FCC Compliance
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation instructions may cause harmful interference to radio communications.

Canadian Compliance
This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Japanese Compliance
This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

International Declaration of Conformity
We, Turin Networks, Inc. declare under our sole responsibility that the Traverse platform (models: Traverse 2000, Traverse 1600, and Traverse 600) to which this declaration relates, is in conformity with the following standards:

EMC Standards
- EN55022
- EN55024
- CISPR-22

Safety Standards
- EN60950
- CSA 22.2 No. 60950, ASINZS 3260
- IEC 60950 Third Edition. Compliant with all CB scheme member country deviations.


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# TL1 Command Reference Guide

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Chapter 1
TL1 Overview

Introduction
This reference guide is a specification of the Transaction Language 1 (TL1) command language used by the Turin® Traverse® 600/1600/2000 and the TraverseEdge™ 100 (TE-100) systems. Unless specifically described otherwise, the commands apply to both Traverse and TE-100 product lines. These Telcordia documents are the basis for the command and message definition in this document.

- GR-199-CORE - Issue 4
- GR-833-CORE - Issue 4
- TR-NWT-000835 – Issue 3

Scope and Organization
This document covers the TL1 command language for the Traverse and TE-100 product lines. The command language includes the syntax, the commands, and the command responses. The organization of this document is:

- Command Format Conventions describes the syntax of the language.
- Section 1—TL1 Overview and Commands, Chapter 2—“TL1 Commands” defines all input commands, expected responses for retrieval commands, and autonomous messages that the system outputs, due to internal system events.
- Section 4 Generic Output-response Format defines common responses for the commands.
- Appendix A describes the TL1 Gateway model using TransNav NMS.
- Appendix B identifies the performance monitoring type (MONTYPE) monitored by each facility type.
- Appendix C identifies AIDs for system-managed entities.
- Appendix D identifies the card type (CRDTYPE) coding for system cards.
- Appendix E identifies the condition type (CONDTYPE) coding.
- Appendix F shows supported PST and SST for equipment and facility.
- Appendix G shows a listing of error codes the system generates as response to input commands.
- Appendix H shows the commands and messages for the system in object entity categories (equipment, facility, etc.).
- Appendix I shows the time zone values.
Command Format Conventions

**TL1 General Message Syntax**

The TL1 syntax is divided into four basic areas:

- Input command messages from the operations systems (OS) toward a network element (NE).
- Acknowledgments from an NE toward an OS.
- Output response messages from an NE toward an OS.
- Autonomous messages from an NE toward an OS.

**Structure of Input Command**

This section discusses the structure of a TL1 input command message, and the functionality of its component parts. The general structure of a TL1 input message is:

<table>
<thead>
<tr>
<th>Command Code Block</th>
<th>Staging Parameter Blocks</th>
<th>Data Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb</td>
<td>Modifier</td>
<td>TID</td>
</tr>
<tr>
<td>Modifier</td>
<td>AID</td>
<td>CTAG</td>
</tr>
<tr>
<td>Modifier</td>
<td>GEN</td>
<td>Data Blocks</td>
</tr>
</tbody>
</table>

<command code> ::= <verb>-<modifier>-<modifier>[:<tid>][:<aid>][:<ctag>]:[e[:f[:g]]];

* TID: Target Identifier; AID: Access Identifier; CTAG: Correlation Tag

**Command Code Block**

The command code determines the action (i.e., pragmatics) to be taken at the network element (NE) as a result of receiving the input message. The command code begins with a mandatory verb followed by up to two other optional modifiers, each separated by a hyphen.

<command code> ::= <verb>-<modifier>[-<modifier>]

The semantics of the verb are to identify the action to be taken at the NE as a result of receiving a TL1 message from an OS. The valid values are:

<table>
<thead>
<tr>
<th>Verb</th>
<th>Description</th>
<th>Related Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>Activate</td>
<td>CANC</td>
</tr>
<tr>
<td>ALW</td>
<td>Allow</td>
<td>INH</td>
</tr>
<tr>
<td>CANC</td>
<td>Cancel</td>
<td>ACT</td>
</tr>
<tr>
<td>DLT</td>
<td>Delete</td>
<td>ENT</td>
</tr>
<tr>
<td>ENT</td>
<td>Enter</td>
<td>DLT, ED, RTRV</td>
</tr>
<tr>
<td>ED</td>
<td>Edit</td>
<td>ENT, RTRV</td>
</tr>
<tr>
<td>INH</td>
<td>Inhibit</td>
<td>ALW</td>
</tr>
<tr>
<td>INIT</td>
<td>Initiate</td>
<td>-</td>
</tr>
<tr>
<td>OPR</td>
<td>Operate</td>
<td>RLS</td>
</tr>
</tbody>
</table>
The command code modifiers are optional depending upon the specific command and the application domain. In normal TL1 command usage, the first modifier identifies the object of the verb where the action is to be applied in the NE. The second modifier further modifies the object of the verb and is interpreted differently for different operations domains.

For example, a `<verb>-EQPT` can be used to indicate that an action, specified by the value of the `verb`, is to be taken on an equipment object.

The second modifier may be used to categorize the identity of the object upon which the action is to be taken. For example, the command `RTRV-CRS-T3` will retrieve (RTRV) cross-connection information (CRS) associated with a particular DS3 signal. The command `RTRV-ALM-ENV` will retrieve environmental alarms only.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Description</th>
<th>Related Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPT</td>
<td>Report</td>
<td>-</td>
</tr>
<tr>
<td>RLS</td>
<td>Release</td>
<td>OPR</td>
</tr>
<tr>
<td>RMV</td>
<td>Remove</td>
<td>RST</td>
</tr>
<tr>
<td>RST</td>
<td>Restore</td>
<td>RMV</td>
</tr>
<tr>
<td>RTRV</td>
<td>Retrieve</td>
<td>ENT, ED</td>
</tr>
<tr>
<td>SET</td>
<td>Set</td>
<td>RTRV</td>
</tr>
</tbody>
</table>

The command code modifiers are optional depending upon the specific command and the application domain. In normal TL1 command usage, the first modifier identifies the object of the verb where the action is to be applied in the NE. The second modifier further modifies the object of the verb and is interpreted differently for different operations domains.

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The staging parameter blocks determine the target NE and identity of the object to be acted upon by the input message.

**Target Identifier (TID)**

The target identifier (TID) is the end-target NE to receive the input command.

The TID is up to 20 characters long and is case-insensitive (NMA supports TID lengths of 20 characters per Telcordia GR 831). If the TID is not specified, it assumes a NULL value which matches the system identifier (SID) of the NE processing the command.

If communication is via the EMS, the tid field is used to represent either the target node TID or the EMS TID. If the EMS TID is used, then the specified command is sent to the EMS and not the NE. For example, template commands are executed using the EMS TID.

**WARNING!** If you enter a node-level target identifier with a length greater than 20 characters or that contains special characters except hyphens, you may have trouble using TL1 commands against that node.

**Access Identifier (AID)**

The access identifier (AID) block normally contains one (or more) simple or compound parameter(s) that uniquely identify the entity within the target NE to be acted upon by the input message to the NE.
**Correlation Tag (CTAG)**

The correlation tag (CTAG) correlates an input command with its associated output response(s). The value of CTAG must either be a TL1 identifier or a non-zero decimal number, consisting of no more than six characters. The OS assigns an arbitrary non-zero CTAG value for inclusion in the input message, and it is the responsibility of the NE to copy this value into the appropriate field of the output response(s) associated with that input command. When the CTAG is not specified, the NE will assign the value arbitrarily.

**General Block**

The general block is used to specify command execution options like delayed activation etc. The Turin Networks Traverse 600/1600/2000 system does not support the general block, and its value is NULL.

**Data Blocks**

The data blocks are broken down into three parts: e-block, f-block, and g-block.

**e-block : Position-Defined Parameters**

In a block of position-defined parameters, the individual parameters must be entered in a specific order without names unless specifically allowed by the message description. A parameter entry may be omitted provided the associated comma separator is retained to indicate the position of the parameter omitted. The parameter names are implicit and not necessary in a positional block, where it is the order of parameter entries that associates each value with the corresponding parameter. Some examples of valid position-defined parameter blocks are:

- : 5, 6, Yes:
  -or-
  : , 6:

TL1 permits omission of commas following the last non-null parameter in a block.

**f-block : Name-Defined Parameters**

For a block of name-defined parameters, every parameter entry must have a parameter name and value, with successive entries made in arbitrary order. Parameter names are always transmitted with name-defined parameters (and order is not significant nor required).

Parameter defaulting is done by omitting a parameter entry. Three equivalent examples of a block of name-defined parameters are:

- : SETPR = 4, MAXHOP= 2, PROTOTYPE=1forn:
  -or-
  : MAXHOP= 2, SETPR = 4:
  -or-
  : PROTOTYPE=1forn:

**g-block : State Parameters**

There are only two parameters, PST and SST, in this block. These are positioned-defined parameters.
**Semi-colon Character**

The semi-colon character (;) terminates a TL1 input message.

**Grouping of Parameter Arguments**

AIDs and other parameters in a message can be grouped so a single occurrence of a message may be applied to more than one entity. The grouping can be done to generate a list of AIDs or a range (incremented in integer steps) of AIDs. Only the last information unit in a compound parameter argument (i.e., one that consists of two or more information units separated by a hyphen) can be used for grouping parameter arguments to generate a range of AIDs. Parameter grouping is not allowed unless explicitly stated in the message. In some cases, restrictions on parameter grouping are explicitly stated for emphasis. A&C means object A and object C. A&&C means object A to C including B. A few examples of grouping are given below:

- The AIDs of the fifth and seventh OC3 port in slot 3 may be expressed in a transmission-hierarchy-based access method as FAC-3-5 and FAC-3-7, respectively.
- For a single message to access both of these ports, the AID parameter grouping FAC-3-5&-7 can be used. The following grouping format can also be used FAC-3-5&FAC-3-7.
- To access path STS-7-3-5, STS-7-3-6, STS-7-3-7, and STS-7-4-5 using parameter grouping; one may issue STS-7-3-5&&-7&STS-7-4-5, or STS-7-3-5&STS-7-3-6&STS-7-3-7&STS-7-4-5.
- An example of parameter argument grouping for equipment units identified by name is PWRA&PWRB&PWRS, where the command would apply to the three equipment units PWRA, PWRB, and PWRS as if three individual commands had been sent to the shelf.
The command completion behavior does not apply to RTRV-CRS, RTRV-ALM, and RTVR-COND commands.

**Explicit List of AIDs - No Wildcards**

If a set of AIDs is explicitly listed, including a set of just one AID, then each AID must complete successfully to return a CMPLD message. If more than one AID is in the set and at least one AID succeeds but all do not, then a PRTL with errors for each failed AID is returned. If all AIDs in the set fail, a DENY with errors for each failed AID is returned. The format of a Partial Response message is as follows:

```
cr lf lf
cr lf
```

```
^^^<SID>^<YY-MM-DD>^<HH:MM:SS> cr lf
M^^<CTAG> PRTL cr lf
```

```
^^"<AID>:ERCDE=<value>[,<keyword>=<value>,....<keyword>=<value>]
```

Multiple repetitions of the `<aid>:ERCDE=<errcde>` blocks are allowed. Valid values for `<errcde>` are found in Appendix G Error Codes.

**Explicit List Grouped With Implicit List**

If a set of AIDs is comprised of two subsets, one set including explicitly stated AIDs and the other set implied by one or more AID(s) with the ALL modifier, then follow the rules explained in **Explicit List of AIDs - No Wildcards** plus the following rule (described via an example):

Assume the following command:

```
RTRV-STS1:tid:STS-3-ALL&STS-12-1:....
```

And also assume Slot-3 contains an OC12; the command is RTRV-STS1 but STS-3-4 and STS-3-7 are STS3C. The set implied by STS-3-ALL then only contains STS-3-{1,2,3,10,11,12}. The STS3C paths are disregarded in this case because the modifier of the command specifies STS-1 paths. The operation defined for the command is then applied to the implicit set of {1,2,3,10,11,12}.
Chapter 2
TL1 Commands

Introduction
This section is divided into several sections including security, equipment, facility, facility/equipment protection, protection switching, timing, surveillance, node, performance monitoring, UPSR and BLSR provisioning and autonomous reporting. Each section contains a listing of all TL1 commands supported by the Turin Traverse 600/1600/2000 and TraverseEdge™ 100 (TE-100) systems.

Utilities
SET-SID

General Description
This command is used to reset the NE SID. Although the SID is rarely an explicit command parameter, it is the recommended value for the target identifier (TID). Normally, one can redirect the destination of a command by changing the value of the TID staging parameter of the entered command string.

To obtain the shelf’s current TID use the RTRV-HDR command or find this value in the command response of any command.

Command Syntax

<table>
<thead>
<tr>
<th>SET-SID:&lt;tid&gt;::&lt;ctag&gt;::&lt;sid&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;tid&gt; is the shelf ID as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>2. &lt;sid&gt; is the system identification code assigned to the shelf.</td>
</tr>
<tr>
<td>3. &lt;ctag&gt; is the correlation tag.</td>
</tr>
</tbody>
</table>

Example:

SET-SID:PETALUMA::123::KICKALUMA;
RAL 00-01-24 11:27:30
M KICKALUMA COMPLD
/* SET-SID:PETALUMA::123::KICKALUMA*/
;

TARGET : TRAVERSE, TE100
RTRV-HDR

General Description

This command instructs the NE to return the header of a TL1 response message. Used by TL1 clients to determine if the link to the NE is still active and if the NE is responding to commands. The user does not have to be logged on to enter this command and receive a response.

Command Syntax

| RTRV-HDR:[<tid>::<ctag>;  
| 1.  <tid> is the shelf ID as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**  
| 2.  <ctag> is the correlation tag.  
| TARGET : TRAVERSE, TE100 |

Response Syntax

```
^^^sid^YY-MM-DD^HH:MM:SS
M^^<ctag> COMPLD
;
```

1.  sid is the shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**  
2.  ctag is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:

```
RTRV-HDR:PETALUMA::123;
PETALUMA 02-04-26 14:10:44
M 123 COMPLD
;
TARGET : TRAVERSE, TE100
```
Chapter 2  TL1 Commands

Shelf Provisioning

General Description

This command is used to edit the shelf parameters.

