NTN465GF 323-1059-190

Nortel Networks

OPTera Metro 3500 Multiservice Platform

TL1 Reference—Part 4 of 4

Standard Release 12.0 Issue 1 November 2003

What's inside...

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NORTEL NETWORKS

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Contents

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 4 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):

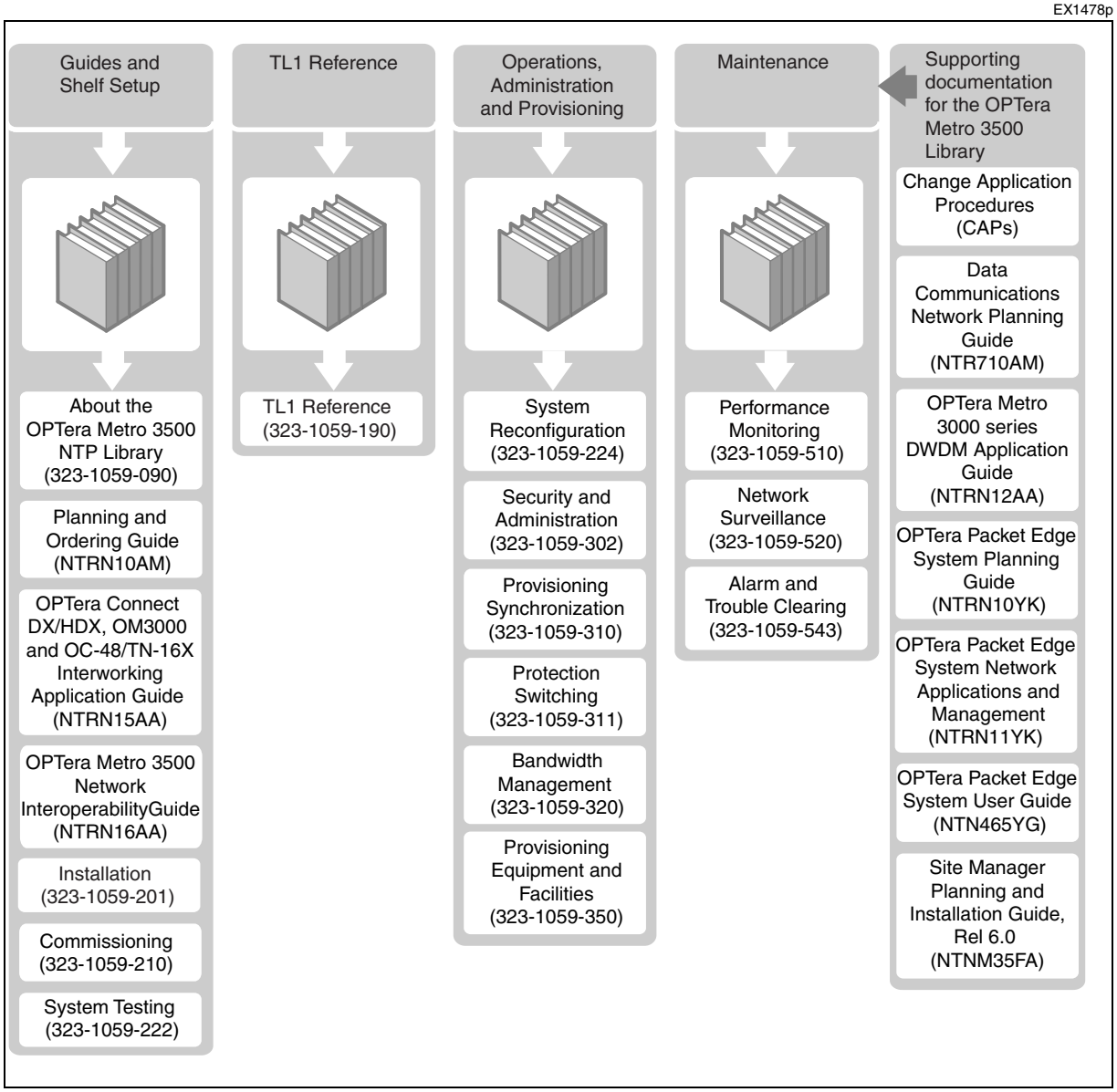
- planners
- provisioners
- network administrators
- transmission standards engineers

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

EX1478p



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
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Cross-connect detailed command descriptions

This chapter is an alphabetical summary of all the TL1 commands that add, delete or retrieve cross-connects. 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.

DLT-CRS-STS1

The Delete Cross-connect STS1 command is used to delete an STS-1 cross-connect between two STS-1 facilities.

Note: Bandwidth assigned to a Resilient Packet Ring (RPR) cannot be removed until all Packet Edge circuit packs have been detached from the RPR.

Security level

Level 3

Input syntax

```
DLT-CRS-STS1:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain];
```

Table 16-1
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12, OC-12x4, OC-48, OC-48 STS, or OC-192 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.

Table 16-2
AID descriptions

AID type	Command-specific values	Purpose
STS-1 Facility AID	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 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
	DS3-slot#-port#	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
	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, 1 to 21 for 2xGigE/FC-P2P
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-3
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
SWMATE	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, 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 facility on an OC-12 circuit pack where slot# = 3 to 12 port# = 1 for OC-12, 1 to 4 for OC-12x4 sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 facility 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 where slot# = 11, 12, sts# = 1 to 192

AID, CCT, and SWMATE usage

Figure 16-1 on page 16-90 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, delete the bidirectional STS-1 passthrough cross-connection between the OC-3x4 in slot 9 port 1 sts 1 and slot 10 port 1 sts 1:

```
DLT-CRS-STS1:NEWYORK:OC3-9-1-1,OC3-10-1-1:CTAG12::2WAY;
```

For the SEATTLE network element, delete the bidirectional STS-1 cross-connection between the DS3x3 circuit pack in slot 9 port 1 and the path protected OC-3x4 interfaces in slot 9 port 1 sts 1 and slot 10 port 1 sts 1:

```
DLT-CRS-STS1:SEATTLE:OC3-9-1-1,DS3-9-1:CTAG12::
2WAYPR:SWMATE=OC3-10-1-1;
```

DLT-CRS-STS3C

The Delete Cross-connect STS-3c command is used to delete an STS-3c cross-connect between two STS-3c facilities.

> ***Note:*** Bandwidth assigned to a Resilient Packet Ring (RPR) cannot be removed until all Packet Edge circuit packs have been detached from the RPR.

Security level

Level 3

Input syntax

```
DLT-CRS-STS3C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain];
```

Table 16-4
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-3c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-3c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12, OC-12x4, OC-48, OC-48 STS, or OC-192 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.

Table 16-5
AID descriptions

AID type	Command-specific values	Purpose
STS-3c 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 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, ...to 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 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
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-6
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
SWMATE	OC3-slot#-port#-sts#	Identify the STS-1 facility 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-1 facility where 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-1 facility 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#	Identify the STS-1 facility where slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 190

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, delete the bidirectional STS-3c passthrough cross-connection between the OC-3x4 in slots 9 and 10:

```
DLT-CRS-STS3C:NEWYORK:OC3-9-1-1,OC3-10-1-1:CTAG12::2WAY;
```

Deprovision the bandwidth from an RPR

```
DLT-CRS-STS3C:OC3SP:OC3-9-1-1,IPTR-1:CTAG12::IPTRING;

DLT-CRS-STS3C:OC3SP:OC3-10-1-1,IPTR-1:CTAG12::IPTRING;
```

DLT-CRS-STS12C

The Delete Cross-connect STS-12c command is used to delete an STS-12c cross-connect between two STS-12c facilities.

Note: Bandwidth assigned to an Resilient Packet Ring (RPR) cannot be removed until all Packet Edge circuit packs have been detached from the RPR.

Security level

Level 3

Input syntax

```
DLT-CRS-STS12C:[TID]:FromAID,ToAID:CTAG::[CCT]
:[SWMATE=Domain];
```

Table 16-7
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-12c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-12c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	The path protection for the FromAID when the CCT is protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.

Table 16-8
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 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
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-9
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
SWMATE	OC12-slot#-port#-sts#	Identify the STS-1 facility where slot# = 3 to 12 port# = 1 for OC-12, 1 to 4 for OC-12x4 sts# = 1
	OC48-slot#-sts#	Identify the STS-1 facility where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	Identify the STS-1 facility where slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181

Example input

For network element NEWYORK, delete the bidirectional STS-12c pass-through cross-connect between OC-48, slot 11, sts 1 and OC-48, slot 12, sts 25:

```
DLT-CRS-STS12C:NEWYORK:OC48-11-1,OC48-12-25:CTAG12::2WAY;
```

DLT-CRS-STS24C

The Delete Cross-connect STS-24c command is used to delete an STS-24c cross-connect between two STS-24c facilities.

Security level

Level 3

Input syntax

```
DLT-CRS-STS24C:[TID]:FromAID,ToAID:CTAG::[CCT]
:[SWMATE=Domain];
```

Table 16-10
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-24c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-24c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	The path protection for the FromAID when the CCT is protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.

Table 16-11
AID descriptions

AID type	Command-specific values	Purpose
STS-24c Facility AID	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1

Table 16-12
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC48-slot#-sts#	Identify the STS-1 facility where slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts#	Identify the STS-1 facility where slot# = 11, 12 sts# = 1, 25, ... 169

Example input

For the NEWYORK network element, delete the bidirectional STS-24c passthrough cross-connection between the OC-48 STS in slot 11 sts 1 and slot 12 sts 25:

```
DLT-CRS-STS12C:NEWYORK:OC48-11-1,OC48-12-25:CTAG12::2WAY;
```

DLT-CRS-STS48C

The Delete Cross-connect STS-48c command is used to delete an STS-48c cross-connect between two STS-48c facilities.

Security level

Level 3

Input syntax

```
DLT-CRS-STS48C:[TID]:FromAID,ToAID:CTAG::[CCT]
:[SWMATE=Domain];
```

Table 16-13
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-48c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-48c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	The path protection for the FromAID when the CCT is protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.

Table 16-14
AID descriptions

AID type	Command-specific values	Purpose
STS-48c Facility AID	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 49, ... 145

Table 16-15
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC48-slot#-sts#	Identify the STS-1 facility where slot# = 3 to 12 sts# = 1
	OC192-slot#-sts#	Identify the STS-1 facility where slot# = 11, 12 sts# = 1, 49 ... 145

Example input

For the NEWYORK network element, delete the bidirectional STS-48c passthrough cross-connection between the OC-48 STS in slot 11 sts 1 and slot 12 sts 1:

```
DLT-CRS-STS48C:NEWYORK:OC48-11-1,OC48-12-1:CTAG12::2WAY;
```

DLT-CRS-VT1

The Delete Cross-connect VT1.5 command is used to delete a VT1.5 cross-connect from between two VT1.5 facilities.

Security level

Level 3

Input syntax

```
DLT-CRS-VT1:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain];
```

Table 16-16
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The VT1.5 path facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The VT1.5 path facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12 or OC-48 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.

Table 16-17
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port#	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
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	DS1 service module port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Table 16-17 (continued)
AID descriptions

AID type	Command-specific values	Purpose
	DS1-DFLT-grp#-%HLINK-OC3-hslot#-hport#	DS1 service module grp# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-sts#-port#-vtg#-vt# OC3-slot#-port#-sts#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL 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
SMART AID	DS1-DFLT-grp#	grp# = 1 to 3

Use the DFLT-# smart AID to delete one of three sets of 28 DS1s cross-connected 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 16-18 shows the DFLT-# smart AID value and the corresponding ports.

Table 16-18
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 16-19
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC3-slot#-port#-sts#-vtg#-vt OC3-slot#-port#-sts#-vtg#-ALL OC3-slot#-port#-sts#-ALL	Identify the VT1.5 facility where slot# = 3 to 10 port# = 1 for OC-3, 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#-vtg#-ALL OC12-slot#-port#-sts#-ALL	Identify the VT1.5 facility where 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#-vtg#-ALL OC48-slot#-sts#-ALL	Identify the VT1.5 facility where slot# = 11, 12 sts# = 1 to 48, vtg# = 1 to 7 vt# = 1 to 4

AID, CCT, and SWMATE usage

Figure 16-3 on page 16-92 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, delete a VT1.5 bidirectional cross-connect between the DS1 mapper in slot 4 and the path protected optical interfaces in slots 8 and 9:

```
DLT-CRS-VT1:NEWYORK:
OC3-8-2-1-1-2,DS1-4-1:CTAG45::
2WAYPR:SWMATE=OC3-9-2-1-1-3;
```

For the WASHINGTON network element, delete 28 bidirectional VT1.5 cross-connects between the DFLT-1 VT1.5 facilities (DS1 ports 1 to 12 on the slot 4 DS1 mapper, DS1 ports 1 to 12 on the slot 5 DS1 mapper and DS1 ports 1 to 4 on the slot 6 DS1 mapper), from the path protected optical interfaces in slots 9 and 11:

```
DLT-CRS-VT1:WASHINGTON:OC3-9-3-1-ALL,DS1-DFLT-1:CTAG89::
2WAYPR:SWMATE=OC3-11-3-1-ALL;
```

ED-CRS-STS1

The Edit Cross-connect STS-1 command is used to edit the cross-connect type (CCT) of an existing STS-1 cross-connect.

See page 16-86 for descriptions of cross-connect types.

Security level

Level 3

Input syntax

```
ED-CRS-STS1:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain];
```

Table 16-20
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-1 facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-1 facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12, OC-12x4 STS, OC-48, OC-48 STS, or OC-192 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).

Table 16-21
AID descriptions

AID type	Command-specific values	Purpose
STS-1 Facility AID	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 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 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
	DS3-slot#-port#	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
	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, 1 to 21 for 2xGigE/FC-P2P
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-22
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
SWMATE	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, 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, 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	Identify the STS-1 facility 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 where slot# = 11, 12 sts# = 1 to 192
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.

Example 1

Task

For the NEWYORK network element, edit (convert) an existing STS-1 1WAY cross-connect to a 2WAY cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 7 DS3 mapper
- ToAID = slot 10 OC-3 interface, port 1, STS1 = 3

Solution

The ED-CRS-STS1 command requires two 1WAY cross-connects to be in place before a 1WAY to 2WAY edit. Consequently, a second 1WAY cross-connect must be entered with the following command before the ED-CRS-STS1 command can be issued:

```
ENT-CRS-STS1:NEWYORK:OC3-10-1-3,DS3-7-1:CTAG12::1WAY;
```

Now that the complementary 1WAY cross-connect exists, the two cross-connects can be converted into an single 2WAY cross-connect with the following command:

```
ED-CRS-STS1:NEWYORK:OC3-10-1-3,DS3-7-1:CTAG12::2WAY;
```

Example 2

Task

For the SEATTLE network element, edit an existing STS-1 2WAY cross-connect to a 2WAYPR cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 9 port 2 OC-3 interface, STS1 = 1
- ToAID = slot 5 port 1 DS3 mapper

The switchmate for the resulting 2WAYPR cross-connect is to be STS1 #1 on the slot 10 port 2 optical interface.

Solution

The following command will edit the existing cross-connect as required:

```
ED-CRS-STS1:SEATTLE:
OC3-9-2-1,DS3-5-1:CTAG12::2WAYPR:SWMATE=OC3-10-2-1;
```

ED-CRS-STS3C

The Edit Cross-connect STS-3c command is used to edit the cross-connect type (CCT) of an existing STS-3c cross-connect.

See page 16-86 for descriptions of cross-connect types.

Security level

Level 3

Input syntax

```
ED-CRS-STS3C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain];
```

Table 16-23
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).

Table 16-24
AID descriptions

AID type	Command-specific values	Purpose
STS-3c 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 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, ...to 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 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
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-25
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
SWMATE	OC3-slot#-port#-sts#	Identify the STS-3c facility 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 where 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 facility 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#	Identify the STS-3c facility where slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 190
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.

Example 1

Task

For the NEWYORK network element, edit (convert) an existing STS-3c 1WAY cross-connect to a 2WAY cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 7 OC-3 interface, port 1, STS-1 = 1
- ToAID = slot 10 OC-3 interface, port 3, STS-1 = 1

Solution

The ED-CRS-STS3C command requires two 1WAY cross-connects to be in place before a 1WAY to 2WAY edit. Consequently, a second 1WAY cross-connect must be entered with the following command before the ED-CRS-STS3C command can be issued:

```
ENT-CRS-STS3C:NEWYORK:OC3-10-3-1,OC3-7-1-1:CTAG12::1WAY;
```

Now that the complementary 1WAY cross-connect exists, the two cross-connects can be converted into an single 2WAY cross-connect with the following command:

```
ED-CRS-STS3C:NEWYORK:OC3-10-3-1,OC3-7-1-1:CTAG12::2WAY;
```

Example 2

Task

For the SEATTLE network element, edit an existing STS-3c 2WAY cross-connect to a 2WAYPR cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 9 OC-3 interface
- ToAID = slot 5 OC-3 interface

The switchmate for the resulting 2WAYPR cross-connect is to be the slot 10 optical interface.

Solution

The following command will edit the existing cross-connect as required:

```
ED-CRS-STS3C:SEATTLE:
OC3-9-1-1,OC3-5-1-1:CTAG12::2WAYPR:SWMATE=OC3-10-1-1;
```

ED-CRS-STS12C

The Edit Cross-connect STS-12c command is used to edit the cross-connect type (CCT) of an existing STS-12c cross-connect.

See page 16-86 for descriptions of cross-connect types.

Security level

Level 3

Input syntax

```
ED-CRS-STS12C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain];
```

Table 16-26
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-12c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-12c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Switchmate identifies the path protection for the FromAID when the CCT is path protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).

Table 16-27
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 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
Resilient Packet Ring (RPR)	IPTR-index#	Index# = 1 to 8

Table 16-28
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
SWMATE	OC12-slot#-port#-sts#	Identify the STS-12c facility where slot# = 3 to 12 port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	Identify the STS-12c facility where slot# = 11, 12 for OC-48, 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	Identify the STS-12c facility where slot# = 11, 12, sts# = 1, 13, 25, 37, ... 181
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.

Example 1

Task

For the NEWYORK network element, edit (convert) an existing STS-12c 1WAY cross-connect to a 2WAY cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 7 OC-12 interface
- ToAID = slot 10 OC-12 interface

Solution

The ED-CRS-STS12C command requires two 1WAY cross-connects to be in place before a 1WAY to 2WAY edit. Consequently, a second 1WAY cross-connect must be entered with the following command before the ED-CRS-STS12C command can be issued:

```
ENT-CRS-STS12C:NEWYORK:OC12-10-1-1,OC12-7-1-1:CTAG12::1WAY;
```

Now that the complementary 1WAY cross-connect exists, the two cross-connects can be converted into an single 2WAY cross-connect with the following command:

```
ED-CRS-STS12C:NEWYORK:OC12-10-1-1,OC12-7-1-1:CTAG12::2WAY;
```

Example 2

Task

For the SEATTLE network element, edit an existing STS-12c 2WAY cross-connect to a 2WAYPR cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 9 OC-12 interface
- ToAID = slot 5 OC-12 interface

The switchmate for the resulting 2WAYPR cross-connect is to be the slot 10 optical interface.

Solution

The following command will edit the existing cross-connect as required:

```
ED-CRS-STS12C:SEATTLE:
OC12-9-1-1,OC12-5-1-1:CTAG12::2WAYPR:SWMATE=OC12-10-1-1;
```

ED-CRS-STS24C

The Edit Cross-connect STS-24c command is used to edit the cross-connect type (CCT) of an existing STS-24c cross-connect.

See page 16-86 for descriptions of cross-connect types.

Security level

Level 3

Input syntax

```
ED-CRS-STS24C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain];
```

Table 16-29
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-24c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-24c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Switchmate identifies the path protection for the FromAID when the CCT is path protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).

Table 16-30
AID descriptions

AID type	Command-specific values	Purpose
STS-24c Facility AID	OC48-slot#-sts#	slot# = 3 to 12, sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 25, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2 sts# = 1

Table 16-31
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC48-slot#-sts#	Identify the STS-24c facility where slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts#	Identify the STS-24c facility where slot# = 11, 12 sts# = 1, 25, ... 169
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.

Example 1

Task

For the NEWYORK network element, edit (convert) an existing STS-24c 1WAY cross-connect to a 2WAY cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 7 OC-48 STS interface
- ToAID = slot 10 OC-48 STS interface

Solution

The ED-CRS-STS24C command requires two 1WAY cross-connects to be in place before a 1WAY to 2WAY edit. Consequently, a second 1WAY cross-connect must be entered with the following command before the ED-CRS-STS24C command can be issued:

```
ENT-CRS-STS24C:NEWYORK:OC48-10-1-1,OC48-7-1-1:CTAG12::1WAY;
```

Now that the complementary 1WAY cross-connect exists, the two cross-connects can be converted into an single 2WAY cross-connect with the following command:

```
ED-CRS-STS24C:NEWYORK:OC48-10-1-1,OC48-7-1-1:CTAG12::2WAY;
```

Example 2

Task

For the SEATTLE network element, edit an existing STS-24c 2WAY cross-connect to a 2WAYPR cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 9 OC-48 STS interface
- ToAID = slot 5 OC-48 STS interface

The switchmate for the resulting 2WAYPR cross-connect is to be the slot 10 optical interface.

Solution

The following command will edit the existing cross-connect as required:

```
ED-CRS-STS24C:SEATTLE:
OC48-9-1-1,OC48-5-1-1:CTAG12::2WAYPR:SWMATE=OC48-10-1-1;
```

ED-CRS-STS48C

The Edit Cross-connect STS-48c command is used to edit the cross-connect type (CCT) of an existing STS-48c cross-connect.

See page 16-86 for descriptions of cross-connect types.

Security level

Level 3

Input syntax

```
ED-CRS-STS48C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain];
```

Table 16-32
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The STS-48c facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The STS-48c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Switchmate identifies the path protection for the FromAID when the CCT is path protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).

Table 16-33
AID descriptions

AID type	Command-specific values	Purpose
STS-48c Facility AID	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 49, ... 145

Table 16-34
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC48-slot#-sts#	Identify the STS-48c facility where slot# = 3 to 12 sts# = 1
	OC192-slot#-sts#	Identify the STS-48c facility where slot# = 11, 12 sts# = 1, 49, ... 145
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.

Example 1

Task

For the NEWYORK network element, edit (convert) an existing STS-48c 1WAY cross-connect to a 2WAY cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 7 OC-48 STS interface
- ToAID = slot 10 OC-48 STS interface

Solution

The ED-CRS-STS48C command requires two 1WAY cross-connects to be in place before a 1WAY to 2WAY edit. Consequently, a second 1WAY cross-connect must be entered with the following command before the ED-CRS-STS48C command can be issued:

```
ENT-CRS-STS48C:NEWYORK:OC48-10-1-1,OC48-7-1-1:CTAG12::1WAY;
```

Now that the complementary 1WAY cross-connect exists, the two cross-connects can be converted into an single 2WAY cross-connect with the following command:

```
ED-CRS-STS48C:NEWYORK:OC48-10-1-1,OC48-7-1-1:CTAG12::2WAY;
```

Example 2

Task

For the SEATTLE network element, edit an existing STS-48c 2WAY cross-connect to a 2WAYPR cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 9 OC-48 STS interface
- ToAID = slot 5 OC-48 STS interface

The switchmate for the resulting 2WAYPR cross-connect is to be the slot 10 optical interface.

Solution

The following command will edit the existing cross-connect as required:

```
ED-CRS-STS48C:SEATTLE:
OC48-9-1-1,OC48-5-1-1:CTAG12::2WAYPR:SWMATE=OC48-10-1-1;
```

ED-CRS-VT1

The Edit Cross-connect VT1.5 command is used to edit the cross-connect type (CCT) of an existing VT1.5 cross-connect.

See page 16-86 for descriptions of cross-connect types.

Security level

Level 3

Input syntax

```
ED-CRS-VT1:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain];
```

Table 16-35
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12 or OC-48 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).

Table 16-36
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port#	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
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-1-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#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL 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
SMART AID	DS1-DFLT-grp#	grp# = 1 to 3

Use the DFLT-# smart AID to edit the CCT for 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. Table 16-37 shows the DFLT-# smart AID value and the corresponding ports.

Table 16-37
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 16-38
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC3-slot#-port#-sts#-vtg#-vt OC3-slot#-port#-sts#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL OC48-slot#-sts#-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.

Example 1

Task

For the NEWYORK network element, edit (convert) an existing VT1.5 1WAY cross-connect to a 2WAY cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 7 DS1 mapper, port 2
- ToAID = slot 9 OC-3 interface, port 3, STS1 = 3, VTG = 1, VT =1

Solution

The ED-CRS-VT1 command requires two 1WAY cross-connects to be in place before a 1WAY to 2WAY edit. Consequently, a second 1WAY cross-connect must be entered with the following command before the ED-CRS-VT1 command can be issued:

```
ENT-CRS-VT1:NEWYORK:OC3-9-3-3-1-1,DS1-7-2:CTAG12::1WAY;
```

Now that the complementary 1WAY cross-connect exists, the two cross-connects can be converted into an single 2WAY cross-connect with the following command:

```
ED-CRS-VT1:NEWYORK:OC3-9-3-3-1-1,DS1-7-2:CTAG12::2WAY;
```

Example 2

Task

For the SEATTLE network element, edit an existing VT1 2WAY cross-connect to a 2WAYPR cross-connect. The existing cross-connect has the following characteristics:

- FromAID = slot 9 OC-3 interface, port 2, STS1 = 3, VTG = 3, VT = 1
- ToAID = slot 5 DS1 mapper, port 12

The required switchmate for the resulting 2WAYPR cross-connect is the slot 10 optical interface.

Solution

The following command will edit the existing cross-connect as required:

```
ED-CRS-VT1:SEATTLE:
OC3-9-2-3-3-1,DS1-5-12:CTAG12::2WAYPR:SWMATE=OC3-10-2-3-3-1;
```

ENT-CRS-STS1

The Enter Cross-connect STS-1 command is used to add an STS-1 connection between two STS-1 facilities.

Security level

Level 3

Input syntax

```
ENT-CRS-STS1:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain][,FROMAEND=Domain][,FROMZEND=Domain]
[,TOAEND=Domain][,TOZEND=Domain];
```

Table 16-39
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12, OC-12x4 STS, OC-48, OC-48 STS, or OC-192 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).
FROMAEND	APS ID of FromAID originating node for BLSR systems.
FROMZEND	APS ID of FromAID terminating node for BLSR systems.
TOAEND	APS ID of ToAID originating node for BLSR systems.
TOZEND	APS ID of ToAID terminating node for BLSR systems.

Table 16-40
AID descriptions

AID type	Command-specific values	Purpose
STS-1 Facility AID	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 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
	DS3-slot#-port#	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
	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, 1 to 21 for 2xGigE/FC-P2P
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-41
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
SWMATE	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 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 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 where slot# = 11, 12 sts# = 1 to 192
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems

Table 16-41 (continued)
Parameter descriptions

Parameter	Possible values	Description
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems

AID, CCT, and SWMATE usage

Figure 16-1 on page 16-90 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input
For the NEWYORK network element, add a bidirectional STS-1 passthrough cross-connection between the OC-3 interfaces in slot 9 port 1 sts 1 and slot 10 port 1 sts 1:

```
ENT-CRS-STS1:NEWYORK:OC3-9-1-1,OC3-10-1-1:CTAG12::2WAY;
```

To provision bandwidth to an RPR:

```
ENT-CRS-STS1:OC3SP:OC3-9-1-1,IPTR-1:CTAG12::IPTRING;
ENT-CRS-STS1:OC3SP:OC3-10-1-1,IPTR-1:CTAG12::IPTRING;
```

> ***Note:*** The OCn optical circuit pack for either end must be on different slots of a different protection pair.

Example input
For the OTTAWA network element, add a STS-1 cross-connection between the OC-48 interface in slot 11 sts 1 and the OC-12 interface in slot 9 sts 1 and define the entry point and the exit point for a BLSR system:

```
ENT-CRS-STS1:OTTAWA:OC48-11-1,OC12-9-1-1:CTAG12::2WAY:
FROMAEND=2,FROMZEND=3;
```

ENT-CRS-STS3C

The Enter Cross-connect STS-3c command is used to add an STS-3c connection between two STS3c facilities.

Security level

Level 3

Input syntax

```
ENT-CRS-STS3C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain][,FROMAEND=Domain][,FROMZEND=Domain]
[,TOAEND=Domain][,TOZEND=Domain];
```

Table 16-42
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12, OC-12x4 STS, OC-48, OC-48 STS, or OC-192 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).
FROMAEND	APS ID of FromAID originating node for BLSR systems.
FROMZEND	APS ID of FromAID terminating node for BLSR systems.
TOAEND	APS ID of ToAID originating node for BLSR systems.
TOZEND	APS ID of ToAID terminating node for BLSR systems.

Table 16-43
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 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, ...to 46
	OC192-slot#-sts#	Identify the STS-3c facility on an OC-192 circuit pack where slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 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
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-44
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
SWMATE	OC3-slot#-port#-sts#	Identify the STS-3c facility 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 where 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 facility 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#	Identify the STS-3c facility where slot# = 11, 12 sts# = 1, 4, 7, 10, ...to 190
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, add a bidirectional STS-3c passthrough cross-connection between the OC-3 interfaces in slots 9 and 10:

```
ENT-CRS-STS3C:NEWYORK:OC3-9-1-1,OC3-10-1-1:CTAG12::2WAY;
```

To provision bandwidth to an RPR:

```
ENT-CRS-STS3C:OC3SP:OC3-9-1-1-1,IPTR-1:CTAG12::IPTRING;

ENT-CRS-STS3C:OC3SP:OC3-10-1-1-1,IPTR-1:CTAG12::IPTRING;
```

Note: The OCn optical circuit pack for either end must be on different slots of a different protection pair.

Example input

For the OTTAWA network element, add a STS-3c cross-connection between the OC-48 interface in slot 11 sts 4 and the OC-12 interface in slot 9 sts 1 and define a BLSR passthrough:

```
ENT-CRS-STS3C:OTTAWA:OC48-11-4,OC12-9-1-1:CTAG5::2WAY:
FROMAEND=1,FROMZEND=4;
```

ENT-CRS-STS12C

The Enter Cross-connect STS-12c command is used to add a STS-12c connection between two STS12c facilities.

Security level

Level 3

Input syntax

```
ENT-CRS-STS12C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain][,FROMAEND=Domain][,FROMZEND=Domain]
[,TOAEND=Domain][,TOZEND=Domain];
```

Table 16-45
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Identifies the path protection for the FromAID when the CCT is protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).
FROMAEND	APS ID of FromAID originating node for BLSR systems.
FROMZEND	APS ID of FromAID terminating node for BLSR systems.
TOAEND	APS ID of ToAID originating node for BLSR systems.
TOZEND	APS ID of ToAID terminating node for BLSR systems.

Table 16-46
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
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1
RPR Facility AID	IPTR-index#	Identify the RPR facility where index# = 1 to 8

Table 16-47
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
SWMATE	OC12-slot#-port#-sts#	Identify the STS-12c facility where slot# = 3 to 12 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	Identify the STS-12c facility where slot# = 11, 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
	OC192-slot#-sts#	Identify the STS-12c facility where slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181

Table 16-47 (continued)
Parameter descriptions

Parameter	Possible values	Description
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, add a bidirectional STS-12c passthrough cross-connection between the OC-12 interfaces in slots 9 and 10:

```
ENT-CRS-STS12C:NEWYORK:OC12-9-1-1,OC12-10-1-1:CTAG12::2WAY;
```

To provision bandwidth to a RPR:

```
ENT-CRS-STS12C:OC12SP:OC12-9-1-1,IPTR-1:12::IPTRING;

ENT-CRS-STS12C:OC12SP:OC12-10-1-1,IPTR-1:12::IPTRING;
```

Note: The OCn optical circuit pack for either end must be on different slots of a different protection pair.

ENT-CRS-STS24C

The Enter Cross-connect STS-24c command is used to add a STS-24c connection between two STS24c facilities.

Security level

Level 3

Input syntax

```
ENT-CRS-STS24C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain][,FROMAEND=Domain][,FROMZEND=Domain]
[,TOAEND=Domain][,TOZEND=Domain];
```

Table 16-48
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. For a unidirectional connection, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. For a unidirectional connection, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Identifies the path protection for the FromAID when the CCT is protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).
FROMAEND	APS ID of FromAID originating node for BLSR systems.
FROMZEND	APS ID of FromAID terminating node for BLSR systems.
TOAEND	APS ID of ToAID originating node for BLSR systems.
TOZEND	APS ID of ToAID terminating node for BLSR systems.

Table 16-49
AID descriptions

AID type	Command-specific values	Purpose
STS-24c Facility AID	OC48-slot#-sts#	slot# = 3 to 12, sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 25, ... 169
	WAN-slot#-port#-sts#	slot# = 3 to 10, port# = 1 or 2, sts# = 1

Table 16-50
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC48-slot#-sts#	Identify the STS-24c facility where slot# = 3 to 12, sts# = 1, 25
	OC192-slot#-sts#	Identify the STS-24c facility where slot# = 11, 12, sts# = 1, 25, ... 169
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, add a bidirectional STS-24c passthrough cross-connection between the OC-48 STS interfaces in slots 9 and 10:

```
ENT-CRS-STS24C:NEWYORK:OC48-9-1-1,OC48-10-1-1:CTAG12::2WAY;
```

Note: The OCn optical circuit pack for either end must be on different slots of a different protection pair.

ENT-CRS-STS48C

The Enter Cross-connect STS-48c command is used to add a STS-48c connection between two STS48c facilities.

Security level

Level 3

Input syntax

```
ENT-CRS-STS48C:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain][,FROMAEND=Domain][,FROMZEND=Domain]
[,TOAEND=Domain][,TOZEND=Domain];
```

Table 16-51
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Identifies the path protection for the FromAID when the CCT is protected. That is, when the CCT is one of 1WAYPR or 2WAYPR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).
FROMAEND	APS ID of FromAID originating node for BLSR systems.
FROMZEND	APS ID of FromAID terminating node for BLSR systems.
TOAEND	APS ID of ToAID originating node for BLSR systems.
TOZEND	APS ID of ToAID terminating node for BLSR systems.

Table 16-52
AID descriptions

AID type	Command-specific values	Purpose
STS-48c Facility AID	OC48-slot#-sts#	slot# = 3 to 12, sts# = 1
	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 49, ... 145

Table 16-53
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC48-slot#-sts#	Identify the STS-48c facility where slot# = 3 to 12 sts# = 1
	OC192-slot#-sts#	Identify the STS-48c facility where slot# = 11, 12 sts# = 1, 49, ... 145
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, add a bidirectional STS-48c passthrough cross-connection between the OC-48 STS interfaces in slots 9 and 10:

```
ENT-CRS-STS48C:NEWYORK:OC48-9-1-1,OC48-10-1-1:CTAG12::2WAY;
```

Note: The OCn optical circuit pack for either end must be on different slots of a different protection pair.

ENT-CRS-VT1

The Enter Cross-connect VT1.5 command is used to cross-connect one VT1.5 facility to another.

Security level

Level 3

Input syntax

```
ENT-CRS-VT1:[TID]:FromAID,ToAID:CTAG::[CCT]:[SWMATE=Domain]
[,CKTID=Domain][,FROMAEND=Domain][,FROMZEND=Domain]
[,TOAEND=Domain][,TOZEND=Domain];
```

Table 16-54
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connection type
SWMATE	Path protection Switch Mate. Path protection for the FromAID OC-3, OC-3x4, OC-12 or OC-48 interface only when the CCT is protected. That is, when the CCT is one of 1WAYPR, 2WAYPR, or 2WAYBR.
CKTID	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect. Enclose the string in double quotes (for example, “Toronto-Ottawa”).
FROMAEND	APS ID of FromAID originating node for BLSR systems.
FROMZEND	APS ID of FromAID terminating node for BLSR systems.
TOAEND	APS ID of ToAID originating node for BLSR systems.
TOZEND	APS ID of ToAID terminating node for BLSR systems.

Table 16-55
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	DS1-slot#-port#	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
	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#-sts#-port#-vtg#-vt# OC3-slot#-port#-sts#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL 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#-vtg#-ALL 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
SMART AID	DS1-DFLT-grp#	grp# = 1 to 3

Use the DFLT-# smart AID to cross-connect 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 16-56 shows the DFLT-# smart AID value and the corresponding ports.

Table 16-56
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 16-57
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
SWMATE	OC3-slot#-port#-sts#-vtg#-vt OC3-slot#-port#-sts#-vtg#-ALL OC3-slot#-port#-sts#-ALL	Identify the VT1.5 facility where 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#-vtg#-ALL OC12-slot#-port#-sts#-ALL	Identify the VT1.5 facility where 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#-vtg#-ALL OC48-slot#-sts#-ALL	Identify the VT1.5 facility where slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4

Table 16-57 (continued)
Parameter descriptions

Parameter	Possible values	Description
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters that identifies the cross-connect.
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems

AID, CCT, and SWMATE usage

Figure 16-3 on page 16-92 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the NEWYORK network element, add a VT1.5 bidirectional cross-connect between the DS1 mapper in slot four and the path protected optical interfaces in slots 9 and 10:

```
ENT-CRS-VT1:NEWYORK:OC3-9-2-1-1-1,DS1-4-1:CTAG45::
2WAYPR:SWMATE=OC3-10-2-1-1-1;
```

For the WASHINGTON network element, add 28 bidirectional VT1.5 cross-connects between the DFLT-1 VT1.5 facilities (DS1 ports to 12 on the slot 4 DS1 mapper, DS1 ports 1 to 12 on the slot 5 DS1 mapper and DS1 ports 1 to 4 on the slot 6 DS1 mapper), from the path protected optical interfaces in slots 8 and 10:

```
ENT-CRS-VT1:WASHINGTON:OC3-8-3-1-ALL,DS1-DFLT-1:CTAG89::
2WAYPR:SWMATE=OC3-10-3-1-ALL;
```

Note: For a BLSR VT1.5 traffic, the cross-connects on the passthrough nodes should be at the STS-1 level.

RTRV-CRS-STS1

The Retrieve Cross-connect STS1 command is used to retrieve STS-1 cross-connects and activity.

Note: This command does not display test access cross-connections.

Security level

Level 1

Input syntax

```
RTRV-CRS-STS1:[TID]:[fromAID],[toAID]:CTAG::
[CCT]:[DISPLAY=Domain][,CKTID=Domain];
```

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

Table 16-58
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connect type is accepted only when Display=PROV. The CCT is ignored if Display=ACT.
Display	Specifies whether provisioned or active cross-connects are retrieved
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 16-59
AID descriptions

AID type	Command-specific values	Purpose
STS-1 Facility AID	ALL	Retrieve all provisioned STS-1 cross-connects to all STS-1 facilities. This is valid only when DISPLAY=PROV Retrieves the active path when DISPLAY=ACT
	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 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	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
	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
	WAN-slot#-port#-sts# WAN-slot#-port# 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 to 21

Table 16-59 (continued)
AID descriptions

AID type	Command-specific values	Purpose
Resilient Packet Ring (RPR) Facility AID	IPTR-index# IPTR-ALL	Identify the RPR facility where index# = 1 to 8

Table 16-60
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
DISPLAY	PROV	Default. Retrieves provisioned cross-connects
DISPLAY	ACT	Retrieves the path activity of provisioned cross-connects
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters,enclosed in double quotes that identifies the cross-connect. If a null string is specified, cross-connects without an identifier are retrieved.
	ALL	Retrieve all cross-connects regardless of their identifier

AID, CCT, and SWMATE usage

Figure 16-1 on page 16-90 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the WASHINGTON network element, retrieve the active OC-3 interface for all provisioned STS-1 cross-connects to the OC-3 interface in slot 10, regardless of cross-connection type:

```
RTRV-CRS-STS1:WASHINGTON:OC3-10-ALL:CTAG65:::DISPLAY=ACT;
```

For the SEATTLE network element, retrieve all the provisioned STS-1 cross-connects regardless of cross-connection type:

```
RTRV-CRS-STS1:SEATTLE:ALL:CTAG56:::DISPLAY=PROV;
```

> ***Note:*** All of the provisioned STS-1 cross-connects on the network element are listed in the command response.

