NTN465GF **323-1059-311**

Nortel Networks

OPTera Metro 3500 Multiservice Platform

Protection Switching

Standard Release 12.0 Issue 1 November 2003

What's inside...

NORTEL NETWORKS™

Printed in Canada

Contents

About this document

This document describes protection switching on:

- tributary circuit packs
- optical interface circuit packs
  - — in bidirectional line-switched ring (BLSR)
  - — in unidirectional path-switched ring (UPSR)
  - — in 1+1 linear systems

This document also includes information about scheduling and running a high-speed exerciser.

Supported software

This document supports the software release 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 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

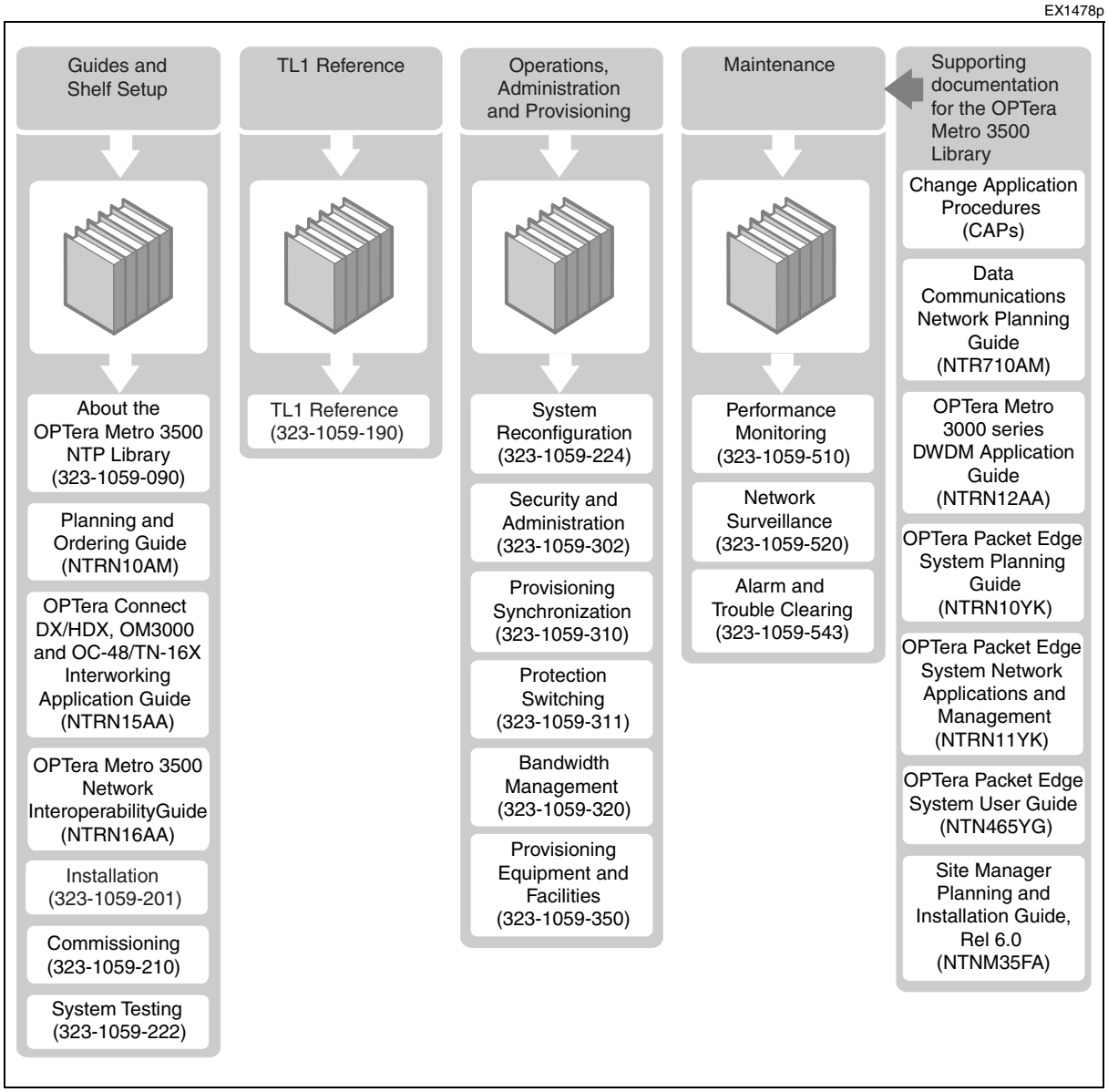
The following members of your company are the intended audience of this Nortel Networks technical publication (NTP):

- 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.

Protection switching

Procedures for protection provisioning

Procedures for protection status

Tributary circuit packs

UPSR

1+1 linear system

BLSR

Procedures for retrieving and setting the line or path SDTH

Procedures for exerciser

Procedure 1-1
Retrieving protection scheme and protection switch mode for a pair of optical facilities

Use this procedure to retrieve the protection scheme and protection switch mode for a pair of optical facilities.