Command Syntax

```
ED-NE:[<tid>];::<ctag>:::
[BKIPADDR =<bkipaddr>, BKIPMASK=<bkipmask>, BKGWIP=<bgwip>]
[EMSIPADDR=<emsipaddr>, EMSIPMASK=<emsipmask>, EMSGWIP=<emsgwip>]
[GCMAIPADDR=<gcmaipaddr>, GCMAIPMASK=<gcmaipmask>, GCMAIPGW=<gcmaipgw>]
[GCMBIPADDR=<gcmbipaddr>, GCMBIPMASK=<gcmbipmask>, GCMBGWIP=<gcmbgwip>]
[NTP1IPADDR=<ntp1ipaddr>]
[NTP2IPADDR=<ntp2ipaddr>]
[LOCATION=<location>]
[TZ=<timezone>]
[MSAIDFMT=<msaidfmt>]
[PROXYARP=<proxyarp>]
[ALMPROF=<almprof>];
```

1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. BKIPADDR is the IP address of the backplane for the DCN, Ethernet interface.
4. BKIPMASK is the IP mask of the backplane for the DCN, Ethernet interface.
5. BKGWIP is the IP GW of the backplane for the DCN, Ethernet interface.
6. EMSIPADDR is the IP address of the ems net.
7. EMSIPMASK is the IP mask of the ems net.
8. EMSGWIP is the IP GW ems net.
9. GCMAIPADDR is the IP address of the Ethernet port on GCM A (Traverse only).
10. GCMAIPMASK is the IP mask of the Ethernet port on GCM A (Traverse only).
11. GCMAIPGW is the IP GW of the Ethernet port on GCM A (Traverse only).
12. GCMBIPADDR is the IP address of the Ethernet port on GCM B (Traverse only).
13. GCMBIPMASK is the IP mask of the Ethernet port on GCM B (Traverse only).
14. GCMBGWIP is the IP GW of the Ethernet port on GCM B (Traverse only).
15. NTP1IPADDR is the IP address of ntp server 1.
16. NTP2IPADDR is the IP address of ntp server 2.
17. LOCATION is the string describing the location of the node.
18. TZ indicates the time zone of the node. Valid values are specified in Appendix I—“Time Zones.”
19. MSAIDFMT indicates the format of MSAID for VT in DCS configuration (Traverse only).
20. NO-MSAID indicates there is no MSAID format.
21. MSAID-VT-SEQ Indicates MSAID Sequential mapping format.
22. MSAID-VT-GR253 indicates the MSAID GR253 mapping format.
23. MSAID-VTG-VT indicates the MSAID VTG- VT format.
24. PROXYARP. Valid values are:
   - Enabled indicates that Proxy ARP is enabled.
   - Disabled indicates that Proxy are is disabled. (Default)
25. ALMPROF is the alarm profile assigned to this node. None indicates no alarm profile is selected.

Example:

```
ED-NE:PETALUMA:::123::NTP1IPADDR=10.3.0.1;
```
RTRV-NE

General Description

This command is used to retrieve node information.

Command Syntax

```
TARGET : TRAVERSE, TE100

RTRV-NE:<tid>::<ctag>;

1. <tid> is the TID described in Chapter 1—"TL1 Overview," Target Identifier (TID).
2. <ctag> is the correlation tag described in Chapter 1—"TL1 Overview," Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET : TRAVERSE, TE100

Response Syntax

```
<cr><lf>
<^[SID<YY:MM:DD><HH:MM:SS><cr><lf>M<ctag> COMPLD <cr>
<lf>^["NDIPADDR=<ndipaddr>,BKIPADDR=<bkipaddr>,BKIPMASK=<bkimask>,BKMAC=<bkmac>,EMSIPADDR=<emsipaddr>,EMSIPMASK=<emsipmask>,EMSGWIP=<emsgwip>,GCMAIPADDR=<gcmaipaddr>,GCMAIPMASK=<gcmaipmask>,GCMAIWIP=<gcmaiwip>,GCMBMAC=<gcmbmac>,GCMBIPADDR=<gcmbipaddr>,GCMBIPMASK=<gcmbipmask>,GCMBGWIP=<gcmbgwip>,GCMBMAC=<gcmbmac>,NTP1IPADDR=<ntp1ipaddr>,NTP2IPADDR=<ntp2ipaddr>,NODEID=<nodeid>,TYPE=<type>,LOCATION=<location>,TZ=<timezone>,OPMODE=<omode>,STANDARD=<standard>,MSAIDFMT=<msaid>,NODEID=<nodeid>,TYPE=<type>,PROXYARP=<proxyarp>,ALMPROF=<almprof>,CUSTTAG=<custtag>,BW=<bw>> + <cr><lf>
```
1. SID is the same as the TID as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. NDIPADDR is the IP address of the node.
3. BKIPADDR is the IP address of the backplane for the DCN, Ethernet interface.
4. BKIPMASK is the IP mask of the backplane for the DCN, Ethernet interface.
5. BKGWIP is the IP GW of the backplane for the DCN, Ethernet interface.
6. EMSIPADDR is the IP address of the ems net.
7. EMSIPMASK is the IP mask of the ems net.
8. EMSGWIP is the IP GW ems net.
9. GCMAIPADDR is the IP address of the Ethernet port on GCM A (Traverse only).
10. GCMAIPMASK is the IP mask of the Ethernet port on GCM A (Traverse only).
11. GCMAGWIP is the IP GW of the Ethernet port on GCM A (Traverse only).
12. GCMAMAC is the mac address for Ethernet port on GCM A (Traverse only).
13. GCMBIPADDR is the IP address of the Ethernet port on GCM B (Traverse only).
14. GCMBIPMASK is the IP mask of the Ethernet port on GCM B (Traverse only).
15. GCMBGWIP is the IP GW of the Ethernet port on GCM B (Traverse only).
16. GCMBMAC is the mac address for Ethernet port on GCM B (Traverse only).
17. NTP1IPADDR is the IP address of ntp server 1.
18. NTP2IPADDR is the IP address of ntp server 2.
19. LOCATION is the string describing about location about the node.
20. TZ indicates time zone of the node. Valid values are specified in Appendix I—“Time Zones.”

21. OPMODE is the application that Node is running. The values are:
   ADM indicates an add drop multiplexer mode.
   DCS-96 indicates the 96 STS1 DCS mode.
   DCS-384 indicates the 384 VT DCS mode.
   DCS-IO indicates the shelf is provisioned for DCS input/output mode.

22. DCS-UPGR-96-IO indicates the shelf is provisioned for a DCS upgrade.

23. STANDARD is the mode in which the Node is operating. Valid values are:
   Gateway-ITU Default: indicates the mode is Gateway with SDH default.
   Gateway-ANSI Default: indicates the mode is Gateway with SONET default.
   ANSI indicates the mode is SONET only.

24. MSAIDFMT indicates the format of the VT services mapped into the payload for a DCS application. The values are:
   NO-MSAID indicates no VT to payload mapping format.
   MSAID-VT-SEQ indicates VT Sequential mapping on payload for DCS application.
   MSAID-VT-GR253 indicates VT GR253 mapping on payload for DCS application.
   MSAID-VTG-VT indicates VTG VT mapping on payload for DCS application.

25. NODEID is the node identifier.

26. BKIPADDR is IP address of the backplane for the DCN, Ethernet interface.

27. TYPE indicates the type of Node chassis. The values are:
   TRAVERSE600 indicates a 6 slot chassis.
   TRAVERSE1600 indicates a 16 slot chassis.
   TRAVERSE2000 indicates a 20 slot chassis.
   TE100 indicates a TraverseEdge 100 chassis.

28. PROXYARP values are:
   Enabled indicates that Proxy ARP is enabled.
   Disabled indicates that Proxy ARP is disabled. Disabled is the default value.

29. ALMPROF indicates the Alarm profile assigned to this node. None indicates no alarm profile is selected.

30. CUSTTAG is the customer tag for the system that is assigned by the user.

31. BW indicates the optical bandwidth supported by the System Control (SC) card. (TE100 only)
   OC3 indicates the SC card includes an OC3 port type.
   OC12 indicates the SC card includes an OC12 port type.
   OC48 indicates the SC card includes an OC 48 port type.
   None

Example:
RTRV-NE:PETALUMA::123;
PETALUMA 02-04-26 14:10:44
M 123 COMPLD
^^^NDIPADDR=10.100.100.112,BKIPADDR =10.3.10.112,
BKIPMASK=,BKGWIP=10.3.10.1,BKMAC=00.01.00.01.00.11;
### SET-SYS

#### General Description

This command is used to reset the system parameters, which will take effect only after system reset. This command will cause system to reset.

#### Command Syntax

```
TARGET : TRAVERSE, TE100
```

```
SET-SYS[:<tid>][:<ctag>::[NODEID=<nodeid>],[NDIPADDR=<ipaddr>],[STANDARD=<standard>],[OPMODE=<opmode>],[BW=<bw>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. NODEID is the node identifier.
4. NDIPADDR is the IP address of node.
5. STANDARD is the ITU/ANSI standard of the node. The values are:
   - ITU_DEFAULT indicates SDH as the default, but is also configurable for SONET.
   - ANSI_DEFAULT indicates SONET as the default, but is also configurable for SDH.
   - ANSI_ONLY indicates SONET only.
6. OPMODE is the operation mode of the node. The values are:
   - ADM indicates the add drop multiplexer mode.
   - DCS-96 indicates the 96 STS1 DCS mode. (Traverse only)
   - DCS-384 indicates the 384 VT DCS mode. (Traverse only)
   - DCS-IO indicates the DCS input/output mode. (Traverse only)
   - DCS-UPGR-96-IO indicates the DCS upgrade mode. (Traverse only)
7. BW indicates the optical bandwidth supported by the System Control (SC) card. (TE100 only)
   - OC3 indicates the SC card includes an OC3 port type.
   - OC12 indicates the SC card includes an OC12 port type.
   - OC48 indicates the SC card includes an OC 48 port type.
   - None

**Example:**

```
SET-SYS:PETALUMA::123::NDIPADDR=10.3.10.144;
```

TARGET : TRAVERSE, TE100
Login/Logout Security

See Appendix A—“TL1 Login and Setup” for TL1 link configuration and login structure.

ACT-USER

General Description

This command is used to login to the node. The system checks the values of the UID and PID against the list of authorized users. If both are matched, the user is logged in.

Command Syntax

ACT-USER::<tid>::<uid>::<ctag>::<pid>;

1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <uid> is the user identifier of the user who is logging into the system. Up to 10 alphanumeric characters are allowed for this identifier.
3. <ctag> is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. <pid> is the user password identification. The PID is between 2 to 32 characters long, with at least two non-alphabetic characters, and at least one special character (!, @, #, $, and %). Other special characters are not allowed. Null value defaults to the current setting of the password.

Example:

ACT-USER::JSMITH:123::JSMITHPASSWD;

TARGET : TRAVERSE, TE100

CANC-USER-SECU

General Description

This command is used by an administrator to terminate a user’s session.

Command Syntax

CANC-USER-SECU::<tid>::<uid>::<ctag>;

1. <tid> is the TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <uid> is the user identifier of the user whose session is being terminated. Up to 10 alphanumeric characters are allowed for this identifier.
3. <ctag> is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

CANC-USER-SECU:PETALUMA:JSMITH:123;

TARGET : TRAVERSE, TE100
### CANC-USER

**General Description**
This command is used by a network user to log out of the system and login under a different user login.

**Command Syntax**

```
CANC-USER:<tid>:<uid>:<ctag>;
```

1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<uid>` is the user identifier of the user whose session is being terminated. Up to 10 alphanumeric characters are allowed for this identifier.
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**

```
CANC-USER:::123;
```

**TARGET : TRAVERSE, TE100**

### DLT-USER-SECU

**General Description**
This command is used by an administrator to delete a user from the system.

**Command Syntax**

```
DLT-USER-SECU:<tid>:<uid>:<ctag>;
```

1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<uid>` is the user identifier of the user whose session is being terminated. Up to 10 alphanumeric characters are allowed for this identifier.
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**

```
DLT-USER-SECU:PETALUMA:JSMITH:123;
```

**TARGET : TRAVERSE, TE100**

### ED-USER-SECU

**General Description**
This command is used by an administrator to change the access security level.

**Command Syntax**

```
ED-USER-SECU:<tid>:<uid>:<ctag>::,<NEWPID>,,<UAP>;
```

**Example:**

```
ED-USER-SECU::<tid>::<uid>::<ctag>::,<NEWPID>,,<UAP>;
```
1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<uid>` is the user identifier of the user whose session is being terminated. Up to 10 alphanumeric characters are allowed for this identifier.
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<NEWPID>` is new User Password Identification. The PID is between 4 to 10 characters long, be alphanumeric, can contain spaces, hyphens (-), and/or special characters (such as !, @, #, $, and %). If alphanumeric, they are also case-sensitive. Null value defaults to current setting of password.
5. `<UAP>` indicates user access privileges. A user may be granted more than one access privileges, by separating with an "&". Valid values are:
   - ADM indicates if the user belongs to the administrative group. (Default)
   - FM indicates if the user belongs to the fault management group.
   - SVC indicates if the user belongs to the service management group.
   - EQP indicates if the user belongs to the equipment management group.
   - USR indicates if the user belongs to the user management group.
   - RPT indicates if the user belongs to the report management group.
   - VIEW (Default) means the user has view-only privileges.

   **Note:** When a parameter is not in an Edit command, its value is unchanged.

Example:
ED-USER-SECU:PETALUMA:JSMITH:123::,,,EQP;
TARGET : TRAVERSE, TE100

**ED-PID**

**General Description**

This command is used by a user to change their own password. The password cannot be null. It will be echoed as clear text as the message is parsed only after the complete message is entered and terminated.

**Command Syntax**

```
ED-PID:<tid>::<uid>::<ctag>::<OLDPID>,<NEWPID>;
```

1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<uid>` is the user identifier of the user whose session is being terminated. Up to 10 alphanumeric characters are allowed for this identifier.
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<OLDPID>` is Old Password
5. `<NEWPID>` is New Password. NEW-PID must be of ASCII string between 4 to 10 characters long, be alphanumeric, can contain spaces, hyphens (-), and/or special characters (such as !, @, #, $, and %). If alphanumeric, they are also case-sensitive. Null value defaults to current setting of password.
ENT-USER-SECU

**General Description**

This command is used by an administrator to add a user to the system.

**Command Syntax**

```
ENT-USER-SECU:[<tid>]:<uid>:<ctag>::<PID>,,[<UAP>];
```

1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<uid>` is the user identifier of the user whose session is being terminated. Up to 10 alphanumeric characters are allowed for this identifier. For multiple UIDs, separate with commas (,).
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. `<PID>` is User Private Identifier (password): The PID is between 4 to 10 characters long, be alphanumeric, can contain spaces, hyphens (-), and/or special characters (such as !, @, #, $, and %). If alphanumeric, they are also case-sensitive. Null value defaults to current setting of password.
5. `<UAP>` indicates user access privileges. A user may be granted more than one access privilege by separating with an "&". Values are {ADM, FM, SVC, EQP, USR, and RPT}.
   - ADM indicates if user belongs to the administrative group. This is the default.
   - FM Indicates if user belongs to the fault management group
   - SVC Indicates if user belongs to the service management group
   - EQP Indicates if user belongs to the equipment management group
   - USR Indicates if user belongs to the user management group
   - RPT Indicates if user belongs to the report management group

**Example:**

```
ENT-USER-SECU:PETALUMA:JSMITH:123::JSMITHPASSWD,,EQP;
```

TARGET : TRAVERSE, TE100

RTRV-USER-SECU

**General Description**

This command is used by the administrator (user access privilege = admin) to retrieve one or all of the authorized user names (uid) and their related access privilege level. The user’s password cannot be retrieved. To retrieve all of the user names and access privileges levels, specify a NULL user name.

**Command Syntax**

```
RTRV-USER-SECU: <tid>::<uid>::<ctag>;
```
General Description

This command is used to restart a module in a particular slot or reboot the entire node. The AID will indicate the slot of the equipment to reboot. In the case of the entire node, no AID is used.

Command Syntax

```
INIT-SYS:<tid>:[<aid>]:<ctag>::[<PH>];
```

1. `<tid>` is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<aid>` is the slot number of the card to be restarted. A null value indicates an NE restart.
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<PH>` is an integer that specifies the degree of thoroughness of the restart. This parameter is applicable only for card restart and not for Node restart. The TL1 command should be denied if AID and PH both are entered in put command. The values are:
   0 indicates a warm restart. This option is NOT supported in Release R2.0, TR2.0, and TE3.0.
   1 indicates a cold restart.

Example:

```
INIT-SYS:PETALUMA:SLOT-8:123;
```
Chapter 2   TL1 Commands

Equipment

ENT-EQPT

General Description

This command enters the card type and attributes for a given equipment slot. It also automatically enters all facilities supported by the card, assigning default values to all port and path attributes.