For the SEATTLE network element, retrieve all the provisioned STS-1 cross-connects with a cross-connection type of 1WAY:

```
RTRV-CRS-STS1:SEATTLE:ALL:CTAG56::1WAY:DISPLAY=PROV;
```

For the SEATTLE network element, retrieve all the provisioned STS-1 cross-connects that have "SEATTLE-WASHINGTON" as their identifier:

```
RTRV-CRS-STS1:SEATTLE:ALL:CTAG56:::DISPLAY=PROV:
CKTID="SEATTLE-WASHINGTON";
```

Response block syntax

```
<SID><DATE><TIME>
FromAID,ToAID:<CCT><,FFP>:<SWMATE=Domain>,<CKTID=Domain>,
<FROMAEND=Domain>,<FROMZEND=Domain>,<TOAEND=Domain>,
<TOZEND=Domain>:<sst>
```

Table 16-61
Response parameter descriptions

Parameter	Possible values	Description
FromAID, ToAID	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 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
	DS3-slot#-port#	slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3, 1 to 12 for DS3x12 or DS3x12e
	EC1-slot#-port#	slot# = 3, 5, 7, 9 port# = 1 to 3 for EC-1x3, 1 to 12 for EC-1x12
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1 to 21
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
FFP (see Note)	UNI	unidirectional
	BIDIR	bidirectional

Table 16-61 (continued)
Response parameter descriptions

Parameter	Possible values	Description
SWMATE	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 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
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the cross-connect, if one exists
SST	ACT	Active, carrying traffic (default)
	IDLE	Idle, not carrying traffic
	PSI	Protection switch inhibited
	FLT	Fault detected in equipment
	MEA	Mismatched equipment attributes (circuit pack)
	TSTF	Test failed, OOS due to failed test
	UEQ	Unequipped, circuit pack missing
	ROLL	Roll
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems
Note: The facility group protection is only available with linear systems.		

RTRV-CRS-STS3C

The Retrieve Cross-connect STS3C command is used to retrieve STS-3c cross-connects and activity.

Note: This command does not display test access cross-connections.

Security level

Level 1

Input syntax

```
RTRV-CRS-STS3C:[TID]:[fromAID],[toAID]:CTAG::
[CCT]:[DISPLAY=Domain][,CKTID=Domain];
```

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

Table 16-62
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connect type is accepted only when Display=PROV. The CCT is ignored if Display=ACT.
DISPLAY	Specifies whether provisioned or active cross-connects are retrieved
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 16-63
AID descriptions

AID type	Command-specific values	Purpose
STS-3c Facility AID	ALL	Retrieve all provisioned STS-3c cross-connects to all OC-3 facilities. This is valid only when DISPLAY=PROV Retrieve the active path when DISPLAY=ACT
	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 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, 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,.. ,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,.. ,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, 4, 7, ... 19
Resilient Packet Ring (RPR) Facility AID	IPTR-index# IPTR-ALL	Identify the RPR facility where index# = 1 to 8

Table 16-64
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
DISPLAY	PROV	Default. Retrieves provisioned cross-connects
DISPLAY	ACT	Retrieves the path activity of provisioned cross-connects
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters,enclosed in double quotes that identifies the cross-connect. If a null string is specified, cross-connects without an identifier are retrieved.
	ALL	Retrieve all cross-connects regardless of their identifier

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the WASHINGTON network element, retrieve the active OC-3 interface for any provisioned STS-3c cross-connects to the OC-3 interface in slot 10, regardless of cross-connection type:

```
RTRV-CRS-STS3C:WASHINGTON:OC3-10-ALL:CTAG65:::DISPLAY=ACT;
```

For the SEATTLE network element, retrieve all the provisioned STS-3c cross-connects regardless of cross-connection type:

```
RTRV-CRS-STS3C:SEATTLE:ALL:CTAG56:::DISPLAY=PROV;
```

> ***Note:*** All of the provisioned STS-3c cross-connects on the network element are listed in the command response.

For the SEATTLE network element, retrieve all the provisioned STS-3c cross-connects with a cross-connection type of 1WAY:

```
RTRV-CRS-STS3C:SEATTLE:ALL:CTAG56::1WAY:DISPLAY=PROV;
```

To retrieve provisioned bandwidth to a Resilient Packet Ring (RPR):

```
RTRV-CRS-STS3C:OC3SP:OC3-ALL,IPTR-ALL:123;
```

For the SEATTLE network element, retrieve all the provisioned STS-3c cross-connects that have "SEATTLE-WASHINGTON" as their identifier:

```
RTRV-CRS-STS3C:SEATTLE:ALL:CTAG56:::DISPLAY=PROV:
CKTID="SEATTLE-WASHINGTON";
```

Response block syntax

```
<SID><DATE><TIME>
FromAID,ToAID:<CCT><,FFP>:<SWMATE=Domain>,<CKTID=Domain>,
<FROMAEND=Domain>,<FROMZEND=Domain>,<TOAEND=Domain>,
<TOZEND=Domain>:<sst>
```

Table 16-65
Response parameter descriptions

Parameter	Possible values	Description
FromAID, ToAID	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 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, 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, 4, 7, ... 19
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for an RPR
FFP (see Note)	UNI	unidirectional
	BIDIR	bidirectional

Table 16-65 (continued)
Response parameter descriptions

Parameter	Possible values	Description
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 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
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the cross-connect, if one exists
SST	ACT	Active, carrying traffic (default)
	IDLE	Idle, not carrying traffic
	PSI	Protection switch inhibited
	FLT	Fault detected in equipment
	MEA	Mismatched equipment attributes (circuit pack)
	TSTF	Test failed, OOS due to failed test
	UEQ	Unequipped, circuit pack missing
	ROLL	Roll
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems
Note: The facility group protection is only available with linear systems.		

RTRV-CRS-STS12C

The Retrieve Cross-connect STS-12c command is used to retrieve STS-12c cross-connects and activity.

Security level

Level 1

Input syntax

```
RTRV-CRS-STS12C:[TID]:[fromAID],[toAID]:CTAG::
[CCT]:[DISPLAY=Domain][,CKTID=Domain];
```

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

Table 16-66
Syntax definition

Field	Purpose
TID	Target identifier
ToAID	To access identifier. The STS-12c facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
CTAG	Correlation tag
CCT	Cross-connect type is accepted only when Display=PROV. The CCT is ignored if Display=ACT.
DISPLAY	Specifies whether provisioned or active cross-connects are retrieved
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 16-67
AID descriptions

AID type	Command-specific values	Purpose
STS12c Facility	ALL	Retrieve all STS-12c path facilities. Retrieve the active path when DISPLAY=ACT
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-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 OC48-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 OC192-ALL	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181
	WAN-slot#-port#-sts#	slot# = 3 to 10 port# = 1 or 2 sts# = 1, 4, 7, ... 19
Resilient Packet Ring (RPR) Facility	IPTR-index# IPTR-ALL	Identify the RPR facility where index# = 1 to 8

Table 16-68
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	IPTRING	SONET bandwith allocation for RPR

Table 16-68 (continued)
Parameter descriptions

Parameter	Possible values	Description
DISPLAY	PROV	Default. Retrieves provisioned cross-connects
	ACT	Retrieves the path activity of provisioned cross-connects
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters,enclosed in double quotes that identifies the cross-connect. If a null string is specified, cross-connects without an identifier are retrieved.
	ALL	Retrieve all cross-connects regardless of their identifier

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the WASHINGTON network element, retrieve the active OC-48 interface for any provisioned STS-12c cross-connects to the OC-48 interface in slot 11, regardless of cross-connection type:

```
RTRV-CRS-STS12C:WASHINGTON:OC48-11-ALL:CTAG65:::DISPLAY=ACT;
```

For the SEATTLE network element, retrieve all the provisioned STS-12c cross-connects regardless of cross-connection type:

```
RTRV-CRS-STS12C:SEATTLE:ALL:CTAG56:::DISPLAY=PROV;
```

Response block syntax

```
<SID><DATE><TIME>
FromAID,ToAID:<CCT><,FFP>:<SWMATE=Domain>,<CKTID=Domain>,
<FROMAEND=Domain>,<FROMZEND=Domain>,<TOAEND=Domain>,
<TOZEND=Domain>:<sst>
```

Table 16-69
Response parameter descriptions

Parameter	Possible values	Description
FromAID, ToAID	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
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
	IPTRING	SONET bandwith allocation for RPR
FFP (see Note)	UNI	unidirectional
	BIDIR	bidirectional
SWMATE	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
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the cross-connect, if one exists

Table 16-69 (continued)
Response parameter descriptions

Parameter	Possible values	Description
SST	ACT	Active, carrying traffic (default)
	IDLE	Idle, not carrying traffic
	PSI	Protection switch inhibited
	FLT	Fault detected in equipment
	MEA	Mismatched equipment attributes (circuit pack)
	TSTF	Test failed, OOS due to failed test
	UEQ	Unequipped, circuit pack missing
	ROLL	Roll
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems
Note: The facility group protection is only available with linear systems.		

RTRV-CRS-STS24C

The Retrieve Cross-connect STS-24c command is used to retrieve STS-24c cross-connects and activity.

Security level

Level 1

Input syntax

```
RTRV-CRS-STS24C:[TID]:[fromAID],[toAID]:CTAG::
[CCT]:[DISPLAY=Domain][,CKTID=Domain];
```

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

Table 16-70
Syntax definition

Field	Purpose
TID	Target identifier
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
CTAG	Correlation tag
CCT	Cross-connect type is accepted only when Display=PROV. The CCT is ignored if Display=ACT.
DISPLAY	Specifies whether provisioned or active cross-connects are retrieved
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 16-71
AID descriptions

AID type	Command-specific values	Purpose
STS12c Facility	ALL	Retrieve all STS-24c path facilities. Retrieve the active path when DISPLAY=ACT
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 25, ... 169
	WAN-slot#-port#-sts# WAN-slot#-port#-ALL WAN-slot#-ALL WAN-ALL	slot# = 3 to 10 port# = 1 or 2 sts# = 1

Table 16-72
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
DISPLAY	PROV	Default. Retrieves provisioned cross-connects
	ACT	Retrieves the path activity of provisioned cross-connects
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters,enclosed in double quotes that identifies the cross-connect. If a null string is specified, cross-connects without an identifier are retrieved.
	ALL	Retrieve all cross-connects regardless of their identifier

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the WASHINGTON network element, retrieve the active OC-48 interface for any provisioned STS-24c cross-connects to the OC-48 STS interface in slot 11, regardless of cross-connection type:

```
RTRV-CRS-STS24C:WASHINGTON:OC48-11-ALL:CTAG65:::DISPLAY=ACT;
```

For the SEATTLE network element, retrieve all the provisioned STS-24c cross-connects regardless of cross-connection type:

```
RTRV-CRS-STS24C:SEATTLE:ALL:CTAG56:::DISPLAY=PROV;
```

Response block syntax

```
<SID><DATE><TIME>
FromAID,ToAID:<CCT><,FFP>:<SWMATE=Domain>,<CKTID=Domain>,
<FROMAEND=Domain>,<FROMZEND=Domain>,<TOAEND=Domain>,
<TOZEND=Domain>:<sst>
```

Table 16-73
Response parameter descriptions

Parameter	Possible values	Description
FromAID, ToAID	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, ... 169
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
FFP (see Note)	UNI	unidirectional
	BIDIR	bidirectional
SWMATE	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, ... 169
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the cross-connect, if one exists

Table 16-73 (continued)
Response parameter descriptions

Parameter	Possible values	Description
SST	ACT	Active, carrying traffic (default)
	IDLE	Idle, not carrying traffic
	PSI	Protection switch inhibited
	FLT	Fault detected in equipment
	MEA	Mismatched equipment attributes (circuit pack)
	TSTF	Test failed, OOS due to failed test
	UEQ	Unequipped, circuit pack missing
	ROLL	Roll
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems
Note: The facility group protection is only available with linear systems.		

RTRV-CRS-STS48C

The Retrieve Cross-connect STS-48c command is used to retrieve STS-48c cross-connects and activity.

Security level

Level 1

Input syntax

```
RTRV-CRS-STS48C:[TID]:[fromAID],[toAID]:CTAG::
[CCT]:[DISPLAY=Domain][,CKTID=Domain];
```

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

Table 16-74
Syntax definition

Field	Purpose
TID	Target identifier
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
FromAID	From access identifier. The facility at one end of the cross-connect. Specifies the signal source if the connection is unidirectional.
CTAG	Correlation tag
CCT	Cross-connect type is accepted only when Display=PROV. The CCT is ignored if Display=ACT.
DISPLAY	Specifies whether provisioned or active cross-connects are retrieved
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 16-75
AID descriptions

AID type	Command-specific values	Purpose
STS48c Facility	ALL	Retrieve all STS-48c path facilities. Retrieve the active path when DISPLAY=ACT
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# = 1
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 49, ... 145

Table 16-76
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
DISPLAY	PROV	Default. Retrieves provisioned cross-connects
	ACT	Retrieves the path activity of provisioned cross-connects
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters,enclosed in double quotes that identifies the cross-connect. If a null string is specified, cross-connects without an identifier are retrieved.
	ALL	Retrieve all cross-connects regardless of their identifier

AID, CCT, and SWMATE usage

Figure 16-2 on page 16-91 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the WASHINGTON network element, retrieve the active OC-48 interface for any provisioned STS-48c cross-connects to the OC-48 STS interface in slot 11, regardless of cross-connection type:

```
RTRV-CRS-STS48C:WASHINGTON:OC48-11-ALL:CTAG65:::DISPLAY=ACT;
```

For the SEATTLE network element, retrieve all the provisioned STS-48c cross-connects regardless of cross-connection type:

```
RTRV-CRS-STS48C:SEATTLE:ALL:CTAG56:::DISPLAY=PROV;
```

Response block syntax

```
<SID><DATE><TIME>
FromAID,ToAID:<CCT><,FFP>:<SWMATE=Domain>,<CKTID=Domain>,
<FROMAEND=Domain>,<FROMZEND=Domain>,<TOAEND=Domain>,
<TOZEND=Domain>:<sst>
```

Table 16-77
Response parameter descriptions

Parameter	Possible values	Description
FromAID, ToAID	OC48-slot#-sts#	slot# = 3 to 12, sts# = 1
	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 49, ... 145
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
FFP (see Note)	UNI	unidirectional
	BIDIR	bidirectional
SWMATE	OC48-slot#-sts#	slot# = 3 to 12, sts# = 1
	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 49, ... 145
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the cross-connect, if one exists
SST	ACT	Active, carrying traffic (default)
	IDLE	Idle, not carrying traffic
	PSI	Protection switch inhibited
	FLT	Fault detected in equipment
	MEA	Mismatched equipment attributes (circuit pack)
	TSTF	Test failed, OOS due to failed test
	UEQ	Unequipped, circuit pack missing
	ROLL	Roll
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems
Note: The facility group protection is only available with linear systems.		

RTRV-CRS-VT1

The Retrieve Cross-connect VT1.5 command is used to retrieve VT1.5 cross-connects.

Note: This command does not display test access cross-connections.

Security level

Level 1

Input syntax

```
RTRV-CRS-VT1:[TID]:[fromAID],[toAID]:CTAG::[CCT]:
[DISPLAY=Domain][,CKTID=Domain];
```

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

Table 16-78
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. If the connection is unidirectional, the FromAID specifies the signal source.
ToAID	To access identifier. The facility at the other end of the cross-connect. If the connection is unidirectional, the ToAID specifies the signal destination.
CTAG	Correlation tag
CCT	Cross-connect type is accepted only when Display=PROV. The CCT is ignored if Display=ACT.
Display	Specifies whether provisioned or active cross-connects are retrieved
CKTID	Identifies the connection identifier of the cross-connect to retrieve

Table 16-79
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 Facility AID	ALL	Retrieve all provisioned VT1.5 cross-connects to all VT1.5 facilities. This is valid only when DISPLAY=PROV. Retrieves the active path when DISPLAY=ACT
	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
	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 port# = 1 to 84, hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt OC3-slot#-port#-sts#-vtg#-ALL OC3-slot#-port#-sts#-ALL OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 sts# = 1 to 3 vtg# = 1 to 7, vt# = 1 to 4 All slots with OC-3 circuit packs
	OC12-slot#-port#-sts#-vtg#-vt# OC12-slot#-port#-sts#-vtg#-ALL 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 All slots with OC-12 circuit packs
	OC48-slot#-sts#-vtg#-vt# OC48-slot#-sts#-vtg#-ALL OC48-slot#-sts#-ALL OC48-slot#-ALL OC48-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7, vt# = 1 to 4 All slots with OC-48 circuit packs
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-vtg#-ALL 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 All slots with EC-1 circuit packs
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 16-80 shows the DFLT-# smart AID value and the corresponding ports.

Table 16-80
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 16-81
Parameter descriptions

Parameter	Possible values	Description
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
DISPLAY	PROV	Default. Retrieves provisioned cross-connects
	ACT	Retrieves the path activity of provisioned cross-connects
CKTID	1 to 40 alphanumeric characters	Connection identifier. A string between 1 and 40 alphanumeric characters,enclosed in double quotes that identifies the cross-connect. If a null string is specified, cross-connects without an identifier are retrieved.
	ALL	Retrieve all cross-connects regardless of their identifier

AID, CCT, and SWMATE usage

Figure 16-3 on page 16-92 shows valid combinations of AID, CCT, and SWMATE along with the resulting facility connections.

Example input

For the WASHINGTON network element, retrieve the activity for all provisioned VT1.5 cross-connects to the OC-3 interface in slot 10 port 1, regardless of cross-connection type:

```
RTRV-CRS-VT1:WASHINGTON:OC3-10-1-ALL:CTAG65:::DISPLAY=ACT;
```

For the SEATTLE network element, retrieve all the provisioned VT1.5 cross-connects regardless of cross-connection type:

```
RTRV-CRS-VT1:SEATTLE:ALL:CTAG56:::DISPLAY=PROV;
```

> ***Note:*** All of the provisioned VT1.5 cross-connects on the network element are listed in the command response.

For the SEATTLE network element, retrieve all the provisioned VT1.5 cross-connects with a cross-connection type of 1WAY:

```
RTRV-CRS-VT1:SEATTLE:ALL:CTAG56::1WAY:DISPLAY=PROV;
```

For the SEATTLE network element, retrieve all the provisioned VT1.5 cross-connects that have "SEATTLE-WASHINGTON" as their identifier:

```
RTRV-CRS-VT1:SEATTLE:ALL:CTAG56:::DISPLAY=PROV:
CKTID="SEATTLE-WASHINGTON";
```

Response block syntax

```
<SID><DATE><TIME>
FromAID,ToAID:<CCT><,FFP>:<SWMATE=Domain>,<CKTID=Domain>,
<FROMAEND=Domain>,<FROMZEND=Domain>,<TOAEND=Domain>,
<TOZEND=Domain>:<sst>
```

Table 16-82
Response parameter descriptions

Parameter	Possible values	Description
FromAID, ToAID	DS1-slot#-port#	slot# = 3 to 10, port# = 1 to 12
	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
	OC12-slot#-port#-sts#-vtg#-vt#	slot# = 3 to 12, port# = 1 sts# = 1 to 12, vtg# = 1 to 7 vt# = 1 to 4
CCT	1WAY	Unidirectional connection
	2WAY	Bidirectional connection (default)
	1WAYPR	Unidirectional path ring connection
	2WAYPR	Bidirectional path ring connection
	2WAYBR	Bidirectional bridge ring connection
FFP (see Note)	UNI	unidirectional
	BIDIR	bidirectional

Table 16-82 (continued)
Response parameter descriptions

Parameter	Possible values	Description
SWMATE	EC1-slot#-sts#-port#-vtg#-vt#	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 sts# = 1, vtg# = 1 to 7, vt# = 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
	OC12-slot#-port#-sts#-vtg#-vt#	Identify the VT1.5 facility where slot# = 3 to 12, port# = 1 sts# = 1 to 12, vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt#	Identify the VT1.5 facility where slot# = 11, 12 sts# = 1 to 48, vtg# = 1 to 7 vt# = 1 to 4
CKTID	String between 1 and 40 alphanumeric characters	Identifier of the cross-connect, if one exists
SST	ACT	Active, carrying traffic (default)
	IDLE	Idle, not carrying traffic
	PSI	Protection switch inhibited
	FLT	Fault detected in equipment
	MEA	Mismatched equipment attributes (circuit pack)
	TSTF	Test failed, OOS due to failed test
	UEQ	Unequipped, circuit pack missing
	ROLL	Roll
FROMAEND	An integer between 0 and 15	APS ID of FromAID originating node for BLSR systems
FROMZEND	An integer between 0 and 15	APS ID of FromAID terminating node for BLSR systems
TOAEND	An integer between 0 and 15	APS ID of ToAID originating node for BLSR systems
TOZEND	An integer between 0 and 15	APS ID of ToAID terminating node for BLSR systems
Note: The facility group protection is only available with linear systems.		

Table 16-83
CCT descriptions

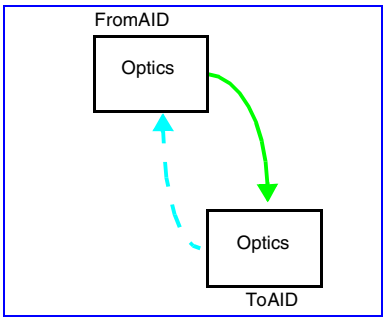
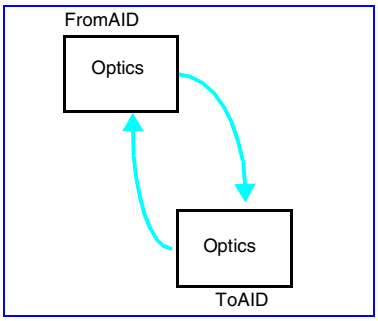
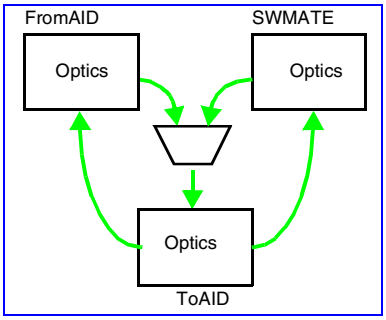
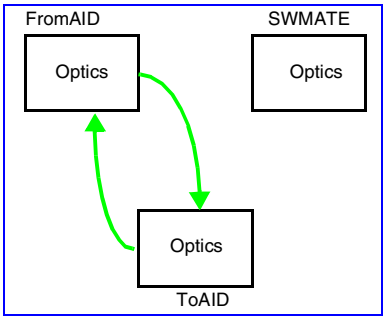
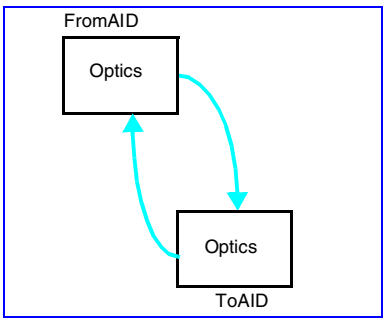
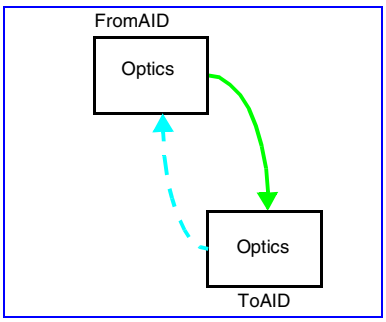
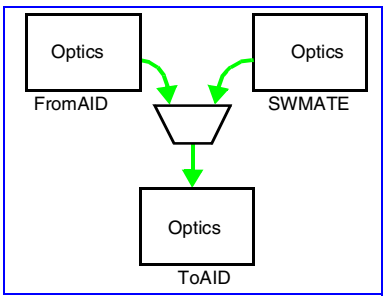
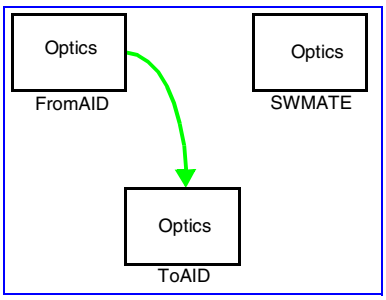
CCT	Description	CCTs before and after CCT edit
2WAY	Converts two existing 1WAY cross-connects to a 2WAY cross-connect.	 Before edit: two 1WAY connections  After edit: one 2WAY connection
	Converts an existing 2WAYPR cross-connect to a 2WAY cross-connect.	 Before edit: one 2WAYPR connection  After edit: one 2WAYconnection
1 WAY	Converts an existing 2WAY cross-connect to two 1WAY cross-connects.	 Before edit: one 2WAY connections  After edit: two 1WAY connections
	Converts an existing 1WAYPR cross-connect to a 1WAY cross-connect.	 Before edit: one 1WAYPR connection  After edit: one 1WAY connection

Table 16-83 (continued)
CCT descriptions

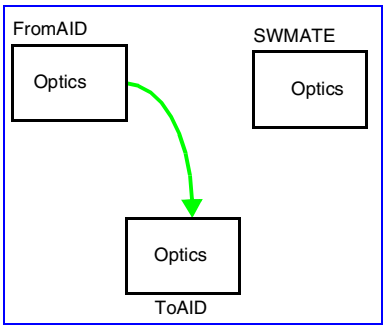
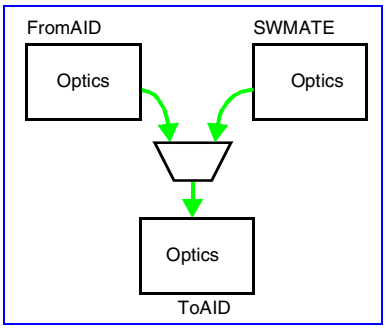
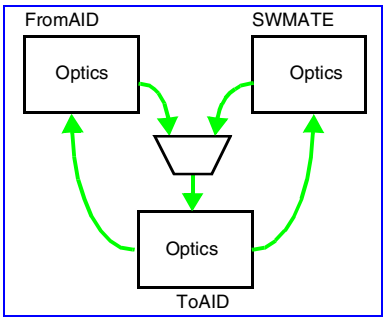
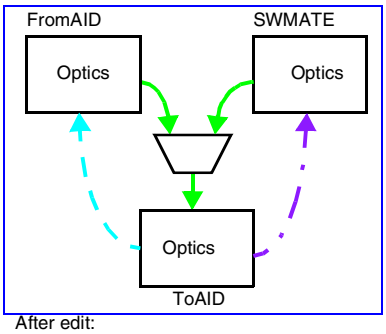
CCT	Description	CCTs before and after CCT edit
1WAYPR	Converts an existing 1WAY cross-connect to a 1WAYPR cross-connect.	 Before edit: one 1WAY connection  After edit: one 1WAYPR connections
	Converts an existing 2WAYPR cross-connect to a 1WAYPR and two 1way cross-connects.	 Before edit: one 2WAYPR connection  After edit: one 1WAYPR and two 1WAYconnections

Table 16-83 (continued)
CCT descriptions

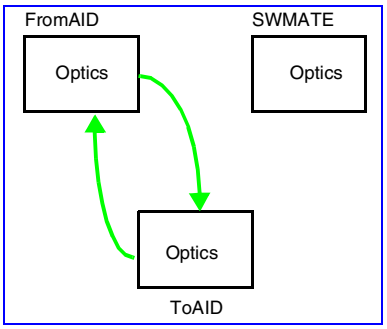
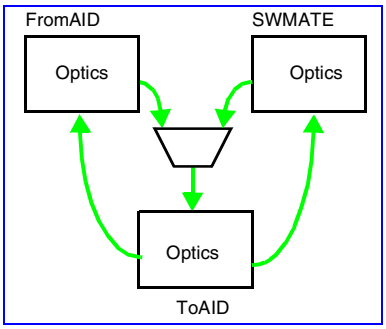
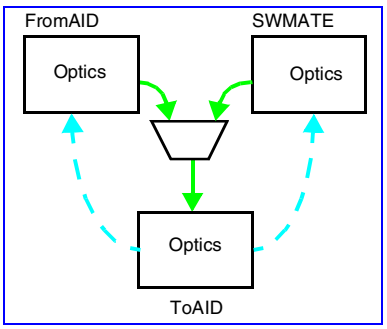
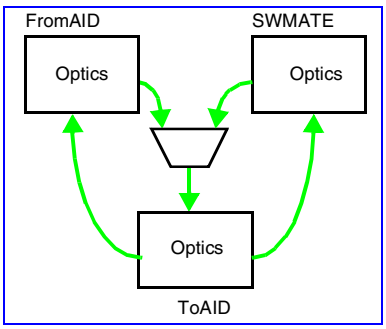
CCT	Description	CCTs before and after CCT edit
2WAYPR	Converts an existing 2WAY cross-connect to a 2WAYPR cross-connect.	 Before edit: one 2WAY connection  After edit: one 2WAYPR connection
	Converts an existing 1WAYPR cross-connect to a 2WAYPR cross-connect if 1WAY cross-connects already exist.	 Before edit: one 1WAYPR connection  After edit: one 2WAYPR connection

Table 16-83 (continued)
CCT descriptions

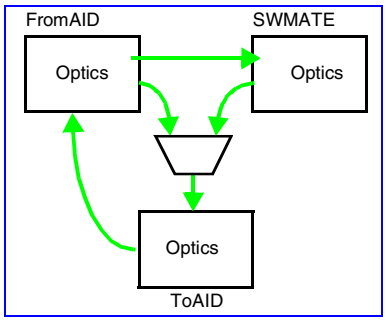
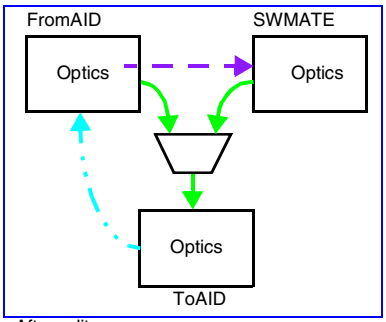
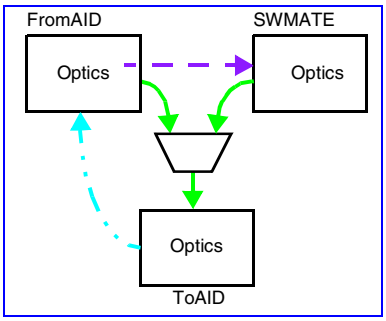
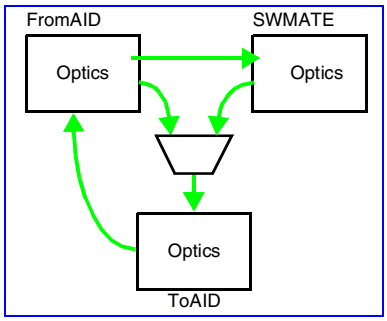
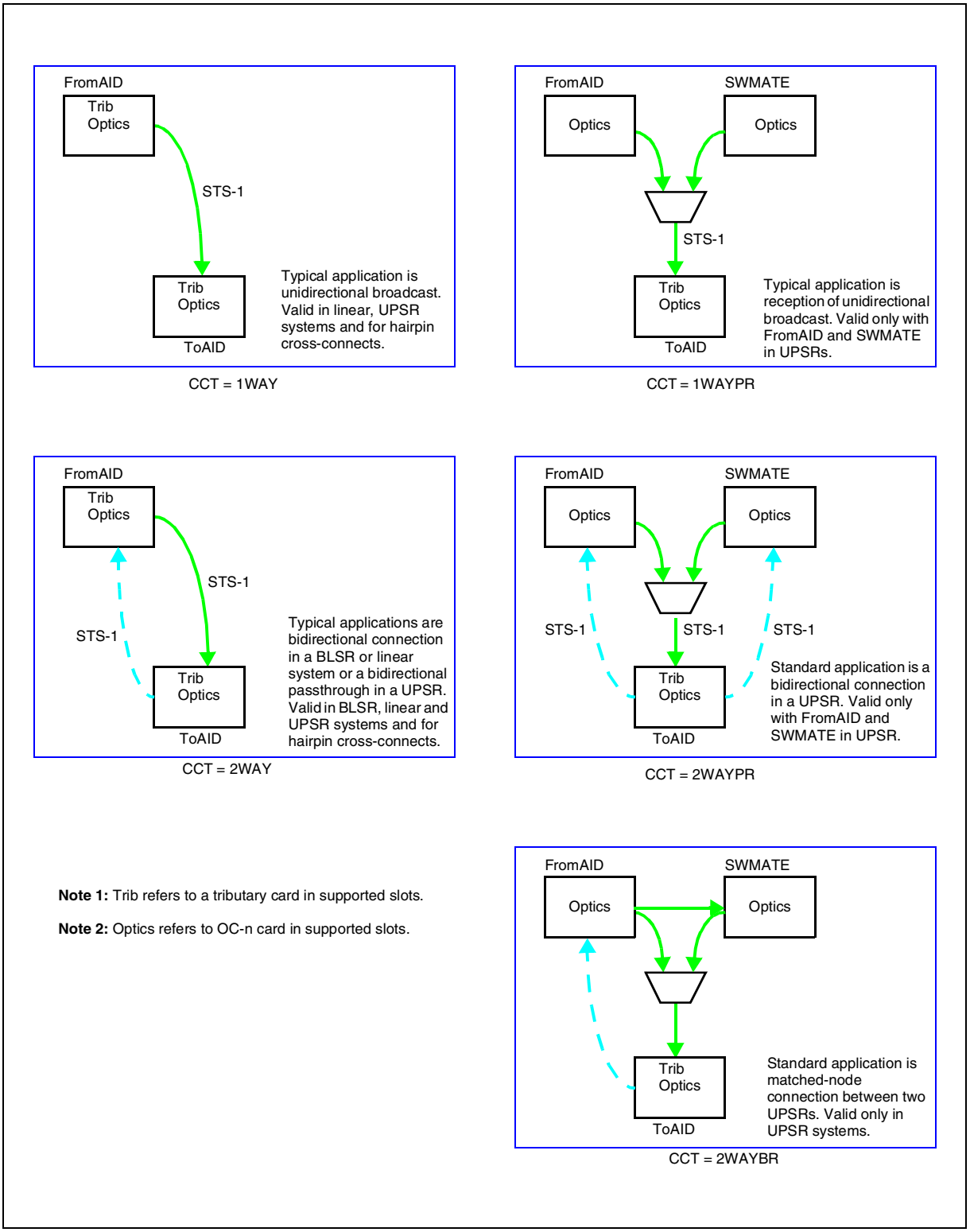
CCT	Description	CCTs before and after CCT edit
1WAYPR and two 1WAY	Converts an existing 2WAYBR cross-connect to a 1WAYPR and two 1WAY cross-connects.	 Before edit: one 2WAYBR connection  After edit: one 1WAYPR and two 1WAYconnections
2WAYBR	Converts an existing 1WAYPR and two 1WAY cross-connects to a 2WAYBR cross-connect.	 Before edit: one 1WAYPR connection  After edit: one 2WAYBR connections

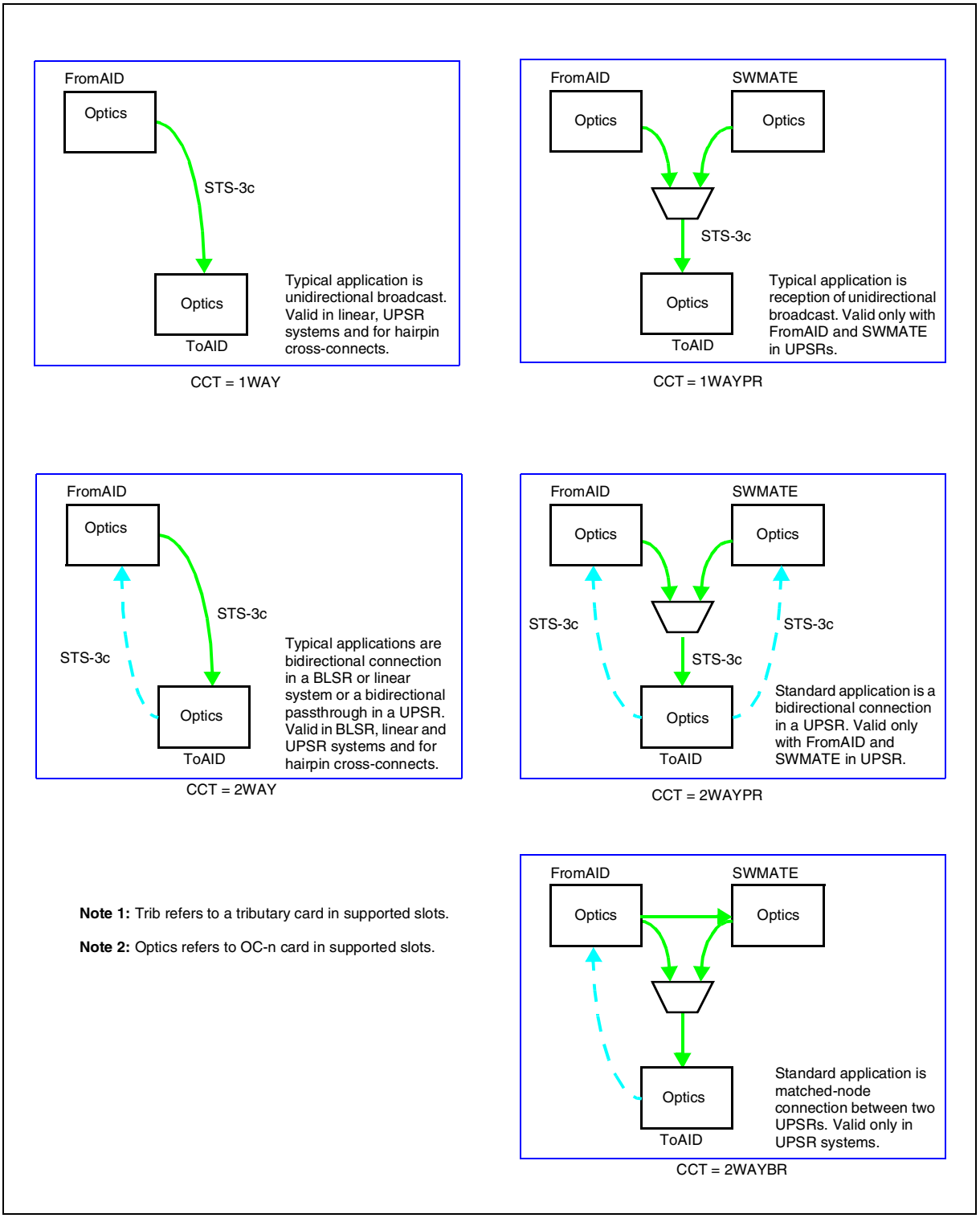
Figure 16-1
Valid STS-1 AID combinations by CCT



Note 1: Trib refers to a tributary card in supported slots.

Note 2: Optics refers to OC-n card in supported slots.

