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Nortel Networks

OPTera Metro 3500 Multiservice Platform

TL1 Reference—Part 2 of 4

Standard Release 12.0 Issue 1 November 2003

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About this document

ATTENTION

This document is presented in four parts. Each part has its own table of contents, which contains topics found in that part only. Part 2 continues sequential chapter numbering from Part 1. Part 3 continues sequential chapter numbering from Part 2. Part 4 continues sequential chapter numbering from Part 3.

You are reading Part 3 of Nortel Networks OPTera Metro 3500 Multiservice Platform *TL1 Reference,* 323-1059-190.

Part 1 covers the introduction of TL1 and TL1 detailed command descriptions.

Part 2 and 3 cover further TL1 detailed command descriptions.

Part 4 covers further TL1 detailed command descriptions, automatic reports, and error codes and messages.

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.

Hardware naming conventions

The following naming conventions are used throughout this document to identify the OPTera Metro 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

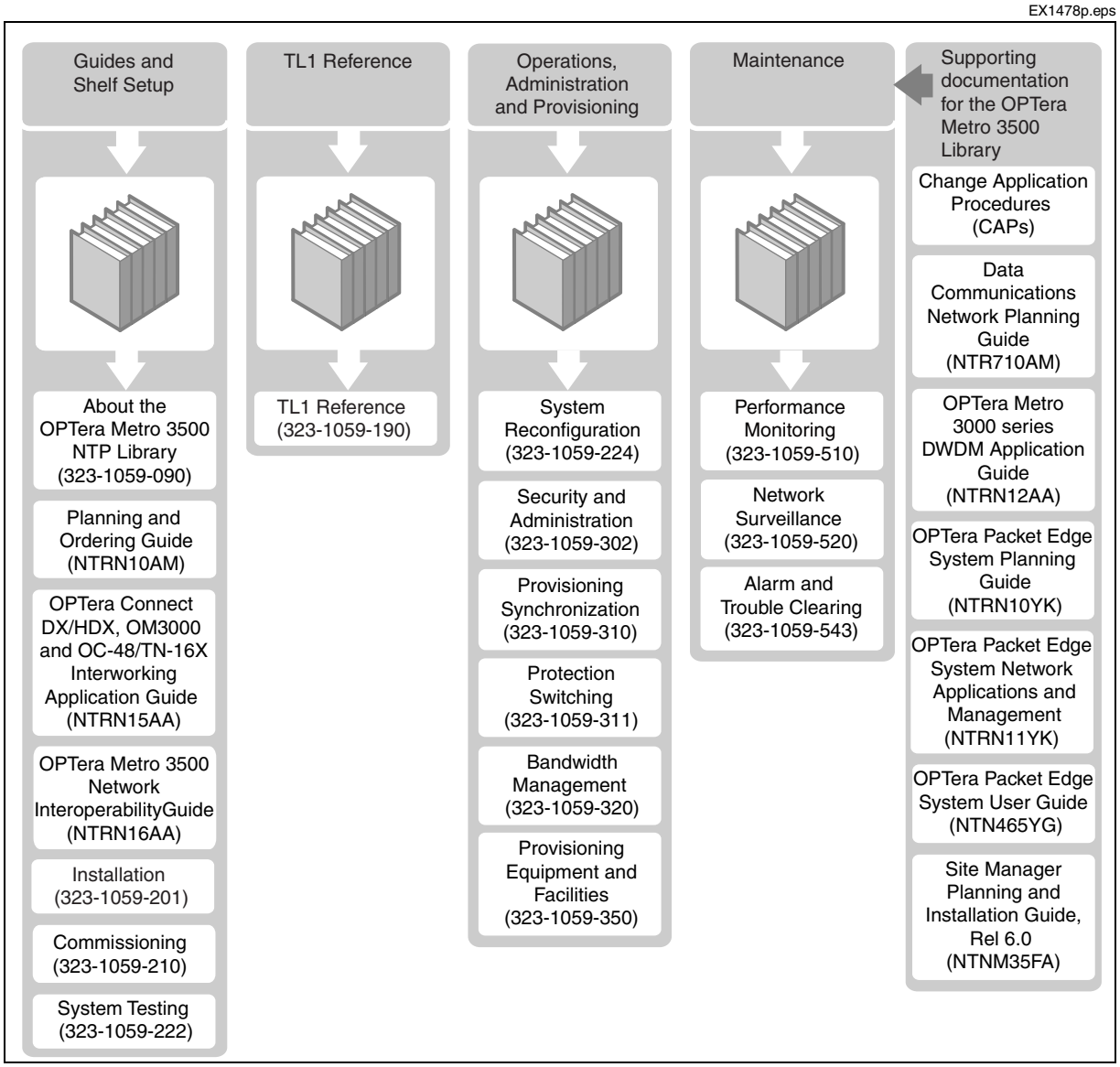
The following members of your company are the intended audience of this Nortel Networks technical publication (NTP):

- 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.
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Packet Edge ring management command descriptions

This chapter is an alphabetical summary of the TL1 commands used to provision Packet Edge rings (Resilient Packet Rings). The command descriptions in this chapter identify each command, and describe the command purpose, syntax, parameters, variables, and response. The following table lists all of the commands in this chapter.

Command	Page
DLT-IPT	8-2
DLT-IPTR	8-3
ENT-IPT	8-4
ENT-IPTR	8-5
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RTRV-IPTR	8-8

DLT-IPT

Use the Delete IPT command to detach a 2xGigE, 4x100FX, or 4x100BT circuit pack from a Resilient Packet Ring (RPR).

> ***Note:*** A Packet Edge circuit pack must be detached from an RPR before it can be deprovisioned.

Security level

Level 3

Input syntax

```
DLT-IPT:[TID]:IPTAID,IPTRAID:CTAG;
```

Table 8-1
Syntax definition

Field	Purpose
TID	Target identifier
IPTAID	Circuit pack to act upon
CTAG	Correlation tag
IPTRAID	RPR to act upon

Table 8-2
AID descriptions

AID	Possible values	Description
IPTAID	IPT100-slot#	Detach a 4x100BT circuit pack where slot# = 3 to 10
	100FX-slot#	Detach a 4x100FX circuit pack where slot# = 3 to 10
	1GE-slot#	Detach a 2xGigE circuit pack where slot# = 3, 5, 7, 9
IPTR AID	IPTR-Index#	RPR entity to act upon where Index# = 1 to 8

Example input

Detach a 4x100BT circuit pack from an RPR:

```
DLT-IPT:OC3SP:IPT100-7,IPTR-1:123;
```

DLT-IPTR

Use the Delete IPTR command to deprovision a Resilient Packet Ring (RPR).

Before you delete an RPR, you must

- delete SONET bandwidth assigned to the RPR
- detach all Packet Edge circuit packs from the RPR

Note: Refer to the DLT-CRS-STS1/STS3C/STS12C commands.

Security level

Level 3

Input syntax

```
DLT-IPTR:[TID]:AID:CTAG;
```

Table 8-3
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 8-4
AID descriptions

AID	Possible values	Description
IPTR AID	IPTR-Index#	RPR entity to act upon where Index# = 1 to 8

Example input

Deprovision an RPR:

```
DLT-IPTR:OC3SP:IPTR-3:123;
```

ENT-IPT

Use the Enter IPT command to attach a Packet Edge circuit pack to a Resilient Packet Ring (RPR).

Note 1: A Packet Edge circuit pack cannot be attached to an RPR until SONET bandwidth on both ends of the ring have been assigned.

Note 2: A Packet Edge circuit pack can be attached to only one RPR.

Security level

Level 3

Input syntax

```
ENT-IPT:[TID]:IPTAID,IPTRAID:CTAG;
```

Table 8-5
Syntax definition

Field	Purpose
TID	Target identifier
IPTAID	Circuit pack to act upon
CTAG	Correlation tag
IPTRAID	RPR to act upon

Table 8-6
AID descriptions

AID	Possible values	Description
IPTAID	IPT100-slot#	Detach a 4x100BT circuit pack where slot# = 3 to 10
	100FX-slot#	Detach a 4x100FX circuit pack where slot# = 3 to 10
	1GE-slot#	Detach a 2xGigE circuit pack where slot# = 3, 5, 7, 9
IPTR AID	IPTR-Index#	RPR entity to act upon where Index# = 1 to 8

Example input

Attach a 4x100BT circuit pack to an RPR:

```
ENT-IPT:OC3SP:IPT100-7,IPTR-2:123;
```

ENT-IPTR

Use the Enter IPTR command to create a Resilient Packet Ring (RPR).

Security level

Level 3

Input syntax

```
ENT-IPTR:[TID]:AID:CTAG;
```

Table 8-7
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 8-8
AID descriptions

AID	Possible values	Description
IPTR AID	IPTR-Index#	RPR entity to create where Index# = 1 to 8

Example input

Create a Resilient Packet Ring for network element MONTREAL:

```
ENT-IPTR:MONTREAL:IPTR-2:123;
```

RTRV-IPT

Use the Retrieve IPT command to find

- the Resilient Packet Ring (RPR) a Packet Edge circuit pack is attached to
- the Packet Edge circuit packs attached to an RPR

Security level

Level 1

Input syntax

```
RTRV-IPT:[TID]:IPTAID[,IPTRAID]:CTAG;
```

Table 8-9
Syntax definition

Field	Purpose
TID	Target identifier
IPTAID	Circuit pack to act upon
CTAG	Correlation tag
IPTRAID	RPR to act upon

Table 8-10
AID descriptions

AID	Possible values	Description
IPTAID	IPT100-slot# IPT100-ALL	Detach a 4x100BT circuit pack where slot# = 3 to 10
	100FX-slot# 100FX-ALL	Detach a 4x100FX circuit pack where slot# = 3 to 10
	1GE-slot# 1GE-ALL	Detach a 2xGigE circuit pack where slot# = 3, 5, 7, 9
IPTR AID	IPTR-Index# IPTR-ALL	Identify an RPR or all RPRs Index# = 1 to 8

Example input

Retrieve all 4x100BT circuit packs attached to an RPR for network element OTTAWA:

```
RTRV-IPT:OTTAWA:IPT100-ALL,IPTR-2:123;
```

Response block syntax

```
<SID><DATE><TIME>
"<IPT AID><,IPTR AID>"
```

Table 8-11
Response parameter descriptions

Parameter	Possible values	Description
IPTAID	IPT100-slot#	4x100BT circuit pack where slot# = 3 to 10
	100FX-slot#	4x100FX circuit pack where slot# = 3 to 10
	1GE-slot#	2xGigE circuit pack where slot# = 3, 5, 7, 9
IPTR AID	IPTR-Index#	Identify an RPR where Index# = 1 to 8

RTRV-IPTR

Use the Retrieve IPTR command to find the Resilient Packet Rings (RPR) that exist.

Security level

Level 1

Input syntax

```
RTRV-IPT:[TID]:AID:CTAG;
```

Table 8-12
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AID	Access identifier

Table 8-13
AID descriptions

AID	Definition	Possible values	Description
IPTR AID	RPR entity to act upon	IPTR-Index#	Index# = 1 to 8
		IPTR-ALL	All RPRs

Example input

Find all RPR for network element SEATTLE:

```
RTRV-IPTR:SEATTLE:IPTR-ALL:123;
```

Response block syntax

```
<SID><DATE><TIME>
"<IPTR AID>"
```

Table 8-14
Response parameter descriptions

Parameter	Possible values	Description
IPTR AID	IPTR-index#	RPR entity Index# = 1 to 8

Inservice traffic rollover command descriptions

This chapter is a summary of the TL1 commands related to inservice traffic rollover (ISTR). The command descriptions in this chapter identify each command, and describe the command purpose, syntax, parameters, variables, and response.

The commands in this chapter are supported on the network element.

The following table lists all the commands in this chapter.

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CMMT-ROLL-STS1	9-3
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CMMT-ROLL-STS12C	9-9
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DLT-ROLL-STS12C	9-26
DLT-ROLL-STS24C	9-29
DLT-ROLL-STS48C	9-32
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ED-ROLL-STS1	9-37
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Command	Page
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ED-ROLL-STS48C	9-49
ED-ROLL-VT1	9-52
ENT-ROLL-STS1	9-55
ENT-ROLL-STS3C	9-59
ENT-ROLL-STS12C	9-63
ENT-ROLL-STS24C	9-66
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ENT-ROLL-VT1	9-72
RTRV-ROLL-STS1	9-75
RTRV-ROLL-STS3C	9-80
RTRV-ROLL-STS12C	9-84
RTRV-ROLL-STS24C	9-88
RTRV-ROLL-STS48C	9-91
RTRV-ROLL-VT1	9-94

CMMT-ROLL-STS1

The Commit Rollover STS-1 command is used to delete the original STS-1 path.

Security level

Level 3

Input syntax

```
CMMT-ROLL-STS1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,CMMTSWMATE=Domain];
```

Table 9-1
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
CMMTSWMATE	Deletes the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-2
AID descriptions

AID type	Command-specific values	Purpose
STS1 facility AID	DS3-slot#-port#	Identify the STS-1 facility on a DS3 circuit pack where slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	Identify the STS-1 facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 facility on an OC-48 or OC-48 STS circuit pack where slot# = 11 or 12 for OC-48 slot # = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	Identify the STS-1 facility on an OC-192 circuit pack where slot# = 11 or 12 sts# = 1 to 192
	EC1-slot#-port#	Identify the STS-1 facility on an EC-1 circuit pack where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	WAN-slot#-port#-sts#	Identify the STS-1 facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack, where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1 to 21 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-3
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CMMTSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS1 working connection on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS3 service and the OC-3x4 circuit pack.

Bridge the original OC-3 working connection:

```
ENT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:A::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:B::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:C::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1;
```

CMMT-ROLL-STS3C

The Commit Rollover STS-3c command is used to delete the original STS-3c path.

Security level

Level 3

Input syntax

```
CMMT-ROLL-STS3C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,CMMTSWMATE=Domain];
```

Table 9-4
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
CMMTSWMATE	Deletes the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE	

Table 9-5
AID descriptions

AID type	Command-specific values	Purpose
STS3C facility AID	OC3-slot#-port#-sts#	Identify the STS-3c facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, or 10
	OC48-slot#-sts#	Identify the STS-3c facility on an OC-48 or OC-48 STS circuit pack where slot# =11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ..., 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1, 4, 7, ... 190
	WAN-slot#-port#-sts#	Identify the STS-3c facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-6
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CMMTSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS-3c working connection on the OC-3x4 circuit pack in a 2WAYPR circuit between an OC-3 service and the OC-3x4 circuit pack.

Bridge the original OC-3 working connection:

```
ENT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:D::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:B::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:C::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1;
```

CMMT-ROLL-STS12C

The Commit Rollover STS-12c command is used to delete the original STS-12c path.

Security level

Level 3

Input syntax

```
CMMT-ROLL-STS12C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=DOMAIN,RTO=DOMAIN[,CMMTSWMATE=Domain];
```

Table 9-7
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
CMMTSWMATE	Deletes the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE	

Table 9-8
AID descriptions

AID type	Command-specific values	Purpose
STS12C facility AID	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# = 11 or 12 for OC-48, 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 13, 25, 37, ... 181
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2, sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM and RTO.

Table 9-9
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CMMTSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS-12c working connection on the OC-12 circuit pack in a 2WAYPR circuit between an OC-12 service and the OC-12 circuit pack.

Bridge the original OC-12 working connection:

```
ENT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG3::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS12C:OTTAWA:OC12-9-1,OC12-8-1:CTAG3::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG3::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1;
```

CMMT-ROLL-STS24C

The Commit Rollover STS-24c command is used to delete the original STS-24c path.

Security level

Level 3

Input syntax

```
CMMT-ROLL-STS24C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=DOMAIN,RTO=DOMAIN[,CMMTSWMATE=Domain];
```

Table 9-10
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
CMMTSWMATE	Deletes the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE	

Table 9-11
AID descriptions

AID type	Command-specific values	Purpose
STS24C facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 on OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, 49, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM and RTO.

Table 9-12
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CMMTSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS-24c working connection on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original OC-48 working connection:

```
ENT-ROLL-STS24C:OTTAWA:OC48-9-1,OC48-8-1:CTAG3::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS24C:OTTAWA:OC48-9-1,OC48-8-1:CTAG3::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS24C:OTTAWA:OC48-9-1,OC48-8-1:CTAG3::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1;
```

CMMT-ROLL-STS48C

The Commit Rollover STS-48c command is used to delete the original STS-48c path.

Security level

Level 3

Input syntax

```
CMMT-ROLL-STS48C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=DOMAIN,RTO=DOMAIN[,CMMTSWMATE=Domain];
```

Table 9-13
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
CMMTSWMATE	Deletes the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE	

Table 9-14
AID descriptions

AID type	Command-specific values	Purpose
STS48C facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 on OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 49, 97... 145

Table 9-15
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CMMTSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS-48c working connection on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original OC-48 working connection:

```
ENT-ROLL-STS48C:OTTAWA:OC48-9-1,OC48-8-1:CTAG3::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS48C:OTTAWA:OC48-9-1,OC48-8-1:CTAG3::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS48C:OTTAWA:OC48-9-1,OC48-8-1:CTAG3::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1;
```

CMMT-ROLL-VT1

The Commit Rollover VT1 command is used to delete the original VT1.5 path.

Security level

Level 3

Input syntax

```
CMMT-ROLL-VT1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,CMMTSWMATE=Domain];
```

Table 9-16
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
CMMTSWMATE	Deletes the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-17
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port# DS1-DFLT-grp	slot# = 4 to 10 port# = 1 to 12 grp = 1 to 3
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	DS1 service module port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	DS1 service module grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7 vt# = 1 to 4

Table 9-18
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CMMTSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover a VT1.5 working connection on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS1 service and the OC-3x4 circuit pack.

Bridge the original OC-3 connection:

```
ENT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:A::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:B::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1,VALID=Y:SWITCHED;
```

Remove the original connection:

```
CMMT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:C::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1;
```

DLT-ROLL-STS1

The Delete Rollover STS-1 command is used to delete a connection previously established by the ENT-ROLL-STS1 command. The Delete Rollover STS-1 command will return the connection to its original idle state.

Security level

Level 3

Input syntax

```
DLT-ROLL-STS1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,DLTSWMATE=Domain];
```

Table 9-19
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
VALID	Command execution will be denied if the conditions on the node are inappropriate
DLTSWMATE	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit

Table 9-20
AID descriptions

AID type	Command-specific values	Purpose
STS1 facility AID	DS3-slot#-port#	Identify the STS-1 facility on a DS3 circuit pack where slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	Identify the STS-1 facility on an OC-3 circuit pack where slot# = 3 to 10 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 facility on an OC-48 or OC-48 STS circuit pack where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	Identify the STS-1 facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1 to 192
	EC1-slot#-port#	Identify the STS-1 facility on an EC-1 circuit pack where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	WAN-slot#-port#-sts#	Identify the STS-1 facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1 to 21 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-21
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path
	N (default)	Bridge will be denied if conditions on the node are inappropriate
DLTSWMATE	Y	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
	N (default)	The switch mate is not affected

Example input
Rollover an STS-1 connection on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS3 service and the OC-3x4 circuit pack.