Command Syntax

ENT-EQPT:<tid>;<AID>;<ctag>;:<type>:[CRDNAME=crdname];:<pst>;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <aid> is the access identifier described in ED-EQPT. Valid values are in Appendix C—“Access Identifiers.”
3. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. <type> indicates type of equipment. Valid values are:
   - Electrical: DS1 | DS3CC | DS3-12 | DS3-24 | DS3TMX | VT | VT-TU-5G | E1 | E3CC | E3-12 | E3-24 | STM1E
   - Ethernet: ETH100TX | ETH100FX | GBE8XVC | GBE8XVCGBP | GE2FE8F | GE2FE16T | GE4FE16T | GE2TGE2FE16T
   - GCM: EGCM | EGCM-VCX | EGCM-OC12 | EGCM-OC12-VCX | EGCM-OC12-2 |
     EGCM-OC12-2-VCX | EGCM-OC48 | EGCM-OC48-VCX | GCM | EGCM-STM4 |
     EGCM-STM4-2 | EGCM-STM4-2-VCX | EGCM-STM16 | EGCM-STM16-VCX
   - Optical: OC3 | OC3-4 | OC3-16 | OC12 | OC48 | OC48-2 | OC48-VCX | OC48-2 | OC192 | STM1 | STM1-4 | STM1-16 | STM4 | STM16 | STM16-2 | STM16-VCX | STM64
     TE100 : SC-OC3|SC-OC12|SC-OC48| SC-STM1 | SC-STM4 | SC-STM16
5. CRDNAME is the card name. The value is a string of up to 16 alphanumeric characters.
6. <pst> is the desired state for the object entity. The values are:
   - IS puts this interface in IS-NR, unless there is an equipment failure, in which case OOS-AU results.
   - OOS puts this interface in OOS-MA, unless there is an equipment failure in which case OOS-AUMA results.

Example:
ENT-EQPT:PETALUMA:SLOT-1:123::DS3CC:CRDNAME=ACTONDS3CC::OOS;
ENT-EQPT:LONDON:SLOT-2:ctag::SCM-2;

TARGET : TRAVERSE, TE100

ED-EQPT

General Description

This command edits the attributes for a given equipment slot. This command is allowed only on the working AID.
**Command Syntax**

ED-EQPT:[:<tid>];<aid>::[CRDNAME=<cardname>],[DS1NBR=<ds1nbr>],
[DS1MAP=<ds1map>],[STS1SFBER=<sts1sfber>],[STS3SFBER=<sts3sfber>],
[STS12SFBER=<sts12sfber>],[STS4SFBER=<sts4sfber>],[STS1SDBER=<sts1sdber>],[STS3SDBER=<sts3sdber>],
[STS12SDBER=<sts12sdber>],[STS48SDBER=<sts48sdber>],
[FEC=<fec>],[VC3SFBER=<vc3sfber>],[VC4SFBER=<vc4sfber>],
[VC4-4CSFBER=<vc4-4csfber>],[VC4-16CSFBER=<vc4-16csfber>],[VC3SDBER=<vc3sdber>],
[VC4SDBER=<vc4sdber>],[VC4-4CSDBER=<vc4-4csdber>],[VC416CSDBER=<vc4-16csdber>],[E1NBR=<e1nbr>],
[E1MAP=<e1map>],[DISTORE3=<ds3ore3>];[<pst>];

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<aid>` is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are in Appendix C—“Access Identifiers.”
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. CRDNAME is card name. The value is a string of up to 16 alphanumeric characters.
5. DS1NBR is valid for DS1 cards only and indicates the DS1 signal maps into VT payload structure. The values are:
   GR-253 is the default value and is DS1 mapping as specified in GR-253.
   SEQUENTIAL is sequential DS1 mapping.
6. DS1MAP is valid for DS1 cards only and is DS1 mapping into a STS/STM signal. The values are:
   VT15/VC11 is the default value and is a DS1 mapped into a VT1.5 and carried into an STS or VC11 signal.
   DS3 is a DS1 mapped into a DS3 and carried into an STS signal.
   VT2/VC12 is DS1s mapped into VT2 and carried into an STS or VC12 signal.
7. STS1SFBER/VC3SFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-3 = 10^-3 is the default value for STS1/VC3.
   1E-4 = 10^-4
   1E-5 = 10^-5
8. STS3SFBER/VC4SFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-4 = 10^-4 is the default value for STS3/VC4.
   1E-5 = 10^-5
   1E-6 = 10^-6
9. STS12SFBER/VC4-4CSFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-4 = 10^-4 is the default value for STS12/VC4-4C.
   1E-5 = 10^-5
   1E-6 = 10^-6
10. **STS48SFBER/VC4-16CSFBER** is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   - $1E^{-4} = 10^{-4}$ is the default value for STS48/VC4-16C.
   - $1E^{-5} = 10^{-5}$
   - $1E^{-6} = 10^{-6}$
   - $1E^{-10} = 10^{-10}$
   - $1E^{-11} = 10^{-11}$

11. **STS1SDBER/VC3SDBER** is the Signal Degrade Bit Error Rate for line degradation. The values are:
   - $1E^{-5} = 10^{-5}$
   - $1E^{-6} = 10^{-6}$ is the default value for STS1/VC3
   - $1E^{-7} = 10^{-7}$
   - $1E^{-8} = 10^{-8}$
   - $1E^{-9} = 10^{-9}$

12. **STS3SDBER/VC4SDBER** is the Signal Degrade Bit Error Rate for line degradation. The values are:
   - $1E^{-6} = 10^{-6}$
   - $1E^{-7} = 10^{-7}$ is the default value for STS3/VC4
   - $1E^{-8} = 10^{-8}$
   - $1E^{-9} = 10^{-9}$
   - $1E^{-10} = 10^{-10}$

13. **STS12SDBER/VC4-4CSDBER** is the Signal Degrade Bit Error Rate for line degradation. The values are:
   - $1E^{-6} = 10^{-6}$
   - $1E^{-7} = 10^{-7}$ is the default value for STS12/VC4-4C
   - $1E^{-8} = 10^{-8}$
   - $1E^{-9} = 10^{-9}$

14. **STS48SDBER/VC4-16CSDBER** is the Signal Degrade Bit Error Rate for line degradation. The values are:
   - $1E^{-7} = 10^{-7}$
   - $1E^{-8} = 10^{-8}$ is the default value for STS48/VC4-16C
   - $1E^{-9} = 10^{-9}$
   - $1E^{-10} = 10^{-10}$

15. **FEC** is forward error correction (Traverse only). The values are:
    - Enabled
    - Disabled is the default value.

16. **E1NBR** indicates E1 signal mapping into a VC12 payload. The values are:
    - Non-Sequential
    - Sequential
17. E1MAP indicates E1 signal mapping into a VC3 payload. The values are:
   VC12 is E1 mapping into a VC12 and carried into a VC3 signal.
   DS3 is E1 mapping into a DS3 and carried into VC3 signal.
18. DS3ORE3 indicates the type of DS3 rate facility whether E3 or DS3 (TE100 only). This parameter
    is only valid in SDH Mode.
    E3 is a DS3-level Facility on TE100 ports that are E3.
    DS3 is a DS3-level Facility on TE100 ports that are DS3.
19. <pst> is the desired state for the object entity. The values are:
    IS - Puts this interface in IS-NR unless there is an equipment failure, in which case OOS-AU results.
    OOS - Puts this interface in OOS-MA unless there is an equipment failure, in which case OOS-AUMA results.

Example:
ED-EQPT:<tid>::SLOT-1:<ctag>::CRDNAME=ACTONDS3:IS;
TARGET : TRAVERSE, TE100

Response Syntax
See response format in Chapter 3—“Generic Output Response Format.”

RTRV-EQPT

General Description
This command retrieves the data and state parameters associated with the equipment.

Command Syntax

RTRV-EQPT:<tid>[:<aid>]:<ctag>;

1. <tid> is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <aid> is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter
   Blocks, Access Identifier (AID). Valid values are in Appendix C—“Access Identifiers.”
3. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks,
   Correlation Tag (CTAG).

Example:
RTRV-EQPT:PETALUMA:SLOT-1:123;
TARGET : TRAVERSE, TE100
### Response Syntax

```
^^^SID\'YY-MM-DD\'HH:MM:SS
M\'CTAG COMPLD
^^^\"<AID>:<CARDTYPE>:[CRDNAME=<cardname>,][NUMPRT=<numprt>,
[TURINID=<partid>],[CLEI=<clei>],[ICID=<icid>],[SERIALNUM=<serialnum>],
[MODID=<modid>],[SWREV=<swrev>],[PROTAID=<protaid>],[RN=<rn>],[PROTTYPE=<prottype>],
[EQUIP=<equip>],[DS1NBR=<ds1nbr>],[DS1MAP=<ds1map>],
[HWDESC=<hwdesc>],[STS1SFBER=<sts1sfbber>],[STS3SFBER=<sts3sfber>],[STS12SFBER=<sts12sfber>],
[STS48SFBER=<sts48sfber>],[STS1SDBER=<sts1sdber>],[STS3SDBER=<sts3sdber>],
[STS12SDBER=<sts12sdber>],[STS48SDBER=<sts48sdber>],
[FEC=<fec>],[VC3SFBER=<vc3sfber>],[VC3SFBER=<vc3sfber>],
[VC4-4CSFBER=<vc4-4cstber>],[VC4-16CSFBER=<vc4-16csfber>],[VC3SDBER=<vc3sdber>],
[VC4SDBER=<vc4sdber>],[VC4-4CSDBER=<vc4-4cstdber>],[VC4-16CSDBER=<vc4-16csdber>],[E1NBR=<e1nbr>],
[E1MAP=<e1map>],[DS3ORE3=<ds3ore3>]:<pst>[,<sst>]:<cr><lf>;
```

1. SID is the same as the TID as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are in Appendix C—“Access Identifiers.”
3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. CRDTYPE is the card type, as shown in Appendix D—“Card Type Coding.”
5. CRDNAME is the card name. The value is a string of up to 16 alphanumeric characters.
6. NUMPRT is the number of ports on the card. The values are: \{1, 4, 8, 12, and 24\}.
7. TURINID is the TURIN part number assigned for this type and specific ECO version of the hardware.
8. CLEI is the CLEI code for the card.
9. ICID is the ITU-T compliant International Common Identifier for this type of hardware module.
10. SERIALNUM is the serial number assigned by TURIN for this hardware module.
11. MODID is the module identifier assigned by TURIN that designates the function of this type of card.
12. SWREV is the software version for the card. Value is an alphanumeric text string.
13. PROTAID is the protecting card slot identifier of the protection group and is the AID value. PROTAID is optional.
14. RN indicates if the card is the working unit or the protecting unit. The values are:
    - **WRKG** indicates the equipment is the working unit.
    - **PROT** indicates the equipment is the secondary unit.
    - **UNPR** indicates the equipment is unprotected.
15. PROTTYPE is the protection group type. The value is \{1-1\}, where 1-1 is 1:1. PROTTYPE is optional.
16. EQUIP indicates if the equipment unit is physically present. The values are: \{EQUIP|UNEQUIP\}.
17. DS1NBR is valid for DS1 cards only and indicates the DS1 signal maps into VT payload structure. The values are:
    - **GR-253** is the default value and is DS1 mapping as specified in GR-253.
    - **SEQUENTIAL** is sequential DS1 mapping.
18. DS1MAP is valid for DS1 cards only and is DS1 mapping into a STS/STM signal. The values are:
   VT15/VC11 is the default value; it is a DS1 mapped into a VT1.5 and carried into an STS or VC11 signal.
   DS3 is a DS1 mapped into a DS3 and carried into an STS signal.
   VT2/VC12 is DS1s mapped into VT2 and carried into an STS or VC12 signal.
19. HWDESC Hardware description of the card
20. STS1SFBER/VC3SFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-3 = 10^{-3} is the default value for STS1/VC3.
   1E-4 = 10^{-4}
   1E-5 = 10^{-5}
21. STS3SFBER/VC4SFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-4 = 10^{-4} is the default value for STS3/VC4.
   1E-5 = 10^{-5}
   1E-6 = 10^{-6}
22. STS12SFBER/VC4-4CSFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-4 = 10^{-4} is the default value for STS12/VC4-4C.
   1E-5 = 10^{-5}
   1E-6 = 10^{-6}
23. STS48SFBER/VC4-16CSFBER is the Signal Fail Bit Error Rate threshold that causes an APS switch. The values are:
   1E-4 = 10^{-4} is the default value for STS48/VC4-16C.
   1E-5 = 10^{-6}
   1E-6 = 10^{-7}
24. STS1SDBER/VC3SDBER is the Signal Degrade Bit Error Rate for line degradation. The values are:
   1E-5 = 10^{-5}
   1E-6 = 10^{-6} is the default value for STS1/VC3.
   1E-7 = 10^{-7}
   1E-8 = 10^{-8}
   1E-9 = 10^{-9}
25. STS3SDBER/VC4SDBER is the Signal Degrade Bit Error Rate for line degradation. The values are:
   1E-6 = 10^{-6}
   1E-7 = 10^{-7} is the default value for STS3/VC4.
   1E-8 = 10^{-8}
   1E-9 = 10^{-9}
   1E-10 = 10^{-10}
26. STS12SDBER/VC4-4CSDBER is the Signal Degrade Bit Error Rate for line degradation. The values are:
   1E-6 = 10^{-6}
   1E-7 = 10^{-7} is the default value for STS12/VC4-4C.
   1E-8 = 10^{-8}
   1E-9 = 10^{-9}
   1E-10 = 10^{-10}

27. STS48SDBER/VC4-16CSDBER is the Signal Degrade Bit Error Rate for line degradation. The values are:
   1E-7 = 10^{-7}
   1E-8 = 10^{-8} is the default value for STS48/VC4-16C.
   1E-9 = 10^{-9}
   1E-10 = 10^{-10}
   1E-11 = 10^{-11}

28. FEC is forward error correction (Traverse only). The values are:
   Enabled
   Disabled (Default)

29. E1NBR indicates E1 signal mapping into a VC12 payload. The values are:
   Non-Sequential
   Sequential

30. E1MAP indicates E1 signal mapping into a VC3 payload. The values are:
   VC12 is E1 mapping into a VC12 and carried into a VC3 signal.
   DS3 is E1 mapping into a DS3 and carried into VC3 signal.

32. DS3ORE3 indicates the type of DS3 rate facility whether E3 or DS3 (TE100 only). This parameter is only valid in SDH Mode.
   E3 is a DS3-level Facility on TE100 ports that are E3.
   DS3 is a DS3-level Facility on TE100 ports that are DS3.

33. <pst> is the desired state for the object entity. The values are:
   IS puts this interface in IS-NR, unless there is an equipment failure, in which case OOS-AU results.
   OOS Puts this interface in OOS-MA, unless there is an equipment failure, in which case OOS-AUMA results.

34. <sst> is the current state of the object.

Example:
PETALUMA 02-03-20 14:30:00
M 001 COMPLD
   “SLOT-4:OC48:EQUIP=EQUIP,CRDNAME=,RN=UNPR,SERIALNUM=BE3601001328,SWREV=ASG.X2D.073,
   NUMPR=1,VENDOR=,CLEI=SN57AD0AAA,ICID="294202",MODID=20000103,TURINID=9
   05-0007-02 Rev 01,DS3FRM=CBIT,HWDESC=OC48 STM16 SR 1P,STS1SFBER=1E-3,STS3SFBER=1E-4,STS12SFBER=1E-4,
   STS48SFBER=1E-5,STS1SDBER=1E-6,STS3SDBER=1E-7,STS12SDBER=1E-7,STS48SDBER=1E-8,IS,ACT”;


DLT-EQPT

General Description

This command deletes a card from a slot. If any facilities are assigned, they are deleted too. Since the Shelf behaves in command mode is “NORMAL” this means any associated dependencies such as facilities must have been provisioned into OOS state and cross-connect must have been deleted. Otherwise the command will be rejected.