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	Ensure the network element is selected in the navigation tree.
3	Select Provisioning from the Protection drop-down menu to open the Protection Provisioning window.
4	Select the appropriate OCn equipment type from the Equipment type drop-down list. ***Note 1:*** The protection scheme is displayed in the Scheme column in the Protection Provisioning window. ***Note 2:*** The protection switch mode is displayed in the Switch Mode column in the Protection Provisioning window. ***Note 3:*** For the OC-3x4 and OC-12x4 STS multi-port optical interface circuit packs, ensure you select the correct protection port for the protection circuit pack. **—end—**

Procedure 1-2
Changing the linear protection switch mode for a pair of optical facilities

Use this procedure to change the protection switch mode for a pair of 1+1 linear protected optical interfaces.

Two switch modes are supported, unidirectional and bidirectional. Unidirectional switches only the direction that has failed. Bidirectional switches both directions of transmission on to the protection circuit pack.

Note 1: An OC-3 or OC-3x4 which is connected to a protected DSM DS1x84 termination module (TM) is always in a 1+1 linear bidirectional protection switch mode. You cannot change this protection switch mode.

Note 2: OC-3x4 and OC-12x4 STS circuit packs are 1+1 equipment protected at the port level. The protection port of the even slot circuit pack will always be the same port number as the working port on the odd slot circuit pack.

Requirements

To perform this procedure, you must:

- use an account with a level 3 or higher user privilege code (UPC)
- ensure 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 logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Provisioning from the Protection drop-down menu to open the Protection Provisioning window.
4	Select the appropriate OCn equipment type from the Equipment type drop-down list. The provisioning data table opens below the Equipment type.
5	Select from the table the facility you want to change the switch mode. ***Note 1:*** When you change the protection switch mode of one of the circuit packs in a pair of 1+1 linear protected optical interfaces, the protection switch mode for the other circuit pack or port (for multi-port circuit packs OC-3x4, OC-12x4 STS) in the pair switches automatically. ***Note 2:*** The protection switching mode must be the same at both connected network elements in the linear system.

—continued—

Procedure 1-2 (continued)
Changing the linear protection switch mode for a pair of optical facilities

Step	Action
6	Click Edit to open the Edit protection provisioning dialog box.
7	Select the required switch mode: bidirectional or unidirectional.
8	Click OK.

—end—

Procedure 1-3
Changing the protection scheme on an optical facility from 1+1 linear to UPSR

Use this procedure to change the protection scheme from 1+1 linear to unidirectional path-switched ring (UPSR) for the facilities on a pair of protected optical interface circuit packs.

Note 1: An OC-3 or OC-3x4 optical interface circuit pack which is connected to a protected DSM DS1x84 termination module is always in a 1+1 linear bidirectional protection switch mode. You cannot change this switch mode.

Note 2: For the OC-3x4 and OC-12x4 STS optical interface circuit pack, you can provision the ports to have different protection schemes.

Note 3: You must change the protection scheme on your remote node before making the change on your local node.

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	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	Ensure the network element is selected in the navigation tree.
3	**CAUTION** **Risk of traffic loss** If you place a facility out of service, you can cause a loss of traffic. Change the even slot facility to the out-of-service state. For multi-port circuit packs OC-3x4 and OC-12x4 STS, you must choose the correct port. See 323-1059-350, Changing a facility state to Out of Service (OOS) on page 2-25.
4	Select Provisioning from the Protection drop-down menu to open the Protection Provisioning window.

—continued—

Procedure 1-3 (continued)
Changing the protection scheme on an optical facility from 1+1 linear to UPSR

Step	Action
5	Select the appropriate OCn equipment type from the Equipment type drop-down list. For multi-port circuit packs OC-3x4 and OC-12x4 STS, you must choose the correct port. The provisioning data table opens below the Equipment type.
6	Select the odd slot facility from the table.
7	Click Edit to open the Edit protection provisioning dialog box.
8	Select the UPSR radio button.
9	Click OK.
10	Click Yes in the confirmation dialog box.
11	Ensure that all 1WAY or 2WAY cross-connects that use the pair of optical interface circuit packs which were just changed from 1+1 linear to UPSR, are edited to be protected instead of unprotected. See 323-1059-320, Editing a 1WAYPR, 2WAYPR, or 2WAYBR cross-connect on page 6-30.
12	Change the even slot facility back to the in-service state. See 323-1059-350, Changing a facility state to In Service (IS) on page 2-26.
13	**CAUTION** **Risk of losing protection provisioning data** You must refresh Map Topology to ensure that protection provisioning data is updated in Preside Site Manager. If Map Topology is not already open, you must open Map Topology to refresh it. Do one of the following to refresh Map Topology: • If the Map Topology window is already open, click Refresh. • If the Map Topology window is not open, ensure the network processor is selected in the navigation tree, select Map Topology from the Configuration drop-down menu, then click Refresh. **—end—**

Procedure 1-4
Changing the protection scheme on an optical facility from UPSR to 1+1 linear

Use this procedure to change the protection scheme from unidirectional path-switched ring (UPSR) to 1+1 linear for the facilities on a pair of protected optical interface circuit packs.

Note 1: You must change the protection scheme on your remote node before making the change on your local node.