Bridge the original OC-3 connection:

```
ENT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:CTAG1::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1,VALID=Y,SWMATE=OC3-10-2-1;
```

Backout of the bridged connection:

```
DLT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:CTAG1::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1,VALID=Y;
```

DLT-ROLL-STS3C

The Delete Rollover STS-3c command is used to delete a connection previously established by the ENT-ROLL-STS3C command. The Delete Rollover STS-3c command will return the connection to its original idle state.

Security level

Level 3

Input syntax

```
DLT-ROLL-STS3C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,DLTSWMATE=Domain];
```

Table 9-22
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	The second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
VALID	Command execution will be denied if the conditions on the node are inappropriate
DLTSWMATE	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit

Table 9-23
AID descriptions

AID type	Command-specific values	Purpose
STS3C facility AID	OC3-slot#-port#-sts#	Identify the STS-3c facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, or 10
	OC48-slot#-sts#	Identify the STS-3c facility on an OC-48 or OC-48 STS circuit pack where slot# =11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ..., 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# =11, 12 sts# = 1, 4, 7, 10, ..., 190
	WAN-slot#-port#-sts#	Identify the STS-3c facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-24
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path
	N (default)	Bridge will be denied if conditions on the node are inappropriate
DLTSWMATE	Y	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
	N (default)	The Switch Mate is not affected

Example input

Rollover an STS-3c connection on the OC-3x4 circuit pack in a 2WAYPR circuit between an OC-3 service and the OC-3x4 circuit pack.

Bridge the original OC-3 connection:

```
ENT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:CTAG1::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1:VALID=Y;
```

Backout of the bridge connection:

```
DLT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:CTAG1::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1,VALID=Y;
```

DLT-ROLL-STS12C

The Delete Rollover STS-12c command is used to delete a connection previously established by the ENT-ROLL-STS12c command. The Delete Rollover STS-12c command will return the connection to its original idle state.

Security level

Level 3

Input syntax

```
DLT-ROLL-STS12C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,DLTSWMATE=Domain];
```

Table 9-25
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	The second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
VALID	Command execution will be denied if the conditions on the node are inappropriate
DLTSWMATE	Delete switch mate. The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit

Table 9-26
AID descriptions

AID type	Command-specific values	Purpose
STS12C facility AID	OC-12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# =11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# =11, 12, sts# = 1, 13, 25, 37, ... 181
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2, sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM and RTO.

Table 9-27
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path
	N (default)	Bridge will be denied if conditions on the node are inappropriate
DLTSWMATE	Y	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
	N (default)	The Switch Mate is not affected

Example input

Rollover an STS-12c connection on the OC-12 circuit pack in a 2WAYPR circuit between an OC-12 service and the OC-12 circuit pack.

Bridge the original OC-12 connection:

```
ENT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG1::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1:VALID=Y;
```

Backout of the bridge connection:

```
DLT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG1::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1,VALID=Y;
```

DLT-ROLL-STS24C

The Delete Rollover STS-24c command is used to delete a connection previously established by the ENT-ROLL-STS24c command. The Delete Rollover STS-24c command will return the connection to its original idle state.

Security level

Level 3

Input syntax

```
DLT-ROLL-STS24C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,DLTSWMATE=Domain];
```

Table 9-28
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	The second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
VALID	Command execution will be denied if the conditions on the node are inappropriate
DLTSWMATE	Delete switch mate. The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit

Table 9-29
AID descriptions

AID type	Command-specific values	Purpose
STS24C facility AID	OC-48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 25, 49, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2, sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM and RTO.

Table 9-30
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path
	N (default)	Bridge will be denied if conditions on the node are inappropriate
DLTSWMATE	Y	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
	N (default)	The Switch Mate is not affected

Example input

Rollover an STS-24c connection on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original OC-48 connection:

```
ENT-ROLL-STS24C:OTTAWA:OC48-9-1,OC48-8-1:CTAG1::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1:VALID=Y;
```

Backout of the bridge connection:

```
DLT-ROLL-STS24C:OTTAWA:OC48-9-1,OC48-8-1:CTAG1::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1,VALID=Y;
```

DLT-ROLL-STS48C

The Delete Rollover STS-48c command is used to delete a connection previously established by the ENT-ROLL-STS48c command. The Delete Rollover STS-48c command will return the connection to its original idle state.

Security level

Level 3

Input syntax

```
DLT-ROLL-STS48C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,DLTSWMATE=Domain];
```

Table 9-31
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	The second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
VALID	Command execution will be denied if the conditions on the node are inappropriate
DLTSWMATE	Delete switch mate. The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit

Table 9-32
AID descriptions

AID type	Command-specific values	Purpose
STS48C facility AID	OC-48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 49, 97, ... 145

Table 9-33
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path
	N (default)	Bridge will be denied if conditions on the node are inappropriate
DLTSWMATE	Y	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
	N (default)	The Switch Mate is not affected

Example input
Rollover an STS-48c connection on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original OC-48 connection:

```
ENT-ROLL-STS48C:OTTAWA:OC48-9-1,OC48-8-1:CTAG1::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1:VALID=Y;
```

Backout of the bridge connection:

```
DLT-ROLL-STS48C:OTTAWA:OC48-9-1,OC48-8-1:CTAG1::2WAYPR:
RFROM=OC48-9-1,RTO=OC48-7-1,VALID=Y;
```

DLT-ROLL-VT1

The Delete Rollover VT1 command is used to delete a connection previously established by the ENT-ROLL-VT1 command. The Delete Rollover VT1 command will return the connection to its original idle state.

Security level

Level 3

Input syntax

```
DLT-ROLL-VT1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,DLTSWMATE=Domain];
```

Table 9-34
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
DLTSWMATE	If included in the command, the switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-35
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port# DS1-DFLT-grp	slot# = 4 to 10 port# = 1 to 12 grp = 1 to 3
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	DS1 service module port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	DS1 service module grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7 vt# = 1 to 4

Table 9-36
Parameter descriptions

Parameter	Possible value	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path
	N (default)	Bridge will be denied if conditions on the node are inappropriate
DLTSWMATE	Y	The switch mate reverts to the original switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR
	N (default)	The switch mate is not affected

Example input
Reverse the rollover of a VT1.5 connection on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS1 service and the OC-3x4 circuit pack.

Bridge the original OC-3 connection:

```
ENT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:A::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1,VALID=Y;
```

Backout of the bridged connection:

```
DLT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:B::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1,VALID=Y;
```

ED-ROLL-STS1

The Edit Rollover STS1 command is used to switch traffic from an existing connection to another connection previously established by an ENT-ROLL-STS1 command.

Security level

Level 3

Input syntax

```
ED-ROLL-STS1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,EDSWMATE=Domain]:SST;
```

Table 9-37
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
EDSWMATE	Used to switch the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
SST	Secondary state
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-38
AID descriptions

AID type	Command-specific values	Purpose
STS1 facility AID	DS3-slot#-port#	Identify the STS-1 facility on a DS3 circuit pack where slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	Identify the STS-1 facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 facility on an OC-48 or OC-48 STS circuit pack where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	Identify the STS-1 facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1 to 192
	EC1-slot#-port#	Identify the STS-1 facility on an EC-1 circuit pack where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	WAN-slot#-port#-sts#	Identify the STS-1 facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1 to 21 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-39
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
EDSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
SST	SWITCHED (default)	when switching from bridged to switched, SST=SWITCHED
	BRIDGED	when backing out from switched to bridged, SST=BRIDGED

Example input

Rollover an STS1 working connection on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS3 service and the OC-3x4 circuit pack.

Bridge the original OC-3 connection:

```
ENT-ROLL-STS1:OTTAWA:OC3-11-2-1,DS3-3-1:A::2WAYPR:
RFROM=OC3-11-2-1,RTO=OC3-11-3-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS1:OTTAWA:OC3-11-2-1,DS3-3-1:B::2WAYPR:
RFROM=OC3-11-2-1,RTO=OC3-11-3-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS1:OTTAWA:OC3-11-2-1,DS3-4-1:C::2WAYPR:
RFROM=OC3-11-2-1,RTO=OC3-11-3-1;
```

ED-ROLL-STS3C

The Edit Rollover STS-3c command is used to switch traffic from an existing connection to another connection previously established by an ENT-ROLL-STS3C command.

Security level

Level 3

Input syntax

```
ED-ROLL-STS3C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,EDSWMATE=Domain]:SST;
```

Table 9-40
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
EDSWMATE	Used to switch the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
SST	Secondary state
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-41
AID descriptions

AID type	Command-specific values	Purpose
STS3C facility AID	OC3-slot#-port#-sts#	Identify the STS-3c facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, or 10
	OC48-slot#-sts#	Identify the STS-3c facility on an OC-48 or OC-48 STS circuit pack where slot# =11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ..., 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# =11, 12 sts# = 1, 4, 7, 10, ..., 190
	WAN-slot#-port#-sts#	Identify the STS-3c facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-42
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
EDSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
SST	SWITCHED (default)	when switching from bridged to switched, SST=SWITCHED
	BRIDGED	when backing -out from switched to bridged, SST=BRIDGED

Example input

Rollover an STS-3c working connection on the OC-3x4 circuit pack in a 2WAYPR circuit between an OC-3 service and the OC-3x4 circuit pack.

Bridge the original OC-3 working connection

```
ENT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:D::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-8-1-1,VALID=Y;
```

Switch to the bridge connection

```
ED-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:B::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-8-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection

```
CMMT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:C::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1;
```

ED-ROLL-STS12C

The Edit Rollover STS-12c command is used to switch traffic from an existing connection to another connection previously established by an ENT-ROLL-STS12c command.

Security level

Level 3

Input syntax

```
ED-ROLL-STS12C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=domain,RTO=domain[,VALID=Domain][,EDSWMATE=Domain]:SST;
```

Table 9-43
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
EDSWMATE	Used to switch the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
SST	Secondary state
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-44
AID descriptions

AID type	Command-specific values	Purpose
STS12C facility AID	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# =11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 13, 25, 37, ... 181
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM and RTO.

Table 9-45
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Table 9-45 (continued)
Parameter descriptions

Parameter	Possible values	Description
EDSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
SST	SWITCHED (default)	when switching from bridged to switched, SST=SWITCHED
	BRIDGED	when backing -out from switched to bridged, SST=BRIDGED

Example input

Rollover an STS-12c working connection on the OC-12 circuit pack in a 2WAYPR circuit between an OC-12 service and the OC-12 circuit pack.

Bridge the original OC-12 working connection

```
ENT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG12::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-8-1-1,VALID=Y;
```

Switch to the bridge connection

```
ED-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG12::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-8-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection

```
CMMT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:CTAG12::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1;
```

ED-ROLL-STS24C

The Edit Rollover STS-24c command is used to switch traffic from an existing connection to another connection previously established by an ENT-ROLL-STS24c command.

Security level

Level 3

Input syntax

```
ED-ROLL-STS24C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,EDSWMATE=Domain]:SST;
```

Table 9-46
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
EDSWMATE	Used to switch the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
SST	Secondary state
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-47
AID descriptions

AID type	Command-specific values	Purpose
STS24C facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 25, 49, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM and RTO.

Table 9-48
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
EDSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
SST	SWITCHED (default)	when switching from bridged to switched, SST=SWITCHED
	BRIDGED	when backing -out from switched to bridged, SST=BRIDGED

Example input

Rollover an STS-24c working connection on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original OC-48 working connection

```
ENT-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:CTAG12::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-8-1-1,VALID=Y;
```

Switch to the bridge connection

```
ED-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:CTAG12::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-8-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection

```
CMMT-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:CTAG12::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1;
```

ED-ROLL-STS48C

The Edit Rollover STS-48c command is used to switch traffic from an existing connection to another connection previously established by an ENT-ROLL-STS48c command.

Security level

Level 3

Input syntax

```
ED-ROLL-STS48C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,EDSWMATE=Domain]:SST;
```

Table 9-49
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
EDSWMATE	Used to switch the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
SST	Secondary state
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-50
AID descriptions

AID type	Command-specific values	Purpose
STS24C facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 49, 97, ... 145

Table 9-51
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
EDSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
SST	SWITCHED (default)	when switching from bridged to switched, SST=SWITCHED
	BRIDGED	when backing -out from switched to bridged, SST=BRIDGED

Example input

Rollover an STS-48c working connection on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original OC-48 working connection

```
ENT-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:CTAG12::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-8-1-1,VALID=Y;
```

Switch to the bridge connection

```
ED-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:CTAG12::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-8-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection

```
CMMT-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:CTAG12::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1;
```

ED-ROLL-VT1

The Edit Rollover VT1 command is used to switch traffic from an existing connection to another connection previously established by an ENT-ROLL-VT1 command.

Security level

Level 3

Input syntax

```
ED-ROLL-VT1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,EDSWMATE=Domain]:SST;
```

Table 9-52
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
EDSWMATE	Used to switch the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR
SST	Secondary state
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-53
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port# DS1-DFLT-grp	slot# = 4 to 10 port# = 1 to 12, grp = 1 to 3
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	DS1 service module port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7 vt# = 1 to 4

Table 9-54
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
EDSWMATE	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.
SST	SWITCHED (default)	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing -out from switched to bridged, SST=BRIDGED

Example input

Rollover a VT1.5 working connection on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS1 service and the OC-3x4 circuit pack.

Bridge the original working OC-3 connection:

```
ENT-ROLL-VT1:OTTAWA:OC3-10-2-1-7-1,DS1-4-4:A::2WAYPR:
RFROM=OC3-10-2-1-7-1,RTO=OC3-10-3-1-7-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-VT1:OTTAWA:OC3-10-2-1-7-1,DS1-4-4:B::2WAYPR:
RFROM=OC3-10-2-1-7-1,RTO=OC3-10-3-1-7-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-VT1:OTTAWA:OC3-10-2-1-7-1,DS1-4-4:C::2WAYPR:
RFROM=OC3-10-2-1-7-1,RTO=OC3-10-3-1-7-1;
```

ENT-ROLL-STS1

The Enter Rollover STS-1 command is used to define a new connection to which to rollover an existing termination point in an STS-1 path.

If you try to execute an inservice rollover command on a 1WAYPR multicast cross-connect, you get the message “Status, data not consistent”. To rollover a 1WAYPR multicast cross-connect, you must

- convert each 1WAYPR multicast cross-connect to a 1WAY cross-connect with the ED-CRS command
- rollover the endpoint of each 1WAY cross-connect
- convert each 1WAY cross-connect back to a 1WAYPR cross-connect with the ED-CRS command

  Note: Rollovers must be performed one connection at a time. Bulk rollovers are not supported.

Security level

Level 3

Input syntax

```
ENT-ROLL-STS1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,SWMATE=AID];
```

Table 9-55
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
SWMATE	Used to bridge the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-56
AID descriptions

AID type	Command-specific values	Purpose
STS1 facility AID	DS3-slot#-port#	Identify the STS-1 facility on a DS3 circuit pack where slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	Identify the STS-1 facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 facility on an OC-48 or OC-48 STS circuit pack where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	Identify the STS-1 facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1 to 192
	EC1-slot#-port#	Identify the STS-1 facility on an EC-1 circuit pack where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	WAN-slot#-port#-sts#	Identify the STS-1 facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1 to 21 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM, RTO, and SWMATE.

Table 9-57
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS1 connection and its switch mate on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS3 service and the OC-3x4 circuit pack.

Bridge the original working OC-3 connection:

```
ENT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:A::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:B::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-3-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:C::2WAYPR:
RFROM=OC3-9-2-,RTO=OC3-9-3-1;
```

Bridge the original switch mate OC-3 connection:

```
ENT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:E::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-2-1,VALID=Y,
SWMATE=OC3-10-2-1;
```

Switch to the bridge connection:

```
ED-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:F::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-2-1,VALID=Y,
EDSWMATE=Y:SWITCHED;
```

Remove the original switch mate OC-3 connection:

```
CMMT-ROLL-STS1:OTTAWA:OC3-9-2-1,DS3-3-1:G::2WAYPR:
RFROM=OC3-9-2-1,RTO=OC3-9-2-1,CMMTSWMATE=Y;
```

ENT-ROLL-STS3C

The Enter Rollover STS3C command is used to define a new connection to which to rollover an existing termination point in a STS-3c path.

If you try to execute an inservice rollover command on a 1WAYPR multicast cross-connect, you get the message "Status, data not consistent". To rollover a 1WAYPR multicast cross-connect, you must

- convert each 1WAYPR multicast cross-connect to a 1WAY cross-connect with the ED-CRS command
- rollover the endpoint of each 1WAY cross-connect
- convert each 1WAY cross-connect back to a 1WAYPR cross-connect with the ED-CRS command

Security level

Level 3

Input syntax

```
ENT-ROLL-STS3C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,SWMATE=AID];
```

Table 9-58
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
SWMATE	Used to bridge the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-59
AID descriptions

AID type	Command-specific values	Purpose
STS3C facility AID	OC3-slot#-port#-sts#	Identify the STS-3c facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, or 10
	OC48-slot#-sts#	Identify the STS-3c facility on an OC-48 or OC-48 STS circuit pack where slot# =11, 12 for OC-48, 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ..., 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# =11, 12 sts# = 1, 4, 7, 10, ..., 190
	WAN-slot#-port#-sts#	Identify the STS-3c facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where, slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM, RTO, and SWMATE.

Table 9-60
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS-3c connection and its switch mate on the OC-3x4 circuit pack in a 2WAYPR circuit between an OC-3 service and the OC-3x4 circuit pack.

Bridge the original working OC-3 connection:

```
ENT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-10-1-1:A::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:B::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:C::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1;
```

Bridge the original switch mate OC-3 connection:

```
ENT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-10-1-1:D::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-7-1-1,VALID=Y,SWMATE=OC3-6-1-1;
```

Switch to the bridge connection:

```
ED-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:E::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-9-1-1,VALID=Y,EDSWMATE=Y:SWITCHED;
```

Remove the original switch mate connection:

```
CMMT-ROLL-STS3C:OTTAWA:OC3-9-1-1,OC3-8-1-1:F::2WAYPR:
RFROM=OC3-9-1-1,RTO=OC3-9-1-1,CMMTSWMATE=Y;
```

ENT-ROLL-STS12C

The Enter Rollover STS12C command is used to define a new connection to which to rollover an existing termination point in a STS-12c path.

If you try to execute an inservice rollover command on a 1WAYPR multicast cross-connect, you get the message "Status, data not consistent". To rollover a 1WAYPR multicast cross-connect, you must

- convert each 1WAYPR multicast cross-connect to a 1WAY cross-connect with the ED-CRS command
- rollover the endpoint of each 1WAY cross-connect
- convert each 1WAY cross-connect back to a 1WAYPR cross-connect with the ED-CRS command

Security level

Level 3

Input syntax

```
ENT-ROLL-STS12C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,SWMATE=AID];
```

Table 9-61
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
SWMATE	Used to bridge the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-62
AID descriptions

AID type	Command-specific values	Purpose
STS12C facility AID	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# =11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 13, 25, 37, ... 181
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-63
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS12C connection and its switch mate on the OC-12 circuit pack in a 2WAYPR circuit between an OC-12 service and the OC-12 circuit pack.