To delete a card that is part of a protection group, it has to be removed from the protection group first via DLT-EFP-WKGMBR or DLT-EFP if it is a protecting member.

Error conditions for deleting equipment may be:

1. For a card in a protection group that has an active cross connection, DCC enabled or is a synchronization source, the SPLD (Equipment in use) error message will be returned.
2. If a card is not provisioned, an error message will be returned.

Command Syntax

```
DLT-EQPT:<tid>:<aid>:<ctag>;
```

1. `<tid>` is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<aid>` is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are in Appendix I—“Time Zones.”
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
DLT-EQPT:PETALUMA:SLOT-1:123;
```

TARGET: TRAVERSE, TE100

Response Syntax

See response format in Chapter 3—“Generic Output Response Format.”

CHG-EQPT-STD

General Description

This command changes the operation standard of the card from SONET to SDH and vice-versa. If the card is already in the standard requested by the command, it does not give any error.
**Command Syntax**

<table>
<thead>
<tr>
<th>CHG-EQPT-STD:&lt;tid&gt;::&lt;aid&gt;::&lt;ctag&gt;::&lt;standard&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;tid&gt; is target identifier described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>2. &lt;aid&gt; is the access identifier as described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Access Identifier (AID).</strong> Valid values are in Appendix C—“Access Identifiers,” <strong>SONET Path AIDs.</strong></td>
</tr>
<tr>
<td>3. &lt;ctag&gt; is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
</tr>
<tr>
<td>4. &lt;standard&gt; is the equipment mode. The values are:</td>
</tr>
<tr>
<td>SONET is for ANSI mode.</td>
</tr>
<tr>
<td>SDH for ITU mode.</td>
</tr>
</tbody>
</table>

**Example:**

CHG-EQPT-STD:PETALUMA:SLOT-1:123::SONET;

TARGET : Traverse only.

**Response Syntax**

See response format in Chapter 3—“Generic Output Response Format.”

**ENT-EFP**

**General Description**

This command is used to create equipment protection group for electrical cards in Traverse only.

DS1, DS3/EC1 and other electrical cards support 1:1 and 1:2 protection schemes. The command supports optional parameters WTR (revertive time), RVRTV (revertive behavior), PROTECT (protection card id) and WORKING (working card) for configuring the equipment protection group. Protection scheme can be 1:1 and 1:2. The protection and working card must already be provisioned before creating the protection group. 1:1 protection involves the odd slot protecting the even slot.

In 1:1 protection scheme protecting card and working card should be adjacent to each other.

In 1:2 protection scheme all cards should be in row and protecting card should be middle one.

The Protect entity must not be carrying any cross-connects. The command will be rejected otherwise.

**Command Syntax**

<table>
<thead>
<tr>
<th>ENT-EFP:&lt;tid&gt;::&lt;WORKING&gt;::&lt;PROTECT&gt;::&lt;ctag&gt;:[RVRTV=&lt;rvrtv&gt;],[WTR=&lt;wtr&gt;];</th>
</tr>
</thead>
</table>
**ED-EFP**

**General Description**

This command is used to edit equipment protection group for electrical cards in Traverse only.

**Command Syntax**

```
ED-EFP:<tid>:<aid>:<ctag>:::[RVRTV=<rvrtv>],[WTR=<wtr>];
```

1. `<tid>` is the TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<aid>` is the identifier of a working or protecting slot a protection group. The AID for electrical cards are shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**
3. `<ctag>` is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. `RVRTV` indicates revertive type. The values are:
   - Y is the default and is revertive.
   - N is non-revertive.
5. `WTR` indicates revertive time. The value is an integer {1 to 60 mins}. The default is 5 minutes.

Example:

`ED-EFP:PETALUMA:SLOT-1:123:::RVRTV=Y,WTR=10;`

`TARGET : Traverse`

---

**RTRV-EFP**

**General Description**

This command is used to retrieve electrical card protection group in Traverse only.
Chapter 2 TL1 Commands

Equipment

Command Syntax

**RTRV-EFP**: <tid>:[<AID>]:<ctag>;

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. AID identifies either the working or protection slot and is the AIDs for electrical cards shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**

TARGET : Traverse

Response Syntax

```plaintext
+++<SID>^<YY:MM:DD>^<HH:MM:SS> M^<ctag> COMPLD <cr> <lf>
+++“<PROTECT>::[RVRTV=<rvrtv>],[WTR=<wtr>],[NAME=<name>],[ID=<id>], [WORKINGLIST=<workinglist>];
```

**Note:** `<workinglist>` contains list of working card AIDs separated by “&” e.g., SLOT-1&SLOT-3

1. `<PROTECT>` identifies a protection card. AIDs for electrical cards are shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**
2. RVRTV indicates revertive type. Value is {Y|N}. Default is Y.
   - Y = revertive
   - N = non-revertive
3. WTR indicates revertive time. Value is integer {1 to 60 mins}. 
4. NAME indicates the protection group named assigned internally. 
5. ID indicates the protection group ID assigned internally. 
6. WORKINGLIST: list the working card AIDs separated by &. Electrical card AIDs are listed in Appendix C—“Access Identifiers,” **Equipment AIDs.**

Example:

```
RTRV-EFP:PETALUMA:SLOT-2:123;
```

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
```plaintext
+++“SLOT-2::RVRTV=Y,WTR=5,NAME=PG5,ID=6,WORKINGLIST=SLOT-1&SLOT-2;`
```

TARGET : Traverse

**DLT-EFP**

**General Description**

This command is used to delete equipment protection group for electrical cards in Traverse only.
**Command Syntax**

**ENT-EFP-WKGMBR**

**General Description**
This command is used to add working electrical card into protection group on Traverse identified by the Protect card.

**Command Syntax**

```
ENT-EFP-WKGMBR:<tid>:<PROTECT,WORKING>:<ctag>[::];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<PROTECT>` is an identifier of a protecting slot, which is part of protection group. The AIDs for electrical card are shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**
3. `<WORKING>` identifies a working slot and is the AIDs for electrical card as shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
```
ENT-EFP-WKGMBR:PETALUMA:SLOT-2,SLOT-3:123;
```

**TARGET : Traverse**

**DLT-EFP-WKGMBR**

**General Description**
This command is used to delete working electrical card member from protection group on Traverse identified by the PROTECT card.

**Command Syntax**

```
DLT-EFP-WKGMBR:<tid>:<PROTECT,WORKING>:<ctag>[::];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<PROTECT>` is an identifier of a protecting slot, which is part of protection group. The AIDs for electrical card are shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**
3. `<WORKING>` identifies a working slot and is the AIDs for electrical card as shown in Appendix C—“Access Identifiers,” **Equipment AIDs.**
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
```
DLT-EFP-WKGMBR:PETALUMA:SLOT-2:123;
```

**TARGET : Traverse**
The ENT-<facility> commands are not required because of pre-population with default values and so only ED commands are required to change their values. That is, when a card is first inserted into a slot, the port properties are per-provisioned with default values. ED-<facility> commands are therefore used to modify the default values.

ED-T1

General Description

This command is used to edit parameter values for the DS1 facility. On an edit command, if a parameter value is to remain the same, leave the parameter out of the command syntax.

Command Syntax

```
ED-T1:<tid>:<AID>:<ctag>:::[AISF=<aisf>],[AISM=<aism>],[AISGEN=<aisgen>],
[LBO=<lbo>],[FMT=<fmt>],[LINECDE=<linecde>],[CUST=<cust>],
[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>];
```

1. <tid> is the target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> is the Access Identifier for the DS1 facilities. Valid values are shown in Appendix C—“Access Identifiers,” Equipment AIDs. Grouping and ranging of AIDs is not allowed.
3. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AISF Indicates the format of the AIS signal to be used. Valid values are:
   - NAS - indicates the format is North American Standard. (Default)
   - ONES - indicates the format is all ones unformatted.
5. AISM - Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - Y - value indicates mask AIS alarm for unused direction
   - N - indicates do not mask AIS alarm for any direction. (Default)
6. AISGEN - Indicates if DS-1 AIS should be generated when VT1.5 signal is degraded. Valid values are:
   - Y - AIS replaces failed signal
   - N - failed signal will pass through. (Default)
7. LBO - Indicates the Line Build out setting. Valid values are:
   D1 {0-133ft}. Default value is D1.
   D2 {133-266ft}
   D3 {266-399ft}
   D4 {399-533ft}

8. D5 {533-665ft} FMT - Indicates the DS1 digital signal format. Valid values are:
   SF - Indicates Superframe Format
   ESF - Indicates Extended Superframe format. (Default) The value of this attribute cannot be
   changed while the entity is in IS state. LINECDE Indicates DS1 line code. Valid values are:
   AMI – Alternative Mark Inversion. Default value is AMI
   B8ZS – Bipolar 8 zero substitution
   The value of this attribute cannot be changed while the entity is in IS state.

9. CUST: Indicates the customer name. None indicates no customer selected.

10. CUSTTAG: Indicates the customer description for this facility. None indicates no customer
description.

11. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.

12. PMTML: PM template assigned to this facility. None indicates no pm template selected

13. <pst> is the desired Primary State. Valid values are:
   IS – Puts the interface in IS-NR, unless there is a facility failure, in which case OOS-AU results.
   OOS – Puts the interface in OOS-MA, unless there is a facility failure, in which case OOS-AUMA
   results.

Example:
ED-T1:PETALUMA:FAC-1-2:123:::OOS;

TARGET : TRAVERSE, TE100

ED-E1

General Description
This command is used to edit parameter values for the E1 facility. On an edit command,
if a parameter value is to remain the same, then leave the parameter out of the
command syntax.

Command Syntax
ED-E1:<tid>:<AID>:<ctag>:::[AISM=<aism>],[AISGEN=<aisgen>],[LBO=<lbo>],[FMT=<fmt>],[CUST=<cust>],
[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTML=<pmtmpl>];[<pst>];

1. tid is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> is the Access Identifier for the E1 facilities. Valid values are shown in
   Appendix C—“Access Identifiers,” Facility AIDs. Grouping and ranging of AIDs is not allowed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks,
   Correlation Tag (CTAG).
CHG-FAC-MODE

General Description

This command is used to reconfigure the mode for ports on DS3/EC-1 clear channel card or Transmux card on Traverse.

Each port on DS3/EC1 clear channel card can operate in either DS3 CC or EC-1 mode. When the card is inserted into the shelf, all associated ports are auto-provisioned as DS3 ports as the default. To re-configure the port to operate as EC1, the port must be taken out of service first using ED-T3 command with PST=OOS. And then issue CHG-FAC-MODE command. Similar steps are required to revert back the EC1 port to DS3 CC.

Each port on Transmux card can operate in EC1, DS3CC, DS3TMX, or STS1TMX mode. To change the facility mode CHG-FAC-MODE command is used. The facility needs to be in OOS state prior to issuing this command.
Command Syntax

CHG-FAC-MODE:<tid>::<AID>::<ctag>::<MODE>::;

1. tid is the target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the Access Identifier for the DS3/EC1 facilities. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs. Grouping and ranging of AIDs is not allowed.
3. MODE Indicates the mode of DS3/EC1 facility:
   DS3CC DS3/EC1 port is in DS3 clear channel mode.
   EC1 DS3/EC1 port is in EC-1 mode.
   DS3TMX DS3/EC-1 port is in DS3 electrical Transmux mode.
   STS1TMX DS3/EC-1 port is in STS-1 optical Transmux mode.

Example:
CHG-FAC-MODE:PETALUMA:FAC-1-1:123::DS3CC;;

TARGET : Traverse

ED-T3

General Description
This command is used to edit parameter values for the DS3 facility.

Command Syntax

ED-T3:<tid>::<AID>::<ctag>:::[AISM=<aism>,][AISF=<aism>],[LBO=<lbo>],[FMT=<fmt>],[RDI=<rdi>],[CUST=<cust>],[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>],<pst>;

1. tid is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the Access Identifier for the DS3 facilities. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs. Grouping and ranging of AIDs is not allowed.
3. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   Y - value indicates mask AIS alarm for unused direction.
   N - indicates do not mask AIS alarm for any direction. Default value is N.
4. AISF: Indicates the format of the AIS signal to be used. Valid values are:
   NAS - indicates the format is North American Standard. Default values is NAS.
   ONES - indicates the format is all ones unformatted.
5. LBO: Indicates the Line Build out setting. Valid values are:
   D1 {0-120ft}. Default value is D1.
   D2 {120-450ft}
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chapter 2</strong> TL1 Commands</td>
<td>Facility</td>
</tr>
</tbody>
</table>

**General Description**

This command is used to edit parameter values for the EC1 facility (Traverse only).

**Command Syntax**

```plaintext
ED-EC1:<tid>:<AID>:<ctag>:::[AISM=<aism>],[LBO=<lbo>],[SFBER=<sfber>],[SDBER=<sdber>],[CUST=<cust>],[CUSTTAG=<custtag>],[ALRMPROF=<alrmprof>],[PMTMPL=<pmtmpl>]:[<pst>];
```
**Facility ED-T3-TMX**

**General Description**
This command is used to edit parameter values for the DS3TMX facility (Traverse only).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Valid Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>tid</strong></td>
<td>Target Identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID)</strong>.</td>
<td></td>
</tr>
<tr>
<td><strong>&lt;AID&gt;</strong></td>
<td>Access Identifier for the EC1 facilities. Valid values are in Appendix C—“Access Identifiers,” <strong>Facility AIDs</strong>. Grouping and ranging of AIDs is not allowed.</td>
<td></td>
</tr>
<tr>
<td><strong>AISM</strong></td>
<td>Controls whether Alarm Indication Signal will trigger an alarm for the unused direction.</td>
<td>Y - value indicates mask AIS alarm for unused direction. N - indicates do not mask AIS alarm for any direction. (Default)</td>
</tr>
<tr>
<td><strong>LBO</strong></td>
<td>Indicates the Line Build out setting. Valid values are:</td>
<td>D1 {0-120ft}; (Default) D2 {120-450ft}</td>
</tr>
<tr>
<td><strong>SDBER</strong></td>
<td>Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are:</td>
<td>{1E-5</td>
</tr>
<tr>
<td><strong>SFBER</strong></td>
<td>Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values {1E-3</td>
<td>1E-4</td>
</tr>
<tr>
<td><strong>CUST</strong></td>
<td>Indicates the customer name. None indicates no customer selected.</td>
<td></td>
</tr>
<tr>
<td><strong>CUSTTAG</strong></td>
<td>Indicates the customer description for this facility. None indicates no customer description.</td>
<td></td>
</tr>
<tr>
<td><strong>ALMPROF</strong></td>
<td>Alarm profile assigned to this facility. None indicates no alarm profile is selected.</td>
<td></td>
</tr>
<tr>
<td><strong>PMTMPL</strong></td>
<td>PM template assigned to this facility. None indicates no pm template selected.</td>
<td></td>
</tr>
<tr>
<td><strong>&lt;pst&gt;</strong></td>
<td>Desired Primary State. Valid values:</td>
<td>IS - Puts this interface in IS-NR unless there is a facility failure in which case OOS-AU will result. OOS - Puts this interface in OOS-MA unless there is a facility failure in which case OOS-AUMA will result.</td>
</tr>
</tbody>
</table>

Example:

ED-EC1:<tid>::<AID>::<ctag>::OOS;

TARGET: Traverse
### Command Syntax