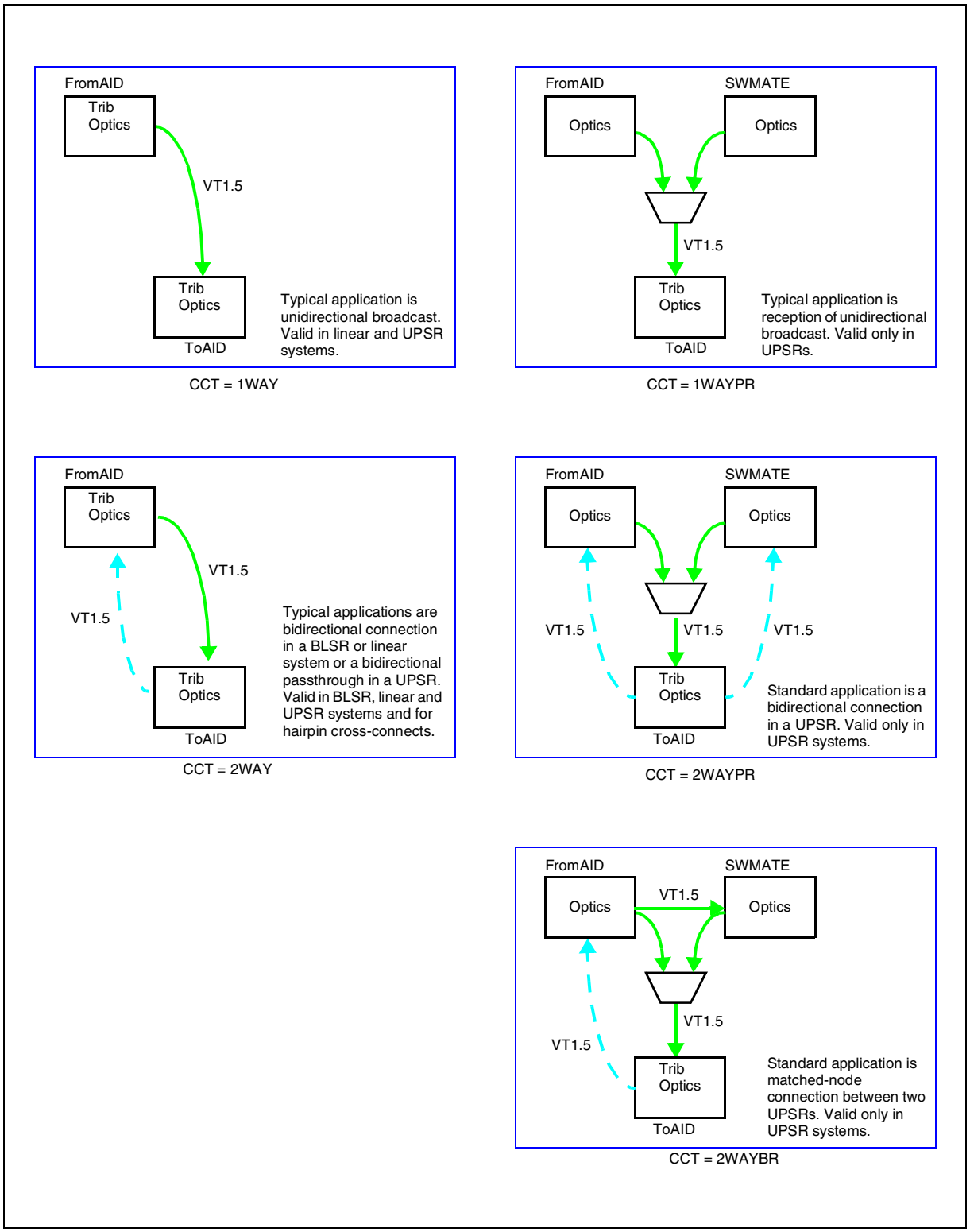
Figure 16-2
Valid STS-3c/12c/24c/48c AID combinations by CCT



Note 1: Trib refers to a tributary card in supported slots.

Note 2: Optics refers to OC-n card in supported slots.

Figure 16-3
Valid VT1.5 AID combinations by CCT



Alarms, events, and external controls detailed command descriptions

This chapter is an alphabetical summary of the TL1 commands related to alarm, events, and external controls. 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.

ALW-MSG-ALL

The Allow Messages All command instructs the network element to resume previously inhibited REPT^ALM, REPT^ALM^ENV, REPT^EVT and REPT^EX autonomous messages. These messages are inhibited through the use of the INH-MSG-ALL command.

When a TL1 session begins, REPT^ALM, REPT^ALM^ENV, and REPT^EVT messages are allowed by default.

To inhibit messages see INH-MSG-ALL.

Note: The Allow Messages All command does not resume previously inhibited REPT^EVT^LOG and REPT^EVT^INVENTORY autonomous messages. To resume these inhibited autonomous messages, use the ALW-MSG-BROADCAST command.

Security level

Level 1

Input syntax

```
ALW-MSG-ALL:[TID]:[ALL]:CTAG;
```

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

Table 17-1
Syntax definition

Field	Purpose
TID	Target identifier
ALL	All data
CTAG	Correlation tag

Example input

Restart all autonomous message from network element BOSTON3:

```
ALW-MSG-ALL:BOSTON3:ALL:CTAG12;
```

ALW-MSG-BROADCAST

The Allow Messages Broadcast command instructs the network element or network processor to resume previously inhibited REPT^DBCHG, REPT^EVT^LOG and REPT^EVT^INVENTORY autonomous messages. These messages are inhibited through the use of the INH-MSG-BROADCAST command.

When a TL1 session begins, REPT^DBCHG, REPT^EVT^LOG and REPT^EVT^INVENTORY messages are inhibited by default.

To inhibit messages see INH-MSG-BROADCAST.

Security level

Level 1

Input syntax

```
ALW-MSG-BROADCAST:[TID]::CTAG;
```

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

Table 17-2
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Turn the autonomous display of REPT^DBCHG, REPT^EVT^LOG and REPT^EVT^INVENTORY events to on for network element BOSTON:

```
ALW-MSG-BROADCAST:BOSTON::CTAG12;
```

DLT-ALM-PROFILE

The Delete Alarm Profile command allows the user to delete an alarm profile.

Security Level

Level 3

Input syntax

```
DLT-ALM-PROFILE:[TID]::CTAG::AIDTYPE,"PRFLNAME";
```

Table 17-3
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
PRFLNAME	Alarm profile name assigned by user

Table 17-4
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS24C	STS-24C facility
	STS48C	STS-48C facility
	EQPT	equipment
	E1	E1 facility
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC-3 facility
	OC12	OC-12 facility

Table 17-4 (continued)
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	OC48	OC-48 facility
	OC192	OC-192 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SP
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel
PRFLNAME	ASCII string	Alarm profile name assigned by user Alarm profile name-can be up to 20 characters long and must be enclosed within quotation marks (quotation marks and backslash to be excluded from name).

Example input
Delete the alarm profile for network element OTTAWA:

```
DLT-ALM-PROFILE:OTTAWA::CTAG12::OC3,”ALARMSON”;
```

ED-ALM-PROFILE

The Edit Alarm Profile command allows the user to set the status of any alarms that are applicable to the specified profile.

Security Level

Level 3

Input syntax

```
ED-ALM-PROFILE:[TID]::CTAG::AIDTYPE,"PRFLNAME":ALMID=Domain
[,ALRMSTAT=Domain];
```

Table 17-5
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
PRFLNAME	Alarm profile name assigned by user
ALMID	Alarm identifier
ALRMSTAT	Alarm status

Table 17-6
Parameter description

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS24C	STS-24C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility

Table 17-6 (continued)
Parameter description

Parameter	Possible values	Description
AIDTYPE	E1	E1 facility
	OC3	OC-3 facility
	OC12	OC-12 facility
	OC48	OC-48 facility
	OC192	OC-192 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SP
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
PRFLNAME	ASCII string	Alarm profile name-can be up to 20 characters long and must be enclosed within quotation marks (quotation marks and backslash to be excluded from name)
ALMID	a positive integer	Identifier of alarm point
ALRMSTAT	ENABLED	Enable selected alarms (default)
	DISABLED	Disable selected alarms

Example input

Set the alarm status for network element OTTAWA:

```
ED-ALM-PROFILE:OTTAWA::CTAG12::OC3,"ALARMSON":
ALMID=12;
```

ENT-ALM-PROFILE

The Enter Alarm Profile command allows the user to create a new alarm profile. The profile is given a name and the status of all alarms in the profile is initially set to enabled by default.

Security Level

Level 3

Input syntax

```
ENT-ALM-PROFILE:[TID]::CTAG::AIDTYPE,"PRFLNAME";
```

Table 17-7
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
PRFLNAME	Alarm profile name assigned by user

Table 17-8
Parameter description

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS24C	STS-24C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	E1	E1 facility
	OC3	OC-3 facility

Table 17-8 (continued)
Parameter description

Parameter	Possible values	Description
AIDTYPE	OC12	OC-12 facility
	OC48	OC-48 facility
	OC192	OC-192 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SP
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
PRFLNAME	ASCII string	Alarm profile name-can be up to 20 characters long and must be enclosed within quotation marks (quotation marks and backslash to be excluded from name)

Example input

Create a new alarm profile for network element NEWYORK:

```
ENT-ALM-PROFILE:NEWYORK::CTAG12::OC48,"ALARMSON";
```

INH-MSG-ALL

The Inhibit Messages All command is used to stop all REPT^ALM, REPT^ALM^ENV, REPT^EVT and REPT^EX autonomous messages. It is meant to be used during maintenance to keep the terminal screen uncluttered.

When a TL1 session begins, REPT^ALM, REPT^ALM^ENV and REPT^EVT messages are allowed by default.

To resume messages see ALW-MSG-ALL.

> ***Note:*** The Inhibit Messages All command does not inhibit REPT^EVT^LOG and REPT^EVT^INVENTORY autonomous messages. To inhibit these autonomous messages, use the INH-MSG-BROADCAST command.

Security level

Level 1

Input syntax

```
INH-MSG-ALL:[TID]:[ALL]:CTAG;
```

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

Table 17-9
Syntax definition

Field	Purpose
TID	Target identifier
ALL	All data
CTAG	Correlation tag

Example input

Turn off all messages from the network element NEWYORK:

```
INH-MSG-ALL:NEWYORK:ALL:CTAG12;
```

INH-MSG-BROADCAST

The Inhibit Messages Broadcast command instructs the network element or network processor to inhibit REPT^DBCHG, REPT^EVT^LOG and REPT^EVT^INVENTORY autonomous messages.

When a TL1 session begins, REPT^DBCHG, REPT^EVT^LOG and REPT^EVT^INVENTORY messages are inhibited by default.

To resume messages see ALW-MSG-BROADCAST.

Security level

Level 1

Input syntax

```
INH-MSG-BROADCAST:[TID]::CTAG;
```

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

Table 17-10
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Turn the autonomous display of REPT^EVT^LOG and REPT^EVT^INVENTORY events to off for network element BOSTON:

```
INH-MSG-BROADCAST:BOSTON::CTAG12;
```

OPR-ACO-ALL

The Operate Audible Alarm Cutoff All command instructs a network element to cut off the office audible alarm indications without changing the other alarm indications.

The result of the OPR-ACO-ALL command is identical to manually pressing the ACO button on the network element circuit pack.

There is no complementary release command for ACO.

Security level

Level 1

Input syntax

```
OPR-ACO-ALL:[TID]:[AID]:CTAG;
```

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

Table 17-11
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AID	Access identifier

Table 17-12
AID descriptions

AID TYPE	Command-specific values	Purpose
AID	ALL-%HLINK-OC3-hslot#-hport#	Turn off DS1 service module office audible alarms hslot# = 3 to 10 hport# = 1 to 4
	ALL	Turn off all office audible alarms

Example input

Stop the audible alarm in network element NEWYORK:

```
OPR-ACO-ALL:NEWYORK::CTAG12;
```

Stop audible alarms in ALL network elements:

```
OPR-ACO-ALL:ALL::CTAG12;
```

OPR-EXT-CONT

The Operate External Controls command is used to turn on one or more of the four external control relays. The network element is equipped with four relays that can be configured for normally closed or normally open operation.

The contact number parameter is mandatory and grouping is allowed. The control TYPE parameter is not required, but can be used to parse the command.

For example, if the command is intended to turn on lights on relay 3, but relay 3 is actually connected to sprinklers, then including the value LIGHT in the CONTTYPE field would cause the command to fail (and prevent sprinklers from being accidentally turned on).

CAUTION
Be careful not to turn on external controls that activate a potential danger such as sprinklers or miscellaneous controls connected to possibly hazardous systems or equipment.

To turn off external control relays see the RLS-EXT-CONT command.

Security level

Level 2

Input syntax

```
OPR-EXT-CONT:[TID]:AID:CTAG::[CONTTYPE];
```

Table 17-13
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. A group of values is acceptable.
CTAG	Correlation tag
CONTTYPE	Optional parameter, the TYPE of control for which the control state is being set

Table 17-14
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 to 4	Identify the contact number
ALL	ALL	Activate all external relays. Not allowed when CONTTYPE is null.
Grouping	#&#&#, #= 1 to 4	Identify multiple contacts
DSM	number-%HLINK-OC3-hslot#-hport#	DS1 service module office audible alarms number = 1 to 4, hslot# = 3 to 10 hport# =1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module office audible alarms hslot# = 3 to 10, hport# = 1 to 4

Table 17-15
Parameter descriptions

Parameter	Possible values	Description
CONTTYPE	null	Optional parameter (ALL). Not allowed when AID is ALL
	AIRCOND	Air conditioning
	ENGINE	Engine
	FAN	Fan
	GEN	Generator
	HEAT	Heat
	LIGHT	Light
	MISC	Miscellaneous
	SPKLR	Sprinkler

Example input

Turn on the air conditioner on relay 1 at network element WASHINGTON:

```
OPR-EXT-CONT:WASHINGTON:1:CTAG12::AIRCOND;
```

Turn on the heat on all external controls at network element NEWYORK:

```
OPR-EXT-CONT:NEWYORK:ALL:CTAG12::HEAT;
```

Turn on relays 2 and 3 to activate the generator at network element SEATTLE:

```
OPR-EXT-CONT:SEATTLE:2&3:CTAG12::GEN;
```

RLS-EXT-CONT

The Release External Control command is used to switch any of the four electrical relays, for controlling external devices, from operative mode to idle mode.

The external control relays can be configured for either normally closed or normally open mode and are connected to external devices through wire-wrap pins.

External control relays are normally inoperative and are switched into operative mode by the OPR-EXT-CONT command.

> ***Note:*** Though the CONTTYPE value is optional it should be used to prevent errors. If an incorrect value to relay pair is entered then the command will be denied by the network element.

Security level

Level 2

Input syntax

```
RLS-EXT-CONT:[TID]:AID:CTAG::[CONTTYPE];
```

Table 17-16
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. A group of values is acceptable.
CTAG	Correlation tag
CONTTYPE	Optional parameter, the TYPE of control for which the control state is being set

Table 17-17
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 to 4	Identify the contact number
ALL	ALL	Release relays 1 to 4. ALL not allowed if CONTTYPE is null.
Grouping	#&#&#, #=1 to 4	Multiple contacts for example 1,2
DSM	number-%HLINK-OC3-hslot#-hport#	DS1 service module office audible alarms number = 1 to 4, hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module office audible alarms hslot# = 3 to 10, hport# = 1 to 4

Table 17-18
Parameter descriptions

Parameter	Possible values	Description
CONTTYPE	null	Optional parameter (ALL) Not allowed when AID is ALL
	AIRCOND	air conditioning
	ENGINE	engine
	FAN	fan
	GEN	generator
	HEAT	heat
	LIGHT	light
	MISC	miscellaneous
	SPKLR	sprinkler

Example input

Switch external control 1, for air conditioning off at network element NEWYORK:

```
RLS-EXT-CONT:NEWYORK:1:CTAG34::AIRCOND;
```

Switch off engine and fan on relays 2 and 3 respectively at network element WASHINGTON:

```
RLS-EXT-CONT:WASHINGTON:2&3:CTAG45::ENGINE&FAN;
```

RTRV-ACTIVE-PROFILE

The Retrieve Active Profile command allows the user to view the current alarm profile that is associated with a given equipment or facility object TYPE.

Security level

Level 1

Input syntax

```
RTRV-ACTIVE-PROFILE:[TID]::CTAG::AIDTYPE,AID:
[PRFLNAME=Domain];
```

Table 17-19
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
AID	A valid access identifier for the selected AIDTYPE
PRFLNAME	Alarm profile name assigned by user

Table 17-20
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS24C	STS-24C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC-3 facility

Table 17-20 (continued)
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	OC12	OC-12 facility
	OC48	OC-48 facility
	OC192	OC-192 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SP
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
PRFLNAME	ASCII string	Alarm profile name-can be up to 20 characters long and must be enclosed within quotation marks. (quotation marks and backslash to be excluded from name)

Table 17-21
AIDTYPE and applicable AID

AIDTYPE	AID	Description
VT1	OC3-slot#-port#-sts#-vtg#-vt# OC3-slot#-port#-sts#-vtg#-ALL OC3-slot#-port#-sts#-ALL OC3-slot#-port#-ALL OC3-ALL	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#-vtg#-ALL 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#-vtg#-ALL OC48-slot#-sts#-ALL OC48-slot#-ALL OC48-ALL	slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	OC3-slot#-1-sts#-vtg#-vt#- %HLINK-OC3-hslot#-hport#	DS1 service module slot# = 1 or 2 sts# = 1 to 3, vtg# = 1 to 7, vt# = 1 to 4 hslot# = 3 to 10, hport# = 1 to 4
	OC3-slot#-1-sts#-ALL- %HLINK-OC3-hslot#- hport#	All VT1.5 facilities in DS1 service module slot# = 1 or 2 sts# = 1 to 4, hslot# = 3 to 10, hport# = 1 to 4
	OC3-slot#-1-ALL-%HLINK -OC3-hslot#-hport#	All VT1.5 facilities in hslot# = 3 to 10, hport# = 1 to 4
	EC1-slot#-port#-vtg#-vt# EC1-slot#-port#-vtg#-ALL EC1-slot#-port#-ALL EC1-slot#-ALL EC1-ALL	slot# =3, 5, 7, 9 port# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL DS1-slot#-ALL DS1-ALL	Identify VT1.5 facilities on DS3VTx12 equipment slot# =3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28

Table 17-21 (continued)
AIDTYPE and applicable AID

AIDTYPE	AID	Description
STS1	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3
	OC3-slot#-1-sts#-%HLINK- OC3-hslot#-hport#	DS1 service module slot# = 1 or 2, sts# = 1 to 3, hslot# = 3 to 10, hport# = 1 to 4
	OC3-slot#-1-ALL-%HLINK- OC3-hslot#-hport#	DS1 service module slot# = 1 or 2, sts# = all, hslot# = 3 to 10, hport# = 1 to 4
	OC12-slot#port#-sts# OC12-slot#-ALL OC12-ALL	slot# = 3 to 10 for OC-12x4 STS slot# = 3 to 12 for OC-12 port# = 1 to 4 for OC-12x4 STS port# = 1 for OC-12 sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 for OC-48 STS slot# = 11, 12 for OC-48 sts# = 1 to 48
	OC192-slot#sts# OC192-slot#-ALL OC192-ALL	slot#=11 to 12 sts#= 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	slot# = 3, 5, 7, 9 port# = 1 to 12
	DS3-slot#-port# DS3-ALL	slot# =3 to 10 port# = 1 to 3 for DS3x3, 1 to 12 for DS3x12 or DS3x12e
	IPT100-slot#-wan#-sts# IPT100-slot#-wan#-ALL IPT100-slot#-ALL IPT100-ALL	slot# = 3 to 10 wan# = 1 or 2 sts# = 1 to 48
	100FX-slot#-wan#-sts# 100FX-slot#-wan#-ALL 100FX-slot#-ALL 100FX-ALL	slot# = 3 to 10 wan# = 1 or 2 sts# = 1 to 48
	1GE-slot#-wan#-sts# 1GE-slot#-wan#-ALL 1GE-slot#-ALL 1GE-ALL	slot# = 3, 5, 7, 9 wan# = 1 or 2 sts# = 1 to 48

Table 17-21 (continued)
AIDTYPE and applicable AID

AIDTYPE	AID	Description
STS1	WAN-slot#-port#-sts# WAN-slot#-port#-ALL WAN-slot#-ALL WAN-ALL	slot# = 3 to 10 port# = 1 or 2 sts# = 1 to 21
STS3C	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	slot# =3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-All OC12-ALL	slot# = 3 to 10 for OC-12x4 STS slot# = 3 to 12 for OC-12 port# = 1 to 4 for OC-12x4 STS port# = 1 for OC-12 sts# = 1,4,7,10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 for OC-48 STS slot# = 11, 12 for OC-48 sts# = 1,4, 7, ..., 46
	OC192-slot#-sts# OC192-slot-#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 4, 7,..., 190
	IPT100-slot#-wan#-sts# IPT100-slot#-wan#-ALL IPT100-slot#-ALL IPT100-ALL	slot# = 3 to 10 wan# = 1 or 2 sts# = 1, 4, 7, 10,...46
	100FX-slot#-wan#-sts# 100FX-slot#-wan#-ALL 100FX-slot#-ALL 100FX-ALL	slot# = 3 to 10 wan# = 1 or 2 sts# = 1, 4, 7, 10, ...46
	1GE-slot#-wan#-sts# 1GE-slot#-wan#-ALL 1GE-slot#-ALL 1GE-ALL	slot# = 3, 5, 7, 9 wan# = 1 or 2 sts# = 1, 4, 7, 10, ...46
	WAN-slot#-port#-sts# WAN-slot#-port#-ALL WAN-slot#-ALL WAN-ALL	slot# = 3 to 10 port# = 1 or 2 sts# = 1, 4, 7, ..., 19

Table 17-21 (continued)
AIDTYPE and applicable AID

AIDTYPE	AID	Description
STS12C	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12slot#-port-ALL OC12-ALL	slot# = 3 to 10 for OC-12x4 STS slot# = 3 to 12 for OC-12 port# = 1 to 4 for OC12x4 STS port# = 1 for OC12 sts# = 1
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 for OC-48 STS slot# = 11, 12 for OC-48 sts# =1,13, 25, 37
	OC192-slot#-sts# OC192-slot-#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 13, 25, ..., 181
	IPT100-slot#-wan#-sts# IPT100-slot#-wan#-ALL IPT100-slot#-ALL IPT100-ALL	slot# = 3 to 10 wan# = 1 or 2 sts# = 1, 13, 25, 37
	100FX-slot#-wan#-sts# 100FX-slot#-wan#-ALL 100FX-slot#-ALL 100FX-ALL	slot# = 3 to 10 wan# = 1 or 2 sts# = 1, 13, 25, 37
	1GE-slot#-wan#-sts# 1GE-slot#-wan#-ALL 1GE-slot#-ALL 1GE-ALL	slot# = 3, 5, 7, 9 wan# = 1 or 2 sts# = 1, 13, 25, 37
	WAN-slot#-port#-sts# WAN-slot#-port#-ALL WAN-slot#-ALL WAN-ALL	slot# = 3 to 10 port# = 1 or 2 sts# = 1
STS24C	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# =1, 25, 49, ..., 169
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to12 sts# =1, 25
	WAN-slot#-port#-sts# WAN-slot#-port#-ALL WAN-slot#-ALL WAN-ALL	slot# = 3 to 10 port# = 1 or 2 sts# = 1

Table 17-21 (continued)
AIDTYPE and applicable AID

AIDTYPE	AID	Description
STS-48c	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# =1, 49, 97, 145
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# =1
EQPT	DS1-slot# DS1-ALL	slot# =3 to 10 All DS1 equipment
	DS3-slot# DS3-ALL	slot# =3 to 10 All DS3 equipment
	DS3V-slot# DS3V-ALL	slot# =3 to 10 All DS3VTx12 equipment
	DS1TM-slot#-%HLINK -OC3-hslot#-hport#	DSM DS1x 84 equipment where slot# = 1 or 2, hslot# = 3 to 10 hport# = 1 to 4
	OC3-slot# OC3-ALL	slot# =3 to 10 All OC-3, OC-3x4 equipment
	OC12-slot# OC12-ALL	slot# = 3 to 12 All OC-12 or OC-12x4 STS equipment
	OC48-slot# OC48-ALL	slot# = 3 to 12 All OC-48 or OC-48 STS equipment
	OC192-slot# OC192-ALL	slot# = 11, 12 All OC-192 equipment
	EC1-slot# EC1-ALL	slot# = 3, 5, 7, 9 All EC-1 equipment

Table 17-21 (continued)
AIDTYPE and applicable AID

AIDTYPE	AID	Description
EQPT	CLX-slot# CLX-ALL	slot# =13,14 All VTX or STX-192 equipment
	NP	Network processor
	SP	Shelf processor
	PSC	Protection switch controller
	PSX	Protection switch extender
	ILAN	Intershelf local area network
	IPT100-slot#	slot# = 3 to 10
	100FX-slot#	slot# = 3 to 10
	1GE-slot#	slot# = 3, 5, 7, 9
	100BTFOS-slot#	slot# = 3 to 10
	1GFOS-slot#	slot# = 3 to 10
T1	DS1-slot#-port# DS1-slot#-ALL DS1-ALL	slot# = 4 to 10, port# = 1 to 12
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL DS1-slot#-ALL DS1-ALL	Identify T1 facilities on DS3VTx12 equipment where 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
	DS1-1-ALL-%HLINK-OC3 -hslot#-hport#	All T1 facilities on the host shelf hslot# = 3 to 10, hport# = 1 to 4
T3	DS3-slot# DS3-ALL	slot# = 3,5,7,9 all slots
	DS3-slot#-port# DS3-slot#-ALL DS3-ALL	Identify T3 facilities on DS3VTx12 equipment where slot# =3, 5, 7, 9 port# = 1 to 12
EC1	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	slot# = 3,5,7,9 port# = 1 to 12 slot# = 3,5,7,9 port# = all all slots

Table 17-21 (continued)
AIDTYPE and applicable AID

AIDTYPE	AID	Description
OC3	OC3-slot#-port# OC3-ALL	slot# = 3 to 10, port# = 1 to 4 all slots
	OC3-slot#-1-%HLINK- OC3-hslot#-hport#	slot# = 1 or 2, hslot# = 3 to 10, hport# = 1 to 4
OC12	OC12-slot#-port# OC12-ALL	slot# = 3 to 12, port#=1 to 4 all slots
OC48	OC48-slot# OC48-ALL	slot# = 3 to 12 all slots
OC192	OC192-slot# OC192-ALL	slot# = 11, 12 all slots
FAC	Null	ILAN facility objects
COM	Null	Common and Shelf alarms
DSM	DSM-%HLINK-OC3 -hslot#-hport#	Targets a single DS1 service module hslot# = 3 to 10, hport# = 1 to 4
SECU	Null	Security related
ETH	ETH-slot#-port#	slot# = 3 to 10 port# = 1 or 2
WAN	WAN-slot#-port#	slot# = 3 to 10 port# = 1 or 2
FC	FC-slot#-port#	slot# = 3 to 10 port# = 1 or 2

Example input
Retrieve the current alarm profile on all OC-12 equipment at network element NEWYORK:

```
RTRV-ACTIVE-PROFILE:NEWYORK::CTAG34::OC12,OC12-ALL;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>,<AIDTYPE>::PRFLNME=\"Domain\"";
```

Table 17-22
Response AID and AIDTYPE descriptions

AID	AIDTYPE	Description
EC1-slot#-port#-vtg#-vt#	VT1	slot# = 3, 5, 7, 9, port# = 1 to 12, vtg# 1 to 7, vt# 1 to 4
DS1-slot#-port#-t1#		slot# =3, 5, 7, 9, port# = 1 to 12, t1# = 1 to 28
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
OC3-slot#-1-sts#-vtg#-vt#-%HLINK-OC3-hslot#-hport#		DS1 service module slot# = 1 or 2, sts# = 1 to 3 vtg# = 1 o 7, vt# = 1 to 4, hslot# = 3 to 10, hport# = 1 to 4
EC1-slot#-port#	STS1	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
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 to 4, sts# = 1 to 12
OC48-slot#-sts#		slot# = 3 to 12, sts# = 1 to 48
OC192-slot#-sts#		slot# = 11, 12, sts# = 1 to 192
OC3-slot#-1-sts#-%HLINK-OC3-hslot#-hport#		DS1 service module slot# = 1 or 2, sts# = 1 to 3, hslot# = 3 to 10, hport# = 1 to 4
DS3-slot#-port#		slot# =3 to 10, port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
IPT100-slot#-wan#-sts#		slot# = 3 to 10, , wan# = 1,2, sts# = 1 to 48
100FX-slot#-wan#-sts#		slot# = 3 to 10, wan# = 1, 2 sts# = 1 to 48
1GE-slot#-wan#-sts#		slot# = 3, 5, 7, 9, wan# = 1, 2, sts# = 1 to 48
WAN-slot#-port#-sts#		slot# = 3 to 10, port# = 1 or 2, sts# = 1 to 21

Table 17-22 (continued)
Response AID and AIDTYPE descriptions

OC3-slot#-port#-sts#	STS3C	slot# =3 to 10 port# = 1 to 4 sts# = 1
OC12-slot#-port#-sts#		slot# = 3 to 12 port#=1 to 4 sts# = 1, 4, 7 or 10
OC48-slot#-sts#		slot# = 3 to 12 sts# = 1, 4, 7, .., 46
OC192-slot#-sts#		slot# = 11, 12, sts# = 1 to 192
IPT100-slot#-wan#-sts#		slot# = 3 to 10, , wan# = 1,2 sts# = 1, , 7, 10,...46
100FX-slot#-wan#-sts#		slot# = 3 to 10, wan# = 1, 2 sts# = 1, 4, 7, 10, ...46
1GE-slot#-wan#-sts#		slot# = 3, 5, 7, 9, wan# = 1, 2 sts# = 1, 4, 7, 10, ...46
WAN-slot#-port#-sts#		slot# = 3 to 10, port# = 1 or 2, sts# = 1, 4, 7, ... 19
OC12-slot#-port#-sts#	STS12C	slot# = 3 to 12, port# = 1 to 4, sts# = 1
OC48-slot#-sts#		slot# = 3 to 12, sts# =1,13, 25,37
OC192-slot#-sts#		slot# = 11, 12, sts# = 1, 13, 25, ..., 181
IPT100-slot#-wan#-sts#		slot# = 3 to 10, wan# = 1, 2, sts# = 1, 13, 25, 37
100FX-slot#-wan#-sts#		slot# = 3 to 10, wan# = 1, 2, sts# = 1, 13, 25, 37
1GE-slot#-wan#-sts#		slot# = 3, 5, 7, 9, wan# = 1, 2 sts# = 1, 13, 25, 37
WAN-slot#-port#-sts#		slot# = 3 to 10, port# = 1 to 2 sts# = 1
OC48-slot#-sts#	STS24C	slot# = 3 to 12, sts# =1, 25
OC192-slot#-sts#		slot# = 11, 12, sts# = 1, 25, 49, ..., 169
WAN-slot#-port#-sts#		slot# = 3 to 10, port# = 1 to 2 sts# = 1
OC48-slot#-sts#	STS48C	slot# = 3 to 12, sts# =1
OC192-slot#-sts#		slot# = 11, 12, sts# = 1, 49, 97, 145
DS1-slot#-port#	T1	slot# =4 to 10, port# = 1 to 2
DS1-slot#-port#-t1#		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
DS3-slot#	T3	slot# = 3,5,7,9
DS3-slot#-port#		slot# =3, 5, 7, 9, port# = 1 to 12
EC1-slot#-port#	EC1	slot# = 3,5,7,9, port # = 1 to 3 for EC-1x3, 1 to 12 for EC-1x12
OC3-slot#-port#	OC3	slot# = 3 to 10, port# = 1 to 4

Table 17-22 (continued)
Response AID and AIDTYPE descriptions

OC3-slot#-1-%HLINK-OC3-hslot#-hport#	OC3	slot# = 1 or 2, hslot# = 3 to 10, hport# = 1 to 4
OC12-slot#-port#	OC12	slot# = 3 to 12, port# = 1 to 4
OC48-slot#	OC48	slot# = 3 to 12
OC192-slot#	OC192	slot# = 11, 12
DSM-%HLINK-OC3 -hslot#-hport#	DSM	Targets a single DS1 service module hslot# = 3 to 10, hport# = 1 to 4
DS1-slot#	EQPT	slot# =3 to 10
DS3-slot#		slot# =3 to 10
DS3V-slot#		slot# =3 to 10
DS1TM-slot#-%HLINK -OC3-hslot#-hport#		DSM DS1x84 equipment where slot# = 1 or 2, hslot# = 3 to 10, hport# = 1 to 4
EC1-slot#		slot# = 3, 5, 7, 9
OC3-slot#		slot# =3 to 10
OC12-slot#		slot# = 3 to 12
OC48-slot#		slot# = 3 to 12
OC192-slot#		slot# = 11, 12
IPT100-slot#		slot# = 3 to 10,
100FX-slot#		slot# = 3 to 10
1GE-slot#		slot# = 3, 5, 7, 9
100BTFOS-slot#		slot# = 3 to 10
1GFOS-slot#		slot# = 3 to 10
CLX-slot#		slot# =13,14
NP		Network processor
SP		Shelf processor
PSC		Protection switch controller
PSX		Protection switch extender
ILAN		Intershelf local area network

Table 17-22 (continued)
Response AID and AIDTYPE descriptions

ETH-slot#-port#	ETH	slot# = 3 to 10, port# = 1 or 2
WAN-slot#-port#	WAN	slot# = 3 to 10, port# = 1 or 2
FC-slot#-port#	FC	slot# = 3 to 10, port# = 1 or 2

Table 17-23
Response parameter description

Parameter	Possible values	Description
PRFLNAME	ASCII string up to 20 characters	Alarm profile name assigned by user

RTRV-ALM-ALL

The Retrieve Alarm All command retrieves all the current alarms from the specified network elements.

The RTRV-ALM-ALL command retrieves only alarmed conditions. To display non-alarmed conditions and events use the RTRV-COND-ALL command.

Note: This command will not retrieve cleared alarms. To retrieve cleared alarms refer to the RTRV-AO command.

Security level

Level 1

Input syntax for NPx

```
RTRV-ALM-ALL:[TID]:[ALL]:CTAG:::[ALRMSEVER=Domain];
```

Input syntax for SPx

```
RTRV-ALM-ALL:[TID]:[ALL]:CTAG:::[ALRMSTAT=Domain]
[,ALRMSEVER=Domain];
```

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

Table 17-24
Syntax definition

Field	Purpose
TID	Target identifier
ALL	All data
CTAG	Correlation tag
ALRMSEVER	Alarm severity
ALRMSTAT	Alarm status

Table 17-25
Parameter descriptions

Parameter	Possible values	Description
ALRMSEVER	CR MJ MN ALL	Retrieve enabled critical alarms Retrieve enabled major alarms Retrieve enabled minor alarms Retrieve all enabled critical, major and minor alarms
ALRMSTAT	ENABLED DISABLED BOTH	(default) Retrieve only enabled alarms Retrieve only disabled alarms Retrieve both enabled and disabled alarms

Example input
Retrieve all the alarms from network element SEATTLE:

```
RTRV-ALM-ALL:SEATTLE::CTAG12;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
<OCRTM>,<LOCN>,<DIRN>:<CONDDESCR>
```

See Table 17-22 on page 17-27 for AID response descriptions. See the following tables for other response descriptions.

Table 17-26
Response parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
NTFCNCDE	CR MJ MN	all	Critical Alarm Major Alarm Minor Alarm
CONDTYPE	EQPT	all	Critical alarm caused by equipment failure
	INT	all	Internal hardware fault/failure
	SWEQPT	working EQPT AID	Protection switching equipment failure
	ESW	OC3, VTX	Excessive switching
	LOS	facility AID	Loss of signal
	LOF	facility AID	Loss of frame
	APSMM	EQPT	Automatic protection switch mode mismatch
	APSC	facility AID	Automatic protection switch channel failure
	AIS	facility AID	Alarm indication signal detected
	INC	facility AID	Incoming failure condition
	SLMF	STS1 facility AID	Signal label match failure
	FA	EQPT	Failure of Power A or B
	SYNCPRI	EQPT	Primary synchronization signal lost
	SYNCSEC	EQPT	Secondary synchronization signal lost
	LOP	OC3 facility	Loss of pointer
SRVEFF	SA NSA	all	Service affecting Not service affecting
OCRDAT	mm-dd	all	The date when the alarm occurred

Table 17-26 (continued)
Response parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
OCRTM	hh:mm:ss	all	The time when the alarm occurred
LOCN	NEND	all	Failure at the near end of the system
	FEND	all	Failure at the far end of the system
DIRN	NA	all	Not applicable
	RCV	facility AID	Receive direction only
	TRMT	all	Transmit direction only
	null	all	Not applicable
CONDDESCR	character string	all	The detailed text description of the trouble.

Legend

Term	Description
AIS	Alarm Indication Signal detection
ENV	Environmental alarm
EQPT	Equipment alarm
INC	Incoming failure condition
INT	Internal failure
NA	Not Applicable
NSA	Non Service Affecting
Rx	Receive
RFI	Remote Fault Indicator
SA	Service Affecting
SDCC	Section Data Communication Channel
Tx	Transmit
VT	Virtual Tributary

Sample output

```
SEATTLE  96-01-01 22:16:48
CTAG12 COMPLD
"SHELF,COM:MN,FA,NSA,01-01,00-00-52,NEND,NA:\"Power Failure
-B\""
```

RTRV-ALM-ENV

The Retrieve Environment Alarm command retrieves the current environmental alarms from the specified entity or entities.

Environment alarms do not relay information about equipment faults but about problems with physical premises.

Security level

Level 1

Input syntax

```
RTRV-ALM-ENV:[TID]:AID:CTAG::[NTFCNCDE],[ALMTYPE];
```

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

Table 17-27
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier, the environmental alarm contact number from 1 to 16
CTAG	Correlation tag
NTFCNCDE	Optional, the notification code indicating severity; grouping allowed
ALMTYPE	Optional, the alarm TYPE indicating the specific nature of the problem; grouping allowed

Table 17-28
AID descriptions

AID TYPE	Command-specific values	Purpose
contact number	1 to 16	Identify the contact number
ALL	ALL	All environmental alarms
Grouping	#&#&#, #= 1 to 16	Grouping of multiple AIDs separated by “&” ampersands
DSM AID	number%HLINK-OC3-hslot#-hport#	DS1 service module environmental alarm number = 1 to 16 hslot# = 3 to 10, hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module environmental alarms where hslot# = 3 to 10, hport# = 1 to 4

Table 17-29
Parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
NTFCNCDE	CR MJ MN	all	Critical alarm Major alarm Minor alarm
ALMTYPE	AIRCOMPR	all	Air compressor failure
	AIRCOND	all	Air conditioning failure
	AIRDRYR	all	Air dryer failure
	BATDSCHRG	all	Battery discharging
	BATTERY	all	Battery failure
	CLFAN	all	Cooling fan failure
	ENGINE	all	Engine failure
	ENGOPRG	all	Engine operating
	EXPLGS	all	Explosive gas
	FIRDETR	all	Fire detector failure
	FIRE	all	Fire
	FLOOD	all	Flood
	FUSE	all	Fuse failure
	GEN	all	Generator failure
	HIAIR	all	High airflow
	HIHUM	all	High humidity
	HITEMP	all	High temperature
	HIWTR	all	High water
	INTRUDER	all	Intrusion
	LWBATVG	all	Low battery voltage
	LWFUEL	all	Low fuel
	LWHUM	all	Low humidity
	LWPRES	all	Low cable pressure
	LWTEMP	all	Low temperature

Table 17-29 (continued)
Parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
ALMTYPE	LWWTR	all	Low water
	MISC	all	Miscellaneous
	OPENDR	all	Open door
	PUMP	all	Pump failure
	POWER	all	Commercial power failure
	PWR-48	all	48-V power supply failure
	RECT	all	Rectifier failure
	RECTHI	all	Rectifier high voltage
	RECTLO	all	Rectifier low voltage
	SMOKE	all	Smoke
	TOXICGAS	all	Toxic gas
	VENTN	all	Ventilation system failure

Example input
Retrieve only INTRUDER alarms on all contacts from network element NEWYORK:

```
RTRV-ALM-ENV:NEWYORK:ALL:CTAG12::,INTRUDER;
```

Retrieve alarms 1, 5 and 6 from network element WASHINGTON:

```
RTRV-ALM-ENV:WASHINGTON:1&5&6:CTAG12;
```

Retrieve all alarms from network element SEATTLE:

```
RTRV-ALM-ENV:SEATTLE:ALL:CTAG34;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:<NTFCNCDE>,<ALMTYPE>,<OCRDAT>,<OCRTM>,<ALMMSG>
```

Table 17-30
Response parameter descriptions

Parameter	Possible values	Description
AID	1 to 16	the contact number
DSM AID	number%HLINK-OC3-hslot#-hport#	DS1 service module environmental alarm number = 1 to 16, hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module environmental alarms where hslot# = 3 to 10, hport# = 1 to 4
NTFCNCDE	CR MJ MN	notification code Critical alarm Major alarm Minor alarm
ALMTYPE	see Table 17-29	the date when the alarm occurred
OCRDAT	mm-dd	the date when the alarm occurred
OCRTM	hh-mm-ss	the time when the alarm occurred
ALMMSG	character string	the detailed text description of the trouble

RTRV-ALM-PROFILE

The Retrieve Alarm Profile command will allow the user to retrieve the list of alarms and their associated profile status.