Bridge the original working OC-12 connection:

```
ENT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-10-1-1:A::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:B::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:C::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1;
```

Bridge the original switch mate OC-12 connection:

```
ENT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-10-1-1:D::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-7-1-1,VALID=Y,SWMATE=OC12-6-1-1;
```

Switch to the bridge connection:

```
ED-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:E::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-9-1-1,VALID=Y,EDSWMATE=Y:SWITCHED;
```

Remove the original switch mate connection:

```
CMMT-ROLL-STS12C:OTTAWA:OC12-9-1-1,OC12-8-1-1:F::2WAYPR:
RFROM=OC12-9-1-1,RTO=OC12-9-1-1,CMMTSWMATE=Y;
```

ENT-ROLL-STS24C

The Enter Rollover STS24C command is used to define a new connection to which to rollover an existing termination point in a STS-24c path.

If you try to execute an inservice rollover command on a 1WAYPR multicast cross-connect, you get the message "Status, data not consistent". To rollover a 1WAYPR multicast cross-connect, you must

- convert each 1WAYPR multicast cross-connect to a 1WAY cross-connect with the ED-CRS command
- rollover the endpoint of each 1WAY cross-connect
- convert each 1WAY cross-connect back to a 1WAYPR cross-connect with the ED-CRS command

Security level

Level 3

Input syntax

```
ENT-ROLL-STS24C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,SWMATE=AID];
```

Table 9-64
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
SWMATE	Used to bridge the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-65
AID descriptions

AID type	Command-specific values	Purpose
STS24C facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 25, 49, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.

Table 9-66
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS24C connection and its switch mate on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original working OC-48 connection:

```
ENT-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-10-1-1:A::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:B::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:C::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1;
```

Bridge the original switch mate OC-48 connection:

```
ENT-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-10-1-1:D::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1,VALID=Y,SWMATE=OC48-6-1;
```

Switch to the bridge connection:

```
ED-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:E::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-9-1-1,VALID=Y,EDSWMATE=Y:SWITCHED;
```

Remove the original switch mate connection:

```
CMMT-ROLL-STS24C:OTTAWA:OC48-9-1-1,OC48-8-1-1:F::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-9-1-1,CMMTSWMATE=Y;
```

ENT-ROLL-STS48C

The Enter Rollover STS48C command is used to define a new connection to which to rollover an existing termination point in a STS-48c path.

If you try to execute an inservice rollover command on a 1WAYPR multicast cross-connect, you get the message "Status, data not consistent". To rollover a 1WAYPR multicast cross-connect, you must

- convert each 1WAYPR multicast cross-connect to a 1WAY cross-connect with the ED-CRS command
- rollover the endpoint of each 1WAY cross-connect
- convert each 1WAY cross-connect back to a 1WAYPR cross-connect with the ED-CRS command

Security level

Level 3

Input syntax

```
ENT-ROLL-STS48C:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,SWMATE=AID];
```

Table 9-67
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
SWMATE	Used to bridge the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-68
AID descriptions

AID type	Command-specific values	Purpose
STS48C facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# =11, 12 sts# = 1, 49, 97, ... 145

Table 9-69
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover an STS48C connection and its switch mate on the OC-48 STS circuit pack in a 2WAYPR circuit between an OC-48 STS circuit pack and another OC-48 STS circuit pack.

Bridge the original working OC-48 connection:

```
ENT-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-10-1-1:A::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:B::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1,VALID=Y:SWITCHED;
```

Remove the original working connection:

```
CMMT-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:C::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1;
```

Bridge the original switch mate OC-48 connection:

```
ENT-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-10-1-1:D::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-7-1-1,VALID=Y,SWMATE=OC48-6-1;
```

Switch to the bridge connection:

```
ED-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:E::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-9-1-1,VALID=Y,EDSWMATE=Y:SWITCHED;
```

Remove the original switch mate connection:

```
CMMT-ROLL-STS48C:OTTAWA:OC48-9-1-1,OC48-8-1-1:F::2WAYPR:
RFROM=OC48-9-1-1,RTO=OC48-9-1-1,CMMTSWMATE=Y;
```

ENT-ROLL-VT1

The Enter Rollover VT1 command is used to define a new connection to which to rollover an existing termination point in a VT1.5 path.

If you try to execute an inservice rollover command on a 1WAYPR multicast cross-connect, you get the message “Status, data not consistent”. To rollover a 1WAYPR multicast cross-connect, you must

- convert each 1WAYPR multicast cross-connect to a 1WAY cross-connect with the ED-CRS command
- rollover the endpoint of each 1WAY cross-connect
- convert each 1WAY cross-connect back to a 1WAYPR cross-connect with the ED-CRS command

  Note: Rollovers must be performed one connection at a time. Bulk rollovers are not supported.

Security level

Level 3

Input syntax

```
ENT-ROLL-VT1:[TID]:fromAID,toAID:CTAG::CCT:
RFROM=Domain,RTO=Domain[,VALID=Domain][,SWMATE=AID];
```

Table 9-70
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, a user created alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled (see Note)
RTO	AID RFROM is to be rolled to (see Note)
VALID	Command execution will be denied if the conditions on the node are inappropriate
SWMATE	Used to bridge the switch mate in a 1WAYPR, 2WAYPR, or 2WAYBR circuit
Note: When rolling a switch mate, RFROM=OLDSWMATE, RTO=NEWSWMATE.	

Table 9-71
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port# DS1-DFLT-grp	slot# = 4 to 10 port# = 1 to 12 grp = 1 to 3
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	DS1 service module port# = 1 to 84 hslot# = 1 to 10 hport# = 1 to 4
	DS1-1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	DS1 service module grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7 vt# = 1 to 4

Table 9-72
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
VALID	Y	Bridge will be performed regardless of the condition of the switched-to path.
	N (default)	Bridge will be denied if conditions on the node are inappropriate.

Example input

Rollover a VT1.5 working connection and its switch mate on the OC-3x4 circuit pack in a 2WAYPR circuit between a DS1 service and the OC-3x4 circuit pack.

Bridge the original working OC-3 connection:

```
ENT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:A::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1,VALID=Y;
```

Switch to the bridge connection:

```
ED-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:B::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1,VALID=Y;
```

Remove the original working connection:

```
CMMT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:C::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-3-1-7-1;
```

Bridge the original switch mate OC-3 connection:

```
ENT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:E::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-2-1-7-1,VALID=Y,
SWMATE=OC3-10-2-1-7-1;
```

Switch to the bridge connection:

```
ED-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:F::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-2-1-7-1,VALID=Y,
EDSWMATE=Y:SWITCHED;
```

Remove the original switch mate OC-3 connection:

```
CMMT-ROLL-VT1:OTTAWA:OC3-9-2-1-7-1,DS1-4-4:G::2WAYPR:
RFROM=OC3-9-2-1-7-1,RTO=OC3-9-2-1-7-1,CMMTSWMATE=Y;
```

RTRV-ROLL-STS1

The Retrieve Rollover STS-1 command is used to retrieve the status of connections operating at the STS-1 rate which are in the process of being rolled over.

Security level

Level 1

Input syntax

```
RTRV-ROLL-STS1:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
RFROM=Domain,RTO=Domain[,CKTID=Domain];
```

Note: ALL is a valid target identifier (TID).

Table 9-73
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The cross-connect end point to be rolled
RTO	The new cross-connect end point for RFROM
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 9-74
AID descriptions

AID type	Command-specific values	Purpose
STS1 facility AID	DS3-slot#-port# DS3-slot#-ALL DS3-ALL	Identify the STS-1 facility on a DS3 circuit pack where slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-1 facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	Identify the STS-1 facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-1 facility on an OC-48 or OC-48 STS circuit pack where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-1 facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the STS-1 facility on an EC-1 circuit pack where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	WAN-slot#-port#-sts# WAN-slot#-ALL WAN-ALL	Identify the STS-1 facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1 to 21 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.
	ALL	all STS-1 facilities

Table 9-75
Parameter descriptions

Parameter	Possible values	Description
CCT	Null (default)	Connections of any cross connect type
	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical
CKTID	String between 0 and 40 alphanumeric characters, enclosed in double quotes	Retrieve connections with the specified identifier. If a null string is specified, connections without an identifier are retrieved.
	ALL	Retrieve all connections regardless of their identifier

Example input

Retrieve the status of connections which are in the process of being rolled over for network element OTTAWA.

RTRV-ROLL-STS1:OTTAWA:ALL:CTAG12:::CKTID=ALL;

Response block syntax

The display response to the command RTRV-ROLL-STS1 is as follows:

```
Unprotected STS1 roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:<CKTID>
for example:
OC3-9-2-1,DS3-9-3:2WAY;DS3-9-3,DS3-9-12:BRIDGED
:CKTID=”OTTAWA-TORONTO”

UPSR Protected endpoint roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:
<SWMATE_RFROM>,<SWMATE_RTO>:<SST>:<CKTID>
for example:
OC3-9-2-1,DS3-9-1:2WAYPR:OC3-9-2-1,OC3-5-3-1:
BRIDGED:OC3-10-2-1,:IDLE:CKTID=”OTTAWA-TORONTO”
```

Table 9-76
Response parameters description

Parameter	Possible values	Description
fromAID, toAID, RFROM, RTO, SWMATE	DS3-slot#-port#	slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1 to 192
	EC1-slot#-port#	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID parameters. The WAN AID does not apply to RFROM, RTO, and SWMATE.
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be optical
	2WAYPR	2WAY path ring, fromAID must be optical
	2WAYBR	2WAY bridge ring, fromAID must be optical

Table 9-76 (continued)
Response parameters description

Parameter	Possible values	Description
SST	SWITCHED	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing -out from switched to bridged, SST=BRIDGED
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the connection, if one exists

RTRV-ROLL-STS3C

The Retrieve Rollover STS-3c command is used to retrieve the status of connections operating at the STS-3c rate which are in the process of being rolled over.

Security level

Level 1

Input syntax

```
RTRV-ROLL-STS3C:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
RFROM=Domain,RTO=Domain[,CKTID=Domain];
```

Note: ALL is a valid target identifier (TID).

Table 9-77
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 9-78
AID descriptions

AID type	Command-specific values	Purpose
STS-3c facility AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility on an OC-3 circuit pack where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	Identify the STS-3c facility on an OC-12 or OC-12x4 STS circuit pack where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7 or 10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-3c facility on an OC-48 or OC-48 STS circuit pack where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10,...to 46
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-3c facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1, 4, 7, 10, ... 190
	WAN-slot#-port#-sts# WAN-slot#-ALL WAN-ALL	Identify the STS-3c facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.
	ALL	all STS-3c facilities

Table 9-79
Parameter descriptions

Parameter	Possible values	Description
CCT	Null (default)	Connections of any cross connect type
	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be OC3
	2WAYPR	2WAY path ring, fromAID must be OC3
	2WAYBR	2WAY bridge ring, fromAID must be OC3
CKTID	String between 0 and 40 alphanumeric characters, enclosed in double quotes	Retrieve connections with the specified identifier. If a null string is specified, connections without an identifier are retrieved.
	ALL	Retrieve all connections regardless of their identifier

Example input

Retrieve the status of connections which are in the process of being rolled over for network element OTTAWA.

RTRV-ROLL-STS3C:OTTAWA:ALL:CTAG12:::CKTID=ALL;

Response block syntax

The display response to the command RTRV-ROLL-STS3C is as follows:

```
Unprotected STS-3c roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:<CKTID>
for example:
OC3-9-1-1,OC3-10-1-1:2WAY;OC3-10-1-1,OC3-7-1-1:BRIDGED
:CKTID=”OTTAWA-TORONTO”

UPSR Protected endpoint roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:
<SWMATE_RFROM>,<SWMATE_RTO>:<SST>:<CKTID>
for example:
OC3-9-1-1,OC3-7-1-1:2WAYPR:OC3-9-1-1,OC48-11-4:BRIDGED
:OC3-10-1-1,:IDLE:CKTID=”OTTAWA-TORONTO”
```

Table 9-80
Response parameters description

Parameter	Possible values	Description
fromAID, toAID RFROM, RTO, SWMATE	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, 10
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ...to 46
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 190
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID parameters. The WAN AID does not apply to the RFROM, RTO, and SWMATE parameters.
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, fromAID must be OC3
	2WAYPR	2WAY path ring, fromAID must be OC3
	2WAYBR	2WAY bridge ring, fromAID must be OC3
SST	SWITCHED	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing -out from switched to bridged, SST=BRIDGED
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the connection, if one exists

RTRV-ROLL-STS12C

The Retrieve Rollover STS-12c command is used to retrieve the status of connections operating at the STS-12c rate which are in the process of being rolled over.

Security level

Level 1

Input syntax

```
RTRV-ROLL-STS12C:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
RFROM=Domain,RTO=Domain[,CKTID=Domain];
```

Note: ALL is a valid target identifier (TID).

Table 9-81
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
AID	The STS-12c path facility to act upon
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 9-82
AID descriptions

AID type	Command-specific values	Purpose
fromAID, toAID	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.
	ALL	all STS-12c facilities

Table 9-83
Parameter descriptions

Parameter	Possible values	Description
CCT	Null (default)	Connections of any cross connect type
	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring
	2WAYPR	2WAY path ring
	2WAYBR	2WAY bridge ring
CKTID	String between 0 and 40 alphanumeric characters, enclosed in double quotes	Retrieve connections with the specified identifier. If a null string is specified, connections without an identifier are retrieved.
	ALL	Retrieve all connections regardless of their identifier

Example input

Retrieve the status of connections which are in the process of being rolled over for network element OTTAWA.

RTRV-ROLL-STS12C:OTTAWA:ALL:CTAG12:::CKTID=ALL;

Response block syntax

The display response to the command RTRV-ROLL-STS12C is as follows:

```
Unprotected STS-12c roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:<CKTID>
for example:
OC12-9-1-1,OC12-10-1-1:2WAY;OC12-10-1-1,OC12-7-1-1:BRIDGED
:CKTID=”OTTAWA-TORONTO”

UPSR Protected endpoint roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:
<SWMATE_RFROM>,<SWMATE_RTO>:<SST>:<CKTID>
for example:
OC12-9-1-1,OC12-7-1-1:2WAYPR:OC12-9-1-1,OC48-11-1-1
:BRIDGED:OC12-10-1-1,:IDLE:CKTID=”OTTAWA-TORONTO”
```

Table 9-84
Response parameters description

Parameter	Possible values	Description
fromAID, toAID RFROM, RTO, SWMATE	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2, sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM, RTO, and SWMATE.
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring
	2WAYPR	2WAY path ring
	2WAYBR	2WAY bridge ring

Table 9-84 (continued)
Response parameters description

Parameter	Possible values	Description
SST	SWITCHED	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing out from switched to bridged, SST=BRIDGED
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the connection, if one exists

RTRV-ROLL-STS24C

The Retrieve Rollover STS-24c command is used to retrieve the status of connections operating at the STS-24c rate which are in the process of being rolled over.

Security level

Level 1

Input syntax

```
RTRV-ROLL-STS24C:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
RFROM=Domain,RTO=Domain[,CKTID=Domain];
```

Note: ALL is a valid target identifier (TID).

Table 9-85
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
AID	The STS-24c path facility to act upon
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 9-86
AID descriptions

AID type	Command-specific values	Purpose
fromAID, toAID	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 25, 49, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to the RFROM and RTO fields.
	ALL	all STS-24c facilities

Table 9-87
Parameter descriptions

Parameter	Possible values	Description
CCT	Null (default)	Connections of any cross connect type
	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring
	2WAYPR	2WAY path ring
	2WAYBR	2WAY bridge ring
CKTID	String between 0 and 40 alphanumeric characters, enclosed in double quotes	Retrieve connections with the specified identifier. If a null string is specified, connections without an identifier are retrieved.
	ALL	Retrieve all connections regardless of their identifier

Example input

Retrieve the status of connections which are in the process of being rolled over for network element OTTAWA.

RTRV-ROLL-STS24C:OTTAWA:ALL:CTAG12:::CKTID=ALL;

Response block syntax

The display response to the command RTRV-ROLL-STS24C is as follows:

```
Unprotected STS-24c roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:<CKTID>
for example:
OC48-9-1-1,OC48-10-1-1:2WAY;OC48-10-1-1,OC48-7-1-1:BRIDGED
:CKTID=”OTTAWA-TORONTO”

UPSR Protected endpoint roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:
<SWMATE_RFROM>,<SWMATE_RTO>:<SST>:<CKTID>
for example:
OC48-9-1-1,OC48-7-1-1:2WAYPR:OC48-9-1-1,OC48-11-1-1
:BRIDGED:OC48-10-1-1,:IDLE:CKTID=”OTTAWA-TORONTO”
```

Table 9-88
Response parameters description

Parameter	Possible values	Description
fromAID, toAID RFROM, RTO, SWMATE	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, 49, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2, sts# = 1 ***Note:*** The WAN AID only applies to the fromAID and toAID fields. The WAN AID does not apply to RFROM, RTO, and SWMATE.
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring
	2WAYPR	2WAY path ring
	2WAYBR	2WAY bridge ring
SST	SWITCHED	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing -out from switched to bridged, SST=BRIDGED
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the connection, if one exists

RTRV-ROLL-STS48C

The Retrieve Rollover STS-48c command is used to retrieve the status of connections operating at the STS-48c rate which are in the process of being rolled over.

Security level

Level 1

Input syntax

```
RTRV-ROLL-STS48C:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
RFROM=Domain,RTO=Domain[,CKTID=Domain];
```

Note: ALL is a valid target identifier (TID).

Table 9-89
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
AID	The STS-48c path facility to act upon
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 9-90
AID descriptions

AID type	Command-specific values	Purpose
fromAID, toAID	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 49, 97, ... 145
	ALL	all STS-48c facilities

Table 9-91
Parameter descriptions

Parameter	Possible values	Description
CCT	Null (default)	Connections of any cross connect type
	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring
	2WAYPR	2WAY path ring
	2WAYBR	2WAY bridge ring
CKTID	String between 0 and 40 alphanumeric characters, enclosed in double quotes	Retrieve connections with the specified identifier. If a null string is specified, connections without an identifier are retrieved.
	ALL	Retrieve all connections regardless of their identifier

Example input

Retrieve the status of connections which are in the process of being rolled over for network element OTTAWA.