```
ED-T3-TMX:<tid>:<AID>:<ctag>:[:AISM=<aism>,][AISF=<aisf>],[LBO=<lbo>],[FMT=<fmt>]
,:[DS1TOVTMAP=<ds1tovtmap>],[DS3MAP=<ds3map>],[CUST=<cust>],
[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>],[SUBPRTMAP=<subprtmap>];::<pst>;
```

1. **tid** is a target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **<AID>:** Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” **Facility AIDs.** Grouping and ranging of AIDs is not allowed.
3. **AISM:** Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - Y - value indicates mask AIS alarm for unused direction.
   - N - indicates do not mask AIS alarm for any direction. (Default)
4. **AISF:** Indicates the format of the AIS signal to be used. Valid values are:
   - NAS - indicates the format is North American Standard. (Default)
   - ONES - indicates the format is all ones unformatted.
5. **LBO:** Indicates the Line Build out setting. Valid values are:
   - D1 {0-120ft}. (Default)
   - D2 {120-450ft}
6. **FMT:** Indicates the DS3 digital signal format. Valid values are:
   - M23 = M23 framed
   - CBIT = M13 framed, C-bit used. (Default)
7. **DS1TOVTMAP:** Indicates the mapping of DS1 in VT.
   - GR-253 DS1 are mapped into VT as per GR253.
   - SEQUENTIAL DS1 are mapped into VT in sequential order.
8. **DS3MAP:** Indicates payload of DS3 Channelized signal.
   - DS1 is the payload of DS3. (Default)
   - E1 is the payload of DS3.
9. **CUST:** Indicates the customer name. None indicates no customer selected.
10. **CUSTTAG:** Indicates the customer description for this facility. None indicates no customer description.
11. **ALMPROF:** Alarm profile assigned to this facility. None indicates no alarm profile is selected.
12. **PMTMPL:** PM template assigned to this facility. None indicates no pm template selected.
13. **SUBPRTMAP:** Indicates DS1 subport mapping into VT type.
   - VT15 DS1 is mapped into VT1.5
   - VT2 DS1 is mapped in VT2
14. **<pst>:** Desired Primary State. Valid values are:
   - IS - Puts this interface in IS-NR unless there is a facility failure in which case OOS-AU will result.
   - OOS - Puts this interface in OOS-MA unless there is a facility failure in which case OOS-AUMA will result.
15. **SUBPRTRMAP:** Indicates DS1 subport mapping into VT type.
   
   - VT15 DS1 is mapped into VT1.5
   - VT2 DS1 is mapped into VT2

16. `<pst>`: Desired Primary State. Valid values are:
   
   - **IS:** Puts this interface in IS-NR unless there is a facility failure in which case OOS-AU will result.
   - **OOS:** Puts this interface in OOS-MA unless there is a facility failure in which case OOS-AUMA will result.

**Example:**

```
ED-T3-TMX:<tid>:<AID>:<ctag>::::OOS;
```

**ED-STS1-TMX**

**General Description**

This command is used to edit parameter values for the STS1TMX facility when a DS3/EC1 port is in optical Transmux mode (Traverse only).

**Command Syntax**

```
ED-STS1-TMX:<tid>:<AID>:<ctag>::::[AISM=<aism>],[AISF=<aisf>],[FMT=<fmt>],[DS1TOVTMAP=<ds1tovtmap>],[DS3MAP=<ds3map>],[CUST=<cust>],[CUSTTAG=<custtag>],[SUBPRTRMAP=<subprtmap>]::<pst>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **<AID>** Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” **Facility AIDs.** Grouping and ranging of AIDs is not allowed.
3. **AISM** Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - **Y** - value indicates mask AIS alarm for unused direction
   - **N** - indicates do not mask AIS alarm for any direction. (Default)
4. **AISF** Indicates the format of the AIS signal to be used. Valid values are:
   - **NAS** - indicates the format is North American Standard. (Default)
   - **ONES** - indicates the format is all ones unformatted.
5. **FMT** Indicates the DS3 digital signal format. Valid values are:
   - **M23** = M23 framed. (Default)
   - **CBIT** = M13 framed, C-bit used
6. **DS1TOVTMAP** Indicates the mapping of DS1 in VT.
   - **GR-253** - DS1 are mapped into VT as per GR253
   - **SEQUENTIAL** - DS1 are mapped into VT in sequential order
7. **DS3MAP** Indicates payload of DS3 Channelized signal
   - **DS1** is the payload of DS3. (Default)
   - **E1** is the payload of DS3.
8. **CUST:** Indicates the customer name. None indicates no customer selected.
Chapter 2  TL1 Commands

Facility

ED-TMX-DS1

General Description

This command is used to edit parameter values for the DS1 subport of a DS3TMX facility (Traverse only).

Command Syntax

ED-TMX-DS1:<tid>:<AID>:<ctag>:::[FMT=<fmt>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>];[<pst>];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” [T]arget [I]dentif[i]er (TID).
2. <AID> Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” [F]acility [A]IDs. Grouping and ranging of AIDs is not allowed.
3. FMT Indicates the DS1 digital signal format. Valid values are:
   SF - indicates Superframe Format
   ESF indicates Extended Superframe format. (Default)
   UNFR indicates the unframed format
4. ALMPROF : Alarm profile assigned to this facility. None indicates no alarm profile is selected.
5. PMTMPL : PM template assigned to this facility. None indicates no pm template selected.
6. <pst> Desired Primary State. Valid values are:
   IS - Puts this interface in IS-NR unless there is a facility failure in which case OOS-AU will result.
   OOS - Puts this interface in OOS-MA unless there is a facility failure in which case OOS-AUMA will result.

Example:
ED-TMX-DS1:<tid>:<AID>:<ctag>::::OOS;
TARGET : Traverse
ED-E3

General Description

This command is used to edit parameter values for the E3 facility.

Command Syntax

```
ED-E3:<tid>::<AID>:{<ctag>}:::[AISM=<aism>,][LBO=<lbo>],[FMT=<fmt>],[CUST=<cust>],
[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>]:::<<pst>>;
```

1. tid is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID: Access Identifier for the E3 facilities. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs. Grouping and ranging of AIDs is not allowed.
3. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - Y - value indicates mask AIS alarm for unused direction.
   - N - indicates do not mask AIS alarm for any direction. (Default)
4. LBO Indicates the Line Build out setting. Valid values are:
   - D1 {0-255ft}. (Default)
   - D2 {250-450ft}
5. FMT Indicates the E3 digital signal format. Valid values are:
   - G751 = G751 frame format
   - G832 = G832 frame format
   - UNFR = unframed. (Default)
   The value of this attribute cannot be changed while the entity is in IS state.
6. CUST: Indicates the customer name. None indicates no customer selected.
7. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.
8. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.
9. PMTMPL: PM template assigned to this facility. None indicates no pm template selected.
10. <pst> Desired Primary State. Valid values are:
    - IS - Puts this interface in IS-NR unless there is a facility failure in which case OOS-AU will result.
    - OOS - Puts this interface in OOS-MA unless there is a facility failure in which case OOS-AUMA will result.

Example:
```
ED-E3:PETALUMA:E3-3-1:123:::OOS;
```

TARGET : TRAVERSE (Not supported in Release 2.0 ), TE100

ED-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description

This command is used to edit parameter values for the OC-n/STM-n facility. On an edit command, if a parameter value is to remain the same, then leave the parameter out of the command syntax.
# Command Syntax

ED-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}: <tid>:<AID>:<ctag>:::[AISM=<aism>],
[SFBER=<sfber>], [SDBER=<sdbber>], [LSRCTL=<lsrctl>], [DCCTYPE=<dctype>]
,[L2PROT=<l2prot>],[LAPDMODE=<lapdmode>],[LAPDROLE=<lapdrole>]
,[CTRLDATA=<ctrldata>],[FRCDDUS=<frcddus>],[FWDSECTRC=<fwdsectrc>]
,[FWDTRCFMT=<fwdtrcfmt>],[REVSECTRC=<revsectrc>],[REVTRCFMT=<revtrcfmt>],
,[ALMPROF=<almprof>],[CUST=<cust>],[CUSTTAG=<custtag>],[PMTMPL=<pmtmpl>]
,[SSBITTX=<ssbittx>],[LAPDMTU=<lapdmtu>],[LSRMODE=<lsrmode>],[RECPLSWDT=<recplswdt>],
,DWDMWL=<dwdmwl>];[<pst>];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID: the Access Identifier for the facility. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs. Grouping and ranging of AIDs is not allowed.
3. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - Y - value indicates mask AIS alarm for unused direction.
   - N - indicates do not mask AIS alarm for any direction. (Default)
4. SDBER: Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are:
   - $1E^{-9}$
   - $1E^{-8}$
   - $1E^{-7}$
   - $1E^{-6}$, (Default)
   - $1E^{-5}$
5. SFBER: Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values {1E-3|1E-4|1E-5}:
   - $1E^{-5}$
   - $1E^{-4}$
   - $1E^{-3}$, (Default)
6. LSRCTL is laser control. Valid values are:
   - On = turn laser on. This is the default value.
   - OFF = turn laser off.
   - Note: The value of this attribute cannot be changed while the entity is in IS state.
7. DCCTYPE: Indicates which DCC bytes are enabled.
   - SECTION = Section overhead bytes are enabled.
   - LINE = Line overhead bytes are enabled. (Default)
   - LINEPLUSESECTION = Both section and Line overhead bytes are enabled.
   - REG = Regenerator section bytes for STM commands.
   - MULTI = Multiplex bytes for STM commands.
   - REGANDMULTI = Both Regenerator and Multiplex bytes.
8. L2PROT: Indicates which Layer 2 protocol is enabled over DCC.
   - PPP = PPP protocol is enabled over DCC. (Default)
   - LAPD = LAPD protocol is enabled over DCC.
9. LAPDROLE: Indicates what is the role of LAPD on this interface.
   USER = User role. (Default)
   NETWORK = Network role
10. CTRLDATA: Indicates whether DCC carries control data information.
    Y = Enabled. (Default)
    N = Disabled
11. FRCDDUS: Indicates whether DUS is forced
    Y = Forced
    N = Unforced. (Default)
12. N = Unforced. (Default)
13. FWDSECTRC: Trace string value. 16-byte string.
14. FWDTRCFMT: Forward string format.
    16BYTES = 16 bytes string. (Default)
15. REVSECTRC: Trace String Value
    16-byte string.
16. REVTRCFMT: Reverse string format
    16BYTES = 16 bytes string. (Default)
17. CUST: Indicates the customer name. None indicates no customer selected.
18. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.
19. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.
20. PMTPL: PM template assigned to this facility. None indicates no pm template selected.
21. SSBITTX (Traverse only): Indicates SS bit transmitted. Valid values are:
    00. (Default)
    10
22. LAPDMTU: Indicates MTU of LAPD info payload. Valid range is 512 – 2048. Default is 512.
23. LSRMODE: Indicates control mode of Laser. Valid values are:
    DISABLED - Auto laser shutdown function is disabled.
    AUTOMATIC - Auto laser shutdown function is in automatic recovery mode.
    MANUAL - Auto laser shutdown function is in manual recovery mode.
24. RECPPLSWDT: Indicates the recovery pulse width for auto laser shutdown (ALS) recovery. Value range is 2 to 10 seconds. The default value is 5 seconds.
25. DWDMWL: Indicates the wavelength number to operate (applicable only to interfaces with tunable laser optics). Valid value range is 191.90 – 196.90 with increments of 0.10 nanometers. Example 192.00, 192.10, 192.20, 192.30 ………………….. 196.90.
26. <pst> Desired Primary State. Valid values are:
    IS
    OOS

Example:
ED-OC3:PETALUMA:FAC-1-1:123:::OOS;
ED-STM4:LONDON:FAC-1-1:123:::IS;
## Chapter 2  TL1 Commands

### Facility

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<th>General Description</th>
<th>Command Syntax</th>
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<tr>
<td><strong>ED-OPT-OC3/12/48/STM1/STM4/STM16</strong></td>
<td>This command is used to edit parameter values for the SFP of optical facility.</td>
<td><strong>ED-OPT-OC3/12/48/STM1/STM4/STM16</strong>:&lt;tid&gt;:&lt;AID&gt;:&lt;ctag&gt;::[ALMPROF=&lt;almprof&gt;]:::&lt;pst&gt;::;</td>
</tr>
<tr>
<td>1.</td>
<td>tid is target identifier described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
<td><strong>TARGET : TRAVERSE, TE100</strong></td>
</tr>
<tr>
<td>2.</td>
<td>AID is the Access Identifier for the SFP of optical facilities. Valid values are shown in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong> Grouping and ranging of AIDs is not allowed.</td>
<td><strong>Note:</strong> ED-OC192 and ED-STM64 are applicable for Traverse only.</td>
</tr>
<tr>
<td>3.</td>
<td>ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.</td>
<td>Example: ED-OPT-OC3:PETALUMA:OPT-1-1:123:::OOS;</td>
</tr>
<tr>
<td>4.</td>
<td>&lt;pst&gt; Desired Primary State. Valid values are: IS - Puts this interface in IS-NR unless there is a facility failure in which case OOS-AU will result. OOS - Puts this interface in OOS-MA unless there is a facility failure in which case OOS-AUMA will result.</td>
<td><strong>TARGET : TE100</strong></td>
</tr>
</tbody>
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### RTRV-T1

<table>
<thead>
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<th>Command</th>
<th>General Description</th>
<th>Command Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RTRV-T1</strong></td>
<td>This command is used to retrieve DS1 attributes.</td>
<td><strong>RTRV-T1</strong>:&lt;tid&gt;:::&lt;AID&gt;;&lt;ctag&gt;;</td>
</tr>
<tr>
<td>1.</td>
<td>tid is target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
<td><strong>TARGET : TRAVERSE, TE100</strong></td>
</tr>
<tr>
<td>2.</td>
<td>AID is Access Identifier for the DS1 facilities. Valid values are in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong> If AID is not specified, all interfaces shall be retrieved.</td>
<td><strong>Note:</strong> ED-OC192 and ED-STM64 are applicable for Traverse only.</td>
</tr>
<tr>
<td>3.</td>
<td>ctag is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
<td>Example: ED-OPT-OC3:PETALUMA:OPT-1-1:123:::OOS;</td>
</tr>
</tbody>
</table>
### Response Syntax

```
<cr> <lf> <lf>
^^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD <cr> <lf>
^^^^<AID>:^[AISM=<aism>],[AISGEN=<aisgen>],[AISF=<aisf>],
[FMT=<fmt>],[LBO=<lbo>],[LINECDE=<linecde>],[LEVEL=<level>],[TESTSIG=<testsig>],
[VSTIMER=<vstimer>],[CUST=<cust>],[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>]:
[<pst>],[<sst>]" + <cr> <lf>
```

1. **AISM**: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - **Y**: value indicates mask AIS alarm for unused direction
   - **N**: indicates do not mask AIS alarm for any direction.

2. **AISGEN**: Indicates if DS-1 AIS should be generated when VT1.5 signal is degraded. Valid values are:
   - **Y**: AIS replaces failed signal
   - **N**: do not generate DS-1 AIS when VT1.5 signal is degraded.

3. **AISF**: Indicates the format of the AIS signal to be used. Valid values are:
   - **NAS**: indicates the format is North American Standard.
   - **ONES**: indicates the format is all ones unformatted.

4. **FMT**: Indicates the DS1 digital signal format. Valid values are:
   - **SF**: indicates Superframe Format.
   - **ESF**: indicates Extended Superframe format.