Note 2: For the OC-3x4 and OC-12x4 STS optical interface circuit pack, you can provision the ports to have different protection schemes.

Note 3: If a DSM is connected to an OC-3 or OC-3x4 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

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	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	Ensure the network element is selected in the navigation tree.
3	Ensure that all 1WAYPR or 2WAYPR cross-connects that use the pair of optical interface circuit packs which are being changed from UPSR to 1+1 linear, are edited to be unprotected instead of protected. For multi-port circuit packs OC-3x4 and OC-12x4 STS, you must choose the correct port. See 323-1059-320, Editing a 1WAYPR, 2WAYPR, or 2WAYBR cross-connect on page 6-30.
4	Select Provisioning from the Protection drop-down menu to open the Protection Provisioning window.
5	Select the appropriate OCn equipment type from the Equipment type drop-down list. For multi-port circuit packs OC-3x4 and OC-12x4 STS, you must choose the correct port. The provisioning data table opens below the Equipment type.

—continued—

Procedure 1-4 (continued)
Changing the protection scheme on an optical facility from UPSR to 1+1 linear

Step	Action
6	Select the odd slot facility from the table.
7	Click Edit to open the Edit protection provisioning dialog box.
8	Select the 1+1 linear radio button.
9	Select the required switch mode.
10	Click OK.
11	Click Yes in the confirmation dialog box.
12	**CAUTION** **Risk of losing protection provisioning data** You must refresh Map Topology to ensure that protection provisioning data is updated in Preside Site Manager. If Map Topology is not already open, you must open Map Topology to refresh it. Do one of the following to refresh Map Topology: • If the Map Topology window is already open, click Refresh. • If the Map Topology window is not open, ensure the network processor is selected in the navigation tree, select Map Topology from the Configuration drop-down menu, then click Refresh. **—end—**

Procedure 1-5
Changing the protection scheme from UPSR to BLSR

Use this procedure to change the protection scheme from unidirectional path-switched ring (UPSR) to bidirectional line-switched ring (BLSR) for the facilities on a pair of protected OC-48 or OC-192 optical interface circuit packs.

> ***Note:*** The BLSR protection scheme cannot be provisioned if there are already cross-connects provisioned on either of the two optical interface circuit packs to be provisioned.

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	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	Ensure the network element is selected in the navigation tree.
3	**CAUTION** **Risk of traffic loss** Ensure cross-connects are not carrying traffic before you delete them. Deleting a cross-connect that is carrying traffic causes traffic loss. Delete cross-connects for the OC-48 or OC-192 optical interface circuit packs that are in a UPSR configuration. See 323-1059-320, Deleting a cross-connect on page 6-4.
4	Select Provisioning from the Protection drop-down menu.
5	Select OC48 or OC-192 from the Equipment type drop-down list, as required. The provisioning data table opens below the Equipment type.
6	Select one of the slots from the table. ***Note:*** Provisioning the protection scheme for one of the optical interface circuit packs in a pair automatically provisions the protection scheme for the other optical interface circuit pack in the pair.
7	Click Edit to open the Edit protection provisioning dialog box.

—continued—

Procedure 1-5 (continued)
Changing the protection scheme from UPSR to BLSR

Step	Action
8	Select the BLSR radio button.
9	Select the required time from the Wait to restore time drop-down list.
10	Click OK. Click Yes in the confirmation dialog box.
11	**CAUTION** **Risk of losing protection provisioning data** You must refresh Map Topology to ensure that protection provisioning data is updated in Preside Site Manager. If Map Topology is not already open, you must open Map Topology to refresh it. Do one of the following to refresh Map Topology: • If the Map Topology window is already open, click Refresh. • If the Map Topology window is not open, ensure the network processor is selected in the navigation tree, select Map Topology from the Configuration drop-down menu, then click Refresh. **—end—**

Procedure 1-6
Changing the protection scheme from BLSR to UPSR

Use this procedure to change the protection scheme from bidirectional line-switched ring (BLSR) to unidirectional path-switched ring (UPSR) for the facilities on a pair of protected OC-48 or OC-192 optical interface circuit packs.

> ***Note:*** The UPSR protection scheme cannot be provisioned if there are already cross-connects provisioned on either of the two optical interface circuit packs to be provisioned.

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	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	Ensure the network element is selected in the navigation tree.
3	**CAUTION** **Risk of traffic loss** Ensure cross-connects are not carrying traffic before you delete them. Deleting a cross-connect that is carrying traffic causes traffic loss. Delete cross-connects for the OC-48 or OC-192 optical interface circuit packs that are in a BLSR configuration. See 323-1059-320, Deleting a cross-connect on page 6-4.
4	Delete the BLSR configuration. See 323-1059-320, Deleting a BLSR configuration from the NPx on page 6-38.
5	Change the even and odd slots facility to the out-of-service state. See 323-1059-350, Changing a facility state to Out of Service (OOS) on page 2-25.
6	Select Provisioning from the Protection drop-down menu.
7	Select OC48 or OC-192 from the Equipment type drop-down list, as required. The provisioning data table opens below the Equipment type.