RTRV-ROLL-STS48C:OTTAWA:ALL:CTAG12:::CKTID=ALL;

Response block syntax

The display response to the command RTRV-ROLL-STS48C is as follows:

```
Unprotected STS-48c roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:<CKTID>
for example:
OC48-9-1-1,OC48-10-1-1:2WAY;OC48-10-1-1,OC48-7-1-1:BRIDGED
:CKTID=”OTTAWA-TORONTO”

UPSR Protected endpoint roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:
<SWMATE_RFROM>,<SWMATE_RTO>:<SST>:<CKTID>
for example:
OC48-9-1-1,OC48-7-1-1:2WAYPR:OC48-9-1-1,OC48-11-1-1
:BRIDGED:OC48-10-1-1,:IDLE:CKTID=”OTTAWA-TORONTO”
```

Table 9-92
Response parameters description

Parameter	Possible values	Description
fromAID, toAID RFROM, RTO, SWMATE	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 49, 97, ... 145
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring
	2WAYPR	2WAY path ring
	2WAYBR	2WAY bridge ring
SST	SWITCHED	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing -out from switched to bridged, SST=BRIDGED
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the connection, if one exists

RTRV-ROLL-VT1

The Retrieve Rollover VT1 command is used to retrieve the status of connections operating at the VT1.5 rate which are in the process of being rolled over.

Security level

Level 1

Input syntax

```
RTRV-ROLL-VT1:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
RFROM=Domain,RTO=Domain[,CMMTSWMATE=Domain]
[,CKTID=Domain];
```

Note: ALL is a valid target identifier (TID).

Table 9-93
Syntax definition

Field	Purpose
TID	Target identifier, the network element to which the command is directed
fromAID	One of the original cross-connection endpoints
toAID	Second of the original cross-connection endpoints
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
CCT	Connection type to be rolled
RFROM	The fromAID or toAID to be rolled
RTO	AID RFROM is to be rolled to
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 9-94
AID descriptions

AID type	Command-specific values	Purpose
fromAID, toAID	ALL	all VT1.5 facilities
	DS1-slot#-port# DS1-slot#-ALL DS1-ALL	slot# = 4 to 10 port# = 1 to 12
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28

Table 9-94 (continued)
AID descriptions

AID type	Command-specific values	Purpose
	DS1-1-port#-%HLINK-OC3-hslot#-hport# DS1-1-ALL-%HLINK-OC3-hslot#-hport#	DS1 service module port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	DS1 service module grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt OC3-slot#-port#-sts#-ALL OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL OC12-slot#-port#-ALL OC12-ALL	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL OC48-slot#-ALL OC48-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-ALL EC1-slot#-ALL EC1-ALL	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7 vt# = 1 to 4
SMART AID	DS1-DFLT-grp#	grp# = 1 to 3

Use the DFLT-# smart AID to retrieve one of three sets of 28 DS1s to VT1.5s within an STS-1. For each possible DFLT-# value, a specific set of 28 ports is cross-connected to an STS-1. For example, the DFLT-2 set of DS1 ports can be mapped to STS1-3. This causes DS1 ports 29 through 56 to be cross-connected to STS1-3. Table 9-95 shows the DFLT-# smart AID value and the corresponding ports.

Table 9-95
DFLT-# smart AID values

DFLT-#	Ports	Equivalent facilities
1	1 to 28	DS1-4-1 — DS1-6-4
2	29 to 56	DS1-6-5 — DS1-8-8
3	57 to 84	DS1-8-9 — DS1-10-12

Table 9-96
Parameter descriptions

Parameter	Possible values	Description
CCT	Null (default)	Connections of any cross connect type
	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, FromAID must be OC3
	2WAYPR	2WAY path ring, FromAID must be OC3
	2WAYBR	2WAY bridge ring, FromAID must be OC3
CKTID	String between 0 and 40 alphanumeric characters, enclosed in double quotes	Retrieve connections with the specified identifier. If a null string is specified, connections without an identifier are retrieved.
	ALL	Retrieve all connections regardless of their identifier

Example input
Retrieve the status of connections which are in the process of being rolled over for network element OTTAWA.

```
RTRV-ROLL-VT1:OTTAWA:ALL:CTAG12:::CKTID=ALL;
```

Response block syntax

The display response to the command RTRV-ROLL-VT1 is as follows:

```
Unprotected VT1 roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:<CKTID>
for example:
OC3-9-2-3-1-1,DS1-4-1:2WAY;DS1-4-1,DS1-6-5:BRIDGED
:CKTID=”OTTAWA-TORONTO”

UPSR Protected endpoint roll
<fromAID>,<toAID>:<CCT>:<RFROM>,<RTO>:<SST>:
<SWMATE_RFROM>,<SWMATE_RTO>:<SST>:<CKTID>
for example:
OC3-9-2-3-1-1,DS1-4-1:2WAYPR:OC3-9-2-3-1-1,OC48-11-3-1-1:
BRIDGED:OC3-10-2-3-1-4,IDLE:CKTID=”OTTAWA-TORONTO”
```

Table 9-97
Response parameters description

Parameter	Possible values	Description
fromAID, toAID, RFROM, RTO, SWMATE	DS1-slot#-port#	slot# = 4 to 10 port# = 1 to 12
	DS1-slot#-port#-t1#	slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4

Table 9-97 (continued)
Response parameters description

Parameter	Possible values	Description
fromAID, toAID, RFROM, RTO, SWMATE	OC12-slot#-port#-sts#-vtg#-vt#	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt#	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	EC1-slot#-port#-vtg#-vt#	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7 vt# = 1 to 4
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection
	1WAYPR	1WAY path ring, FromAID must be OC3
	2WAYPR	2WAY path ring, FromAID must be OC3
	2WAYBR	2WAY bridge ring, FromAID must be OC3
SST	SWITCHED	When switching from bridged to switched, SST=SWITCHED
	BRIDGED	When backing -out from switched to bridged, SST=BRIDGED
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the connection, if one exists

Facility test signal generation and loopback detailed command descriptions

This chapter is an alphabetical summary of all the TL1 commands for the management of facility internal test equipment and facility loopbacks. The command descriptions in this chapter identify each command, and describe the command purpose, syntax, parameters, variables, and response. The following table lists all of the commands in this chapter.

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CONN-TSTSIG-T1

The Connect Test Signal T1 command instructs the network element to connect a test signal to the DS1 facility or monitor a connected signal. To retrieve error count on the monitored signal, use the RTRV-T1 command. Internal test equipment connected with the CONN-TSTSIG -T1 remains connected until it is released using the DISC-TSTSIG-T1 command (see page 10-5).

Before internal test equipment can be connected to a DS1 facility, the facility must be put in an out-of-service state (RMV-T1 command).

In order to clear the error count on the internal signal monitor, disconnect the internal test equipment by using the DISC-TSTSIG -T1 command.

Security level

Level 2

Input syntax

```
CONN-TSTSIG-T1:[TID]:AID:CTAG::[SRC],[DIRN],[TSIG],[ERR];
```

Table 10-1
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
SRC DIRN TSIG ERR	See the Parameter descriptions table for details

Table 10-2
AID descriptions

AID type	Command-specific values	Purpose
DS1	DS1-slot#-port#	Identify the DS1 facility where slot# = 4 to 10, port# = 1 to 12
DSM	DS1-1-port#-%HLINK-OC3-hslot#-hport#	Identify the DS1 facility on the DS1 service module where port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Table 10-3
Parameter descriptions

Parameter	Possible values	Description
SRC	SRC	Connect the internal signal generator to the facility (default)
	MON	Connect the internal signal monitor to the facility
DIRN	IN	Default. Internal signal generator outputs a test signal in the direction of the optics. Internal signal monitor monitors the signal from the copper (DS1) side of the facility.
	OUT	Internal signal generator outputs a test signal to the copper (DS1) side of the facility. Internal signal monitor monitors the signal from the direction of the optics.
TSIG		The test signal to be sent for or monitored is:
	PR2017	Default: a pseudo-random pattern: $x^{20} + x^{17} + 1$ (default)
	PR2003	a pseudo-random pattern: $x^{20} + x^{3} + 1$ (see Note)
	PR1514	a pseudo-random pattern: $x^{15} + x^{14} + 1$
	PR2318	a pseudo-random pattern: $x^{23} + x^{18} + 1$
	FIX	the fixed Daly pattern
	<number>	a fixed pattern made by endlessly repeating the binary version of the number specified by the user. The number can be anything between 0 and 16,777,215
		Note: This pattern is not the pattern usually referred to as PR2003 in North American DS1 test sets. It is a rare variant that has been included for completeness. To generate a PR2003 pattern compatible with a North American test set, the PR2017 pattern should be used without zero suppression enabled.
ERR	0 to 1023	The number of errors to be inserted in one second. The default is 0. (This parameter is valid only if the src is SRC.)

Example input

At the SEATTLE network element, attach an internal DS1 signal generator to DS1 facility 7 on the slot 4 DS1 mapper. Send the test signal with a pattern of $x^{20} + x^{17} + 1$ and with 10 errors onto the DS1 copper:

```
CONN-TSTSIG-T1:SEATTLE:DS1-4-7:CTAG12::SRC,OUT,,10;
```

Monitor the returned pattern:

```
CONN-TSTSIG-T1:SEATTLE:DS1-4-7:CTAG12::MON,IN,,10;
```

DISC-TSTSIG-T1

The Disconnect Test Signal T1 command instructs the network element to disconnect the DS1 test signal from the facility or stop monitoring a connected DS1 signal. All internal test equipment connected to a facility is disconnected.

Security level

Level 2

Input syntax

```
DISC-TSTSIG-T1:[TID]:AID:CTAG;
```

Table 10-4
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-5
AID descriptions

AID type	Command-specific values	Purpose
DS1	DS1-slot#-port#	Identify the DS1 facility where slot# =4 to 10 port# =1 to 12
DSM	DS1-1-port#-%HLINK-OC3-hslot#-hport#	Identify the T1 facility on the DS1 service module where port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Example input

Remove all internal test equipment on DS1 facility 7 on the DS1 in slot 4:

```
DISC-TSTSIG-T1:SEATTLE:DS1-4-7:CTAG12;
```

OPR-LPBK-EC1

The Operate Loopback EC-1 facility command instructs the equipment to set the specified EC-1 facility into loopback mode. Two types of loopbacks are provided: terminal and facility.

The facility must be put in an out-of-service state before a loopback will be permitted (see the RMV-EC1 command).

To release the facility loopback, use the RLS-LPBK-EC1 command.

Security level

Level 2

Input syntax

```
OPR-LPBK-EC1:TID:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-6
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-7
AID descriptions

AID type	Command-specific values	Purpose
EC-1	EC1-slot#-port#	slot# = 3, 5, 7, or 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12

Table 10-8
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	A signal received on the copper side of the facility is looped back towards the copper.
	TERMINAL	A signal received on the optical side of the facility is looped back towards the optics.

Example input

At the SEATTLE network element, for the port 11 facility on the slot 5 EC-1 mapper, loopback the incoming signal from the optics back on to the optics:

```
OPR-LPBK-EC1:SEATTLE:EC1-5-11:CTAG::,,,TERMINAL;
```

At the SEATTLE network element, for the port 11 facility on the slot 5 EC-1 mapper, loopback the incoming signal from the copper back on to the copper:

```
OPR-LPBK-EC1:SEATTLE:EC1-5-11:CTAG::,,,FACILITY;
```

OPR-LPBK-ETH

The Operate Loopback Ethernet command operates a facility or terminal loopback on an Ethernet facility (LAN port) of a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack. The facility must be in an out-of-service management (OOS-MA) state before you can operate a loopback. See RMV-ETH on page 7-91 for information about putting an Ethernet facility in an OOS-MA state. See RLS-LPBK-ETH on page 10-21 for information about releasing a loopback.

Security level

Level 2

Input syntax

```
OPR-LPBK-ETH:TID:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-9
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Ethernet facility to put in loopback mode.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-10
AID descriptions

AID type	Command-specific values	Purpose
ETH	ETH-slot#-port#	Identify the Ethernet facility where slot# = 3 to 10 port# = 1 or 2

Table 10-11
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	The Ethernet signal received on the LAN port is sent back out.
	TERMINAL	The SONET signal received on the corresponding WAN port is sent back out.
Note 1: To operate a terminal loopback, the LAN port must be in full duplex mode. See ED-ETH on page 7-21 to change the duplex mode of a LAN port. ***Note 2:*** During a terminal loopback, the LAN port sends a link pulse, even though the port is out-of-service. Also, the INFRAMES, INOCTETS, OUTFRAMES, and OUTOCTETS measurements of the LAN port increment, in relation to the number of packets received by the WAN port.		

Example input

Operate a facility loopback on LAN port 1 of the 2x100BT-P2P circuit pack in slot 7 of network element OTTAWA:

```
OPR-LPBK-ETH:OTTAWA:ETH-7-1:CTAG::,,,FACILITY;
```

OPR-LPBK-FC

The Operate Loopback Fibre Channel command operates a facility or terminal loopback on a Fibre Channel facility (LAN port) of a 2xGigE/FC-P2P circuit pack. The facility must be in an out-of-service management (OOS-MA) state before you can operate a loopback. See RMV-ETH on page 7-91 for information about putting an Fibre Channel facility in an OOS-MA state. See RLS-LPBK-ETH on page 10-21 for information about releasing a loopback.

Security level

Level 2

Input syntax

```
OPR-LPBK-FC:TID:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-12
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Fibre Channel facility to put in loopback mode.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-13
AID descriptions

AID type	Command-specific values	Purpose
FC	FC-slot#-port#	Identify the Fibre Channel facility where slot# = 3 to 10 port# = 1 or 2

Table 10-14
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	The Fibre Channel signal received on the LAN port is sent back out.
	TERMINAL	The SONET signal received on the corresponding WAN port is sent back out.
Note 1: To operate a terminal loopback, the LAN port must be in full duplex mode. See ED-ETH on page 7-21 to change the duplex mode of a LAN port. ***Note 2:*** During a terminal loopback, the LAN port sends a link pulse, even though the port is out-of-service. Also, the INFRAMES, INOCTETS, OUTFRAMES, and OUTOCTETS measurements of the LAN port increment, in relation to the number of packets received by the WAN port.		

Example input

Operate a facility loopback on LAN port 1 of the 2xGigE/FC-P2P circuit pack in slot 7 of network element OTTAWA:

```
OPR-LPBK-FC:OTTAWA:FC-7-1:CTAG::,,,FACILITY;
```

OPR-LPBK-OC3

The Operate Loopback OC3 facility command instructs the equipment to set the specified OC3 facility into loopback mode. To release the facility loopback, use the RLS-LPBK-OC3 command. Loopback modes supported include terminal and facility. The facility must be put in an out-of-service state before a loopback is permitted (see the RMV-OC3 command).

Security level

Level 2

Input syntax

```
OPR-LPBK-OC3:[TID]:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-15
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-16
AID descriptions

AID type	Command-specific values	Details
OC-3	OC3-slot#-port#	slot# = 3 to 10 port# = 1 to 4 for OC-3x4 port# = 1 for OC-3

Table 10-17
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	The incoming signal into the OC-3 circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-3 circuit pack is connected to the associated incoming receiver.

Example input

At the SEATTLE network element, loopback the incoming signal to the associated return transmitter on the specified OC-3 circuit pack:

```
OPR-LPBK-OC3:SEATTLE:OC3-3-1:CTAG23::,,,FACILITY;
```

OPR-LPBK-OC12

The Operate Loopback OC12 facility command instructs the equipment to set the specified OC12 facility into loopback mode. To release the facility loopback, use the RLS-LPBK-OC12 command. Loopback modes supported include terminal and facility. The facility must be put in an out-of-service state before a loopback is permitted (see the RMV-OC12 command).

Security level

Level 2

Input syntax

```
OPR-LPBK-OC12:[TID]:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-18
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-19
AID descriptions

AID type	Command-specific values	Details
OC-12	OC12-slot#-port#	slot# = 3 to 12 port# = 1 for OC-12, 1 to 4 for OC-12x4 STS

Table 10-20
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	The incoming signal into the OC-12 or OC-12x4 STS circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-12 or OC-12x4 STS circuit pack is connected to the associated incoming receiver.

Example input

At the SEATTLE network element, loopback the signal leaving the OC-12 circuit pack is connected to the associated incoming receiver:

```
OPR-LPBK-OC12:SEATTLE:OC12-11:CTAG23::,,,TERMINAL;
```

OPR-LPBK-OC48

The Operate Loopback OC48 facility command instructs the equipment to set the specified OC48 facility into loopback mode. To release the facility loopback, use the RLS-LPBK-OC48 command. Loopback modes supported include terminal and facility. The facility must be put in an out-of-service state before a loopback is permitted (see the RMV-OC48 command).

Security level

Level 2

Input syntax

```
OPR-LPBK-OC48:[TID]:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-21
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-22
AID descriptions

AID type	Command-specific values	Details
OC-48	OC48-slot#	slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS

Table 10-23
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	The incoming signal into the OC-48 or OC-48 STS circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-48 or OC-48 STS circuit pack is connected to the associated incoming receiver.

Example input

At the SEATTLE network element, loopback the signal leaving the OC-48 circuit pack is connected to the associated incoming receiver:

```
OPR-LPBK-OC48:SEATTLE:OC48-12:CTAG23::,,,TERMINAL;
```

OPR-LPBK-OC192

The Operate Loopback OC192 facility command instructs the equipment to set the specified OC192 facility into loopback mode. To release the facility loopback, use the RLS-LPBK-OC192 command. Loopback modes supported include terminal and facility. The facility must be put in an out-of-service state before a loopback is permitted (see the RMV-OC192 command).

Security level

Level 2

Input syntax

```
OPR-LPBK-OC192:[TID]:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-24
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback type

Table 10-25
AID descriptions

AID type	Command-specific values	Details
OC-192	OC192-slot#	slot # = 11 or 12

Table 10-26
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	The incoming signal into the OC-192 circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-192 circuit pack is connected to the associated incoming receiver.

Example input

At the SEATTLE network element, loopback the signal leaving the OC-192 circuit pack is connected to the associated incoming receiver:

```
OPR-LPBK-OC192:SEATTLE:OC192-12:CTAG23::,,,TERMINAL;
```

OPR-LPBK-T1

The Operate Loopback T1 facility command instructs the equipment to set the specified DS1 facility into loopback mode. Two types of loopback are provided: terminal and facility.

The facility must be put in an out-of-service state before a loopback is permitted (RMV-T1 command).

To release the facility loopback, use the RLS-LPBK-T1 command.

Security level

Level 2

Input syntax

```
OPR-LPBK-T1:[TID]:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-27
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback. See the Parameter descriptions table for details.

Table 10-28
AID descriptions

AID type	Command-specific values	Purpose
DS1	DS1-slot#-port#	Identify the DS1 facility where slot# = 4 to 10 port# =1 to 12
DS3V	DS1-slot#-port#-t1#	Identify DS1s on DS3VTx12 equipment where slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
DSM	DS1-1-port#-%HLINK-OC3-hslot#-hport#	Identify the T1 facility on the DS1 service module where port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Table 10-29
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	A signal received on the copper side of the facility is looped back towards the copper (default). The signal will only pass through the DS1-n mapper on the shelf that has the loopback.
	TERMINAL	A signal received on the optical side of the facility is looped back towards the optics. The signal will pass through the following cards on the shelf that has the loopback: OC-n => VTX => DSn-n => VTX => OC-n

Example input

At the SEATTLE network element, for the port 11 facility on the slot 5 DS1 mapper, loopback the incoming signal from the optics back on to the optics:

```
OPR-LPBK-T1:SEATTLE:DS1-5-11:CTAG::,,,TERMINAL;
```

At the SEATTLE network element, for the port 11 facility on the slot 5 DS1 mapper, loopback the incoming signal from the copper back on to the copper:

```
OPR-LPBK-T1:SEATTLE:DS1-5-11:CTAG::,,,FACILITY;
```

OPR-LPBK-T3

The Operate Loopback T3 facility command instructs the equipment to set the specified DS3 facility into loopback mode. Two types of loopback are provided: terminal and facility.