5. **LBO**: Indicates the Line Build-out setting. Valid values are:
   - **D1**: {0-133ft}
   - **D2**: {133-266ft}
   - **D3**: {266-399ft}
   - **D4**: {399-533ft}
   - **D5**: {533-665ft}

6. **LINECDE**: Indicates DS1 line code. Valid values are:
   - **AMI**: Alternative Mark Inversion
   - **B8ZS**: Bipolar 8 zero substitution

7. **VSTIMER** (Traverse only): Valid signal timer to count the number of minutes since the last detection of valid incoming signal. Units are in minutes.

8. **LEVEL** (TE100 only): Valid values are:
   - **DSX1**

9. **TESTSIG** (TE100 only): Valid values are:
   - **CLEAR**: Test signal is not applied
   - **PRBS-15**: Pseudo random bit sequence

10. **CUST**: Indicates the customer name. None indicates no customer selected.
11. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. 
Valid values are:
Y - value indicates mask AIS alarm for unused direction
N - indicates do not mask AIS alarm for any direction.

12. AISGEN: Indicates if DS-1 AIS should be generated when VT1.5 signal is degraded. Valid values are:
Y - AIS replaces failed signal
N - do not generate DS-1 AIS when VT1.5 signal is degraded.

13. AISF: Indicates the format of the AIS signal to be used. Valid values are:
NAS - indicates the format is North American Standard.
ONES - indicates the format is all ones unformatted.

14. FMT: Indicates the DS1 digital signal format. Valid values are:
SF - indicates Superframe Format.
ESF - indicates Extended Superframe format.

15. LBO: Indicates the Line Build-out setting. Valid values are:
D1 {0-133ft}
D2 {133-266ft}
D3 {266-399ft}
D4 {399-533ft}
D5 {533-665ft}

16. LINECDE: Indicates DS1 line code. Valid values are:
AMI - Alternative Mark Inversion
B8ZS - Bipolar 8 zero substitution

17. VSTIMER (Traverse only): Valid signal timer to count the number of minutes since the last
detection of valid incoming signal. Units are in minutes.

18. LEVEL (TE100 only): Valid values are:
DSX1

19. TESTSIG (TE100 only): Valid values are:
CLEAR - Test signal is not applied
PRBS-15 - Pseudo random bit sequence

20. CUST: Indicates the customer name. None indicates no customer selected.

21. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.

22. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.

23. PMTPL: PM template assigned to this facility. None indicates no pm template selected.

24. <pst> Current Primary State.

25. <sst> Current secondary state of the system.
RTRV-E1

General Description

This command is used to retrieve E1 attributes.

Command Syntax

RTRV-E1: <tid>:<AID>:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is Access Identifier for the DS1 facilities. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs. If AID is not specified, all interfaces shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET : TRAVERSE, TE100

Response Syntax

Example:
RTRV-T1:PETALUMA:FAC-2-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
"FAC-2-1::AISM=N,AISGEN=N,AISF=ONES,FMT=ESF,LBO=D2,LINECDE=AMI:OOS"
;
TARGET : TRAVERSE, TE100,

RTRV-E1

M^^<ctag> COMPLD  <cr> <lf>
^^^"<AID>::[AISM=<aism>,[AISGEN=<aisgen>],[FMT=<fmt>],[LBO=<lbo>],[LINECDE=<linecde>],[LEVEL=<level>],[VSTIMER=<vstimer>],[CUST=<cust>],[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>];[<pst>],[<sst>]* + <cr> <lf>
Chapter 2 TL1 Commands

Facility

1. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   Y - value indicates mask AIS alarm for unused direction
   N - indicates do not mask AIS alarm for any direction.

2. AISGEN: Indicates if E1 AIS should be generated when signal is degraded. Valid values are:
   Y - AIS replaces failed signal
   N - do not generate DS-1 AIS when signal is degraded.

3. LBO: Indicates the Line Build out setting. Valid values are:
   GAIN - G.703, 120 Ohms, HDB3
   SHORT - G.703, 120 Ohms, HDB3 (Default)

4. FMT: Indicates the DS1 digital signal format. Valid values are:
   MFR - indicates multiframe format
   BASIC - indicates basic frame format.
   UNFR - indicates unframed format. (Default)

5. LINECDE: Indicates E1 line code. Valid values are:
   HDB3

6. VSTIMER (Traverse only): Valid signal timer to count the number of minutes since the last detection of valid incoming signal. Unit is in minutes.

7. CUST: Indicates the customer name. None indicates no customer has been selected.

8. CUSTTAG: Indicates the customer description for this facility. None indicates there is no customer description.

9. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.

10. PMTPL: PM template assigned to this facility. None indicates no pm template selected.

11. <pst> Current primary state.

12. <sst> Current secondary state of the system.

Example:
RTRV-E1:PETALUMA:E1-3-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
" FAC-2-1::AISM=N,AISGEN=Y,FMT=MFR,LBO=SHORTHAUL,VSTIMER=120,LINECDE=HDB3,ALMPROF=default,CUST=,CUSTTAG=,PMTPL=default:OOS-AUMA,FAF"
;
TARGET : TRAVERSE, TE100

RTRV-T3

General Description

This command is used to retrieve DS3 facility attributes.
### Command Syntax

RTRV-T3:<tid>:[<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is Access Identifier for the DS3 facilities. Valid values are in Appendix C—“Access Identifiers,” **Facility AIDs.** If AID is not specified, all interfaces shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**TARGET**: TRAVERSE, TE100

### Response Syntax

<cr><lf>
^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr><lf>
M^^<ctag> COMPLD <cr><lf>
^^^<AID>::[AISM=<aism>],[FMT=<fmt>],LINECDE=<linecde>,LEVEL=<level>]
[,AISF=<aism>],[RDI=<rdi>],LBO=<lbo>],[CBITPRCS=<cbit>],[TSTSIG=<tstsig>]
[,ALMPROF=<almprof>],[CUST=<cust>],[CUSTTAG=<custtag>],[PMTMPL=<pmtmpl>]: [<pst>],[<sst>] + <cr><lf>

1. **AISM**: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction.
   - **Y**: value indicates mask AIS alarm for unused direction
   - **N**: indicates do not mask AIS alarm for any direction.
2. **FMT**: Indicates the DS3 digital signal format. Valid values are:
   - **M23**: M23 framed
   - **CBIT**: M13 framed
   - **UNFR**: unframed
3. **LINECDE**: Indicates DS1 line code. Valid value:
   - **B3ZS**
4. **LEVEL**: Indicates the signal level. Valid values are:
   - **DSX-3**
5. **AISF**: Indicates the format of the AIS signal to be used. Valid values are:
   - **NAS**: indicates the format is North American Standard.
   - **ONES**: indicates the format is all ones unformatted.
6. **RDI** (Traverse only): Remote Defect Indicator generator. Valid values are:
   - **Y**: Generate RDI on receipt of AIS or LOF
   - **N**: Do not generate RDI
7. **LBO**: Indicates the Line Build out setting. Valid values are:
   - **D1**: {0-120ft}
   - **D2**: {120-450ft}
8. **CBITPRCS**: Indicates if C Bits are processed.
   - **Y**: C Bit is processed
   - **N**: C Bit processing is disabled
RTRV-EC1

General Description

This command is used to retrieve EC1 attributes.

Command Syntax

RTRV-EC1:<tid>[:<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is Access Identifier for the EC1 facilities. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs. If AID is not specified, all interfaces shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET: TRAVERSE
### Response Syntax

```
<cr> <lf> <lf>
<cr> <lf>
M^^ctag> COMPLD

1. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - Y - value indicates mask AIS alarm for unused direction.
   - N - indicates do not mask AIS alarm for any direction.

2. LBO: Indicates the Line Build out setting. Valid values are:
   - D1 {0-120ft}
   - D2 {120-450ft}

3. VSTIMER: Valid signal timer to count the number of minutes since the last detection of valid incoming SONET signal. Unit is in minutes.

4. SFBER: Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values are:
   - 1E-5
   - 1E-4
   - 1E-3

5. SDBER: Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are:
   - 1E-9 = 10^-9
   - 1E-8 = 10^-8
   - 1E-7 = 10^-7
   - 1E-6 = 10^-6
   - 1E-5 = 10^-5

6. LINECDE: Indicates the line coding. Valid value:
   - B3ZS

7. LEVEL: Indicates the signal level. Valid value:
   - DSX3

8. FMT: Indicates the EC1 digital signal format. Valid values are:
   - M23 = M23 framed
   - CBIT = M13 framed
   - UNFR = unframed

9. CUST: Indicates the customer name. None indicates no customer selected.

10. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.

11. ALRMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.

12. PMTPLM: PM template assigned to this facility. None indicates no pm template selected.


14. <sst>: Current secondary state.
```
Chapter 2  TL1 Commands

Facility

Example:
RTRV-EC1:PETALUMA:FAC-2-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
“FAC-2-1:::AISM=N LBO=D1,
VSTIMER=0 SDBER=1E-6 SFBER=1E-3,
LINECDE=B3ZS LEVEL=DSX-3 OOS-MA”;
TARGET : TRAVERSE

RTRV-T3-TMX

General Description
This command is used to retrieve T3 TMX attributes (Traverse only).

Command Syntax

RTRV-T3-TMX:<tid>:[<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs. If AID is not specified, all interfaces of shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET : TRAVERSE

Response Syntax

<RTRV-T3-TMX: tid>:[<AID>]:<ctag>;

1. <cr> <lf> <cr> <lf>
2. ^<SID>^(YY-MM-DD)^<HH:MM:SS> <cr> <lf>
3. M^<ctag> COMPLD
4. ^<AID>:^[AISM=<aism>,[AISF=<aisf>],LBO=<lbo>],[FMT=<fmt>],[LEVEL=<level>],
[LINEdCDE=<linecde>],[DS1TOVTMAP=<ds1tovtmap>],[DS3MAP=<ds3map>],[TSTSIG=<tstsig>]
[CUST=<cust>],[CUSTTAG=<custag>],[ALRMPROF=<alrmprof>],[PMTMPL=<pmtmpl>],[SUBPRTMAP=<subprtmap>];
}<cr> <lf>
1. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   Y - value indicates mask AIS alarm for unused direction
   N - indicates do not mask AIS alarm for any direction.
2. AISF: Indicates the format of the AIS signal to be used. Valid values are:
   NAS - indicates the format is North American Standard.
   ONES - indicates the format is all ones unformatted.
3. LBO: Indicates the Line Build out setting. Valid values are:
   D1 {0-120ft}
   D2 {120-450ft}
4. FMT: Indicates the EC1 digital signal format. Valid values are:
   M23 = M23 framed
   CBIT = M13 framed
   UNFR = unframed
5. LEVEL: Indicates the signal level. Valid value: DSX3
6. LINECDE: Indicates the line coding. Valid value: B3ZS
7. DSITOVVTMAP: Indicates the mapping of DS1 in VT. Valid values are:
   GR-253 - DS1 are mapped into VT as per GR253
   SEQUENTIAL - DS1 are mapped into VT in sequential order
8. DS3MAP: Indicates payload of DS3 Channelized signal. Valid values are:
   DS1 is the payload of DS3. (Default)
   E1 is the payload of DS3.
9. TSTSIG: Indicates Test Signal inserted on facility. Valid values are:
   CLEAR: No test signal is inserted
   PRBS: Pseudo Random bit sequence test signal
   FIXED-24BIT: 24 bit repeating pattern test signal
10. CUST: Indicates the customer name. None indicates no customer selected.
11. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.
12. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.
13. PMTMLP: PM template assigned to this facility. None indicates no pm template selected.
14. SUBPRTMAP: Indicates DS1 subport mapping into VT type. Valid values are:
   VT15 - DS1 is mapped into VT1.5
   VT2 - DS1 is mapped in VT2
15. <pst>: Current Primary State.
16. <sst>: Current secondary state.
Example:
RTRV-T3-TMX:PETALUMA:FAC-2-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
"FAC-2-1::AISM=N,LBO=D1;
LINECDE=B3ZS,DS1TOVTMAP=GR253,DS3MAP=DS1:OOS-MA"
;
TARGET : TRAVERSE

RTRV-STS1-TMX

General Description
This command is used to retrieve STS1 TMX attributes (Traverse only).

Command Syntax

RTRV-STS1-TMX:<tid>:[<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs. If AID is not specified, all interfaces shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET: TRAVERSE

Response Syntax

<cr> <lf> <lf>
^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD
^^<AID>::[AISM=<aism>],[FMT=<fmt>],[AISF=<aisf>],[DS1TOVTMAP=<ds1tovtmap>],[DS3MAP=<ds3map>],[CUST=<cust>],[CUSTTAG=<custtag>],[SUBPRTMAP=<subprtmap>]; [<pst>][,<sst>]" + <cr> <lf>
1. AISM: Controls whether Alarm Indication Signal (AIS) will trigger an alarm for the unused direction. Valid values are:
   Y - value indicates mask AIS alarm for unused direction.
   N - indicates do not mask AIS alarm for any direction.
2. FMT: Indicates the EC1 digital signal format. Valid values are:
   M23 - M23 framed
   CBIT - M13 framed
   UNFR - unframed
3. AISF: Indicates the format of the AIS signal to be used. Valid values are:
   NAS - indicates the format is North American Standard.
   ONES - indicates the format is all ones unformatted.
4. DS1TOVTMAP: Indicates the mapping of DS1 in VT. Valid values are:
   GR-253 - DS1 are mapped into VT as per GR253.
   SEQUENTIAL - DS1 are mapped into VT in sequential order.
5. DS3MAP: Indicates payload of DS3 Channelized signal. Valid values are:
   DS1 - is the payload of DS3. (Default)
   E1 - is the payload of DS3.
6. CUST: Indicates the customer name. None indicates no customer selected.
7. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.
8. SUBPRTMAP: Indicates DS1 subport mapping into VT type. Valid values are:
   VT15 - DS1 is mapped into VT1.5
   VT2 - DS1 is mapped in VT2
9. <pst>: Current primary state.
10. <sst>: Current secondary state.