Security level

Level 1

Input syntax

```
RTRV-ALM-PROFILE:[TID]::CTAG::AIDTYPE[,PRFLNAME]:
[PRFLINFO=Domain];
```

Table 17-31
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
PRFLNAME	Alarm profile name assigned by user
PRFLINFO	Profile information

Table 17-32
Parameter description

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC3 facility
	OC12	OC12 facility
	OC48	OC48 facility

Table 17-32 (continued)
Parameter description

Parameter	Possible values	Description
AIDTYPE	OC192	OC192 facility
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre channel
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or shelf processor
	DSM	DS1 service module facility
	SECU	Security related
PRFLNAME	ASCII string	alarm profile name-can be up to 20 characters long and must be enclosed within quotation marks (quotation marks and backslash to be excluded from name)
PRFLINFO	N Y	(default) Display only profile names Display full profile information

Example input
Retrieve the list of alarms for the DSM and display the profile information at network element NEWYORK:

```
RTRV-ALM-PROFILE:NEWYORK::CTAG12::DSM,:PRFLINFO=Y;
```

Response block syntax

```
<SID><DATE><TIME>
"AIDTYPE,\"PRFLNAME\":\"CONDDESCR\":ALMID=Domain,
ALRMSTAT=Domain"
```

Table 17-33
Response parameter descriptions

Parameter	Possible values	Description
AIDTYPE	See Table 17-32 on page 17-38	equipment TYPE AIDs
PRFLNAME	ASCII string	alarm profile name
CONDDESCR	text string	condition description
ALMID	non-zero unsigned integer	alarm identifier
ALRMSTAT	ENABLED	enabled alarm point
	DISABLED	disabled alarm point

RTRV-ALMID

The Retrieve Alarm Identification command retrieves the alarm identification numbers for alarms.

Security level

Level 1

Input syntax

```
RTRV-ALMID:[TID]::CTAG::AIDTYPE;
```

Table 17-34
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier type

Table 17-35
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	ALL	All AID TYPEs
	EQPT	equipment
	EC1	EC1 facility
	OC3	OC3 facility
	OC12	OC12 facility
	OC48	OC48 facility
	OC192	OC192 facility
	T1	T1 facility
	T3	T3 facility
	VT1	VT1.5 facility
	STS1	STS-1 facility
	STS3C	STS-3c facility
	STS12C	STS-12c facility
	STS24C	STS-24c facility

Table 17-35 (continued)
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	STS48C	STS-48c facility
	DSM	DS1 service module facility AID
	FAC	conditions attributed to ILAN facilities
	COM	common to shelf or SPx
	SECU	Security related
	ETH	Ethernet facility of a 2x100BT-P2P circuit pack
	WAN	WAN facility of a 2x100BT-P2P circuit pack
	FC	Fibre channel

Example input
Retrieve the list of alarms for the DSM and display the profile information at network element NEWYORK:

```
RTRV-ALMID:NEWYORK::CTAG12::EQUIPMENT;
```

Response block syntax

```
<SID><DATE><TIME>
"AIDTYPE ALMID" Condition Description
"-----------------------------------"
"AIDTYPE ALMID" \"CONDDESCR\"
```

Table 17-36
Response parameter descriptions

Parameter	Possible values	Description
AIDTYPE	See Table 17-35 on page 17-40	Access identifier type
ALMID	non-zero unsigned integer	Alarm identification number
CONDDESCR	<character string>	condition description- up to 70 characters

RTRV-AO

The Retrieve Automatic Output command retrieves a list of automatic output (AO) messages on the shelf processor (SPx) or the network processor (NPx). The message list provides historical autonomous messages including all events, alarms and environmental alarms. The AO list cannot be deleted, reset, or altered. The message list holds messages in a first-in-first-out buffer:

- 600 messages on the shelf processor
- 50 messages on the network processor

To identify the significance of the alarm messages see the REPT-ALM and REPT-EVT messages in the Automatic Reports chapter.

Note 1: This command retrieves alarms and conditions that are cleared. The notification code is CL for cleared alarms.

Note 2: This command does not retrieve historical autonomous messages for database change, log and inventory events. To retrieve these historical autonomous messages, use the RTRV-AO-BROADCAST command.

Security level

Level 1

Input syntax for network processor

```
RTRV-AO:[TID]::CTAG::[DISPLAY_ATAG]:[ATAGSEQ=Domain];
```

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

Input syntax for shelf processor

```
RTRV-AO:[TID]::CTAG::[DISPLAY_ATAG]:[ATAGSEQ=Domain]
[,MSGTYPE=Domain];
```

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

Table 17-37
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
DISPLAY_ATAG	Turn the viewing of the ATAG sequence number on or off.
ATAGSEQ	Automatic message tag sequence. The sequential equivalent of a CTAG, issued by the system when the event record is generated.
MSGTYPE	Message TYPE. Specifies what TYPE of activity is to be retrieved.

Table 17-38
Parameter descriptions

Parameter	Possible values	Description
DISPLAY_ATAG	ON OFF	Turn viewing on or off for ATAG sequence number
ATAGSEQ	1 to 6 digit autonomous message identifier	Autonomous message tag sequence Grouping allowed, ranging allowed
MSGTYPE	ALM EVT ALM-ENV	Alarm Event Environmental alarm

Example input
Retrieve shelf processor automatic output messages requesting automatic tag sequential from network element WASHINGTON:

```
RTRV-AO:WASHINGTON::CTAG12:::ATAGSEQ=123&124&235;
```

Retrieve shelf processor automatic output messages of message TYPE alarm from network element SEATTLE:

```
RTRV-AO:SEATTLE::CTAG12:::,MSGTYPE=ALM;
```

Retrieve network processor automatic output messages requesting automatic tag sequential from network element SEATTLE:

```
RTRV-AO:SEATTLE::CTAG12:::ATAGSEQ=123&124&235;
```

Response block syntax

Alarm response blocks contain:

```
<SID><DATE><TIME>
<ATAGSEQ=Domain>,<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,
<OCRDAT>,<OCRTM>,<LOCN>,<DIRN>:<CONDDESCR>
```

Note: The ATAGSEQ parameter only appears if the DISDPLAY_ATAG parameter is ON.

For Parameter descriptions see the REPT-ALM autonomous messages in Chapter 24.

Event response blocks contain:

```
<SID><DATE><TIME>
<ATAGSEQ=#>,<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,
<OCRTM>,<LOCN>,<DIRN>:<CONDDESCR>
```

Note: The ATAGSEQ parameter only appears if the DISDPLAY_ATAG parameter is ON.

For Parameter descriptions see the REPT-EVT autonomous messages in Chapter 24.

Threshold crossing alert response blocks contain:

```
<SID><DATE><TIME>
<ATAGSEQ=#>,<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,
<OCRTM>,<LOCN>,<DIRN>,<MONVAL>,<THLEV>,<TMPER>
```

Note: The value ATAGSEQ parameter only appears if the DISDPLAY_ATAG parameter is ON.

For Parameter descriptions see the REPT-EVT autonomous messages in Chapter 24.

Environmental alarm response blocks contain:

```
<SID><DATE><TIME>
<ATAGSEQ=#>,<AID>:<NTFCNCDE>,<ALMTYPE>,<OCRDAT>,<OCRTM>,
<ALMMSG>
```

Note: The value ATAGSEQ parameter only appears if the DISDPLAY_ATAG parameter is ON.

For Parameter descriptions see the REPT-ALM autonomous messages in Chapter 24.

RTRV-AO-BROADCAST

The Retrieve Automatic Output Broadcast command retrieves a list of automatic output (AO) messages on the shelf processor (SPx) or the network processor (NPx). The message list provides historical autonomous messages including database change, log and inventory events. To identify the significance of the alarm messages see the REPT^DBCHG, REPT^EVT^LOG and REPT^EVT^INVENTORY messages in the Automatic Reports chapter.

Security level

Level 4

Input syntax

```
RTRV-AO-BROADCAST:[TID]::CTAG:::[ATAGSEQ=Domain]
[,DBCHGSEQ=Domain];
```

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

Table 17-39
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
ATAGSEQ	Autonomous message tag sequence. The sequential equivalent of a CTAG, issued by the system when the event record is generated.
DBCHGSEQ	Database change sequence number.

Table 17-40
Parameter descriptions

Parameter	Possible values	Description
ATAGSEQ	1 to 999999	Allows for sequencing of autonomous events. Grouping allowed, ranging allowed
DBCHGSEQ	1 to 9999	Allows for sequencing of database change events. Grouping allowed, ranging allowed

Example input

Retrieve the history of autonomous events requesting autonomous tag sequential from network element WASHINGTON:

```
RTRV-AO-BROADCAST:WASHINGTON::CTAG12:::ATAGSEQ=123&124&235;
```

Retrieve the history of autonomous messages including database change, log and inventory events from network element SEATTLE:

```
RTRV-AO-BROADCAST:SEATTLE::CTAG12;
```

Response block syntax

Inventory event response blocks contain:

```
<SID><DATE><TIME>
<CTAG>,<RETURN CODE>
<EVTTYPE=Domain>:<ATAGSEQ=Domain>:<DATE>,<TIME>::
<ACTION=Domain>:<AID>:::<CTYPE=Domain>,<SER=Domain>,
<PEC=Domain>
```

Database change event response blocks contain:

```
<SID><DATE><TIME>
<CTAG>,<RETURN CODE>
<EVTTYPE=Domain>:<ATAGSEQ=Domain>,<DBCHGSEQ=Domain>:<DATE>,
<TIME>:<UID=Domain>,<PRIORITY=Domain>:<CMD_CODE>:<AID>:<CTAG>:
<POSITION PARMS>:<KEYWORD PARMS>:<PST>:<,SST>
```

Log event response blocks contain:

```
<SID><DATE><TIME>
<CTAG>,<RETURN CODE>
<EVTTYPE=Domain>:<ATAGSEQ=Domain>:<DATE>,<TIME>:<UID=Domain>,
<PRIORITY=Domain>,<STATUS=Domain>:<CMD_CODE>:<AID>:<CTAG>:
<POSITION PARMS>:<KEYWORD PARMS>:<PST>:<,SST>:<FAILURE STRING>
```

RTRV-ATTR-CONT

The Retrieve External Control Attributes command retrieves the attributes associated with external controls. The attributes are the text strings assigned by the SET-ATTR-CONT command, which identify the function of the control relay.

Security level

Level 1

Input syntax

```
RTRV-ATTR-CONT:[TID]:AID:CTAG::[CONTTYPE];
```

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

Table 17-41
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier, the external control number from 1 to 4. Group of values is acceptable.
CTAG	Correlation tag
CONTTYPE	Control TYPE, optional parameter, the TYPE of control for which the control state is being set

Table 17-42
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 to 4	Identify the contact number Grouping allowed. (see Note)
DSM	number-%HLINK-OC3-hslot#-hport#	DS1 service module attributes number = 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module attributes hslot# = 3 to 10 hport# = 1 to 4
ALL	ALL	Display all external controls
Note: Group multiple AIDs by adding “&” ampersands between each AID.		

Table 17-43
Parameter descriptions

Parameter	Possible values	Description
CONTTYPE	AIRCOND	Air conditioning
	ENGINE	Engine
	FAN	Fan
	GEN	Generator
	HEAT	heat
	LIGHT	light
	MISC	Miscellaneous
	SPKLR	Sprinkler
Note: Group multiple type of control type by adding "&" ampersands between each control type.		

Example input
Retrieve the description of the external control on relay 2 from network element NEWYORK:

```
RTRV-ATTR-CONT:NEWYORK:2:CTAG12;
```

Retrieve all external control relays that are connected to air conditioning from network element WASHINGTON:

```
RTRV-ATTR-CONT:WASHINGTON:ALL:CTAG75::AIRCOND;
```

Retrieve the status of all engine and generator relays from network element SEATTLE:

```
RTRV-ATTR-CONT:SEATTLE:ALL:CTAG18::ENGINE&GEN;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:<CONTTYPE>
```

Table 17-44
Response parameter descriptions

Parameter	Possible values	Description
AID	1 to 4	Identify the contact number
DSM AID	number-%HLINK-OC3-hslot#-hport#	DS1 service module attributes number = 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module attributes hslot# = 3 to 10 hport# = 1 to 4
CONTTYPE	AIRCOND	Air conditioning
	ENGINE	Engine
	FAN	Fan
	GEN	Generator
	HEAT	heat
	LIGHT	light
	MISC	Miscellaneous
	SPKLR	Sprinkler

RTRV-ATTR-ENV

The Retrieve Environment Alarm Attributes command retrieves the attributes associated with environmental alarms.

The response displays what each environmental alarm register has been programmed to represent. In the response, an alarm TYPE field contains one of the 36 allowed TYPEs, followed by an alarm message preprogrammed by the customer to describe the precise details.

Security level

Level 1

Input syntax

```
RTRV-ATTR-ENV:[TID]:AID:CTAG::[NTFCNCDE],[ALMTYPE];
```

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

Table 17-45
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier, the environment alarm contact number from 1 to 16, or ALL to display all contact numbers
CTAG	Correlation tag
NTFCNCDE	Notification code for the environmental alarm; grouping allowed
ALMTYPE	Alarm TYPE for the environmental alarm; grouping allowed

Table 17-46
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 through 16	Identify the environment alarm contact number. (see Note)
DSM	number-%HLINK-OC3-hslot#-hport#	Display the DS1 service module environmental alarm number = 1 to 16 hslot# = 3 to 10, hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	Display all DS1 service module environmental alarms
ALL	ALL	Display all environmental alarms
Note: Group multiple AIDs by adding “&” ampersands between each AID.		

Table 17-47
Parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
NTFCNCDE	CR MJ MN	all	Critical Alarm Major Alarm Minor Alarm
ALMTYPE	AIRCOMPR	all	Air compressor failure
	AIRCOND	all	Air conditioning failure
	AIRDRYR	all	Air dryer failure
	BATDSCHRG	all	Battery discharging
	BATTERY	all	Battery failure
	CLFAN	all	Cooling fan failure
	ENGINE	all	Engine failure
	ENGOPRG	all	Engine operating
	EXPLGS	all	Explosive gas
	FIRDETR	all	Fire detector failure
	FIRE	all	Fire
	FLOOD	all	Flood
	FUSE	all	Fuse failure
	GEN	all	Generator failure
	HIAIR	all	High airflow
	HIHUM	all	High humidity
	HITEMP	all	High Temperature
	HIWTR	all	High water
	INTRUDER	all	Intrusion

Table 17-47 (continued)
Parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
ALMTYPE	LWBATVG	all	Low battery voltage
	LWFUEL	all	Low fuel
	LWHUM	all	Low humidity
	LWPRES	all	Low cable pressure
	LWTEMP	all	Low temperature
	LWWTR	all	Low water
	MISC	all	Miscellaneous
	OPENDR	all	Open door
	PUMP	all	Pump failure
	POWER	all	Commercial power failure
	PWR-48	all	48-V power supply failure
	RECT	all	Rectifier failure
	RECTHI	all	48-V rectifier high voltage
	RECTLO	all	Rectifier low voltage
	SMOKE	all	Smoke
	TOXICGAS	all	Toxic gas
	VENTN	all	Ventilation system failure

Example input
Retrieve all environmental alarms configured to represent either floods or major severity from network element SEATTLE:

```
RTRV-ATTR-ENV:SEATTLE:ALL:CTAG12::FLOOD;
```

Retrieve the configuration of environmental alarm relay 2 from network element WASHINGTON:

```
RTRV-ATTR-ENV:WASHINGTON:2:CTAG12;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:<NTFCNCDE>,<ALMTYPE>,\"<ALMMSG>\"
```

Note: The alarm message field <ALMMSG> is always prefixed and terminated with the characters backslash and quotation mark (\").

Table 17-48
Response parameter descriptions

Parameter	Possible values	Description
AID	1 through 16	Identify the environment alarm contact number. (see Note)
DSM AID	number-%HLINK-OC3-hslot#-hport#	Display the DS1 service module environmental alarm number = 1 to 16 hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	Display all DS1 service module environmental alarms
NTFCNCDE	CR MJ MN	Critical Alarm Major Alarm Minor Alarm
ALMTYPE	See parameter descriptions in Table 17-47	Alarm type
ALMMSG	1 to 40 character string	Detailed text description of trouble

RTRV-COND-ALL

The Retrieve Conditions All command retrieves the current conditions (alarm or status) from the specified network elements.

The RTRV-COND-ALL command does not retrieve performance monitored threshold crossings. To display performance monitored information use the RTRV-PM commands. To display environmental alarms use the RTRV-ALM-ENV command.

Note: This command will not retrieve cleared alarms. To retrieve cleared alarms refer to the RTRV-AO command.

Security level

Level 1

Input syntax for network processor

```
RTRV-COND-ALL:[TID]:[ALL]:CTAG:::[ALRMSEVER=Domain];
```

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

Input syntax for shelf processor

```
RTRV-COND-ALL:[TID]:[ALL]:CTAG:::[ALRMSTAT=Domain]
[,ALRMSEVER=Domain];
```

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

Table 17-49
Syntax definition

Field	Purpose
TID	Target identifier
ALL	All data
CTAG	Correlation tag
ALRMSEVER	Alarm severity
ALRMSTAT	Alarm status

Table 17-50
Parameter descriptions

Parameter	Possible values	Description
ALRMSEVER	CR MJ MN ALL	Retrieve enabled critical alarms Retrieve enabled major alarms Retrieve enabled minor alarms Retrieve all enabled critical, major and minor alarms
ALRMSTAT	ENABLED DISABLED BOTH	(default) Retrieve only enabled alarms Retrieve only disabled alarms Retrieve both enabled and disabled alarms

Example input
Retrieve all conditions from the network element SEATTLE:

```
RTRV-COND-ALL:SEATTLE::CTAG12;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
<OCRTM>,<LOCN>,<DIRN>:<CONDDESCR>
```

See Table 17-22 on page 17-27 for AID response descriptions. See the following tables for other response descriptions.

Table 17-51
Response parameters definition

Parameter	Description
NTFCNCDE	Notification code indicating severity of condition
CONDTYPE	Condition TYPE indicating the equipment or facility affected
SRVEFF	Service effect indicating whether the condition is service affecting
OCRDAT	Occurrence date indicating the day of the event
OCRTM	Occurrence time indicating the hour of the event
LOCN	Location indicating whether the event is near end or far end
DIRN	Direction indicating whether the event is incoming or outgoing
CONDDESCR	Condition description giving a textual outline of the event

Table 17-52
Response parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
NTFCNCDE	CR MJ MN	all	Critical Alarm Major Alarm Minor Alarm
CONDTYPE	EQPT	all	Critical alarm caused by equipment failure
	INT	all	Internal hardware fault/failure
	SWEQPT	working EQPT AID	Protection switching equipment failure
	ESW	OC3, VTX	Excessive switching
	LOS	facility AID	Loss of signal
	LOF	facility AID	Loss of frame
	APSMM	EQPT	Automatic protection switch mode mismatch
	APSC	facility AID	Automatic protection switch channel failure
	AIS	facility AID	Alarm indication signal detected
	INC	facility AID	Incoming failure condition
	SLMF	STS1 facility AID	Signal label match failure
	FA	EQPT	Failure of Power A or B
	SYNCPRI	EQPT	Primary synchronization signal lost
	SYNCSEC	EQPT	Secondary synchronization signal lost
	LOP	OC3 facility	Loss of pointer
SRVEFF	SA NSA	all	Service affecting Not service affecting
OCRDAT	mm-dd	all	The date when the alarm occurred
OCRTM	hh:mm:ss	all	The time when the alarm occurred
LOCN	NEND	all	Failure at the near end of the system
	FEND	all	Failure at the far end of the system
DIRN	NA	all	Not applicable
	RCV	facility AID	Receive direction only
	TRMT	all	Transmit direction only
	null	all	Not applicable
CONDDESCR	character string	all	The detailed text description of the trouble.

RTRV-CONDATTR

The Retrieve Condition Attributes command retrieves the condition attributes associated with equipment and facility alarms.

Security level

Level 1

Input syntax

```
RTRV-CONDATTR:[TID]::CTAG::AIDTYPE,AID:[ALMID=Domain]
[,ALRMSTAT=Domain];
```

Table 17-53
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
ALMID	Alarm identification number
ALRMSTAT	Alarm status

Table 17-54
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC3 facility
	OC12	OC12 facility
	OC48	OC48 facility

Table 17-54 (continued)
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	OC192	OC192 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or shelf processor
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
ALMID	non-zero unsigned integer	all ALMids of selected AIDTYPE specific alarm identifier (multiple alarms can be grouped, for example ALMID= 2&4&6)
ALRMSTAT	BOTH (default)	Filter on enabled and disabled alarm points
	Enabled	Filter on enabled alarm points
	Disabled	Filter on disabled alarm points
Note: See Table 17-21 on page 17-20 for AIDTYPE and applicable AID.		

Example input
Retrieve the condition attributes for the DS3 equipment in slot 3 at network element SEATTLE:

```
RTRV-CONDATTR:SEATTLE::CTAG12::EQPT,DS3-3;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>,<AIDTYPE>:\"CONDDESCR\":<ALMID=Domain>,
<ALRMSTAT=Domain>;
```

See Table 17-22 on page 17-27 for AID response descriptions. See the following table for other response descriptions.

Table 17-55
Response parameter descriptions

Parameter	Possible values	Description
CONDDESCR	text string	condition description - up to 70 characters
ALMID	non-zero unsigned integer	alarm identifier
ALRMSTAT	ENABLED or DISABLED	alarm point is enabled or disabled

RTRV-DFLT-PROFILE

The Retrieve Default Profile command will allow the user to retrieve the current default profile of an AIDTYPE.

Security level

Level 1

Input syntax

```
RTRV-DFLT-PROFILE:[TID]::CTAG::AIDTYPE:[PRFLINFO=Domain];
```

Table 17-56
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
PRFLINFO	Profile information

Table 17-57
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC-3 facility
	OC12	OC-12 facility
	OC48	OC-48 facility
	OC192	OC-192 facility

Table 17-57 (continued)
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SPx
	SECU	Security related
	DSM	DSM entities
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
PRFLINFO	N Y	(default) do not list profile information list profile information

Example input
Retrieve the current profile information for the OC-3 facilities at network element SEATTLE:

```
RTRV-DFLT-PROFILE:SEATTLE::CTAG12::OC3:PRFLINFO=Y;
```

Response block syntax

```
<SID><DATE><TIME>
<AIDTYPE>,\"prflname\":\CONDDESCR\":<ALMID=Domain>,
<ALRMSTAT=Domain>;
```

Table 17-58
Response parameter descriptions

Parameter	Possible values	Description
AIDTYPE	See Table 17-57 on page 17-60	equipment TYPE AIDs
PRFLNAME	ASCII string	alarm profile name
CONDDESCR	text string	condition description
ALMID	non-zero unsigned integer	alarm identifier
ALRMSTAT	ENABLED	enabled alarm point

RTRV-EXT-CONT

The Retrieve External Control Status command retrieves the control state of external controls showing whether the control is Operated or Released. The command is used to retrieve the state from one to all four controls.

The control TYPE variable is optional and can be used to ensure that the correct information is retrieved.

Security level

Level 1

Input syntax

```
RTRV-EXT-CONT:[TID]:AID:CTAG::[CONTTYPE];
```

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

Table 17-59
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier, the external control number from 1 to 4. Group of values acceptable.
CTAG	Correlation tag
CONTTYPE	Optional parameter, the TYPE of control for which the control state is being retrieved. Grouping is allowed; use ampersand "&" as separator

Table 17-60
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 to 4	Identify the external control number
ALL	ALL	Retrieve all external controls
DSM	number-%HLINK-OC3-hslot#-hport#	DS1 service module number= 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service modules hslot# = 3 to 10 hport# = 1 to 4

Table 17-61
Input paramter descriptions

Parameter	Possible value	Description
CONTTYPE	AIRCOND	air conditioning
	ENGINE	engine
	FAN	fan
	GEN	generator
	HEAT	heat
	LIGHT	light
	MISC	miscellaneous
	SPKLR	sprinkler

Example input
Retrieve the state of control 1 from network element NEWYORK:

```
RTRV-EXT-CONT:NEWYORK:1:CTAG23;
```

Retrieve the state of all light relays from network element SEATTLE:

```
RTRV-EXT-CONT:SEATTLE:ALL:CTAG56::LIGHT;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:[<CONTTYPE>],CONTS,<CONSTATE>
```

Table 17-62
Response parameter descriptions

Parameter	Possible values	Description
AID	1 to 4	Identify the external control number
DSM AID	number-%HLINK-OC3-hslot#-hport#	DS1 service module number= 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service modules hslot# = 3 to 10 hport# = 1 to 4
CONTS	CONTS	Duration is continuous, momentary is not supported
CONTSTATE	OPER	Operated
	RLS	Released

RTRV-LAST-SEQNUM

The Retrieve Last Sequence Number retrieves the sequence numbers assigned to the last generated autonomous message.

Security level

Level 1

Input syntax

```
RTRV-LAST-SEQNUM:[TID]::CTAG:::[SEQTYPE=Domain];
```

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

Table 17-63
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
SEQTYPE	Sequence number type

Table 17-64
Parameter descriptions

Parameter	Possible values	Description
SEQTYPE	ATAGSEQ	Autonomous message tag sequence with a value of 1 to 999999. The sequential equivalent of a CTAG, issued by the system when the event record is generated. Allows for sequencing of autonomous events.
	DBCHGSEQ	Database change sequence number with a value of 1 to 9999. Allows for sequencing of database change events.
	BOTH	Allows for retrieval of both ATASEQ and DCHGSEQ at the same time.

Example input

Retrieve the last sequence number for the last autonomous message generated on network element WASHINGTON:

```
RTRV-LAST-SEQNUM:WASHINGTON::CTAG12:::SEQTYPE=ATAGSEQ;
```

RTRV-NE-AOMSG

The Retrieve NE Automatic Output Message command retrieves all autonomous messages that can be generated by the network element. The autonomous messages include alarms and events. This command is supported on the network processor and shelf processor.

Security level

Level 4

Input syntax

```
RTRV-NE-AOMSG:[TID]:ALL:CTAG;
```

Table 17-65
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve all autonomous messages from network element NEWYORK:

```
RTRV-NE-AOMSG:NEWYORK:ALL:CTAG23;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
<OCRTM>,<LOCN>,<DIRN>:<CONDDESCR>
```

See Table 17-22 on page 17-27 for AID response descriptions. See the following tables for other response descriptions.

Table 17-66
Response parameters definition

Parameter	Description
NTFCNCDE	Notification code indicating severity of condition
CONDTYPE	Condition TYPE indicating the equipment or facility affected
SRVEFF	Service effect indicating whether the condition is service affecting
OCRDAT	Occurrence date indicating the day of the event
OCRTM	Occurrence time indicating the hour of the event

Table 17-66 (continued)
Response parameters definition

Parameter	Description
LOCN	Location indicating whether the event is near end or far end
DIRN	Direction indicating whether the event is incoming or outgoing
CONDDESCR	Condition description giving a textual outline of the event

Table 17-67
Response parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
NTFCNCDE	CR, MJ, MN, or CL	all	Critical, Major, Minor or Cleared Alarm
CONDTYPE	EQPT	all	Critical alarm caused by equipment failure
	INT	all	Internal hardware fault/failure
CONDTYPE	SWEQPT	working EQPT AID	Protection switching equipment failure
	ESW	OC3, VTX	Excessive switching
	LOS	facility AID	Loss of signal
	LOF	facility AID	Loss of frame
	APSMM	EQPT	Automatic protection switch mode mismatch
	APSC	facility AID	Automatic protection switch channel failure
	AIS	facility AID	Alarm indication signal detected
	INC	facility AID	Incoming failure condition
	SLMF	STS1 facility AID	Signal label match failure
	FA	EQPT	Failure of Power A or B
	SYNCPRI	EQPT	Primary synchronization signal lost
	SYNCSEC	EQPT	Secondary synchronization signal lost
	LOP	OC3 facility	Loss of pointer

Table 17-67 (continued)
Response parameter descriptions

Parameter	Possible values	Applicable AIDs	Description
SRVEFF	SA NSA	all	Service affecting Not service affecting
OCRDAT	mm-dd	all	The date when the alarm occurred
OCRTM	hh:mm:ss	all	The time when the alarm occurred
LOCN	NEND	all	Failure at the near end of the system
	FEND	all	Failure at the far end of the system
DIRN	NA	all	Not applicable
	RCV	facility AID	Receive direction only
	TRMT	all	Transmit direction only
	null	all	Not applicable
CONDDESCR	character string	all	The detailed text description of the trouble.

RTRV-NTFCNCDE

The Retrieve Alarm Notification command retrieves the current alarm notification setting for the specified network element.

Security level

Level 1

Input syntax

```
RTRV-NTFCNCDE:[TID]::CTAG;
```

Table 17-68
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the setting of the alarm notification code from network element OTTAWA5:

```
RTRV-NTFCNCDE:OTTAWA5::CTAG12;
```

Response block syntax

```
<SID><DATE><TIME>
<CODE=Domain>
```

Table 17-69
Response parameter descriptions

Parameter	Possible values	Purpose
CODE	DFLT ALT	default notification code alternate notification code

SET-ACTIVE-PROFILE

The Set Active Profile command allows the user to edit the alarm profile that is associated with a given alarm group instance (equipment of facility instance).

Security level

Level 3

Input syntax

```
SET-ACTIVE-PROFILE:[TID]::CTAG::AIDTYPE,AID:PRFLNAME=Domain;
```

Table 17-70
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
AID	A valid access identifier for the selected AIDTYPE
PRFLNAME	Alarm profile name assigned by user

Table 17-71
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC-3 facility
	OC12	OC-12 facility
	OC48	OC-48 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SPx
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
PRFLNAME	ASCII string	Alarm profile name-can be up to 20 characters long and must be enclosed within quotation marks. (quotation marks and backslash to be excluded from name)
Note: See Table 17-21 on page 17-20 for AIDTYPE and applicable AID.		

Example input
Edit the alarm profile on all OC-12 equipment at network element NEWYORK:

```
SET-ACTIVE-PROFILE:NEWYORK::CTAG34::OC12,OC12-ALL;
```

SET-ATTR-CONT

The Set Attributes Control command sets the attributes associated with external controls. The attributes are used to indicate what the external control is used for.

Security level

Level 3

Input syntax

```
SET-ATTR-CONT:[TID]:AID:CTAG::[CONTTYPE];
```

Table 17-72
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier, the external control number from 1 to 4. Group of values is acceptable.
CTAG	Correlation tag
CONTTYPE	Control TYPE, optional parameter, the TYPE of control for which the control state is being set

Table 17-73
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 to 4	Identify the contact number Grouping allowed. (see Note)
DSM	number-%HLINK-OC3-hslot#-hport#	DS1 service module attributes number = 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	ALL-%HLINK-OC3-hslot#-hport#	All DS1 service module attributes hslot# = 3 to 10 hport# = 1 to 4
ALL	ALL	Display all external controls
Note: Group multiple AIDs by adding “&” ampersands between each AID.		

Table 17-74
Parameter descriptions

Parameter	Possible values	Description
CONTTYPE	AIRCOND	Air conditioning
	ENGINE	Engine
	FAN	Fan
	GEN	Generator
	HEAT	heat
	LIGHT	light
	MISC	Miscellaneous
	SPKLR	Sprinkler
Note: Group multiple type of control type by adding “&” ampersands between each control type.		

Example input

Set control relay 2 to display the air conditioning value (AIRCOND) for CONTTYPE on network element NEWYORK:

```
SET-ATTR-CONT:NEWYORK:2:CTAG12::AIRCOND;
```

SET-ATTR-ENV

The Set Environmental Alarms Attributes command sets the attributes associated with environmental alarms. These attributes are included when an environmental alarm is reported or retrieved. If all attributes are null value, it unassigns the value. If some of them are null, it keeps these null value attributes unchanged.

Security level

Level 3

Input syntax

```
SET-ATTR-ENV:[TID]:AID:CTAG::[NTFCNCDE],[ALMTYPE],
[\"ALMMSG\"];
```

Note: The alarm message field must begin and end with the characters backslash and quote (\").

Table 17-75
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier, the environmental alarm contact number from 1 to 16. Groups of values acceptable
CTAG	Correlation tag
NTFCNCDE	The notification code for the environmental alarm
ALMTYPE	The alarm TYPE for the environmental alarm
ALMMSG	The text message, 1 to 40 characters, associated with the environmental alarm specified by the AID parameters

Table 17-76
AID descriptions

AID TYPE	Command-specific values	Purpose
CONTACT NO.	1 through 16	Identify the environment alarm contact number. (see Note)
DSM	number-%HLINK-OC3-hslot#-hport#	Display the DS1 service module environmental alarm number = 1 to 16 hslot# = 3 to 10 hport# = 1 to 4

Table 17-76 (continued)
AID descriptions (continued)

AID TYPE	Command-specific values	Purpose
DSM	ALL-%HLINK-OC3-hslot#-hport#	Display all DS1 service module environmental alarms
ALL	ALL	Display all environmental alarms
Note: Group multiple AIDs by adding "&" ampersands between each AID.		

Table 17-77
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
NTFCNCDE	CR MJ MN	all	Critical Alarm Major Alarm Minor Alarm
ALMTYPE	AIRCOMPR	all	Air compressor failure
	AIRCOND	all	Air conditioning failure
	AIRDRYR	all	Air dryer failure
	BATDSCHRG	all	Battery discharging
	BATTERY	all	Battery failure
	CLFAN	all	Cooling fan failure
	ENGINE	all	Engine failure
	ENGOPRG	all	Engine operating
	EXPLGS	all	Explosive gas
	FIRDETR	all	Fire detector failure
	FIRE	all	Fire
	FLOOD	all	Flood
	FUSE	all	Fuse failure
	GEN	all	Generator failure
	HIAIR	all	High airflow
	HIHUM	all	High humidity
	HITEMP	all	High temperature
	HIWTR	all	High water

Table 17-77 (continued)
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
ALMTYPE	INTRUDER	all	Intrusion
	LWBATVG	all	Low battery voltage
	LWFUEL	all	Low fuel
	LWHUM	all	Low humidity
	LWPRES	all	Low cable pressure
	LWTEMP	all	Low temperature
	LWWTR	all	Low water
	MISC	all	Miscellaneous
	OPENDR	all	Open door
	PUMP	all	Pump failure
	POWER	all	Commercial power failure
	PWR-48	all	48-V power supply failure
	RECT	all	Rectifier failure
	RECTHI	all	Rectifier high voltage
	RECTLO	all	Rectifier low voltage
	SMOKE	all	Smoke
	TOXICGAS	all	Toxic gas
	VENTN	all	Ventilation system failure
<ALMMSG>	character string	all	1 to 40-character detailed text description of trouble

Example input
Set the attributes of contact number 4, with a minor alarm, for an alarm type CLFAN, and a alarm message of \" FAN DEFECT\"for network element SEATTLE:

```
SET-ATTR-ENV:SEATTLE:4:CTAG12::MN,CLFAN,\"FANDEFECT\";
```

SET-CONDATTR

The Set Condition Attributes command set the condition attributes associated with alarms. These attributes are included when an alarm is reported or retrieved.

Security level

Level 3

Input syntax

```
SET-CONDATTR:[TID]::CTAG::AIDTYPE,AID:ALMID=Domain
[,ALRMSTAT=Domain];
```

Table 17-78
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
AID	A valid access identifier for the selected AIDTYPE
ALMID	Alarm identification number
ALRMSTAT	Alarm status

Table 17-79
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC-3 facility
	OC12	OC-12 facility
	OC48	OC-48 facility
	OC192	OC-192 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SPx
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility of a 2x100BT-P2P circuit pack
	WAN	WAN facility of a 2x100BT-P2P circuit pack
ALMID	non-zero unsigned integer	specific alarm identifier (multiple alarms can be grouped, for example ALMID= 2&4&6)
ALRMSTAT	Enabled	(default) enable alarm point
	Disabled	disable alarm point
Note: See Table 17-21 on page 17-20 for AIDTYPE and applicable AID.		

Example input
Set the condition attributes for the DS3 equipment in slot 3 at network element SEATTLE:

```
SET-CONDATTR:SEATTLE::CTAG12::EQPT,DS3-3:ALMID=2;
```

SET-DFLT-PROFILE

The Set Default Profile command allows the user to change the default profile of an AIDTYPE (equipment or facility TYPE).

Security level

Level 3

Input syntax

```
SET-DFLT-PROFILE:[TID]::CTAG::AIDTYPE,PRFLNAME;
```

Table 17-80
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
AIDTYPE	Access identifier TYPE
PRFLNAME	Alarm profile name assigned by user

Table 17-81
Parameter descriptions

Parameter	Possible values	Description
AIDTYPE	VT1	VT1 facility
	STS1	STS-1 facility
	STS3C	STS-3C facility
	STS12C	STS-12C facility
	STS48C	STS-48C facility
	EQPT	equipment
	T1	T1 facility
	T3	T3 facility
	EC1	EC-1 facility
	OC3	OC-3 facility
	OC12	OC-12 facility
	OC48	OC-48 facility
	FAC	conditions attributed to ILAN facilities
	COM	conditions attributed to shelf or SPx
	DSM	DS1 service module facility
	SECU	Security related
	ETH	Ethernet facility
	WAN	WAN facility
	FC	Fibre Channel facility
	COM	conditions attributed to shelf or SPx
	DSM	DSM entities
	SECU	Security related
PRFLNAME	ASCII string	Alarm profile name assigned by user. can be up to 20 characters long and must be enclosed within quotation marks (quotation marks and backslash to be excluded from name).

Example input
Change the default profile information for the OC-3 facilities at network element SEATTLE:

```
SET-DFLT-PROFILE:SEATTLE::CTAG12::OC3,"All Alarms ON";
```

SET-NTFCNCDE

The Set Alarm Notification command sets the alarm notification code for the specified network element. The alarm notifications supported are default and alternative.

> ***Note:*** This command only applies to new alarms; it has no impact on alarms already raised.

Security level

Level 3

Input syntax

```
SET-NTFCNCDE:[TID]::CTAG::CODE;
```

Table 17-82
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
CODE	Notification code set to use

Table 17-83
Parameter descriptions

Parameter	Possible values	Purpose
CODE	DFLT ALT	default notification code alternate notification code

Example input

Set the alarm notification code to alternative on the network element OTTAWA5:

```
SET-NTFCNCDE:OTTAWA5::CTAG12::ALT;
```

SDCC detailed command descriptions

This chapter is an alphabetical summary of all the TL1 commands that apply to the section data communications channel (SDCC). 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.

DLT-LLSDCC

The Delete Lower Layer SDCC command is used to delete a section data communications channel (SDCC) link (layers 1 and 2) on the specified AID.

Note: You cannot delete the SDCC link on OC-3 facilities related to the DSM.

Security level

Level 3

Input syntax

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

Table 18-1
Syntax definition

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

Table 18-2
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, 1 to 4 for OC-3x4
OC-12 AID	OC12-slot#-port#	Identify the OC-12 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
OC-48 AID	OC48-slot#	Identify the OC-48 where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS
OC-192 AID	OC192-slot#	Identify the OC-192 where slot# = 11 or 12
EC-1 AID	EC1-slot#-port#	Identify the EC-1 where slot# = 3, 5, 7, 9, port# = 1 to 3
Note: SDCC is not supported on EC-1x12 circuit packs		

Example input

Delete the lower layer SDCC link for the OC-3x4 circuit pack in slot 7, port 1:

```
DLT-LLSDCC:NEWYORK:OC3-7-1:CTAG34;
```

ED-LLSDCC

The Edit Lower Layer SDCC command is used to modify editable layer 2 parameters of the section data communications channel (SDCC) link. When the SDCC link is provisioned, default values are set for these parameters.

Execute the edit command at the far end first since all edit commands cause the link to drop and be reestablished.

You can edit up to nine parameters in one command. The order of the parameters is unimportant. Separate each parameter with a comma.

> ***Note:*** You cannot edit the SDCC link on OC-3 facilities related to the DSM.

