

Nortel Networks

# OPTera Metro 3500 Multiservice Platform

## TL1 Reference—Part 3 of 4

Standard Release 12.0 Issue 1 November 2003

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# About this document

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**ATTENTION**

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

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

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

Part 2 and 3 cover further TL1 detailed command descriptions.

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

## Supported software

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

## Supported hardware

This document supports the OPTera Metro 3500 shelf.

## Hardware naming conventions

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

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

## **Audience**

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

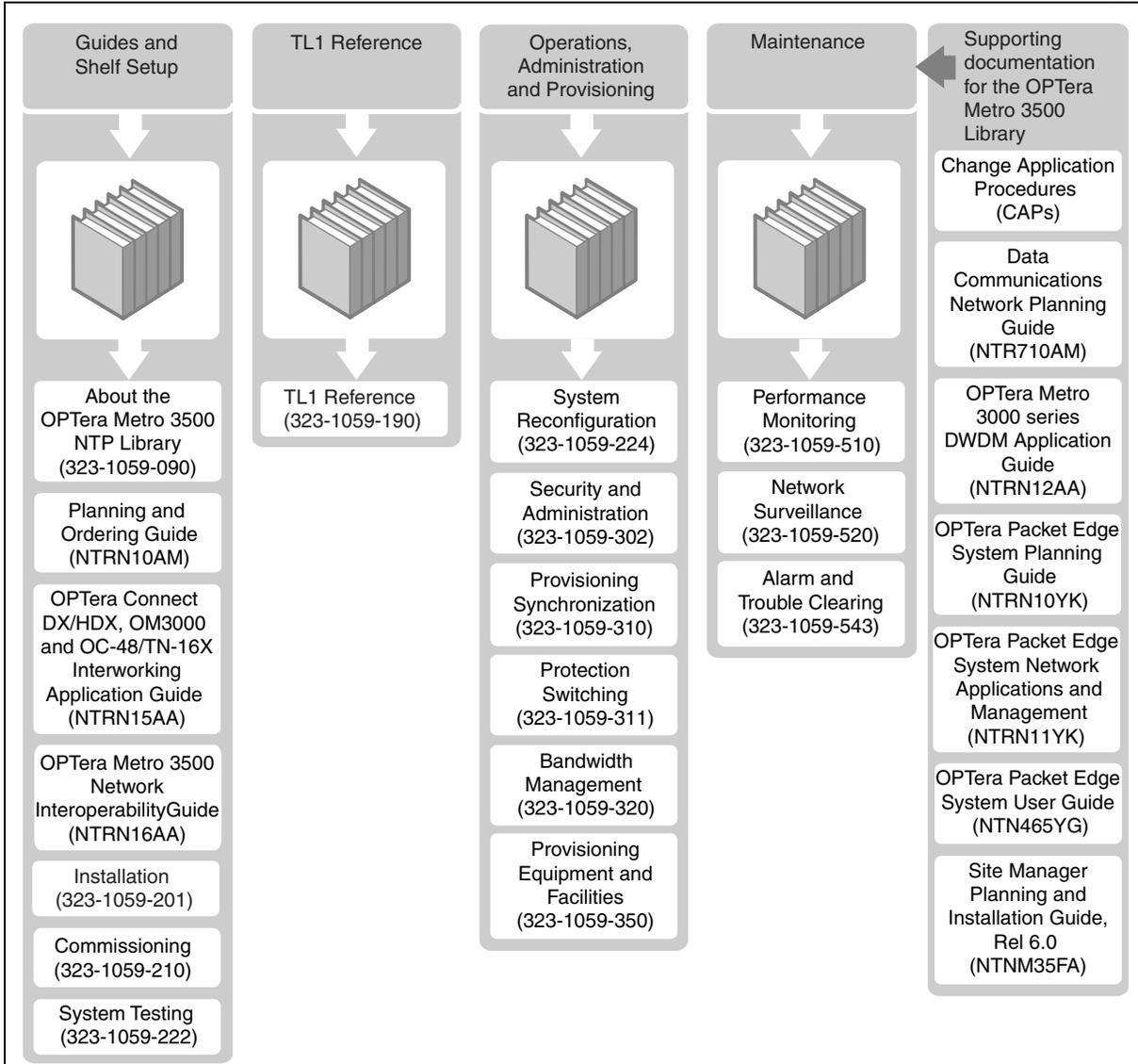
- planners
- provisioners
- network administrators
- transmission standards engineers

## **Standards**

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

# OPTera Metro 3500 NTP library

EX1478p.eps



## Technical support and information

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

<b>Technical Assistance Service</b>	
<p><b>For service-affecting problems:</b> For 24-hour emergency recovery or software upgrade support, that is, for:</p> <ul style="list-style-type: none"> <li>• restoration of service for equipment that has been carrying traffic and is out of service</li> <li>• issues that prevent traffic protection switching</li> <li>• issues that prevent completion of software upgrades</li> </ul>	<p><b>North America:</b> 1-800-4NORTEL (1-800-466-7835)</p> <p><b>International:</b> 001-919-992-8300</p>
<p><b>For non-service-affecting problems:</b> For 24-hour support on issues requiring immediate support or for 14-hour support (8 a.m. to 10 p.m. EST) on non-urgent issues.</p>	<p><b>North America:</b> 1-800-4NORTEL (1-800-466-7835)</p> <p><b>Note:</b> You require an express routing code (ERC). To determine the ERC, see our corporate Web site at <a href="http://www.nortelnetworks.com">www.nortelnetworks.com</a>. Click on the Express Routing Codes link.</p> <p><b>International:</b> Varies according to country. For a list of telephone numbers, see our corporate Web site at <a href="http://www.nortelnetworks.com">www.nortelnetworks.com</a>. Click on the Contact Us link.</p>
<p><b>Global software upgrade support:</b> For non-service affecting software upgrade issues</p>	<p><b>North America:</b> 1-800-4NORTEL (1-800-466-7835)</p> <p><b>International:</b> Varies according to country. For a list of telephone numbers, see our corporate Web site at <a href="http://www.nortelnetworks.com">www.nortelnetworks.com</a>. Click on the Contact Us link.</p>

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## Performance monitoring detailed command descriptions

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

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## ED-PMCONFIG-EC1

The Edit Performance Monitoring Configuration EC-1 command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for the EC-1 facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-EC1 : [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-1**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Used to reset the baseline value for receive physical PM thresholding

**Table 12-2**  
**AID descriptions**

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

**Table 12-3**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For EC-1 facilities (all applicable directions and locations) on network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-EC1:BOSTON:ALL:CTAG12::, , 15-MIN:THMODE=ALARM, ;
```

## ED-PMCONFIG-ETH

The Edit Performance Monitoring Configuration Ethernet command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for an Ethernet facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-ETH: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-4**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Used to reset the baseline value for receive physical PM thresholding

**Table 12-5**  
**AID descriptions**

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

**Table 12-6**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For Ethernet facility 1 in slot 10 of network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-ETH:BOSTON:ETH-10-1:CTAG12::,15-MIN:
THMODE=ALARM,;
```

## ED-PMCONFIG-FC

The Edit Performance Monitoring Configuration Fibre Channel command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for a Fibre Channel facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-FC: [TID] :AID:CTAG: : [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-7**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Used to reset the baseline value for receive physical PM thresholding

**Table 12-8**  
**AID descriptions**

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

**Table 12-9**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For Fibre Channel facility 1 in slot 10 of network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-FC:BOSTON:ETH-10-1:CTAG12::, , 15-MIN:
THMODE=ALARM, ;
```

## ED-PMCONFIG-OC3

The Edit Performance Monitoring Configuration OC-3 command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for the OC-3 facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-OC3 : [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-10**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-11**  
**AID descriptions**

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

**Table 12-12**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For OC-3 facilities (all applicable directions and locations) on network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-OC3 : BOSTON : ALL : CTAG12 : , , 15-MIN : THMODE=ALARM, ;
```

## ED-PMCONFIG-OC12

The Edit Performance Monitoring Configuration OC-12 command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for the OC-12 facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-OC12 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-13**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-14**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC12	OC12-slot#-port# OC12-slot#-ALL OC12-ALL ALL	Identify the OC-12 facilities 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 12-15**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For OC-12 facilities (all applicable directions and locations) on network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-OC12:BOSTON:ALL:CTAG12::,15-MIN:
THMODE=ALARM,;
```

## ED-PMCONFIG-OC48

The Edit Performance Monitoring Configuration OC-48 command instructs the network element to set the PM threshold crossing report type and/or to reset the optical power received (OPR) physical PM threshold baseline value for the OC-48 ER facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-OC48 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , , [RXPHYBASE=DOMAIN] ;
```

**Table 12-16**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-17**  
**AID descriptions**

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

**Table 12-18**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For OC-48 facilities on network element BOSTON, reset physical PM, optical power received (OPR) to the current value.

```
ED-PMCONFIG-OC48:BOSTON:ALL:CTAG12::, , 1-UNT, , RXPHYBASE=RESET;
```

## ED-PMCONFIG-OC192

The Edit Performance Monitoring Configuration OC-192 command instructs the network element to set the PM threshold crossing report type and/or to reset the optical power received (OPR) physical PM threshold baseline value for the OC-192 facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-OC192 [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-19**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-20**  
**AID descriptions**

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

**Table 12-21**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping is allowed	Default 15-min bins (for OPR Normal only) 15-Minute bins (for OPR Normal only) 1-Day bins (for OPR Normal only) Untimed bins (for OPR only) All intervals
THMODE	TCA ALARM NONE Grouping is allowed	Default TCAs only Summary alarms only Disable both TCAs and summary alarms
RXPHYBASE	RESET NULL	Reset the Receive Physical Baseline value

**Example input**

For OC-192 facilities on network element BOSTON, reset physical PM, optical power received (OPR) to the current value.

```
ED-PMCONFIG-OC192:BOSTON:ALL:CTAG12::, , 1-UNT, , RXPHYBASE=RESET;
```

## ED-PMCONFIG-STS1

The Edit Performance Monitoring Configuration STS-1 command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for the STS-1 facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-STS1 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-22**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-23**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS1 AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-1 facilities on the OC-3 or OC-3x4 interfaces where slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 sts# = 1 to 3
	OC3-slot#-sts#-%HLINK- OC3-hslot#-hport#	Identify the STS-1 facilities on the DSM interfaces where slot# = 1 or 2 sts# = 1 to 3 hslot# = 1 to 10 hport# = 1 to 4
	OC3-slot#-ALL-%HLINK- OC3-hslot#-hport#	Identify all STS-1 facilities on the DSM interfaces where slot# = 1 or 2 hslot# = 1 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-1 facilities on OC-12 or OC-12x4 STS interfaces where slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# =1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-1 facilities on OC-48 or OC-48 STS interfaces where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-1 facilities on OC-192 interfaces where slot# = 11 or 12 port= 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the STS-1 facilities on the EC-1x3 or EC-1x12 interfaces where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	ALL	All applicable STS-1 path facilities

**Table 12-24**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For the STS-1 #2 facility (all applicable directions and locations) for the OC-3 circuit pack in slot 9 on network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-STS1:BOSTON:OC3-9-1-2:CTAG12::, , 15-MIN:
THMODE=ALARM, ;
```

## ED-PMCONFIG-STS3C

The Edit Performance Monitoring Configuration STS-3c command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for the STS-3c facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-STS3C: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :  
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-25**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-26**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-3c AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility slot# = 3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC-12-ALL	Identify the STS-3c facility slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, 10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-3c facility slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 4, 7, ..., 46
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11 or 12 sts# = 1, 4, 7, ..., 190
	ALL	All applicable STS-3c path facilities

**Table 12-27**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-27 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For the STS-3c #1 facility (all applicable directions and locations) for the OC-3 circuit pack in slot 9 on network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-STS3C:BOSTON:OC3-9-1-1:CTAG12::, , 15-MIN:
THMODE=ALARM, ;
```

## ED-PMCONFIG-STS12C

The Edit Performance Monitoring Configuration STS-12c command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for the STS-12c facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-STS12C: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-28**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-29**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-12c	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-12c facilities, 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
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-12c facilities, where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 13, ..., 181
	ALL	All applicable STS-12c path facilities

**Table 12-30**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-30 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For the STS-12c #1 facility (all applicable directions and locations) for the OC-12 circuit pack in slot 9 on network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-STS12C:BOSTON:OC12-9-1:CTAG12::,15-MIN:
THMODE=ALARM,;
```

## ED-PMCONFIG-STS24C

The Edit Performance Monitoring Configuration STS-24c command instructs the network element to set the PM threshold crossing report type and/or to reset the optical power received (OPR) physical PM threshold baseline value for the STS24c facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-STS24C: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :  
[THMODE=Domain] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-31**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-32**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-24c	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-24c facility where slot# = 11 or 12 sts# =1, 25, 49, ..., 169 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-24c facility where slot# = 3 to 12, sts# =1, 25 All slots with OC-48 STS cards

**Table 12-33**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-min 1-day 1null 15-MIN 1-DAY -UNT All Grouping is allowed	Default 15-min bins (for OPR Normal only) 15-Minute bins (for OPR Normal only) 1-Day bins (for OPR Normal only) Untimed bins (for OPR only) All intervals Default: equivalent to 15-MIN 15-minute interval 1-day interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default TCAs only Summary alarms only Disable both TCAs and summary alarms
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For STS24c facilities on network element BOSTON, reset physical PM, optical power received (OPR) to the current value.

ED-PMCONFIG-STS24C:BOSTON:ALL:CTAG12: , , 1-UNT,

## ED-PMCONFIG-STS48C

The Edit Performance Monitoring Configuration STS48c command instructs the network element to set the PM threshold crossing report type and/or to reset the optical power received (OPR) physical PM threshold baseline value for the STS48c facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-STS48C [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :  
[THMODE=Domain] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-34**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Reset the baseline value for receive physical PM thresholding

**Table 12-35**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-48c	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-48c facility where slot# = 11 or 12 sts# =1, 49, 97, 145 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-48c facility where slot# = 3 to 12, sts# =1 All slots with OC-48 STS cards

**Table 12-36**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-min 1-day 1null 15-MIN 1-DAY -UNT All Grouping is allowed	Default 15-min bins (for OPR Normal only) 15-Minute bins (for OPR Normal only) 1-Day bins (for OPR Normal only) Untimed bins (for OPR only) All intervals Default: equivalent to 15-MIN 15-minute interval 1-day interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default TCAs only Summary alarms only Disable both TCAs and summary alarms
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For STS48c facilities on network element BOSTON, reset physical PM, optical power received (OPR) to the current value.

ED-PMCONFIG-STS48c:BOSTON:ALL:CTAG12::, , 1-UNT,

## ED-PMCONFIG-WAN

The Edit Performance Monitoring Configuration WAN command instructs the network element to set the PM threshold crossing report type and/or to reset the receive physical PM thresholding baseline value for a WAN facility.

You can set the report type to one of the following options:

- threshold crossing alert (TCA)
- TCA summary alarm
- both TCA and TCA summary alarm
- no reporting

To set the report type to both TCA and TCA summary alarm, use the ampersand (&) as a separator for grouping values in the THMODE parameter.

### Security level

Level 3

### Input syntax

```
ED-PMCONFIG-WAN: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] :
[THMODE=DOMAIN] , [RXPHYBASE=DOMAIN] ;
```

**Table 12-37**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
THMODE	The PM threshold crossing report type of the entity identified by the AID
RXPHYBASE	Used to reset the baseline value for receive physical PM thresholding

**Table 12-38**  
**AID descriptions**

AID type	Command-specific values	Purpose
WAN	WAN-slot#-port# WAN-slot#-ALL WAN-ALL	Identify the WAN facilities, where slot# = 3 to 10 port# = 1 or 2

**Table 12-39**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
THMODE	TCA ALARM NONE Grouping allowed	Default: TCA reporting TCA summary alarm reporting No reporting
RXPHYBASE	RESET NULL	The baseline takes the current receive physical value from the hardware

**Example input**

For WAN facility 1 in slot 10 of network element BOSTON, set TCA summary alarm reporting for 15-minute threshold crossings.

```
ED-PMCONFIG-WAN:BOSTON:WAN-10-1:CTAG12::,15-MIN:
THMODE=ALARM,;
```

## INIT-OM-ETH

Use the Initialize Operational Measurements Ethernet command to clear Ethernet operational measurements for an Ethernet facility of a 2x100BT-P2P or a 2xGigE/FC-P2P circuit pack.

### Security level

Level 2

### Input syntax

INIT-OM-ETH: [TID] :AID:CTAG;

**Table 12-40**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to clear.

**Table 12-41**  
**AID descriptions**

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

### Example input

Clear Ethernet operational measurements for the Ethernet facility in port 1 of the 2x100BT-P2P circuit pack in slot 7 of network element OTTAWA:

INIT-OM-ETH:OTTAWA:ETH-7-1:CTAG01;

## INIT-OM-IF

Use the Initialize Operational Measurements Interface command to clear

- Interface operational measurements for an Ethernet or WAN facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack
- Interface operational measurements for a Fibre Channel facility on a 2xGigE/FC-P2P circuit pack

### Security level

Level 2

### Input syntax

```
INIT-OM-IF: [TID] :AID:CTAG;
```

**Table 12-42**

#### Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to clear.

**Table 12-43**

#### AID descriptions

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

#### Example input

Clear interface operational measurements for WAN facility 2 of the 2x100BT-P2P circuit pack in slot 9 of network element OTTAWA:

```
INIT-OM-IF: OTTAWA: WAN-9-2: CTAG01;
```

## INIT-REG-ALL

The Initialize Registers All command instructs a network element to clear the performance monitoring data registers for all facilities.

To initialize registers for individual facilities use the INIT-REG-<FACTYPE> commands.

The AID for this command is always ALL.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the PM registers for all facilities and parameters for the current 15-minute accumulation period will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-ALL: [TID] :AID:CTAG:: [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-44**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-45**  
**AID descriptions**

AID type	Command-specific values	Purpose
ALL	ALL	All facilities: EC-1, ETH, FC, OC-3, OC-12, OC-48, OC-192, STS-1, STS-3c, STS-12c, STS-24c, STS-48c, WAN, DS1, DS3

**Table 12-46**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ALL	Default: equivalent to ALL All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations

**Table 12-46 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT and MONTM are used, INDEX cannot be used.
<p><b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Example input**

Initialize all 15-minute and 1-day registers on the network element, specifying MONDAT and MONTM:

```
INIT-REG-ALL:NEWYORK:ALL:CTAG23: , , , , 15-MIN&1-DAY, ALL, ALL;
```

Initialize all registers on the network element, specifying all intervals:

```
INIT-REG-ALL:SEATTLE:ALL:CTAG23: , , , , ALL, , , ALL;
```

## INIT-REG-EC1

The Initialize Register EC-1 command instructs a network element to initialize performance monitoring data for an EC-1 facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-EC1 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-47**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-48**  
**AID descriptions**

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

**Table 12-49**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL ALL Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-49 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive line coding violations for EC-1 slot 3 port 6, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-EC1:SEATTLE:EC1-3-6:CTAG12::CVL,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for EC-1 slot 3 port 6, for all intervals, specifying all intervals:

```
INIT-REG-EC1:NEWYORK:EC1-3-6:CTAG12::,,,,ALL,,,ALL;
```

Initialize all current 15-minute registers for all EC-1 facilities:

```
INIT-REG-EC1:WASHINGTON:ALL:CTAG12;
```

## INIT-REG-ETH

The Initialize Register Ethernet command instructs a network element to initialize performance monitoring data for an Ethernet facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-ETH: [TID] :AID:CTAG:: [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-50**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-51**  
**AID descriptions**

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

**Table 12-52**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS INFRAMES INFRAMESERR INFRAMESDISC ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored In Frames Discarded All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-52 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive errored seconds for the Ethernet facility in slot 3 port 6, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-ETH:SEATTLE:ETH-3-6:CTAG12::ES,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for the Ethernet facility in slot 3 port 6, for all intervals, specifying all intervals:

```
INIT-REG-ETH:NEWYORK:ETH-3-6:CTAG12::,,,,ALL,,,ALL;
```

Initialize all current 15-minute registers for all Ethernet facilities:

```
INIT-REG-ETH:WASHINGTON:ALL:CTAG12;
```

## INIT-REG-FC

The Initialize Register Fibre Channel command instructs a network element to initialize performance monitoring data for a Fibre Channel facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-FC: [TID] :AID:CTAG:: [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-53**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-54**  
**AID descriptions**

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

**Table 12-55**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds All applicable MONTYPEs
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-55 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive errored seconds for the Fibre Channel facility in slot 3 port 6, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-FC:SEATTLE:FC-3-6:CTAG12::ES,,NEND,RCV,ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for the Fibre Channel facility in slot 3 port 6, for all intervals, specifying all intervals:

```
INIT-REG-FC:NEWYORK:FC-3-6:CTAG12::,,,,ALL,,,ALL;
```

Initialize all current 15-minute registers for all Fibre Channel facilities:

```
INIT-REG-FC:WASHINGTON:ALL:CTAG12;
```

## INIT-REG-OC3

The Initialize Register OC-3 command instructs a network element to initialize performance monitoring data for an OC-3 facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-OC3 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-56**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-57**  
**AID descriptions**

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

**Table 12-58**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD ALL Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-58 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive line coding violations for OC-3x4 slot 10 port 2, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-OC3:SEATTLE:OC3-10-2:CTAG12::CVL,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for OC-3x4 slot 10 port 2, for all intervals, specifying all intervals:

```
INIT-REG-OC3:NEWYORK:OC3-10-2:CTAG12::,,,,ALL,,,ALL;
```

Initialize all current 15-minute registers for all OC-3 facilities:

```
INIT-REG-OC3:WASHINGTON:ALL:CTAG12;
```

## INIT-REG-OC12

The Initialize Register OC-12 command instructs a network element to initialize performance monitoring data for an OC-12 facility.

Performance Monitoring (PM) data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-OC12 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-59**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-60**  
**AID parameters**

AID type	Command-specific values	Purpose
OC12 AID type	OC12-slot#-port# OC12-slot#-ALL OC12-ALL ALL	Identify the OC-12 facilities where slot# = 3 to12 for OC-12 slot# = 3 to10 for OC-12x4 STS port# =1 for OC-12 port# =1 to 4 for OC-12x4 STS

**Table 12-61**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD ALL Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-61 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive line coding violations for OC-12 slot 10, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-OC12:SEATTLE:OC12-10:CTAG12::CVL,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for OC-12 slot 10, for all intervals, specifying all intervals:

```
INIT-REG-OC12:NEWYORK:OC12-10:CTAG12::,,,,ALL,,,ALL;
```

Initialize all current 15-minute registers for all OC-12 facilities:

```
INIT-REG-OC12:WASHINGTON:ALL:CTAG12;
```

## INIT-REG-OC48

The Initialize Register OC-48 command instructs a network element to initialize performance monitoring data for an OC-48 facility.

Performance Monitoring (PM) data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-OC48 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-62**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of beginning the requested PM period
MONTM	The time of beginning the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-63**  
**AID descriptions**

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

**Table 12-64**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD OPR ALL Grouping allowed	Default: equivalent to ALL 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 Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration Optical Power Receive All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-64 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive line coding violations for OC-48 slot 11, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-OC48:SEATTLE:OC48-11:CTAG12::CVL,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for OC-48 slot 11, for all intervals, specifying all intervals:

```
INIT-REG-OC48:NEWYORK:OC48-11:CTAG12::,,,,ALL,,,ALL;
```

## INIT-REG-OC192

The Initialize Register OC-192 command instructs a network element to initialize performance monitoring data for an OC-192 facility.

Performance Monitoring (PM) data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-OC192 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-65**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of beginning the requested PM period
MONTM	The time of beginning the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-66**  
**AID descriptions**

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

**Table 12-67**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD OPR ALL Grouping allowed	Default: equivalent to ALL 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 Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration Optical Power Receive Optical Power Receive, normalized All monitored type
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-67 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive line coding violations for OC-192 slot 11, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-OC192:SEATTLE:OC192-11:CTAG12::CVL,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for OC-192 slot 11, for all intervals, specifying all intervals:

```
INIT-REG-OC192:NEWYORK:OC192-11:CTAG12::,,,,ALL,,,,ALL;
```

## INIT-REG-STS1

The Initialize Register STS-1 command instructs a network element to initialize performance monitoring data for the STS-1 facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-STS1 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-68**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-69**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations

**Table 12-69 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<p><b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Table 12-70**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS1 AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-1 facilities on the OC-3 or OC-3x4 interfaces where slot# = 3 to 10 port# = 1 for OC-3, 1 to 4 for OC-3x4 sts# = 1 to 3
	OC3-slot#-sts#-%HLINK- OC3-hslot#-hport#	Identify the STS-1 facilities on the DSM interfaces where slot# = 1 or 2, sts# = 1 to 3 hslot# = 1 to 10, hport# = 1 to 4
	OC3-slot#-ALL-%HLINK- OC3-hslot#-hport#	Identify all STS-1 facilities on the DSM interfaces where slot# = 1 or 2, hslot# = 1 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-1 facilities on the OC-12 or OC-12x4 STS interfaces slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-1 facilities on the OC-48 interfaces slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-1 facilities on the OC-192 interfaces slot# = 11 or 12, sts# = 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the STS-1 facilities on the EC-1x3 or EC-1x12 interfaces where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	ALL	All applicable STS-1 path facilities

**Example input**

Initialize the PM data at NEWYORK on OC-3x4 in slot 3 port 1 sts 2, for path errored seconds (ESP) for the current 15-minute bin:

```
INIT-REG-STST1:NEWYORK:OC3-3-1-2:CTAG12::ESP;
```

Initialize the PM data at SEATTLE on all facilities for path failure count (FCP), at the near-end receive direction only for the current 1-day bin:

```
INIT-REG-STST1:SEATTLE:ALL:CTAG12::FCP,,NEND,RCV,1-DAY;
```

## INIT-REG-STS3C

The Initialize Register STS-3c command instructs a network element to initialize performance monitoring data for the STS-3c facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-STS3C: [TID] :AID:CTAG: : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-71**  
**Syntax definition**

<b>Field</b>	<b>Purpose</b>
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-72**  
**AID Description**

AID type	Command-specific values	Purpose
STS-3c AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility slot# = 3 to 10 port# = 1 to 4 sts# =1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC-12-ALL	Identify the STS-3c facility slot# = 3 to12 for OC-12 slot# = 3 to10 for OC-12x4 STS port# =1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, 10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-3c facility slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 4, 7, ..., 46
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-3c facility slot# =11 to 12 sts# = 1, 4, 7, ..., 190
	ALL	All applicable STS-3c path facilities

**Example input**

Initialize the PM data at NEWYORK on OC-3x4 in slot 3 port 2 sts 1, for path errored seconds (ESP) for the current 15-minute bin:

```
INIT-REG-STS3C:NEWYORK:OC3-3-2-1:CTAG12::ESP;
```

Initialize the PM data at WASHINGTON on all OC-3x4 slots for STS-3c path severely errored seconds (SESP), specifying MONDAT and MONTM for 15-minute bins:

```
INIT-REG-STS3C:WASHINGTON:OC3-ALL:CTAG12:SESP,,,,,12-25,09-00;
```

Initialize the PM data at SEATTLE on all facilities for STS-3c path failure count (FCP), at the near-end receive direction only for the current 1-day bin:

```
INIT-REG-STS3C:SEATTLE:ALL:CTAG12::FCP,,NEND,RCV,1-DAY;
```

## INIT-REG-ST512C

The Initialize Register STS-12c command instructs a network element to initialize performance monitoring data for the STS-12c facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-ST512C: [TID] :AID:CTAG: : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-73**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-12c path facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-74**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-12c	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-12c facilities, where slot# = 3 to12 for OC-12 slot# = 3 to10 for OC-12x4 STS port# =1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-12c facilities, where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-12c facilities, where slot# = 11 or 12 sts# = 1, 13, ..., 181
	ALL	All applicable STS-12c path facilities

**Table 12-75**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-75 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data at NEWYORK on OC-12 in slot 3 sts 1, for path errored seconds (ESP) for the current 15-minute bin:

```
INIT-REG-ST3C:NEWYORK:OC12-3-1:CTAG12::ESP;
```

Initialize the PM data at WASHINGTON on all OC-12 slots for STS-12c path severely errored seconds (SESP), specifying MONDAT and MONTM for 15-minute bins:

```
INIT-REG-ST3C:WASHINGTON:OC12-ALL:CTAG12:SESP,,,,,12-25,09-00;
```

Initialize the PM data at SEATTLE on all OC-12 and OC-48 facilities for STS-12c path failure count (FCP), at the near-end receive direction only for the current 1-day bin:

```
INIT-REG-ST12C:SEATTLE:ALL:CTAG12::FCP,,NEND,RCV,1-DAY;
```

## INIT-REG-STS24C

The Initialize Register STS-24c command instructs a network element to initialize performance monitoring data for the STS-24c facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-STS24C: [TID] :AID:CTAG: : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-76**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-24c path facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-77**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-24c AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-24c facility where slot# = 11, 12 sts# = 1, 25 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-24c facility where slot# = 3 to 12 sts# = 1, 25 All slots with OC-48 STS cards
	ALL	All applicable STS-24c facilities

**Table 12-78**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPEs
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-78 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data at NEWYORK on OC-48 in slot 3 sts 1, for path errored seconds (ESP) for the current 15-minute bin:

```
INIT-REG-STS24C:NEWYORK:OC48-3-1:CTAG12::ESP;
```

Initialize the PM data at WASHINGTON on all OC-48 slots for STS-24c path severely errored seconds (SESP), specifying MONDAT and MONTM for 15-minute bins:

```
INIT-REG-STS24C:WASHINGTON:OC48-ALL:CTAG12:SESP,,,,,12-25,09-00;
```

Initialize the PM data at SEATTLE on all OC-48 facilities for STS-24c path failure count (FCP), at the near-end receive direction only for the current 1-day bin:

```
INIT-REG-STS24C:SEATTLE:ALL:CTAG12::FCP,,NEND,RCV,1-DAY;
```

## INIT-REG-STS48C

The Initialize Register STS-48c command instructs a network element to initialize performance monitoring data for the STS-48c facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-STS48C: [TID] :AID:CTAG: : [MONTYPE] , [MONVAL] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-79**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-48c path facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-80**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-48c AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-48c facility where slot# = 11, 12 sts# =1, 49, 97, 145 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-48c facility where slot# = 3 to 12 sts# =1 All slots with OC-48 STS cards
	ALL	All applicable STS-48c facilities

**Table 12-81**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP Seconds - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPEs
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-81 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data at NEWYORK on OC-48 in slot 3 sts 1, for path errored seconds (ESP) for the current 15-minute bin:

```
INIT-REG-STS48C:NEWYORK:OC48-3-1:CTAG12::ESP;
```

Initialize the PM data at WASHINGTON on all OC-48 slots for STS-48c path severely errored seconds (SESP), specifying MONDAT and MONTM for 15-minute bins:

```
INIT-REG-STS48C:WASHINGTON:OC48-ALL:CTAG12:SESP,,,,,12-25,09-00;
```

Initialize the PM data at SEATTLE on all OC-48 facilities for STS-48c path failure count (FCP), at the near-end receive direction only for the current 1-day bin:

```
INIT-REG-STS48C:SEATTLE:ALL:CTAG12::FCP,,NEND,RCV,1-DAY;
```

## INIT-REG-T1

The Initialize Registers T1 command instructs a network element to initialize performance monitoring data for the DS1 facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-T1 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-82**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-83**  
**AID descriptions**

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

**Table 12-84**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVL ESL SESL CVP ESP SESP SEFSP SASP CSSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Line Errored Seconds - Line Severely Errored Seconds- Line Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path Severely Errored Frame Seconds - Path SEF / AIS Seconds - Path Controlled slip seconds - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPEs
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-84 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<p><b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Example input**

Initialize the PM data for near-end receive line coding violations for DS1 slot 4 port 7, for all intervals, specifying ALL MONDAT and ALL MONTM (that is, all current and historical bins):

```
INIT-REG-T1:NEWYORK:DS1-4-7:CTAG12::CVL,,NEND,RCV,ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for DS1 slot 4 port 7, for all intervals, specifying all time periods:

```
INIT-REG-T1:SEATTLE:DS1-4-7:CTAG12::,,,,,15-MIN&1-DAY&1-UNT,,,,ALL;
```

Initialize all current 15-minute registers for all DS1 facilities:

```
INIT-REG-T1:WASHINGTON:ALL:CTAG12;
```

## INIT-REG-T3

The Initialize Registers T3 command instructs a network element to initialize performance monitoring data for the DS3 facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-T3 : [TID] : AID : CTAG : : [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-85**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-86**  
**AID descriptions**

AID type	Command-specific values	Purpose
T3 AID	DS3-slot#-port# DS3-slot#-ALL DS3-ALL	Identify the DS3 facility slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12
	ALL	All DS3 facilities

**Table 12-87**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVL ESL SESL CVP ESP SESP SASP UASP FCP ALL Grouping allowed	Default: equivalent to ALL 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 Failure Count - Path All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-87 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data at NEWYORK on DS3 in slot 3 port 2 for path coding violations (CVP) for the current 15-minute bin:

```
INIT-REG-T3:NEWYORK:DS3-3-2:CTAG12::CVP;
```

Initialize the PM data at WASHINGTON on all DS3 slots for path unavailable seconds (UASP), specifying MONDAT and MONTM:

```
INIT-REG-T3:WASHINGTON:DS3-ALL:CTAG12::UASP,,,,,12-25,09-00;
```

Initialize the PM data at SEATTLE on all DS3 facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
INIT-REG-T3:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

## INIT-REG-WAN

The Initialize Register WAN command instructs a network element to initialize performance monitoring data for a WAN facility.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

If all optional parameters are left blank, all of the current 15-min PM registers for all parameters for the corresponding facility will be cleared at once.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 2

### Input syntax

```
INIT-REG-WAN: [TID] :AID:CTAG:: [MONTYPE] , [MONVAL] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-88**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONVAL	The value the registers should be initialized to
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be accessed

**Table 12-89**  
**AID descriptions**

AID type	Command-specific values	Purpose
WAN	WAN-slot#-port# WAN-slot#-ALL WAN-ALL	Identify WAN facilities, where slot# = 3 to 10 port# = 1 or 2

**Table 12-90**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS INFRAMES INFRAMESERR ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored All applicable MONTYPES
MONVAL	null 0	Default: equivalent to 0 Reset registers to zero
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.

**Table 12-90 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Initialize the PM data for near-end receive errored seconds for the WAN facility in slot 3 port 6, for all intervals, all MONDAT and MONTM (that is, all current and historical information):

```
INIT-REG-WAN:SEATTLE:WAN-3-6:CTAG12::ES,,NEND,RCV,
ALL,ALL,ALL;
```

Initialize the PM data for all monitored parameters for the WAN facility in slot 3 port 6, for all intervals, specifying all intervals:

```
INIT-REG-WAN:NEWYORK:WAN-3-6:CTAG12::,,,,ALL,,,ALL;
```

Initialize all current 15-minute registers for all WAN facilities:

```
INIT-REG-WAN:WASHINGTON:ALL:CTAG12;
```

## RTRV-OM-ETH

Use the Retrieve Operational Measurements Ethernet command to retrieve Ethernet operational measurements for an Ethernet facility of a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack.

### Security level

Level 1

### Input syntax

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

**Table 12-91**

#### Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The Ethernet facility measurements to retrieve.

**Table 12-92**

#### AID descriptions

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

#### Example input

Retrieve Ethernet operational measurements for the Ethernet facility in port 1 of the 2x100BT-P2P circuit pack in slot 7 of network element OTTAWA:

```
RTRV-OM-ETH:OTTAWA:ETH-7-1:CTAG01;
```

### Response block syntax

```
<SID><DATE><TIME>
<AID>:: [ALIGNERR=Domain] [, FCSERR=Domain]
[, SINGLECOLLFR=Domain] [, MULTICOLLFR=Domain]
[, EXCESSCOLL=Domain] [, INTERNALMACRXERR] [, FRTOOLONGS=Domain]
[, FRTOOSHORTS=Domain] [, SYMBOLERR] [, INPAUSEFR=Domain]
[, OUTPAUSEFR=Domain]
```

**Table 12-93**  
**Response parameter descriptions**

Parameter	Possible values	Description
SID	Any valid source identifier.	Source identifier of the network element.
DATE	YY-MM-DD	Date of retrieval. YY is the last two digits of the year (from 00 to 99), MM is the month of the year (from 01 to 12), DD is the day of the month (from 01 to 31).
TIME	HH-MM-SS	Time of retrieval. HH is the hour (from 00 to 23), MM is the minute (from 00 to 59), SS is the second (from 00 to 59).
AID	ETH-slot#-port#	The LAN port where slot# = 3 to 10 port# = 1 or 2
ALIGNERR	0 to $(2^{64} - 1)$	The number of frames received at the port that were not an integer number of octets in length or failed the frame check sequence.  <b>Note:</b> This measurement does not apply to the 2xGigE/FC-P2P circuit pack.
FCSERR	0 to $(2^{64} - 1)$	The number of frames received at the port that were an integer number of octets in length but failed the frame check sequence.  <b>Note 1:</b> The FCS errors count includes the Frames too long count. To determine only the number of FCS errors received at the port, subtract the Frames too long count from the FCS errors count.  <b>Note 2:</b> Packets which contain CRC errors and are less than 64 bytes are measured as fragments and are not included in the FCS errors count.
SINGLECOLLFR	0 to $(2^{64} - 1)$	The number of times that frames were transmitted after one collision.  <b>Note:</b> This measurement does not apply to the 2xGigE/FC-P2P circuit pack.

**Table 12-93 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
MULTICOLLFR	0 to $(2^{64} - 1)$	The number of times that frames were transmitted after multiple collisions (2 to 15 collisions of the frame). <b>Note:</b> This measurement does not apply to the 2xGigE/FC-P2P circuit pack.
EXCESSCOLL	0 to $(2^{64} - 1)$	The number of times that frames failed to transmit because of excessive collisions (more than 15 collisions of the frame). <b>Note:</b> This measurement does not apply to the 2xGigE/FC-P2P circuit pack.
INTERNALMACRXERR	0 to $(2^{64} - 1)$	The number of frames that could not be received because of an internal MAC sub-layer receive error. <b>Note:</b> This measurement does not apply to the 2x100BT-P2P circuit pack.
FRTOOLONGS	0 to $(2^{64} - 1)$	The number of frames received at the port that exceed 1594 bytes.
FRTOOSHORTS	0 to $(2^{64} - 1)$	The number of frames received at the port that are smaller than the allowed 64-byte frame size.
SYMBOLERR	0 to $(2^{64} - 1)$	The number of received frames with a valid length but at least one invalid data symbol. <b>Note:</b> This measurement does not apply to the 2x100BT-P2P circuit pack.
INPAUSEFR	0 to $(2^{64} - 1)$	The number of pause frames received at the port.
OUTPAUSEFR	0 to $(2^{64} - 1)$	The number of pause frames transmitted by the port.

## RTRV-OM-IF

Use the Retrieve Operational Measurements Interface command to retrieve interface operational measurements for

- Interface operational measurements for an Ethernet or WAN facility on a 2x100BT-P2P or 2xGigE/FC-P2P circuit pack
- Interface operational measurements for a Fibre Channel facility on a 2xGigE/FC-P2P circuit pack

### Security level

Level 1

### Input syntax

```
RTRV-OM-IF: [TID] :AID:CTAG;
```

**Table 12-94**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility measurements to retrieve.

**Table 12-95**  
**AID descriptions**

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

### Example input

Retrieve interface operational measurements for WAN facility 2 of the 2x100BT-P2P circuit pack in slot 9 of network element OTTAWA:

```
RTRV-OM-IF: OTTAWA: WAN-9-2: CTAG01;
```

**Response block syntax**

```

<SID><DATE><TIME>
<AID>:: [INFRAMES=Domain] [, INFRAMESERR=Domain]
[, INFRAMEDISCDS=Domain] [, INOCTETS=Domain] [, INOCTETSERR=Domain]
[, OUTFRAMES=Domain] [, OUTFRAMESERR=Domain]
[, OUTFRAMEDISCDS=Domain] [, OUTOCTETS=Domain]
[, OUTOCTETSERR=Domain]

```

**Table 12-96**  
**Response parameter descriptions**

Parameter	Possible values	Description
SID	Any valid source identifier	Source identifier of the network element.
DATE	YY-MM-DD	Date of retrieval. YY is the last two digits of the year (from 00 to 99), MM is the month of the year (from 01 to 12), DD is the day of the month (from 01 to 31).
TIME	HH-MM-SS	Time of retrieval. HH is the hour (from 00 to 23), MM is the minute (from 00 to 59), SS is the second (from 00 to 59).
AID	ETH-slot#-port# WAN-slot#-port#	The LAN or WAN port where slot# = 3 to 10 port# = 1 or 2

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
INFRAMES	0 to (2 <sup>64</sup> - 1)	<p>Ethernet facilities: The number of frames received at the port, including errored frames (see Note). The count includes control frames and pause frames.</p> <p>Fibre Channel facilities: The number of Class 2, 3, and F FC frames received at the port.</p> <p>WAN POS facilities: The number of frames received at the port.</p> <p>WAN GFP-F facilities: The number of client data frames received at the port. The count includes FCS and type header error control (tHEC) errors but does not include client management frames.</p> <p>WAN GFP-T facilities: The number superblocks received at the port.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: Packet over SONET (POS), Generic Framing Protocol-Framed (GFP-F), Generic Framing Protocol-Transparent (GFP-T)</li> </ul> <p><b>Note:</b> For the 2x100BT-P2P circuit pack, this count includes only frames without errors and with a valid frame size.</p>

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
INFRAMESERR	0 to $(2^{64} - 1)$	<p>Ethernet facilities: The number of frames received at the port with an FCS error. The count includes fragments (short frames with an invalid FCS) and jabbers (long frames with an invalid FCS) but excludes undersized frames (short frames with a valid FCS) and oversized frames (long frames with a valid FCS).</p> <p>WAN POS facilities: The number of frames received at the port with an FCS error.</p> <p>WAN GFP-F facilities: The number of client data frames received at the port with a payload FCS error. The count includes received type header error control (tHEC) errors that could not be corrected.</p> <p>WAN GFP-T facilities: The number of superblocks received at the port with CRC-16 errors that could not be corrected.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet or Fibre Channel</li> <li>• WAN facilities: POS, GFP-F, GFP-T</li> </ul> <p><b>Note:</b> When the WAN link is down, the INFRAMESERR counter and the INOCTETSERR counter may not increment consistently with each other.</p>

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
INFRAMEDISCDS	0 to $(2^{64} - 1)$	<p>Ethernet facilities: The number of frames received at the port with a valid FCS and valid frame size but discarded because of an ingress first-in, first-out (FIFO) overflow. Ingress overflows can result at a Ethernet or Fibre Channel port when the operating state of the corresponding WAN port is down or when ingress traffic exceeds the bandwidth capability of the corresponding WAN port.</p> <p>Fibre Channel facilities: The number of Fibre Channel frames received at the port that were discarded because of an ingress FIFO overflow.</p> <p>WAN POS facilities: The number of frames received at the port that were discarded because they exceeded the maximum transmit unit (MTU) size. The count also includes frames that were discarded because they had an invalid POS field.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: POS</li> </ul>

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
INOCTETS	0 to $(2^{64} - 1)$	<p>The number of octets received at the port (see Note).</p> <p>For Ethernet facilities, the count includes the DA, SA, T/L, and FCS headers.</p> <p>For Fibre Channel facilities, this count can be estimated using the following formula: Rx data bytes - (Rx control bytes x 3) + Rx symbol errors</p> <p>For WAN POS facilities, the count includes the point-to-point protocol (PPP) headers. Undersized and oversized packets are not counted.</p> <p>For WAN GFP-F facilities, the count includes the GFP/HEC headers and payload FCS. The count does not include octets from client management frames.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: POS, GFP-F</li> </ul> <p><b>Note:</b> For the 2x100BT-P2P circuit pack, this count includes only frames without errors and with a valid frame size.</p>
INOCTETSERR	0 to $(2^{64} - 1)$	<p>The number of octets received at the port in errored frames (as counted by INFRAMESERR).</p> <p>For Fibre Channel facilities, this count can be estimated using the following formula: Rx disparity errors + Rx symbol errors.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: POS, GFP-F</li> </ul> <p><b>Note:</b> When the WAN link is down, the INFRAMESERR counter and the INOCTETSERR counter may not increment consistently with each other.</p>

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
OUTFRAMES	0 to $(2^{64} - 1)$	<p>Ethernet facilities: The number of frames transmitted by the port.</p> <p>Fibre Channel facilities: The number of Class 2, 3, and F FC frames transmitted by the port.</p> <p>WAN POS facilities: The number of frames transmitted by the port. The count includes heartbeat control frames when link connectivity monitoring is enabled.</p> <p>WAN GFP-F: The number of client data frames transmitted by the port. The count does not include client management frames.</p> <p>WAN GFP-T facilities: The number of superblocks transmitted by the port.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: POS, GFP-F, GFP-T</li> </ul>
OUTFRAMESERR	0 to $(2^{64} - 1)$	<p>The number of frames that could not be transmitted by the port because of errors.</p> <p>For Ethernet facilities, the count includes frames that were transmitted with errors. The count also includes frames that could not be transmitted because of excessive or late collisions (in half duplex mode) or because of an FIFO underrun (due to internal memory errors). The count also includes the number of frames transmitted with FCS errors (when received from the corresponding WAN port).</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet facilities</li> <li>• WAN facilities: POS, GFP-F</li> </ul>

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
OUTFRAMESDISCDS	0 to ( $2^{64} - 1$ )	<p>The number of frames discarded because of an egress FIFO overflow.</p> <p>For Ethernet facilities, egress overflows can result at a ETH port when the operating state of the ETH port is down or when egress traffic exceeds the ETH port capacity (for example, the ETH port is only operating at 10 Mbit/s when the corresponding WAN port is mapped to an STS-3c rate).</p> <p>For Fibre Channel facilities, egress overflows can result at an FC port when the maximum link distance is exceeded.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: Not applicable</li> </ul>
OUTOCTETS	0 to ( $2^{64} - 1$ )	<p>The number of octets transmitted by the port.</p> <p>For Ethernet facilities, the count includes the DA, SA, T/L, and FCS headers.</p> <p>For Fibre Channel facilities, this count can be estimated using the following formula: Tx data bytes - (Tx control bytes x 3) + Tx 8B/10B code errors.</p> <p>For WAN POS facilities, the count includes the PPP headers.</p> <p>For WAN GFP-F facilities, the count includes GFP/HEC headers and payload FCS.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities</li> <li>• WAN facilities: POS, GFP-F</li> </ul>

**Table 12-96 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
OUTOCTETSERR	0 to $(2^{64} - 1)$	<p>Ethernet facilities: The number of octets transmitted by the port in errored frames (as counted by OUTFRAMESERR).</p> <p>Fibre Channel facilities: The number of 8B/10B code errors transmitted by the port.</p> <p>Valid for:</p> <ul style="list-style-type: none"> <li>• Ethernet, Fibre Channel facilities(see Note)</li> <li>• WAN facilities: Not applicable</li> </ul> <p><b>Note:</b> This measurement is not supported on the 2x100BT-P2P circuit pack.</p>

## RTRV-PM-ABORT

The Retrieve Performance Monitoring Abort command allows you to abort the active retrieve (RTRV-PM) command.

If the retrieve command completes before the abort command is processed by the system, there is no impact.

### Security level

Level 1

### Input syntax

```
RTRV-PM-ABORT: [TID] : : CTAG;
```

**Table 12-97**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

### Example input

Abort the active retrieve PM command at NEWYORK:

```
RTRV-PM-ABORT:NEWYORK: : 123;
```

## RTRV-PM-ALL

The Retrieve Performance Monitoring All command instructs a network element to send its set of all performance monitoring (PM) data to the current TL1 session immediately.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

RTRV-PM-ALL: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;

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

**Table 12-98**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command is directed.
CTAG	Correlation tag

**Table 12-98 (continued)**  
**Syntax definition**

Field	Purpose
MONTYPE	The type of monitored parameter for which a value is requested. A null value requests all types of monitored parameters to be retrieved. Parameter grouping may be used. With multiple AIDs, the register(s) specified pertains to each AID specified.
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-99**  
**AID descriptions**

AID type	Command-specific values	Purpose
ALL	ALL	All facilities

**Example input**

Retrieve all non-zero 15-minute and 1-day registers on the network element, specifying MONDAT and MONTM:

```
RTRV-PM-ALL:NEWYORK:ALL:CTAG12: , , , , 15-MIN&1-DAY, ALL, ALL;
```

Retrieve all non-zero 15-minute and 1-day registers on the network element, specifying all intervals:

```
RTRV-PM-ALL:SEATTLE:ALL:CTAG12: , , , , 15-MIN&1-DAY, , , ALL;
```

Retrieve all current 15-minute registers:

```
RTRV-PM-ALL:WASHINGTON:ALL:CTAG12: , , , 0-UP;
```

**Response block syntax**

```
<SID><DATE><TIME>  

<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  

<TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

**Table 12-100**  
**Response parameter descriptions**

Parameter	Possible values	Description
AID	OC3-slot#-port#-sts# OC3-slot#-port#	Identify the OC-3 facility 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 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 sts# = 1 to 12
	OC48-slot#-sts#	Identify the OC-48 facility where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1 to 48
	OC192-slot#-sts#	Identify the OC-192 facility where slot# = 11, 12, sts# = 1 to 192
	EC1-slot#-port#	Identify the EC-1 facility 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 DS3 facility where slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12
	DS1-slot#-port#	Identify the DS1 facility where slot# = 4 to 10, port# = 1 to 12
	ETH-slot#-port#	Identify the Ethernet facility where slot# = 3 to 10, port# = 1 or 2
	FC-slot#-port#	Identify the Fibre Channel facility where slot# = 3 to 10, port# = 1 or 2
	WAN-slot#-port#	Identify the WAN facility where slot# = 3 to 10, port# = 1 or 2

**Table 12-100 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
DSM AID	DS1-1-port#-%HLINK-OC3-hslot#-hport#  OC3-slot#-1-%HLINK-OC3-hslot#-hport#	Identify the DS1 facility on the DSM where DSM port# = 1 to 84 hslot# = 3 to 10, hport# = 1 to 4  Identify the OC-3 facility on the DSM where slot# = 1 or 2, hslot# = 3 to 10 hport# = 1 to 4
AIDTYPE	EC1, ETH, FC, OC3, OC12, OC48, OC192, STS1, STS3C, STS12C, STS24C, STS48C, T1, T3, WAN	
MONTYPE	See MONTYPE parameter in parameter description tables for RTRV-PM-EC1, RTRV-PM-ETH, RTRV-PM-FC, RTRV-PM-OC3/12/48/192, RTRV-PM-STS1/3C/12C/24C/48C, RTRV-PM-T1, RTRV-PM-T3, RTRV-PM-WAN	
MONVAL	Integer from 0 - ( $2^{32} - 1$ )	Value counted from 0 to 4,294,967,295 or ( $2^{32} - 1$ )
VLDTY	CMPLT PRTL  ADJ	Interval complete Interval incomplete (partial) - current time period was cut short  The register data is suspect
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
MONDAT	MONTH-DAY	Month of year-day of month
MONTM	HOUR-MINUTE	Hour of day-minute of hour
INDEX	0 1 to 32	Current interval Previous intervals (see Note)
<p><b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-EC1

The Retrieve Performance Monitoring EC-1 command instructs a network element to send its current set of EC-1 performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-EC1 : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-101**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-102**  
**AID descriptions**

AID type	Command-specific values	Purpose
EC1 AID	EC1-slot#-port# EC1-slot#-ALL EC1-ALL ALL	Identify the EC1s where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	ALL	All EC-1 facilities

**Table 12-103**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL ALL  Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested  <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT  ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval  All intervals

**Table 12-103 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive line coding violations (CVL) for EC-1 slot 3 port 3, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-EC1:NEWYORK:EC1-3-3:CTAG12::CVL,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

Retrieve all current 15-minute registers at WASHINGTON for all EC-1 facilities:

```
RTRV-PM-EC1:WASHINGTON:ALL:CTAG12::,0-UP;
```

### Response block syntax

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-ETH

The Retrieve Performance Monitoring Ethernet command instructs a network element to send its current set of Ethernet performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-ETH: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-104**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-105**  
**AID descriptions**

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

**Table 12-106**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS INFRAMES INFRAMESERR INFRAMESDISC ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored In Frames Discarded All applicable MONTYPES  <b>Note:</b> LAN PMs ES, SES, and UAS on the 2xGigE/FC-P2P do not count properly if defects are also present on the WAN port.
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested  <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-106 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<p><b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive errored seconds for the Ethernet facility in slot 3 port 3, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-ETH:NEWYORK:ETH-3-3:CTAG12::ES,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

### Response block syntax

<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-FC

The Retrieve Performance Monitoring Fibre Channel command instructs a network element to send its current set of Fibre Channel performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

RTRV-PM-FC: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;

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

**Table 12-107**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-108**  
**AID descriptions**

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

**Table 12-109**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS ALL  Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds All applicable MONTYPES  <b>Note:</b> LAN PMs ES, SES, and UAS on the 2xGigE/FC-P2P do not count properly if defects are also present on the WAN port.
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested  <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT  ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval  All intervals

**Table 12-109 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive errored seconds for the Fibre Channel facility in slot 3 port 3, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-ETH:NEWYORK:FC-3-3:CTAG12::ES,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

### Response block syntax

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-OC3

The Retrieve Performance Monitoring OC-3 command instructs a network element to send its current set of OC-3 performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-OC3 : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-110**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-111**  
**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
DSM AID	OC3-slot#-1-%HLINK-OC3- hslot#-hport#	Identify the OC-3s where DSM slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4
	ALL	All OC-3 facilities

**Table 12-112**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD ALL Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration  All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-112 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPPER=1-UNT or TMPPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<p><b>Note:</b> For TMPPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive line coding violations (CVL) for OC-3x4 slot 10 port 1, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-OC3:NEWYORK:OC3-10-1:CTAG12::CVL,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

Retrieve all current 15-minute registers at WASHINGTON for all OC-3 facilities:

```
RTRV-PM-OC3:WASHINGTON:ALL:CTAG12::,0-UP;
```

### Response block syntax

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-OC12

The Retrieve Performance Monitoring OC-12 command instructs a network element to send its current set of OC-12 performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-OC12 : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-113**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-114**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port# OC12-slot ALL OC-12-ALL ALL	Identify the OC-12 facilities where slot# = 3 to12 for OC-12, 3 to10 for OC-12x4 STS port# =1 for OC-12, 1 to 4 for OC-12x4 STS

**Table 12-115**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD ALL Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-115 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive line coding violations (CVL) for OC-12 slot 11, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-OC12:NEWYORK:OC12-11:CTAG12::CVL,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

Retrieve all current 15-minute registers at WASHINGTON for all OC-12 facilities:

```
RTRV-PM-OC12:WASHINGTON:ALL:CTAG12::,0-UP;
```

### Response block syntax

```
<SID><DATE><TIME>  
AID, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-OC48

The Retrieve Performance Monitoring OC-48 command instructs a network element to send its current set of OC-48 performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-OC48 : [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-116**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-117**  
**AID descriptions**

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

**Table 12-118**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD OPR OPRN ALL  Grouping allowed	Default: equivalent to ALL 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 Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration Optical Power Receive Optical Power Received Normalized All applicable montypes
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-118 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<p><b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).</p>		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive line coding violations (CVL) for OC-48 slot 11, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-OC48:NEWYORK:OC48-11:CTAG12::CVL,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

### Response block syntax

<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-OC192

The Retrieve Performance Monitoring OC-192 command instructs a network element to send its current set of OC-192 performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-OC192 : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-119**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-120**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot# OC192-ALL	Identifies the OC-192 slot slot# = 11, 12
	ALL	All OC-192 facilities

**Table 12-121**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL PSCW PSCP PSD OPR OPRN ALL Grouping allowed	Default: equivalent to ALL 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 Failure Count - Line Protection switch count - Working line Protection switch count - Protection line Protection switch duration Optical Power Receive Optical Power Received Normalized All applicable montypes
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: Non-zero-monitored bins All monitored parameter bins Non-zero monitored bins Non-zero bins, zero-adjusted bins, A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: Near and far ends Near end Far end Near and far ends
DIRN	null TRMT RCV ALL	Default: Receive and transmit Transmit direction only Receive direction only Receive and transmit

**Table 12-121 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve all PM data at NEWYORK for near-end receive line coding violations (CVL) for OC-192 slot 11, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-OC192:NEWYORK:OC192-11:CTAG12::CVL,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

**Response block syntax**

<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#)

## RTRV-PM-STSI

The Retrieve Performance Monitoring STS-1 command instructs a network element to send its current set of STS-1 Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

RTRV-PM-STSI : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;

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

**Table 12-122**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters

**Table 12-122 (continued)**  
**Syntax definition**

<b>Field</b>	<b>Purpose</b>
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-123**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS1 AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-1 facilities on the OC-3 or OC-3x4 interfaces where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC3-slot#-sts#-%HLINK- OC3-hslot#-hport#	Identify the STS-1 facilities on the DSM interfaces where slot# = 1 or 2 sts# = 1 to 3 hslot# = 1 to 10 hport# = 1 to 4
	OC3-slot#-ALL-%HLINK- OC3-hslot#-hport#	Identify all STS-1 facilities on the DSM interfaces where slot# = 1 or 2 hslot# = 1 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts# OC12-slot#-port#ALL OC12-slot#-ALL OC12-slot#-ALL	Identify the STS-1 facilities on the OC-12 or OC-12x4 STS interfaces where 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	Identify the STS-1 facilities on the OC-48 or OC-48 STS interfaces slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-1 facilities on the OC-192 interfaces slot# = 11 to 12 port# = 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the STS-1 facilities on the EC-1x3 or EC-1x12 interfaces where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	ALL	All applicable STS-1 path facilities

**Table 12-124**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP  ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path  AIS/LOP second - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Table 12-124 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

#### Example input

Retrieve the non-zero PM data at SEATTLE on all STS-1 facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
RTRV-PM-STS1:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

#### Response block syntax

```
<SID><DATE><TIME>  
AID,<AIDTYPE>:<MONTYPE>,<MONVAL>,<VLDTY>,<LOCN>,<DIRN>,  
<TMPER>,<MONDAT>,<MONTM>,<INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-STS3C

The Retrieve Performance Monitoring STS-3c command instructs a network element to send its current set of STS-3c Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-STS3C: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] ,
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-125**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters

**Table 12-125**  
**Syntax definition**

Field	Purpose
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-126**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-3c AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility slot# = 3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC-12-ALL	Identify the STS-3c facility 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, 4, 7, 10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-3c facility slot# = 3 to 12 for OC-48 STS, 11 or 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
	ALL	All applicable STS-3c path facilities

**Table 12-127**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL  Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT  ALL  Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval  All intervals

**Table 12-127 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve the non-zero PM data at NEWYORK on OC-3x4 in slot 3 port 1 sts 1 for STS-3c path coding violations (CVP) for the current 15-minute bin:

```
RTRV-PM-ST3C:NEWYORK:OC3-3-1-1:CTAG12::CVP;
```

Retrieve the non-zero PM data at WASHINGTON on all OC-3x4 slots for STS-3c path failure count (FCP), specifying MONDAT and MONTM:

```
RTRV-PM-ST3C:WASHINGTON:OC3-ALL:CTAG12::FCP,,,,,12-25,09-00;
```

Retrieve the non-zero PM data at SEATTLE on all STS-3c facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
RTRV-PM-ST3C:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

### Response block syntax

<SID><DATE><TIME>  
AID, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-STS12C

The Retrieve Performance Monitoring STS-12c command instructs a network element to send its current set of STS-12c Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-STS12C: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-128**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-12c facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-129**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-12c AID	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-12c facility where slot# = 3 to 10 for OC-12x4 STS slot# = 3 or 12 for OC-12 port# = 1 to 4 for OC-12x4 STS port# = 1 for OC-12 sts# = 1 All slots with OC-12 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-12c facility where slot# = 3 to 12 for OC-48 STS, 11 or 12 for OC-48 sts# = 1, 13, 25, 37 All slots with OC-48 cards
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 13, ..., 181 All slots with OC-192 cards
	ALL	All applicable STS-12c facilities

**Table 12-130**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Table 12-130 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve the non-zero PM data at NEWYORK on OC-12 in slot 3 sts 1 for STS-12c path coding violations (CVP) for the current 15-minute bin:

```
RTRV-PM-STS12C:NEWYORK:OC12-3-1:CTAG12::CVP;
```

Retrieve the non-zero PM data at WASHINGTON on all OC-12 slots for STS-12c path failure count (FCP), specifying MONDAT and MONTM:

```
RTRV-PM-STS12C:WASHINGTON:OC12-ALL:CTAG12::FCP,,,,,
12-25,09-00;
```

Retrieve the non-zero PM data at SEATTLE on all STS-12c facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
RTRV-PM-STS3C:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

### Response block syntax

<SID><DATE><TIME>  
AID, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-STS24C

The Retrieve Performance Monitoring STS-24c command instructs a network element to send its current set of STS-24c Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-STS24C: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-131**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-24c facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-132**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-24c AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-24c facility where slot# = 11, 12 sts# = 1, 25, 49, ..., 169 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-24c facility where slot# = 3 to 12 sts# = 1, 25 All slots with OC-48 STS cards
	ALL	All applicable STS-24c facilities

**Table 12-133**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Table 12-133 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve the non-zero PM data at NEWYORK on OC-48 in slot 3 sts 1 for STS-24c path coding violations (CVP) for the current 15-minute bin:

```
RTRV-PM-STS24C:NEWYORK:OC48-3-1:CTAG12::CVP;
```

Retrieve the non-zero PM data at WASHINGTON on all OC-48 slots for STS-24c path failure count (FCP), specifying MONDAT and MONTM:

```
RTRV-PM-STS24C:WASHINGTON:OC48-ALL:CTAG12::FCP,,,,,  
12-25,09-00;
```

Retrieve the non-zero PM data at SEATTLE on all STS-24c facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
RTRV-PM-STS24C:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

### Response block syntax

<SID><DATE><TIME>  
AID, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-STS48C

The Retrieve Performance Monitoring STS-48c command instructs a network element to send its current set of STS-48c Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-STS48C: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] ,  
[DIRN] , [TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-134**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-12c facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-135**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-48 AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-48c facility where slot# = 11, 12 sts# = 1, 49, 97, 145 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-48c facility where slot# = 3 to 12 sts# = 1 All slots with OC-48 STS cards

**Table 12-136**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Table 12-136 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve the non-zero PM data at NEWYORK on OC-48 in slot 3 sts 1 for STS-48c path coding violations (CVP) for the current 15-minute bin:

```
RTRV-PM-ST548C:NEWYORK:OC48-3-1:CTAG12::CVP;
```

Retrieve the non-zero PM data at WASHINGTON on all OC-48 slots for STS-48c path failure count (FCP), specifying MONDAT and MONTM:

```
RTRV-PM-ST548C:WASHINGTON:OC48-ALL:CTAG12::FCP,,,,,
12-25,09-00;
```

Retrieve the non-zero PM data at SEATTLE on all STS-48c facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
RTRV-PM-ST548C:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

### Response block syntax

<SID><DATE><TIME>  
AID, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-T1

The Retrieve Performance Monitoring T1 command instructs a network element to send the specified set of DS1 Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-T1 : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-137**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-138**  
**AID descriptions**

AID type	Command-specific values	Purpose
T1 AID	DS1-slot#-port# DS1-slot#-ALL DS1-ALL	Identify the DS1s where slot# = 4 to 10 port# = 1 to 12
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	Identify DS1s on DS3/VTx12 equipment where slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3- hslot#-hport#	Identify the DS1s on the DSM where DSM port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-1-ALL-%HLINK-OC3- hslot#-hport#	Identify all DS1 ports on the DSM hslot# = 3 to 10 hport# = 1 to 4
	ALL	All DS1 facilities

**Table 12-139**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVL ESL SESL CVP ESP SEFSP SESP SASP CSSP UASP FCP ALL Grouping allowed	Default: equivalent to ALL 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 Controlled slip seconds - Path Unavailable Seconds - Path Failure Count - Path All applicable MONTYPES <b>Note:</b> The SESP parameter does not count frame errors for DS-1 facilities on DS-1 circuit packs.
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions

**Table 12-139 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve all the PM data for near-end receive line coding violations for DS1 slot 4 port 7, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-T1:NEWYORK:DS1-4-7:CTAG12::CVL,0-UP,NEND,RCV,ALL,ALL,ALL;
```

Retrieve all current 15-minute registers for all DS1 facilities:

```
RTRV-PM-T1:SEATTLE:ALL:CTAG12::,0-UP;
```

Retrieve all non-zero T1 registers for April:

```
RTRV-PM-T1:WASHINGTON:ALL:CTAG12::,,,,,04-00;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>, <TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

*Note:* This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-T3

The Retrieve Performance Monitoring T3 command instructs a network element to send its current set of DS3 Performance Monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

*Note:* When a DS3x12e circuit pack is protected by DS3x12 circuit pack or vice versa, the PM counts for CV-P, ES-P, SES-P and UAS-P change on the receive side when the switching occurs. A working DS3x12e circuit pack shows all performance monitoring and a working DS3x12 circuit pack shows performance monitoring on the transmit side and 0 on the receive side.