—continued—

Procedure 1-6 (continued)
Changing the protection scheme from BLSR to UPSR

Step	Action
8	Select one of the slots from the table. ***Note:*** Provisioning the protection scheme for one of the optical interface circuit packs in a pair automatically provisions the protection scheme for the other optical interface circuit pack in the pair.
9	Click Edit to open the Edit protection provisioning dialog box.
10	Select the UPSR radio button.
11	Click OK. Click Yes in the confirmation dialog box.
12	Change the even and odd slots facility to the in-service state. See 323-1059-350, Changing a facility state to In Service (IS) on page 2-26.
13	**CAUTION** **Risk of losing protection provisioning data** You must refresh Map Topology to ensure that protection provisioning data is updated in Preside Site Manager. If Map Topology is not already open, you must open Map Topology to refresh it. Do one of the following to refresh Map Topology: • If Map Topology window is already open, click Refresh. • If Map Topology window is not yet open, ensure the network processor is selected in the navigation tree, select Map Topology from the Configuration drop-down menu, and click Refresh. **—end—**

Procedure 1-7
Changing the wait-to-restore period

Use this procedure to change the wait-to-restore period for facilities on a pair of OC-48 or OC-192 optical interface circuit packs with a bidirectional line-switched ring (BLSR) protection scheme.

> ***Note:*** To release a BLSR protection switch on an optical line with the wait-to-restore period set to infinite, see Releasing an optical line switch on page 1-30.

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	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	Ensure the network element is selected in the navigation tree.
3	Select Provisioning from the Protection drop-down menu to open the Protection Provisioning window.
4	Select OC48 or OC-192 from the Equipment type drop-down list, as required. The provisioning data table opens below the Equipment type.
5	Select one of the slots from the table. ***Note:*** Changing the wait to restore time for one of the optical interface circuit packs in a pair automatically changes the wait to restore time for the other optical interface circuit pack in the pair.
6	Click Edit to open the Edit Protection Provisioning dialog box.
7	Select the required time from the Wait to restore time drop-down list.
8	Click OK.

—end—

Procedure 1-8
Retrieving protection status details

Use this procedure to retrieve the status of the provisioned equipment and the path type for a single network element. You can view the total number of lockouts, forced switches, autonomous switches, and manual switches.

Requirements

To perform this procedure, you must:

- use an account with a level 2 or higher user privilege code (UPC)
- ensure 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 logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select an equipment or path type under Protection summary. ***Note:*** Ensure you select the correct port for OC-3x4 or OC-12x4 STS circuit packs. The bottom area of the Protection Status window displays the protection status details of the selected equipment or path type.

—end—

Procedure 1-9
Operating a manual switch on a tributary circuit pack

Use this procedure to manually switch

- DS1 traffic from a working mapper to the protection mapper
- traffic between two circuit packs in a protected DS1, DS3x3, DS3VTx12, DS3x12, DS3x12e, EC-1x3, EC-1x12, or DSM DS1x84 termination module pair (in adjacent slots)

  Note 1: VT management, DS1 services, DS1 circuit packs (not including DS1x84TM circuit packs), and DS3VTx12 circuit packs are not supported in shelves equipped with the STX-192 circuit pack.

  Note 2: To operate a manual switch on an optical tributary circuit pack, refer to the following procedures:

  — Operating a manual optical line switch in a 1+1 linear system on page 1-26

  — Operating a manual path switch in a UPSR on page 1-22

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
A protection switch is a traffic affecting operation. Ensure the protection circuit pack is available to carry traffic before you switch traffic.
A manual switch can cause a traffic hit (less than 60 ms).

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the required active circuit pack under equipment protection details.
6	Click Operate to open the Operate Protection Switch dialog box.

—continued—

Procedure 1-9 (continued)
Operating a manual switch on a tributary circuit pack

Step	Action
7	Select Manual Switch.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-10
Operating a forced switch on a tributary circuit pack

Use this procedure to force switch

- DS1 traffic from a working mapper to the protection mapper
- traffic between two circuit packs in a protected DS1, DS3x3, DS3VTx12, DS3x12, DS3x12e, EC-1x3, EC-1x12, or DSM DS1x84 termination module pair (in adjacent slots)

  Note 1: VT management, DS1 services, DS1 circuit packs (not including DS1x84TM circuit packs), and DS3VTx12 circuit packs are not supported in shelves equipped with the STX-192 circuit pack.

  Note 2: To operate a manual switch on an optical tributary circuit pack, refer to the following procedures:

  — Operating a manual optical line switch in a 1+1 linear system on page 1-26

  — Operating a manual path switch in a UPSR on page 1-22

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Exercise caution when you perform a forced switch. Forced switches have a higher priority than autonomous and manual switches. Before you switch traffic, ensure the protection circuit pack is available to carry traffic.
A forced switch can cause a traffic hit (less than 60 ms).

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the working circuit pack under equipment protection details.

—continued—

Procedure 1-10 (continued)
Operating a forced switch on a tributary circuit pack

Step	Action
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Forced Switch.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-11
Operating a lockout on a DS1 mapper

Use this procedure to put a working DS1 mapper, or a protection DS1 mapper in a lockout condition.