Security level

Level 3

Input syntax

```
ED-LLSDCC:[TID]:AID:CTAG:::[L2INFO=Domain][,L2REX=Domain]
[,L2WAIT=Domain][,L2NOA=Domain][,L2IF=Domain][,L2TEI=Domain]
[,L2SAPI=Domain][,L2TS=Domain][,L2SIDE=Domain];
```

Table 18-3
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The equipment to act on.
CTAG	Correlation tag
L2INFO	Layer 2 frame size
L2REX	Layer 2 retransmission count
L2WAIT	Layer 2 waiting acknowledgement timer
L2NOA	Layer 2 no activity timer
L2IF	Layer 2 outstanding I frame count
L2TEI	Layer 2 terminal endpoint identifier
L2SAPI	Layer 2 service access point identifier
L2TS	Layer 2 transfer type
L2SIDE	Layer 2 user side / network side roles

Table 18-4
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
OC-12 AID	OC12-slot#-port#	Identify the OC-12 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
OC-48 AID	OC48-slot#	Identify the OC-48 where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS
OC-192 AID	OC192-slot#	Identify the OC-192 where slot# = 11 or 12
EC-1 AID	EC1-slot#-port#	Identify the EC-1 where slot# = 3, 5, 7, 9, port# = 1 to 3
Note: SDCC is not supported on EC-1x12 circuit packs		

Table 18-5
Parameter descriptions

Parameter	Possible values	Description
L2INFO	512 to 1492	The frame size in bytes. (default) 1304 bytes
L2REX	2 to 16	The retransmission count. (default) 3 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.
L2WAIT	2 to 200	The waiting acknowledgment timer, in tenths of a second. (default) 2 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.
L2NOA	4 to 120	The no activity timer, in seconds. (default) 10 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.

Table 18-5 (continued)
Parameter descriptions

Parameter	Possible values	Description
L2IF	1 to 127	The outstanding I-frame count. (default) 7 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.
L2TEI	0 to 127	The terminal endpoint identifier. (default) 0 Make the change at both ends as a new value gives the channel a new address. Make the change at the far end first, because when the first change is made, the channel state becomes down, and association with the far end is lost.
L2SAPI	0 to 63	The Service Access Point Identifier. (default) 62 Make the change at both ends as a new value gives the channel a new address. Make the change at the far end first, because when the first change is made, the channel state becomes down, and association with the far end is lost.
L2TS	AITS UITS	The transfer type. The default is AITS (acknowledged information transfer service). UITS (unacknowledged information transfer service) is not supported in this release.
L2SIDE	USER NETWORK AUTO	The role of the local node, network or user. The default value is Auto. The local node attempts to establish a connection with the far end by toggling its role between network and user in a random pattern. Setting this parameter to auto simplifies the setup of the link since the nodes decide which node is user and which is network. It does not matter which node has which role, as long as the two connecting nodes have opposite roles.

Example input
Change the retransmission count from the default value:

```
ED-LLSDCC:WASHINGTON:OC3-11-1:CTAG23:::L2REX=5;
```

Change the no activity timer to 100 seconds, the frame size to 1492 bytes and the terminal endpoint identifier to 25:

```
ED-LLSDCC:WASHINGTON:OC3-11-1:CTAG23:::L2NOA=100,
L2INFO=1492,L2TEI=25;
```

ED-ULSDCC

The Edit ULSDCC command is used to change manual area addresses of the section data communications channel (SDCC) link. When the SDCC link is provisioned, MANAREA0 has a default setting of 49000.

You must have at least one manual area address provisioned. If you want to delete the address in MANAREA0 and it is the only address provisioned, you must first provision an address in MANAREA1 or MANAREA2, then delete the address in MANAREA0.

To change a manual area address, you must delete the address that is provisioned, then add the new address. For example, to change MANAREA1, enter the command to edit MANAREA1 and leave a blank for the domain. This clears the address in MANAREA1. Then enter the command to edit MANAREA1 again, and enter the new address for the domain.

Security level

Level 3

Input syntax

```
ED-ULSDCC:[TID]::CTAG:::[MANAREA0=Domain][,MANAREA1=Domain]
[,MANAREA2=Domain];
```

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

Table 18-6
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
MANAREA0	Layer 3 area address 0
MANAREA1	Layer 3 area address 1
MANAREA2	Layer 3 area address 2

Table 18-7
Parameter descriptions

Parameter	Possible values	Description
MANAREA0	3 to 13 octets, each octet of the form PQ, where P and Q are ASCII-encoded hex values	Area address 0 (default)
MANAREA1		Area address 1
MANAREA2		Area address 2
Note 1: The MANAREA address must follow a standard format for data communications protocol. ***Note 2:*** Use null to delete the existing area address.		

Example input

Edit the address in MANAREA1, by clearing the address that is already provisioned, then entering a new address:

```
ED-ULSDCC:SEATTLE::CTAG34:::MANAREA1=;

ED-ULSDCC:SEATTLE::CTAG34:::
MANAREA1=39830f80000000000000000000;
```

Delete area address 2

```
ED-ULSDCC:SEATTLE::CTAG34:::MANAREA2=;
```

ENT-LLSDCC

The Enter Lower Layer SDCC command is used to add a section data communications channel (SDCC) link (layers 1 and 2) to the indicated AID (equipment slot). The request is validated based on SDCCs already configured on the pair of slots (the number of SDCCs and the current SDCC protection scheme) and the circuit pack now provisioned in that slot or pair of slots.

Upon SDCC provisioning, parameters are the default values. To change the provisioning defaults, see ED-LLSDCC on page 18-3.

> ***Note:*** The SDCC link on the DS1 DSM OC-3 facility has the provisioning default parameter, L2SIDE=USER.

Security level

Level 3

Input syntax

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

Table 18-8
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The equipment to retrieve SDCC information from.
CTAG	Correlation tag

Table 18-9
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, 1 to 4 for OC-3x4
OC-12 AID	OC12-slot#-port#	Identify the OC-12 where slot# = 3 to 12 for OC-12, 3 to 10 for OC-12x4 STS port# = 1 for OC-12, 1 to 4 for OC-12x4 STS
OC-48 AID	OC48-slot#	Identify the OC-48 where slot# = 11 or 12 for OC-48, 3 to 12 for OC-48 STS

Table 18-9 (continued)
AID descriptions

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot#	Identify the OC-192 where slot# = 11 or 12
EC-1 AID	EC1-slot#-port#	Identify the EC-1 where slot# = 3, 5, 7, 9, port# = 1 to 3
Note: SDCC is not supported on EC-1x12 circuit packs		

Example input

Add a lower layer SDCC link on the OC-3x4 circuit pack in slot 7, port 1:

```
ENT-LLSDCC:NEWYORK:OC3-7-1:CTAG13;
```

RTRV-LLSDCC

The Retrieve Lower Layer SDCC command is used to retrieve information associated with a given section data communications channel (SDCC) link for layers 1 and 2. The information includes the state of the layer 2 (LAPD) link (IS-NR, OOS-AU) and the current settings of editable layer 2 parameters.

Security level

Level 1

Input syntax

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

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

Table 18-10
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The equipment to retrieve SDCC information from.
CTAG	Correlation tag

Table 18-11
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
OC-12 AID	OC12-slot#-port# OC12-slot#-ALL OC12-ALL	Identify the OC-12 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
OC-48 AID	OC48-slot# OC48-ALL	Identify the OC-48 where slot# = 11 or 12 for OC-48, 3 to 12 for OC-48 STS
OC-192 AID	OC192-slot# OC192-ALL	Identify the OC-192 where slot# = 11 or 12
EC-1 AID	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the EC-1 where slot# = 3, 5, 7, 9 port# = 1 to 3

Table 18-11 (continued)
AID descriptions

AID type	Command-specific values	Purpose
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
ALL	ALL	Retrieve SDCC information for all optical interface circuit packs
Note: SDCC is not supported on EC-1x12 circuit packs		

Example input
Retrieve the lower layer SDCC information for the OC-3x4 circuit pack in slot 5, port 1:

```
RTRV-LLSDCC:NEWYORK:OC3-5-1:CTAG56;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>::<L2INFO=Domain>,<L2REX=Domain>,<L2WAIT=Domain>,
<L2NOA=Domain>,<L2IF=Domain>,<L2TEI=Domain>,<L2SAPI=Domain>,
<L2TS=Domain>,<L2SIDE=Domain>,<PROT=Domain>:<PST>,<SST>
```

Table 18-12
Response AID description

AID type	Possible values	Description
OC-3 AID	OC3-slot#-port#	Identify the OC-3 where slot# = 3 to 10 port# = 1 to 4
OC-12 AID	OC12-slot#-port#	Identify the OC-12 where slot# = 3 to 12 port# = 1 to 4
OC-48 AID	OC48-slot#	Identify the OC-48 where slot# = 3 to 12

Table 18-12 (continued)
Response AID description

AID type	Possible values	Description
OC-192 AID	OC192-slot#	Identify the OC-192 where slot# = 11 or 12
EC-1 AID	EC1-slot#-port#	Identify the EC-1 where slot# = 3, 5, 7, 9 port# = 1 to 3
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

Table 18-13
Response parameter descriptions

Parameter	Possible values	Description
L2INFO	512 to 1492	The frame size in bytes. (default) 1304 bytes
L2REX	2 to 16	The retransmission count. (default) 3 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.
L2WAIT	2 to 200	The waiting acknowledgment timer, in tenths of a second. (default) 2 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.
L2NOA	4 to 120	The no activity timer, in seconds. (default) 10 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.
L2IF	1 to 127	The outstanding I-frame count. (default) 7 Although there is no requirement to make this value the same at both ends, it is advisable to do so to improve performance.

Table 18-13 (continued)
Response parameter descriptions

Parameter	Possible values	Description
L2TEI	0 to 127	The terminal endpoint identifier. (default) 0 Make the change at both ends as a new value gives the channel a new address. Make the change at the far end first, because when the first change is made, the channel state becomes down, and association with the far end is lost.
L2SAPI	0 to 63	The Service Access Point Identifier. (default) 62 Make the change at both ends as a new value gives the channel a new address. Make the change at the far end first, because when the first change is made, the channel state becomes down, and association with the far end is lost.
L2TS	AITS UITS	The transfer type. The default is AITS (acknowledged information transfer service). UITS (unacknowledged information transfer service) is not supported in this release.
L2SIDE	USER NETWORK AUTO	The role of the local node, network or user. The default value is Auto. The local node attempts to establish a connection with the far end by toggling its role between network and user in a random pattern. Setting this parameter to auto simplifies the setup of the link since the nodes decide which node is user and which is network. It does not matter which node has which role, as long as the two connecting nodes have opposite roles.
PROT	Y N	Yes, Protection is 1+1. No, Protection is not 1+1.
PST	IS	Primary state is In-Service
	OOS-AU	Primary state is Out-Of-Service Autonomous - the entity is not able to perform its provisioned functions (alarm is raised)
SST	ACT	Secondary state SDCC is Active - carrying traffic
	SGEO	Supporting entity outage. The medium to communicate with the other shelf is not available.
	PRTCL	SDCC is ready, but protocol has not yet established handshaking communication with other shelf.

RTRV-ULSDCC

The Retrieve ULSDCC command is used to retrieve manual area addresses provisioned for the section data communications channel (SDCC) link.

Security level

Level 1

Input syntax

```
RTRV-ULSDCC:[TID]::CTAG;
```

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

Table 18-14
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the MANAREA addresses provisioned for network element New York:

```
RTRV-ULSDCC:NEWYORK::CTAG12;
```

Response block syntax

```
<SID><DATE><TIME>
<MANAREA0=Domain>,<MANAREA1=Domain>,<MANAREA2=Domain>
```

Table 18-15
Response Parameter descriptions

Parameter	Possible values	Description
MANAREA0	3 to 13 octets, each octet of the form PQ, where P and Q are ASCII-encoded hex values	Area address 0 (default)
MANAREA1		Area address 1
MANAREA2		Area address 2
Note: The MANAREA address must follow a standard format for data communications protocol		

Initialization detailed command descriptions

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

All commands in this chapter are supported on the network element and network processor.

The following table lists all commands in this chapter.

INIT-COLD

The Initialize Cold command instructs a network element to initialize its circuit packs. A cold initialization is equivalent to a power-up and can affect traffic. You can use the network processor as the target identifier to initialize the network processor.

The date and time must be reset on the network element and network processor after a system restart.

Security level

Level 3

Input syntax

```
INIT-COLD:[TID]:AID:CTAG;
```

Table 19-1
Syntax definition

Field	Purpose
TID	Target identifier ***Note:*** You must use the network processor as the target identifier to initialize the NP.
AID	Access identifier. The circuit pack to initialize. See Table 19-3.
CTAG	Correlation tag

Example input

Perform a cold initialization of OC-3x4 in slot 10 only on network element WASHINGTON:

```
INIT-COLD:WASHINGTON:OC3-10:CTAG13;
```

Reset the 4x100BT circuit pack in slot 7:

```
INIT-COLD:OC3SP:IPT100-7:123;
```

INIT-WARM

The Initialize Warm command instructs a network element to initialize its circuit packs. A warm initialization does not affect traffic.

The date and time must be reset after a system restart.

Note: If the INIT-WARM command is issued against the OC-3x4 circuit pack, an SDCC link failure alarm will be briefly raised and then cleared.

Security level

Level 3

Input syntax

```
INIT-WARM:[TID]:AID:CTAG;
```

Table 19-2
Syntax definition

Field	Purpose
TID	Target identifier ***Note:*** You must use the network processor as the target identifier to initialize the NP.
AID	Access identifier. The circuit pack to initialize.
CTAG	Correlation tag

Table 19-3
AID descriptions

AID type	Command-specific values	Purpose
Equipment	DS1-slot#	Identify the DS1 where slot# =3 to 10
	DS3-slot#	Identify the DS3 where slot# =3 to 10
	DS3V-slot#	Identify the DS3VTx12 where slot# =3 to 10
	OC3-slot#	Identify the OC-3 or OC-3x4 where slot# =3 to 10
	OC12-slot#	Identify the OC-12 or OC-12x4 STS where slot# = 3 to 12 for OC-12, 3 to 10 for OC-12x4 STS
	OC48-slot#	Identify the OC-48 or OC-48 STS where slot# = 11 or 12 for OC-48, 3 to 12 for OC-48 STS
	OC192-slot#	Identify the OC-192 where slot# = 11 or 12

Table 19-3 (continued)
AID descriptions

AID type	Command-specific values	Purpose
Equipment	EC1-slot#	Identify the EC-1 where slot# = 3 to 10
	CLX-slot#	Identify the VTX or STX-192 where slot# =13 or 14
	ILAN	Identify the ILAN
	IPT100-slot#	Identify the 4x100BT where slot# = 3 to 10
	1GE-slot#	Identify the 2xGigE where slot# = 3, 5, 7, 9
	100FX-slot#	Identify the 4x100FX where slot# = 3 to 10
	100BTFOS-slot#	Identify the 2x100BT-P2P where slot# = 3 to 10
	1GFOS-slot#	Identify the 2xGigE/FC-P2P where slot# = 3 to 10
	PSC	Protection switch controller
	SP	Shelf processor
	NP	Network processor ***Note:*** You must use the network processor as the target identifier to initialize the NP.
	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	Identify a single DSM DS1 termination module, where slot# = 1 or 2, hslot# = 3 to 10, hport# = 1 to 4

Example input
Perform a warm initialization of OC-3x4 in slot 10 only on network WASHINGTON:

```
INIT-WARM:WASHINGTON:OC3-10:CTAG12;
```

Restart the 4x100BT circuit pack in slot 8:

```
INIT-WARM:OC3SP:IPT100-8:CTAG12;
```

Path and section trace detailed command descriptions

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

The following table lists the commands in this chapter.

ED-STS1

The Edit STS-1 command is used to edit the expected incoming or outgoing path trace values, or both path trace values.

Security level

Level 3

Input syntax

```
ED-STS1:[TID]:AID:CTAG::[MON]:[EXPTRC=Domain],
[TRC=Domain]:,[SST];
```

Table 20-1
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-1 facility to act on.
CTAG	Correlation tag
MON	Path trace monitoring
EXPTRC	Expected incoming path trace message
TRC	Outgoing path trace message
SST	Secondary state

Table 20-2
AID descriptions

Command-specific values	Purpose
DS3-slot#-port#	Identify the STS-1 path facility on the DS3 slot# = 3, 5, 7, or 9 port# =1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
OC3-slot#-port#-sts#	Identify the STS-1 path facility on the OC-3 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 path facility on the OC-12 or OC-12x4 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

Table 20-2 (continued)
AID descriptions

Command-specific values	Purpose
OC48-slot#-sts#	Identify the STS-1 path facility on the OC-48 or OC-48 STS 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 path facility on the OC-192 slot# = 11 or 12 sts# = 1 to 192
WAN-slot#-port#-sts#	Identify the STS-1 path facility on the WAN port of the 2x100BT-P2P or 2xGigE/FC-P2P where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1 to 21 for 2xGigE/FC-P2P

Table 20-3
Parameter descriptions

Parameter	Possible values	Description
MON	ON OFF (default)	Enables path trace monitoring Disables path trace monitoring
EXPTRC (See Note)	<ASCII string>	Any ASCII string of up to 62 characters
TRC (See Note)	<ASCII string >	Any ASCII string of up to 62 characters
SST	AINS AINS-DEA	Auto-In-Service Auto-In-Service Deactivate
Note: Enclose the ASCII string in double quotes (“) to maintain case sensitivity. The string must begin and end with the double quotes. You cannot use double quotes as part of the ASCII string.		

Example
Edit the path trace value:

```
ED-STS1:NEWYORK:OC3-10-1-1:CTAG13::ON:
EXPTRC=NEWYORKOC3-10-1-1,TRC=TXPATHDS3-5;
```

ED-STS3C

Use the Edit STS-3c command to edit the expected incoming and/or outgoing path trace values for an STS-3c path.

Security level

Level 3

Input syntax

```
ED-STS3C:[TID]:AID:CTAG::[MON]:[EXPTRC=Domain][,TRC=Domain];
```

Table 20-4
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
MON	Path trace monitoring
EXPTRC	Expected incoming path trace message
TRC	Outgoing path trace message

Table 20-5
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port#-sts#	Identify the STS-3c path on the WAN port of the 2x100BT-P2P or 2xGigE/FC-P2P where slot# = 3 to 10, port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P

Table 20-6
Parameter descriptions

Parameter	Possible values	Description
MON	ON	Enable or disable path trace monitoring
	OFF (default)	
EXPTRC	A string up to 62 characters	The expected incoming path trace message
TRC	A string up to 62 characters	The outgoing path trace message
Note: Enclose the incoming and outgoing path trace message in double quotes (“) to maintain case sensitivity. You cannot use double quotes in the string.		

Example
Edit the path trace value for WAN port 2 of the 2x100BT-P2P circuit pack in slot 9 of network element OTTAWA:

```
ED-STS3C:OTTAWA:WAN-9-2-1:CTAG13::ON:
EXPTRC=MONTREALWAN-10-1-1,TRC=TXPATH;
```

ED-STS12C

Use the Edit STS-12c command to edit the expected incoming and/or outgoing path trace values for an STS-12c path.

Security level

Level 3

Input syntax

```
ED-STS12C:[TID]:AID:CTAG::[MON]:[EXPTRC=Domain][,TRC=Domain];
```

Table 20-7
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
MON	Path trace monitoring
EXPTRC	Expected incoming path trace message
TRC	Outgoing path trace message

Table 20-8
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port#-sts#	Identify the STS-12c path on the WAN port of the 2xGigE/FC-P2P where slot# = 3 to 10, port# = 1 or 2, sts# = 1

Table 20-9
Parameter descriptions

Parameter	Possible values	Description
MON	ON	Enable or disable path trace monitoring
	OFF (default)	
EXPTRC	A string up to 62 characters	The expected incoming path trace message
TRC	A string up to 62 characters	The outgoing path trace message
Note: Enclose the incoming and outgoing path trace message in double quotes (“) to maintain case sensitivity. You cannot use double quotes in the string.		

Example
Edit the path trace value for WAN port 2 of the 2xGigE/FC-P2P circuit pack in slot 9 of network element OTTAWA:

```
ED-STS12C:OTTAWA:WAN-9-2-1:CTAG13::ON:
EXPTRC=MONTREALWAN-10-1-1,TRC=TXPATH;
```

ED-STS24C

Use the Edit STS-24c command to edit the expected incoming and/or outgoing path trace values for an STS-24c path.

Security level

Level 3

Input syntax

```
ED-STS24C:[TID]:AID:CTAG::[MON]:[EXPTRC=Domain][,TRC=Domain];
```

Table 20-10
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
MON	Path trace monitoring
EXPTRC	Expected incoming path trace message
TRC	Outgoing path trace message

Table 20-11
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port#-sts#	Identify the STS-24c path on the WAN port of the 2xGigE/FC-P2P where slot# = 3 to 10, port# = 1 or 2, sts# = 1

Table 20-12
Parameter descriptions

Parameter	Possible values	Description
MON	ON	Enable or disable path trace monitoring
	OFF (default)	
EXPTRC	A string up to 62 characters	The expected incoming path trace message
TRC	A string up to 62 characters	The outgoing path trace message
Note: Enclose the incoming and outgoing path trace message in double quotes (“) to maintain case sensitivity. You cannot use double quotes in the string.		

Example
Edit the path trace value for WAN port 2 of the 2xGigE/FC-P2P circuit pack in slot 9 of network element OTTAWA:

```
ED-STS24C:OTTAWA:WAN-9-2-1:CTAG13::ON:
EXPTRC=MONTREALWAN-10-1-1,TRC=TXPATH;
```

RTRV-PTHTRC-STS1

The Retrieve Path Trace STS-1 command is used to retrieve the expected incoming, actual incoming, or outgoing path trace values for a given STS path.

Security level

Level 1

Input syntax

```
RTRV-PTHTRC-STS1:[TID]:AID:CTAG::[MSGTYPE][,MONINFO];
```

Table 20-13
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-1 facility to act on.
CTAG	Correlation tag
MSGTYPE	Message type
MONINFO	Path trace monitoring information

Table 20-14
AID descriptions

Command-specific values	Purpose
DS3-slot#-port#	Identify the STS-1 path facility on the DS3 slot# = 3, 5, 7, or 9 port# =1 to 3 for DS3x3, 1 to 12 for DS3x12 or DS3x12e
OC3-slot#-port#-sts#	Identify the STS-1 path facility on the OC-3 slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 sts# = 1 to 3
OC12-slot#-port#-sts#	Identify the STS-1 path facility on the OC-12 or OC-12x4 STS slot# = 3 to 12 for OC-12, 3 to 10 for OC-12x4 STS port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1 to 12

Table 20-14 (continued)
AID descriptions

Command-specific values	Purpose
OC48-slot#-sts#	Identify the STS-1 path facility on the OC-48 or OC-48 STS slot# = 11 or 12 for OC-48, 3 to 12 for OC-48 STS sts# = 1 to 48
OC192-slot#-sts#	Identify the STS-1 path facility on the OC-192 slot# = 11 or 12 sts# = 1 to 192
WAN-slot#-port#-sts#	Identify the STS-1 path facility on the WAN port of the 2x100BT-P2P or 2xGigE/FC where slot# = 3 to 10, port# = 1 or 2 sts# = 1 for 2x100BT-P2P, sts# = 1 to 21 for 2xGigE/FC

Table 20-15
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	EXPTRC	(default) Expected incoming path trace message
	INCTRC	Incoming path trace message
	TRC	Outgoing path trace message
MONINFO	YES	Include path trace monitoring value
	NO	(default) Does not include path trace monitoring value

Example input
Retrieve the expected incoming path trace message and include the path trace monitoring value:

```
RTRV-PTHTRC-STS1:NEWYORK:OC3-10-1-1:CTAG45::EXPTRC,YES;
```

Response block syntax

```
<SID><DATE><TIME>
<TRACEMSG><MON=Domain>
```

Table 20-16
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
TRACEMSG	ASCII string	Path trace message. Any ASCII string of up to 62 characters.
MON	ON OFF	Path trace monitoring is on Path trace monitoring is off

RTRV-PTHTRC-STS3C

Use the Retrieve Path Trace STS-3c command to retrieve the expected incoming, actual incoming, or outgoing path trace value for an STS-3c path.

Security level

Level 1

Input syntax

```
RTRV-PTHTRC-STS3C:[TID]:AID:CTAG::[MSGTYPE][,MONINFO];
```

Table 20-17
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
MSGTYPE	Message type
MONINFO	Path trace monitoring information

Table 20-18
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port#-sts#	Identify the STS-3c path on the WAN port of the 2x100BT-P2P or 2xGigE/FC-P2P where slot# = 3 to 10 port# = 1 or 2 sts# = 1 for 2x100BT-P2P sts# = 1, 4, 7, ..., 19 for 2xGigE/FC-P2P

Table 20-19
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	EXPTRC (default)	Retrieve the expected incoming path trace message, the incoming path trace message, or the outgoing path trace message.
	INCTRC	
	TRC	
MONINFO	YES	Whether to include the path trace monitoring value.
	NO (default)	

Example input

Retrieve the expected incoming path trace message, including the path trace monitoring value, for WAN port 2 of the 2x100BT-P2P circuit pack in slot 9 of network element OTTAWA:

```
RTRV-PTHTRC-STS3C:OTTAWA:WAN-9-2-1:CTAG45::EXPTRC,YES;
```

Response block syntax

```
<SID><DATE><TIME>
<TRACEMSG><MON=Domain>
```

Table 20-20
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
TRACEMSG		Path trace message
MON	ON	Whether path trace monitoring is on or off.
	OFF	

RTRV-PTHTRC-STS12C

Use the Retrieve Path Trace STS-12c command to retrieve the expected incoming, actual incoming, or outgoing path trace value for an STS-12c path.

Security level

Level 1

Input syntax

```
RTRV-PTHTRC-STS12C:[TID]:AID:CTAG::[MSGTYPE][,MONINFO];
```

Table 20-21
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
MSGTYPE	Message type
MONINFO	Path trace monitoring information

Table 20-22
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port#-sts#	Identify the STS-12c path on the WAN port of the 2xGigE/FC-P2P where slot# = 3 to 10 port# = 1 or 2 sts# = 1

Table 20-23
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	EXPTRC (default)	Retrieve the expected incoming path trace message, the incoming path trace message, or the outgoing path trace message.
	INCTRC	
	TRC	
MONINFO	YES	Whether to include the path trace monitoring value.
	NO (default)	

Example input

Retrieve the expected incoming path trace message, including the path trace monitoring value, for WAN port 2 of the 2xGigE/FC-P2P circuit pack in slot 9 of network element OTTAWA:

```
RTRV-PTHTRC-STS12C:OTTAWA:WAN-9-2-1:CTAG45::EXPTRC,YES;
```

Response block syntax

```
<SID><DATE><TIME>
<TRACEMSG><MON=Domain>
```

Table 20-24
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
TRACEMSG		Path trace message
MON	ON	Whether path trace monitoring is on or off.
	OFF	

RTRV-PTHTRC-STS24C

Use the Retrieve Path Trace STS-24c command to retrieve the expected incoming, actual incoming, or outgoing path trace value for an STS-24c path.

Security level

Level 1

Input syntax

```
RTRV-PTHTRC-STS24C:[TID]:AID:CTAG::[MSGTYPE][,MONINFO];
```

Table 20-25
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
MSGTYPE	Message type
MONINFO	Path trace monitoring information

Table 20-26
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port#-sts#	Identify the STS-24c path on the WAN port of the 2xGigE/FC-P2P where slot# = 3 to 10 port# = 1 or 2 sts# = 1

Table 20-27
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	EXPTRC (default)	Retrieve the expected incoming path trace message, the incoming path trace message, or the outgoing path trace message.
	INCTRC	
	TRC	
MONINFO	YES	Whether to include the path trace monitoring value.
	NO (default)	

Example input

Retrieve the expected incoming path trace message, including the path trace monitoring value, for WAN port 2 of the 2xGigE/FC-P2P circuit pack in slot 9 of network element OTTAWA:

```
RTRV-PTHTRC-STS24C:OTTAWA:WAN-9-2-1:CTAG45::EXPTRC,YES;
```

Response block syntax

```
<SID><DATE><TIME>
<TRACEMSG><MON=Domain>
```

Table 20-28
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
TRACEMSG		Path trace message
MON	ON	Whether path trace monitoring is on or off.
	OFF	

RTRV-TRC-OC3

The Retrieve Trace OC-3 command is used to retrieve the expected incoming, actual incoming, or outgoing section trace values for a specified OC-3 facility.

For adding or editing section trace parameters refer to ED-OC3 on page 7-34 and ENT-OC3 on page 7-74.

Security level

Level 1

Input syntax

```
RTRV-TRC-OC3:[TID]:AID:CTAG::[MSGTYPE];
```

Table 20-29
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. OC-3 facility to act on.
CTAG	Correlation tag
MSGTYPE	Section trace message type. See the Parameter descriptions table for details.

Table 20-30
AID descriptions

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

Table 20-31
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	STRC	Outgoing section trace message (default)
	EXPSTRC	Expected incoming section trace message
	INCSTRC	Actual incoming section trace message

Example input

Retrieve the outgoing section trace message for the OC-3 facility in slot 10, port 1 on network element SEATTLE:

```
RTRV-TRC-OC3:SEATTLE:OC3-10-1:CTAG3::STRC;
```

Response block syntax

```
<SID><DATE><TIME>
<SECTION TRACE MESSAGE>
```

Table 20-32
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
SECTION TRACE MESSAGE	0 to 255 or ASCII string	Section trace message. The possible values depend on the section trace format. For a number format, possible values are 0 to 255. For a string format, possible values are any printable alphanumeric ASCII string (except comma, colon, semi-colon, equal sign, or question mark) up to 15 characters in length or a NULL character string.

RTRV-TRC-OC12

The Retrieve Trace OC-12 command is used to retrieve the expected incoming, actual incoming, or outgoing section trace values for a specified OC-12 facility.

For adding or editing section trace parameters refer to ED-OC12 on page 7-38 and ENT-OC12 on page 7-77.

Security level

Level 1

Input syntax

```
RTRV-TRC-OC12:[TID]:AID:CTAG::[MSGTYPE];
```

Table 20-33
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. OC-12 facility to act on.
CTAG	Correlation tag
MSGTYPE	Section trace message type. See the Parameter descriptions table for details.

Table 20-34
AID descriptions

AID type	Command-specific values	Purpose
OC-12	OC12-slot#-port# OC12-slot#-ALL	Identify the OC-12 facility 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

Table 20-35
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	STRC	Outgoing section trace message (default)
	EXPSTRC	Expected incoming section trace message
	INCSTRC	Actual incoming section trace message

Example input

Retrieve the outgoing section trace message for the OC-12 facility in slot 10 on network element SEATTLE:

```
RTRV-TRC-OC12:SEATTLE:OC12-10-1:CTAG2::STRC;
```

Response block syntax

```
<SID><DATE><TIME>
<SECTION TRACE MESSAGE>
```

Table 20-36
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
SECTION TRACE MESSAGE	0 to 255 or ASCII string	Section trace message. The possible values depend on the section trace format. For a number format, possible values are 0 to 255. For a string format, possible values are any printable alphanumeric ASCII string (except comma, colon, semi-colon, equal sign, or question mark) up to 15 characters in length or a NULL character string.

RTRV-TRC-OC48

The Retrieve Trace OC-48 command is used to retrieve the expected incoming, actual incoming, or outgoing section trace values for an OC-48 facility.

For adding or editing section trace parameters refer to ED-OC48 on page 7-41 and ENT-OC48 on page 7-79.

Security level

Level 1

Input syntax

```
RTRV-TRC-OC48:[TID]:AID:CTAG::[MSGTYPE];
```

Table 20-37
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. OC-48 facility to act on.
CTAG	Correlation tag
MSGTYPE	Section trace message type. See the Parameter descriptions table for details.

Table 20-38
AID descriptions

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

Table 20-39
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	STRC	Outgoing section trace message (default)
	EXPSTRC	Expected incoming section trace message
	INCSTRC	Actual incoming section trace message

Example input

Retrieve the outgoing section trace message for the OC-48 facility in slot 11 on network element SEATTLE:

```
RTRV-TRC-OC48:SEATTLE:OC48-11:123::STRC;
```

Response block syntax

```
<SID><DATE><TIME>
<SECTION TRACE MESSAGE>
```

Table 20-40
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
SECTION TRACE MESSAGE	0 to 255 or ASCII string	Section trace message. The possible values depend on the section trace format. For a number format, possible values are 0 to 255. For a string format, possible values are any printable alphanumeric ASCII string (except comma, colon, semi-colon, equal sign, or question mark) up to 15 characters in length or a NULL character string.

RTRV-TRC-OC192

Use the Retrieve Trace OC-192 command to retrieve the expected incoming, actual incoming, or outgoing section trace values for an OC-192 facility.

For adding or editing section trace parameters, refer to ED-OC192 on page 7-44 and ENT-OC192 on page 7-81.

Security level

Level 1

Input syntax

```
RTRV-TRC-OC192:[TID]:AID:CTAG::[MSGTYPE];
```

Table 20-41
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. OC-192 facility to act on.
CTAG	Correlation tag
MSGTYPE	Section trace message type. See the Parameter descriptions table for details.

Table 20-42
AID descriptions

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

Table 20-43
Parameter descriptions

Parameter	Possible values	Description
MSGTYPE	STRC	Outgoing section trace message (default)
	EXPSTRC	Expected incoming section trace message
	INCSTRC	Actual incoming section trace message

Example input

Retrieve the outgoing section trace message for the OC-192 facility in slot 11 on network element SEATTLE:

```
RTRV-TRC-OC192:SEATTLE:OC192-11:123::STRC;
```

Response block syntax

```
<SID><DATE><TIME>
<SECTION TRACE MESSAGE>
```

Table 20-44
Response parameter descriptions

Parameter	Possible values	Description
SID		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), and SS is the second (from 00 to 59).
SECTION TRACE MESSAGE	0 to 255 or ASCII string	Section trace message. The possible values depend on the section trace format. For a number format, possible values are 0 to 255. For a string format, possible values are any printable alphanumeric ASCII string (except comma, colon, semi-colon, equal sign, or question mark) up to 15 characters in length or a NULL character string.

Network processor command descriptions

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

The TL1 commands described in this chapter apply only to the NP. For descriptions of the TL1 commands that apply to both the NP and the network element, for example, network security and administration commands, see other appropriate sections in this document.

> ***Note:*** The target identifier (TID) in the commands in this chapter is always the NP to which the command is directed.

The following table lists all the commands in this chapter.

ADD-SOC

The Add Span of Control command is used to add a network element to the NP span of control (SOC). A maximum of 16 network elements can be added to an NP span of control.

Security level

Level 4

Input syntax

```
ADD-SOC:[TID]:SID:CTAG::UID,PID;
```

Table 21-1
Syntax definition

Field	Purpose
TID	Target identifier.
SID	System identifier.
CTAG	Correlation tag.
UID	User identifier of the network element to add to the NP span of control.
PID	Password identifier of the network element to add to the NP span of control.
Note 1: If centralized security administration (CSA) is enabled on both the NP and the network element, the command uses only the user identifier. The SOC application will only log in successfully if the NP and network element have the same shared secret. See SET-ATTR-CSA on page 2-106 to provision the CSA state and SET-CHALLENGE-SECRET on page 2-114 to set the shared secret. If CSA is disabled on either the NP or network element, the command uses the user identifier and password identifier. ***Note 2:*** The password does not appear on screen.	

Example input

Add network element NEWYORK to the span of control of OC3NP:

```
ADD-SOC:OC3NP:NEWYORK:CTAG13::SURVEIL,SURVEIL;
```

DLT-FAC

The Delete Facility command is used to delete an NP facility. NP facilities include ILANSP, ILANNP, ILAN1, ILAN2, COLAN, and X25. ILANSP and ILANNP are autoprovisioned and cannot be manually deprovisioned.

Security level

Level 3

Input syntax

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

Table 21-2
Syntax definition

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

Table 21-3
AID descriptions

AID type	Command-specific values	Purpose
AID	ILAN1 ILAN2 COLAN X25 ALL	Intershelf LAN-1 Intershelf LAN-2 Central office LAN X.25 All facility entities

Example input

Delete the ILAN-2 facility on OC3NP:

```
DLT-FAC:OC3NP:ILAN2:CTAG24;
```

DLT-PVC

The Delete Permanent Virtual Circuit (PVC) command deletes an X.25 PVC. Deleting a PVC restores the circuit to a switched virtual circuit (SVC) with default values from ULX25.

Security level

Level 3

Input syntax

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

Table 21-4
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The PVC to delete.
CTAG	Correlation tag

Table 21-5
AID descriptions

AID type	Command-specific values	Purpose
AID	0 to 15	Identify the X.25 virtual circuit to act upon

Example input

Delete PVC #11 and then retrieve VC #11:

```
DLT-PVC:OC3NP:11:CTAG45;
RTRV-VC:OC3NP:11:CTAG45;
```

VC #11 is now an SVC with default values retrieved from the ULX25 database.

ED-IP

The Edit IP command is used to edit the IP address and associated parameters assigned to the COLAN on the NP.

Security level

Level 3

Input syntax

```
ED-IP:[TID]::CTAG::[IPADDR]:[NETMASK=Domain][,GATEWAY=Domain]
[,BCASTADDR=Domain];
```

Table 21-6
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
IPADDR	The unique IP address to assign the COLAN on the NP. The IP address must be in standard dot notation (n.n.n.n) where $0 \leq n \leq 255$, for example, 47.215.37.65
NETMASK	COLAN network mask
GATEWAY	COLAN default gateway
BCASTADDR	COLAN broadcast address

Table 21-7
Parameter descriptions

Parameter	Valid value	Description
NETMASK	Class A: 255.n.n.n Class B: 255.255.n.n Class C: 255.255.255.n Class D: 255.255.255.n Class E: 255.255.255.n	COLAN network mask. Value 0.0.0.0 means that the network mark is assigned automatically by the NP, based on the network class of the IP address. (default) 0.0.0.0
GATEWAY	0.0.0.0 (default) n.n.n.n	COLAN default gateway. Router for packets with unknown destination. Value 0.0.0.0 deletes the currently provisioned gateway.
BCASTADDR	0.0.0.0 (default) n.n.n.n	COLAN broadcast address. Value 0.0.0.0 means the broadcast address is assigned automatically by the NP based on the IP address.

Example input

Change the COLAN IP address and default gateway:

```
ED-IP:OC3IP::CTAG45::47.215.37.65;
ED-IP:OC3IP::CTAG45::47.215.37.65:GATEWAY=47.215.0.1;
```

ED-LLX25

The Edit Lower Level X.25 command is used to edit the common parameters for all virtual circuits (VC) on the X.25 LAPB level.

Security level

Level 3

Input syntax

```
ED-LLX25:[TID]::CTAG:::[T1=Domain][,T3=Domain][,N1=Domain]
[,N2=Domain][,K=Domain][,MODULUS=Domain];
```

Table 21-8
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
T1	Acknowledgment timer
T3	Link inactivity timer
N1	Maximum length of I frame
N2	Maximum number of retransmissions
K	Window size for transmitter
MODULUS	Sequence number range

Table 21-9
Parameter descriptions

Parameter	Possible values	Description
T1	500 to 10000 ms (default 500)	Acknowledgment timer (500 ms increment)
T3	10000 to 300000 ms (default 30000)	Link inactivity timer (500 ms increment)
N1	1080 to 16440 bits (default 1080)	Maximum length of an I frame in bits (increments of 8)
N2	1 to 30 (default 30)	Maximum number of retransmissions
K	1 to 7 or 1 to 127 (default 7)	Window size for the transmitter based on LLX25 MODULUS value
MODULUS	8 or 128 (default 8)	Sequence number range

Example input

Modify the T3 and the N2 parameters:

```
ED-LLX25:OC3NP::CTAG45:::T3=20000,N2=20;
```

ED-PTX25

The Edit X.25 Physical Port Configuration command is used to modify the physical port configuration of X.25.