Example:
RTRV-STS1-TMX:PETALUMA:FAC-2-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
"FAC-3-2::AISM=N,FMT=M23, AISF=NAS,
:OOS-MA,MT TERMLPBK"
;
TARGET : TRAVERSE

**RTRV-TMX-DS1**

**General Description**

This command is used to retrieve attributes for subport of TMX facility (Traverseonly).
### Command Syntax

**RTRV-TMX-DS1:**<tid>[:<AID>:]<ctag>;

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” **Facility AIDs.** If AID is not specified, all interfaces shall be retrieved.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**TARGET : TRAVERSE**

### Response Syntax

```
<cr> <lf> <lf>
<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M<ctag> COMPLD
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **<AID>:** Access Identifier for the T3-TMX facilities. Valid values are in Appendix C—“Access Identifiers,” **Facility AIDs.** Grouping and ranging of AIDs is not allowed.
3. **FMT** Indicates the DS1 digital signal format. Valid values are:
   - SF - indicates Superframe Format.
   - ESF - indicates Extended Superframe format. Default value is ESF.
   - UNFR - indicates the unframed format.
4. **ALMPROF:** Alarm profile assigned to this facility. None indicates no alarm profile is selected.
5. **PMTMPL:** PM template assigned to this facility. None indicates no pm template selected.
6. **<pst>:** Current Primary State.

Example:

RTRV-TMX-DS1:PETALUMA:DS1-2-1-1:123;

```
PETALUMA 02-04-20 14:30:00
M 123 COMPLD
“FMT=UNFR, AISF=NAS,
:OOS-MA ”
```

**TARGET : TRAVERSE**
RTRV-E3

General Description
This command is used to retrieve E3 facility attributes.

Command Syntax

```
RTRV-E3:<tid>:[<AID>]:<ctag>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is Access Identifier for the E3 facilities. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs. If AID is not specified, all interfaces shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET : TRAVERSE, TE100

Response Syntax

```
<cr> <lf> <lf>
 ^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
 M^^<ctag> COMPLD <cr> <lf>
 ^^<AID>::[AISM=<aism>],[FMT=<fmt>],[LINECDE=<linecde>] [,LBO=<lbo>][,TSTSIG=<tstsig>]
 [,ALMPROF=<almpprof>][,CUST=<cust>][,CUSTTAG=<custtag>][,PMTMPL=<pmtmpl>]:[<pst>],<sst>" + <cr> <lf>
```

1. AISM: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   Y - indicates mask AIS alarm for unused direction.
   N - indicates do not mask AIS alarm for any direction.
2. LBO: Indicates the Line Build out setting. Valid values are:
   0-255. (Default)
   250-450
3. FMT: Indicates the E3 digital signal format. Valid values are:
   G.751 = G751 frame format
   G.832 = G832 frame format
   UNFR = unframed. (Default)
   The value of this attribute cannot be changed while the entity is in IS state.
4. LINECDE: Indicates E3 line code. Valid values are:
   HDB3
5. TSTSIG: Indicates E3 test signal value. Valid values are:
   CLEAR
   PRBS-15
   PRBS-23
   FIXED-24BIT
6. CUST: Indicates the customer name. None indicates no customer selected.
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Facility

7. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.
8. ALMPROF: Alarm profile assigned to this facility. None indicates no alarm profile is selected.
9. PMTPL: PM template assigned to this facility. None indicates no PM template is selected.
10. <pst>: Current primary state.
11. <sst>: Current secondary state.

Example:
Assuming a terminal loopback was applied to E3-3-1.
RTRV-E3:PETALUMA:E-3-1:123;
PETALUMA 02-04-20 14:30:00
M 123 COMPLD
“FAC-3-1::AISM=N,FMT=G751,LINECDE=HDB3,LBO=0-225 FT,ALMPROF=default,CUST=,CUSTTAG=:OOS-AUMA,FAF”;

TARGET : TRAVERSE, TE100

RTRV-(OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64)

General Description
This command is used to retrieve OC-n/STM-n attributes.

Command Syntax


1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the Access Identifier for the OC-n/STM-n facilities. Valid values are shown in Appendix C—“Access Identifiers.” If AID is not specified, all interfaces of the same type shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET : TRAVERSE, TE100

Note: RTRV-OC192 and STM64 are applicable for Traverse only.
### Response Syntax

```plaintext
<cr> <lf> <lf>
^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD
^^^"<AID>:[AISM=<aism>,[SFBER=<sfber>,[SDBER=<sdber>,[LSRCTL=<lsrctl>]
,[DCCTYPE=<dcctype>],[L2PROT=<l2prot>],[LAPDMODE=<lapdmode>],
[LAPDROLE=<lapdrole>],[CTRLDATA=<ctrldata>],[FRCDDUS=<frcddus>],
[FWDSECTRC=<fwdsectrc>],[FWDTRCFMT=<fwdtrcfmt>],[REVSECTRC=<revsectrc>],
[REVTRCFMT=<revtrcfmt>],[ALMPROF=<almprof>],[CUST=<cust>],[CUSTTAG=<custtag>],[PMTMPL=<pmtmpl>],
[FMT=<fmt>],[SSBITTX=<ssbittx>],[LAPDMTU=<lapdmtu>],[LSRMODE=<lsrmode>],
[RECPNLSWDT=<recpnlswdt>],[WLNUM=<wlnum>],[WL=<wl>],[TXSTATE=<txstate>],
[SSBITRX=<ssbitrx>],[SSMTX=<ssmtx>],[SSMRX=<ssmrx>],[p<prot>],[<psrt>]+<cr><lf>
```

1. **AID**: Access Identifier for the facility. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs.
2. **AISM**: Controls whether Alarm Indication Signal will trigger an alarm for the unused direction. Valid values are:
   - Y - value indicates mask AIS alarm for unused direction
   - N - indicates do not mask AIS alarm for any direction.
3. **SFBER**: Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values are \{1E-5|1E-4|1E-3\}. Default value is 1E-3.
4. **SDBER**: Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are \{1E-9|1E-8|1E-7|1E-6|1E-5\}. Default value is 1E-6.
5. **LSRCTL**: is laser control. Valid values are:
   - ON = turn laser on. (Default)
   - OFF = turn laser off.
6. **DCCTYPE**: indicates which DCC bytes are enabled
   - SECTION = Section overhead bytes are enabled. Valid for OC3/12/48/192 only.
   - LINE = Line overhead bytes are enabled. (Default) Valid for OC3/12/48/192 only.
   - LINEPLUSSECTION = Both section and Line overhead bytes are enabled. Valid for OC3/12/48/192 only.
   - REG = Regenerator section bytes for STM commands. Valid for STM1/4/16/64 only.
   - MULTI = Multiplex bytes for STM commands. Valid for STM1/4/16/64 only.
   - REGANDMULTI = Both Regenerator and Multiplex bytes. Valid for STM1/4/16/64 only.
7. **L2PROT**: Indicates which Layer 2 protocol is enabled over DCC
   - PPP = PPP protocol is enabled over DCC. (Default)
   - LAPD = LAPD protocol is enabled over DCC
8. **LAPDMODE**: Indicates the mode in which LAPD is enabled
   - AITS = Acknowledge mode
   - UITS = Unacknowledge mode. (Default)
9. **LAPDROLE**: Indicates what is the role of LAPD on this interface.
   - USER = User role. (Default)
   - NETWORK = Network role
### Chapter 2 TL1 Commands

#### Facility

<table>
<thead>
<tr>
<th>No.</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>CTRLDATA</td>
<td>Indicates whether DCC carries control data information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y = Enabled (Default)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Disabled</td>
</tr>
<tr>
<td>11</td>
<td>FRCDDUS</td>
<td>Indicates whether DUS is forced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y = Forced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Unforced. (Default)</td>
</tr>
<tr>
<td>12</td>
<td>FWDSECTRC</td>
<td>Trace string value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 bytes string</td>
</tr>
<tr>
<td>13</td>
<td>FWDTRCFMT</td>
<td>Forward string format</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16BYTES = 16 bytes string. (Default)</td>
</tr>
<tr>
<td>14</td>
<td>REVSECTRC</td>
<td>Trace string value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 bytes string</td>
</tr>
<tr>
<td>15</td>
<td>REVTRCFMT</td>
<td>Reverse string format</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16BYTES = 16 bytes string. (Default)</td>
</tr>
<tr>
<td>16</td>
<td>CUST</td>
<td>Indicates the customer name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None indicates no customer selected.</td>
</tr>
<tr>
<td>17</td>
<td>CUSTTAG</td>
<td>Indicates the customer description for this facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None indicates no customer description.</td>
</tr>
<tr>
<td>18</td>
<td>ALMPROF</td>
<td>Alarm profile assigned to this facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None indicates no alarm profile is selected.</td>
</tr>
<tr>
<td>19</td>
<td>PMTPL</td>
<td>PM template assigned to this facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>None indicates no PM template selected.</td>
</tr>
<tr>
<td>20</td>
<td>FMT</td>
<td>Format of the signal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SONET</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SDH</td>
</tr>
<tr>
<td>21</td>
<td>SSBITTX</td>
<td>(Traverse only): Indicates SS bit transmitted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values are:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>00. Default value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>22</td>
<td>LAPDMTU</td>
<td>Indicates MTU of LAPD info payload.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid range is 512 to 1497. Default is 512.</td>
</tr>
<tr>
<td>23</td>
<td>LSRMODE</td>
<td>Indicates operation mode of auto laser shutdown.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DISABLED - Auto laser shutdown function is disabled.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AUTOMATIC - Auto laser shutdown function is in automatic recovery mode.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MANUAL - Auto laser shutdown function is in manual recovery mode.</td>
</tr>
<tr>
<td>24</td>
<td>RECPLSWDT</td>
<td>Indicates the recovery pulse width for auto laser shutdown (ALS) recovery.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Value range is 2 to 10 seconds. The default value is 5 seconds.</td>
</tr>
<tr>
<td>25</td>
<td>DWDMWL</td>
<td>(Traverse only): Indicates the actual wavelength (nm) of the interface.</td>
</tr>
<tr>
<td>26</td>
<td>TXSTATE</td>
<td>Indicates transmit state of laser</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON = Laser is ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF = Laser is OFF</td>
</tr>
<tr>
<td>27</td>
<td>SSBITRX</td>
<td>(Traverse only): Indicates SS bit received.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values are:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>00, Default value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
28. SSMTX: Indicates transmitted sync status message (SSM). Valid values are:
   PRS – Stratum 1 traceable
   STU – Synchronized, traceability unknown
   ST2 - Stratum 2 traceable
   TNC – Transit node clock traceable
   ST3E - Stratum 3E traceable
   ST3 - Stratum 3 traceable
   SMC – SONET minimum clock traceable
   ST4 - Stratum 4 traceable
   DUS - use for synchronization
   RES - Reserved for network synchronization use

29. SSMRX: Indicates received sync status message (SSM)
   PRS - Stratum 1 traceable
   STU - Synchronized, traceability unknown
   ST2 - Stratum 2 traceable
   TNC - Transit node clock traceable
   ST3E - Stratum 3E traceable
   ST3 - Stratum 3 traceable
   SMC - SONET minimum clock traceable
   ST4 - Stratum 4 traceable
   DUS - Don’t use for synchronization
   RES - Reserved for network synchronization use

30. <pst>: Current Primary State.
31. <sst>: Current secondary state of the system.

Example:
RTRV-OC3:PETALUMA:FAC-2-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
“FAC-2-1::AISM=N,SDBER=1E-6,SFBER=1E-3, VSTIMER=1000,LSRCTL=ON;OOS-MA”
;
TARGET : TRAVERSE, TE100

Note: RTRV-OC192 and STM64 are applicable for Traverse only.

RTRV-OPT-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description
This command is used to retrieve optic parameters on OC-n/STM-n facility.
**Command Syntax**

<table>
<thead>
<tr>
<th>Command Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTRV-OPT-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}::&lt;tid&gt;::[&lt;AID&gt;::&lt;ctag&gt;];</td>
</tr>
</tbody>
</table>

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is Access Identifier for the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers,” **Facility AIDs.** If AID is not specified, all facilities of the same type shall be retrieved.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**TARGET:** TRAVERSE, TE100

**Note:** RTRV-OPT-OC192 and STM64 are applicable for Traverse only.

**Response Syntax**

```
<cr> <lf> <lf>
^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^<ctag> COMPLD
^<AID>::[ALMPROF=<almprof>],[IDENT=<ident>],[WAVE=<wave>],[DIAGTYPE=<diagtype>],[DATE=<date>],
[ENCODING=<encoding>],[BRNOMINAL=<brnominal>],[VENDOR=<vendor>],
[VENDORREV=<vendorrev>],[VENDORPN=<vendorpn>],[VENDORSN=<vendorsn>],
[TEMP=<temp>],[VOLT=<volt>],[TXCURR=<txcurr>],[TXPWR=<txpwr>],
[RXPWR=<rxpwr>];[<pst>];[[<sst>]]^<cr>^<lf>
```
1. **AID**: Access Identifier for the facility. Valid values are in Appendix C—“Access Identifiers,” *Facility AIDs*.
2. **LMPROF** *(TE100 only)*: Alarm profile assigned to this facility. None indicates no alarm profile is selected.
3. **IDENT**: Indicates name of the optical transceiver device (SFP).
4. **WAVE**: Indicates wavelength of the optics. Valid values are:
   - 1310 - Wavelength is 1310 nanometer
   - 1550 - Wavelength is 1550 nanometer
5. **DIAGTYPE**: Indicates the diagnostic monitoring type.
6. **DATE**: Indicates date of the optics.
7. **ENCODING**: Indicates encoding of the optics.
8. **BRNOMINAL**: Indicates BR nominal value of the optics
9. **VENDOR**: Indicates vendor of the optics
10. **VENDORREV**: Indicates vendor revision of optics.
11. **VENDORPN**: Indicates vendor part number of optics
12. **VENDORSN**: Indicates vendor serial number of optics
13. **TEMP**: Indicates the measured temperature of optics in centigrade.
14. **VOLT**: Indicates the measured voltage of optics in volts.
15. **TXCURR**: Indicates the measured transmitted current in milliamps.
16. **TXPWR**: Indicates the measured transmitted power in dBm.
17. **RXPWR**: Indicates the measured received power in dBm.
18. **<pst>** *(TE100 only)*: Current Primary State.
19. **<sst>** *(TE100 only)*: Current secondary state of the system.

Example:

```
RTRV-OPT-OC3:PETALUMA:FAC-2-1:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
“IDENT=SMALL FORM FACTOR PLUGGABLE TRANSRECEIVER, WAVE=1310nm”

TARGET : TRAVERSE, TE100
```

**Note**: RTRV-OPT-OC192 and STM64 are applicable for Traverse only.
The commands in this section are used to configure path parameters.

**ED-{VT1/VC11/VC12}**

**General Description**
This command is used to configure VT1.5, VC-11, or VC-12 path parameters. On an edit command, if a parameter value is to remain the same, leave the parameter out of the command syntax.

**Command Syntax**

```
ED-{VT1/VC11/VC12}::{tid}:::<aid>::::<ctag>:::::[ALMPROF=<almprof>];
```

1. **AID**: Access Identifier for the connection termination point of VT1.5/VC11/VC12 paths. Valid values are shown in Appendix C—“Access Identifiers,” **SONET Path AIDs**, **AU-4 Mapped SDH Path AIDs**, and **AU-3 Mapped SDH Path AIDs**. Grouping and ranging of AIDs is not allowed.
2. **ALMPROF**: Alarm profile assigned to the connection termination point. None indicates no alarm profile is selected.

**TARGET**: TRAVERSE, TE100

**Note**: VC11 command is not valid for TE100.

---

**RTRV-{VT1/VC11/VC12}**

**General Description**
Used to retrieve VT1.5, VC-11 or VC-12 path information. Grouping and ranging of AIDs is not allowed.

**Command Syntax**

```
RTRV-{VT1/VC11/VC12}::{id}::<AID>::::<ctag>;
```

**Response Syntax**

```
<cr><lf> <cr><lf>
^^^<SID>^^<YY-MM-DD>^^<HH:MM:SS> <cr><lf>
M^^<ctag> COMPLD^^^^<AID>::[ALMPROF=<almprof>]" + <cr><lf>
`;`
```

1. **AID**: Access Identifier for the connection termination point of VT1.5/VC11/VC12 paths. Valid values are shown in Appendix C—“Access Identifiers,” **SONET Path AIDs**, **AU-4 Mapped SDH Path AIDs**, and **AU-3 Mapped SDH Path AIDs**. Grouping and ranging of AIDs is not allowed.
2. **ALMPROF**: Alarm profile assigned to the connection termination point. None indicates no alarm profile is selected.

**TARGET**: TRAVERSE, TE100

**Note**: VC11 command is not valid for TE100.
ED-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}

**General Description**
This command is used to configure SONET STS1, STS3C, STS12C, STS48C path or SDH VC-3, VC-4, VC-4-4C, VC-4-16C path attributes. On an edit command, if a parameter value is to remain the same, then leave the parameter out of the command syntax.

**Command Syntax**
```
ED-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C} :<tid>:<aid>:<ctag>::[ALMPROF=<almprof>];
```

1. **AID**: Access Identifier for the STS/VC facility. Valid values are shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs. Grouping and ranging of AIDs is not allowed.
2. **ALMPROF**: Alarm profile assigned to the connection termpoint. None indicates no alarm profile is selected.