Note 1: VT management, DS1 services, DS1 circuit packs (not including DS1x84TM circuit packs), and DS3VTx12 circuit packs are not supported in shelves equipped with the STX-192 circuit pack.

Note 2: Lockouts are not supported on DS3x3, DS3VTx12, DS3x12, DS3x12e, EC-1x3 or EC-1x12 circuit packs, or DSM DS1x84 termination modules.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Exercise caution when you perform a lockout. Lockouts prevent autonomous protection switching and can cause a loss of traffic when operated. Lockouts have a higher priority than autonomous, forced and manual switches.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the required active circuit pack under equipment protection details.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Lockout.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-12
Releasing a protection switch on a tributary circuit pack

Use this procedure to release a protection switch on a working or protection tributary circuit pack.

Note 1: For the DS1 mappers, you can release lockouts, and forced and manual switches with the release protection switch command. You can also clear a manual or forced switch by using a lockout protection switch, or clear a manual switch by performing a forced switch.

Note 2: For DS3x3, DS3VTx12, DS3x12, DS3x12e, EC-1x3, or EC-1x12 circuit packs, or DSM DS1x84 termination modules, only forced switches can be released. Manual switches do not need to be released. You can move traffic between the protected pair by performing another manual switch.

Note 3: VT management, DS1 services, DS1 circuit packs (not including DS1x84TM circuit packs), and DS3VTx12 circuit packs are not supported in shelves equipped with the STX-192 circuit pack.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Traffic may revert back to the released circuit pack. This is a traffic affecting operation.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the required circuit pack (from which you want to release the protection switch) under equipment protection details.
6	Click Release.
7	Click Yes in the confirmation dialog box.

—end—

Procedure 1-13
Operating a manual path switch in a UPSR

Use this procedure to operate VT1.5, STS-1, STS-3c, STS-12c, STS-24c, or STS-48c manual path switches in a unidirectional path-switched ring (UPSR).

> ***Note:*** VT management is not supported on shelves equipped with the STX-192 circuit pack.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
A protection switch is a traffic affecting operation. Ensure the protection circuit pack is available to carry traffic before you switch traffic.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the path type under Protection summary.
5	Select the required active path under path protection details.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Manual Switch.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-14
Operating a forced path switch in a UPSR

Use this procedure to force switch VT1.5, STS-1, STS-3c, STS-12c, STS-24c, or STS-48c paths in a unidirectional path-switched ring (UPSR).

Note: VT management is not supported on shelves equipped with the STX-192 circuit pack.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Force switching has a higher priority than autonomous or manual switching. Before you switch traffic, make sure that the protection circuit pack is available to carry traffic.

CAUTION
Risk of traffic loss
A forced switch applied to a VT1.5, STS-1, STS-3c, STS-12c, STS-24c, or STS-48c path is released if its switch mate is rolled over to another endpoint using inservice traffic rollover. Once the forced switch is released, traffic can move back to the previously switched path. For more information on in-service traffic rollover, see 323-1059-320, Procedures for in-service traffic rollovers in UPSR networks on page 3-2.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the path type under Protection summary.
5	Select the active path under path protection details.

—continued—

Procedure 1-14 (continued)
Operating a forced path switch in a UPSR

Step	Action
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Forced Switch.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-15
Releasing a path switch in a UPSR

Use this procedure to release a forced switch on a VT1.5, STS-1, STS-3c, STS-12c, STS-24c, or STS-48c path in a unidirectional path-switched ring (UPSR).

Note: VT management is not supported on shelves equipped with the STX-192 circuit pack.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
A protection switch is a traffic affecting operation. Ensure a circuit pack is available to carry traffic before you switch traffic.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the path type under Protection summary.
5	Select the forced path under path protection details.
6	Click Release.
7	Click Yes in the confirmation dialog box.

—end—

Procedure 1-16
Operating a manual optical line switch in a 1+1 linear system

Use this procedure to perform a manual switching of traffic from one optical interface circuit pack to another.

> ***Note:*** This procedure is valid only for network elements in a linear configuration.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
A protection switch is a traffic affecting operation. Ensure a circuit pack is available to carry traffic before you switch traffic.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the appropriate OCn equipment type under Protection summary.
5	Select the facility or equipment that you want to perform a protection switch on, under equipment protection details.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Manual Switch.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-17
Operating a forced optical line switch in a 1+1 linear system

Use this procedure to perform a forced switching of traffic from one optical interface circuit pack to another.

Note: This procedure is valid only for network elements in a linear configuration.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Exercise caution when you perform a forced switch. Forced switches have a higher priority than autonomous and manual switches. Before you switch traffic, ensure the protection circuit pack is available to carry traffic.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the appropriate OCn equipment type under Protection summary.
5	Select the facility or equipment that you want to perform a protection switch on, under equipment protection details.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Forced Switch.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-18
Operating a lockout on an optical interface circuit pack in a 1+1 linear system

Use this procedure to lockout traffic on an optical interface protection circuit pack (even slot) in a linear configuration.

> ***Note:*** This procedure is valid only for network elements in a linear configuration.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC).

CAUTION
Risk of traffic loss
Exercise caution when you perform a lockout. Lockouts prevent autonomous protection switching and can cause a loss of traffic when operated. Lockouts have a higher priority than autonomous, forced and manual switches.