Security level

Level 3

Input syntax

```
ED-PTX25:[TID]::CTAG:::[RXCLKSRC=Domain][,TXCLKSRC=Domain]
[,CTS_PIN=Domain][,DCD_PIN=Domain][,DSR_PIN=Domain]
[,DTR_PIN=Domain][,RTS_PIN=Domain][,DSR=Domain][,DTR=Domain]
[,RTS=Domain];
```

Table 21-10
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
RXCLKSRC	Receive clock source
TXCLKSRC	Transmit clock source
CTS_PIN	CTS pin configuration
DCD_PIN	DCD pin configuration
DSR_PIN	DSR pin configuration
DTR_PIN	DTR pin configuration
RTS_PIN	RTS pin configuration
DSR	DSR pin initial value
DTR	DTR pin initial value
RTS	RTS pin initial value

Table 21-11
Parameter descriptions

Parameter	Possible values	Description
RXCLKSRC	RXEXT, TXEXT	(default RXEXT) Source of receive clock
TXCLKSRC	RXEXT, TXEXT	(default TXEXT) Source of transmit clock
CTS_PIN	ENABLED DISABLED	(default ENABLED) CTS pin configuration

Table 21-11 (continued)
Parameter descriptions

Parameter	Possible values	Description
DCD_PIN	ENABLED DISABLED	(default DISABLED) DCD pin configuration
DSR_PIN	ENABLED DISABLED	(default DISABLED) DSR pin configuration
DTR_PIN	ENABLED DISABLED	(default ENABLED) DTR pin configuration
RTS_PIN	ENABLED DISABLED	(default ENABLED) RTS pin configuration
DSR	ON, OFF	(default ON) DSR pin initial value when DSR_PIN is enabled
DTR	ON, OFF	(default ON) DTR pin initial value when DTR_PIN is enabled
RTS	ON, OFF, AUTO	(default ON) RTS pin initial value when RTS_PIN is enabled (see Note)
Note: When the range is set to AUTO, the RTS value is under hardware control.		

Example input
Modify the X.25 port configuration of OC3NP:

```
ED-PTX25:OC3NP::CTAG45:::RXCLKSRC=RXEXT,TXCLKSRC=RXEXT;
```

ED-ULSDCC

The Edit Upper Layer SDCC command is used to edit the network layer address of the OSI stack on the NP. Three manual area addresses can be provisioned. The manual area address identifies the network to which the NP belongs. When the NP is provisioned, MANAREA0 has a default setting of 490000.

You must have at least one manual area address provisioned. If you want to delete the address in MANAREA0 and it is the only address provisioned, you must first provision an address in MANAREA1 or MANAREA2, then delete the address in MANAREA0.

To change a manual area address, you must ensure that at least two area addresses are provisioned. You must delete the address you want to change, then add the new address. For example, to change MANAREA1, enter the command to edit MANAREA1 and leave a blank for the domain. This clears the address in MANAREA1. Then enter the command to edit MANAREA1 again, and enter the new address for the domain.

Security level

Level 3

Input syntax

```
ED-ULSDCC:[TID]::CTAG:::[MANAREA0=Domain][,MANAREA1=Domain]
[,MANAREA2=Domain];
```

Table 21-12
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
MANAREA0	Layer 3 area address 0
MANAREA1	Layer 3 area address 1
MANAREA2	Layer 3 area address 2

Table 21-13
Parameter descriptions

Parameter	Possible values	Description
MANAREA0	3 to 13 octets, each octet of the form PQ, where P and Q are ASCII-encoded hex values	Network layer area address 0 (default)
MANAREA1		Network layer area address 1
MANAREA2		Network layer area address 2

Example input

Edit the address in MANAREA1, by clearing the address that is already provisioned, then entering a new address:

```
ED-ULSDCC:OC3NP::CTAG34:::MANAREA1=;

ED-ULSDCC:OC3NP::CTAG34:::
MANAREA1=39840f8000000000000000000;
```

Delete area address 0:

```
ED-ULSDCC:OC3NP::CTAG34:::MANAREA0=;
```

ED-ULX25

The Edit Upper Level X.25 command is used to edit the common parameters for all switched virtual circuits (SVCs) on the X.25 network level.

Note 1: To edit the parameters for a permanent virtual circuit (PVC), use the ED-VC command (page 21-15).

Note 2: Changes to any of the following ULX25 parameters cause all current SVC calls to be lost and all PVC calls to be restarted: TXSIZE, RXSIZE, WNDW, MODULUS, T20, N20, T21, T22, T23, N22, N23, or DBIT.

Note 3: Changes to any of the following ULX25 parameters only affect new calls: NUI, NEGFLOWCTRL, NEGTXSIZE, NEGRXSIZE, NEGTXWNDW, NEGRXWNDW, NEGTRPTCLS, NEGTXTRPT, or NEGRXTRPT.

Security level

Level 3

Input syntax

```
ED-ULX25:[TID]::CTAG:::[TXSIZE=Domain][,RXSIZE=Domain]
[,WNDW=Domain][,MODULUS=Domain][,T20=Domain][,N20=Domain]
[,T21=Domain][,T22=Domain][,T23=Domain][,N22=Domain]
[,N23=Domain][,DBIT=Domain][,NUI=Domain][,NEGFLOWCTRL=Domain]
[,NEGTXSIZE=Domain][,NEGRXSIZE=Domain][,NEGTXWNDW=Domain]
[,NEGRXWNDW=Domain][,NEGTRPTCLS=Domain][,NEGTXTRPT=Domain]
[,NEGRXTRPT=Domain];
```

Table 21-14
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TXSIZE	Maximum Transmitting Packet Size
RXSIZE	Maximum Receiving Packet Size
WNDW	Packet Window Size
MODULUS	Sequence Number Range
T20	DTE Restart Time-out
N20	Number of T20 Retries
T21	DTE Call Request Time-out
T22	DTE Reset Time-out

Table 21-14 (continued)
Syntax definition

Field	Purpose
T23	Declare Time-out
N22	Number of T22 Retries
N23	Number of T23 Retries
DBIT	Delivery Confirmation Option
NUI	Network User ID
NEGFLOWCTRL	Negotiate Flow Control
NEGTXSIZE	NFC Transmit Packet Size
NEGRXSIZE	NFC Receive Packet Size
NEGTXWNDW	NCF Transmit Packet Window Size
NEGRXWNDW	NCF Receive Packet Window Size
NEGTRPTCLS	Negotiate Throughput Class
NEGTXTRPT	Throughput Class of Transmitter
NEGRXTRPT	Throughput Class of Receiver

Table 21-15
Parameter descriptions

Parameter	Possible values	Description
TXSIZE	16 to 4096	(default 128) Maximum transmitting packet size
RXSIZE	16 to 4096	(default 128) Maximum receiving packet size
WNDW	1 to 7 or 1 to 127	(default 2) Packet window size based on ULX25 MODULUS value
MODULUS	8 or 128	(default 8) Sequence number range
T20	5 to 500 sec	(default 180 sec) Data terminating equipment (DTE) restart time-out (5 sec increment)
N20	1 to 255	(default 1) Number of T20 retries
T21	5 to 500 sec	(default 200 sec) DTE call request time-out (5 sec increment)
T22	5 to 500 sec	(default 180 sec) DTE reset time-out (5 sec increment)

Table 21-15 (continued)
Parameter descriptions

Parameter	Possible values	Description
T23	5 to 500 sec	(default 180 sec) Declare time-out (5 sec increment)
N22	1 to 255	(default 1) Number of T22 retries
N23	1 to 255	(default 1) Number of T23 retries
DBIT	Y N	(default YES) Delivery confirmation option
NUI	Maximum 20 ASCII characters	(default null string) Network user identification for SVC only. (see Note 4)
NEGFLOWCTL	ON OFF	(default OFF) Negotiate flow control (NFC)
NEGTXSIZE	16 to 4096	(default 128) NFC: Tx packet size (see Note 1)
NEGRXSIZE	16 to 4096	(default 128) NFC: Rx packet size (see Note 1)
NEGTXWNDW	1 to 7 or 1 to 127	(default 2) NFC: Tx window size based on ULX25 MODULUS value (see Note 1)
NEGRXWNDW	1 to 7 or 1 to 127	(default 2) NFC: Rx window size based on LIX25 MODULUS value (see Note 1)
NEGTRPTCLS	ON OFF	(default OFF) Negotiate throughput class
NEGTXTRPT	7 to 11	(default 10) Throughput class: speed of transmitter (see Note 2)
NEGRXTRPT	7 to 11	(default 10) Throughput class: speed of receiver (see Note 2)

Note 1: The default value applies only when NEGFLOWCTRL is ON.

Note 2: The default value applies only when NEGTRPTCLS is ON.

Note 3: Any edited parameter values are also applied only when NEGFLOWCTRL or NEGTRPTCLS is on.

Note 4: Some ASCII characters are not supported for NUI. The semi-colon (;), question mark (?), backslash (\), space ( ), double quotes (“), and comma (,) are not supported.

Example input

Modify the TXSIZE and the RXSIZE parameters:

```
ED-ULX25:OC3NP::CTAG45:::TXSIZE=256,RXSIZE=256;
```

ED-VC

The Edit Virtual Circuit (VC) command modifies the parameter values of the specified permanent virtual circuit (PVC). This command cannot be used to modify a switched virtual circuit (SVC). To modify SVCs, use the ED-ULX25 command (page 21-12).

You can use ED-VC to change an SVC to a PVC, or to change a PVC to an SVC. To change an SVC to a PVC, you must specify the values of LCGN and LCN. Default values of TXSIZE and RXSIZE are available from ULX25 (see Table 21-17). To change a PVC to an SVC, the PVC is deleted and the circuit is restored as an SVC with default parameter values from the ULX25 (see Table 21-17).

Security level

Level 3

Input syntax

```
ED-VC:[TID]:AID:CTAG::TYPE:[DBIT=Domain][,WNDW=Domain]
[,T21=Domain][,T22=Domain][,T23=Domain][,N22=Domain]
[,N23=Domain][,LCN=Domain][,LCGN=Domain][,TXSIZE=Domain]
[,RXSIZE=Domain];
```

Table 21-16
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The VC number to act on. Possible values are 0 to 15. Null is not a valid value.
CTAG	Correlation tag
TYPE	The virtual circuit (VC) type, SVC or PVC
DBIT	Delivery Confirmation Option
WNDW	Packet Window Size
T21	DTE Call Request Time-out
T22	DTE Reset Time-out
T23	Declare Time-out
N22	Number of T22 Retries
N23	Number of T23 Retries
LCN	Logical Channel Number (required for PVC)

Table 21-16 (continued)
Syntax definition

Field	Purpose
LCGN	Logical Channel Group Number (required for PVC)
TXSIZE	Maximum Transmitting Packet Size
RXSIZE	Maximum Receiving Packet Size

Table 21-17
Parameter descriptions

Parameter	Possible values	Description
DBIT	Y N	(default YES) Delivery confirmation option
WNDW	1 to 7 or 1 to 127	(default 2) Packet window size based on ULX25 MODULUS value
T21	5 to 500 sec	(default 200 sec) DTE call request time-out
T22	5 to 500 sec	(default 180 sec) DTE reset time-out
T23	5 to 500 sec	(default 180 sec) Declare time-out
N22	1 to 255	(default 1) Number of T22 retries
N23	1 to 255	(default 1) Number of T23 retries
LCN	0 to 255	Logical channel number (see Note)
LCGN	0 to 7	Logical channel group number (see Note)
TXSIZE	16 to 4096	(default 128) Maximum transmitting packet size
RXSIZE	16 to 4096	(default 128) Maximum receiving packet size
Note: Values for LCGN and LCN must be provided when switching an SVC to a PVC.		

Example input
Change SVC #10 to PVC:

```
ED-VC:OC3NP:10:CTAG45::PVC:LCGN=0,LCN=5,WNDW=5;
```

This command reconfigures VC #10 to be a PVC with LCGN and LCN set to 0 and 5 respectively, and WNDW set to 5.

Change PVC #10 back to SVC:

```
ED-VC:OC3NP:10:CTAG45::SVC:;
```

This command deletes PVC #10 and restores VC #10 as an SVC with WNDW reset to default value 2.

ENT-FAC

The Enter Facility command is used to provision an NP facility. NP facilities include ILANSP, ILANNP, ILAN1, ILAN2, COLAN, and X25. ILANSP and ILANNP cannot be manually provisioned.

Security level

Level 3

Input syntax

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

Table 21-18
Syntax definition

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

Table 21-19
AID descriptions

AID type	Command-specific values	Purpose
AID	ILAN1 ILAN2 COLAN X25 ALL	Intershelf LAN-1 Intershelf LAN-2 Central office LAN X.25 All facility entities

Example input

Provision the ILAN-2 facility:

```
ENT-FAC:OC3NP:ILAN2:CTAG24;
```

RMV-SOC

The Remove Span of Control command is used to remove a network element from the NP span of control.

Security level

Level 4

Input syntax

```
RMV-SOC:[TID]:SID:CTAG;
```

Table 21-20
Syntax definition

Field	Purpose
TID	Target identifier
SID	System identifier. 1 to 20 alphanumeric characters or a text string enclosed within quotations.
CTAG	Correlation tag

Example input

Remove network element NEWYORK from the span of control of OC3NP:

```
RMV-SOC:OC3NP:NEWYORK:CTAG13;
```

RTRV-CHK-SUM

The Retrieve Check Sum command is used to retrieve the checksum created by the NP after a file transfer from Preside. After the file transfer, the NP calculates the checksum of the files in the given directory and Preside retrieves the checksum to verify the success of the file transfer. This command is normally used by Preside.

> ***Note:*** This command is intended for internal Preside validation of electronic software delivery (ESWD) and not for manual execution at the TL1 prompt.

Security level

Level 1

Input syntax

```
RTRV-CHK-SUM:[TID]::CTAG:::LOC=Domain;
```

Table 21-21
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
LOC	Location of files. The absolute path to the directory where the NP checksum is stored. DirectoryName must start with the root directory.

Table 21-22
Parameter description

Parameter	Possible values	Description
LOC	a character string	Absolute path of directory containing files must begin with '/'.

Example input

Retrieve checksums for three files, load1, load2, and load3, stored in the directory /load/v2:

```
RTRV-CHK-SUM:OC3NP::CTAG13:::LOC=/load/v2;
```

Response block syntax

```
<SID><DATE><TIME>
<FILE=FileName>,<SIZE=FileSize>,<SUM=ChkSum>
```

Table 21-23
Response parameter description

Parameter	Description
FILE	Name of the file
SIZE	File size in bytes
SUM	Checksum as a decimal number (16 bits)

RTRV-CONFIG

The Retrieve Configuration command retrieves the current network topology, that is, all connections between network elements that are in the span of control of the network processor (NP), as well as the adjacent neighbors of those network elements. The adjacent network element can be another OPTera Metro 3000 network element or an OPTera Connect DX network element.

> ***Note:*** To retrieve connections between a network element within the NP span of control and an adjacent neighbor outside the span of control, the network element and its adjacent neighbor must be connected through a section data communication channel (SDCC). The SDCC connection can occur through any OC-n, EC-1, or EC-1x3 circuit pack. EC-1x12 circuit packs do not support SDCC.

Security level

Level 1

Input syntax

```
RTRV-CONFIG:[TID]::CTAG:::[MULTIPORT=Domain]
[,PROTDETAILS=Domain][,ADSIGNATURE=Domain];
```

Table 21-24
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
MULTIPORT	Multiport flag
PROTDETAILS	Protection flag
ADSIGNATURE	Auto-discovery flag

Table 21-25
Parameter descriptions

Parameter	Possible values	Description
MULTIPORT	OFF	Do not show multiport information (default)
	ON	Show multiport information

Table 21-25 (continued)
Parameter descriptions

Parameter	Possible values	Description
PROTDETAILS	OFF	Do not show protection information (default)
	ON	Show protection information
ADSIGNATURE	OFF (default)	Do not show auto-discovery tags, that is, the near-end correlation tag, the far-end correlation tag, or far-end product identifiers
	ON	Show auto-discovery tags, that is, the near-end correlation tag, the far-end correlation tag, and far-end product identifiers. If you enable this parameter, you must also enable the multiport parameter.

Example input
Retrieve the current network topology, including multiport and protection information, and auto-discovery tags:

```
RTRV-CONFIG:OC3NP::CTAG13:::MULTIPORT=ON,PROTDETAILS=ON,
ADSIGNATURE=ON;
```

Response block syntax if ADSIGNATURE=OFF

```
<SID><DATE><TIME>
<NearEndTID>,<Eqpt-slot-port><Prot>:
<FarEndTID>,<Eqpt-slot-port><Prot>;
```

Response block syntax if ADSIGNATURE=ON

```
<SID><DATE><TIME>
<NearEndTID>,<Eqpt-slot-port><Prot>,<AD_RX>:
<FarEndTID>,<Eqpt-slot-port><Prot>,<AD_TX>,<ProdId_SubProdId>;
```

Table 21-26
Response block parameters

Parameter	Description
SID	Source identifier of the network processor.
DATE	Date of retrieval. Shows the last two digits of the year (from 00 to 99), the month of the year (from 01 to 12), and the day of the month (from 01 to 31).
TIME	Time of retrieval. Shows the hour (from 00 to 23), the minute (from 00 to 59), and the second (from 00 to 59).
NearEndTID, FarEndTID	Target identifier of the near-end or far-end network element. ***Note:*** If the far-end network element is not in the NP span of control, the FarEndTID parameter displays “UNKNOWN”.

Table 21-26 (continued)
Response block parameters

Parameter	Description
Eqpt-slot-port	The type, slot number, and port number of the equipment that connects the near-end and far-end network elements. If the equipment contains a single port, only Eqpt-slot is shown. ***Note 1:*** If the Multiport flag is disabled, port number displays "N". ***Note 2:*** If the far-end network element is not in the NP span of control, the far-end slot and port number display "0".
Prot	The protection mode of the network element: 1+1, BLSR, or UPSR. ***Note 1:*** If the Protection flag is disabled, the Prot parameter displays "N". ***Note 2:*** If the far-end network element is not in the NP span of control, the far-end Prot parameter displays "?".
AD_RX, AD_TX	The receive or transmit correlation tag of the network element, in the form: \"AD_1_aa:bb:cc:dd:ee:ff_xxx_yyy_sss_zzz_ppp\" where • "AD_1" reflects the tag version • "aa:bb:cc:dd:ee:ff" is the media access control (MAC) address of the network element • "xxx_yyy_sss_zzz_ppp" is the universal port identifier (xxx, yyy, and zzz are always 000; sss and ppp are the slot and port numbers, respectively, of the connecting equipment) ***Note 1:*** If a near- or far-end OPTera Metro 3000 network element is running a release lower than 11, the AD_RX or AD_TX parameter displays "UNKNOWN". ***Note 2:*** If a far-end OPTera Connect DX network element is running a release lower than 5, the AD_TX parameter displays "UNKNOWN".
ProdId_SubProdId	The product and sub-product identifiers of the far-end network element: ProdId = OM for OPTera Metro 3000, DX for OPTera Connect DX SubProdId = 1 for OPTera Metro 3400, 2 for OPTera Metro 3500, 3 for OPTera Metro 3300 (blank for OPTera Connect DX) ***Note 1:*** If the far-end network element is an OPTera Metro 3000 network element running a release lower than 11, the ProdId_SubProdId parameter displays "UNKNOWN". ***Note 2:*** If the far-end network element is an OPTera Connect DX network element running a release lower than 5, the ProdId_SubProdId parameter displays "UNKNOWN".

RTRV-FAC

The Retrieve Facility command is used to retrieve the state of an NP facility. NP facilities include ILANSP, ILANNP, ILAN1, ILAN2, COLAN, and X25. States of all facilities can be retrieved.

Security level

Level 1

Input syntax

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

Table 21-27
Syntax definition

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

Table 21-28
AID descriptions

AID type	Command-specific values	Purpose
AID	ILANSP ILANNP ILAN1 ILAN2 COLAN X25 ALL	Intershelf LAN to SP communication Intershelf LAN to NP communication Intershelf LAN-1 Intershelf LAN-2 Central office LAN X.25 All facilities

Example input

Retrieve the X25 facility of OC3NP:

```
RTRV-FAC:OC3NP:X25:CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>::<STATE>
```

Table 21-29
Response parameter descriptions

Parameter	Possible values	Description
AID	ILANSP ILANNP ILAN1 ILAN2 COLAN X25 ALL	Intershelf LAN to SP communication Intershelf LAN to NP communication Intershelf LAN-1 Intershelf LAN-2 Central office LAN X.25 All facilities
STATE	NULL	Facility not provisioned or manually deprovisioned. Does not apply to ILAN-SP and ILAN-NP
	IS	Facility in service. No alarms or fault conditions detected.
	OOS-AU, FLT	Facility failure
	IS-ANR,FLT	Facility performance degraded

RTRV-IP

The Retrieve IP command is used to retrieve the IP address and associated parameters assigned to the COLAN on the NP. COLAN allows the NP to communicate with Preside and Multiservice Managed Object Agent (MOA) over TCP/IP.

Security level

Level 1

Input syntax

```
RTRV-IP:[TID]::CTAG;
```

Table 21-30
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
IPADDR	The unique IP address to be assigned to COLAN on the NP. The IP address must be in the standard dot notation, n.n.n.n ($0 \leq n \leq 255$), for example, 47.215.37.65

Example input

Retrieve the IP address of the OC3NP:

```
RTRV-IP:OC3NP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
"IP=Domain"
"GATEWAY=Domain"
"NETMASK=Domain"
"BCASTADDR=Domain"
"PROVISIONED_NETMASK=Domain"
"PROVISIONED_BCASTADDR=Domain"
```

Table 21-31
Response parameter descriptions

Parameter	Possible values	Description
IPADDR	n.n.n.n	The unique IP address to be assigned to COLAN on the NP.The IP address must be in the standard dot notation, n.n.n.n ($0 \leq n \leq 255$), for example, 47.215.37.65
NETMASK	0.0.0.0 (default) Class A: 255.n.n.n Class B: 255.255.n.n Class C: 255.255.255.n Class D: 255.255.255.n Class E: 255.255.255.n	COLAN network mask. The value 0.0.0.0 means that the network mark is assigned automatically by the NP, based on the network class of the IP address.
GATEWAY	0.0.0.0 (default) n.n.n.n	COLAN default gateway. Router for packets with unknown destination. The value 0.0.0.0 will delete the currently provisioned gateway.
BCASTADDR	0.0.0.0 (default) n.n.n.n	COLAN broadcast address. The value 0.0.0.0 means the broadcast address is assigned automatically by the NP based on the IP address.

RTRV-LLX25

The Retrieve Lower Level X.25 command is used to retrieve the LAPB level parameters of the X.25 facility.

Security level

Level 1

Input syntax

```
RTRV-LLX25:[TID]::CTAG;
```

Table 21-32
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the X.25 facility of the OC3NP:

```
RTRV-LLX25:OC3NP:X.25:CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
<TYPE>,<LINKS>,<T1=Domain>,<T3=Domain>,
<N1=Domain>,<N2=Domain>,<K=Domain>,<MODULUS=Domain>;
```

Table 21-33
Response parameter descriptions

Parameter	Possible values	Description
TYPE	DTE	Data terminating equipment
LINKS		Number of LAPB links
T1	500 to 10 000	Acknowledgment timer in milliseconds
T3	10 000 to 300 000	Link inactivity timer in milliseconds
N1	1080 to 16440	Maximum length of an I frame in bytes
N2	1 to 30	Maximum number of retransmissions
K	1 to 7 or 1 to 127	Window size for the transmitter based on the LLX25 MODULUS value
MODULUS	8 or 128	Sequence number range

RTRV-PTX25

The Retrieve X.25 Physical Port Configuration command is used to retrieve the X.25 port configuration.

Security level

Level 1

Input syntax

```
RTRV-PTX25:[TID]::CTAG;
```

Table 21-34
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the X.25 port configuration of OC3NP:

```
RTRV-PTX25:OC3NP::CTAG45;
```

Response block syntax

```
<SID><DATE><TIME>
<RXCLKSRC=Domain>,<TXCLKSRC=Domain>,<CTS_PIN=Domain>,
<DCD_PIN=Domain>,<DSR_PIN=Domain>,<DTR_PIN=Domain>,
<RTS_PIN=Domain>,<DSR=Domain>,<DTR=Domain>,<RTS=Domain>;
```

Table 21-35
Response parameter descriptions

Parameter	Possible values	Description
RXCLKSRC	RXEXT TXEXT	Source of receive clock
TXCLKSRC	RXEXT TXEXT	Source of transmit clock
CTS_PIN	ENABLED DISABLED	CTS pin configuration (input pin)
DCD_PIN	ENABLED DISABLED	DCD pin configuration (input pin)
DSR_PIN	ENABLED DISABLED	DSR pin configuration (input pin)
DTR_PIN	ENABLED DISABLED	DTR pin configuration (output pin)

Table 21-35 (continued)
Response parameter descriptions

Parameter	Possible values	Description
RTS_PIN	ENABLED DISABLED	RTS pin configuration (output pin)
DSR	ON OFF	DSR pin initial value (when DSR_PIN is enabled)
DTR	ON OFF	DTR pin initial value (when DTR_PIN is enabled)
RTS	ON OFF AUTO	RTS pin initial value (when RTS_PIN is enabled)

RTRV-SOC

The Retrieve Span of Control command is used to retrieve all the network elements in the NP span of control.

Note: The status of the network elements in the span of control (using a surveil account on the NP) is independent from the MAP view when the MAP view is retrieved since they use different links.

Security level

Level 1

Input syntax

```
RTRV-SOC:[TID]::CTAG;
```

Table 21-36
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the span of control of OC3NP:

```
RTRV-SOC:OC3NP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
"\"NETID\":SW_VER::STATUS"
```

Table 21-37
Response parameter descriptions

Parameter	Possible values	Description
NETID	1 and 20 alphanumeric characters	Target identifier of the network element
SW_VER		The software version of the shelf processor (SP) if STATUS is UP
STATUS	UP DOWN XPID	SP to NP association up SP to NP association down password mismatch
Note: All span of control connections are DOWN until the surveillance account (level 5 UPC) is activated.		

RTRV-ULSDCC

The Retrieve Upper Level SDCC command is used to retrieve the manual area address of the OSI stack on the NP.

Security level

Level 1

Input syntax

```
RTRV-ULSDCC:[TID]::CTAG;
```

Table 21-38
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the MANAREA addresses provisioned on OC3NP:

```
RTRV-ULSDCC:OC3NP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
<MANAREA0=Domain>,<MANAREA1=Domain>,<MANAREA2=Domain>
```

Table 21-39
Response parameter descriptions

Parameter	Possible values	Description
MANAREA0	3 to 13 octets, each octet of the form PQ, where P and Q are ASCII-encoded hex values or null if the address is not provisioned	Area address 0 (default)
MANAREA1		Area address 1
MANAREA2		Area address 2
Note: The MANAREA address must follow a standard format for data communications protocol		

RTRV-ULX25

The Retrieve Upper Level X.25 command is used to retrieve the network level X.25 parameters.

Security level

Level 1

Input syntax

```
RTRV-ULX25:[TID]::CTAG;
```

Table 21-40
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the packet level X.25 parameters of OC3NP:

```
RTRV-ULX25:OC3NP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
<CCITTVER>,<MAXCIR>,<MAXINTR>,<TXSIZE=Domain>,<RXSIZE=Domain>,
<WNDW=Domain>,<MODULUS=Domain>,<T20=Domain>,<N20=Domain>,
<T21=Domain>,<T22=Domain>,<T23=Domain>,<N22=Domain>,
<N23=Domain>,<DBIT=Domain>,<NUI=Domain>,<NEGFLOWCTRL=Domain>,
<NEGTXSIZE=Domain>,<NEGRXSIZE=Domain>,<NEGTXWNDW=Domain>,
<NEGRXWNDW=Domain>,<NEGTRPTCLS=Domain>,<NEGTXTRPT=Domain>,
<NEGRXTRPT=Domain>
```

Table 21-41
Response parameter descriptions

Parameter	Domain	Description
CCITTVER	String of 10 characters	CCITT Version
MAXCIR		Maximum circuits supported
MAXINTR		Maximum DTE interfaces supported
TXSIZE	16 to 4096	Maximum transmitting packet size
RXSIZE	16 to 4096	Maximum receiving packet size
WNDW	1 to 7 or 1 to 127	Packet window size based on ULX25 MODULUS value

Table 21-41 (continued)
Response parameter descriptions

Parameter	Domain	Description
MODULUS	8 or 128	Sequence number range
T20	5 to 500 sec	DTE restart time-out (5 sec increment)
N20	1 to 255	Number of T20 retries
T21	5 to 500 sec	DTE call request time-out (5 sec increment)
T22	5 to 500 sec	DTE reset time-out (5 sec increment)
T23	5 to 500 sec	Declare time-out (5 sec increment)
N22	1 to 255	Number of T22 retries
N23	1 to 255	Number of T23 retries
DBIT	Y/N	Delivery confirmation option
NUI	Maximum 20 ASCII characters	Network user identification (SVC only)
NEGFLOWCTL	ON/OFF	Negotiate flow control (NFC)
NEGTXSIZE	16 to 4096	NFC: Tx packet size
NEGRXSIZE	16 to 4096	NFC: Rx packet size
NEGTXWNDW	1 to 7 or 1 to 127	NFC: Tx window size based on ULX25 MODULUS value
NEGRXWNDW	1 to 7 or 1 to 127	NFC: Rx window size based on ULX25 MODULUS value
NEGTRPTCLS	ON/OFF	Negotiate throughput class
NEGTXTRPT	7 to 11	Throughput class: speed of transmitter
NEGRXTRPT	7 to 11	Throughput class: speed of receiver

RTRV-VC

The Retrieve Virtual Circuit command is used to retrieve a virtual circuit (VC) and its parameter settings.

Security level

Level 1

Input syntax

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

Table 21-42
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The VC number to be acted upon. Possible values are 0 to 15. Null is not a valid value.
CTAG	Correlation tag
AID	Access identifier. The VC number to act on. Possible values are 0 to 15. Null is not a valid value.
CTAG	Correlation tag
TYPE	The virtual circuit (VC) type, SVC or PVC

Example input

Retrieve VC #11:

```
RTRV-VC:OC3NP:11:CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>:<TYPE>:<DBIT=Domain>,<WNDW=Domain>,<T21=Domain>,
<T22=Domain>,<T23=Domain>,<N22=Domain>,<N23=Domain>,
<LCN=Domain>,<LCGN=Domain>,<TXSIZE=Domain>,<RXSIZE=Domain>;
```

Table 21-43
Response parameter descriptions

Parameter	Possible values	Description
AID	0 to 15	The VC number.
TYPE	VC PVC SVC	The virtual circuit (VC) The permanent virtual circuit (PVC) The switched virtual circuit (SVC)
DBIT	Y N	Delivery confirmation option

Table 21-43 (continued)
Response parameter descriptions

Parameter	Possible values	Description
WNDW	1 to 7 or 1 to 127	Packet window size based on ULX25 MODULUS value
T21	5 to 500 sec	DTE call request time-out
T22	5 to 500 sec	DTE reset time-out
T23	5 to 500 sec	Declare time-out
N22	1 to 255	Number of T22 retries
N23	1 to 255	Number of T23 retries
LCN	0 to 255	Logical channel number (see Note)
LCGN	0 to 7	Logical channel group number (see Note)
TXSIZE	16 to 4096	Maximum transmitting packet size
RXSIZE	16 to 4096	Maximum receiving packet size

Software upgrade detailed command descriptions

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

All commands in this chapter are supported on both the network element and the network processor.

The following table lists all the commands in this chapter.

CANC-UPGRD

The Cancel Upgrade command allows you to back out of the upgrade, if a commit upgrade command has not been issued.

Security level

Level 3

Input syntax for shelf processor

```
CANC-UPGRD:[TID]::CTAG::RNAME;
```

Input syntax for network processor

```
CANC-UPGRD:[TID]::CTAG;
```

Table 22-1
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
RNAME	Remote node name (applies to the shelf processor only)

Table 22-2
Parameter descriptions

Parameter	Description
RNAME	The RNAME parameter applies to the shelf processor only. The name of the node from which the old loads are retrieved. The node can be of different types: OC3NE: RNAME = the remote TID (7-20 characters) OC3NP: RNAME = the remote TID (7-20 characters) OPC: RNAME = the name of the remote OPC To obtain old loads from the PC using the RS-232 port: PC: RNAME = "PC" ***Note:*** OC3NE is valid only for network element upgrade.

Example input

Cancel the upgrade of node Ottawa, using network processor Montreal:

```
CANC-UPGRD:OTTAWA::CTAG24::MONTREAL;
```

Cancel the upgrade of network processor Toronto:

```
CANC-UPGRD:TORONTO::CTAG12;
```

CHK-UPGRD

The Check Upgrade command is entered with parameters specifying the new release number and where to get the files containing the new loads (PC, OPC, another network element).

When CHK-UPGRD is issued from the network element user interface, the shelf processor checks if the specified location is reachable and does a pre-upgrade check to see if the network element can be upgraded. When CHK-UPGRD is issued from the network processor user interface, the network processor checks if the specified location is reachable and does a pre-upgrade check to see if the network processor can be upgraded.

Security level

Level 3

Input syntax

```
CHK-UPGRD:[TID]::CTAG::RNAME,RELNO;
```

Table 22-3
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
RNAME	The name of the node from which the new loads are retrieved. The node can be of the following types: OC3NE: RNAME = the remote TID (7-20 characters) OC3NP: RNAME = the remote TID (7-20 characters) OPC: RNAME = the name of the remote OPC For upgrade from a PC using the RS-232 port: PC: RNAME = "PC" For upgrade from the local file system: file system: RNAME = the local TID (7-20 characters) ***Note:*** OC3NE is valid only for network element upgrade.
RELNO	An ASCII string identifying the release number to upgrade to

Example input

Check that network element Ottawa can be upgraded from network element TORONTO:

```
CHK-UPGRD:OTTAWA::CTAG24::TORONTO,NTNA6021;
```

Check that OC3NP can be upgraded from another network processor:

```
CHK-UPGRD:OC3NP::CTAG25::OC3NP2,NTNA6021;
```

CMMT-UPGRD

The Commit Upgrade command causes the new loads on the shelf processor or the network processor to become the permanent load. You cannot cancel the upgrade once the commit upgrade command has been executed.

Security level

Level 3

Input syntax

```
CMMT-UPGRD:[TID]::CTAG;
```

Table 22-4
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Commit the upgrade load on network element OTTAWA:

```
CMMT-UPGRD:OTTAWA::CTAG24;
```

Commit the upgrade load on OC3NP:

```
CMMT-UPGRD:OC3NP::CTAG25;
```

DLT-UPGRD

The Delete Upgrade command is used to delete a release of a software load stored on the network processor.

Security level

Level 3

Input syntax

```
DLT-UPGRD:[TID]::CTAG::RELNO;
```

Table 22-5
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
RELNO	ASCII string identifying the release number to delete

Example input

Delete the software release REL0310D.TT on network element OTTAWA:

```
DLT-UPGRD:OTTAWA::CTAG24::REL0310D.TT;
```

INVK-UPGRD

When issued from the network element user interface, the Invoke Upgrade command causes the new shelf processor and transport loads to be executed. The new transport load runs on each transport card. When issued from the network processor user interface, the Invoke Upgrade command causes the new network processor load to be executed.

Security level

Level 3

Input syntax

```
INVK-UPGRD:[TID]::CTAG;
```

Table 22-6
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Invoke the upgrade on network element NEWYORK:

```
INVK-UPGRD:NEWYORK::CTAG24;
```

Invoke the upgrade on OC3NP:

```
INVK-UPGRD:OC3NP::CTAG25;
```

LOAD-FPGA

Use the Load Field Programmable Gate Array command to upgrade the FPGA load of a Packet Edge, 2x100BT-P2P or 2xGigE/FC-P2P circuit pack.

> ***Note:*** After the upgrade, you must cold restart the circuit pack for the new FPGA load to be used. See the description of the INIT-COLD command on page 19-2 for information about performing a cold restart.

Security level

Level 3

Input syntax

```
LOAD-FPGA:[TID]:AID:CTAG::RNAME;
```

Table 22-7
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag
RNAME	Remote node name where FPGA load file resides. 1 to 40 alphanumeric characters.

Table 22-8
AID descriptions

AID	Possible values	Description
IPT100	IPT100-slot#	Upgrade the FPGA load of the 4x100BT where slot# = 3 to 10
1GE	1GE-slot#	Upgrade the FPGA load of the 2xGigE where slot# = 3, 5, 7, 9
100FX	100FX-slot#	Upgrade the FPGA load of the 4x100FX where slot# = 3 to 10
100BTFOS	100BTFOS-slot#	Upgrade the FPGA load of the 2x100BT-P2P where slot# = 3 to 10
1GFOS	1GFOS-slot#	Upgrade the FPGA load of the 2xGigE/FC-P2P where slot# = 3 to 10

Example input

Upgrade the FPGA load of the 4x100BT in slot 5 of network element NEWYORK:

```
LOAD-FPGA:NEWYORK:IPT100-5:CTAG 12::MASTERNODE58;
```

LOAD-REPLACE

The Load Replace command is only available on the network processor. Load Replace installs a software load specified in the TL1 command into the file system, without upgrading to it. This makes the load available for upgrades by the local network processor or other connected network elements or network processors.

Security level

Level 3

Input syntax

```
LOAD-REPLACE:[TID]::CTAG::RNAME,RELNO:[ALRMS=Domain];
```

Table 22-9
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
RNAME	Name of the node or OPC where the load files reside
RELNO	Release number to install on network processor. See Parameter descriptions table for details.
ALRMS=Domain	Check alarms. See Parameter descriptions table for details.

Table 22-10
Parameter descriptions

Parameter	Description
RNAME	The name of the node from which the new loads are retrieved. The node can be of different types: OC3NP: RNAME = the remote TID (7-20 characters) OPC: RNAME = the name of the remote OPC
RELNO	ASCII string identifying the release number to upgrade to
ALRMS	If Y, proceed only if there are no alarms If N, proceed regardless of the alarm status

Example input

Install load REL0400A.DM from OPC MONTREAL onto network processor OTTAWANP and proceed only if there are no alarms:

```
LOAD-REPLACE:OTTAWANP::CTAG1::MONTREAL,REL0400A.DM:ALRMS=Y;
```

LOAD-UPGRD

When issued from the network element user interface, the Load Upgrade command causes the new shelf processor and transport loads to be downloaded into the shelf processor file system. The new transport load is transferred from the shelf processor to each transport card in the network element. When issued from the network processor user interface, the Load Upgrade command causes the new shelf processor, transport, and network processor loads to be downloaded into the network processor file system.

Security level

Level 3

Input syntax

```
LOAD-UPGRD:[TID]::CTAG::RNAME,RELNO:[ALRMS=Domain];
```

Table 22-11
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
RNAME	Name of the node from which the new loads are retrieved. See Table 22-12.
RELNO	Release number to upgrade to. See Table 22-12.
ALRMS	Check alarms. See Table 22-12.

Table 22-12
Parameter descriptions

Parameter	Description
RNAME	The name of the node from which the new loads are retrieved. The node can be of different types: OC3NE: RNAME = the remote TID (7-20 characters) OC3NP: RNAME = the remote TID (7-20 characters) OPC: RNAME = the name of the remote OPC For upgrade from a PC using the RS-232 port: PC: RNAME = "PC" For upgrade from the local file system: file system: RNAME = the local TID (7-20 characters) ***Note:*** OC3NE is valid only for network element upgrade.
RELNO	ASCII string identifying the release number to upgrade to
ALRMS	If Y, proceed only if there are no alarms If N, proceed regardless of the alarm status

Example input

Download the new software from network element OTTAWA to network element NEWYORK regardless of the alarm status:

```
LOAD-UPGRD:NEWYORK::CTAG24::OTTAWA,NTNA6021:ALRMS=N;
```

Download the new software from OC3NP2 to OC3NP:

```
LOAD-UPGRD:OC3NP::CTAG25::OC3NP2,NTNA6021;
```

RTRV-FPGA

Use the Retrieve Field Programmable Gate Array command to retrieve the status of the FPGA load file on a Packet Edge, 2x100BT-P2P or 2xGigE/FC-P2P circuit pack.