### Security level

Level 1

### Input syntax

```
RTRV-PM-T3 : [TID] : AID : CTAG : : [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

**Table 12-140**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-141**  
**AID descriptions**

AID type	Command-specific values	Purpose
T3 AID	DS3-slot#-port# DS3-slot#-ALL DS3-ALL ALL	Identify the T3 facility slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12
	ALL	All DS3 facilities

**Table 12-142**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVL ESL SESL CVP ESP FCP SESP SASP UASP ALL Grouping allowed	ALL Coding Violations - Line Errored Seconds - Line Severely Errored Seconds - Line Coding Violations - Path Errored Seconds - Path Failure Count - Path Severely Errored Seconds - Path SEF / AIS Seconds - Path Unavailable Seconds - Path All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Table 12-142 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1 to 32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve the non-zero PM data at NEWYORK on DS3 in slot 3 port 1 for path coding violations (CVP) for the current 15-minute bin:

```
RTRV-PM-T3:NEWYORK:DS3-3-1:CTAG12::CVP;;
```

Retrieve the non-zero PM data for 15-minute bins at WASHINGTON on all DS3 slots for path unavailable seconds (UASP), specifying MONDAT and MONTM:

```
RTRV-PM-T3:WASHINGTON:DS3-ALL:CTAG12::UASP,,,,,12-25,09-00;
```

Retrieve the non-zero PM data at SEATTLE on all DS3 facilities for path severely errored seconds (SESP), at the near-end receive direction only for the current 1-day bin:

```
RTRV-PM-T3:SEATTLE:ALL:CTAG12::SESP,,NEND,RCV,1-DAY;
```

### Response block syntax

<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,  
<TMPER>, <MONDAT>, <MONTM>, <INDEX>

See [Table 12-100](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PM-WAN

The Retrieve Performance Monitoring WAN command instructs a network element to send its current set of WAN performance monitoring (PM) data to the current TL1 session.

PM data is kept in separate monitored parameter registers or bins for each passed interval. You can specify either the starting time of the periods of interest using <MONDAT>, <MONTM>, or both, or you can directly specify the interval by using <INDEX>. If you specify <MONDAT>, <MONTM>, or both, you cannot specify <INDEX>.

Current intervals are indicated by INDEX=0, and older periods have higher numbers. If you specify <INDEX>, you cannot specify <MONDAT> or <MONTM>.

*Note:* The accumulation intervals that are stored are as follows: the current 15-minute and 32 previous 15-minute intervals, the current day and previous day, and an untimed interval.

Several parameters can be grouped. To group parameters, use the ampersand (&) as the separator. To use a range of parameters, use two ampersands (&&) between the parameters. For example, to use a range of INDEX intervals from 5 to 12, enter 5&&12 as the INDEX parameter.

### Security level

Level 1

### Input syntax

```
RTRV-PM-WAN: [TID] :AID:CTAG:: [MONTYPE] , [MONLEV] , [LOCN] , [DIRN] ,  
[TMPER] , [MONDAT] , [MONTM] , [INDEX] ;
```

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

**Table 12-143**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The type of monitored parameter for which a value is requested
MONLEV	The discriminating level for reported monitored parameters
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information
MONDAT	The date of the beginning of the requested PM period
MONTM	The beginning time of day of the requested PM period
INDEX	The interval numbers to be retrieved

**Table 12-144**  
**AID descriptions**

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

**Table 12-145**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS INFRAMES INFRAMESERR ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored All applicable MONTYPES
MONLEV	null 0-UP 1-UP 0-ADJ-UP	Default: equivalent to 1-UP All monitored parameter bins Non-zero bins only Non-zero bins, zero-adjusted bins, and all parameters for the first interval requested  <b>Note:</b> A PM parameter is zero adjusted when: <ul style="list-style-type: none"> <li>• a restart occurs</li> <li>• an Initialize Registers (INIT-REG) command is issued</li> <li>• the network element time is edited</li> <li>• the state of the facility changes (from in-service to out-of-service or the reverse)</li> <li>• a defect occurs at the near end (In this case, the far-end PM parameters are zero adjusted.)</li> </ul>
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Table 12-145 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
MONDAT	null ALL MONTH-DAY Grouping allowed	Default: Current date All dates available MONTH= 1 to 12, DAY= 1 to 31 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER = 1-UNT, MONDAT is not applicable.
MONTM	null ALL HOUR-MINUTE Grouping allowed	Default: Current 15-MIN All available times HOUR= 00 to 23, MINUTE= 00, 15, 30, 45 MONDAT and MONTM can be used as a pair. <b>Note 1:</b> If INDEX is used, MONDAT and MONTM cannot be used. <b>Note 2:</b> If TMPER=1-UNT or TMPER=1-DAY, MONTM is not applicable.
INDEX	null 0 1-32 ALL Grouping and ranges allowed	Default: equivalent to 0 Current interval Previous intervals (see Note) All available intervals If MONDAT or MONTM is used, INDEX cannot be used.
<b>Note:</b> For TMPER=15-MIN, INDEX=1 is the most recently completed 15-minute interval, INDEX=2 is the interval before that. For TMPER=1-DAY, INDEX=1 is the most recently completed day interval (yesterday).		

**Example input**

Retrieve near-end receive errored seconds at network element NEWYORK for the WAN facility in slot 3 port 3, for all intervals, specifying ALL MONDAT and ALL MONTM:

```
RTRV-PM-WAN:NEWYORK:WAN-3-3:CTAG12::ES,0-UP,NEND,RCV,
ALL,ALL,ALL;
```

**Response block syntax**

```
<SID><DATE><TIME>
<AID>, <AIDTYPE>: <MONTYPE>, <MONVAL>, <VLDTY>, <LOCN>, <DIRN>,
<TMPER>, <MONDAT>, <MONTM>, <INDEX>
```

See [Table 12-100 on page 12-114](#) for a description of the response block parameters.

**Note:** This command supports a continuation message mechanism. See [TL1 command response header on page 1-8](#).

## RTRV-PMCONFIG-EC1

The Retrieve Performance Monitoring Configuration EC-1 command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for the EC-1 facility.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-EC1 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] ;

**Table 12-146**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-147**  
**AID descriptions**

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

**Table 12-148**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for EC-1 facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-EC1:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE>,<RXPHYBASE>
```

**Table 12-149**  
**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), SS is the second (from 00 to 59).

**Table 12-149 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
AID	EC1-slot#-port#	EC1 facility, where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting

**RTRV-PMCONFIG-ETH**

The Retrieve Performance Monitoring Configuration Ethernet command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for an Ethernet facility.

**Security level**

Level 2

**Input syntax**

```
RTRV-PMCONFIG-ETH: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;
```

**Table 12-150**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-151**  
**AID descriptions**

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

**Table 12-152**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for the Ethernet facility in slot 10, port 1 of network element BOSTON.

```
RTRV-PMCONFIG-ETH:BOSTON:10-1:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE>,<RXPHYBASE>
```

**Table 12-153**  
**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), SS is the second (from 00 to 59).
AID	ETH-slot#-port#	Ethernet facility, where slot# = 3 to 10 port# = 1 or 2

**Table 12-153 (continued)**  
**Response parameter descriptions**

<b>Parameter</b>	<b>Possible values</b>	<b>Description</b>
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting

**RTRV-PMCONFIG-FC**

The Retrieve Performance Monitoring Configuration Fibre Channel command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for a Fibre Channel facility.

**Security level**

Level 2

**Input syntax**

```
RTRV-PMCONFIG-FC: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;
```

**Table 12-154**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-155**  
**AID descriptions**

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

**Table 12-156**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for the Fibre Channel facility in slot 10, port 1 of network element BOSTON.

```
RTRV-PMCONFIG-FC:BOSTON:10-1:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE>,<RXPHYBASE>
```

**Table 12-157**  
**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), SS is the second (from 00 to 59).
AID	FC-slot#-port#	Fibre Channel facility, where slot# = 3 to 10 port # = 1 or 2

**Table 12-157 (continued)**  
**Response parameter descriptions**

<b>Parameter</b>	<b>Possible values</b>	<b>Description</b>
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting

**RTRV-PMCONFIG-OC3**

The Retrieve Performance Monitoring Configuration OC-3 command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for the OC-3 facility.

**Security level**

Level 2

**Input syntax**

RTRV-PMCONFIG-OC3 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] ;

**Table 12-158**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-159**  
**AID descriptions**

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

**Table 12-160**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for OC-3 facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-OC3:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE>,<RXPHYBASE>
```

**Table 12-161**  
**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), SS is the second (from 00 to 59).

**Table 12-161 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
AID	OC3-slot#-port#	OC-3 facility, where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting
RXPHYBASE		Receive physical PM thresholding baseline value

## RTRV-PMCONFIG-OC12

The Retrieve Performance Monitoring Configuration OC-12 command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for the OC-12 facility.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-OC12 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] ;

**Table 12-162**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-163**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC12	OC12-slot#-port# OC12-slot ALL OC-12-ALL ALL	Identify the OC-12 facilities 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 12-164**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for OC-12 facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-OC12:BOSTON:ALL:CTAG12::, , 15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  

<AID>: <LOCN>, <DIRN>, <TMPER>: <THMODE>, <RXPHYBASE>
```

**Table 12-165**  
**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), SS is the second (from 00 to 59).
AID	OC12-slot#-port#	OC-12 facility, where slot# = 3 to 12 port# = 1 to 4

**Table 12-165 (continued)**  
**Response parameter descriptions**

<b>Parameter</b>	<b>Possible values</b>	<b>Description</b>
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting
RXPHYBASE		Receive physical PM thresholding baseline value

## RTRV-PMCONFIG-OC48

The Retrieve Performance Monitoring Configuration OC-48 command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value and the PM reporting status as on or off.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-OC48 : [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;

**Table 12-166**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-167**  
**AID descriptions**

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

**Table 12-168**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for OC-48 facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-OC48:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER><THMODE>,<RXPHYBASE>
```

**Table 12-169**  
**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), SS is the second (from 00 to 59).
AID	OC48-slot#	OC-48 facility, where slot# = 3 to 12

**Table 12-169 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting
RXPHYBASE	null RESET	Receive physical PM thresholding baseline value was reset.

## RTRV-PMCONFIG-OC192

The Retrieve Performance Monitoring Configuration OC-192 command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value and the PM reporting status as on or off.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-OC192 : [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;

**Table 12-170**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-171**  
**AID descriptions**

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

**Table 12-172**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null  15-MIN  1-DAY 1-UNT  ALL  Grouping allowed	Default: equivalent to 15-MIN (supported for OPR normal only) 15-minute interval (supported for OPR normal only) 1-day interval (supported for OPR only) Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for OC-192 facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-OC192:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  

<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE=Domain>  

[,<RXPHYBASE=Domain>]
```

**Table 12-173**  
**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), SS is the second (from 00 to 59).
AID	OC192-slot#	OC-192 facility, where slot# = 11,12
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting
RXPHYBASE	null RESET	Receive physical PM thresholding baseline value was reset.

**RTRV-PMCONFIG-STS1**

The Retrieve Performance Monitoring Configuration STS-1 command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for the STS-1 facility.

**Security level**

Level 2

**Input syntax**

RTRV-PMCONFIG-STS1 : [TID] : AID : CTAG : : [LOCN] , [DIRN] , [TMPER] ;

**Table 12-174**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-175**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS1 AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-1 facilities on the OC-3 or OC-3x4 interfaces where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC3-slot#-sts#-%HLINK- OC3-hslot#-hport#	Identify the STS-1 facilities on the DSM interfaces where slot# = 1 or 2 sts# = 1 to 3 hslot# = 1 to 10 hport# = 1 to 4
	OC3-slot#-ALL-%HLINK- OC3-hslot#-hport#	Identify all STS-1 facilities on the DSM interfaces where slot# = 1 or 2 hslot# = 1 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-1 facilities on the OC-12 or OC-12x4 STS interfaces slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-1 facilities on the OC-48 interfaces slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-1 facilities on the OC-192 interfaces slot# = 11 to 12 sts# = 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the STS-1 facilities on the EC-1x3 or EC-1x12 interfaces where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	ALL	All applicable STS-1 path facilities

**Table 12-176**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for STS-1 facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-STS1:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE>,<RXPHYBASE>
```

**Table 12-177**  
**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), SS is the second (from 00 to 59).

**Table 12-177 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
AID	STS-1 facility, where	
	EC1-slot#-port#	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 for OC-3 port# = 1 to 4 for OC-3x4 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 to 12 sts# = 1 to 192
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting
RXPHYBASE		Receive physical PM thresholding baseline value

## RTRV-PMCONFIG-STS3C

The Retrieve Performance Monitoring Configuration STS-3c command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for the STS-3c facility.

### Security level

Level 2

### Input syntax

```
RTRV-PMCONFIG-STS3C: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;
```

**Table 12-178**

#### Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-179**  
**AID Description**

AID type	Command-specific values	Purpose
STS-3c AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility slot# = 3 to 10 port# = 1 to 4 sts# =1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC-12-ALL	Identify the STS-3c facility slot# = 3 to12 for OC-12 slot# = 3 to10 for OC-12x4 STS port# =1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1, 4, 7, 10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-3c facility slot# = 3 to 12 for OC-48 STS slot# = 11 or 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
	ALL	All applicable STS-3c path facilities

**Table 12-180**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for STS-3c facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-STS3C:BOSTON:ALL:CTAG12::, , 15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>
<AID>: <LOCN>, <DIRN>, <TMPER>: <THMODE>, <RXPHYBASE>
```

**Table 12-181**  
**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), SS is the second (from 00 to 59).
AID	STS-3c facility, where	
	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-sts#	slot# = 3 to 12 sts# = 1, 4, 7, 10
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 4, 7, 10, ..., 46
	OC192-slot#-sts#	slot# = 11 to 12 sts# = 1, 4, 7, ..., 190
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only

**Table 12-181 (continued)**  
**Response parameter descriptions**

<b>Parameter</b>	<b>Possible values</b>	<b>Description</b>
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting
RXPHYBASE		Receive physical PM thresholding baseline value

**RTRV-PMCONFIG-STS12C**

The Retrieve Performance Monitoring Configuration STS-12c command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for the STS-12c facility.

**Security level**

Level 2

**Input syntax**

RTRV-PMCONFIG-STS12C: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;

**Table 12-182**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-183**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-12c	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-12c facilities, where slot# = 3 to12 for OC-12 slot# = 3 to10 for OC-12x4 STS port# =1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1

**Table 12-183**  
**AID descriptions**

AID type	Command-specific values	Purpose
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-12c facilities, where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 13, ..., 181
	ALL	All applicable STS-12c path facilities

**Table 12-184**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for STS-12c facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-STS12C:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID> : <LOCN> , <DIRN> , <TMPER> : <THMODE> , <RXPHYBASE>
```

**Table 12-185**  
**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), SS is the second (from 00 to 59).
AID	STS-12c facility, where	
	OC12-slot#-sts#	slot# = 3 to 12 sts# = 1
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 13, 25, 37
	OC192-slot#-sts#	slot# = 11 to 12 sts# = 1, 13, ..., 181
LOCN	NEND	Near end
	FEND	Far end
DIRN	TRMT	Transmit direction only
	RCV	Receive direction only
TMPER	15-MIN	15-minute interval
	1-DAY	1-day interval
	1-UNT	Untimed interval
THMODE	TCA	TCA
	ALARM	TCA summary alarm reporting
	NONE	No reporting
RXPHYBASE		Receive physical PM thresholding baseline value

## RTRV-PMCONFIG-STS24C

The Retrieve Performance Monitoring Configuration STS24c command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value and the PM reporting status as on or off.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-STS24c: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;

**Table 12-186**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-187**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-24c	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-24c facility where slot# = 11, 12, sts# =1, 25, 49, ..., 169 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-24c facility where slot# = 3 to 12 sts# =1, 25 All slots with OC-48 STS cards

**Table 12-188**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN (supported for OPR normal only) 15-minute interval (supported for OPR normal only) 1-day interval (supported for OPR only) Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for STS24c facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-STS24C:BOSTON:ALL:CTAG12::,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>, <DIRN>, <TMPER>:<THMODE=Domain>
```

**Table 12-189**  
**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), SS is the second (from 00 to 59).
AID	OC192-slot#-sts#	slot# = 11, 12 sts# = 1, 25, 49, ..., 169
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 25
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting

## RTRV-PMCONFIG-STS48C

The Retrieve Performance Monitoring Configuration STS48c command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value and the PM reporting status as on or off.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-STS48c: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;

**Table 12-190**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-191**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-48c	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-48c facility where slot# = 11, 12 sts# =1, 49, 97, 145 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-48c facility where slot# = 3 to 12 sts# =1 All slots with OC-48 STS cards

**Table 12-192**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null  15-MIN  1-DAY 1-UNT  ALL  Grouping allowed	Default: equivalent to 15-MIN (supported for OPR normal only) 15-minute interval (supported for OPR normal only) 1-day interval (supported for OPR only) Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for STS48c facilities (all applicable directions and locations) on network element BOSTON.

```
RTRV-PMCONFIG-STS48C:BOSTON:ALL:CTAG12::, , 15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <LOCN>, <DIRN>, <TMPER>:<THMODE=Domain>
```

**Table 12-193**  
**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), SS is the second (from 00 to 59).
AID	OC192-slot#-sts#	slot# = 11, 12, sts# = 1, 49, 97, 145
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting

## RTRV-PMCONFIG-WAN

The Retrieve Performance Monitoring Configuration WAN command instructs the network element to display the PM threshold crossing report type and the receive physical PM thresholding baseline value for a WAN facility.

### Security level

Level 2

### Input syntax

RTRV-PMCONFIG-WAN: [TID] :AID:CTAG:: [LOCN] , [DIRN] , [TMPER] ;

**Table 12-194**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies
CTAG	Correlation tag
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-195**  
**AID descriptions**

AID type	Command-specific values	Purpose
WAN	WAN-slot#-port# WAN-slot#-ALL WAN-ALL	Identify the WAN facilities, where slot# = 3 to 10 port# = 1 or 2

**Table 12-196**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Retrieve the 15-minute PM threshold crossing report type and the receive physical PM thresholding baseline value for the WAN facility in slot 10, port 1 of network element BOSTON.

```
RTRV-PMCONFIG-WAN:BOSTON:10-1:CTAG12:,,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>:<LOCN>,<DIRN>,<TMPER>:<THMODE>,<RXPHYBASE>
```

**Table 12-197**  
**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), SS is the second (from 00 to 59).
AID	WAN-slot#-port#	WAN facility, where slot# = 3 to 10 port# = 1 or 2

**Table 12-197 (continued)**  
**Response parameter descriptions**

<b>Parameter</b>	<b>Possible values</b>	<b>Description</b>
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval
THMODE	TCA ALARM NONE	TCA TCA summary alarm reporting No reporting

## RTRV-TH-ALL

The Retrieve Threshold All command instructs the network element to display the threshold levels for given PM monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-ALL: [TID] :AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-198**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-199**  
**AID descriptions**

AID type	Command-specific values	Purpose
ALL	ALL	All facilities (EC-1, ETH, FC, OC-3, OC-12, OC-48, OC192, STS-1, STS-3c, STS-12c, STS-24c, STS-48c, DS1, DS3, WAN)

**Table 12-200**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL CVP ESP SESP SASP SEFSP ALSP CSSP UASP FCP OPR ES SES UAS INFRAMES INFRAMESERR INFRAMESDISC ALL Grouping allowed	Default: equivalent to ALL 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 Failure Count - Line Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path SEF/AIS Seconds - Path Severely Errored Frame Seconds - Path AIS/LOP Seconds - Path Controlled Slip Seconds - Path Unavailable Seconds - Path Failure Count - Path Optical Power Receive Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored In Frames Discarded All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve all thresholds:

```
RTRV-TH-ALL:NEWYORK:ALL:CTAG12;
```

Retrieve all default thresholds:

```
RTRV-TH-ALL:WASHINGTON:DFLT:CTAG12;
```

Retrieve thresholds for the 15-minute and 1-day accumulation bins:

```
RTRV-TH-ALL:SEATTLE:ALL:CTAG12::,,1-DAY&15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>
```

```
<AID>,<AIDTYPE>:<MONTYPE>,<LOCN>,<DIRN>,<THLEV>,<TMPER>
```

**Table 12-201**  
**Response parameter descriptions**

Parameter	Possible values	Description
SID		Source identifier of the network element.
DATE	YY-MM-DD	Date of list retrieval. YY is the last two digits of the year ranging from 00 to 99, MM is the month of the year ranging from 01 to 12, and DD is the day of the month ranging from 01 to 31.
TIME	HH-MM-SS	Time of list retrieval. HH is the hour ranging from 00 to 23, MM is the minute ranging from 00 to 59, and SS is the second ranging from 00 to 59.