CAUTION
Risk of traffic loss
If traffic on the protection circuit pack is being locked out, the lockout operation automatically switches the traffic back to the working circuit pack.

Make sure that the odd slot circuit pack is functional before completing the lockout operation.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the appropriate OCn equipment type under Protection summary.
5	Select the facility or equipment that you want to perform a protection switch on, under equipment protection details.

—continued—

Procedure 1-18 (continued)
Operating a lockout on an optical interface circuit pack in a 1+1 linear system

Step	Action
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Lockout.
8	Click Operate.
9	Click Yes in the confirmation dialog box.

—end—

Procedure 1-19
Releasing an optical line switch

Use this procedure to release a

- lockout on an optical line
- forced switch on an optical line
- manual switch on an optical line
- protection switch that is provisioned with an infinite wait-to-restore period in a BLSR configuration

Note 1: This procedure is valid only for network elements in a 1+1 linear or BLSR configuration.

Note 2: You cannot release a manual switch in a 1+1 linear configuration.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 2 or higher user privilege code (UPC)

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the appropriate OCn equipment type under Protection summary.
5	Select the protection switch you want to release under equipment protection details. ***Note:*** To release a lockout of protection, select the OCn equipment with the Lockout of protection. Do not select the equipment that has Lockout of protection, remote, specified in the Switch column.
6	Click Release.
7	Click Yes in the confirmation dialog box.

—end—

Procedure 1-20
Operating a manual switch in a BLSR

Use this procedure to operate a manual switch in a bidirectional line-switched ring (BLSR) configuration.

> ***Note:*** AIS alarms are raised on a Packet Edge circuit pack if an RPR is created, cross-connects are added, but no circuit packs are attached to the ring. Performing a protection switch on the ring's host optics causes the AIS alarms to clear and to be raised again. This behavior occurs only when the Packet Edge circuit pack is not attached to an RPR; it does not occur when the Packet Edge circuit pack is attached to an RPR or if passthrough connections are used.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- ensure the BLSR configuration is provisioned on all network elements in the configuration. See 323-1059-320, Provisioning a BLSR configuration on page 6-34.
- use an account with a level 2 or higher user privilege code (UPC)

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the equipment type under Protection summary.
5	Select the required active equipment under equipment protection details.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Manual Switch.
8	Click Operate. Click Yes in the confirmation dialog box.

—end—

Procedure 1-21
Operating a forced switch in a BLSR

Use this procedure to operate a forced switch in a bidirectional line-switched ring (BLSR) configuration.

> ***Note:*** AIS alarms are raised on a Packet Edge circuit pack if an RPR is created, cross-connects are added, but no circuit packs are attached to the ring. Performing a protection switch on the ring's host optics causes the AIS alarms to clear and to be raised again. This behavior occurs only when the Packet Edge circuit pack is not attached to an RPR; it does not occur when the Packet Edge circuit pack is attached to an RPR or if passthrough connections are used.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- ensure the BLSR configuration is provisioned on all network elements in the configuration. See 323-1059-320, Provisioning a BLSR configuration on page 6-34
- use an account with a level 2 or higher user privilege code (UPC)

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the required equipment under equipment protection details.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Forced Switch.
8	Click Operate. Click Yes in the confirmation dialog box.

—end—

Procedure 1-22
Operating a lockout of working in a BLSR

The lockout of working prevents the working channels over the addressed span from accessing the protection channels for a span switch in a bidirectional line-switched ring (BLSR).

ATTENTION
The lockout of working must be initiated at both network elements terminating the affected span. Existing and subsequent lower-priority protection switches will go pending until the lockout of working is released.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- ensure the BLSR configuration is provisioned on all network elements in the configuration. See 323-1059-320, Provisioning a BLSR configuration on page 6-34.
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Exercise caution when you perform a lockout. Lockouts prevent autonomous protection switching and can cause a loss of traffic when operated. Lockouts have a higher priority than autonomous, forced and manual switches.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the required OC-48 or OC-192 optical interface circuit pack under equipment protection details, as required.
6	Click Operate to open the Operate Protection Switch dialog box.

—continued—

Procedure 1-22 (continued)
Operating a lockout of working in a BLSR

Step	Action
7	Select Lockout Working.
8	Click Operate. Click Yes in the confirmation dialog box.
9	Repeat step 1 through step 8 for the network element at the other end of the affected span.

—end—

Procedure 1-23
Operating a lockout of protection in a BLSR

The lockout of protection prevents the use of the span for any protection activity and prevents any ring switches anywhere in the bidirectional line-switched ring (BLSR).

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- ensure the BLSR configuration is provisioned on all network elements in the configuration. See 323-1059-320, Provisioning a BLSR configuration on page 6-34.
- use an account with a level 2 or higher user privilege code (UPC)

CAUTION
Risk of traffic loss
Exercise caution when you perform a lockout. Lockouts prevent autonomous protection switching and can cause a loss of traffic when operated. Lockouts have a higher priority than autonomous, forced and manual switches.