Security level

Level 1

Input syntax

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

Table 22-13
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 22-14
AID descriptions

AID	Possible values	Description
IPT100	IPT100-slot#	Retrieve FPGA information for a 4x100BT circuit pack where slot# = 3 to 10
1GE	1GE-slot#	Retrieve FPGA information for a 2xGigE circuit pack where slot# = 3, 5, 7, 9
100FX	100FX-slot#	Retrieve FPGA information for a 4x100FX circuit pack where slot# = 3 to 10
100BTFOS	100BTFOS-slot#	Retrieve FPGA information for a 2x100BT-P2P circuit pack where slot# = 3 to 10
1GFOS	1GFOS-slot#	Retrieve FPGA information for a 2xGigE/FC-P2P circuit pack where slot# = 3 to 10

Example input

Retrieve FPGA information for the 4x100BT circuit pack in slot 7 of network element NEWYORK:

```
RTRV-FPGA:NEWYORK:IPT100-7:CTAG 12;
```

Response block syntax

```
<SID><DATE><TIME>
"<AID>::<LOADSTATE=Domain>,<RELNO=Domain>,<LOADVALID=Domain>"
```

Table 22-15
Response parameter descriptions

Parameter	Command specific values	Description
AID	IPT100-slot#	4x100BT circuit pack where slot# = 3 to 10
	1GE-slot#	2xGigE circuit pack where slot# = 3, 5, 7, 9
	100FX-slot#	4x100FX circuit pack where slot# = 3 to 10
	100BTFOS-slot#	2x100BT-P2P circuit pack where slot# = 3 to 10
	1GFOS-slot#	2xGigE/FC-P2P circuit pack where slot# = 3 to 10
LOADSTATE	Complete	Download is complete
	In Active	Circuit pack has never tried to download
	In Progress	Download is in progress
RELNO		Release number of FPGA load file in flash memory of the circuit pack
LOADVALID	Yes	Load is valid
	No	Load is not valid. Possible failure during download.

RTRV-SPACE

The Retrieve Space command is used to retrieve the available file system space to make sure there is enough space before putting a new release in the file system.

Security level

Level 1

Input syntax

```
RTRV-SPACE:[TID]::CTAG;
```

Table 22-16
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the available file system space on OTTAWANP:

```
RTRV-SPACE:OTTAWANP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
"x bytes available"
```

RTRV-UPGRD

The Retrieve Upgrade command is used to retrieve the list of software releases on the network processor file system.

Security level

Level 1

Input syntax

```
RTRV-UPGRD:[TID]::CTAG;
```

Table 22-17
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the list of software releases on OTTAWANP:

```
RTRV-UPGRD:OTTAWANP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
"REL"
```

Table 22-18
Response parameter descriptions

Parameter	Possible values	Description
Rel		Software release name

RTRV-UPGRD-STATE

The Retrieve Upgrade State command is used to retrieve the state of the software upgrade.

Security level

Level 1

Input syntax

```
RTRV-UPGRD-STATE:[TID]::CTAG;
```

Table 22-19
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

Example input

Retrieve the upgrade state on OTTAWANP:

```
RTRV-UPGRD-STATE:OTTAWANP::CTAG24;
```

Response block syntax

```
<SID><DATE><TIME>
"STATE"
```

Table 22-20
Response parameter descriptions

Parameter	Possible values	Description
STATE	CHECK, PASS	The CHK-UPGRD command passed.
	CHECK, FAIL	The CHK-UPGRD command failed.
	CHECK, INPROGRESS	The CHK-UPGRD command is in progress.
	LOAD, PASS	The LOAD-UPGRD command passed.
	LOAD, FAIL	The LOAD-UPGRD command failed.
	LOAD, INPROGRESS	The LOAD-UPGRD command is in progress.
	FIRST INVOKE, PASS	The first INVK-UPGRD command passed.
	FIRST INVOKE, FAIL	The first INVK-UPGRD command failed.

Table 22-20 (continued)
Response parameter descriptions

Parameter	Possible values	Description
STATE	SECOND INVOKE, PASS	The second INVK-UPGRD command passed.
	SECOND INVOKE, FAIL	The second INVK-UPGRD command failed.
	INVOKE, INPROGRESS	The INVK-UPGRD command is in progress.
	COMMIT, PASS	The CMMT-UPGRD command passed.
	COMMIT, FAIL	The CMMT-UPGRD command failed.
	COMMIT, INPROGRESS	The CMMT-UPGRD command is in progress.
	CANCEL, PASS	The CANC-UPGRD command was run for the second time. The upgrade is completely cancelled.
	CANCEL, FAIL	The CANC-UPGRD command failed.
	CANCEL, INPROGRESS	The CANC-UPGRD command was run for the first time.
	INACTIVE	The upgrade process is not active.

DS1 Service Module command descriptions

This chapter is an alphabetical summary of the TL1 commands related to the DS1 Service Module. 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.

ED-SITE-DSM

Use the Edit Site-DSM command to assign a site address to the DS1 Service Module (DSM). The site address is an attribute used to identify the DSM and is only supported for circuit packs in slot 1 of the DSM.

> ***Note 1:*** Each DSM must have a site address. The DSM will not be operational until you assign a site address.
>
> ***Note 2:*** The DSM site will not be visible at the RTRV-RTG-TBL command.

Security level

Level 3

Input syntax

```
ED-SITE-DSM:[TID]:AID:CTAG::SITE;
```

Table 23-1
Syntax definition

Field	Purpose
TID	Target identifier
AID	The DSM entity to act upon
CTAG	Correlation tag
SITE	Site address. 1 to 40 characters enclosed within quotations.

Table 23-2
AID description

AID	Possible values	Purpose
AID DSM	DSM-%HLINK-OC3-hslot#-hport#	Identify the DSM where hslot# = 3 to 10 hport# = 1 to 4 The site address must be unique in the network element. Use the working OC-3 or OC-3x4 if protected.

Example input

Assign a site address to the DS1 service module of network element BOSTON:

```
ED-SITE-DSM:BOSTON:CTAG12::"XYZ";
```

RTRV-CEM-DSM

Use the Retrieve DSM common equipment module command to display the inventory of the common equipment modules (CEM) on one DSM, or on all DSMs attached to the shelf. The common equipment modules are the OAM module, the fan module, and the DS1 I/Os.

Note: The DSMs must be provisioned before displaying the CEMs.

Security level

Level 1

Input syntax

```
RTRV-CEM-DSM:[TID]:AID:CTAG;
```

Table 23-3
Syntax definition

Field	Purpose
AID	Access identifier
TID	Target identifier
CTAG	Correlation tag

Table 23-4
AID description

AID type	Command-specific values	Purpose
DSM AID for a single DSM attached to the shelf.	ALL-%HLINK-0C3-hslot#-hport#	hslot # = 3 to 10 hport # = 1 to 4
DSM AID for all DSM attached to the shelf.	ALL	

Example input

Retrieve all attached DSMs common equipment on network element BOSTON:

```
RTRV-CEM-DSM:BOSTON:ALL:CTAG;
```

Response block syntax

```
<SID><DATE><TIME>
<AID>::<CTYPE=Domain>,<PEC=Domain>,<REL=Domain>,
<CLEI=Domain>,\"SITE\"
```

Table 23-5
Response parameter descriptions

Parameter	Possible values	Description
AID	DSMOAMEX-%HLINK-OC3-hslot#-hport# DSMFANX3-%HLINK-OC3-hslot#-hport# DSMIO-number-%HLINK-OC3-hslot#-hport#	DSM where number = 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
CTYPE	“DSMOAMEX-DSM OAM Adaptor module” “DSMFANX3-DSM Fanx3 module” “DSMIO - DSM 28 DS1 I/0”	Common equipment code
PEC		Product equipment code
REL		Release
CLEI		Common language equipment identifier
SITE	<String>	1-40 characters, enclosed within quotations

OPR-LAMP-TEST

Performs a lamp-test on

- either the Host shelf or the DS1 service module
- a single slot (hslot or DSM DS1x84 termination module)
- all NE slots

For a DSM DS1x84 termination module, its purpose is to help identify the DSM DS1x84 termination module location and host link misconnections. It is directed to the host OCN port and sent to the DSM DS1x84 termination module that is fiber connected to this OCN port.

> ***Note:*** The DSM DS1x84 termination module must have a direct OAM link through the above fiber.

Security level

Level 2

Input syntax

```
OPR-LAMP-TEST:[TID]:AID:CTAG;
```

Table 23-6
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier
CTAG	Correlation tag

Table 23-7
AID description

AID type	Command- specific parameters	Purpose
DSM AID	%HLINK-0C3-hslot#-hport#	Identify the DSM where hslot # = 3 to 10 hport # = 1 to 4
	ALL	All DSM attached

Example input

Test the connections for all attached DSMs for the network element BOSTON:

```
OPR-LAMP-TEST:BOSTON:ALL:CTAG12;
```

Response block syntax

```
<SID><DATE><TIME>
<CTAG> CMPLD
```

Automatic reports

This chapter is an alphabetical summary of each OPTera Metro 3500 network element TL1 automatic report. Automatic reports are the messages retrieved by the RTRV-AO command. Automatic reports are stored in a random access memory (RAM) cache and are also broadcast to all active TL1 accounts when each event occurs.

There are two possible event reporting formats for two event types: one event format is designed for a switch event (like a forced or auto-switch); the other format is to identify Performance Management Threshold crossing (PMs). The response block will differ for these two event types.

The message descriptions in this chapter describe the purpose of the message, the syntax, and parameters returned as part of the autonomous message.

Note 1: Examples might not include both event reporting formats. The syntax for both types is described where applicable.

Note 2: Automatic reports are sometimes referred to as autonomous messages.

Note 3: When the generation of autonomous reports surpasses an average of four alarms or events per second over a ten minute period, the Alarm and Event Throttling Active alarm is raised. If this alarm is raised, other alarms and events can still be raised and retrieved, but their automatic output is stopped. Reduce the generation of automatic reports to less than four per second. Once this alarm clears, the output of other autonomous reports resumes.

The following table lists automatic reports available in this chapter.

REPT^ALM^COM

Report Alarm Com is generated by a network element or network processor to report alarms that affect the network processor or the shelf as a whole. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^COM <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
;
```

Table 24-1
Syntax definition

Field	Purpose
<sid>	The network element or NPx source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-2
AID descriptions

AID type	Command-specific values	Purpose
Shelf	SHELF	Identify the network element
SPx	SP	Identify the shelf processor
NPx	NP	Identify the network processor
Fan	FAN-slot#	Identify the fan unit where slot# = 1 to 3
BITS signal	BITS-A BITS-B	Identify the BITS A or B input or output
Timing reference	DS1-slot#-port#	Identify the timing reference where slot# = 4 to 10, port# = 1 to 12
	EC1-slot#-port#	Identify the timing reference where slot# = 3, 5, 7, 9, port# = 1 to 12
	OC3-slot#-port#	Identify the timing reference where slot# = 3 to 10, port# = 1 to 4
	OC12-slot#-port#	Identify the timing reference where slot# = 3 to 12, port# = 1 to 4
	OC48-slot#	Identify the timing reference where slot# = 3 to 12
	OC192-slot#	Identify the timing reference where slot# = 11 or 12
TBOS display	display-shelf	Identify the remote network element where display = 1 to 16 shelf = user-defined shelf name
Power cards	PWR-A PWR-B	Identify the power cards

Table 24-3
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<ntfcncde>	CR MJ MN CL	all	Critical alarm Major alarm Minor alarm Cleared alarm

Table 24-3 (continued)
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<condtype>	INC	BITS signal	Incoming failure condition
	SWTOINT	Shelf	Switch to internal synchronization
	BPV	BITS signal	BITS In A or B bipolar violations >10^{-3}
	AIS	BITS signal	BITS In A or B receive AIS
	LOF	BITS signal	BITS In A or B loss of frame
	LOS	BITS signal	BITS In A or B loss of signal
	FA	Shelf	Power failure
	null	SPx, NPx	Software upgrade
	SWFTDWN	SPx, NPx	Software download
	SYNCPRI	BITS signal timing ref	Primary synchronization reference failure
	SYNCSEC	BITS signal timing ref	Secondary synchronization reference failure
	INT	all	Internal software failure
<srveff>	SA or NSA	all	Service affecting or non-service affecting
<ocrdat>	mm-dd	all	The date when the alarm occurred
<ocrtm>	hh-mm-ss	all	The time when the alarm occurred
<locn>	NEND	all	Failure at the near end of the system
	FEND	null	Failure at the far end of the system
	null	SPx, NPx	No failure in the system
<dirn>	NA	all	Not applicable
	RCV	BITs signal null	Receive failure
	null	SPx, NPx	No failure in the system
<conddescr>	Character string	all	The detailed text description of the trouble

Example message
At 9 pm on March 17, 2002, the timing reference was lost for the BITS out A signal:

```
<cr> <lf> <lf>
   OC3NE01 02-03-17 21:00:00 <cr> <lf>
*  123 REPT ALM COM <cr> <lf>
   "BITS-A,COM:MN,SYNCPRI,NSA,03-17,21-00-00,NEND,NA:\"Loss of
BITSout-A Pri. Timing Ref.\""
;
<cr> <lf>
```

REPT^ALM^EC1

Report Alarm EC-1 is generated by a network element to report the occurrence of EC-1 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^EC1 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-4
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-5
AID descriptions

AID type	Command-specific values	Purpose
EC-1 facility AID	EC1-slot#-port#	Identify EC-1 facility where slot# = 3, 5, 7, or 9 port# = 1 to 12

Table 24-6
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	LOS LOF INT INC AIS null	Loss of signal Loss of frame Internal hardware fault/failure Incoming failure condition Alarm indication signal detected Not applicable
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA RCV	Not applicable Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example messages
At 9 pm on October 17, 2001, the following alarm report was generated for the EC-1x12 in slot 7, port 1:

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*  123 REPT ALM EC1 <cr> <lf>
   "EC1-7-1:MN,INT,SA,10-17,21-00-00,NEND,RCV:\"EC1 Loopback
Active\""
;
<cr> <lf>
```

REPT^ALM^ENV

Report Alarm Environment is generated by a network element to report the occurrence of an environmental alarm.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^ENV <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<almtype>,<ocrdat>,<ocrtm>,<almmsg>
<cr> <lf>
;
```

Table 24-7
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-8
AID descriptions

AID type	Purpose
1 to 16	Identify the contact

Table 24-9
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<ntfcncde>	CR MJ MN CL	all	Critical alarm Major alarm Minor alarm Cleared alarm
<almtype>	AIRCOMPR	all	Air compressor failure
	AIRCOND	all	Air conditioning failure
	AIRDRYR	all	Air dryer failure
	BATDSCHRG	all	Battery discharging
	BATTERY	all	Battery failure
	CLFAN	all	Cooling fan failure
	ENGINE	all	Engine failure
	ENGOPRG	all	Engine operating
	EXPLGS	all	Explosive gas
	FIRDETR	all	Fire detector failure
	FIRE	all	Fire
	FLOOD	all	Flood
	FUSE	all	Fuse failure
	GEN	all	Generator failure
	HIAIR	all	High airflow
	HIHUM	all	High humidity
	HITEMP	all	High temperature
	HIWTR	all	High water
	INTRUDER	all	Intrusion

Table 24-9 (continued)
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<almtype>	LWBATVG	all	Low battery voltage
	LWFUEL	all	Low fuel
	LWHUM	all	Low humidity
	LWPRES	all	Low cable pressure
	LWTEMP	all	Low temperature
	LWWTR	all	Low water
	MISC	all	Miscellaneous
	OPENDR	all	Open door
	PUMP	all	Pump failure
	POWER	all	Commercial power failure
	PWR-48	all	-48 V power supply failure
	RECT	all	Rectifier failure
	RECTHI	all	Rectifier high voltage
	RECTLO	all	Rectifier low voltage
	SMOKE	all	Smoke
	TOXICGAS	all	Toxic gas
	VENTN	all	Ventilation system failure
<ocrdat>	mm-dd	all	The date when the alarm occurred
<ocrtm>	hh-mm-ss	all	The time when the alarm occurred
<almmsg>	character string	all	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*  123 REPT ALM ENV <cr> <lf>
   "1:MN,FLOOD,10-17,21-00-00,\"Flood\""
;
<cr> <lf>
```

REPT^ALM^EQPT

Report Alarm Equipment is generated by a network element to report the occurrence of alarmed equipment related events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^EQPT <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-10
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-11
AID descriptions

AID type	Command-specific values	Purpose
2xGigE eqpt	1GE-slot#	Identify 2xGigE equipment where slot# = 3, 5, 7, 9
4x100BT eqpt	IPT100-slot#	Identify 4x100BT equipment where slot# = 3 to 10
4x100FX eqpt	100FX-slot#	Identify 4x100FX equipment where slot# = 3 to 10
100BTFOS AID	100BTFOS-slot#	Identify 2x100BT-P2P equipment where slot# = 3 to 10
1GFOS AID	1GFOS-slot#	Identify 2xGigE/FC-P2P equipment where slot# = 3 to 10
DS1 eqpt	DS1-slot#	Identify DS1 equipment where slot# = 3 to 10
DSM eqpt	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	Identify the DS1 equipment on the DSM where slot# = 1, 2, hslot# = 3 to 10, hport# = 1 to 4
DS3 eqpt	DS3-slot#	Identify DS3x3, DS3x12, or DS3x12e equipment where slot# = 3 to 10
DS3VT AID	DS3V-slot#	Identify DS3VTx12 equipment where slot# = 3 to 10
EC1 eqpt	EC1-slot#	Identify EC-1 equipment where slot# = 3 to 10
ILAN eqpt	ILAN	Identify ILAN equipment
OC3 eqpt	OC3-slot#	Identify OC-3 or OC-3x4 equipment where slot# = 3 to 10
OC12 eqpt	OC12-slot#	Identify OC-12 or OC-12x4 STS equipment where slot# = 3 to 12
OC48 eqpt	OC48-slot#	Identify OC-48 equipment where slot# = 3 to 12
OC192 ept	OC192-slot#	Identify OC-192 equipment where slot# = 11 or 12
PSC eqpt	PSC	Identify the protection switch controller
PSX eqpt	PSX	Identify the protection switch extender
SPx eqpt	SP	Identify the shelf processor
CLX eqpt	CLX-slot#	Identify the VTX or STX-192 where slot# =13 or 14

Table 24-12
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<ntfcncde>	CR, MJ, MN, or CL	all	Critical, Major, Minor or Cleared alarm
<condtype>	EQPT	all	Critical alarm caused by equipment failure
	INT	all	Internal hardware fault/failure
	INC	OC12-slot#	Incoming failure condition where slot# = 3 to 12
		IPT100-slot#	Incoming failure condition where slot# = 3 to 10
		100FX-slot#	Incoming failure condition where slot# = 3 to 10
		1GE-slot#	Incoming failure condition where slot# = 3, 5, 7, 9
<srveff>	SA NSA	all	Service affecting Not service affecting
<ocrdat>	mm-dd	all	The date when the alarm occurred
<ocrtm>	hh-mm-ss	all	The time when the alarm occurred
<locn>	NEND	all	Failure at the near end of the system
<dirn>	NA	all	Not applicable
	RCV	OC12-slot#	Incoming failure condition where slot# = 3 to 12
		IPT100-slot#	Incoming failure condition where slot# = 3 to 10
		100FX-slot#	Incoming failure condition where slot# = 3 to 10
		1GE-slot#	Incoming failure condition where slot# = 3, 5, 7, 9
	NEND	DS3-slot#	Near end direction only where slot# = 3 to 10
<conddescr>	Character string	all	The detailed text description of the trouble

Example message

At 9 p.m. on October 17, 2001, an automatic diagnostic ran and passed on the DS1 in slot 5:

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*  123 REPT ALM EQPT <cr> <lf>
   "DS1-5:CR,INT,NSA,10-17,21-00-00,NEND,NA:\"Circuit Pack
Failed\""
;
<cr> <lf>
```

REPT^ALM^FAC

Report Alarm Facility is generated by a network processor to report the occurrence of alarmed facility related events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^FAC <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-13
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-14
AID descriptions

AID type	Command-specific values	Purpose
NPx facility AID	ILAN1 ILAN2 COLAN ILANSP ILANNP X25	Identify the NPx facility

Table 24-15
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	INT	Internal software fault/failure
<srveff>	NSA	Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA	Not applicable
<conddescr>	character string	The detailed text description of the trouble

Example message
At 9 p.m. on October 17, 2001, the NP ILAN1:

```
<cr> <lf> <lf>
   NPOC3NE01 01-10-17 21:00:00 <cr> <lf>
*  123 REPT ALM FAC<cr> <lf>
   "ILAN1:MN,INT,NSA,10-17,21-00-00,NEND,NA:\"Facility
Failure\""
;
<cr> <lf>
```

REPT^ALM^OC3

Report Alarm OC-3 is generated by a network element to report the occurrence of OC-3 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^OC3 <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-16
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-17
AID descriptions

AID type	Command-specific values	Purpose
OC-3 facility AID	OC3-slot#-port#	Identify the OC-3 facility where slot# = 3 to 10, port# = 1 to 4
	OC3-slot#-port#-%HLINK-OC3-hslot#-hport#	Identify the OC-3 facility on the DSM interface where slot# = 1 or 2, port# = 1 to 84, hslot# = 3 to 10, hport# = 1 to 4

Table 24-18
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR, MJ, MN CL	Critical, Major, Minor, or Cleared Alarm
<condtype>	LOS LOF INT INC AIS APSC APSMM	Loss of signal Loss of frame Internal hardware fault/failure Incoming failure condition Alarm indication signal detected Automatic protection switch channel condition Automatic protection switch mode mismatch condition
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA RCV	Not applicable Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM OC3 <cr> <lf>
    "OC3-10-1:C,INC,SA,10-17,21-00-00,NEND,RCV:\"OC3 Signal
Degrade\""
;
<cr> <lf>
```

REPT^ALM^OC12

Report Alarm OC-12 is generated by a network element to report the occurrence of OC-12 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^OC12 <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-19
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-20
AID descriptions

AID type	Command-specific values	Purpose
OC-12 facility AID	OC12-slot#-port#	Identify the OC-12 or OC-12x4 STS where slot# = 3 to 12 for OC-12, 3 to 10 for OC-12x4 STS port# = 1 for OC-12, 1 to 4 for OC-12x4 STS

Table 24-21
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	LOS	Loss of signal
	LOF	Loss of frame
	INT	Internal hardware fault/failure
	INC	Incoming failure condition
	AIS	Alarm indication signal detected
	APSC	Automatic protection switch channel condition
	APSMM	Automatic protection switch mode mismatch condition
<srveff>	SA	Service affecting
	NSA	Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA RCV	Not applicable Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC12NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM OC12 <cr> <lf>
    "OC12-10-1:C,INC,SA,10-17,21-00-00,NEND,RCV:\"OC12 Signal
Degrade\""
;
<cr> <lf>
```

REPT^ALM^OC48

Report Alarm OC-48 is generated by a network element to report the occurrence of OC-48 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^OC48 <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-22
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-23
AID descriptions

AID type	Command-specific values	Purpose
OC-48 facility AID	OC48-slot#	Identify the OC-48 where slot# = 3 to 12

Table 24-24
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	LOS	Loss of signal
	LOF	Loss of frame
	INT	Internal hardware fault/failure
	INC	Incoming failure condition
	AIS	Alarm indication signal detected
	APSC	Automatic protection switch channel condition
	APSMM	Automatic protection switch mode mismatch condition
	SWEX	Switch exerciser failure condition
	RSWS	Traffic squelched condition
<srveff>	SA	Service affecting
	NSA	Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND FEND	Near end Far end
<dirn>	NA RCV TRMT	Not applicable Receive direction only Transmit direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC48NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM OC48 <cr> <lf>
    "OC48-11:C,INC,SA,10-17,21-00-00,NEND,RCV:\"OC48 Signal
Degrade\""
;
<cr> <lf>
```

REPT^ALM^OC192

Report Alarm OC-192 is generated by a network element to report the occurrence of OC-192 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^OC192 <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-25
Syntax defintion

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-26
AID descriptions

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

Table 24-27
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	LOS	Loss of signal
	LOF	Loss of frame
	INT	Internal hardware fault/failure
	INC	Incoming failure condition
	AIS	Alarm indication signal detected
	APSC	Automatic protection switch channel condition
	APSMM	Automatic protection switch mode mismatch condition
	SWEX	Switch exerciser failure condition
	RSWS	Traffic squelched condition
<srveff>	SA	Service affecting
	NSA	Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND FEND	Near end Far end
<dirn>	NA RCV TRMT	Not applicable Receive direction only Transmit direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC192NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM OC192 <cr> <lf>
    "OC192-11:C,INC,SA,10-17,21-00-00,NEND,RCV:\"OC192 Signal
Degrade\""
;
<cr> <lf>
```

REPT^ALM^SECU

Report Alarm Security is generated when the shelf processor or network processor detects a security alarm, for example, an incoming network access violation or intrusion attempt. The message is generated to users with a UPC level of 4 or higher.

Security alarms have an impact of major, non-service affecting. Security alarms can be manually cleared by accounts with an UPC level of 4 or higher. Intrusion attempt alarms are also automatically cleared when the lockout expires.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
^<atag>^REPT^ALM^SECU <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-28
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-29
AID descriptions

AID type	Command-specific values	Purpose
SPx	SP	Identify the shelf processor
NPx	NP	Identify the network processor

Table 24-30
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	MJ CL	Major alarm Cleared alarm
<condtype>	INT	Internal
<srveff>	NSA	Non-service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA	Not applicable
<conddescr>	character string	The detailed text description of the alarm

Example messages

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
 123 REPT ALM SECU <cr> <lf>
    "SP:MJ,INT,NSA,10-17,21-00-00,NEND,NA:\"Intrusion
Attempt\""
;
<cr> <lf>
```

REPT^ALM^STS1

Report Alarm STS-1 is generated by a network element to report the occurrence of STS-1 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^STS1<cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-31
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-32
AID descriptions

AID type	Command-specific values	Purpose
STS path AID	OC3-slot#-port#-sts#	Identify the STS-1 where slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 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
	OC-48-slot#-sts#	Identify the STS-1 where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC-192-slot#	Identify the STS-1 where slot# = 11 or 12 sts# = 1 to 192
	EC1-slot#-port#	Identify STS-1 where slot# = 3, 5, 7, 9 port# = 1 to 12
	OC3-slot#-1-sts#-%HLINK-OC3-hslot#-hport#	Identify the STS-1 where slot# = 1, 2 sts# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4

Table 24-33
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	SLMF	Signal label mismatch failure
	AIS	Alarm indication signal detected
	INC	Incoming failure condition
<srveff>	SA NSA	Service affecting Non service affecting

Table 24-33 (continued)
Parameter descriptions

Parameter	Values	Description
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	RCV	Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM STS1 <cr> <lf>
    "OC3-9-1-1:CR,AIS,SA,10-17,21-00-00,NEND,RCV:\"STS Rx
AIS\"" ; <cr> <lf>
```

REPT^ALM^STS3C

Report Alarm STS-3c is generated by a network element to report the occurrence of STS-3c alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^STS3C <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-34
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-35
AID descriptions

AID type	Command-specific values	Purpose
STS-3c facility AID	OC3-slot#-port#-sts#	Identify the STS-3c where slot# = 3 to 10, port# = 1 to 4, sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c 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 where slot# = 11 or 12 for OC-48, slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, ..., 46
	OC192-slot#-sts#	Identify the STS-3c where slot# = 11 or 12, sts# = 1, 4, 7, ..., 190

Table 24-36
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR, MJ, MN, or CL	Critical, major, minor, or cleared alarm
<condtype>	SLMF AIS INC PAYUEQ PAYERR	Signal label mismatch failure Alarm indication signal detected Incoming failure condition Payload unequipped Payload error
<srveff>	SA or NSA	Service affecting or non-service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	RCV	Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM STS3C <cr> <lf>
    "OC3-9-1-1:CR,AIS,SA,10-17,21-00-00,NEND,RCV:\"STS3C Rx
AIS\""
 ;
<cr> <lf>
```

REPT^ALM^STS12C

Report Alarm STS-12c is generated by a network element to report the occurrence of STS-12c alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^STS12C <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-37
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-38
AID descriptions

AID type	Command-specific values	Purpose
OC-12	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
OC-48	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
OC-192	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181

Table 24-39
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	MJ MN CL	Major alarm Minor alarm Cleared alarm
<condtype>	PAYUEQ	Payload unequipped
	PAYERR	Payload error
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	RCV	Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC12NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM STS12C <cr> <lf>
    "OC12-9-1-1:CR,AIS,SA,10-17,21-00-00,NEND,RCV:\"STS12C Rx
AIS\""
 ;
<cr> <lf>
```

REPT^ALM^STS24C

Report Alarm STS-24c is generated by a network element to report the occurrence of STS-24c alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^STS24C <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-40
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-41
AID descriptions

AID type	Command-specific values	Purpose
OC-48	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# = 1, 25
OC-192	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 25, ..., 169

Table 24-42
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	PAYUEQ	Payload unequipped
	PAYERR	Payload error
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	RCV	Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC48NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM STS24C <cr> <lf>
    "OC48-9-1-1:CR,AIS,SA,10-17,21-00-00,NEND,RCV:\"STS24C Rx
AIS\""
 ;
<cr> <lf>
```

REPT^ALM^STS48C

Report Alarm STS-48c is generated by a network element to report the occurrence of STS-48c alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^STS48C <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-43
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-44
AID descriptions

AID type	Command-specific values	Purpose
OC-48	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# = 1
OC-192	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 49, ..., 145

Table 24-45
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	PAYUEQ	Payload unequipped
	PAYERR	Payload error
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	RCV	Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC48NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM STS48C <cr> <lf>
    "OC48-9-1:CR,AIS,SA,10-17,21-00-00,NEND,RCV:\"STS48C Rx
AIS\""
 ;
<cr> <lf>
```

REPT^ALM^T1

Report Alarm T1 is generated by a network element to report the occurrence of DS1 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^T1 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-46
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-47
AID descriptions

AID type	Command-specific values	Purpose
DS1 facility AID	DS1-slot#-port#	Identify the DS1 facility where slot# = 4 to 10, port# = 1 to 12
DS3VT facility AID	DS1-slot#-port#-t1#	Identify the DS1 facility on DS3VTx12 equipment where slot# = 3, 5, 7, 9, port# = 1 to 12, t1# = 1 to 28
DSM AID	DS1-1-port#-%HLINK-OC3-hslot#-hport#	Identify the DS1s on the DSM where port# = 1 to 84, hslot# = 3 to 10, hport# = 1 to 4

Table 24-48
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	LOS LOF INT INC AIS	Loss of signal Loss of frame Internal hardware fault/failure Incoming failure condition Alarm indication signal
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA RCV TRMT	Not applicable Receive direction only Transmit direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*  123 REPT ALM T1 <cr> <lf>
   "DS1-5-12:MJ,INT,SA,10-17,21-00-00,NEND,RCV:\"DS1 Loopback
Active\""
;
<cr> <lf>
```

REPT^ALM^T3

Report Alarm T3 is generated by a network element to report the occurrence of DS3 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^T3 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-49
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-50
AID descriptions

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

Table 24-51
Parameter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	LOS	Loss of signal
	LOF	Loss of frame
	INT	Internal hardware fault/failure
	INC	Incoming failure condition
	AIS	Alarm indication signal
<srveff>	SA	Service affecting
	NSA	Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	NA RCV TRMT	Not applicable Receive direction only Transmit direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
* 123 REPT ALM T3 <cr> <lf
   "DS3-5-3:MN,INT,SA,10-17,21-00-00,NEND,RCV:\"DS3 Loopback
Active\""
;
<cr> <lf>
```

REPT^ALM^VT1

Report Alarm VT1 is generated by a network element to report the occurrence of VT1.5 alarmed events. In general, an alarmed event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^ALM^VT1 <cr> <lf>
<rspblk> +
;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
<locn>,<dirn>:<conddescr>" <cr> <lf>
```

Table 24-52
Syntax defintion

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	Possible alarm code values in decreasing order of severity: *C (Critical alarm) ** (Major alarm) *^ (Minor alarm) A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-53
AID descriptions

AID type	Command-specific values	Purpose
VT1.5 facility AID	EC1-slot#-port#-vtg#-vt#	Identify the VT1.5 path where slot# = 3, 5, 7, 9 port# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt#	Identify the VT1.5 path where slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC3-slot#-1-sts#-vtg#-vt#- %HLINK-OC3-hslot#-hport#	Identify the VT1.5 path where slot# = 1, 2 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt#	Identify the VT1.5 path where slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt#	Identify the VT1.5 path where slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	DS1-slot#-port#-t1#	Identify the VT1.5 path on DS3VTx12 equipment where slot# =3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28

Table 24-54
Paramter descriptions

Parameter	Values	Description
<ntfcncde>	CR MJ MN CL	Critical alarm Major alarm Minor alarm Cleared alarm
<condtype>	SLMF	Signal label match failure
	AIS	Alarm indication signal detected
	INC	Incoming failure condition
<srveff>	SA NSA	Service affecting Non service affecting
<ocrdat>	mm-dd	The date when the alarm occurred
<ocrtm>	hh-mm-ss	The time when the alarm occurred
<locn>	NEND	Near end
<dirn>	RCV	Receive direction only
<conddescr>	character string	The detailed text description of the trouble

Example message

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
*C  123 REPT ALM VT1 <cr> <lf>
    "OC3-10-1-2-2-1:CR,AIS,SA,10-17,21-00-00,NEND,RCV:\"VT Rx
AIS\""
;
 <cr> <lf>
```

REPT^CONFIG^CHG

Report Configuration Change is generated when the functionality detects that there may be a change in the configured network administered by the network processor. Typically this is due to expansion and reconfiguration of an existing network. An example of this might be the upgrading of a point-to-point linear network to a linear ADM chain or the addition of nodes to a ring.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
<almcde>^<atag>^REPT^CONFIG^CHG <cr> <lf>
;
```

Table 24-55
Syntax defintion

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<almcde>	A^ (Automatic message)
<atag>	Automatic tag, the numerical identification of the message

REPT^DBCHG

Report Database Change is generated by the network element to which a name change (TID) or account change (UID) was made. It is also generated by BLSR configuration, cross-connect, FFP and SOC commands.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^DBCHG <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>.
The format for an NE name change is:

```
^^^"<msgtype>:<netid>,<oldtid>,<newtid>" <cr> <lf>
```

The format for an NE account change is:

```
^^^"<msgtype>:<netid>,<olduid>,<newuid>" <cr> <lf>
```

Note: Since an atag of 0000000 is always used for this type of report, they are not logged into the automatic output (AO) buffer.

The format for all other commands that cause a configuration change (level 1 to level 4) commands is:

```
^^^"<DBCHGSEQ=seqnum>:<DATE>,<TIME>:<userid=domain>,<priority=
domain>:<commandcode>:<aid1><,aid2>:<ctag>:<position1>
<,position2>:<keyword1=domain><,keyword2=domain]>:<pst>,<sst>"
<cr> <lf>
```

Note 1: When issued for a SID change, REPT DBCHG is sent only to the TL1 session that originated the change.

Note 2: When issued for a UID change, REPT DBCHG is sent to all active TL1 sessions to the shelf processor or network processor that issued the change. The affected TL1 sessions are those that have a UPC equal or greater to the UPC of the UID that was changed.

Table 24-56
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message. Since an atag of 0000000 is always used for this type of report, they are not logged into the automatic output (AO) buffer
<rspblk>	Response block. See the following table for details.

Table 24-57
Parameter descriptions

Parameter	Values	Description
<msgtype>	NNC SAC	NE name change System account change
<netid>		Target identifier
<oldtid>		Old target identifier
<newtid>		New target identifier
<olduid>		Old user identifier
<newuid>		New user identifier
<DBCHGSEQ= seqnum>		REPT- DBCHG sequence number
<uid=domain>		User name that executed the command
<command code>		The provisioning command issued (for example, ENT-CRS-STS1)
<aid1><,aid2>		Optional and specific to the provisioning command.
<ctag>		Correlation tag
<position1> <,position2		All position defined parameters specified in the command
<keyword1=domain> <,keyword2=domain>		All keyword defined parameters that were specified in the command
<pst>		Primary state from the command
<sst>		Secondary state from the command

Example message

At 9 p.m. on October 17, 2001, the name of NE01TID was changed to OC3NE01. This message will be returned:

```
<cr> <lf> <lf>
   NE01TID 01-10-17 21:00:00 <cr> <lf>
A  000000 REPT DBCHG <cr> <lf>
   "NNC:NE01TID,NE01TID,OC3NE01" <cr> <lf>
```

At 10 p.m. on January 18, 2002, the user identifier EXPRESS01 on network element BOSTON was changed to EXPRESS02. This message will be returned:

```
<cr> <lf> <lf>
   BOSTON 02-01-18 22:00:00 <cr> <lf>
A  000000 REPT DBCHG <cr> <lf>
   "SAC:BOSTON,EXPRESS01,EXPRESS02" <cr> <lf>
```

REPT^EVT^COM

Report Event Com is generated by a network element or network processor to report alarms that affect the network processor or the shelf as a whole. In general, an event causes a standing condition and has immediate or potential impact on the operation or performance of the entity. Some form of maintenance effort is required to restore normal operation or performance of the entity after the event has occurred.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^COM <cr> <lf>
<rspblk> +
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,<dirn>:
<conddescr>" <cr> <lf>
```

Table 24-58
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-59
AID descriptions

AID type	Command-specific values	Purpose
SPx	SP	Identify the network element
NPx	NP	Identify the network processor
Shelf	SHELF	Identify the shelf
BITS signal	BITS-A BITS-B	Identify the BITS-A or BITS-B input or output

Table 24-59 (continued)
AID descriptions

AID type	Command-specific values	Purpose
Timing reference	DS1-slot#-port#	Identify the timing reference where slot# = 4 to 10, port# = 1 to 12
	EC1-slot#-port#	Identify the timing reference where slot# = 3, 5, 7, 9, port# = 1 to 12
	OC3-slot#-port#	Identify the timing reference where slot# = 3 to 10, port# = 1 to 4
	OC12-slot#-port#	Identify the timing reference 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
	OC48-slot#	Identify the timing reference where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS
	OC192-slot#	Identify the timing reference where slot# = 11 or 12
TBOS display	display-shelf	Identify the remote network element where display = 1 to 16 shelf = user-defined shelf name

Table 24-60
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<condtype>	INC	BITS signal	Incoming failure condition
	FEMCOD	TBOS display	Far end SID change
	HLDOVRSYNC	Shelf	Switch to holdover synchronization
	FRNGSYNC	Shelf	Switch to freerun synchronization
	SYNCREFSW	BITS signal Synchronization reference	Synchronization reference switch
	SWFTDWN	SPx or NPx	Software download
	INT	SPx or NPx	Internal software failure

Table 24-60 (continued)
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<condeff>	SC TC CL	all	Standing condition raised Transient condition Standing condition cleared
<ocrdat>	mm-dd	all	The date when the event occurred
<ocrtm>	hh-mm-ss	all	The time when the event occurred
<conddescr>	character string	all	The detailed text description of the trouble
<locn>	NEND FEND	all TBOS display	Failure at the near end of the system Failure at the far end of the system
<dirn>	NA	all	Not applicable
	RCV	BITS signal TBOS display	Receive failure

Example message
At 9 p.m. on March 17, 2001, during a software upgrade on network element NEWYORK, the following event is reported:

```
<cr> <lf> <lf>
   NEWYORK 01-10-17 21:00:00 <cr> <lf>
A  123 REPT EVT COM  <cr> <lf>
   "SP:SWFTDWN,TC,10-17,21-00-00:"
Invoke upgrade passed
Slot(s) 05 06 09 10 11 12 13 14 15 passed""
;
<cr> <lf>
```

REPT^EVT^EC1

Report Event EC-1 is generated by a network element to report the occurrence of non-alarmed EC-1 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^EC1 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>" <cr> <lf>
```

Table 24-61
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-62
AID descriptions

AID type	Command-specific values	Purpose
EC1 facility AID	EC1-slot#-port#	Identify EC-1 facility where slot# = 3, 5, 7, 9 port# = 1 to 12

Table 24-63
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE	Threshold-crossing monitored threshold type
<condeff>	TC	Transient condition
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far-end
<dirn>	TRMT RCV	Transmit (away from the node) Receive (onto the node)
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	15-MIN 1-DAY 1-UNT	The accumulation time period: 15 minute, 1 day, or untimed.
<conddescr>	text message	Condition description

Table 24-64
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVS ESS SESS SEFSS CVL ESL SESL UASL	Coding Violations - Section Errored Seconds - Section Severely Errored Seconds - Section Severely Errored Frame Seconds - Section Coding Violations - Line Errored Seconds - Line Severely Errored Seconds- Line Unavailable Seconds - Line

Example message

EC-1 performance monitoring At 00:29:23 on 1 January 2002 a transient threshold-crossing of Severely Errored Seconds - Section of 1, where the threshold level is 1, is recorded for the EC-1 circuit pack in slot 7, port 1 of FMX70.

```
<cr> <lf> <lf>
FMX70 02-01-01 00:29:23^M
A  000012 REPT EVT EC1^M
"EC1-7-1:T-SESS,TC,01-01,00-29-23,NEND,RCV,1,1,15-MIN
:\"T-SESS\"<cr> <lf>
```

REPT^EVT^EQPT

Report Event Equipment is generated by a network element to report the occurrence of non-alarmed equipment related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^EQPT <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>"<cr> <lf>
```

Table 24-65
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-66
AID descriptions

AID type	Command-specific values	Purpose
2xGigE eqpt	1GE-slot#	Identify 2xGigE equipment where slot# = 3, 5, 7, 9
4x100BT eqpt	IPT100-slot#	Identify 4x100BT equipment where slot# = 3 to 10
4x100FX eqpt	100FX-slot#	Identify 4x100FX equipment where slot# = 3 to 10
2x100BT-P2P eqpt	100BTFOS-slot#	Identify the 2x100BT-P2P circuit pack where slot# = 3 to 10
2xGigE/FC-P2P eqpt	1GFOS-slot#	Identify the 2xGigE/FC-P2P where slot# = 3 to 10

Table 24-66 (continued)
AID descriptions

AID type	Command-specific values	Purpose
DS1 eqpt	DS1-slot#	Identify DS1 equipment where slot# = 3 to 10
	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	Identify the DS1 equipment on the DSM where slot# = 1, 2, hslot# = 3 to 10, hport# = 1 to 4
DS3 eqpt	DS3-slot#	Identify the DS3x3, DS3x12, or DS3x12e equipment where slot# = 3 to 10
DS3VT eqpt	DS3V-slot# DS3V-ALL	Identify the DS3VTx12 equipment where slot# =3 to 10
EC1 eqpt	EC1-slot#	Identify the EC-1x3 or EC-1x12 equipment where slot# = 3 to 10
ILAN eqpt	ILAN	Identify ILAN equipment
NPx eqpt	NP	Identify the network processor
OC3 eqpt	OC3-slot#	Identify the OC-3 or OC-3x4 equipment where slot# = 3 to 10
OC12 eqpt	OC12-slot#	Identify the OC-12 or OC-12x4 STS equipment where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4
OC48 eqpt	OC48-slot#	Identify the OC-48 or OC-48 STS equipment where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS
OC192 ept	OC192-slot#	Identify the OC-192 equipment where slot# = 11 or 12
PSC eqpt	PSC	Identify the protection switch controller
PSX eqpt	PSX	Identify the protection switch extender
SPx eqpt	SP	Identify the shelf processor
Shelf	SHELF	Identify the network element
CLX eqpt	CLX-slot#	Identify the VTX or STX-192 equipment where slot# = 13 or 14

Table 24-67
Parameter descriptions

Parameter	Values	Applicable AIDs	Description
<condtype>	INC	IPT100-slot#	Switch to protection inhibited where slot# = 3 to 12
		100FX-slot#	Switch to protection inhibited where slot# = 3 to 10
		1GE-slot#	Switch to protection inhibited where slot# = 3, 5, 7, 9
	FWGADWNLD	IPT100-slot#	FPGA download where slot# = 3 to 10
		100FX-slot#	FPGA download where slot# = 3 to 10
		1GE-slot#	FPGA download where slot# = 3, 5, 7, 9
	INT	all	Internal software failure
<condeff>	TC SC CL	all	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	all	The date when the event occurred
<ocrtm>	hh-mm-ss	all	The time when the event occurred
<locn>	NEND	all	Failure at the near end of the system
<dirn>	NA	all	Not applicable
<conddescr>	character string	all	The detailed text description of the trouble

Example message
At 9 p.m. on March 21, 2002, the DS1 in slot 4 switches to protection. This message will be returned.