The facility must be put in an out-of-service state before a loopback is permitted (RMV-T3 command).

To release the facility loopback, use the RLS-LPBK-T3 command.

Security level

Level 2

Input syntax

```
OPR-LPBK-T3:[TID]:AID:CTAG::,,,[LPBKTYPE];
```

Table 10-30
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag
LPBKTYPE	Loopback type. See the Parameter descriptions table for details.

Table 10-31
AID descriptions

AID type	Command-specific values	Purpose
DS3	DS3-slot#-port#	Identify the DS3 where slot# =3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12

Table 10-32
Parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY (default)	A signal received on the copper side of the facility is looped back towards the copper. ***Note:*** The signal will only pass through the DS1-n mapper on the shelf that has the loopback.
	TERMINAL	A signal received on the optical side of the facility is looped back towards the optics. ***Note:*** The signal will pass through the following cards on the shelf that has the loopback: OC-n => VTX => DSn-n => VTX => OC-n

Example input

At the NEWYORK network element, for the port 3 facility on the slot 5 DS3 mapper, loopback the incoming signal from the optics back on to the optics:

```
OPR-LPBK-T3:NEWYORK:DS3-5-3:CTAG::,,,TERMINAL;
```

At the NEWYORK network element, for the port 3 facility on the slot 5 DS3 mapper, loopback the incoming signal from the copper back on to the copper:

```
OPR-LPBK-T3:NEWYORK:DS3-5-3:CTAG::,,,FACILITY;
```

RLS-LPBK-EC1

The Release Loopback EC-1 command instructs the equipment to release an EC-1 facility loopback.

Security level

Level 2

Input syntax

```
RLS-LPBK-EC1:[TID]:AID:CTAG;
```

Table 10-33
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Example input

At the NEWYORK network element, release the EC-1 facility loopback in slot 4 port 7 :

```
RLS-LPBK-EC1:NEWYORK:DS1-4-7:CTAG23;
```

RLS-LPBK-ETH

The Release Loopback Ethernet command releases a loopback on an Ethernet facility (LAN port) of a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack.

Security level

Level 2

Input syntax

```
RLS-LPBK-ETH:TID:AID:CTAG;
```

Table 10-34
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Ethernet facility to release from loopback mode.
CTAG	Correlation tag

Table 10-35
AID descriptions

AID type	Command-specific values	Details
ETH	ETH-slot#-port#	Identify the Ethernet facility where slot# = 3 to 10 port# = 1 or 2

Example input

Release the loopback on LAN port 1 of the 2x100BT-P2P circuit pack in slot 7 of network element OTTAWA:

```
RLS-LPBK-ETH:OTTAWA:ETH-7-1:CTAG23;
```

RLS-LPBK-FC

The Release Loopback Fibre Channel command releases a loopback on an Fibre Channel facility (LAN port) of a 2xGigE/FC-P2P circuit pack.

Security level

Level 2

Input syntax

```
RLS-LPBK-FC:TID:AID:CTAG;
```

Table 10-36
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Fibre Channel facility to release from loopback mode.
CTAG	Correlation tag

Table 10-37
AID descriptions

AID type	Command-specific values	Details
FC	FC-slot#-port#	Identify the Fibre Channel facility where slot# = 3 to 10 port# = 1 or 2

Example input

2xGigE/FC-P2P circuit pack in slot 7 of network element OTTAWA:

```
RLS-LPBK-FC:OTTAWA:FC-7-1:CTAG23;
```

RLS-LPBK-OC3

The Release Loopback OC3 command instructs the equipment to release an OC-3 facility loopback.

Security level

Level 2

Input syntax

```
RLS-LPBK-OC3:[TID]:AID:CTAG;
```

Table 10-38
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-39
AID descriptions

AID type	Command-specific values	Details
OC-3	OC3-slot# -port#	slot # = 3 to 10 port # = 1 to 4 for OC-3x4 or port# = 1 for OC-3

Example input

At the SEATTLE network element, release the loopback on the specified OC-3 facility:

```
RLS-LPBK-OC3:SEATTLE:OC3-3-1:CTAG23RLS-LPBK-OC12
```

RLS-LPBK-OC12

The Release Loopback OC12 command instructs the equipment to release an OC-12 facility loopback.

Security level

Level 2

Input syntax

```
RLS-LPBK-OC12:[TID]:AID:CTAG;
```

Table 10-40
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-41
AID descriptions

AID type	Command-specific values	Details
OC-12	OC12-slot#-port#	slot # = 3 to 12 port # = 1 for OC-12 port # = 1 to 4 for OC-12x4 STS

Example input

At the SEATTLE network element, release the loopback on the specified OC-12 facility:

```
RLS-LPBK-OC12:SEATTLE:OC12-11-1:CTAG23;
```

RLS-LPBK-OC48

The Release Loopback OC48 command instructs the equipment to release an OC-48 facility loopback.

Security level

Level 2

Input syntax

```
RLS-LPBK-OC48:[TID]:AID:CTAG;
```

Table 10-42
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-43
AID descriptions

AID type	Command-specific values	Details
OC-48	OC48-slot#	slot # = 11 or 12 for OC-48 slot # = 3 to 12 for OC-48 STS

Example input

At the SEATTLE network element, release the loopback on the specified OC-48 facility:

```
RLS-LPBK-OC48:SEATTLE:OC48-12:CTAG23;
```

RLS-LPBK-OC192

The Release Loopback OC192 command instructs the equipment to release an OC-192 facility loopback.

Note 1: After the loopback has been released, a cold restart of the OC-192 circuit pack is automatically performed.

Note 2: After the loopback has been released, you should clear any performance measurements that were collected while the OC-192 was in the loopback state. See INIT-REG-OC192 on page 12-64.

Security level

Level 2

Input syntax

```
RLS-LPBK-OC192:[TID]:AID:CTAG;
```

Table 10-44
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-45
AID descriptions

AID type	Command-specific values	Details
OC-192	OC192-slot#	slot # = 11 or 12

Example input

At the SEATTLE network element, release the loopback on the specified OC-192 facility:

```
RLS-LPBK-OC192:SEATTLE:OC192-12:CTAG23;
```

RLS-LPBK-T1

The Release Loopback T1 command instructs the equipment to release a DS1 facility loopback.

Security level

Level 2

Input syntax

```
RLS-LPBK-T1:[TID]:AID:CTAG;
```

Table 10-46
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-47
AID descriptions

AID type	Command-specific values	Purpose
DS1	DS1-slot#-port#	Identify the DS1 facility where slot# =4 to 10, port# =1 to 12
DS3V	DS1-slot#-port#-t1#	Identify DS1s on DS3VTx12 equipment where slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
DSM	DS1-1-port#-%HLINK-OC3-hslot#-hport#	Identify the T1 facility on the DS1 service module where port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Example input

At the NEWYORK network element, release the DS1 facility loopback in slot 4 port 7:

```
RLS-LPBK-T1:NEWYORK:DS1-4-7:CTAG23;
```

RLS-LPBK-T3

The Release Loopback T3 command instructs the equipment to release a DS3 facility loopback.

Security level

Level 2

Input syntax

```
RLS-LPBK-T3:[TID]:AID:CTAG;
```

Table 10-48
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-49
AID descriptions

AID type	Command-specific values	Purpose
DS3	DS3-slot#-port#	Identify the DS3 where slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12

Example input

At the SEATTLE network element, release the DS3 facility loopback in slot 7 port 1:

```
RLS-LPBK-T3:SEATTLE:DS3-7-1:CTAG45;
```

RTRV-LPBK-EC1

The Retrieve Loopback EC-1 facility command returns the type of loopback currently in operation for the specified EC-1 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-EC1:[TID]:AID:CTAG;
```

Table 10-50
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-51
AID descriptions

AID type	Command-specific values	Purpose
EC-1	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	slot# = 3, 5, 7, or 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12

Example input

At the SEATTLE network element, retrieve the loopback state for all EC-1 circuit packs:

```
RTRV-LPBK-EC1:SEATTLE:EC1-ALL:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-52
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	A signal received on the copper side of the facility is looped back towards the copper. (default)
	TERMINAL	A signal received on the optical side of the facility is looped back towards the optics.

RTRV-LPBK-ETH

The Retrieve Loopback Ethernet command returns the current loopback state for an Ethernet facility (LAN port) of a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack.

Security level

Level 1

Input syntax

```
RTRV-LPBK-ETH:[TID]:AID:CTAG;
```

Table 10-53
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Ethernet facility to retrieve.
CTAG	Correlation tag

Table 10-54
AID descriptions

AID type	Command-specific values	Purpose
ETH	ETH-slot#-port# ETH-slot#-ALL ETH-ALL	Identify the Ethernet facility where slot# = 3 to 10 port# = 1 or 2

Example input

Retrieve the loopback state for LAN port 1 of the 2x100BT-P2P circuit pack in slot 7 of network element OTTAWA:

```
RTRV-LPBK-ETH:OTTAWA:ETH-7-1:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-55
Response parameter descriptions

Parameter	Possible values	Description
SID	Any valid source identifier	Source identifier of the network element.
DATE	YY-MM-DD	Date of retrieval. YY is the last two digits of the year (from 00 to 99), MM is the month of the year (from 01 to 12), DD is the day of the month (from 01 to 31).
TIME	HH-MM-SS	Time of retrieval. HH is the hour (from 00 to 23), MM is the minute (from 00 to 59), SS is the second (from 00 to 59).
AID	ETH-slot#-port#	The Ethernet facility where slot# = 3 to 10 port# = 1 or 2
LPBKTYPE	FACILITY	A facility loopback is currently in use, that is, the Ethernet signal received on the LAN port is being sent back out.
	TERMINAL	A terminal loopback is currently in use, that is, the SONET signal received on the WAN port is being sent back out.

RTRV-LPBK-FC

The Retrieve Loopback Fibre Channel command returns the current loopback state for an Fibre Channel facility (LAN port) of a 2xGigE/FC-P2P circuit pack.

Security level

Level 1

Input syntax

```
RTRV-LPBK-FC:[TID]:AID:CTAG;
```

Table 10-56
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Fibre Channel facility to retrieve.
CTAG	Correlation tag

Table 10-57
AID descriptions

AID type	Command-specific values	Purpose
FC	FC-slot#-port# FC-slot#-ALL FC-ALL	Identify the Fibre Channel facility where slot# = 3 to 10 port# = 1 or 2

Example input

Retrieve the loopback state for LAN port 1 of the 2xGigE/FC-P2P circuit pack in slot 7 of network element OTTAWA:

```
RTRV-LPBK-FC:OTTAWA:FC-7-1:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-58
Response parameter descriptions

Parameter	Possible values	Description
SID	Any valid source identifier	Source identifier of the network element.
DATE	YY-MM-DD	Date of retrieval. YY is the last two digits of the year (from 00 to 99), MM is the month of the year (from 01 to 12), DD is the day of the month (from 01 to 31).
TIME	HH-MM-SS	Time of retrieval. HH is the hour (from 00 to 23), MM is the minute (from 00 to 59), SS is the second (from 00 to 59).
AID	ETH-slot#-port#	The Ethernet facility where slot# = 3 to 10 port# = 1 or 2
LPBKTYPE	FACILITY	A facility loopback is currently in use, that is, the Fibre Channel signal received on the LAN port is being sent back out.
	TERMINAL	A terminal loopback is currently in use, that is, the SONET signal received on the WAN port is being sent back out.

RTRV-LPBK-OC3

The Retrieve Loopback OC3 facility command returns the type of loopback currently in operation for the specified OC-3 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-OC3:[TID]:AID:CTAG;
```

Table 10-59
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-60
AID descriptions

AID type	Command-specific values	Details
OC-3	OC3-slot# -port#	slot # = 3 to 10 port # = 1 to 4 for OC-3x4 port# = 1 for OC-3
	OC3-slot#-all	All the ports for the specified slot
	OC3-all	All OC-3 circuit packs on the specified network element

Example input

At the SEATTLE network element, retrieve the loopback state on the specified OC-3 facility:

```
RTRV-LPBK-OC3:SEATTLE:OC3-3-1:CTAG23;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-61
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	The incoming signal into the OC-3 circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-3 circuit pack is connected to the associated incoming receiver.

RTRV-LPBK-OC12

The Retrieve Loopback OC12 facility command returns the type of loopback currently in operation for the specified OC-12 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-OC12:[TID]:AID:CTAG;
```

Table 10-62
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-63
AID descriptions

AID type	Command-specific values	Details
OC-12	OC12-slot#-port#	slot # = 3 to 12 port # = 1 for OC-12 port # = 1 to 4 for OC-12x4 STS
	OC12-all	All OC-12 or OC-12x4 STS circuit packs on the specified network element

Example input

At the SEATTLE network element, retrieve the loopback state on the specified OC-12 facility:

```
RTRV-LPBK-OC12:SEATTLE:OC12-11-1:CTAG23;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-64
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	The incoming signal into the OC-12 or OC-12x4 STS circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-12 or OC-12x4 STS circuit pack is connected to the associated incoming receiver.

RTRV-LPBK-OC48

The Retrieve Loopback OC48 facility command returns the type of loopback currently in operation for the specified OC-48 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-OC48:[TID]:AID:CTAG;
```

Table 10-65
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-66
AID descriptions

AID type	Command-specific values	Purpose
OC-48	OC48-slot#	slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS
	OC48-all	All OC-48 circuit packs on the specified network element.

Example input

At the SEATTLE network element, retrieve the loopback state on the specified OC-48 facility:

```
RTRV-LPBK-OC48:SEATTLE:OC48-12:CTAG23;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-67
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	The incoming signal into the OC-48 or OC-48 STS circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-48 or OC-48 STS circuit pack is connected to the associated incoming receiver.

RTRV-LPBK-OC192

The Retrieve Loopback OC-192 facility command returns the type of loopback currently in operation for the specified OC-192 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-OC192:[TID]:AID:CTAG;
```

Table 10-68
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-69
AID descriptions

AID type	Command-specific values	Purpose
OC-192	OC192-slot#	slot # = 11 or 12
	OC192-all	All OC-192 circuit packs on the specified network element.

Example input

At the SEATTLE network element, retrieve the loopback state on the specified OC-192 facility:

```
RTRV-LPBK-OC192:SEATTLE:OC192-12:CTAG23;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-70
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	The incoming signal into the OC-192 circuit pack is connected to the associated return transmitter.
	TERMINAL	The signal leaving the OC-192 circuit pack is connected to the associated incoming receiver.

RTRV-LPBK-T1

The Retrieve Loopback T1 facility command returns the type of loopback currently in operation for the specified DS1 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-T1:[TID]:AID:CTAG;
```

Table 10-71
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-72
AID descriptions

AID type	Command-specific values	Purpose
DS1	DS1-slot#-port# DS1-slot#-ALL DS1-ALL	Identify the DS1 facility where slot# =4 to 10 port# =1 to 12
DS3V	DS1-slot#-port#-t1#	Identify DS1s on DS3VTx12 equipment where slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
DSM	DS1-1-port#-%HLINK-OC3-hslot#-hport# DS1-1-ALL-%HLINK-OC3-hslot#-hport#	Identify the T1 facility on the DS1 service module where port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Example input

At the SEATTLE network element, retrieve the loopback state for all DS1 circuit packs:

```
RTRV-LPBK-T1:SEATTLE:DS1-ALL:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-73
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	A signal received on the copper side of the facility is looped back towards the copper. The signal will only pass through the DS1-n mapper on the shelf that has the loopback.
	TERMINAL	A signal received on the optical side of the facility is looped back towards the optics. The signal will pass through the following cards on the shelf that has the loopback: OC-n => VTX => DSn-n => VTX => OC-n

RTRV-LPBK-T3

The Retrieve Loopback T3 facility command returns the type of loopback currently in operation for the specified DS3 facility.

Security level

Level 1

Input syntax

```
RTRV-LPBK-T3:[TID]:AID:CTAG;
```

Table 10-74
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to act on.
CTAG	Correlation tag

Table 10-75
AID descriptions

AID type	Command-specific values	Purpose
DS3	DS3-slot#-port# DS3-slot#-ALL DS3-ALL	Identify the DS3 where slot# =3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12

Example input

At the SEATTLE network element, retrieve the loopback state for all DS3 circuit packs:

```
RTRV-LPBK-T3:SEATTLE:DS3-ALL:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:::,,,<LPBKTYPE>
```

Table 10-76
Response parameter descriptions

Parameter	Possible values	Description
LPBKTYPE	FACILITY	A signal received on the copper side of the facility is looped back towards the copper. The signal will only pass through the DS1-n mapper on the shelf that has the loopback.
	TERMINAL	A signal received on the optical side of the facility is looped back towards the optics. The signal will pass through the following cards on the shelf that has the loopback: OC-n => VTX => DSn-n => VTX => OC-n

Protection switching detailed command descriptions

This chapter is an alphabetical summary of all the TL1 commands related to protection switching. The command descriptions in this chapter identify each command, and describe the command purpose, syntax, parameters, variables, and response.

The following table lists all the commands in this chapter.

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ALW-EX-OC3

The Allow Exerciser command is used to activate the exerciser to test the different protection mechanisms associated with OC-3 line switching in a linear 1+1 protected system.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-3 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule or can be initiated manually. The exerciser runs on a pair of OC-3x4 circuit packs or on all OC-3x4 circuit packs in the shelf that are in-service. The pair must be in 1+1 protection for the exerciser to work.

> ***Note:*** If the OC-3x4 circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
ALW-EX-OC3:[TID]:AID:CTAG;
```

Table 11-1
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-2
AID descriptions

AID type	Command-specific values	Purpose
OC3 AID	OC3-slot#-port# OC3-slot#-ALL OC3-ALL	Identify the OC-3 where slot# = 3, 5, 7, and 9 port# = 1 for OC-3, 1 to 4 for OC-3x4
DSM AID	OC3-slot#-1-%HLINK-OC3-hslot#-hport#	slot# = 1 or 2, hslot# = 3 to 10 hport# = 1 to 4

Example input

Allow the exerciser to run in slot 10 on all ports for network element OSAKA:

```
ALW-EX-OC3:OSAKA:OC3-10-ALL:CTAG13;
```

ALW-EX-OC12

The Allow Exerciser OC-12 command is used to activate the exerciser to test the different protection mechanisms associated with OC-12 line switching in a linear 1+1 protected system.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-12 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-12 or OC-12x4 STS circuit packs or on all OC-12/OC-12x4 STS circuit packs in the shelf that are in-service. The pair must be in 1+1 protection for the exerciser to work.

> ***Note:*** If the circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
ALW-EX-OC12:[TID]:AID:CTAG;
```

Table 11-3
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-4
AID descriptions

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port# OC12-ALL	Identify the OC-12 facility where slot# = 3, 5, 7, 9, or 11 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Example input

Allow the exerciser for network element SEATTLE to run:

```
ALW-EX-OC12:SEATTLE:OC12-9-1:CTAG13;
```

ALW-EX-OC48

The Allow Exerciser OC-48 command is used to activate the exerciser to test the different protection mechanisms associated with OC-48 line switching in a linear 1+1 or bidirectional line-switched ring (BLSR) protected system.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-48 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule or can be initiated manually. The exerciser runs on a pair of OC-48 or OC-48 STS circuit packs or on all OC-48/OC-48 STS circuit packs in the shelf that are in-service. The pair must be in 1+1 or BLSR protection for the exerciser to work.