**Table 12-201 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
AID	OC3-slot#-port#-sts# OC3-slot#-port#	Identify the OC-3 facility 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 OC-12 facility where slot# = 3 to 12, port# = 1 to 4 sts# = 1 to 12
	OC48-slot#-sts#	Identify the OC-48 facility where slot# = 11, 12 sts# = 1 to 48
	OC192-slot#-sts#	Identify the OC-192 facility where slot# = 11, 12 sts# = 1 to 192
	EC1-slot#-port#	Identify the EC-1 facility 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 DS3 facility where slot# = 3, 5, 7, 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12
	DS1-slot#-port#	Identify the DS1 facility where slot# = 4 to 10, port# = 1 to 12
	ETH-slot#-port#	Identify the Ethernet facility where slot# = 3 to 10, port# = 1 or 2
	FC-slot#-port#	Identify the Fibre Channel facility where slot# = 3 to 10, port# = 1 or 2
	WAN-slot#-port#	Identify the WAN facility where slot# = 3 to 10, port# = 1 or 2
	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
OC3-slot#-1-%HLINK-OC3- hslot#-hport#	Identify the OC-3 facility on the DSM where slot# = 1 or 2, hslot# = 3 to 10 hport# = 1 to 4	

**Table 12-201 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
AID	EC1-DFLT ETH-DFLT FC-DFLT OC3-DFLT OC12-DFLT OC48-DFLT OC192-DFLT WAN-DFLT EMPTY-DFLT	Defaults threshold settings for EC-1 Defaults threshold settings for ETH Defaults threshold settings for FC Defaults threshold settings for OC-3 Defaults threshold settings for OC-12 Defaults threshold settings for OC-48 Defaults threshold settings for OC-192 Defaults threshold settings for WAN Defaults threshold settings for STS-1, STS-3c, STS-12c, STS24c, STS-48c, DS1 and DS3 facilities
AIDTYPE	EC-1, ETH, FC, OC-3, OC-12, OC-48, OC-192, STS-1, STS-3c, STS-12c, STS-24c, STS-48c, DS1, DS3, WAN	
MONTYPE	See MONTYPE parameter in parameter description tables for RTRV-TH-EC1, RTRV-TH-ETH, RTRV-TH-FC, RTRV-TH-OC3, RTRV-TH-OC12, RTRV-TH-OC48, RTRV-TH-OC192, RTRV-TH-T1, RTRV-TH-T3, RTRV-TH-ST1, RTRV-TH-ST3C, RTRV-TH-ST12C, RTRV-TH-ST24C, RTRV-TH-ST48C, RTRV-TH-WAN	
LOCN	NEND FEND	Near end Far end
DIRN	TRMT RCV	Transmit direction only Receive direction only
THLEV	10 digit number	Restricted by MONTYPE and TMPER
TMPER	15-MIN 1-DAY 1-UNT	15-minute interval 1-day interval Untimed interval

## RTRV-TH-EC1

The Retrieve Threshold EC-1 command instructs the network element to display the threshold levels for specified EC-1 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-EC1 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-202**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-203**  
**AID descriptions**

AID type	Command-specific values	Purpose
EC1 AID	EC1-slot#-port# EC1-slot#-ALL EC1-ALL  ALL	Identify the EC1s where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 All EC-1 facilities
	DFLT	Default threshold settings for EC-1 facilities

**Table 12-204**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL FCL ALL Grouping allowed	Default: equivalent to ALL 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 Second - Line Failure Count - Line All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for the EC-1 in slot 7 port 1, for the 15-minute time period:

```
RTRV-TH-EC1:NEWYORK:EC1-7-1:CTAG12::CVL,NEND,RCV,15-MIN;
```

Retrieve the EC1 threshold defaults:

```
RTRV-TH-EC1:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>,<AIDTYPE>:<MONTYPE>,<LOCN>,<DIRN>,<THLEV>,<TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-ETH

The Retrieve Threshold Ethernet command instructs the network element to display the threshold levels for specified Ethernet performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-ETH: [TID] :AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-205**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-206**  
**AID descriptions**

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

**Table 12-207**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS INFRAMES INFRAMESERR INFRAMESDISC ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored In Frames Discarded All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive errored seconds for the Ethernet facility in slot 7 port 1, for the 15-minute time period:

```
RTRV-TH-ETH:NEWYORK:ETH-7-1:CTAG12::ES,NEND,RCV,15-MIN;
```

Retrieve the Ethernet threshold defaults:

```
RTRV-TH-ETH:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-FC

The Retrieve Threshold Fibre Channel command instructs the network element to display the threshold levels for specified Fibre Channel performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-FC: [TID] :AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-208**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-209**  
**AID descriptions**

AID type	Command-specific values	Purpose
FC AID	FC-slot#-port# FC-slot#-ALL FC-ALL	Identify the Fibre Channel facilities where slot# = 3 to 10 port # = 1 or 2
	DFLT	Default threshold settings for Fibre Channel facilities

**Table 12-210**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive errored seconds for the Fibre Channel facility in slot 7 port 1, for the 15-minute time period:

```
RTRV-TH-FC:NEWYORK:FC-7-1:CTAG12::CVL,NEND,RCV,15-MIN;
```

Retrieve the Fibre Channel threshold defaults:

```
RTRV-TH-FC:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-OC3

The Retrieve Threshold OC-3 command instructs the network element to display the threshold levels for specified OC-3 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-OC3 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-211**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-212**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC3 AID	OC3-slot#-port# OC3-slot#-ALL OC3-ALL  ALL	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 All OC-3 facilities
DSM OC3 Facility AID	OC3-slot#-1-%HLINK-OC3- hslot#-hport#	slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4
	DFLT	Default threshold settings for OC-3 facilities

**Table 12-213**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL ALL  Grouping allowed	Default: equivalent to ALL 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 Second - Line All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL  Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for the OC-3x4 in slot 10 port 1, for the 15-minute time period:

```
RTRV-TH-OC3:NEWYORK:OC3-10-1:CTAG12::CVL,NEND,RCV,15-MIN;
```

Retrieve the OC-3 threshold defaults:

```
RTRV-TH-OC3:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

**RTRV-TH-OC12**

The Retrieve Threshold OC-12 command instructs the network element to display the threshold levels for specified OC-12 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

**Security level**

Level 1

**Input syntax**

RTRV-TH-OC12 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-214**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-215**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-12 AID	OC12-slot#-port# OC12-slot ALL OC-12-ALL ALL	Identify the OC-12 facilities where slot# = 3 to12 for OC-12, 3 to10 for OC-12x4 STS port# =1 for OC-12, 1 to 4 for OC-12x4 STS
	DFLT	Default threshold settings for OC-12 facilities

**Table 12-216**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL ALL Grouping allowed	ALL 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 All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for OC-12 slot 10, for the 15-minute time period:

```
RTRV-TH-OC12:NEWYORK:OC12-10:CTAG12::CVL,NEND,RCV,15-MIN;
```

Retrieve the OC-12 threshold defaults:

```
RTRV-TH-OC12:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-OC48

The Retrieve Threshold OC-48 command instructs the network element to display the threshold levels for specified OC-48 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

```
RTRV-TH-OC48 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;
```

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

**Table 12-217**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-218**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-48 AID	OC48-slot# OC48-ALL	Identifies the OC-48 slots 3 to 12 for OC-48 STS, 11 or 12 for OC-48
	ALL	All OC-48 facilities
	DFLT	Default threshold settings for OC-48 facilities

**Table 12-219**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL OPR ALL  Grouping allowed	Default: equivalent to ALL 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 Optical Power Receive Valid only with THLEV of DFLT, and TMPER of ALL
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for OC-48 slot 11, for the 15-minute time period:

```
RTRV-TH-OC48:NEWYORK:OC48-11:CTAG12::CVL,NEND,RCV,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>
```

```
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

**RTRV-TH-OC192**

The Retrieve Threshold OC-192 command instructs the network element to display the threshold levels for specified OC-192 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

**Security level**

Level 1

**Input syntax**

RTRV-TH-OC192 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-220**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-221**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-192 AID	OC192-slot# OC192-ALL	Identifies the OC-192 slots slot# = 11 to 12
	ALL	All OC-192 facilities
	DFLT	Default threshold settings for OC-192 facilities

**Table 12-222**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL OPR ALL Grouping allowed	Default: equivalent to ALL 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 Optical Power Receive All monitored types
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for OC-192 slot 11, for the 15-minute time period:

```
RTRV-TH-OC192:NEWYORK:OC192-11:CTAG12::CVL,NEND,RCV,15-MIN;
```

**Response block syntax**

```
<SID><DATE><TIME>
```

```
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-STS1

The Retrieve Threshold STS-1 command instructs the network element to display the threshold levels for the specified STS-1 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

```
RTRV-TH-STS1 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;
```

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

**Table 12-223**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-224**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS1 AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-1 facilities on the OC-3 or OC-3x4 interfaces where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC3-slot#-sts#-%HLINK- OC3-hslot#-hport#	Identify the STS-1 facilities on the DSM interfaces where slot# = 1 or 2 sts# = 1 to 3 hslot# = 1 to 10 hport# = 1 to 4
	OC3-slot#-ALL-%HLINK- OC3-hslot#-hport#	Identify all STS-1 facilities on the DSM interfaces where slot# = 1 or 2 hslot# = 1 to 10 hport# = 1 to 4
	OC12-slot#-port#-sts# OC12-slot#-port#ALL OC12-slot#-ALL OC12-ALL	Identify the STS-1 facilities on the OC-12 or OC-12x4 STS interfaces slot# = 3 to12 for OC-12 slot# = 3 to10 for OC-12x4 STS 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 facilities on the OC-48 or OC-48 STS interfaces slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1 to 48
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-1 facilities on the OC-192 interfaces slot# = 11 to 12 sts# = 1 to 192
	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the STS-1 facilities on the EC-1x3 or EC-1x12 interfaces where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	ALL	All applicable STS-1 path facilities

**Table 12-225**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP ALL Grouping allowed	ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the thresholds for the near-end receive path code violation (CVP) on the OC-3x4 in slot 3 port 1 sts 1, for the 15-minute time period:

```
RTRV-TH-ST51:NEWYORK:OC3-3-1-1:CTAG12::CVP,NEND,RCV,15-MIN;
```

Retrieve the STS1 threshold defaults:

```
RTRV-TH-ST51:WASHINGTON:DFLT:CTAG12;
```

**Note:** When the STS-1 default thresholds are displayed, the output AID is shown as EMPTY-DFLT. The STS-1 threshold defaults are common to OC-3 and OC-3x4 equipment.

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-STS3C

The Retrieve Threshold STS-3c command instructs the network element to display the threshold levels for the specified STS-3c performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-STS3C: [TID] :AID:CTAG: : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-226**  
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-227**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-3c AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility slot# = 3 to 10 port# = 1 to 4 sts# =1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC-12-ALL	Identify the STS-3c facility slot# = 3 to12 for OC-12, 3 to10 for OC-12x4 STS port# =1 for OC-12, 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 slot# = 3 to 12 for OC-48 STS, 11 or 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
	ALL	All applicable STS-3c path facilities

**Table 12-228**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP ALL Grouping allowed	ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path All applicable MONTYPES

**Table 12-228 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the thresholds for the near-end receive STS-3c path code violation (CVP) on the OC-3x4 in slot 3 port 1 sts 1, for the 15-minute time period:

```
RTRV-TH-ST33C:NEWYORK:OC3-3-1-1:CTAG12::CVP,NEND,RCV,15-MIN;
```

Retrieve the STS-3c threshold defaults:

```
RTRV-TH-ST33C:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-STS12C

The Retrieve Threshold STS-12c command instructs the network element to display the threshold levels for the specified STS-12c performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

```
RTRV-TH-STS12C: [TID] :AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] ,  
[TMPER] ;
```

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

**Table 12-229**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-12c facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-230**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-12c	OC12-slot#-port#-sts# OC12-slot#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-12c facilities, 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
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-12c facilities, where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 13, ..., 181
	ALL	All applicable STS-12c path facilities

**Table 12-231**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP ALL Grouping allowed	ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path All applicable MONTYPES

**Table 12-231 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the thresholds for the near-end receive STS-12c path code violation (CVP) on the OC-12 in slot 3 sts 1, for the 15-minute time period:

```
RTRV-TH-ST512C:NEWYORK:OC12-3-1:CTAG12::CVP,NEND,RCV,15-MIN;
```

Retrieve the STS-12c threshold defaults:

```
RTRV-TH-ST512C:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-STS24C

The Retrieve Threshold STS-24c command instructs the network element to display the threshold levels for the specified STS-24c performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

```
RTRV-TH-STS24C: [TID] :AID:CTAG: : [MONTYPE] , [LOCN] , [DIRN] ,
[TMPER] ;
```

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

**Table 12-232**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-24c facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-233**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-24c AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-24c facility where slot# = 11, 12 sts# =1, 25, 49, ..., 169 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-24c facility where slot# = 3 to 12 sts# =1,13, 25,37 All slots with OC-48 STS cards
	ALL	All applicable STS-24c facilities

**Table 12-234**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP ALL Grouping allowed	ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the thresholds for the near-end receive STS-24c path code violation (CVP) on the OC-48 in slot 3 sts 1, for the 15-minute time period:

```
RTRV-TH-STS24C:NEWYORK:OC48-3-1:CTAG12::CVP,NEND,RCV,15-MIN;
```

Retrieve the STS-24c threshold defaults:

```
RTRV-TH-STS24C:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-STS48C

The Retrieve Threshold STS-48c command instructs the network element to display the threshold levels for the specified STS-48c performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

```
RTRV-TH-STS48C: [TID] :AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] ,  
[TMPER] ;
```

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

**Table 12-235**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The STS-48c facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-236**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-48c	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-48c facility where slot# = 11, 12, sts# = 1, 49, 97, 145 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-48c facility where slot# = 3 to 12 sts# = 1 All slots with OC-48 STS cards
	ALL	All applicable STS-48c facilities

**Table 12-237**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVP ESP SESP ALSP UASP ALL Grouping allowed	ALL Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the thresholds for the near-end receive STS-48c path code violation (CVP) on the OC-48 in slot 3 sts 1, for the 15-minute time period:

```
RTRV-TH-ST548C:NEWYORK:OC48-3-1:CTAG12::CVP,NEND,RCV,15-MIN;
```

Retrieve the STS-48c threshold defaults:

```
RTRV-TH-ST548C:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-T1

The Retrieve Threshold T1 command instructs the network element to display the threshold levels for the specified DS1 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-T1 : [TID] : AID : CTAG : : [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-238**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the command applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-239**  
**AID descriptions**

AID type	Command-specific values	Purpose
T1 AID	DS1-slot#-port# DS1-slot#-ALL DS1-ALL	Identify the DS1 facility slot# = 4 to 10 port# = 1 to 12
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	Identify DS1s on DS3VTx12 equipment where slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3- hslot#-hport#	Identify the DS1 facility on the DSM port# = 1 to 84 hslot# = 3 to 10 hport# = 1 to 4
	DS1-1-ALL-%HLINK-OC3- hslot#-hport#	Identify all DS1 ports on the DSM hslot# = 3 to 10 hport# = 1 to 4
	ALL	All DS1 facilities
	DFLT	Default threshold setting

**Table 12-240**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVL ESL SESL CVP ESP SEFSP SESP SASP CSSP UASP ALL Grouping allowed	ALL 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 Controlled slip seconds - Path Unavailable Seconds - Path All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for DS1 slot 4 port 7, for the 15-minute time period:

```
RTRV-TH-T1:NEWYORK:DS1-4-7:CTAG12::CVL,NEND,RCV,15-MIN;
```

Retrieve the T1 threshold defaults:

```
RTRV-TH-T1:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-T3

The Retrieve Threshold T3 command instructs the network element to display the threshold levels for the specified DS3 performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-T3:TID:AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-241**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-242**  
**AID descriptions**

AID type	Command-specific values	Purpose
T3 AID	DS3-slot#-port# DS3-slot#-ALL DS3-ALL ALL	Identify the DS3 facility slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12
	ALL	All DS3 facilities
	DFLT	Default threshold setting

**Table 12-243**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVL ESL SESL  CVP ESP SESP SASP UASP ALL Grouping allowed	ALL 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 All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive line coding violations for the DS3 in slot 3 port 2, for the 15-minute time period:

```
RTRV-TH-T3:NEWYORK:DS3-3-2:CTAG12::CVL,NEND,RCV,15-min;
```

Retrieve the T3 threshold defaults:

```
RTRV-TH-T3:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>, <AIDTYPE>: <MONTYPE>, <LOCN>, <DIRN>, <THLEV>, <TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## RTRV-TH-WAN

The Retrieve Threshold WAN command instructs the network element to display the threshold levels for specified WAN performance monitored parameters.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 1

### Input syntax

RTRV-TH-WAN: [TID] :AID:CTAG:: [MONTYPE] , [LOCN] , [DIRN] , [TMPER] ;

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

**Table 12-244**  
Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being retrieved
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-245**  
AID descriptions

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port# WAN-slot#-ALL WAN-ALL	Identify the WAN facilities where slot# = 3 to 10 port # = 1 or 2
	DFLT	Default threshold settings for WAN facilities

**Table 12-246**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null ES SES UAS INFRAMES INFRAMESERR ALL Grouping allowed	Default: equivalent to ALL Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored All applicable MONTYPES
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval Default: All intervals

**Example input**

Retrieve the threshold for near-end receive errored seconds for the WAN facility in slot 7 port 1, for the 15-minute time period:

```
RTRV-TH-WAN:NEWYORK:WAN-7-1:CTAG12::ES,NEND,RCV,15-MIN;
```

Retrieve the WAN threshold defaults:

```
RTRV-TH-WAN:WASHINGTON:DFLT:CTAG12;
```

**Response block syntax**

```
<SID><DATE><TIME>  
<AID>,<AIDTYPE>:<MONTYPE>,<LOCN>,<DIRN>,<THLEV>,<TMPER>
```

See [Table 12-201 on page 12-233](#) for a description of the response block parameters.

## SET-TH-ALL

The Set Threshold All command instructs the network element to set the threshold levels for all PM monitored parameters to default settings. When these thresholds are met or exceeded, automatic messages (threshold crossing alerts) will be generated.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-ALL: [TID] :AID:CTAG:: [MONTYPE] , [THLEV] ;
```

**Table 12-247**

#### Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE

**Table 12-248**

#### AID descriptions

AID type	Command-specific values	Purpose
ALL	ALL	All facilities

**Table 12-249**

#### Parameter descriptions

Parameter	Possible values	Description
MONTYPE	ALL	Set the threshold level of all monitored parameters; valid only with THLEV of DFLT
THLEV	DFLT	Set to Default THLEV

### Example input

Set all thresholds to defaults:

```
SET-TH-ALL:NEWYORK:ALL:CTAG12::ALL,DFLT;
```

## SET-TH-EC1

The Set Threshold EC-1 command instructs the network element to set the threshold level for a PM monitored EC-1 parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-EC1 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,  
[TMPER] ;
```

**Table 12-250**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-251**  
**AID descriptions**

AID type	Command-specific values	Purpose
EC1 AID	EC1-slot#-port# EC1-slot#-ALL EC1-ALL	Identify the EC1s where slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 All EC-1 facilities
	DFLT	Default threshold setting

**Table 12-252**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVS ESS SESS SEFSS CVL ESL SESL UASL ALL	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 Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for the EC-1 in slot 9 port 3:

```
SET-TH-EC1:SEATTLE:E1-9-3:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period:

```
SET-TH-EC1:NEWYORK:DFLT:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set all EC-1 thresholds to defaults:

```
SET-TH-EC1:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-ETH

The Set Threshold Ethernet command instructs the network element to set the threshold level for a PM monitored Ethernet parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-ETH: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TPMER] ;
```

**Table 12-253**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TPMER	The accumulation time period for the PM information

**Table 12-254**  
**AID descriptions**

AID type	Command-specific values	Purpose
ETH AID	ETH-slot#-port# ETH-slot#-ALL ETH-ALL	Identify the Ethernet facilities where slot# = 3 to 10 port # = 1 or 2
	DFLT	Default threshold setting

**Table 12-255**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	ES SES UAS INFRAMES INFRAMESERR INFRAMESDISC ALL	Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored In Frames Discarded All applicable MONTYPES: valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive errored seconds at 100 for the 15-minute accumulation period for the Ethernet facility in slot 9 port 3:

```
SET-TH-ETH:SEATTLE:ETH-9-3:CTAG12::ES,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive errored seconds at 100 for the 15-minute accumulation period:

```
SET-TH-ETH:NEWYORK:DFLT:CTAG12::ES,100,NEND,RCV,15-MIN;
```

Set all Ethernet thresholds to defaults:

```
SET-TH-ETH:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-FC

The Set Threshold Fibre Channel command instructs the network element to set the threshold level for a PM monitored Fibre Channel parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-FC: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TPMER] ;
```

**Table 12-256**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TPMER	The accumulation time period for the PM information

**Table 12-257**  
**AID descriptions**

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

**Table 12-258**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	ES SES UAS ALL	Errored Seconds Severely Errored Seconds Unavailable Seconds All applicable MONTYPES: valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive errored seconds at 100 for the 15-minute accumulation period for the Fibre Channel facility in slot 9 port 3:

```
SET-TH-FC:SEATTLE:FC-9-3:CTAG12::ES,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive errored seconds at 100 for the 15-minute accumulation period:

```
SET-TH-FC:NEWYORK:DFLT:CTAG12::ES,100,NEND,RCV,15-MIN;
```

Set all Fibre Channel thresholds to defaults:

```
SET-TH-FC:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-OC3

The Set Threshold OC-3 command instructs the network element to set the threshold level for a PM monitored OC-3 parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-OC3 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-259**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-260**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-3 AID	OC3-slot#-port# OC3-slot#-ALL	Identify the OC-3 where slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4
DSM AID	OC3-slot#-1-%HLINK-OC3- hslot#-hport#	slot# = 1 or 2 hslot# = 3 to 10 hport# = 1 to 4
	ALL	All OC-3 facilities
	DFLT	Default threshold setting

**Table 12-261**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVS ESS SESS SEFSS  CVL ESL SESL UASL ALL	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  Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number  DFLT	Disable threshold Restricted by MONTYPE and TMPER  Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT

**Table 12-261 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for the OC-3x4 in slot 9 port 1:

```
SET-TH-OC3:SEATTLE:OC3-9-1:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period:

```
SET-TH-OC3:NEWYORK:DFLT:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set all OC-3 thresholds to defaults:

```
SET-TH-OC3:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-OC12

The Set Threshold OC-12 command instructs the network element to set the threshold level for a PM monitored OC-12 parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-OC12 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,  
[TMPER] ;
```

**Table 12-262**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-263**  
**AID descriptions**

AID type	Command-specific values	Description
OC-12 AID	OC12-slot#-port# OC12-slot#-ALL OC12-ALL ALL	Identify the OC-12 facilities where slot# = 3 to12 for OC-12, 3 to10 for OC-12x4 STS port# =1 for OC-12, 1 to 4 for OC-12x4 STS

**Table 12-264**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVS ESS SESS SEFSS CVL ESL SESL UASL ALL	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 Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number  DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for OC-12 slot 10:

```
SET-TH-OC12:SEATTLE:OC12-10:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period:

```
SET-TH-OC12:NEWYORK:DFLT:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set all OC-12 thresholds to defaults:

```
SET-TH-OC12:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-OC48

The Set Threshold OC-48 command instructs the network element to set the threshold level for a PM monitored OC-48 parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-OC48 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-265**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-266**  
**AID descriptions**

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

**Table 12-267**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL OPR ALL  Grouping allowed	Default: equivalent to ALL 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 Optical Power Receive Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number  DFLT	Disable threshold Restricted by MONTYPE and TMPER  Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for OC-48 slot 12:

```
SET-TH-OC48:SEATTLE:OC48-12:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

## SET-TH-OC192

The Set Threshold OC-192 command instructs the network element to set the threshold level for a PM monitored OC-192 parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-OC192: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-268**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-269**  
**AID descriptions**

AID type	Command-specific values	Purpose
OC-192 AID	OC-192 -slot#	Identifies the OC-192 slot number slot# = 11 to 12

**Table 12-270**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	null CVS ESS SESS SEFSS CVL ESL SESL UASL OPR ALL Grouping allowed	Default: equivalent to ALL 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 Optical Power Receive
THLEV	0 10 digit number  DFLT	Threshold Level (0= valid value) Set to default threshold value Supported for OPR only
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT  ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for OC-192 slot 12:

```
SET-TH-OC192:SEATTLE:OC192-12:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

## SET-TH-STS1

The Set Threshold STS-1 command instructs the network element to set the threshold level for a PM monitored STS-1 parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-STS1 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-271**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Example input**

Set the threshold for near-end receive path coding violations (CVP) at 100 for the 15-minute accumulation period for the OC-3x4 in slot 9 port 1 sts 2:

```
SET-TH-STs1:SEATTLE:OC3-9-1-2:CTAG12::CVP,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive path coding violations (CVP) at 100 for the 15-minute accumulation period:

```
SET-TH-STs1:NEWYORK:DFLT:CTAG12::CVP,100,NEND,RCV,15-MIN;
```

Set all STS-1 thresholds to defaults:

```
SET-TH-STs1:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-STS3C

The Set Threshold STS-3c command instructs the network element to set the threshold level for a PM monitored STS-3c parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-STS3C: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-272**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-273**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-3c AID	OC3-slot#-port#-sts# OC3-slot#-port#-ALL OC3-slot#-ALL OC3-ALL	Identify the STS-3c facility slot# = 3 to 10 port# = 1 to 4 sts# = 1
	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC-12-ALL	Identify the STS-3c facility 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, 4, 7, 10
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-3c facility slot# = 3 to 12 for OC-48 STS, 11 or 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
	ALL	All applicable STS-3c path facilities

**Table 12-274**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVP ESP SESP ALSP UASP ALL	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT

**Table 12-274 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive STS-3c path coding violations (CVP) at 100 for the 15-minute accumulation period for the OC-3x4 in slot 9 port 1 sts 1:

```
SET-TH-ST3C:SEATTLE:OC3-9-1-1:CTAG12::CVP,100,
NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive STS-3c path coding violations (CVP) at 100 for the 15-minute accumulation period:

```
SET-TH-ST3C:NEWYORK:DFLT:CTAG12::CVP,100,NEND,RCV,15-MIN;
```

Set all STS-3c thresholds to defaults:

```
SET-TH-ST3C:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-STS12C

The Set Threshold STS-12c command instructs the network element to set the threshold level for a PM monitored STS-12c parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-STS12C: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,  
[TMPER] ;
```

**Table 12-275**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-276**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-12c	OC12-slot#-port#-sts# OC12-slot#-port#-ALL OC12-slot#-ALL OC12-ALL	Identify the STS-12c facilities, 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
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-12c facilities, where slot# = 3 to 12 for OC-48 STS slot# = 11 or 12 for OC-48 sts# = 1, 13, 25, 37
	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	slot# = 11 to 12 sts# = 1, 13, ..., 181
	ALL	All applicable STS-12c path facilities

**Table 12-277**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVP ESP SESP ALSP UASP ALL	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT

**Table 12-277 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive STS-12c path coding violations (CVP) at 100 for the 15-minute accumulation period for the OC-12 in slot 9 sts 1:

```
SET-TH-ST512C:SEATTLE:OC12-9-1:CTAG12::CVP,100,  
NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive STS-12c path coding violations (CVP) at 100 for the 15-minute accumulation period:

```
SET-TH-ST512C:NEWYORK:DFLT:CTAG12::CVP,100,NEND,RCV,15-MIN;
```

Set all STS-12c thresholds to defaults:

```
SET-TH-ST512C:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-STS24C

The Set Threshold STS-24c command instructs the network element to set the threshold level for a PM monitored STS-24c parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-STS24C: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-278**  
**Syntax definitions**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-279**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-24c AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-24c facility where slot# = 11, 12 sts# = 1, 25, 49, ..., 169 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-24c facility where slot# = 3 to 12 sts# = 1, 25 All slots with OC-48 STS cards
	ALL	All applicable STS-24c facilities

**Table 12-280**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVP ESP SESP ALSP UASP ALL	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive STS-24c path coding violations (CVP) at 100 for the 15-minute accumulation period for the OC-48 in slot 11 sts 1:

```
SET-TH-STS24C:SEATTLE:OC48-11-1:CTAG12::CVP,100,  
NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive STS-24c path coding violations (CVP) at 100 for the 15-minute accumulation period:

```
SET-TH-STS24C:NEWYORK:DFLT:CTAG12::CVP,100,NEND,RCV,15-MIN;
```

Set all STS-24c thresholds to defaults:

```
SET-TH-STS24C:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-STS48C

The Set Threshold STS-48c command instructs the network element to set the threshold level for a PM monitored STS-48c parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-STS48C: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,  
[TMPER] ;
```

**Table 12-281**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-282**  
**AID descriptions**

AID type	Command-specific values	Purpose
STS-48c AID	OC192-slot#-sts# OC192-slot#-ALL OC192-ALL	Identify the STS-48c facility where slot# = 11, 12, sts# = 1, 49, 97, 145 All slots with OC-192 cards
	OC48-slot#-sts# OC48-slot#-ALL OC48-ALL	Identify the STS-48c facility where slot# = 3 to 12 sts# = 1 All slots with OC-48 STS cards
	ALL	All applicable STS-48c facilities

**Table 12-283**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVP ESP SESP ALSP UASP ALL	Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path AIS/LOP second - Path Unavailable Seconds - Path Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive STS-48c path coding violations (CVP) at 100 for the 15-minute accumulation period for the OC-48 in slot 11 sts 1:

```
SET-TH-STS48C:SEATTLE:OC48-11-1:CTAG12::CVP,100,  
NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive STS-48c path coding violations (CVP) at 100 for the 15-minute accumulation period:

```
SET-TH-STS48C:NEWYORK:DFLT:CTAG12::CVP,100,NEND,RCV,15-MIN;
```

Set all STS-48c thresholds to defaults:

```
SET-TH-STS48C:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-T1

The Set Threshold T1 command instructs the network element to set the threshold level for a PM monitored DS1 parameter. When this threshold is met or exceeded, an autonomous message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-T1 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TMPER] ;
```

**Table 12-284**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-285**  
**AID descriptions**

AID type	Command-specific values	Purpose
T1 AID	DS1-slot#-port# DS1-slot#-ALL DS1-ALL	Identify the DS1s where slot# = 4 to 10 port# = 1 to 12
	DS1-slot#-port#-t1# DS1-slot#-port#-ALL	Identify DS1s on DS3VTx12 equipment where slot# = 3, 5, 7, 9 port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3- hslot#-hport#	DSM port# = 1 to 84 hslot# = 3 to 10, hport# = 1 to 4
	DS1-1-ALL-%HLINK-OC3- hslot#-hport#	All DS1 ports on the DSM hslot# = 3 to 10 hport# = 1 to 4
	ALL	All DS1 facilities
	DFLT	Default threshold setting

**Table 12-286**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVL ESL SESL CVP ESP SESP SEFSP SASP CSSP UASP ALL	Coding Violations - Line Errored Seconds - Line Severely Errored Seconds - Line Coding Violations - Path Errored Seconds - Path Severely Errored Seconds - Path Severely errored frame seconds - Path SEF / AIS Seconds - Path Controlled slip seconds - Path Unavailable Seconds - Path Valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT

**Table 12-286 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for DS1 slot 4 port 7:

```
SET-TH-T1:NEWYORK:DS1-4-7:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period:

```
SET-TH-T1:SEATTLE:DFLT:CTAG126::CVL,100,NEND,RCV,15-MIN;
```

Set all T1 thresholds to default:

```
SET-TH-T1:WASHINGTON:ALL:CTAG12::ALL,DFLT,,ALL;
```

## SET-TH-T3

The Set Threshold T3 command instructs the network element to set the threshold level for a PM monitored DS3 parameter. When this threshold is met or exceeded, an autonomous message (threshold crossing alert) will be generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands from the OS.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-T3 : [TID] : AID : CTAG : : MONTYPE, THLEV, [LOCN] , [DIRN] ,  
[TMPER] ;
```

**Table 12-287**

#### Syntax definition

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the given threshold level applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TMPER	The accumulation time period for the PM information

**Table 12-288**  
**AID descriptions**

AID type	Command-specific values	Purpose
T3 AID	DS3-slot#-port# DS3-slot#-ALL DS3-ALL ALL	Identify the DS3 facility slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12, DS3x12e, or DS3VTx12
	DFLT	Default threshold setting
	ALL	All DS3 facilities

**Table 12-289**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	CVL ESL SESL CVP ESP SESP SASP UASP ALL	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 Valid only with THLEV of DFLT and TMPER of ALL
THLEV	0 10 digit number  DFLT	Disable threshold Restricted by MONTYPE and TMPER  Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period for DS3 slot 9 port 2:

```
SET-TH-T3 : SEATTLE : DS3-9-2 : CTAG12 : : CVL, 100, NEND, RCV, 15-MIN;
```

Set the default threshold for near-end receive line coding violations (CVL) at 100 for the 15-minute accumulation period:

```
SET-TH-T3 : NEWYORK : DFLT : CTAG12 : : CVL, 100, NEND, RCV, 15-MIN;
```

Set all DS3 thresholds to defaults:

```
SET-TH-T3 : SEATTLE : ALL : CTAG12 : : ALL, DFLT, , , ALL;
```

## SET-TH-WAN

The Set Threshold WAN command instructs the network element to set the threshold level for a PM monitored WAN parameter. When this threshold is met or exceeded, an automatic message (threshold crossing alert) is generated. Threshold setting for multiple parameters or time periods requires multiple SET-TH commands to the operating system.

Setting a threshold to zero will disable threshold crossing alerts (TCAs) from being generated for the corresponding monitored parameter and accumulation bin. Only non-zero thresholds are displayed by RTRV-TH commands.

### Security level

Level 2

### Input syntax

```
SET-TH-WAN: [TID] :AID:CTAG: :MONTYPE, THLEV, [LOCN] , [DIRN] ,
[TPMER] ;
```

**Table 12-290**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	Access identifier. The facility to which the threshold applies.
CTAG	Correlation tag
MONTYPE	The particular monitored parameter for which the threshold level is being set
THLEV	The desired threshold level to be set for MONTYPE
LOCN	The location where the monitored parameter originates, and refers to the entity identified by the AID
DIRN	The direction which the monitored parameter applies, and is relative to the entity identified by the AID
TPMER	The accumulation time period for the PM information

**Table 12-291**  
**AID descriptions**

AID type	Command-specific values	Purpose
WAN AID	WAN-slot#-port# WAN-slot#-ALL WAN-ALL	Identify the WAN facilities where slot# = 3 to 10 port # = 1 or 2
	DFLT	Default threshold setting

**Table 12-292**  
**Parameter descriptions**

Parameter	Possible values	Description
MONTYPE	ES SES UAS INFRAMES INFRAMESERR ALL	Errored Seconds Severely Errored Seconds Unavailable Seconds In Frames In Frames Errored All applicable MONTYPES: valid only with THLEV of DFLT, and TMPER of ALL
THLEV	0 10 digit number DFLT	Disable threshold Restricted by MONTYPE and TMPER Set to default threshold; valid only with TMPER of ALL; cannot be used if AID type is DFLT
LOCN	null NEND FEND ALL	Default: All applicable locations Near end Far end All applicable locations
DIRN	null TRMT RCV ALL	Default: All applicable directions Transmit direction only Receive direction only All applicable directions
TMPER	null 15-MIN 1-DAY 1-UNT ALL Grouping allowed	Default: equivalent to 15-MIN 15-minute interval 1-day interval Untimed interval All intervals

**Example input**

Set the threshold for near-end receive errored seconds at 100 for the 15-minute accumulation period for the WAN facility in slot 9 port 3:

```
SET-TH-WAN:SEATTLE:WAN-9-3:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set the default threshold for near-end receive errored seconds at 100 for the 15-minute accumulation period:

```
SET-TH-WAN:NEWYORK:DFLT:CTAG12::CVL,100,NEND,RCV,15-MIN;
```

Set all WAN thresholds to defaults:

```
SET-TH-WAN:SEATTLE:ALL:CTAG12::ALL,DFLT,,ALL;
```

---

## TARP detailed command descriptions

---

This chapter is an alphabetical summary of the TL1 commands related to TARP provisioning. 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.

Command	Page
<a href="#">ED-TARP-CONFIG</a>	<a href="#">13-2</a>
<a href="#">ED-TARP-TBL</a>	<a href="#">13-5</a>
<a href="#">OPR-TARP-TEF</a>	<a href="#">13-7</a>
<a href="#">RTRV-TARP-CONFIG</a>	<a href="#">13-9</a>
<a href="#">RTRV-TARP-TBL</a>	<a href="#">13-11</a>

## ED-TARP-CONFIG

The Edit TARP Configuration command is used to configure the (TARP) processor parameters as required.

*Note:* The Target Identifier Address Resolution Protocol (TARP) is a protocol used by TL1 managed network elements to convert TL1 target identifiers (TIDs) into network service access point (NSAPs).

### Security level

Level 3

### Input syntax

```
ED-TARP-CONFIG: [TID] ::CTAG::OPERATION: [TMODE=Domain]
[,NSEL=Domain] [,LIFE=Domain] [,PTYPE=Domain] [,SEQ=Domain]
[,THROTTLE=Domain] [,T1=Domain] [,T3=Domain] [,LDBFLUSH=Domain]
[,TDCFLUSH=Domain] [,LDBELIFE=Domain];
```

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

**Table 13-1**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
OPERATION	Configuration operation. See Parameter descriptions.
TMODE	TARP mode
NSEL	Network selector
LIFE	PDU lifetime
PTYPE	Protocol address type
SEQ	PDU sequence number
THROTTLE	Throttle and period
T1	TARP type 1 request period
T3	Address resolution request waiting period
LDBFLUSH	Loop detection buffer flush
TDCFLUSH	TARP data cache flush
LDBELIFE	Loop detection buffer entry life

**Table 13-2**  
**Parameter descriptions**

Parameter	Possible values	Description
OPERATION	SET RESET RESETALL	SET: Set parameters specified in configuration operation. Supply at least one keyword-defined parameter. RESET: Reset parameters specified in configuration operation to default values by specifying only the keyword. RESETALL: Reset all parameters to default values.
TMODE	PROPAGATION ORINATION BOTH NONE	TARP mode Default: Both propagation and origination
NSEL	String of 2 hexadecimal digits null	Network selector Default: AF for CLNP type of address
LIFE	0 to 65535 null	PDU lifetime. A integer value from 0 to 65535 (hops) Default: 100 hops
PTYPE	String of 2 hexadecimal digits null	Protocol address type Default: FE for CLNP
SEQ	0 to 65535 null	PDU sequence number. A integer value from 0 to 65535 ( number of hops) Default: 100 hops
THROTTLE	Throttle = 0 .. 32767 Period = 1 .. 32767 null	Throttle and period. A decimal number grouping. Throttle (integer) is the maximum number of PDUs processed within the time of interval period (second) Throttle default: 300 Period default: 2 An example is: THROTTLE=300&2
T1	0 to 3600 null	TARP type 1 request waiting period A integer value from 0 to 3600 seconds Default: 15 seconds

## 13-4 TARP detailed command descriptions

---

**Table 13-2 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
T3	0 to 3600  null	Address resolution request response waiting period A integer value from 0 to 3600 seconds Default: 40 seconds
LDBFLUSH	0 to 1440  null	Loop detection buffer flush A integer value from 0 to 1440 minutes Default: 5 minutes
TDCFLUSH	0 to 1440  null	TARP data cache flush A integer value from 0 to 1440 minutes Default: 1440 minutes
LDBELIFE	1 to 10  null	Loop detection buffer entry life A integer value from 1 to 10 minutes Default: 5 minutes

**Example input**

Reset the TMODE and T1 parameter to the default on network element NEWYORK:

```
ED-TARP-CONFIG:NEWYORK::CTAG123::RESET:TMODE=, T1=;
```

## ED-TARP-TBL

The Edit TARP Tables command is used to edit the disabled adjacency table (DAT), disabled circuit/port table (DCT), loop detection buffer (LDB), manual adjacency table (MAT), and TARP data cache (TDC).

### Security level

Level 3

### Input syntax

```
ED-TARP-TBL: [TID] : :CTAG: :TABLE, OPERATION: [LDBENTRY=Domain]
[, TDCENTRY=Domain] [, MATENTRY=Domain] [, DATENTRY=Domain]
[, DCTENTRY=Domain];
```

**Table 13-3**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TABLE	TARP Table CDAT - Disabled adjacency table DCT - Disabled circuit/port table LDB - Loop detection buffer MAT - Manual adjacency table TDC - TARP data cache
OPERATION	TARP Operation ADD - Adds a new entry operation DEL - Deletes an entry operation FLUSH - Flushes the table
LDBENTRY	Loop detection buffer entry
TDCENTRY	TARP Data cache entry
MATENTRY	Manual adjacency table entry
DATENTRY	Disabled adjacency table entry
DCTENTRY	Disabled circuit/port table entry

**Table 13-4  
Parameter descriptions**

Parameter	Possible values	Description
LDBENTRY	12 digit hexadecimal string 0-65535	Loop detection buffer entry System ID and SEQ System ID SEQ (sequence number)
TDCENTRY	string of up to 20 characters hexadecimal number up to 40 digits	TARP data cache entry TID and NSAP TID NSAP a number including a maximum of 40 hexadecimal digits
MATENTRY	hexadecimal number up to 40 digits 12 digit hexadecimal string	Manual adjacency table entry NSAP or System ID NSAP is a number including a maximum of 40 hexadecimal digits System ID is a 12 hexadecimal digit number
DATENTRY	hexadecimal number up to 40 digits 12 digit hexadecimal string	Disabled adjacency table entry NSAP or System ID NSAP is a number including a maximum of 40 hexadecimal digits SystemID is a 12 hexadecimal digit number
DCTENTRY	LAN0, DCC-3, DCC-4, DCC-5, DCC-6, DCC-7, DCC-8, DCC-9, DCC-10, DCC-11, DCC-12	Disabled circuit/port table entry
<p><b>Note:</b> Add or delete the parameter(s) from the specified TABLE. Either parameter is mandatory if the OPERATION is either ADD or DEL. If OPERATION is FLUSH, the parameter(s) is ignored and all entries on the specified TABLE are deleted.</p>		

**Example input**

Delete all entries from LDB table:

```
ED-TARP-TBL:OTTAWA::CTAG12::LDB,FLUSH;
```

## OPR-TARP-TEF

The Operate TARP TEF (TARP Echo Function) command is used to support TEF for troubleshooting. It is similar to the ping function in the IP network.

### Security level

Level 3

### Input syntax