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	Ensure the network element is selected in the navigation tree.
3	Select Status from the Protection drop-down menu.
4	Select the circuit pack under Protection summary.
5	Select the required OC-48 or OC-192 optical interface circuit pack under equipment protection details, as required.
6	Click Operate to open the Operate Protection Switch dialog box.
7	Select Lockout Protection.
8	Click Operate. Click Yes in the confirmation dialog box.

—end—

Procedure 1-24
Retrieving the line SDTH of an optical facility

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

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

Requirements

To perform this procedure, you must ensure 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 logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	From the Configuration menu, select Equipment & Facility Provisioning.
4	Select the optical circuit pack under Equipment. The Signal degrade threshold column under Facility displays the SDTH last set.

—end—

Procedure 1-25
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, 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 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	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	Ensure the network element is selected in the navigation tree.
3	From the Configuration menu, select Equipment & Facility Provisioning.
4	Select the optical circuit pack under Equipment.
5	Select the facility you want to edit under Facility.
6	Click Edit under Facility to open the Edit Facility dialog box.
7	Select the required SDTH from the Signal degrade threshold drop-down list.
8	Click OK.
9	Repeat step 4 through step 8 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 1-26
Retrieving the path SDTH

Use this procedure to retrieve the signal degrade threshold (SDTH) of a signal for path switching in a network element.

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

- an autonomous protection switch occurs between two protected VT1.5, STS-1, STS-3c, STS-12c, STS-24c, or STS-48c paths in a UPSR
- alarm reporting occurs

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	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Node Information from the Configuration drop-down menu. The path SDTH is displayed in the System area of the Node Information window.

—end—

Procedure 1-27
Editing the path SDTH of a signal

Use this procedure to edit the signal degrade threshold (SDTH) of a signal for path switching in a network element.

Note: With this procedure you edit the path SDTH for all VT and STS paths within the network element.

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

- an autonomous protection switch occurs between two protected VT1.5, STS-1, STS-3c, STS-12c, STS-24c, or STS-48c paths in a unidirectional path-switched ring (UPSR)
- alarm reporting occurs

Note: To set the line SDTH, see Editing the line SDTH of an optical facility on page 1-37.

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	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Node Information from the Configuration drop-down menu.
4	Click Edit in the System area to open the Edit System dialog box.
5	Select the required SDTH from the SDTH drop-down list.
6	Click OK. The System area of the Node Information window displays the path SDTH.

—end—

Procedure 1-28
Scheduling the exerciser

Use this procedure to schedule the high-speed exerciser.

> ***Note:*** After a shelf processor restart or a time change, the protection exerciser will resume its schedule on the next calendar day at the provisioned start time. Also, if you provisioned the number of times the exerciser runs, this counter is restarted when the exerciser resumes the next day. After the scheduler has run the scheduled number of times, it will reset to 'indefinitely', and therefore run indefinitely.

The exerciser runs only on a pair of optical interface circuit packs that meet all the following conditions. The optical interface circuit packs must be

- in a 1+1 linear or BLSR configuration

  Note 1: If the optical interface circuit packs are in a BLSR configuration, they must also have a valid BLSR configuration and no active protection switch.

  Note 2: If the optical interface circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.
- in service
- in bidirectional protection switching mode, if in a 1+1 linear configuration
- active for the working circuit pack

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an optical interface pair. If the two ends fail to exchange the K-bytes, the test fails and alarms can be raised.

The exerciser can run automatically on a schedule set in advance, or can be initiated manually.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect. Also, the exerciser will not run if alarms are present on the optical interface circuit packs.

To be compatible with Transport Bandwidth Manager (TBM), the exerciser runs only when the traffic activity is present on the working channel.

—continued—

Procedure 1-28 (continued)
Scheduling the exerciser

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	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Exerciser from the Protection drop-down menu. The Protection Exerciser window opens and displays the Exercise schedule data table under the Equipment type.
4	Select the required OCn from the Equipment drop-down list. ***Note:*** In a BLSR configuration, the exerciser will run on both circuit packs.
5	Select the required facility in the Exercise schedule data table. ***Note:*** When a DS1 service module (DSM) is attached to a host OC-3 or OC-3x4, exerciser scheduling can only be provisioned on the DSM OCn line, but exerciser operation can be executed on both the Host-prov line and DSM OCn line. If you select the Host prov-line, you can only use the Execute button to initiate the exerciser to run immediately. You cannot edit the exerciser for this line.
6	Click Edit to open the Edit Protection Exerciser Schedule dialog box.
7	Enter the frequency of running the exerciser in the boxes after Run every. ***Note:*** See Schedule parameters on page 1-42 for schedule parameter values.
8	Select either one of the radio buttons after Run. ***Note:*** If you select number of times, enter the appropriate value in the box.
9	Enter the hours and minutes in the Start at boxes.
10	Select one of the two Log event radio buttons.
11	Click OK.