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

Note 2: If the circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
ALW-EX-OC48:[TID]:AID:CTAG;
```

Table 11-5
Sysntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-6
AID descriptions

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot# OC48-ALL	Identifies the OC-48 facility slot# = 11 for OC-48 slot# = 3, 5, 7, 9, 11 for OC-48 STS

Example input

Allow the exerciser for network element SEATTLE to run:

```
ALW-EX-OC48:SEATTLE:OC48-11:CTAG13;
```

ALW-EX-OC192

The Allow Exerciser OC-192 command is used to activate the exerciser to test the different protection mechanisms associated with OC-192 line switching in a linear 1+1 or bidirectional line-switched ring (BLSR) protected system.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-192 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of in-service OC-192 circuit packs. The pair must be in 1+1 or BLSR protection for the exerciser to work.

Note 1: If the OC-192 circuit packs are in a BLSR configuration, they must also have a valid BLSR configuration and no active protection switch.

Note 2: If the OC-192 circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
ALW-EX-OC192:[TID]:AID:CTAG;
```

Table 11-7
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-8
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot# OC192-ALL	Identifies the OC-192 facility slot# = 11

Example input

Allow the exerciser for network element SEATTLE to run:

```
ALW-EX-OC192:SEATTLE:OC192-11:CTAG13;
```

EX-SW-OC3

The Exercise Switch OC-3 command is used to run the exerciser to test the different protection mechanisms associated with OC-3 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-3 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-3x4 circuit packs or on all OC-3x4 circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

> ***Note:*** If the OC-3x4 circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
EX-SW-OC3:[TID]:AID:CTAG;
```

Table 11-9
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-10
AID descriptions

AID type	Command-specific values	Purpose
OC-3 AID	OC3-slot#-port#	Identify the OC-3 where slot# = 3, 5, 7, and 9 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
DS1 service module OC-3 Facility AID	OC3-slot-1-%HLINK-OC3-hslot-hport	slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4

Example input

Run the exerciser on network element OTTAWA and report results of all exercises:

```
EX-SW-OC3:OTTAWA:OC3-10-2:CTAG23;
```

Response block syntax

```
[AID]:<RSLT>
```

Possible values for <RSLT> are:

FAIL the exercise has determined unit failure
PASS the exercise found no problem in the unit

EX-SW-OC12

The Exercise Switch OC-12 command is used to run the exerciser to test the different protection mechanisms associated with OC-12 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-12 or OC-12x4 STS pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-12 or OC-12x4 STS circuit packs or on all OC-12/OC-12x4 STS circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

> ***Note:*** If the circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
EX-SW-OC12:[TID]:AID:CTAG;
```

Table 11-11
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-12
AID descriptions

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port#	Identify the OC-12 facility where slot# = 3, 5, 7, 9, or 11 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Example input

Run the exerciser on network element OTTAWA and report results of all exercises:

```
EX-SW-OC12:OTTAWA:OC12-9-1:CTAG23;
```

Response block syntax

```
[AID]:<RSLT>
```

Possible values for <RSLT> are:

FAIL the exercise has determined unit failure
PASS the exercise found no problem in the unit

EX-SW-OC48

The Exercise Switch OC-48 command is used to run the exerciser to test the different protection mechanisms associated with OC-48 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-48 or OC-48 STS pair configured in a linear 1+1 or BLSR protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-48 or OC-48 STS circuit packs or on all OC-48/OC-48 STS circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 or BLSR protection for the exerciser to work.

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

Note 2: If the circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
EX-SW-OC48:[TID]:AID:CTAG;
```

Table 11-13
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-14
AID descriptions

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot#	Identify the OC-48 facility where slot# = 11 for OC-48 slot# = 3, 5, 7, 9, 11 for OC-48 STS

Example input

Run the exerciser on network element OTTAWA and report results of all exercises:

```
EX-SW-OC48:OTTAWA:OC48-11:CTAG23;
```

Response block syntax

```
[AID]:<RSLT>
```

Possible values for <RSLT> are:

FAIL the exercise has determined unit failure
PASS the exercise found no problem in the unit

EX-SW-OC192

The Exercise Switch OC-192 command is used to run the exerciser to test the different protection mechanisms associated with OC-192 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-192 pair configured in a linear 1+1 or BLSR protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of in-service OC-192 circuit packs. The pair must be in 1+1 or BLSR protection for the exerciser to work.

Note 1: If the OC-192 circuit packs are in a BLSR configuration, they must also have a valid BLSR configuration and no active protection switch.

Note 2: If the OC-192 circuit packs are in a 1+1 linear configuration, there must not be an active protection switch.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
82EX-SW-OC192:[TID]:AID:CTAG;
```

Table 11-15
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-16
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot#	Identify the OC-192facility where slot# = 11

Example input

Run the exerciser on network element OTTAWA and report results of all exercises:

```
EX-SW-OC192:OTTAWA:OC192-11:CTAG23;
```

Response block syntax

```
[AID]:<RSLT>
```

Possible values for <RSLT> are:

FAIL the exercise has determined unit failure
PASS the exercise found no problem in the unit

INH-EX-OC3

The INH-EX-OC3 command is used to prevent the exerciser from running to test the different protection mechanisms associated with OC-3 line switching.

Security level

Level 3

Input syntax

```
INH-EX-OC3:[TID]:AID:CTAG;
```

Table 11-17
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-18
AID descriptions

AID type	Command-specific values	Purpose
OC-3 AID	OC3-slot#- port# OC3-ALL	Identify the OC-3 where slot# = 3, 5, 7, and 9 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
DS1 service module OC-3 Facility AID	OC3-slot-1-%HLINK-OC3-hslot-hport	slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4

Example input

Prevent the exerciser from running on network element SEATTLE:

```
INH-EX-OC3:SEATTLE:OC3-ALL:CTAG23;
```

INH-EX-OC12

The Inhibit Exercise OC-12 command is used to prevent the exerciser from running to test the different protection mechanisms associated with OC-12 line switching.

Security level

Level 3

Input syntax

```
INH-EX-OC12:[TID]:AID:CTAG;
```

Table 11-19
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-20
AID descriptions

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port# OC12-ALL	Identify the OC-12 facility where slot# = 3, 5, 7, 9, or 11 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Example input

Prevent the exerciser from running on network element SEATTLE:

```
INH-EX-OC12:SEATTLE:OC12-ALL:CTAG23;
```

INH-EX-OC48

The Inhibit Exercise OC-48 command is used to prevent the exerciser from running to test the different protection mechanisms associated with OC-48 line switching.

Security level

Level 3

Input syntax

```
INH-EX-OC48:[TID]:AID:CTAG;
```

Table 11-21
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-22
AID descriptions

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot# OC48-ALL	Identify the OC-48 facility where slot# = 11 for OC-48 slot# = 3, 5, 7, 9, 11 for OC-48 STS

Example input

Prevent the exerciser from running on network element SEATTLE:

```
INH-EX-OC48:SEATTLE:OC48-11:CTAG23;
```

INH-EX-OC192

The Inhibit Exercise OC-192 command is used to prevent the exerciser from running to test the different protection mechanisms associated with OC-192 line switching.

Security level

Level 3

Input syntax

```
INH-EX-OC192:[TID]:AID:CTAG;
```

Table 11-23
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-24
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot# OC192-ALL	Identify the OC-192 facility where slot# = 11

Example input

Prevent the exerciser from running on network element SEATTLE:

```
INH-EX-OC192:SEATTLE:OC192-11:CTAG23;
```

OPR-PROTNSW-EQPT

The Operate Protection Switch Equipment command instructs the network element to initiate an equipment protection switch request for a DS1, or DS3 circuit pack.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-EQPT command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-EQPT:[TID]:AID:CTAG::[SC];
```

Table 11-25
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch command. See the Parameter descriptions table for details. Default is manual.

Table 11-26
AID descriptions

AID type	Command-specific values	Purpose
DS1 AID	DS1-slot#	Identify the DS1 where slot# = 3 to 10
DS3 AID	DS3-slot#	Identify the DS3 where slot# = 3 to 10
DS3V AID	DS3V-slot#	Identify the DS3VTx12 where slot# = 3 to 10
DSM AID	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	Identify the DS1 service module where slot# = 1 or 2 hslot# = 1 to 10 hport# = 1 to 4
EC1 AID	EC1-slot#	Identify the EC-1 where slot# = 3 to 10

Table 11-27
Parameter description

Parameter	Possible values	AID	Description
SC	MAN (default)	DS1#4 to 10 DS3 #3 to 10	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is neither failed nor servicing a higher or equal priority request.
		DS1#3	Not applicable.
	FRCD	DS1#4 to 10 DS3 #3 to 10	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.
		DS1#3	Not applicable.
	LOCKOUT	DS1#3	If the AID identifies the protection circuit pack (DS1-3) then the command will prevent any working circuit pack from switching to the protection circuit pack. If a working circuit pack is already on protection, it will be switched back.
		DS1#4 to 10	If the AID identifies a working circuit pack, then the command will prevent the working circuit pack from switching to protection. If the working circuit pack is on protection, it will be switched back.

Example input
Manually switch the DS1 in slot 5 to protection mode:

```
OPR-PROTNSW-EQPT:NEWYORK:DS1-5:CTAG23::MAN;
```

OPR-PROTNSW-OC3

The Operate Protection Switch OC-3 command instructs the network element to initiate a protection switch request for an OC-3 or an OC-3x4 circuit pack. You can initiate a protection switch request only for network elements in a linear system.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-OC3 command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-OC3:[TID]:AID:CTAG::[SC];
```

Table 11-28
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-29
AID descriptions

AID type	Command-specific values	Purpose
OC-3 AID	OC3-slot# -port#	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4

Table 11-30
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.
	LOCKOUT (only available on the Protection circuit pack	If the AID identifies the protection circuit pack then the command will prevent any working circuit pack from switching to the protection circuit pack. If a working circuit pack is already on protection, it will be switched back.

Example input

Manually switch the OC-3x4 in slot 9 to protection mode:

```
OPR-PROTNSW-OC3:NEWYORK:OC3-9-1:CTAG23::MAN;
```

Lock out the OC-3x4 protection circuit pack in slot 10:

```
OPR-PROTNSW-OC3:NEWYORK:OC3-10-1:CTAG23::LOCKOUT;
```

OPR-PROTNSW-OC12

The Operate Protection Switch OC-12 command instructs the network element to initiate a protection switch request for an OC-12 or OC-12x4 STS circuit pack. You can initiate a protection switch request only for network elements in a linear system.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-OC12 command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-OC12:[TID]:AID:CTAG::[SC];
```

Table 11-31
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details.

Table 11-32
AID descriptions

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port#	Identify the OC-12 slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Table 11-33
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.
	LOCKOUT (only available on the Protection circuit pack)	If the AID identifies the protection circuit pack then the command will prevent any working circuit pack from switching to the protection circuit pack. If a working circuit pack is already on protection, it will be switched back.

Example input

Manually switch the OC-12 in slot 9 to protection mode:

```
OPR-PROTNSW-OC12:NEWYORK:OC12-9-1:CTAG23::MAN;
```

Lockout the OC-12 protection circuit pack in slot 10:

```
OPR-PROTNSW-OC12:NEWYORK:OC12-10-1:CTAG23::LOCKOUT;
```

OPR-PROTNSW-OC48

The Operate Protection Switch OC-48 command instructs the network element to initiate a protection switch request for an OC-48 or OC-48 STS circuit pack. You can initiate a protection switch request only for network elements in a linear system.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-OC48 command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-OC48:[TID]:AID:CTAG::[SC];
```

Table 11-34
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch command

Table 11-35
AID descriptions

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot#	Identify the OC-48 where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS

Table 11-36
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.
	LOCKOUT (valid only for the protection circuit pack in a 1+1 linear system)	If the AID identifies the protection circuit pack then the command will prevent any working circuit pack from switching to the protection circuit pack. If a working circuit pack is already on protection, it will be switched back.
	LOCKOUT_PROT (valid only for BLSR systems)	Prevents the use of the span of the ring for any protection activity and prevents switches anywhere around the ring.
	LOCKOUT_WRKG (valid only for BLSR systems)	Prevents the working channels over the addressed span from accessing protection channels for a switch by disabling the node’s capability to request a ring protection switch.

Example input
Manually switch the OC-48 in slot 11 to protection mode:

```
OPR-PROTNSW-OC48:NEWYORK:OC48-11:CTAG23::MAN;
```

Lockout the OC-48 protection circuit pack in slot 12:

```
OPR-PROTNSW-OC48:NEWYORK:OC48-12:CTAG23::LOCKOUT;
```

OPR-PROTNSW-OC192

The Operate Protection Switch OC-192 command instructs the network element to initiate a protection switch request for an OC-192 circuit pack. You can initiate a protection switch request only for network elements in a linear system.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-OC192 command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-OC192:[TID]:AID:CTAG::[SC];
```

Table 11-37
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch command

Table 11-38
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot#	Identify the OC-192 where slot# = 11, 12

Table 11-39
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.
	LOCKOUT (valid only for the protection circuit pack in a 1+1 linear system)	If the AID identifies the protection circuit pack then the command will prevent any working circuit pack from switching to the protection circuit pack. If a working circuit pack is already on protection, it will be switched back.
	LOCKOUT_PROT (valid only for BLSR systems)	Prevents the use of the span of the ring for any protection activity and prevents switches anywhere around the ring.
	LOCKOUT_WRKG (valid only for BLSR systems)	Prevents the working channels over the addressed span from accessing protection channels for a switch by disabling the node’s capability to request a ring protection switch.

Example input

Manually switch the OC-192 in slot 11 to protection mode:

```
OPR-PROTNSW-OC192:NEWYORK:OC192-11:CTAG23::MAN;
```

Lockout the OC-192 protection circuit pack in slot 12:

```
OPR-PROTNSW-OC192:NEWYORK:OC192-12:CTAG23::LOCKOUT;
```

OPR-PROTNSW-STS1

The Operate Protection Switch STS-1 command instructs the network element to initiate an STS-1 path protection switch request for an OC-12 or OC-12x4 STS circuit pack.

Two levels of priority are supported: manual and forced. Lockout is not supported because STS-1 circuits are non-revertive.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-STS1 command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-STS1:[TID]:AID:CTAG::[SC];
```

Table 11-40
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag, an alphanumeric identifier to correlate the command and response messages
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-41
AID descriptions

AID type	Command-specific values	Purpose
STS-1 facility AID	OC3-slot#-port#-sts#	Identify the STS-1 path on the OC-3 slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 path on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 path on the OC-48 or OC-48 STS slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	Identify the STS-1 path on the OC-192 slot# = 11, 12 sts# = 1 to 192
Note: ALL is not a valid AID option.		

Table 11-42
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working circuit pack, then service will be transferred from it to the protection circuit pack if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.

Example input

Manually switch the STS-1 of the OC-3 in slot 9 port 2 sts 1 to protection mode:

```
OPR-PROTNSW-STS1:NEWYORK:OC3-9-2-1:CTAG23::MAN;
```

OPR-PROTNSW-STS3C

The Operate Protection Switch STS-3c command instructs the network element to initiate an STS-3c path protection switch request for an OC-3 path.

Two levels of priority are supported: manual and forced. Lockout is not supported.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-STS3C command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-STS3C:[TID]:AID:CTAG::[SC];
```

Table 11-43
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-44
AID descriptions

AID type	Command-specific values	Purpose
STS-3c facility AID	OC3-slot#-port#-sts#	Identify the STS-3c path on the OC-3 slot# = 3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c path on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7 or 10
	OC48-slot#-sts#	Identify the STS-3c path on the OC-48 slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ...46
	OC192-slot#-sts#	Identify the STS-3c path on the OC-192 slot# = 11, 12 sts# = 1, 4, 7, 10, ...190
Note: ALL is not a valid AID option.		

Table 11-45
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.

Example input
Manually switch the STS-3c signal of the OC-3 in slot 9 port 1 sts 1 to protection mode:

```
OPR-PROTNSW-STS3C:NEWYORK:OC3-9-1-1:CTAG23::MAN;
```

OPR-PROTNSW-STS12C

The Operate Protection Switch STS-12c command instructs the network element to initiate an STS-12c path protection switch request.

Two levels of priority are supported: manual and forced. Lockout is not supported.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-STS12C command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-STS12C:[TID]:AID:CTAG::[SC];
```

Table 11-46
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-47
AID descriptions

AID type	Command-specific values	Purpose
STS-12c facility AID	OC12-slot#-port#-sts#	slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181
Note: ALL is not a valid AID option.		

Table 11-48
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.

Example input

Manually switch the STS-12c signal of the OC-12 in slot 9 sts 1 to protection mode:

```
OPR-PROTNSW-STS12C:NEWYORK:OC12-9-1:CTAG23::MAN;
```

OPR-PROTNSW-STS24C

The Operate Protection Switch STS-24c command instructs the network element to initiate an STS-24c path protection switch request.

Two levels of priority are supported: manual and forced. Lockout is not supported.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-STS24C command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-STS24C:[TID]:AID:CTAG::[SC];
```

Table 11-49
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-50
AID descriptions

AID type	Command-specific values	Purpose
STS-24c facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, 49, ... 169
Note: ALL is not a valid AID option.		

Table 11-51
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.

Example input

Manually switch the STS-24c signal of the OC-48 in slot 9 sts 1 to protection mode:

```
OPR-PROTNSW-STS24C:NEWYORK:OC48-9-1:CTAG23::MAN;
```

OPR-PROTNSW-STS48C

The Operate Protection Switch STS-48c command instructs the network element to initiate an STS-48c path protection switch request.

Two levels of priority are supported: manual and forced. Lockout is not supported.

User switch requests initiated with this command remain active until they are released using the RLS-PROTNSW-STS48C command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-STS48C:[TID]:AID:CTAG::[SC];
```

Table 11-52
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-53
AID descriptions

AID type	Command-specific values	Purpose
STS-48c facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 49, 97, ... 145
Note: ALL is not a valid AID option.		

Table 11-54
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is neither failed nor servicing a higher or equal priority request.
	FRCD	If the AID identifies a working path, then service will be transferred from it to the protection path if and only if the latter is not servicing a higher or equal priority request. If the AID identifies a working circuit pack that has already been switched to protection, no switch occurs; however, the priority of the existing switch will be raised to “forced”.