```
<cr> <lf> <lf>
   OC3NE01 02-03-21 21:00:00 <cr> <lf>
A  123  REPT EVT EQPT <cr> <lf>
DS1-4:INT,SC,03-21,21-00-00,NEND,NA:\"Auto Switch Complete"\
;
```

REPT^EVT^INVENTORY

Report Event Inventory is generated by a network element to report the occurrence of inventory events. The event being reported is for the insertion or removal of circuit packs from the shelf.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^INVENTORY <cr> <lf>
<rspblk> +;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<ACTION=descriptor>:<aid>:<CTYPE=domain>,<SER=domain>,
<PEC=domain>" <cr> <lf>
```

Table 24-68
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-69
Parameter descriptions

Parameter	Values	Description
<Descriptor>	INSERT REMOVE	The action that was performed
<aid>	see TBD	Circuit pack and slot number
<ctype=domain>		circuit pack type
<serial=domain>		circuit pack serial number
<pec=domain>		circuit pack product engineering code (PEC)

Table 24-70
AID descriptions

AID type	Command-specific values	Purpose
2xGigE eqpt	1GE-slot#	Identify 2xGigE equipment where slot# = 3, 5, 7, 9
4x100BT eqpt	IPT100-slot#	Identify the 4x100BT circuit pack where slot# = 3 to 10
4x100FX eqpt	100FX-slot#	Identify 4x100FX equipment where slot# = 3 to 10
2x100BT-P2P eqpt	100BTFOS-slot#	Identify the 2x100BT-P2P circuit pack where slot# = 3 to 10
2xGigE/FC-P2P eqpt	1GFOS-slot#	Identify the 2xGigE/FC-P2P where slot# = 3 to 10
DS1 eqpt	DS1-slot#	Identify DS1 equipment where slot# = 3 to 10
	DS1TM-slot#-%HLINK-OC3-hslot#-hport#	Identify the DS1 equipment on the DSM where slot# = 1, 2, hslot# = 3 to 10 hport# = 1 to 4
DS3 eqpt	DS3-slot#	Identify the DS3x3, DS3x12, or DS3x12e equipment where slot# = 3 to 10
DS3VT eqpt	DS3V-slot#	Identify the DS3VTx12 equipment where slot# =3 to 10
EC1 eqpt	EC1-slot#	Identify the EC-1 equipment where slot# = 3 to 10
ILAN eqpt	ILAN	Identify ILAN equipment
NPx eqpt	NP	Identify the network processor
OC3 eqpt	OC3-slot#	Identify the OC-3 or OC-3x4 equipment where slot# = 3 to 10
OC12 eqpt	OC12-slot#	Identify the OC-12 or OC-12x4 STS equipment where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS
OC48 eqpt	OC48-slot#	Identify the OC-48 or OC-48 STS equipment where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS

Table 24-70 (continued)
AID descriptions

AID type	Command-specific values	Purpose
OC192 ept	OC192-slot#	Identify the OC-192 equipment where slot# = 11 or 12
PSC eqpt	PSC	Identify the protection switch controller
PSX eqpt	PSX	Identify the protection switch extender
SPx eqpt	SP	Identify the shelf processor
Shelf	SHELF	Identify the network element
CLX eqpt	CLX-slot#	Identify the VTX or STX-192 equipment where slot# = 13 or 14

Example message
At 10:15 p.m. on October 15, 2002, an OC-12 circuit pack was inserted in slot 4. This message will be returned.

```
<cr> <lf> <lf>
   OC3NE01 02-10-15 22:15:00 <cr> <lf>
A  123  REPT EVT EQPT <cr> <lf>
"ACTION=INSERT:OC12-4:CTYPE=OC12,SERIAL=NNTM01GZ34R76,
PEC=NTN404AA"
;
```

REPT^EVT^LOG

Report Event Log is generated by a network element to report the occurrence of log events. The event being reported is for activities that have occurred on the system.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^LOG <cr> <lf>
<rspblk> ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<timestamp>:<uid=domain>:<priority=domain>,<status=domain>
:<commandcode>:<aid>:<ctag>:<positionparms>:
<keywordparms=domain>:<pst>,<sst>:<failure string>" <cr> <lf>
```

Table 24-71
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-72
Parameter descriptions

Parameter	Description
<timestamp>	Date and time command was executed
<uid=domain>	User name that executed the command
<priority=domain>	The priority of the message
<status=domain>	The status of the command (for example: completed, failed, or IDNV)
<commandcode>	Name of the command that was executed
<aid>	The AID that received the command
<ctag>	Correlation tag
<positionparms>	All position defined parameters specified in the command

Table 24-72 (continued)
Parameter descriptions

Parameter	Description
<keywordparms>	All keyword defined parameters specified in the command
<pst>	Primary state from the command
<sst>	Secondary state from the command

Example message
At 10:15 p.m. on October 15, 2002, the following failure message was returned for an input command:

```
ENT-EQPT:FGXSPX107:EC1-11:D;IP D

   FGXSPX107 02-10-17 17:00:00
M  D DENY
   IIAC
/*Input, Invalid ACcess identifier*/
```

Due to this failure, this log event will be returned.

```
<cr> <lf> <lf>
   FGXSPX107 02-10-17 17:00:00 <cr> <lf>
A  005551  REPT EVT LOG <cr> <lf>
"02-10-17,17-00-00:UID=ADMIN,PRIORITY=GEN_TL1_CMD,STATUS=IIAC:
ENT-EQPT:EC1-11:CTAG99:::"
;
```

REPT^EVT^OC3

Report Event OC-3 is generated by a network element to report the occurrence of non-alarmed OC-3 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^OC3 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-73
Syntax definitions

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following AID and Parameter description tables for details.

Table 24-74
AID descriptions

AID type	Command-specific values	Purpose
OC-3 facility AID	OC3-slot#-port#	Identify the OC-3 or OC-3x4 where slot# = 3 to 10, port# = 1 to 4
	OC3-slot#-%HLINK-OC3-hslot#-hport#	Identify the OC-3 equipment on the DSM where slot# = 1, 2, hslot# = 3 to 10 hport# = 1 to 4

Table 24-75
Parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE PS INT	Threshold-crossing monitored threshold type Protection switch exerciser Internal hardware or software failure
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-76
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVS ESS SESS SEFSS CVL ESL SESL UASL	Coding Violations - Section Errored Seconds - Section Severely Errored Seconds - Section Severely Errored Frame Seconds - Section Coding Violations - Line Errored Seconds - Line Severely Errored Seconds- Line Unavailable Seconds - Line

Example message

At 9 a.m. on October 17, 2001, the OC-3 in slot 10 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^OC3 <cr> <lf>
^^^"OC3-10-1:T-CVS,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVS\"<cr> <lf>
```

REPT^EVT^OC12

Report Event OC-12 is generated by a network element to report the occurrence of non-alarmed OC-12 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^OC12 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-77
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following AID and Parameter description tables for details.

Table 24-78
AID descriptions

AID type	Command-specific values	Purpose
OC-12 facility AID	OC12-slot#-port#	Identify the OC-12 or OC-12x4 STS 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

Table 24-79
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE PS INT	Threshold-crossing monitored threshold type Protection switch exerciser Internal hardware or software failure
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	15-MIN 1-DAY 1-UNT	The accumulation time period: 15 minute, 1 day, or untimed.
<conddescr>	text message	Condition description

Table 24-80
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVS ESS SESS SEFSS CVL ESL SESL UASL	Coding Violations - Section Errored Seconds - Section Severely Errored Seconds - Section Severely Errored Frame Seconds - Section Coding Violations - Line Errored Seconds - Line Severely Errored Seconds- Line Unavailable Seconds - Line

Example message

At 9 a.m. on October 17, 2001, the OC-12 in slot 10 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^OC12 <cr> <lf>
^^^"OC12-10:T-CVS,TC,10-17,9-0-0,NEND,RCV,10,10,15-MIN
:\"T-CVS\"<cr> <lf>
```

REPT^EVT^OC48

Report Event OC-48 is generated by a network element to report the occurrence of non-alarmed OC-48 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^OC48 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-81
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following AID and Parameter description tables for details.

Table 24-82
AID descriptions

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

Table 24-83
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE PS INT	Threshold-crossing monitored threshold type Protection switch exerciser Internal hardware or software failure
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND or FEND	Near end or far end
<dirn>	RCV, TRMT, or NA	Receive (onto the node), Transmit (away from the node), or Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	15-MIN, 1-DAY, or 1-UNT	The accumulation time period: 15 minute, 1 day, or untimed
<conddescr>	text message	Condition description

Table 24-84
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVS ESS SESS SEFSS CVL ESL SESL UASL	Coding Violations - Section Errored Seconds - Section Severely Errored Seconds - Section Severely Errored Frame Seconds - Section Coding Violations - Line Errored Seconds - Line Severely Errored Seconds- Line Unavailable Seconds - Line

Example message
At 9 a.m. on October 17, 2001, the OC-48 in slot 11 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^OC48 <cr> <lf>
^^^"OC48-11:T-CVS,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVS\"<cr> <lf>
```

REPT^EVT^OC192

Report Event OC-192 is generated by a network element to report the occurrence of non-alarmed OC-192 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^OC192 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-85
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following AID and Parameter description tables for details.

Table 24-86
AID descriptions

AID type	Command-specific Values	Purpose
OC-192 facility AID	OC192-slot#	Identify the OC-192 where slot# = 11 or 12

Table 24-87
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE PS INT	Threshold-crossing monitored threshold type Protection switch exerciser Internal hardware or software failure
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	15-MIN, 1-DAY, or 1-UNT	The accumulation time period: 15 minute, 1 day, or untimed.
<conddescr>	text message	Condition description

Table 24-88
Montype paramter descriptions

Parameter	Possible values	Description
<montype>	CVS ESS SESS SEFSS CVL ESL SESL UASL	Coding Violations - Section Errored Seconds - Section Severely Errored Seconds - Section Severely Errored Frame Seconds - Section Coding Violations - Line Errored Seconds - Line Severely Errored Seconds- Line Unavailable Seconds - Line

Example message
At 9 a.m. on October 17, 2001, the OC-48 in slot 11 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^OC192 <cr> <lf>
^^^"OC192-11:T-CVS,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVS\"<cr> <lf>
```

REPT^EVT^STS1

Report Event STS1 is generated by a network element to report the occurrence of non-alarmed STS-1 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^STS1 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-89
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following AID and Parameter description tables for details.

Table 24-90
AID descriptions

AID type	Command-specific Values	Purpose
STS path AID	OC3-slot#-port#-sts#	Identify the STS-1 where slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3
	OC12-slot#-port#-sts#	Identify the STS-1 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
	OC-48-slot#-sts#	Identify the STS-1 where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1 to 48
	OC-192-slot#-sts#	Identify the STS-1 where slot# = 11 or 12 sts# = 1 to 192
	EC1-slot#-port#	Identify STS-1 where slot# = 3, 5, 7, 9 port# = 1 to 12
	OC3-slot#-1-sts#-%HLINK-OC3-hslot#-hport#	Identify the STS-1 where slot# = 1, 2 sts# = 1 to 3 hslot# = 3 to 10 hport# = 1 to 4

Table 24-91
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE INT	Threshold-crossing monitored threshold type Internal hardware or software failure
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end

Table 24-91
Response parameter descriptions

Parameter	Values	Description
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-92
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVP ESP SESP ALSP UASP	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path

Example message

At 9 a.m. on October 17, 2001, the OC-3 in slot 10, port 1, sts 3 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^STS1 <cr> <lf>
^^^"OC3-10-1-3:T-CVP,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVP\"<cr> <lf>
```

REPT^EVT^STS3C

Report Event STS-3c is generated by a network element to report the occurrence of non-alarmed STS-3c related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^STS3C <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-93
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-94
AID descriptions

AID type	Command-specific Values	Purpose
STS-3c facility AID	OC3-slot#-port#-sts#	Identify the STS-3c where slot# = 3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts#	Identify the STS-3c 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 where slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 4, 7, ..., 46
	OC192-slot#-sts#	Identify the STS-3c where slot# = 11 or 12 sts# = 1, 4, 7, ..., 190

Table 24-95
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE INT PAYCHG	Threshold-crossing monitored threshold type Internal hardware or software failure Payload change
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter

Table 24-95 (continued)
Response parameter descriptions

Parameter	Values	Description
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-96
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVP ESP SESP ALSP UASP	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path

Example message

At 9 a.m. on October 17, 2001, the OC-3 in slot 10 port 1 sts 1 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^STS3C <cr> <lf>
^^^"OC3-10-1-1:T-CVP,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVP\"<cr> <lf>
```

REPT^EVT^STS12C

Report Event STS-12c is generated by a network element to report the occurrence of non-alarmed STS-12c related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^STS12C <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-97
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-98
AID descriptions

AID type	Command-specific values	Purpose
OC-12	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
OC-48	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 11 or 12 for OC-48 slot# = 3 to 12 for OC-48 STS sts# = 1, 13, 25, 37
OC-192	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 13, 25, 37, ... 181

Table 24-99
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE INT PAYCHG	Threshold-crossing monitored threshold type Internal hardware or software failure Payload change
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-100
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVP ESP SESP ALSP UASP	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path

Example message

At 9 a.m. on October 17, 2001, the OC-12 in slot 3 port 1 sts 1 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^STS12C <cr> <lf>
^^^"OC12-3-1-1:T-CVP,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVP\"<cr> <lf>
```

REPT^EVT^STS24C

Report Event STS-24c is generated by a network element to report the occurrence of non-alarmed STS-24c related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^STS24C <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-101
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-102
AID descriptions

AID type	Command-specific Values	Purpose
OC-48	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# = 1, 25
OC-192	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 25, ..., 169

Table 24-103
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE INT PAYCHG	Threshold-crossing monitored threshold type Internal hardware or software failure Payload change
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-104
Montype paramter descriptions

Parameter	Possible values	Description
<montype>	CVP ESP SESP ALSP UASP	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path

Example message

At 9 a.m. on October 17, 2001, the OC-48 in slot 3 sts 1 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^STS24C <cr> <lf>
^^^"OC48-3-1:T-CVP,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVP\"<cr> <lf>
```

REPT^EVT^STS48C

Report Event STS-48c is generated by a network element to report the occurrence of non-alarmed STS-48c related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^STS48C <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-105
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-106
AID descriptions

AID type	Command-specific Values	Purpose
OC-48	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	slot# = 3 to 12 sts# = 1
OC-192	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11, 12 sts# = 1, 49, ..., 145

Table 24-107
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE INT PAYCHG	Threshold-crossing monitored threshold type Internal hardware or software failure Payload change
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-108
Montype parameter descriptions

Parameter	Possible values	Description
<montype>	CVP ESP SESP ALSP UASP	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path

Example message

At 9 a.m. on October 17, 2001, the OC-48 in slot 3 sts 1 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
^NE1^01-10-17^9-00 <cr> <lf>
A^^123^REPT^EVT^STS48C <cr> <lf>
^^^"OC48-3-1:T-CVP,TC,10-17,9-0-0,NEND,
RCV,10,10,15-MIN:\"T-CVP\"<cr> <lf>
```

REPT^EVT^T1

Report Event T1 is generated by a network element to report the occurrence of non-alarmed DS1 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^T1 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

or

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-109
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	in the format yy-mm-dd
<time>	in the format hh:mm:ss
<atag>	automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-110
AID descriptions

AID type	Command-specific Values	Purpose
DS1 facility AID	DS1-slot#-port#	Identify the DS1 facility where slot# = 4 to 10 port# = 1 to 12
DS3VT facility AID	DS1-slot#-port#-t1#	Identify the DS1 facility on DS3VTx12 equipment where slot# =3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
DSM AID	DS1-1-port#-%HLINK-OC3-hslot#-hport#	Identify the DS1 facility on the DSM where port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4

Table 24-111
Reponse parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE INC INT	Threshold-crossing monitored threshold type Incoming failure Software failure
<condeff>	TC SC CL	Transient condition Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT NA	Receive (onto the node) Transmit (away from the node) Not applicable
<monval>	1 and up	Measured value of a monitored parameter
<thlev>	1 and up	Threshold level for the monitored parameter
<tmper>	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-112
Montype parameter descriptions

Parameter	Possible values	Description
montype	CVL ESL SESL CVP ESP SEFSP SESP SASP UASP CSSP	Coding Violations - Line Errored Seconds - Line Severely Errored Seconds - Line Coding Violations - Path Errored Seconds - Path Severely Errored Frame Seconds - Path Severely Errored Seconds - Path SEF / AIS Seconds - Path Unavailable Seconds - Path Controlled Slip Seconds - Path

Example message
At 9 p.m. on October 17, 2001, the DS1 in slot 4, port 2 records unavailable seconds. This message will be returned:

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
A  123 REPT EVT T1<cr> <lf>
   "DS1-4-2:T-UASP,TC,10-17:21:00:00,NEND,TRMT,15,10,15-MIN
:\"T-UASP\"<cr> <lf>
```

At 9 p.m. on October 17, 2001, the DS1 in slot 4, port 10 reports a problem with the DS1 test pattern. This message will be returned:

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
A  123 REPT EVT T1<cr> <lf>
   "DS1-4-10:INT,SC,10-17:21:00:00,NEND,NA:\"DS1 Test Signal
Active-OutofSync\"" <cr> <lf>
```

REPT^EVT^T3

Report Event T3 is generated by a network element to report the occurrence of non-alarmed DS3 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^T3 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>,<monval>,<thlev>,<tmper>:<conddescr>"<cr> <lf>
```

Table 24-113
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-114
AID descriptions

AID type	Command-specific Values	Purpose
DS3 AID	DS3-slot#-port#	Identify the DS3 where slot# = 3, 5, 7, or 9 port# = 1 to 12

Table 24-115
Response parameter descriptions

Parameter	Values	Description
<condtype>	T-MONTYPE	Threshold-crossing monitored threshold type
<condeff>	TC	Transient condition
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND FEND	Near end Far end
<dirn>	RCV TRMT	Receive (onto the node) Transmit (away from the node)
monval	1 and up	Measured value of a monitored parameter
thlev	1 and up	Threshold level for the monitored parameter
tmper	 15-MIN 1-DAY 1-UNT	The accumulation time period 15 minute 1 day untimed
<conddescr>	text message	Condition description

Table 24-116
Montype parameter descriptions

Parameter	Possible values	Description
montype	CVL ESL SESL CVP ESP SESP SASP UASP	Coding Violations - Line Errored Seconds - Line Severely Errored Seconds - Line Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path SEF / AIS Seconds - Path Unavailable Seconds - Path

Example message

At 9 p.m. on October 17, 2001, the DS3x12 in slot 3, port 3 records coding violations. This message will be returned:

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
A  123 REPT EVT T3<cr> <lf>
   "DS3-3-3:T-CVL,TC,10-17,21:00:00,NEND,RCV,3,3,15-MIN
:\"T-CVL\"<cr> <lf>
```

REPT^EVT^VT1

Report Event VT1 is generated by a network element to report the occurrence of non-alarmed VT1.5 related events. The event being reported can be a change of status or the occurrence of an irregularity, which by itself is not severe enough to warrant an alarm notification.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EVT^VT1 <cr> <lf>
<rspblk> + ;
```

The message must contain at least one occurrence of <rspblk>. Its format is in one of the two following formats:

```
^^^"<aid>:<condtype>,<condeff>,<ocrdat>,<ocrtm>,<locn>,
<dirn>:<conddescr>" <cr> <lf>
```

Table 24-117
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<rspblk>	Response block. See the following tables for details.

Table 24-118
AID descriptions

AID type	Command-specific Values	Purpose
VT1.5 facility AID	EC1-slot#-port#-vtg#-vt#	Identify the VT1.5 path where slot# = 3, 5, 7, 9 port# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC3-slot#-port#-sts#-vtg#-vt#	Identify the VT1.5 path where slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4
	OC3-slot#-1-sts#-vtg#-vt#- %HLINK-OC3-hslot#-hport#	Identify the VT1.5 path where slot# = 1, 2 sts# = 1 to 3 vtg# = 1 to 7 vt# = 1 to 4 hslot# = 3 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts#-vtg#-vt#	Identify the VT1.5 path where slot# = 3 to 12 port# = 1 sts# = 1 to 12 vtg# = 1 to 7 vt# = 1 to 4
	OC48-slot#-sts#-vtg#-vt#	Identify the VT1.5 path where slot# = 11, 12 sts# = 1 to 48 vtg# = 1 to 7 vt# = 1 to 4
	DS1-slot#-port#-t1#	Identify the VT1.5 path on DS3VTx12 equipment where slot# =3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28

Table 24-119
Response parameter descriptions

Parameter	Values	Description
<condtype>	INT	Internal hardware fault/failure
<condeff>	SC CL	Standing condition raised Standing condition cleared
<ocrdat>	mm-dd	Date when the event occurred
<ocrtm>	hh-mm-ss	Time when the event occurred
<locn>	NEND	Near end
<dirn>	NA	Not applicable

Example message
At 9 p.m. on October 17, 2001, the OC-3 in slot 3, STS-3 records an internal hardware fault/failure. This message will be returned:

```
<cr> <lf> <lf>
   OC3NE01 01-10-17 21:00:00 <cr> <lf>
A  123 REPT EVT VT1 <cr> <lf>
   "OC48-11-3-1-1:INT,SC,10-17,21:00:00,NEND,NA:\Auto VT1.5
Path Switch Complete"" <cr> <lf>
```

REPT^EX^LINK

Report exercise link is generated by the NPx to exercise connections (links) made to the NPx and to detect any half open connections. If the link is half open, the attempt to transmit this message will fail and result in the NPx closing the link and cleaning up the associated resources.

> ***Note:*** A TCP connection is half open when one end has closed or aborted the connection without the knowledge of the other end. This can happen at any time one of the two hosts crashes. As long as there is no attempt to transfer data across a half-open connection, the end that is still up will not detect that the other end has crashed.

The report exercise link message is only sent where there is no timeout set on the TL1 session (TIMEOUTA=N) or where no TL1 session has been activated (no ACT-USER has been completed).

The frequency of the REPT EX LINK is determined by the level of the user and whether there is an active TL1 session. The frequency is either every 30 seconds, or every 30 minutes.

Table 24-120
Use and frequency of the REPT EX LINK message

Account UPC level	**Level 5**		**Level 4, 3, 2, 1**		**Unknown (no ACT-USER)**
Session TIMEOUTA	Y default	N	Y default	N	n/a
Is REPT EX LINK sent?	N	Y	N	Y	Y
REPT EX LINK time interval	n/a	30 sec	n/a	30 min	30 min

Message format

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^EX^LINK <cr> <lf>
;
```

> ***Note:*** Since an atag of 0000000 is always used for this type of report, they are not logged into the automatic output (AO) buffer.

Table 24-121
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message. The atag for REPT EX LINK is 000.

Example message

At 2 a.m. on November 17, 2001, the following message was generated by EXPRESS45NP:

```
<cr> <lf> <lf>
   EXPRESS45NP 01-11-17 02:00:00 <cr> <lf>
A  000 REPT EX LINK <cr> <lf>
;
```

REPT^IMSG

Report Instant Message is generated by a network element to report the occurrence of a new text message.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^IMSG <cr> <lf>
^^^"<date>,<time>:UID=<uid>:\"<msg>\"" <cr> <lf>;
```

Note: Since an atag of 0000000 is always used for this type of report, they are not logged into the automatic output (AO) buffer.

Table 24-122
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<uid>	User identifier
<msg>	Message

Example message

At 1:17 p.m. on October 17, 2003, user identifier ADMIN sent the following message "I am restarting this NE. Please re-connect in 5 minutes". The following will be returned:

```
<cr> <lf> <lf>
   NPGX0504 03-10-17 13:17:00 <cr> <lf>
A  000000 REPT IMSG <cr> <lf>
   "03-10-17,13-17-00:UID=ADMIN:18:\"I am restarting this NE.
Please re-connect in 5 minutes.\"" <cr> <lf>;
```

REPT^SOC

The Report Span of Control is generated by the NPx to a level 5 user if there is a change in the span of control of the NPx, such as an NE is removed from or added to the span of control, or the connection status from an NPx to an NE in the span of control is changed.

Message format

All parameters in this message are either positional or name-defined.

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
A^^<atag>^REPT^SOC <cr> <lf>
^^^"<msgtype>:<netid>,<status>,<swversion>" <cr> <lf>
;
```

Note: Since an atag of 0000000 is always used for this type of report, they are not logged into the automatic output (AO) buffer.

Table 24-123
Syntax definition

Field	Purpose
<sid>	The network element source identifier
<date>	In the format yy-mm-dd
<time>	In the format hh:mm:ss
<atag>	Automatic tag, the numerical identification of the message
<msgtype> <netid> <status> <swversion>	See the following table for details.

Table 24-124
Response parameter descriptions

Parameter	Values	Description
<msgtype>	EAD ERM CSR	NE added NE removed Connection status report
<netid>		Target identifier

Table 24-124 (continued)
Response parameter descriptions

Parameter	Values	Description
<status>	UP DOWN XPID	Connection is up Connection is down Incorrect password
<swversion>		Software version
Note: For the Connection status report notification, the software version is provided only if the connection status changes from DOWN to UP, or from XPID to UP.		

Example message

At 9 p.m. on October 17, 2001, the connection status from NP OC3NP01 to network element OC3NE02 was changed from down to up. This message will be returned:

```
<cr> <lf> <lf>
   OC3NP01 01-10-17 21:00:00 <cr> <lf>
A  000000 REPT SOC <cr> <lf>
   "CSR:OC3NE02,UP,REL0902X.DU" <cr> <lf>
```

Software load installation detailed command descriptions

This chapter is an alphabetical summary of all the TL1 commands related to the installation of software on a shelf processor. 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.

CANC-INSTALL

The Cancel Install command backs out of the installation of software to a shelf processor. The command removes all load files and provisioning data from the release being installed on the shelf processor, and restores provisioning data and load files to the shelf processor from a specified node.

The CANC-INSTALL command can be run after the LOAD-INSTALL or INVK-INSTALL commands. When you run the command after the INVK-INSTALL command, a restart of the shelf processor occurs. After the restart, the status of the installation (retrieved using RTRV-INSTALL-STATE) changes to "CANCEL, PASSED". You must run the CANC-INSTALL command again to completely cancel the installation. The status of the installation then changes to "CANCEL". After the first CANC-INSTALL command, the system raises a "Load Mismatch' alarm to indicate that the software loads on the shelf processor and network element do not match. The alarm clears after the second CANC-INSTALL command.

Security level

Level 3

Input syntax

```
CANC-INSTALL:[TID]::CTAG::RNAME;
```

Table 25-1
Syntax definition

Field	Purpose
TID	Target identifier of the network element that contains the shelf processor
CTAG	Correlation tag
RNAME	Remote node name where target release files reside

Table 25-2
Parameter description

Parameter	Possible values	Description
RNAME	PC	Locally attached PC
	string of 1 to 40 alphanumeric characters	Target identifier of the local/remote network element, network processor, or operation controller that contains the load files and provisioning data to restore to the shelf processor

Example input

Cancel the installation of the software on network element OTTAWA:

```
CANC-INSTALL:OTTAWA::CTAG45::MONTREAL;
```

CHK-INSTALL

The Check Installation command verifies that the installation of a new software release to the shelf processor is possible and that a specified node can provide the necessary load.

For the check to be successful:

- The software loads on the shelf processor and on the network element that contains the shelf processor must be different
- The software loads on the specified node and on the network element that contains the shelf processor must be the same
- The software load on the network element that contains the shelf processor must not be indeterminate (the circuit packs on the network element must all have the same software release)

Security level

Level 3

Input syntax

```
CHK-INSTALL:[TID]::CTAG::RNAME;
```

Table 25-3
Syntax definition

Field	Purpose
TID	Target identifier of the network element that contains the shelf processor
CTAG	Correlation tag
RNAME	Target identifier of the node (local/remote network element, network processor, or operation controller) that contains the load files and provisioning data to install on the shelf processor

Table 25-4
Parameter description

Parameter	Possible values	Description
RNAME	PC	Locally attached PC
	string of 1 to 40 alphanumeric characters	Remote node name where target release files reside.

Example input

Check the installation of the new software on network element OTTAWA:

```
CHK-INSTALL:OTTAWA::CTAG45::MONTREAL;
```

CMMT-INSTALL

The Commit Installation command causes the new software load on the shelf processor to become permanent. The command removes any files and provisioning data from the previous load.

Security level

Level 3

Input syntax

```
CMMT-INSTALL:[TID]::CTAG;
```

Table 25-5
Syntax definition

Field	Purpose
TID	Target identifier of the network element that contains the shelf processor
CTAG	Correlation tag

Example input

Commit the installation of the software on network element OTTAWA:

```
CMMT-INSTALL:OTTAWA::CTAG45;
```

INVK-INSTALL

The Invoke Installation command initiates the installation of software to the shelf processor.

Security level

Level 3

Input syntax

```
INVK-INSTALL:[TID]::CTAG;
```

Table 25-6
Syntax definition

Field	Purpose
TID	Target identifier of the network element that contains the shelf processor
CTAG	Correlation tag

Example input

Initiate the installation of the software to the shelf processor on network element OTTAWA:

```
INVK-INSTALL:OTTAWA::CTAG45;
```

LOAD-INSTALL

The Load Installation command downloads the software load to install on the shelf processor from a specified node to the program store bank of the shelf processor. The system uses a different store bank from the one currently running.

Security level

Level 3

Input syntax

```
LOAD-INSTALL:[TID]::CTAG::RNAME;
```

Table 25-7
Syntax definition

Field	Purpose
TID	Target identifier of the network element that contains the shelf processor
CTAG	Correlation tag
RNAME	Target identifier of the node (local/remote network element, network processor, or operation controller) that contains the load files and provisioning data to install on the shelf processor

Table 25-8
Parameter description

Parameter	Possible values	Description
RNAME	PC	Locally attached PC
	string of 1 to 40 alphanumeric characters	Remote node name where target release files reside.

Example input

Download the software load from the network element MONTREAL to the shelf processor of network element OTTAWA:

```
LOAD-INSTALL:OTTAWA::CTAG45::MONTREAL;
```

RTRV-INSTALL-STATE

The Retrieve Installation State command is used to retrieve the state of the software installation.

Security level

Level 1

Input syntax

```
RTRV-INSTALL-STATE:[TID]::CTAG;
```

Table 25-9
Syntax definition

Field	Purpose
TID	Target identifier of the network element that contains the shelf processor
CTAG	Correlation tag

Example input

Retrieve the state of the software installation on network element OTTAWA:

```
RTRV-INSTALL-STATE:OTTAWA::CTAG45;
```

Response block syntax

```
<SID><DATE><TIME>
"STATE"
```

Table 25-10
Response parameter descriptions

Parameter	Possible values	Description
STATE	CHECK, PASS	The CHK-INSTALL command passed.
	CHECK, FAIL	The CHK-INSTALL command failed.
	CHECK, INPROGRESS	The CHK-INSTALL command is in progress.
	LOAD, PASS	The LOAD-INSTALL command passed.
	LOAD, FAIL	The LOAD-INSTALL command failed.
	LOAD, INPROGRESS	The LOAD-INSTALL command is in progress.
	FIRST INVOKE, PASS	The first INVK-INSTALL command passed.
	FIRST INVOKE, FAIL	The first INVK-INSTALL command failed.

Table 25-10 (continued)
Response parameter descriptions

Parameter	Possible values	Description
STATE	SECOND INVOKE, PASS	The second INVK-INSTALL command passed.
	SECOND INVOKE, FAIL	The second INVK-INSTALL command failed.
	INVOKE, INPROGRESS	The INVK-INSTALL command is in progress.
	COMMIT, PASS	The CMMT-INSTALL command passed.
	COMMIT, FAIL	The CMMT-INSTALL command failed.
	COMMIT, INPROGRESS	The CMMT-INSTALL command is in progress.
	CANCEL, INPROGRESS	The CANC-INSTALL command is in progress.
	CANCEL, PASS	The CANC-INSTALL command passed.
	CANCEL, FAIL	The CANC-INSTALL command failed.
	INACTIVE	The installation process is not active.

Error codes and messages

Whenever a TL1 command is incorrectly entered, addresses equipment, a logical device or a facility that does not exist, or is misspelled, the TL1 interface will return a DENY message, a four-letter error code and a text message explaining the error.

The error code and error text appear in the error response message as follows:

```
<cr> <lf> <lf>
^^^<sid>^<date>^<time> <cr> <lf>
M^^<ctag>^DENY <cr> <lf>
^^^<errcde> <cr> <lf>
^^^/*error text*/ <cr> <lf>
;
```

This chapter lists the error codes and error text messages for TL1 commands as displayed in the error response.

Table 26-1
TL1 response error codes

Error code	Error text	Applicable commands
ENEQ	Equipage, Not EQuipped	ENT-<FAC>
ENEX	Equipage, Not equipped with EXercise capability	exerciser
ENPS	Equipage, Not equipped with Protection Switching	protection switching
ENSI	Invalid VTX version ***Note:*** The user selected EXT and the appropriate VTX modules are not present, for example, VTX is used instead of VTX+ or VTXe, there is a mix of VTX modules , or no VTX modules are present.	SET-TMG-MODE
EQWT	EQuipage, Wrong Type	network element commands
IATA	Input, Ambiguous TID	all
IBEX	Input, Block EXtra	all
IBMS	Input, Block Missing	all
ICNV	Input, Command Not Valid	all
IDNV	Input, Data Not Valid	commands with parameters
IDRG	Input, Data, RanGe error	commands with parameters
IEAE	Input, Entity Already Exists	provisioning
IENE	Input, Entity Not Exists	provisioning
IIAC	Input, Invalid ACcess identifier	all
IICT	Input, Invalid Correlation Tag	all
IIPG	Input, Invalid Parameter Grouping	PM commands
IITA	Input, Invalid TArget identifier	all
INUP	Input, Non-null Unimplemented Parameter	all
INVS	Input, Not in Valid State	all
IPEX	Input, Parameter EXtra	all
IPMS	Input, Parameter MiSsing	commands with parameters
IPNV	Input, Parameter Not Valid	commands with parameters
ODNV	Output, Data Not Valid	all

Table 26-1 (continued)
TL1 response error codes

Error code	Error text	Applicable commands
PIUC	Privilege, Illegal User Code	admin and security commands
PIUI	Privilege, Illegal User Identity	admin and security commands
PLNA	Privilege, Login Not Active	all
PRTL	PaRTiaLly completed	DataComm
SAAL	Status, Already ALlowed	ALW commands
SAAS	Status, Already ASsigned	network element type commands
SABT	Status, ABorTed	all
SAIN	Status, Already INhibited	INH commands
SAIS	Status, Already In Service	provisioning
SAMS	Status, Already in Maintenance State	provisioning
SAOP	Status, Already OPerated	protection switching
SAPR	Status, Already in PRotection state	protection switching
SARB	Status, All Resources Busy	all
SARL	Status, Already ReLeased	protection switching
SDNC	Status, Data Not Consistent	provisioning
SDNR	Status, Data Not Ready	provisioning
SLEM	Status, List Exceeds Maximum	admin and security commands
SNSR	Status, No Switch Request outstanding	protection switching
SNVS	Status, Not in Valid State	ACT-USER and provisioning
SPFA	Status, Protection unit FAiled	protection switching
SPLD	Status, Protection unit LockeD	protection switching
SRCI	Status, Requested Command Inhibited	exerciser
SROF	Status, Requested Operation Failed	protection switching
SRPR	Status, switch Request PReempted	protection switching
SSRD	Status, Switch Request Denied	protection switching

Table 26-1 (continued)
TL1 response error codes

Error code	Error text	Applicable commands
SSRE	Status, System Resources Exceeded	all
SSTP	Status, SToPped	all
SWFA	Status, Working unit FAiled	protection switching
SWLD	Status, Working unit LockeD	protection switching

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