```
OPR-TARP-TEF: [TID] ::CTAG::ADDRTYPE, ADDRESS:
[ITERATION=Domain] [,RATE=Domain] [,TIMEOUT=Domain];
```

**Table 13-5**  
**Syntax definitions**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
ADDRTYPE	Remote address type can be TL1 System Identifier Type Address (TID) or Network Service Access Point Address Type (NSAP)
ADDRESS	ADDRESS is the value of ADDRTYPE. If ADDRTYPE is TID, ADDRESS is a string with a maximum of 20 characters. (the SID name) If ADDRTYPE is NSAP, ADDRESS is a hexadecimal number with a maximum of 40 digits. (the NSAP number)
ITERATION	Number TARP Type 5 messages to be transmitted
RATE	Rate of sent requests
TIMEOUT	Maximum echo waiting period

**Table 13-6  
Parameter descriptions**

Parameter	Possible values	Description
ITERATION	Integer from 1 to 65535 null	Iterations of number TARP Type 5 messages to be transmitted Default: 1
RATE	Integer from 1000 to 180000 null	Rate of sent requests A decimal number that ranges from 1000 to 180000 msec Wait for a response before sending each request (in milliseconds) Default: 1000
TIMEOUT	Integer from 1000 to 180000 null	The maximum time to wait for a response to each echo request (in milliseconds) A decimal number that ranges from 1000 to 180000 msec Default: 1500

**Input example**

OPR-TARP-TEF:OTTAWA::CTAG12::TID,NEWYORK;

**Example output**

Perform a TARP-TEF:

TEF:SEQ=1,TID=NEWYORK,NSAP=490000000075D0082E00,TIME=70  
TEF:SENT 1, RECEIVED 1,MTNTM/AVETM/MAXTM=70/70/70, SUCCESS=100%

**Table 13-7  
Response parameter descriptions**

Parameter	Possible value	Description
TEF	A string with a maximum of 20 characters	TARP echo function indicator
SEQ	A decimal number	Sequence number
TID	A string with a maximum of 20 characters	Target identifier
NSAP	A number with a maximum of 40 hexadecimal digits	NSAP
TIME	A decimal number	Response time in milliseconds

## RTRV-TARP-CONFIG

The Retrieve TARP Configuration command is used to retrieve all the TARP configuration parameters.

### Security level

Level 1

### Input syntax

```
RTRV-TARP-CONFIG: [TID] : : CTAG;
```

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

**Table 13-8**  
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

### Example input

Retrieve the TARP configuration parameter for network element NEWYORK:

```
RTRV-TARP-CONFIG:NEWYORK: : CTAG12;
```

### Response block syntax

```
<SID><DATE><TIME>  
<TMODE=Domain>, <TID=Domain>, <NSAP=Domain>, <NSEL=Domain>,  
<SEQ=Domain>, <PTYPE=Domain>, <LIFE=Domain>, <THROTTLE=Domain>,  
<T1=Domain>, <T3=Domain>, <LDBFLUSH=Domain>, <TDCFLUSH=Domain>,  
<LDBELIFE=Domain>
```

**Table 13-9**  
Response parameter descriptions

Parameter	Possible values	Description
TMODE	PROPAGATION ORIGINATION BOTH NONE	TARP mode
TID	A string with a maximum of 20 characters	Target identifier
NSAP	A number including a maximum of 40 hexadecimal digits	NSAP
NSEL	A number including 2 hexadecimal digits	Network selector

**Table 13-9 (continued)**  
**Response parameter descriptions**

Parameter	Possible values	Description
SEQ	A decimal number that ranges from 0 to 65535	PDU sequence number
PTYPE	A number including 2 hexadecimal digits	Protocol address type
LIFE	A decimal number that ranges from 0 to 65535  Default: 100 hops	PDU lifetime
THROTTLE	A decimal number grouping  An example is: THROTTLE=300&2	Throttle and period  Throttle (integer) is the maximum number of PDUs processed within the time of interval period (second)
T1	A decimal number that ranges from 0 to 3600	TARP type 1 message response waiting period
T3	A decimal number that ranges from 0 to 3600	Address resolution request response waiting period
LDBFLUSH	A decimal number that ranges from 0 to 1440  Default: 5 minutes	Loop detection buffer flush
TDCFLUSH	A decimal number that ranges from 0 to 1440  Default: 1440 minutes	TARP data cache flush
LDBELIFE	A decimal number that ranges from 1 to 10  Default: 5 minutes	Loop detection buffer entry life

## RTRV-TARP-TBL

The Retrieve TARP Tables command is used to retrieve the contents of the computed TARP adjacency (ADJ), disabled adjacency table (DAT), disabled circuit/port table (DCT), loop detection buffer (LDB), manual adjacency table (MAT), and TARP data cache (TDC).

### Security level

Level 1

### Input syntax

```
RTRV-TARP-TBL: [TID] :: CTAG: : TABLE;
```

**Table 13-10**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TABLE	<p style="text-align: center;">TARP Table</p> ADJ - Computed TARP adjacency DAT - Disabled adjacency table DCT - Disabled circuit/port table LDB - Loop detection buffer MAT - Manual adjacency table TDC - TARP data cache

### Example input

Retrieve the TARP table ADJ on network element OTTAWA:

```
RTRV-TARP-TBL: OTTAWA: : CTAG12: : ADJ;
```

### Response block syntax

```
<SID><DATE><TIME>  
<ADJ>, <DAT>, <DCT>, <LDB>, <MAT>, <TDC>
```

## 13-12 TARP detailed command descriptions

### Example output

```

OTTAWA 02-05-04 11:47:06
CTAG COMPLD
" NSAP/SystemID      Port ID
"-----"
" 000075D04872      LAN --- router      "
" 000075DE4D82      LAN --- router      "
" 000075DE2DB7      LAN --- router      "
" 000075DE2EBF      LAN --- router      "
" 000075DE3764      LAN --- router      "
" 000075D01664      LAN --- router      "
" 000075DE3DBC      LAN --- router      "
" 000075D017CC      LAN --- router      "
" 000075D06FA8      LAN --- router      "
" 000075DE221D      LAN --- router      "
" 000075D00E12      LAN --- router      "
" 000075D04BB2      LAN --- router      "
" 000075D04C79      DCC-8                "

```

**Table 13-11**  
Response parameter descriptions

Table	Parameter	Value
ADJ	NSAP SystemID PORT ID	Up to 40 hexadecimal digit numbers A 12 hexadecimal digit number LAN LAN-ROUTER DCC-ROUTER DCC-3, DCC-4, DCC-5, DCC-6, DCC-7, DCC-8, DCC-9, DCC-10, DCC-11, DCC-12
DAT	NSAP SystemID	Up to 40 hexadecimal digit numbers A 12 hexadecimal digit number
DCT	Port ID	LAN LAN-ROUTER DCC-ROUTER DCC-3, DCC-4, DCC-5, DCC-6, DCC-7, DCC-8, DCC-9, DCC-10, DCC-11, DCC-12
LDB	System ID SeqNumber	A 12 hexadecimal digit number A decimal number
MAT	NSAP SystemID	Up to 40 hexadecimal digit numbers A 12 hexadecimal digit number
TDC	TID NSAP	A string of up to 20 characters Up to 40 hexadecimal digit numbers

---

## TBOS detailed command descriptions

---

This chapter is an alphabetical summary of the TL1 commands related to the telemetry byte-oriented serial feature (TBOS). 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.

Command	Page
<a href="#">RTRV-TBOS</a>	<a href="#">14-2</a>
<a href="#">SET-TBOS</a>	<a href="#">14-4</a>

## RTRV-TBOS

The Retrieve TBOS command returns a report with a standard header and a display array listing current assignments of all assigned network elements in the TBOS span of control by TBOS page number. TBOS page numbers are previously assigned using the [SET-TBOS](#) command.

Adjacent will be TID and columns indicating critical, major, and minor alarms, columns for the first four (or four most important) environmental alarms, and a remote alarm column. The RTRV-TBOS command is a powerful tool for monitoring network conditions.

The single-ended TBOS feature is a simple and powerful remote surveillance tool, independent of whether an actual TBOS link is used.

For example, in a four-node ring, the head-end network element can be provisioned to monitor all four network elements in the ring using the [SET-TBOS](#) command. Alarms activating the remote (RM) LED on the office alarm contact of the head-end network element can be retrieved by entering the RTRV-TBOS command at that network element. This gives an alarm summary of all four network elements in the ring. Often, this information will require you to log in to a remote network element with outstanding alarms for further diagnostics.

*Note:* Only the head-end network element can display the TBOS array.

### Security level

Level 1

### Input syntax

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

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

**Table 14-1**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

### Example input

Retrieve TBOS for a network span whose head end is NEWYORK:

```
RTRV-TBOS : NEWYORK : : CTAG23 ;
```

**Response block syntax**

```
DISPLAYSID C M m E2 E3 E4 RM
```

```
-----
```

```
[^]+ <display> [^]+ <sid> [ ^<*.|.|?>]+
```

**Example normal response**

```
SID yy-mm-dd hh:mm:ss
M CTAG23 COMPLD
"DISPLAY      SID C M m E2 E3 E4 RM "
"-----"
"  1  NEWYORK  .  .  *  *  .  .  .  *  "
"  2  SYRACUSE .  *  .  .  .  .  .  .  "
"  3  ROCHESTER .  .  .  .  .  .  .  .  "
"  4  BOSTON1  ?  ?  ?  ?  ?  ?  ?  ?  "
;
```

In the sample report, adjacent to each SID (source identifier) are columns containing periods (.), asterisks (\*), or question marks (?). Each column is used to indicate a condition. A period indicates normal status.

The asterisks under the display header row symbols C, M, m, E2, E3, E4, and RM, correspond to alarm conditions at each network element. These represent critical, major and minor alarms, the first four environmental alarms in numeric order, and the remote alarm indicator, respectively. The name in each row under SID identifies the SID of the network element.

Question marks show that the network element has not been found in the TBOS traffic flow. The network element might not be found if

- the network element is not functioning
- the network element cannot be reached
- the SID has been changed but not updated in the TBOS display page
- the SID contains special or lowercase characters (TBOS only recognizes uppercase characters)

## SET-TBOS

The Set TBOS command sets up the TBOS display number associated with a particular network element, to enable single-ended TBOS operations.

This means that one network element in a TBOS span of control is designated the head-end network element. From the head-end network element the [RTRV-TBOS](#) command can be used to monitor the conditions of all other network elements that have been assigned a TBOS page number.

Each network element being monitored by TBOS has half a display (32 data bits instead of 64). Therefore, the traditional 8 displays for standard TBOS become 16 displays.

If the SID is changed then the new name will not be recognized by the TBOS display mapper. To reassign the network element to the correct TBOS display number, use the SET-TBOS command.

*Note:* This command is also used to delete TBOS mapping assignments. See the procedure for deleting TBOS mapping assignments in *Network Surveillance*, 323-1059-520.

### Security level

Level 3

### Input syntax

```
SET-TBOS : [TID] : AID : CTAG : : [SID] ;
```

*Note:* The SID field is not used when deleting a TBOS mapping assignment.

**Table 14-2**  
**Syntax definition**

Field	Purpose
TID	Target identifier
AID	The display number assigned in the TBOS display, from 1 to 16
CTAG	Correlation tag
SID	The system identifier of the network element associated with the AID. One to 20 alphanumeric characters or a text string enclosed within quotations. (for example, BUILDING6A, "Toronto").

**Example input**

A TBOS link has been established to the network element with SID of NEWYORK. Four commands are entered telling NEWYORK that it is responsible for the surveillance of four different network elements.

```
SET-TBOS:NEWYORK:1:CTAG12::NEWYORK;
```

```
SET-TBOS:NEWYORK:2:CTAG23::SYRACUSE;
```

```
SET-TBOS:NEWYORK:3:CTAG34::ROCHESTER;
```

```
SET-TBOS:NEWYORK:4:CTAG45::BOSTON1;
```

The RTRV-TBOS command will display the following:

```

SID yy-mm-dd hh:mm:ss

M CTAG12 COMPLD

"DISPLAY      SID C M m E2 E3 E4 RM "

"-----
- "

"  1  NEWYORK  .  .  *  *  .  .  .  *
"

"  2  SYRACUSE .  *  .  .  .  .  .

```

**Note:** The series of question marks at BOSTON1 indicate that TBOS is unable to connect to the remote node. Such a state causes a TBOS connection failure alarm to be raised. Every 30 seconds, TBOS retries the connection. If the connection is established, the alarm clears automatically. The alarm is also cleared if the connection at BOSTON1 is deleted.

Delete the TBOS connection at the remote node BOSTON1:

```
SET-TBOS:NEWYORK:4:CTAG12::;
```

**Note 1:** The SID field is left blank when deleting a TBOS mapping assignment.

**Note 2:** TBOS mapping connections can only be deleted from the head-end network element.

**Note 3:** The TID must match the head-end TID in the TBOS mapping assignment table retrieved.



---

# Test access detailed command descriptions

---

This chapter is an alphabetical summary of the TL1 commands related to test access. 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.

<b>Command</b>	<b>Page</b>
CHG-ACCMD-STS1	15-3
CHG-ACCMD-STS3C	15-6
CHG-ACCMD-STS12C	15-8
CHG-ACCMD-STS24C	15-10
CHG-ACCMD-STS48c	15-12
CHG-ACCMD-T1	15-14
CHG-ACCMD-T3	15-16
CHG-ACCMD-VT1	15-18
CONN-TACC-STS1	15-20
CONN-TACC-STS3C	15-23
CONN-TACC-STS12C	15-25
CONN-TACC-STS24C	15-27
CONN-TACC-STS48C	15-29
CONN-TACC-T1	15-31
CONN-TACC-T3	15-33
CONN-TACC-VT1	15-36
DISC-TACC	15-39

## 15-2 Test access detailed command descriptions

---

<b>Command</b>	<b>Page</b>
<a href="#">REPT-INITZN</a>	15-41
<a href="#">REPT-STAT</a>	15-42
<a href="#">RTRV-TACC</a>	15-43

## CHG-ACCMD-STS1

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a STS-1 facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-STS1](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-STS1](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-STS1](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2](#).

**Table 15-1**  
Supported mode transitions

From/To	MONE	MONF	MONEF	SPLTE	SPLTF	SPLTEF	SPLTA
<b>MONE</b>		Yes	No	Yes	Yes	No	Yes
<b>MONF</b>	Yes		No	Yes	Yes	No	Yes
<b>MONEF</b>	No	No		No	No	Yes	No
<b>SPLTE</b>	Yes	Yes	No		No	No	No
<b>SPLTF</b>	Yes	Yes	No	No		No	No
<b>SPLTEF</b>	No	No	Yes	No	No		No
<b>SPLTA</b>	Yes	Yes	No	No	No	No	

**Table 15-2**  
Supported test access cross-connect types (split mode)

Cross-connect type/Mode	SPLTE	SPLTF	SPLTEF	SPLTA
<b>1WAY (Unidirectional)</b>	No	No	No	Yes
<b>2WAY (Bidirectional)</b>	Yes	Yes	Yes	Yes
<b>1WAYPR (Unidirectional Path Ring)</b>	No	No	No	No
<b>2WAYPR (Bidirectional Path Ring)</b>	Yes	No	No	No
<b>2WAYBR (Bidirectional Bridge Ring)</b>	Yes	No	No	No
<b>FFP (Facility Protection Group)</b>	Yes	No	No	No

**Security level**

Level 3

**Input syntax**

CHG-ACCMD-STS1 : [TID] : TAP Aid : CTAG : : MODE ;

**Table 15-3  
Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAP Aid	Test access port access identifier. STS-1 to act on.
MODE	Mode of test access session

**Table 15-4  
AID descriptions**

TAP Aid type	Possible values	Description
STS-1 Facility AID	EC1-slot#-port#	slot# = 3 to 10 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	DS3-slot#-port#	slot# = 3, 5, 7 or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1 to 48

**Table 15-5**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end.
	MONF	Monitor receive path at “to” end.
	MONEF	Monitor receive path at both “from” and “to” ends.
	SPLTE	Split path at “from” end.
	SPLTF	Split path at “to” end.
	SPLTEF	Split path at both “from” and “to” ends.
	SPLTA	Split forward path

**Example input**

Transition from the monitor test access mode to the split test access mode on the receive path at the “from end” or originating point of the path on an STS-1 facility.

```
CHG-ACCMD-STS1:NEWYORK:DS3-5-3:CAKE23::SPLTE;
```

## CHG-ACCMD-STS3C

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a STS-3c facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-STS3C](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-STS3C](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-STS3C](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

```
CHG-ACCMD-STS3C: [TID] :TAP Aid:CTAG: :MODE;
```

**Table 15-6**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAP AID	Test access port access identifier. STS-3c to act on.
MODE	Mode of test access session

**Table 15-7**  
**AID descriptions**

TAPAID type	Possible values	Description
STS-3c Facility AID	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 10 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1,4,7,10
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1,4,7, ... 46

**Table 15-8**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end.
	MONF	Monitor receive path at “to” end.
	MONEF	Monitor receive path at both “from” and “to” ends.
	SPLTE	Split path at “from” end.
	SPLTF	Split path at “to” end.
	SPLTEF	Split path at both “from” and “to” ends.
	SPLTA	Split forward path

**Example input**

Transition from the monitor test access mode to the split test access mode on the receive path at the “from end” or originating point of the path on an STS-3c facility.

```
CHG-ACCMD-STS3C:NEWYORK:OC3-5-3-1:CAKE23::SPLTE;
```

## CHG-ACCMD-STS12C

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a STS-12c facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-STS12C](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-STS12C](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-STS12C](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

```
CHG-ACCMD-STS12C: [TID] : TAPaid : CTAG : : MODE ;
```

**Table 15-9**  
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAPaid	Test access port access identifier. STS-12c to act on.
MODE	Mode of test access session

**Table 15-10**  
AID descriptions

TAPaid type	Possible values	Description
STS-12c Facility AID	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-port#-sts#	slot# = 3 to 10 port# = 1 to 4 sts# = 1, 13, 25, 37

**Table 15-11**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end.
	MONF	Monitor receive path at “to” end.
	MONEF	Monitor receive path at both “from” and “to” ends.
	SPLTE	Split path at “from” end.
	SPLTF	Split path at “to” end.
	SPLTEF	Split path at both “from” and “to” ends.
	SPLTA	Split forward path

**Example input**

Transition from the monitor test access mode to the split test access mode on the receive path at the “from end” or originating point of the path on an STS-12c facility.

```
CHG-ACCMD-STS12C:NEWYORK:OC12-3-1-1:CAKE23::SPLTE;
```

## CHG-ACCMD-STS24C

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a STS-24c facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-STS24C](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-STS24C](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-STS24C](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

CHG-ACCMD-STS24C: [TID] : TAPaid : CTAG : : MODE ;

**Table 15-12**  
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAPaid	Test access port access identifier. STS-24c to act on.
MODE	Mode of test access session

**Table 15-13**  
AID descriptions

TAPaid type	Possible values	Description
STS-24c Facility AID	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1, 25

**Table 15-14**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at "from" end.
	MONF	Monitor receive path at "to" end.
	MONEF	Monitor receive path at both "from" and "to" ends.
	SPLTE	Split path at "from" end.
	SPLTF	Split path at "to" end.
	SPLTEF	Split path at both "from" and "to" ends.
	SPLTA	Split forward path

**Example input**

Transition from the monitor test access mode to the split test access mode on the receive path at the "from end" or originating point of the path on an STS-24c facility.

```
CHG-ACCMD-STS24C:NEWYORK:OC48-5-1:CAKE23::SPLTE;
```

## CHG-ACCMD-STS48c

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a STS-48c facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-STS48C](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-STS48c](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-STS48c](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

CHG-ACCMD-STS48C: [TID] : TAPAID : CTAG : : MODE ;

**Table 15-15**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAPAID	Test access port access identifier. STS-48c to act on.
MODE	Mode of test access session

**Table 15-16**  
**AID descriptions**

TAPAID type	Possible values	Description
STS-48c Facility AID	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1

**Table 15-17**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end.
	MONF	Monitor receive path at “to” end.
	MONEF	Monitor receive path at both “from” and “to” ends.
	SPLTE	Split path at “from” end.
	SPLTF	Split path at “to” end.
	SPLTEF	Split path at both “from” and “to” ends.
	SPLTA	Split forward path

**Example input**

Transition from the monitor test access mode to the split test access mode on the receive path at the “from end” or originating point of the path on an STS-48c facility.

```
CHG-ACCMD-ST548C:NEWYORK:OC48-3-1:CAKE23::SPLTE;
```

## CHG-ACCMD-T1

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a DS1 facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-T1](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-T1](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-T1](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

```
CHG-ACCMD-T1 : [TID] : TAPAID : CTAG : : MODE ;
```

**Table 15-18**  
Syntax definition

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAPAID	Test access port access identifier. DS1 to act on.
MODE	Mode of test access session

**Table 15-19**  
AID descriptions

TAPAID type	Possible values	Description
DS1 AID	DS1-slot#-port#	slot# =4 to 10, port# =1 to 12
DS3V AID	DS1-slot#-port#-t1#	slot# = 3 to 10, port# = 1 to 12 t1# = 1 to 28
DSM AID	DS1-1-port#-%HLINK-OC3-hslot#-hport#	port# = 1 to 84, hslot# = 3 to 10 hport# = 1 to 4

**Table 15-19**  
**AID descriptions**

TAP AID type	Possible values	Description
VT1.5 facility AID	EC1-slot#-port#-vtg#-vt#	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7, vt# = 1 to 4
OC3 AID	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 AID	OC12-slot#-port#-sts#-vtg#-vt#	slot# = 3 to 10 port# = 1 sts# = 1 to 12 vtg# = 1 to 7, vt# = 1 to 4

**Table 15-20**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at "from" end.
	MONF	Monitor receive path at "to" end.
	MONEF	Monitor receive path at both "from" and "to" ends.
	SPLTE	Split path at "from" end.
	SPLTF	Split path at "to" end.
	SPLTEF	Split path at both "from" and "to" ends.
	SPLTA	Split forward path

**Example input**

Transition from the split test access mode to the monitor test access mode on the receive path at the "to end" or end point of the path on a DS-1 facility.