Example input

Manually switch the STS-48c signal of the OC-48 in slot 9 sts 1 to protection mode:

```
OPR-PROTNSW-STS48C:NEWYORK:OC48-9-1:CTAG23::MAN;
```

OPR-PROTNSW-VT1

The Operate Protection Switch VT1 command instructs the network element to initiate a VT1.5 path protection switch request.

Two levels of priority are supported: manual and forced. Lockout is not supported because VT1.5 circuits are non-revertive.

Manual and forced switch requests initiated using this command remain active until they are released using the RLS-PROTNSW-VT1 command or overridden by a higher priority switch request.

Security level

Level 2

Input syntax

```
OPR-PROTNSW-VT1:[TID]:AID:CTAG::[SC];
```

Table 11-55
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch Command. See the Parameter descriptions table for details. Default is manual.

Table 11-56
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL	Identify the VT1.5 path on the OC-3 where slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL	Identify the VT1.5 path on the OC-12 slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL	Identify the VT1.5 path on the OC-48 slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4

Table 11-57
Parameter descriptions

Parameter	Possible values	Description
SC	MAN (default)	Manual VT1.5 path protection switch. Service is transferred from the VT1.5 path identified, to the alternate path only if the path selector is not satisfying a higher or equal priority request.
	FRCD	Forced VT1.5 path protection switch. Service is transferred from the VT1.5 path identified, to the alternate path only if the path selector is not satisfying a higher or equal priority request.

Example input

Request forced protection switching for VT1 #1, VTG#1, STS1#1, port 2 in slot 10:

```
OPR-PROTNSW-VT1:SEATTLE:OC3-10-2-1-1-1:CTAG45::FRCD;
```

RLS-PROTNSW-EQPT

The Release Protection Switch Equipment command instructs the network element to release any equipment protection switch requests that were initiated by the OPR-PROTNSW-EQPT command and are active on the entity specified. This command clears lockouts, forced switches and manual switches of DS1 circuit packs, and forced switches of DS3x3, DS3x12, DS3x12e, or DS3VTx12 circuit packs.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-EQPT:[TID]:AID:CTAG;
```

Table 11-58
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-59
AID descriptions

AID type	Command-specific values	Purpose
DS1 AID	DS1-slot#	Identify the DS1 where slot# = 3 to 10
DS3 AID	DS3-slot#	Identify the DS3 where slot# = 3 to 10
DS3V AID	DS3V-slot#	Identify the DS3VTx12 where slot# = 3 to 10
DS1 service module AID	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	Identify the DSM DS1x84 termination module, where slot# = 1 or 2 hslot# = 1 to 10 hport# = 1 to 4
EC1 AID	EC1-slot#	Identify the EC-1 where slot# = 3 to 10

Example input

Release any protection requests on the DS1 in slot 5:

```
RLS-PROTNSW-EQPT:SEATTLE:DS1-5:CTAG23;
```

RLS-PROTNSW-OC3

The Release Protection Switch OC-3 command instructs the network element to release an OC-3 protection switch request. This command clears lockouts and forced switches of OC-3 or OC-3x4 circuit packs.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-OC3:[TID]:AID:CTAG;
```

Table 11-60
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-61
AID descriptions

AID type	Command-specific values	Purpose
OC-3 AID	OC3-slot#-port#	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4

Example input

Place the OC-3x4 circuit pack in slot 10 back into normal mode:

```
RLS-PROTNSW-OC3:SEATTLE:OC3-10:CTAG12;
```

RLS-PROTNSW-OC12

The Release Protection Switch OC-12 command instructs the network element to release an OC-12 protection switch request. This command clears lockouts and forced switches on OC-12 or OC-12x4 STS circuit packs.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-OC12:[TID]:AID:CTAG;
```

Table 11-62
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-63
AID descriptions

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port#	Identify the OC-12 facility slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Example input

Place the OC-12 circuit pack in slot 10 back into normal mode:

```
RLS-PROTNSW-OC12:SEATTLE:OC12-10-1:CTAG12;
```

RLS-PROTNSW-OC48

The Release Protection Switch OC-48 command instructs the network element to release an OC-48 protection switch request. This command clears lockouts and forced switches on OC-48 and OC-48 STS circuit packs.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-OC48:[TID]:AID:CTAG::[SC];
```

Table 11-64
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch command

Table 11-65
AID descriptions

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot#	Identifies the OC-48 facility slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS

Table 11-66
Parameter descriptions

Parameter	Possible values	Description
SC	MAN	Release a manual switch in a BLSR system.
	FRCD	Release a forced switch in a 1+1 linear or BLSR system (default).
	LOCKOUT	Release a lockout on the protection circuit pack in a 1+1 linear system.
	LOCKOUT_PROT	Release the protection lockout in a BLSR system. (valid only for BLSR systems)
	LOCKOUT_WRKG	Release the working lockout in a BLSR system. (valid only for BLSR systems)
	WTR	End the wait-to-restore period and release the associated automatic switch for a BLSR system. (valid only for BLSR systems)

Example input
Place the OC-48 circuit pack in slot 12 back into normal mode:

```
RLS-PROTNSW-OC48:SEATTLE:OC48-12:CTAG12;
```

RLS-PROTNSW-OC192

The Release Protection Switch OC-192 command instructs the network element to release an OC-192 protection switch request. This command clears lockouts and forced switches on OC-192 circuit packs.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-OC192:[TID]:AID:CTAG::[SC];
```

Table 11-67
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
SC	Switch command

Table 11-68
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot#	Identifies the OC-192 facility slot# = 11, 12

Table 11-69
Parameter descriptions

Parameter	Possible values	Description
SC	MAN	Release a manual switch in a BLSR system.
	FRCD	Release a forced switch in a 1+1 linear or BLSR system (default).
	LOCKOUT	Release a lockout on the protection circuit pack in a 1+1 linear system.
	LOCKOUT_PROT	Release the protection lockout in a BLSR system. (valid only for BLSR systems)
	LOCKOUT_WRKG	Release the working lockout in a BLSR system. (valid only for BLSR systems)
	WTR	End the wait-to-restore period and release the associated automatic switch for a BLSR system. (valid only for BLSR systems)

Example input
Place the OC-192 circuit pack in slot 12 back into normal mode:

```
RLS-PROTNSW-OC192:SEATTLE:OC192-12:CTAG12;
```

RLS-PROTNSW-STS1

The Release Protection Switch STS-1 command instructs the network element to release an STS-1 path protection switch request.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-STS1:[TID]:AID:CTAG;
```

Table 11-70
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-71
AID descriptions

AID type	Command-specific values	Purpose
STS-1 facility AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL	Identify the STS-1 path on the OC-3 slot# = 3 to 10, port# = 1 to 4 sts# = 1 to 3
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	Identify the STS-1 path on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC-48-ALL	Identify the STS-1 path on the OC-48 or OC-48 STS slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC-192-ALL	Identify the STS-1 path on the OC-192 slot# = 11, 12 sts# = 1 to 192

Example input

Place the STS-1 signal on OC-3x4 circuit pack in slot 10 port 1 sts1 back into normal mode:

```
RLS-PROTNSW-STS1:SEATTLE:OC3-10-1-1:CTAG12;
```

RLS-PROTNSW-STS3C

The Release Protection Switch STS-3c command instructs the network element to release an STS-3c path protection switch request.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-STS3C:[TID]:AID:CTAG;
```

Table 11-72
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tags

Table 11-73
AID descriptions

AID type	Command-specific values	Purpose
STS-3c facility AID	OC3-slot#-port#-sts# OC3-slot-port-#-ALL OC3-slot-ALL	Identify the STS-3c path on the OC-3 slot# = 3 to 10, port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL	Identify the STS-3c path on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7 or 10
	OC48-slot#-sts# OC48-slot#-ALL	Identify the STS-3c path on the OC-48 or OC-48 STS slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ...to 46
	OC192-slot#-sts# OC192-slot#-ALL	Identify the STS-3c path on the OC-192 slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 190

Example input

Place the STS-3c signal on OC-3x4 circuit pack in slot 10 port 1 sts 1 back into normal mode:

```
RLS-PROTNSW-STS3C:SEATTLE:OC3-10-1-1:CTAG12;
```

RLS-PROTNSW-STS12C

The Release Protection Switch STS-12c command instructs the network element to release an STS-12c path protection switch request.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-STS12C:[TID]:AID:CTAG;
```

Table 11-74
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tags

Table 11-75
AID descriptions

AID type	Command-specific values	Purpose
STS-12c facility AID	OC12-slot#-port#-sts# OC12-slot#-port#-ALL	slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts# OC48-slot#-ALL	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181

Example input

Place the STS-12c signal on OC-12 circuit pack in slot 10 sts 1 back into normal mode:

```
RLS-PROTNSW-STS12C:SEATTLE:OC12-10-1:CTAG12;
```

RLS-PROTNSW-STS24C

The Release Protection Switch STS-24c command instructs the network element to release an STS-24c path protection switch request.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-STS24C:[TID]:AID:CTAG;
```

Table 11-76
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tags

Table 11-77
AID descriptions

AID type	Command-specific values	Purpose
STS-24c facility AID	OC48-slot#-sts# OC48-slot#-ALL	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts# OC192-slot#-ALL	slot# = 11, 12 sts# = 1, 25, 49, ... 169

Example input

Place the STS-24c signal on OC-48 circuit pack in slot 10 sts 1 back into normal mode:

```
RLS-PROTNSW-STS24C:SEATTLE:OC48-10-1:CTAG12;
```

RLS-PROTNSW-STS48C

The Release Protection Switch STS-48c command instructs the network element to release an STS-48c path protection switch request.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-STS48C:[TID]:AID:CTAG;
```

Table 11-78
Syntax definitions

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tags

Table 11-79
AID descriptions

AID type	Command-specific values	Purpose
STS-48c facility AID	OC48-slot#-sts# OC48-slot#-ALL	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts# OC192-slot#-ALL	slot# = 11, 12 sts# = 1, 25, 49, ... 169

Example input

Place the STS-48c signal on OC-48 circuit pack in slot 10 sts 1 back into normal mode:

```
RLS-PROTNSW-STS48C:SEATTLE:OC48-10-1:CTAG12;
```

RLS-PROTNSW-VT1

The Release Protection Switch VT1 command instructs the network element to release a VT1.5 path protection switch request.

Security level

Level 2

Input syntax

```
RLS-PROTNSW-VT1:[TID]:AID:CTAG;
```

Table 11-80
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-81
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL	Identify the VT1.5 path on the OC-3 slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL	Identify the VT1.5 path on the OC-12 slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL	Identify the VT1.5 path on the OC-48 slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4

Example input

Place the VT1.5 signal on OC-3x4 circuit pack in slot 10, port 1, STS1#1, VTG#1, VT# 2 back into normal mode:

```
RLS-PROTNSW-VT1:SEATTLE:OC3-10-1-1-1-2:CTAG12;
```

RTRV-EXSCHED-OC3

The Retrieve Exerciser Schedule command is used to retrieve the schedule that has been set for the exerciser to run. The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-3 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-3x4 circuit packs or on all OC-3x4 circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work. The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 1

Input syntax

```
RTRV-EXSCHED-OC3:[TID]:AID:CTAG;
```

Note: ALL is a valid target identifier (TID).

Table 11-82
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-83
AID descriptions

AID type	Command-specific values	Purpose
OC-3	OC3-slot#-port# OC3-slot#-ALL OC3-ALL	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
DSM AID	OC3-slot#-1-%HLINK-OC3-hslot#-hport#	Identify the DS1 service module where slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4

Example input

Retrieve the schedule that has been set for the exerciser to run in the Seattle network element:

```
RTRV-EXSCHED-OC3:SEATTLE:OC3-ALL:CTAG22;
```

Response block syntax

The response follows the normal response format if there are no exerciser schedules.

If there is at least one exerciser schedule to report, the <rspblk> has the format:

```
<SID><DATE><TIME>
<AID>[,AIDTYPE]:<INVL>,<DAT>,<TM>,<NUMINVL>,<REPTMODE>,<ALW>
```

Table 11-84
Response parameter descriptions

Parameter	Possible values	Description
AID	OC3-slot#-port#	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
DSM AID	OC3-slot#-1-%HLINK-OC3-hslot#-hport#	Identify the DS1 service module where slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4
AIDTYPE	OC3	
INVL (interval between the exerciser)	**Value** **Unit** 1 to 3 DAY 1 to 5 HR 5 to 30 MIN null	 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 24 hours.
DAT (date)	MOY-DOM	Month of year, day of month of the next exerciser run MOY = 1 to 12, DOM = 1 to 31
TM (time)	HOD-MOH	Hour of day, minute of hour of the next exercise HOD = 0 to 23, MOH = 0 to 59

Table 11-84 (continued)
Response parameter descriptions

Parameter	Possible values	Description
NUMINVL (number of intervals to run the exerciser)	1 to 250 INDEF	The remaining number of intervals over which exercises are to be performed The exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL FAIL null	Report results of all exercises Report results of failed exercises If no value is entered, the default is FAIL.
ALW	ALW INH	The exerciser is enabled. The exerciser is disabled.

RTRV-EXSCHED-OC12

The Retrieve Exerciser Schedule command is used to retrieve the schedule that has been set for the exerciser to run.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-12 or OC-12x4 STS pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-12 or OC-12x4 STS circuit packs or on all OC-12/OC-12x4 STS circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 1

Input syntax

```
RTRV-EXSCHED-OC12:[TID]:AID:CTAG;
```

Note: ALL is a valid target identifier (TID).

Table 11-85
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-86
AID descriptions

AID type	Command-specific values	Purpose
OC-12	OC12-slot#-port# OC12-ALL	Identify the OC-12 facility where slot# = 3, 5, 7, 9, or 11 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Example input

Retrieve the schedule that has been set for the exerciser to run in the Seattle network element:

```
RTRV-EXSCHED-OC12:SEATTLE:OC12-ALL:CTAG22;
```

Response block syntax

The response follows the normal response format if there are no exerciser schedules.

If there is at least one exerciser schedule to report, the <rspblk> has the format:

```
<SID><DATE><TIME>
<AID>[,AIDTYPE]:<INVL>,<DAT>,<TM>,<NUMINVL>,<REPTMODE>,<ALW>
```

Table 11-87
Response parameter descriptions

Parameter	Possible values		Description
AID	OC12-slot#		slot# = 3, 5, 7, 9, or 11
AIDTYPE	OC12		
INVL (interval between the exerciser)	**Value**	**Unit**	
	1 to 3	DAY	Run the exerciser once every x days
	1 to 5	HR	Run the exerciser once every x hours
	5 to 30	MIN	Run the exerciser once every x minutes
	null		If no parameter is entered, the default is once every 24 hours.
DAT (date)	MOY-DOM		Month of year, day of month of the next exerciser run MOY = 1 to 12, DOM = 1 to 31
TM (time)	HOD-MOH		Hour of day, minute of hour of the next exercise HOD = 0 to 23, MOH = 0 to 59
NUMINVL (number of intervals to run the exerciser)	1 to 250		The remaining number of intervals over which exercises are to be performed
	INDEF		The exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL		Report results of all exercises
	FAIL		Report results of failed exercises
	null		If no value is entered, the default is FAIL.
ALW	ALW		The exerciser is enabled.
	INH		The exerciser is disabled.

RTRV-EXSCHED-OC48

The Retrieve Exerciser Schedule command is used to retrieve the schedule that has been set for the exerciser to run.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-48 or OC-48 STS pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-48 or OC-48 STS circuit packs or on all OC-48/OC-48 STS circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 1

Input syntax

```
RTRV-EXSCHED-OC48:[TID]:AID:CTAG;
```

Note: ALL is a valid target identifier (TID).

Table 11-88
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-89
AID descriptions

AID type	Command-specific values	Purpose
OC-48	OC48-slot# OC-48-ALL	Identify the OC-48s where slot# = 11 for OC-48 slot# = 3, 5, 7, 9, 11 for OC-48 STS

Example input

Retrieve the schedule that has been set for the exerciser to run in the Seattle network element:

```
RTRV-EXSCHED-OC48:SEATTLE:OC48-11:CTAG22;
```

Response block syntax

The response follows the normal response format if there are no exerciser schedules.

If there is at least one exerciser schedule to report, the <rspblk> has the format:

```
<SID><DATE><TIME>
<AID>[,AIDTYPE]:<INVL>,<DAT>,<TM>,<NUMINVL>,<REPTMODE>,<ALW>
```

Table 11-90
Response parameter descriptions

Parameter	Possible values		Description
AID	OC48-slot#		slot# =11 for OC-48 slot# = 3, 5, 7, 9, 11 for OC-48 STS
AIDTYPE	OC48		
INVL (interval between the exerciser)	**Value**	**Unit**	
	1 to 3	DAY	Run the exerciser once every x days
	1 to 5	HR	Run the exerciser once every x hours
	1 to 30	MIN	Run the exerciser once every x minutes
DAT (date)	MOY-DOM		Month of year, day of month of the next exerciser run MOY = 1 to 12, DOM = 1 to 31
TM (time)	HOD-MOH		Hour of day, minute of hour of the next exercise HOD = 0 to 23, MOH = 0 to 59
NUMINVL (number of intervals to run the exerciser)	1 to 250 INDEF		The remaining number of intervals over which exercises are to be performed The exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL FAIL		Results of all exercises reported Results of all failed exercises reported
ALW	ALW INH		The exerciser is enabled. The exerciser is inhibited.

RTRV-EXSCHED-OC192

The Retrieve Exerciser Schedule command is used to retrieve the schedule that has been set for the exerciser to run.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-192 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of in-service OC-192 circuit packs. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 1

Input syntax

```
RTRV-EXSCHED-OC192:[TID]:AID:CTAG;
```

Note: ALL is a valid target identifier (TID).

Table 11-91
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-92
AID descriptions

AID type	Command-specific values	Purpose
OC-192	OC192-slot# OC-192-ALL	Identify the OC-192s where slot# = 11

Example input

Retrieve the schedule that has been set for the exerciser to run in the Seattle network element:

```
RTRV-EXSCHED-OC192:SEATTLE:OC192-11:CTAG22;
```

Response block syntax

The response follows the normal response format if there are no exerciser schedules.

If there is at least one exerciser schedule to report, the <rspblk> has the format:

```
<SID><DATE><TIME>
<AID>[,AIDTYPE]:<INVL>,<DAT>,<TM>,<NUMINVL>,<REPTMODE>,<ALW>
```

Table 11-93
Response parameter descriptions

Parameter	Possible values	Description
AID	OC192-slot#	slot# =11
AIDTYPE	OC192	
INVL (interval between the exerciser)	**Value** **Unit** 1 to 3 DAY 1 to 5 HR 1 to 30 MIN	Run the exerciser once every x days Run the exerciser once every x hours Run the exerciser once every x minutes
DAT (date)	MOY-DOM	Month of year, day of month of the next exerciser run MOY = 1 to 12, DOM = 1 to 31
TM (time)	HOD-MOH	Hour of day, minute of hour of the next exercise HOD = 0 to 23, MOH = 0 to 59
NUMINVL (number of intervals to run the exerciser)	1 to 250 INDEF	The remaining number of intervals over which exercises are to be performed The exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL FAIL	Results of all exercises reported Results of all failed exercises reported
ALW	ALW INH	The exerciser is enabled. The exerciser is inhibited.