—end—

Schedule parameters

Parameter	Valid values	Description
Facility	The value is displayed by Preside Site Manager and cannot be edited.	The value is displayed by Preside Site Manager and cannot be edited.
Frequency for running the exerciser	**Value** **Unit** 1 to 3 DAY 1 to 5 HR 5 to 30 MIN	Run the exerciser once every x days Run the exerciser once every x hours Run the exerciser once every x minutes If no parameter is entered, the default is once every day.
Number of times the exerciser runs before it stops	1 to 250 indefinitely	The exerciser runs the specified number of times. If no parameter is entered, and the radio button Indefinitely is selected, the exerciser runs indefinitely until it is stopped or rescheduled by another command.
Start time for the exerciser schedule	Start at Hours: from 0 to 23, Minutes: from 0 to 59	Hours and Minutes to start the exerciser If no parameter is entered, the default is 01:00. See Note 1. The start time is displayed as mm-dd,hh:mm (month-day,hours:minutes).
Log Event	Always On failure	Report results of all exercises Report results of failed exercises If no parameter is entered, the default is: Report results of failed exercises.
Status	Allow Inhibit	The exerciser is allowed to run as scheduled. The exerciser is inhibited from running as scheduled.
Note 1: The system adds a day to the date you edit the exerciser schedule, and displays the date in the Start at column in the Protection Exerciser window. ***Note 2:*** Do not schedule more than one test at the same time.		

Procedure 1-29
Retrieving the exerciser schedule

Use this procedure to retrieve the high-speed exerciser schedule on a pair of optical interface circuit packs in a 1+1 linear or BLSR protected system.

> ***Note:*** After a shelf processor restart or a time change, the protection exerciser will resume its schedule on the next calendar day at the provisioned start time. Also, if you provisioned the number of times the exerciser runs, this counter is restarted when the exerciser resumes the next day.

Requirements

To perform this procedure, you must ensure you have all the documentation referenced in this procedure.

Step	Action
1	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Exerciser from the Protection drop-down menu.
4	Select the required OCn from the Equipment type drop-down list.

—end—

Procedure 1-30
Running the exerciser manually

Use this procedure to manually initiate the high-speed exerciser.

The exerciser runs only on a pair of optical interface circuit packs that meet all the following conditions. The optical interface circuit packs must be

- in a 1+1 linear or BLSR configuration

  Note 1: If the optical interface circuit packs are in a BLSR configuration, they must also have a valid BLSR configuration and no active protection switch.

  Note 2: If the optical interface circuit packs are in a 1+1 linear configuration, there must be no active protection switch.
- in service
- in bidirectional protection switching mode, if in a 1+1 linear configuration
- active for the working circuit pack

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect. Also, the exerciser will not run if alarms are present on the optical interface circuit packs.

To be compatible with Transport Bandwidth Manager (TBM), the exerciser runs only when the traffic activity is present on the working channel.

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)

—continued—

Procedure 1-30 (continued)
Running the exerciser manually

Step	Action
1	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Exerciser from the Protection drop-down menu. The Protection Exerciser window opens.
4	Select the required OCn from the Equipment drop-down list. The Exercise schedule data table appears under the Equipment type. ***Note:*** In a BLSR configuration, the exerciser will run on both circuit packs.
5	Select the required OCn facility pair from the table. ***Note:*** If you select OCn-ALL, the Execute button is disabled.
6	Click Execute.

—end—

Procedure 1-31
Allowing the exerciser to run as scheduled

Use this procedure to allow the high-speed exerciser to run automatically as scheduled on a pair of optical interface circuit packs.

The exerciser runs only on a pair of optical interface circuit packs that meet all of the following conditions. The optical interface circuit packs must be

- in a 1+1 linear or BLSR configuration

  Note 1: If the optical interface circuit packs are in a BLSR configuration, there must also have a valid BLSR configuration and no active protection switch.

  Note 2: If the optical interface circuit packs are in a 1+1 linear configuration, there must be no active protection switch.
- in service
- in bidirectional protection switching mode, if in a 1+1 linear configuration
- active for the working circuit pack

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect. Also, the exerciser will not run if alarms are present on the optical interface circuit packs.

To be compatible with Transport Bandwidth Manager (TBM), the exerciser runs only when the traffic activity is present on the working channel.

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)

—continued—

Procedure 1-31 (continued)
Allowing the exerciser to run as scheduled

Step	Action
1	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Exerciser from the Protection drop-down menu. The Protection Exerciser window opens.
4	Select the required OCn from the Equipment drop-down list. The Exercise schedule data table appears under the Equipment type. ***Note:*** In a BLSR configuration, the exerciser will run on both circuit packs.
5	Select the required facility from the table.
6	Click Allow.

—end—

Procedure 1-32
Inhibiting the exerciser to run as scheduled

Use this procedure to inhibit the running of the high-speed exerciser as scheduled.

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	Ensure you are logged in to the required network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	Ensure the network element is selected in the navigation tree.
3	Select Exerciser from the Protection drop-down menu. The Protection Exerciser window opens.
4	Select the required OCn from the Equipment drop-down list. The Exercise schedule data table appears under the Equipment type.
5	Select the required facility from the table.
6	Click Inhibit.

—end—

Nortel Networks

OPTera Metro 3500 Multiservice Platform

Protection Switching

323-1059-311
Standard Release 12.0 Issue 1
November 2003
Printed in Canada

NORTEL NETWORKS™