```
CHG-ACCMD-T1:NEWYORK:DS1-10-3:CAKE23::MONF;
```

## CHG-ACCMD-T3

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a DS-3 facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-T3](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-T3](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-T3](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

CHG-ACCMD-T3 : [TID] : TAPAID : CTAG : : MODE ;

**Table 15-21**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAPAID	Test access port access identifier. DS3 to act on.
MODE	Mode of test access session

**Table 15-22**  
**AID description**

TAPAID type	Possible values	Description
T3 Facility AID	EC1-slot#-port#	slot# = 3 to 10, port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	DS3-slot#-port#	slot# = 3,5,7,9, port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 sts# = 1 to 12
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1 to 48

**Table 15-23**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end.
	MONF	Monitor receive path at “to” end.
	MONEF	Monitor receive path at both “from” and “to” ends.
	SPLTE	Split path at “from” end.
	SPLTF	Split path at “to” end.
	SPLTEF	Split path at both “from” and “to” ends.
	SPLTA	Split forward path.

**Example input**

Transition from the split test access mode to the monitor test access mode on the receive path at the “to end” or end point of the path on a DS-3 facility.

```
CHG-ACCMD-T3:NEWYORK:DS3-9-3:CAKE23::MONF;
```

## CHG-ACCMD-VT1

The Change Access Mode command is used to transition from a monitor test access session to a split test access session on a VT1.5 facility.

All connections should be monitored before splitting the connection. After successful completion of the [CONN-TACC-VT1](#) command, the test access session is in the monitor state and can be split with the [CHG-ACCMD-VT1](#) command.

Once the test access session is in the split state, it can be either disconnected with [DISC-TACC](#) command or set back to the monitor state using the [CHG-ACCMD-VT1](#) command.

*Note:* For a listing of supported mode transitions, see [Table 15-1 on page 15-3](#). For a listing of supported cross-connect types for split test access sessions, see [Table 15-2 on page 15-3](#).

### Security level

Level 3

### Input syntax

```
CHG-ACCMD-VT1 : [TID] : TAP Aid : CTAG : : MODE ;
```

**Table 15-24**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag
TAP AID	Test access port access identifier. VT1.5 to act on.
MODE	Mode of test access session

**Table 15-25**  
**AID description**

TAP AID type	Possible values	Description
VT1.5 facility AID	DS1-slot#-port#	slot# =4 to 10, port# =1 to 12
	DS1-slot#-port#-t1#	slot# = 3 to 10, 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
	EC1-slot#-port#-vtg#-vt#	slot# = 3 to 10 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 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#	slot# = 3 to 10 port# = 1 sts# = 1 to 12 vtg# = 1 to 7, vt# = 1 to 4

**Table 15-26**  
**Parameter descriptions**

Parameter	Possible values	description
MODE	MONE	Monitor receive path at "from" end.
	MONF	Monitor receive path at "to" end.
	MONEF	Monitor receive path at both "from" and "to" ends.
	SPLTE	Split path at "from" end.
	SPLTF	Split path at "to" end.
	SPLTEF	Split path at both "from" and "to" ends.
	SPLTA	Split forward path

**Example input**

Transition from the split test access mode to the monitor test access mode on the receive path at the "to end" or end point of the path.

```
CHG-ACCMD-VT1:NEWYORK:DS1-10-3:CAKE23::MONF;
```

## CONN-TACC-STs1

The Connect Test Access Cross-Connect command is used to provision a test access session for a STS-1 facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27](#).

**Table 15-27**  
Supported test access cross-connect types (monitor mode)

Cross-connect type	MONE (FromAid)	MONF (ToAid)	MONEF (FromAid & ToAid)
1WAY (Unidirectional)	Yes	No	No
2WAY (Bidirectional)	Yes	Yes	Yes
1WAYPR (Unidirectional Path Ring)	Yes	No	No
2WAYPR (Bidirectional Path Ring)	Yes	No	No
2WAYBR (Bidirectional Bridge Ring)	Yes	No	No
FFP (Facility Protection Group)	Yes	No	No

### Security level

Level 3

### Input syntax

```
CONN-TACC-STs1 : [TID] : FromAID : CTAG : : TAPAID : MODE [ : : LASSO ] ;
```

**Table 15-28**  
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. STS-1 to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-29**  
**AID descriptions**

AID type	Possible values	Description
FromAID	DS3-slot#-port#	slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	EC1-slot#-port#	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 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1 to 48
	OC192-slot#-sts#	slot# = 11 or 12 sts# = 1 to 192
TAPAID	EC1-slot#-port#	slot# = 3 to 10 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	DS3-slot#-port#	slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1 to 48

**Table 15-30**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a STS-1 facility. In this example the test access connection will be dropped if a loss of association occurs.

```
CONN-TACC-STS1:MYTOWN:OC3-3-1-1:MYTAG::DS3-3-1:MONE::Y;
```

## CONN-TACC-ST3C

The Connect Test Access Cross-Connect command is used to provision a test access session for a STS-3c facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

```
CONN-TACC-ST3C: [TID] :FromAID:CTAG::TAPAID:MODE [::LASSO] ;
```

**Table 15-31**  
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. STS-3c to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-32**  
AID descriptions

AID type	Possible values	Description
FromAID	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1
	OC12-slot#-port#-sts#	slot# = 3 to 12 for OC-12 slot# = 3 to 10 for OC-12x4 STS port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 STS sts# = 1 to 12
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1,4,7, ... 46
	OC192-slot#-sts#	slot# = 11 or 12 sts# = 1,4,7, ... 190

**Table 15-32**  
**AID descriptions**

AID type	Possible values	Description
TAPAID	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 10 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 sts# = 1,4,7,10
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1,4,7, ... 46

**Table 15-33**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a STS-3c facility. In this example the test access connection will be dropped if a loss of association occurs.

```
CONN-TACC-STS1:MYTOWN:OC3-3-1-1:MYTAG::OC3-3-1-1:MONE::Y;
```

## CONN-TACC-ST512C

The Connect Test Access Cross-Connect command is used to provision a test access session for a STS-12c facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

```
CONN-TACC-ST512C: [TID] :FromAID:CTAG::TAPAID:MODE [::LASSO] ;
```

**Table 15-34**  
Syntax definition

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. STS-12c to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-35**  
AID descriptions

AID type	Possible values	Description
FromAID	OC12-slot#-port#-sts#	slot# = 3 to 12 port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1,13, 25, 37
	OC192-slot#-sts#	slot# = 11 or 12 sts# = 1,13, 25, ... 181
TAPAID	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-12, 1 to 4 for OC-12x4 STS sts# = 1
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1,13, 25, 37

**Table 15-36**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a STS-12c facility. In this example the test access connection will be dropped if a loss of association occurs.

```
CONN-TACC-ST512C:MYTOWN:OC12-3-1-1:MYTAG::OC12-3-1-1:MONE::Y;
```

## CONN-TACC-STS24C

The Connect Test Access Cross-Connect command is used to provision a test access session for a STS-24c facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

```
CONN-TACC-STS24C: [TID] : FromAID : CTAG : : TAPAID : MODE [ : : LASSO ] ;
```

**Table 15-37**  
**Syntax definition**

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. STS-24c to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-38**  
**AID descriptions**

AID type	Possible values	Description
FromAID	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1, 25
	OC192-slot#-sts#	slot# = 11 or 12 sts# = 1, 25, 49, ...169
TAPAID	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1, 25

**Table 15-39**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a STS-24c facility. In this example the test access connection will be dropped if a loss of association occurs.

```
CONN-TACC-STS24C:MYTOWN:OC48-3-1:MYTAG::OC48-3-1:MONE::Y;
```

## CONN-TACC-ST548C

The Connect Test Access Cross-Connect command is used to provision a test access session for a STS-48c facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

```
CONN-TACC-ST548C: [TID] :FromAID:CTAG: :TAPAID:MODE [ : :LASSO ] ;
```

**Table 15-40**  
**Syntax definition**

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. STS-48c to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-41**  
**AID descriptions**

AID type	Possible values	Description
FromAID	OC48-slot#-sts#	slot# = 3 to 12 sts# = 1
	OC192-slot#-sts#	slot# = 11 or 12 sts# = 1, 49, 97, 145
TAPAID	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1

**Table 15-42**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a STS-48c facility. In this example the test access connection will be dropped if a loss of association occurs.

```
CONN-TACC-ST548C:MYTOWN:OC48-3-1:MYTAG::OC48-3-1:MONE::Y;
```

## CONN-TACC-T1

The Connect Test Access Cross-Connect command is used to provision a test access session for a DS1 facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

```
CONN-TACC-T1 : [TID] : FromAID : CTAG : : TAPAID : MODE [ : : LASSO ] ;
```

**Table 15-43**  
**Syntax definition**

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. DS1 to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-44**  
**AID descriptions**

AID type	Possible values	Description
FromAID	DS1-slot#-port#	slot# = 4 to 10, port# = 1 to 12
	DS1-slot#-port#-t1#	slot# = 3 to 10, 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

**Table 15-44**  
**AID descriptions**

AID type	Possible values	Description
TAPAID	DS1-slot#-port#	slot# = 4 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 10 port# = 1 sts#= 1 to 12, vtg# = 1 to 7, vt# = 1 to 4

**Table 15-45**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a DS1 facility. In this example the test access connection is maintained if a loss of association occurs.

```
CONN-TACC-T1:MYTOWN:DS1-4-1:MYTAG::DS1-5-1:MONE::N;
```

## CONN-TACC-T3

The Connect Test Access Cross-Connect command is used to provision a test access session for a DS3 facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

```
CONN-TACC-T3 : [TID] : FromAID : CTAG : : TAPAID : MODE [ : : LASSO ] ;
```

**Table 15-46**  
**Syntax definition**

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAID	Test access port access identifier. DS3 to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-47**  
**AID description**

AID type	Possible values	Description
FromAID	DS3-slot#-port#	slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e

**Table 15-47**  
**AID description**

AID type	Possible values	Description
TAP Aid	EC1-slot#-port#	slot# = 3 to 10 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12
	DS3-slot#-port#	slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	OC3-slot#-port#-sts#	slot# = 3 to 10 port# = 1 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 sts# = 1 to 12
	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1 to 48

**Table 15-48**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.

**Table 15-48 (continued)**  
**Parameter descriptions**

Parameter	Possible values	Description
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a monitor test access session on the receive path at the “from end” or originating point of the path on a DS3 facility. In this example the test access connection is maintained if a loss of association occurs.

```
CONN-TACC-T3:MYTOWN:DS3-9-3:MYTAG::DS3-9-12:MONE::N;
```

## CONN-TACC-VT1

The Connect Test Access Cross-Connect command is used to provision a test access session for a VT1.5 facility.

*Note:* For a listing of supported cross-connect types for monitor test access sessions, see [Table 15-27 on page 15-20](#).

### Security level

Level 3

### Input syntax

CONN-TACC-VT1 : [TID] : FromAID : CTAG : : TAPAIID : MODE [ : : LASSO ] ;

**Table 15-49**  
**Syntax definition**

Field	Purpose
TID	Target identifier
FromAID	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.
CTAG	Correlation tag
TAPAIID	Test access port access identifier. VT1.5 to act on.
MODE	Mode of test access session
LASSO	Link association

**Table 15-50**  
**AID description**

<b>AID type</b>	<b>Possible values</b>	<b>Description</b>
FromAID	DS1-slot#-port#	slot# = 4 to 10, port# = 1 to 12
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	port# = 1 to 84, hslot# = 3 to 10 hport# = 1 to 4
	EC1-slot#-port#-vtg#-vt#	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7, vt# = 1 to 4
	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
TAPAID	DS1-slot#-port#	slot# = 4 to 10, port# = 1 to 12
	DS1-slot#-port#-t1#	slot# = 3 to 10, 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
	EC1-slot#-port#-vtg#-vt#	slot# = 3 to 10 port# = 1 to 3 for EC-1x3 port# = 1 to 12 for EC-1x12 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#	slot# = 3 to 10 port# = 1 sts# = 1 to 12 vtg# = 1 to 7, vt# = 1 to 4

**Table 15-51**  
**Parameter descriptions**

Parameter	Possible values	Description
MODE	MONE	Monitor receive path at “from” end. Creates a single facility access digroup (FAD) test access session.
	MONF	Monitor receive path at “to” end. Creates a single facility access digroup (FAD) test access session.
	MONEF	Monitor receive path at both “from” and “to” ends. Creates a dual facility access digroup (FAD) test access session.
LASSO	Y	Y for yes Drops the test access connections when the link is dropped.
	N (default)	N for no Test access connections are maintained when the link is dropped.
<p><b>Note:</b> The LASSO parameter only applies when using a Hekimian test set for the test access session. If you are not using a Hekimian test set, the test access session is always maintained when the link is dropped, even if the LASSO parameter is enabled.</p>		

**Example input**

Provision a VT1.5 monitor test access session on the receive path at the “from end” or originating point of the path. In this example the test access connection is dropped if a loss of association occurs.

```
CONN-TACC-VT1:MYTOWN:OC3-7-1-1-1-1:MYTAG::DS1-4-1:MONE::Y;
```

## DISC-TACC

The Disconnect Test Access Cross-Connect command is used to remove individual test access sessions.

### Security level

Level 3

### Input syntax

DISC-TACC: [TID] :TAPAID:CTAG;

**Table 15-52**  
**Syntax definition**

Field	Purpose
TID	Target identifier
TAPAID	Test access port access identifier.
CTAG	Correlation tag

**Table 15-53**  
**AID description**

AID type	Possible values	Description
TAP AID	DS1-slot#-port#	slot# =4 to 10, port# =1 to 12
	DS1-slot#-port#-t1#	slot# = 3, 5, 7, 9, port# = 1 to 12 t1# = 1 to 28
	DS1-1-port#-%HLINK-OC3-h slot#-hport#	port# = 1 to 84, hslot# = 3 to 10 hport# = 1 to 4
	DS3-slot#-port#	slot# = 3, 5, 7, or 9 port# = 1 to 3 for DS3x3 port# = 1 to 12 for DS3x12 or DS3x12e
	EC1-slot#-port#-vtg#-vt#	slot# = 3, 5, 7, 9 port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12 vtg# = 1 to 7, vt# = 1 to 4
	EC1-slot#-port#	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 for OC-3 port# = 1 to 4 for OC-3x4 sts# = 1 to 3
	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#	slot# = 3 to 10 port# = 1 for OC-12 port# = 1 to 4 for OC-12x4 sts# = 1 to 12
	OC12-slot#-port#-sts#- vtg#-vt#	slot# = 3 to 10 port# = 1 sts#= 1 to 12, vtg# = 1 to 7, vt# = 1 to 4
OC48-slot#-sts#	slot# = 3 to 10 sts# = 1 to 48	

**Example input**

Disconnect the path from a test access session.

```
DISC-TACC:MYTOWN:DS1-4-1:MYTAG;
```

## REPT-INITZN

The Report Initialization command is used to release all test access sessions on the network element. This command removes all test access connections and restores previous connections.

### Security level

Level 3

### Input syntax

```
REPT-INITZN: [TID] : :CTAG;
```

**Table 15-54**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

### Example input

Release all test access sessions on network element New York.

```
REPT-INITZN:NEWYORK: :MYTAG;
```

## REPT-STAT

The Report State command is used to check that the association (communication) between the network element and test equipment is alive. An acknowledgement will be sent within 60 seconds.

### Security level

Level 3

### Input syntax

```
REPT-STAT: [TID] : :CTAG;
```

**Table 15-55**  
**Syntax definition**

Field	Purpose
TID	Target identifier
CTAG	Correlation tag

### Example input

Check link association between the test equipment and network element New York.

```
REPT-STAT:NEWYORK: :MYTAG;
```

## RTRV-TACC

The Retrieve Test Access Cross-Connect command is used to retrieve the test access points on the network element.

### Security level

Level 3

### Input syntax

RTRV-TACC: [TID] : [TAPAID] : CTAG: : [ALLTAP] ;

**Table 15-56**

#### Syntax definition

Field	Purpose
TID	Target identifier
TAPAID	Test access port access identifier. VT1.5 to act on.
CTAG	Correlation tag

**Table 15-57**

#### AID description

AID type	Possible values	Description
TAPAID	ALL	Retrieves all provisioned TAPs on the network element (default value)
	DS1-slot#-port#	slot# = 4 to 10, port# = 1 to 12
	DS1-all	Retrieves all slots containing DS1 circuit packs.
	DS1-slot#-port#-t1	slot# = 3 to 10, port# = 1 to 12, t1# = 1 to 28
	DS1-slot#-port#-all	slot# = 3 to 10, port# = 1 to 12, t1# = all
	DS1-1-port#-%HLINK-OC3-hslot#-hport#	port# = 1 to 84, hslot# = 3 to 10, hport# = 1 to 4
	DS1-1-all-%HLINK-OC3-hslot#-hport#	all DS1 ports on DSM, hslot# = 3 to 10, hport# = 1 to 4
	DS1-1-all-%HLINK-OC3-hslot#-hport#	all DS1 ports on DSM, hslot# = 3 to 10, hport# = 1 to 4
	DS3-slot#-port#	slot# = 3,5,7 or 9, port# = 1 to 12
	DS3-slot#-all	slot# = 3,5,7 or 9, retrieves all ports for slot
	DS3-all	Retrieves all provisioned DS3 TAPs on the NE
	EC1-slot#-port#	slot# = 3,5,7 or 9, port# = 1 to 12

**Table 15-57**  
**AID description**

AID type	Possible values	Description
TAPAID	EC1-slot#-port#-vtg#-vt#	slot# = 3, 5, 7 or 9, port # = 1 to 3 for EC-1x3, port # = 1 to 12 for EC-1x12, vtg# = 1 to 7, vt# = 1 to 4
	EC1-slot#-port#-all	slot# = 3, 5, 7, 9, port # = 1 to 3 for EC-1x3 port # = 1 to 12 for EC-1x12, for all vtgs
	EC1-slot#-all	slot# = 3,5,7 or 9, retrieves all ports for slot
	EC1-all	Retrieves all provisioned EC1 TAPs on the NE
	OC3-slot#-port#	slot# = 3 to 10 port# = 1 to 4
	OC3-slot#-port#-vtg#-vt#	slot# = 3 to 10 port# = 1 to 4 vtg# = 1 to 7 vt# = 1 to 4
	OC3-slot#-port#-ALL	slot# = 3 to 10 port# = 1 to 4 All vtgs
	OC3-slot#-ALL	slot# = 3 to 10 All ports
	OC3-ALL	All slots with OC-3 circuit packs
	OC12-slot#-port#	slot# = 3 to 10 port# = 1 to 4
	OC12-slot#-port#-vtg#-vt#	slot# = 3 to 10 port# = 1 vtg# = 1 to 7 vt# = 1 to 4
	OC12-slot#-port#-sts#	slot# = 3 to 10 port# = 1 to 4 sts# = 1 to 12
	OC12-slot#-port#-ALL	slot# = 3 to 10 port# = 1 to 4 All vtgs
	OC12-slot#-ALL	slot# = 3 to 10 All ports
	OC12-ALL	All slots with OC-12 circuit packs
	OC48-ALL	All slots with OC-48 circuit packs

**Table 15-57**  
**AID description**

AID type	Possible values	Description
TAPAID	OC48-slot#-sts#	slot# = 3 to 10 sts# = 1 to 48
	OC48-slot#-ALL	slot# = 3 to 10 All sts
TAPALL	All Active	Retrieves all test access ports or only the active test access ports.

**Example input**

Retrieve all EC-1 test access ports on network element NewYork:

```
RTRV-TACC:NEWYORK:EC1-all:Jam123;
```

**Response block syntax**

```
<SID><DATE><TIME>  
"TAPAID,<MODE=Domain>,<FromAID=Domain>"
```

**Table 15-58**  
**Response parameter descriptions**

Parameter	Parameter values	Description
SID		Source identifier of the network element.
DATE	YY-MM-DD	Date of list retrieval. YY is the last two digits of the year, MM is the month of the year, and DD is the day of the month.
TIME	HH-MM-SS	Time of list retrieval. HH is the hour ranging from 00 to 23, MM is the minute ranging from 00 to 59, and SS is the second ranging from 00 to 59.
TAPAID	See <a href="#">Table 15-57 on page 15-43</a>	Test access ports address identifiers.

**Table 15-58 (continued)**  
**Response parameter descriptions**

Parameter	Parameter values	Description
MODE	MONE	Monitor receive path at “from” end.
	MONF	Monitor receive path at “to” end.
	MONEF	Monitor receive path at both “from” and “to” ends.
	SPLTE	Split path at “from” end.
	SPLTF	Split path at “to” end.
	SPLTEF	Split path at both “from” and “to” ends.
	SPLTA	Split forward path
FromAID	See <a href="#">Table 15-29 on page 15-21</a> , <a href="#">Table 15-44 on page 15-31</a> , <a href="#">Table 15-47 on page 15-33</a> , <a href="#">Table 15-50 on page 15-37</a>	From access identifier. The facility at one end of the cross-connect. The FromAID specifies the signal source.



Nortel Networks

# **OPTera Metro 3500 Multiservice Platform**

TL1 Reference—Part 3 of 4

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