RTRV-PROTNSW-EQPT

The retrieve protection switch equipment command retrieves an equipment protection switch status.

Security level

Level 1

Input Syntax

```
RTRV-PROTNSW-EQPT:[TID]:AID:CTAG;
```

Table 11-94
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-95
AID descriptions

AID TYPE	Possible values	Description
EQPT AID	ALL	All equipment entities
DS1 AID	DS1-slot#	slot# = 3 to 10
	DS1-ALL	All slots with DS1 cards
DS1 service module AID	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	slot# = 1 or 2, hslot# = 3 to 10 hport# = 1 to 4
	DS1TM-ALL	All slots with DSM DS1 termination modules
DS3 AID	DS3-slot#	slot# = 3 to 10
	DS3-ALL	All slots with DS3 cards
DS3V AID	DS3V-slot#	slot# = 3 to 10
	DS3V-ALL	All slots with DS3VTx12 circuit packs
EC1 AID	EC1-slot#	Identify the EC-1 equipment where slot# = 3 to 10
	EC1-ALL	Identify all EC-1 equipment

Example input

Retrieve the protection switch status for the SEATTLE network element:

```
RTRV-PROTNSW-EQPT:SEATTLE:ALL:CTAG22;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:<SWSTATUS=Domain>,<SWEND=Domain>,<SWREASON=Domain>
```

Table 11-96
Response parameter descriptions

Parameter	Possible values	Description
AID	EC1-slot#	Identify the EC-1 equipment where slot# = 3 to 10
	DS1-slot#	slot# = 3 to 10
	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4
	DS3-slot#	slot# = 3 to 10
	DS3V-slot#	slot# = 3 to 10
SWSTATUS	MAN	Manual switch by user (not valid for 1+1 Equipment protection, OC3, OC12 1+1 protection, VT1.5, STS3C, STS1 path protection)
	LOCKOUT	Lockout by user
	AUTO	Autonomous switch by network element
	FRCD	Forced switch by user
	IDLE	No switch
	LOCKOUT_PROT	Protection lockout in a BLSR system (OC-48 and OC-192 equipment only)
	LOCKOUT_WRKG	Working lockout in a BLSR system (OC-48 and OC-192 equipment only)
SWEND	REMOTE	The switch is initiated at the far end. Applicable to protection such as SONET APS where the protocol requires negotiation of switch requests between network elements. (Currently only OC-3 line switching.)
	LOCAL	The switch is initiated by the local network element. All equipment and path switches are always locally initiated. OC-3 line switches are LOCAL when a failure is detected on the local network element or if the user request is initiated locally.

Table 11-96 (continued)
Response parameter descriptions

Parameter	Possible values	Description
SWREASON	SIGOK	Signal OK Signal/path/line/equipment is able to carry traffic
	SF	Signal Fail Autonomous switch due to complete line/path failure (OC-3 line or path switching only)
	SD	Signal Degrade Autonomous switch due to line/path signal degrade condition (OC-3 line or path switching only)
	EBER	Excessive BIP error Autonomous switch due to excessive BIP error (OC-3 line and path switching)
	EQPFL	Equipment Fail Autonomous switch due to equipment failure (DS1/DS3/ equipment or OC-3 line switching)
	FACOOS	Facility OOS OC-3 line autonomous switch due to facility OOS
	EQPOOS	Equipment OOS OC-3 line autonomous switch due to OC-3 equipment OOS
	OSC	Oscillation Autonomous switch locked onto working or protection OC-3 line due to switch oscillation control by OC-3 firmware
	WTR	Wait to restore Autonomous switch active because the wait to restore period has not yet expired (DS1 equipment only)

RTRV-PROTNSW-rr

The Retrieve Protection Switch command retrieves the protection switching status for

- tributary equipment (DS1 and DS3)
- 1+1 protected optical interfaces
- VT1.5 and STS path protected channels

Security level

Level 2

Input syntax

```
RTRV-PROTNSW-rr:[TID]:AID:CTAG;
```

Table 11-97
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 11-98
AID descriptions

rr value	AID value	Purpose
EQPT	ALL	Equipment protection All DS1, and DS3 equipment
	DS1-slot# DS1-ALL	Identify the DS1 equipment where slot# =3 to 10
	DS3-slot# DS3-ALL	Identify the DS3 equipment where slot# =3 to 10
	DS3V-slot# DS3V-ALL	Identify the DS3VTx12 equipment where slot# =3 to 10
OC3	OC3-slot#-port# OC3-slot#-ALL OC3-ALL	OC-3x4 equipment protection slot# =3 to 10 port# = 1 to 4
OC12	OC12-slot#-port# OC12-ALL	OC-12 or OC-12x4 STS equipment protection slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Table 11-98 (continued)
AID descriptions

rr value	AID value	Purpose
OC48	OC48-slot# OC48-ALL	OC-48 equipment protection slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS
OC192	OC192-slot# OC192-ALL	OC-192 equipment protection slot# = 11, 12
VT1	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-ALL OC3-slot#-sts#-ALL OC3-slot#-ALL OC3-ALL	VT1.5 path protection on the OC-3 slot# = 3 to 10 port# = 1 to 4 sts# =1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-ALL OC12-slot#-port#-ALL OC12-ALL	VT1.5 path protection on the OC-12 slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-ALL OC48-slot#-ALL OC48-ALL	VT1.5 path protection on the OC-48 slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
STS1	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	STS-1 path protection on the OC-3 slot# =3 to 10 port# = 1 to 4 sts# =1 to 3
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	STS-1 path protection on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	STS-1 path protection on the OC-48 or OC-48 STS slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	STS-1 path protection on the OC-192 slot# = 11, 12 sts# = 1 to 192

Table 11-98 (continued)
AID descriptions

rr value	AID value	Purpose
STS3C	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	STS-3c path protection on the OC-3 slot# =3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	STS-3c path protection on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7 or 10
	OC48-slot#-sts# OC48-slot#-ALL OC-48-ALL	STS-3c path protection on the OC-48 slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ...46
	OC192-slot#-sts# OC192-slot#-ALL OC-192-ALL	STS-3c path protection on the OC-192 slot# = 11, 12 sts# = 1, 4, 7, 10, ...190
STS12C	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-ALL	STS-12c path protection on the OC-12 or OC-12x4 STS slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts# OC48-slot#-ALL OC-48-ALL	STS-12c path protection on the OC-48 or OC-48 STS slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL OC-192-ALL	STS-12c path protection on the OC-192 slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181

Table 11-98 (continued)
AID descriptions

rr value	AID value	Purpose
STS24C	OC48-slot#-sts# OC48-slot#-ALL OC-48-ALL	STS-24c path protection on the OC-48 slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts# OC192-slot#-ALL OC-192-ALL	STS-24c path protection on the OC-192 slot# = 11, 12 sts# = 1, 25, 49, ... 169
STS48C	OC48-slot#-sts# OC48-slot#-ALL OC-48-ALL	STS-48c path protection on the OC-48 slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts# OC192-slot#-ALL OC-192-ALL	STS-48c path protection on the OC-192 slot# = 11, 12 sts# = 1, 49, 97, ... 145

Example input

Retrieve the protection switching status for the slot 5 DS1 mapper in the Seattle network element:

```
RTRV-PROTNSW-EQPT:SEATTLE:DS1-5:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:<SWSTATUS=status>, <SWEND=END>, <SWREASON=REASON>
```

Table 11-99
Response AID descriptions

AID type	Possible values	Description
VT1	OC3-slot#-port#-sts#-vtg#-vt#	slot# = 3 to 10 port# = 1 to 4 sts# =1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt#	slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt#	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
STS1	OC3-slot#-port#-sts#	slot# =3 to 10 port# = 1 to 4 sts# =1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1 to 192
STS3C	OC3-slot#-port#-sts#	slot# =3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts#	slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7 or 10
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, 10, ...46
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 4, 7, 10, ...190

Table 11-99 (continued)
Response AID descriptions

AID type	Possible values	Description
STS-12c facility AID	OC12-slot#-port#-sts#	slot# =3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181
STS-24c facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, 49, ... 169
STS-48c facility AID	OC48-slot#-sts#	slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 49, 97, ... 145

Table 11-100
Response parameter descriptions

Parameter	Possible values	Description
SWSTATUS	MAN	Manual switch by user (not valid for 1+1 Equipment protection, OC3, OC12, OC-12x4, OC48, OC-48 STS, OC192 1+1 protection, VT1.5, STS1, STS3c, STS12c, STS24c, and STS48c path protection)
	LOCKOUT	Lockout by user
	AUTO	Autonomous switch by network element
	FRCD	Forced switch by user
	IDLE	No switch
	LOCKOUT_PROT	Protection lockout in a BLSR system (OC-48 and OC-192 equipment only)
	LOCKOUT_WRKG	Working lockout in a BLSR system (OC-48 and OC-192 equipment only)
SWEND	REMOTE	The switch is initiated at the far end. Applicable to protection such as SONET APS where the protocol requires negotiation of switch requests between network elements. (Currently only OC-3 line switching.)
	LOCAL	The switch is initiated by the local network element. All equipment and path switches are always locally initiated. OC-3 line switches are LOCAL when a failure is detected on the local network element or if the user request is initiated locally.

Table 11-100 (continued)
Response parameter descriptions

Parameter	Possible values	Description
SWREASON	SIGOK	Signal OK Signal/path/line/equipment is able to carry traffic
	SF	Signal Fail Autonomous switch due to complete line/path failure (OC-3 line or path switching only)
	SD	Signal Degrade Autonomous switch due to line/path signal degrade condition (OC-3 line or path switching only)
	EBER	Excessive BIP error Autonomous switch due to excessive BIP error (OC-3 line and path switching)
	EQPFL	Equipment Fail Autonomous switch due to equipment failure (DS1/DS3/ equipment or OC-3 line switching)
	FACOOS	Facility OOS OC-3 line autonomous switch due to facility OOS
	EQPOOS	Equipment OOS OC-3 line autonomous switch due to OC-3 equipment OOS
	OSC	Oscillation Autonomous switch locked onto working or protection OC-3 line due to switch oscillation control by OC-3 firmware
	WTR	Wait to restore Autonomous switch active because the wait to restore period has not yet expired (DS1 equipment only)

SCHED-EX-OC3

The Schedule Exerciser OC-3 command is used to schedule the exerciser to test the different protection mechanisms associated with OC-3 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-3 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-3 or OC-3x4 circuit packs or on all OC-3 or OC-3x4 circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
SCHED-EX-OC3:[TID]:AID:CTAG::[INVL],[STATM],[NUMINVL],
[REPTMODE];
```

Table 11-101
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
INVL	Interval between the running of the exerciser. See the Parameter descriptions table for details.
STATM	Start time for the exerciser schedule. See the Parameter descriptions table for details.
NUMINVL	Number of intervals over which exerciser is to be run. See the Parameter descriptions table for details.
REPTMODE	Report mode, determines whether the results of all exercises or only failed exercises are reported. See the Parameter descriptions table for details.

Table 11-102
AID descriptions

AID type	Command-specific values	Purpose
OC-3 AID	OC3-slot#-port# OC3-slot#-ALL OC3-ALL	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
DS1 service module AID	OC3-slot-1-%HLINK-OC3-hslot#-hport#	slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4

Table 11-103
Parameter descriptions

Parameter	Possible values		Description
INVL (interval between the exerciser)	**Value**	**Unit**	
	1 to 3	DAY	Run the exerciser once every x days
	1 to 5	HR	Run the exerciser once every x hours
	5 to 30	MIN	Run the exerciser once every x minutes
	null		If no parameter is entered, the default is once every 24 hours.
STATM (start time)	HOD-MOH where HOD is from 0 to 23, and HOM is from 0 to 59		Hour of day, minute of hour to start the exerciser
	null		If no parameter is entered, the default is the current time of day.
NUMINVL (number of intervals to run the exerciser)	1 to 250		the exerciser runs the specified number of times; a value of 0 stops the exerciser
	null		If no parameter is entered, the exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL		Report results of all exercises
	FAIL		Report results of failed exercises
	null		If no value is entered, the default is FAIL.

Example input
Schedule the exerciser to run on network element Seattle, 3 times, every day at 10 am, and to report the results of all exercises:

```
SCHED-EX-OC3:SEATTLE:OC3-10-1:CTAG12::1-DAY,10-0,3,ALL;
```

SCHED-EX-OC12

The Schedule Exerciser OC-12 command is used to schedule the exerciser to test the different protection mechanisms associated with OC-12 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-12 or OC-12x4 STS pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-12 or OC-12x4 circuit packs or on all OC-12 or OC-12x4 circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
SCHED-EX-OC12:[TID]:AID:CTAG::[INVL],[STATM],[NUMINVL],
[REPTMODE];
```

Table 11-104
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
INVL	Interval between the running of the exerciser. See the Parameter descriptions table for details.
STATM	Start time for the exerciser schedule. See the Parameter descriptions table for details.
NUMINVL	Number of intervals over which exerciser is to be run. See the Parameter descriptions table for details.
REPTMODE	Report mode, determines whether the results of all exercises or only failed exercises are reported. See the Parameter descriptions table for details.

Table 11-105
AID descriptions

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port# OC12-slot-ALL OC12-ALL	Identify the OC-12 facility where slot# = 3, 5, 7, 9, or 11 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS

Table 11-106
Parameter descriptions

Parameter	Possible values		Description
INVL (interval between the exerciser)	**Value**	**Unit**	
	1 to 3	DAY	Run the exerciser once every x days
	1 to 5	HR	Run the exerciser once every x hours
	5 to 30	MIN	Run the exerciser once every x minutes
	null		If no parameter is entered, the default is once every 24 hours.
STATM (start time)	HOD-MOH where HOD is from 0 to 23, and HOM is from 0 to 59		Hour of day, minute of hour to start the exerciser
	null		If no parameter is entered, the default is the current time of day.
NUMINVL (number of intervals to run the exerciser)	1 to 250		the exerciser runs the specified number of times; a value of 0 stops the exerciser
	null		If no parameter is entered, the exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL		Report results of all exercises
	FAIL		Report results of failed exercises
	null		If no value is entered, the default is FAIL.

Example input

Schedule the exerciser to run on network element Seattle, 3 times, every day at 10 am, and to report the results of all exercises:

```
SCHED-EX-OC12:SEATTLE:OC12-11-1:CTAG12::1-DAY,10-0,3,ALL;
```

SCHED-EX-OC48

The Schedule Exerciser OC-48 command is used to schedule the exerciser to test the different protection mechanisms associated with OC-48 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-48 or OC-48 STS pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-48 or OC-48 STS circuit packs or on all OC-48 or OC-48 STS circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
SCHED-EX-OC48:[TID]:AID:CTAG::[INVL],[STATM],[NUMINVL],
[REPTMODE];
```

Table 11-107
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
INVL	Interval between the running of the exerciser. See the Parameter descriptions table for details.
STATM	Start time for the exerciser schedule. See the Parameter descriptions table for details.
NUMINVL	Number of intervals over which exerciser is to be run. See the Parameter descriptions table for details.
REPTMODE	Report mode, determines whether the results of all exercises or only failed exercises are reported. See the Parameter descriptions table for details.

Table 11-108
AID descriptions

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot# OC48-ALL	Identify the OC-48 facility where slot# = 11 for OC-48 slot# = 3, 5, 7, 9, 11 for OC-48 STS

Table 11-109
Parameter descriptions

Parameter	Possible values		Description
INVL (interval between the exerciser)	**Value**	**Unit**	
	1 to 3	DAY	Run the exerciser once every x days
	1 to 5	HR	Run the exerciser once every x hours
	5 to 30	MIN	Run the exerciser once every x minutes
	null		If no parameter is entered, the default is once every 24 hours.
STATM (start time)	HOD-MOH where HOD is from 0 to 23, and HOM is from 0 to 59		Hour of day, minute of hour to start the exerciser
	null		If no parameter is entered, the default is the current time of day.
NUMINVL (number of intervals to run the exerciser)	1 to 250		the exerciser runs the specified number of times; a value of 0 stops the exerciser
	null		If no parameter is entered, the exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL		Report results of all exercises
	FAIL		Report results of failed exercises
	null		If no value is entered, the default is FAIL.

Example input
Schedule the exerciser to run on network element Seattle, 3 times, every day at 10 am, and to report the results of all exercises:

```
SCHED-EX-OC48:SEATTLE:OC48-11:CTAG48::1-DAY,10-0,3,ALL;
```

SCHED-EX-OC192

The Schedule Exerciser OC-192 command is used to schedule the exerciser to test the different protection mechanisms associated with OC-192 line switching.

The high-speed exerciser is a routine that tests the integrity of the protection switching bytes (K-bytes) communication between an OC-192 pair configured in a linear 1+1 protected system. The exerciser can run automatically on a predetermined schedule, or it can be initiated manually. The exerciser runs on a pair of OC-192 circuit packs or on all OC-192 circuit packs in the shelf that are in an in-service state. The pair must be in 1+1 protection for the exerciser to work.

The exerciser is the lowest priority user command and does not run if a higher priority feature or command is in effect.

Security level

Level 3

Input syntax

```
SCHED-EX-OC192:[TID]:AID:CTAG::[INVL],[STATM],[NUMINVL],
[REPTMODE];
```

Table 11-110
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
INVL	Interval between the running of the exerciser. See the Parameter descriptions table for details.
STATM	Start time for the exerciser schedule. See the Parameter descriptions table for details.
NUMINVL	Number of intervals over which exerciser is to be run. See the Parameter descriptions table for details.
REPTMODE	Report mode, determines whether the results of all exercises or only failed exercises are reported. See the Parameter descriptions table for details.

Table 11-111
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC1928-slot# OC192-ALL	Identify the OC-192 facility where slot# = 11

Table 11-112
Parameter descriptions

Parameter	Possible values		Description
INVL (interval between the exerciser)	**Value**	**Unit**	
	1 to 3	DAY	Run the exerciser once every x days
	1 to 5	HR	Run the exerciser once every x hours
	5 to 30	MIN	Run the exerciser once every x minutes
	null		If no parameter is entered, the default is once every 24 hours.
STATM (start time)	HOD-MOH where HOD is from 0 to 23, and HOM is from 0 to 59		Hour of day, minute of hour to start the exerciser
	null		If no parameter is entered, the default is the current time of day.
NUMINVL (number of intervals to run the exerciser)	1 to 250		the exerciser runs the specified number of times; a value of 0 stops the exerciser
	null		If no parameter is entered, the exerciser runs indefinitely, until it is stopped or rescheduled by another command.
REPTMODE (report mode)	ALL		Report results of all exercises
	FAIL		Report results of failed exercises
	null		If no value is entered, the default is FAIL.

Example input
Schedule the exerciser to run on network element Seattle, 3 times, every day at 10 am, and to report the results of all exercises:

```
SCHED-EX-OC192:SEATTLE:OC192-11:CTAG48::1-DAY,10-0,3,ALL;
```

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