**TARGET**: TRAVERSE, TE100

**Note**: STS48C and VC4_16C command is not applicable for TE100.

RTRV-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}

**General Description**
Used to retrieve SONET STS1, STS3C, STS12C, STS48C path or SDH VC-3, VC-4, VC-4-4C, VC-4-16C path information. Grouping and ranging of AIDs is not allowed.

**Command Syntax**
```
RTRV-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C};<tid>:<AID>:<ctag>;
```

**Response Syntax**
```
<cr> <lf><lf>
^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD^^^"<AID>[ALMPROF=<almprof>]" + <cr> <lf>;
```

1. **AID**: Access Identifier for the STS/VC facility. Valid values are shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs. Grouping and ranging of AIDs is not allowed.
2. **ALMPROF**: Alarm profile assigned to the connection termpoint. None indicates no alarm profile is selected.

**TARGET**: TRAVERSE, TE100

**Note**: STS48C and VC4_16C command is not applicable for TE100.
Test Access

Test Access allows T1, T3, STS1, and VT1.5 circuit monitoring and testing. It includes commands to connect, disconnect, and change the test access port (TAP) and test access connections (TAC).


**ENT-TAP-{STS1/VT1}**

**General Description**

This command is used to create STS-1/DS3/EC-1 or VT1.5/DS1 TAPs.

**Command Syntax**

<table>
<thead>
<tr>
<th>ENT-TAP-{STS1/VT1/VC3/VC11/VC12}:[&lt;TID&gt;]:&lt;TAP&gt;:&lt;CTAG&gt;:&lt;FAD1AID&gt;[,&lt;FAD2AID&gt;];</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> TID: is target identifier.</td>
</tr>
<tr>
<td><strong>2.</strong> TAP: defines test access port ID. The TAP is an integer number ranging from TAP-1 to TAP-128.</td>
</tr>
<tr>
<td><strong>3.</strong> CTAG: is correlation tag.</td>
</tr>
<tr>
<td><strong>4.</strong> FAD1AID: is the facility AID that is associated with this TAP. For a STS-1/DS3/EC-1/VC3 TAP, the facility AID could be referring to a DS3 interface, an EC-1 interface, or an STS-1/VC-3 facility within an OC-n/STM-n interface. For a VT1.5/DS1/VC11 TAP, the facility AID could be referring to a DS1 interface, a DS1 subport within a DS3 Transmux interface, or a VT1.5/VC-11 path within any OC-n/EC-1/STM-n interface.</td>
</tr>
<tr>
<td><strong>5.</strong> FAD2AID: is the second facility AID associated with a TAP with dual FAD.</td>
</tr>
</tbody>
</table>
The following example sets up a DS3 (or EC-1) TAP on port 12 of a DS3/EC-1 card in slot 3:

```
ENT-TAP-STS1:node1:TAP-1:ctag::FAC-3-12;
```

The following example sets up an STS TAP on port 1, STS #1 of an OC-n card in slot 10:

```
ENT-TAP-STS1:node1:TAP-2:ctag::STS-10-1-1;
```

The following example sets up a VC-3 TAP on port 1, STS #1 of an STM-n card in slot 10:

```
ENT-TAP-VC3:node1:TAP-2:ctag::STS-10-1-1;
```

The following example sets up an STS TAP on MSAID numbered STS #13 and #14 (dual FAD):

```
ENT-TAP-STS1:node2:TAP-1:ctag::MSTS-13,MSTS-14;
```

The following example sets up a VT TAP on OC-n/EC-1 in slot 12, port 1, STS 1, VTG 2, VT 5:

```
ENT-TAP-VT1:node1:TAP-101:ctag::VT1-12-1-1-2-5;
```

The following example sets up a DS1 TAP with DS1 ports 27 and 28 in slot 5 (dual FAD):

```
ENT-TAP-VT1:node1:TAP-102:ctag::FAC-5-28, FAC-5-27;
```

The following example sets up a DS1 subport TAP on the 28th DS1 within the DS3 Transmux port 11 of a Transmux card in slot 9:

```
ENT-TAP-VT1:node1:TAP-103:ctag::DS1-9-11-28;
```

The following example sets up a VT TAP on MSAID-VTG-VT numbered STS 2, VTG 4, VT 3:

```
ENT-TAP-VT1:node2:TAP-10:ctag::MVT1-2-4-3;
```

The following example sets up a VT TAP on MSAID-Sequential numbered STS 96, VT 28:

```
ENT-TAP-VT1:node3:TAP-20:ctag::MVT1-96-28;
```

TARGET: TRAVERSE

### RTRV-TAP-{STS1/VT1/VC3/VC11/VC12}

#### General Description

This command is used to retrieve STS-1/DS3/EC-1/VC3 TAP, VT1.5/DS1/VC11, or E1/VC12 TAP parameter values.

#### Command Syntax

```
RTRV-TAP-{STS1/VT1/VC3/VC11/VC12}:<TID>:<TAP>:<CTAG>;
```

1. **TID** is target identifier.
2. **TAP** defines test access port ID. The TAP is an integer number ranging from TAP-1 to TAP-128. Grouping of TAPs is allowed. If not specified, all established TAPs would be returned.
3. **CTAG** is correlation tag.

#### Examples:

```
RTRV-TAP-VT1::TAP-2:ctag;
RTRV-TAP-STS1::ctag;
RTRV-TAP-VC3::TAP-1:ctag;
RTRV-TAP-VC11::ctag;
RTRV-TAP-VC12::TAP-1:ctag;
```
**DLT-TAP-{STS1/VT1/VC3/VC11/VC12}**

**General Description**

This command is used to delete a TAP, a group of TAPs, or all TAPs.

**Command Syntax**

```
DLT-TAP-{STS1/VT1}[::<TID>]:::<TAP>:::<TAP>:<<<ctag>>;::<fad1aid>[,<<fad2aid>>]¬<cr>¬<lf>
```

1. **TID** is target identifier.
2. **TAP** defines test access port ID. The TAP is an integer number ranging from TAP-1 to TAP-128. If not specified all established TAPs would be deleted. Grouping of the TAPs is allowed.
3. **CTAG** is correlation tag.

**Examples:**

- `DLT-TAP-VT1::TAP-1:ctag;`
- `DLT-TAP-STS1::TAP-2:ctag;`
- `DLT-TAP-VC11::ctag;`
- `DLT-TAP-VC12::TAP-2:ctag;`
- `DLT-TAP-VC3::ctag;`

**TARGET: TRAVERSE**

---

**CONN-TACC-{STS1/VT1}**

**General Description**

This command connects test access for STS1/T3, VT1.5/T1, or E1 specified by the AID to test port specified by the TAP number. This command provides information required to process an access to the facility under test. The original cross-connection still can be retrieved using the `RTRV-CRS-STS1` or `RTRV-CRS-VT1` command.

The following restriction applies:

- If the mode is service affecting (e.g., SPLIT or LOOP access), the facility needs to be provisioned to an out of service state (e.g., OOS-MA).
## Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
<th>Details</th>
</tr>
</thead>
</table>
| **CONN-TACC-**-STS1/VT1[:<TID>:]<AID>:<CTAG>:<TAP>:<MOD>; | **1.** TID is target identifier.  
**2.** AID is the access identifier for the single source.  
**3.** CTAG is correlation tag.  
**4.** TAP is the selected the test access port. It must be a decimal integer with a range of TAP-1 to TAP-128.  
**5.** MOD indicates the test access mode. Valid values are:  
  - LOOP (Planned for future release.)  
  - LOOPF (Planned for future release.)  
  - MONE  
  - MONEF  
  - MONF  
  - SPLTA  
  - SPLTB  
  - SPLTE  
  - SPLTEF  
  - SPLTF |

The following example connects STS facility on slot 6, port 1, STS 3 to TAP-1:  
**CONN-TACC-**-STS1:node1:STS-6-1-3:ctag::TAP-1:MONE;  
The following example connects DS3/EC-1 facility on slot 12, port 6 to TAP-2:  
**CONN-TACC-**-STS1:node1:FAC-12-6:ctag::TAP-2:MONF;  
The following example connects STS facility on MSAID numbered STS 9 to TAP-101:  
**CONN-TACC-**-STS1:node2:MSTS-9:ctag::TAP-101:SPLTF;  
The following example connects DS1 facility on port 28 of DS1 card in slot 5 to TAP-1:  
**CONN-TACC-**-VT:node1:FAC-5-28:ctag::TAP-1:MONEF;  
The following example connects VT1.5 facility on OC-n slot 11, port 1, STS 9, VTG 5, VT3 in slot 5 to TAP-2:  
**CONN-TACC-**-VT:node1:VT1-11-1-9-5-3:ctag::TAP-2:MONF;  
The following example connects DS1 subport on Transmux card slot 9, DS3 port 11, DS1 subport 28 to TAP-1:  
**CONN-TACC-**-VT:node1:DS-9-11-28:ctag::TAP-1:MONE;  
The following example connects MSAID-VTG-VT numbered STS 5, VTG 3, VT3 to TAP-1:  
**CONN-TACC-**-VT:node2:MVT1-5-3-3:ctag::TAP-1:SPLTEF;  
The following example connects MSAID-Sequential numbered STS 96, VT 17 to TAP-2:  
**CONN-TACC-**-VT:node2:MVT1-96-17:ctag::TAP-1:SPLTEF;  
TARGET: TRAVERSE
**CHG-ACCMD-{STS1/VT1}**

**General Description**

This command changes the access mode for the circuit under test.

The following restrictions apply:

- This command can only be applied to an existing TAP connection.
- The value of the tap parameter must match the active tap value of the previous `CONN-TACC-{STS1/VT1}` command.
- Only a single test access configuration is allowed at a time.
- A `CONN-TACC-{STS1/VT1}` command must have executed successfully first so a test access session with a valid mode currently exists.
- The state of the facility needs to be provisioned to an out of service state (e.g., OOS-MA) when changing from a non-service-affecting mode (MONE or MONF) to a service-affecting mode (SPLIT or LOOP).

If the circuit is already in the requested access mode, a normal completion response will be returned.

**Command Syntax**

```
CHG-ACCMD-{STS1/VT1}:<TID>:TAP:<CTAG>::<MOD>;
```

1. **TID** is target identifier.
2. **CTAG** is correlation tag.
3. **TAP** is the selected the test access port. It must be a decimal integer with a range of TAP-1 to TAP-128.
4. **MOD** indicates the test access mod. Valid values are:
   - LOOPE (*Planned for future release.*)
   - LOOPF (*Planned for future release.*)
   - MONE
   - MONEF
   - MONF
   - SPLITA
   - SPLITB
   - SPLTE
   - SPLTEF
   - SPLTF

**Example:**

Assume the previous test connect command was established by this command for MONE:

```
CONN-TACC-VT1::FAC-2-4:ctag::TAP-1:MONE;
```

The following change mode command will change it to MONF:

```
CHG-ACCMD-VT1::TAP-1:ctag::MONF;
```

**TARGET:** TRAVERSE
RTRV-TACC-{STS1/VT1}

**General Description**

This command is used to retrieve STS1/T3, VT1.5/T1, or E1 test access points.

**Command Syntax**

```
RTRV-TACC-{STS1/VT1}:[<TID>]:[<TAP>]:<CTAG>;
```

1. **TID** is target identifier.
2. **TAP** defines test access port ID. The TAP is an integer number ranging from TAP-1 to TAP-128. Grouping of TAPs is allowed. If not specified, all established TAPs would be returned.
3. **CTAG** is correlation tag.

**Examples:**

- `RTRV-TACC-VT1::TAP-2:ctag;`
- `RTRV-TACC-STS1:::ctag;`

**NORMAL RESPONSE**

```
<cr><lf><lf>
^^^<rsphdr><cr><lf>
M^^<ctag>^COMPLD<cr><lf>
(^^^<aid>:<connMode>:<fad1aid>[,.<fad2aid>]*<cr><lf>)*
```

**TARGET: TRAVERSE**

DISC-TACC-{STS1/VT1}

**General Description**

This command disconnects test access for STS1/T3, VT1.5/T1, or E1 and restores the circuit under test to its through state. Previously provisioned cross-connections are automatically restored. The value of the TAP parameter must match the active TAP value of the previous `CONN-TACC` command.

**Command Syntax**

```
DISC-TACC-{STS1/VT1}:[<TID>]:[<TAP>]:<CTAG>;
```

1. **TID** is target identifier.
2. **CTAG** is correlation tag.
3. **TAP** is the selected the test access path.

**Example:**

- `DISC-TACC-VT1: :TAP-1:ctag;`
- `DISC-TACC-STS1 ::TAP-2 :ctag;`

**TARGET: TRAVERSE**
If the command identifies an already disconnected connection, a SADC error message is returned.
If the system cannot release the TAP, a SRTN error message is returned.

**REPT-INITZN**

**General Description**
This command causes all test accesses to be released.

**Command Syntax**

<table>
<thead>
<tr>
<th>REPT-INITZN:&lt;&lt;TID&gt;&gt;::&lt;CTAG&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>TID</strong> is the target identifier.</td>
</tr>
<tr>
<td>2. <strong>CTAG</strong> is the correlation tag.</td>
</tr>
</tbody>
</table>

Example:

REPT-INITZN:::ctag;

TARGET: TRAVERSE

**REPT-STAT**

**General Description**
Use this command to verify the data link between the NE and the test equipment. If the NE does not receive this command from the test equipment for a period of 75 seconds, the NE will release any accesses that are previously set up. Only an acknowledgement is returned upon receipt of the command.

**Command Syntax**

<table>
<thead>
<tr>
<th>REPT-STAT:&lt;&lt;TID&gt;&gt;::&lt;CTAG&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>TID</strong> is the target identifier.</td>
</tr>
<tr>
<td>2. <strong>CTAG</strong> is the correlation tag.</td>
</tr>
</tbody>
</table>

Example:

REPT-STAT:::ctag;

TARGET: TRAVERSE
Linear Facility Protection

The commands in this section are for facility protection.

**ENT-FFP-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}**

**General Description**

This command is used to create a linear 1+1 protection group.

**Command Syntax**

```
ENT-FFP-<FAC>:<tid>:<WORKING>,<protect>:<ctag>::: [PSDIRN=<psdirn>],[RVRTV=<rvrtv>],[WTR=<wtr>];
```

1. `<FAC>` indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.
2. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<WORKING>` identifies a working port AID as shown in Appendix C—“Access Identifiers,” Facility AIDs.
5. `<protect>` identifies a protection port AID as shown in Appendix C—“Access Identifiers,” Facility AIDs.
6. PSDIRN is protection-switching direction.
   - UNI – Unidirectional protection switching. (Default)
   - BI – Bidirectional protection switching
7. RVRTV indicates revertive type. Value is \{Y|N\}.
   - Y = revertive (Default)
   - N = non-revertive
8. WTR indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.

Example:
```
ENT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:123:::RVRTV=Y,WTR=10,PSDIRN=UNI;
ENT-FFP-STM4:LONDON:FAC-5-1,FAC-6-1:123::;
```

**TARGET:** TRAVERSE, TE100

**Note:** STM64 and OC192 commands are available only in TRAVERSE

**ED-FFP - {OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}**

**General Description**

This command is used to edit linear 1+1 protection groups. Only one AID needs to be entered for this command. If two AIDs are entered, the requests will error. The entered AID may be either the working AID or the protect AID.

This command will not allow the user to change the protection type (for example: from 1+1 to 1:1). In order to do this, the delete command (DLT-FFP) must first be issued to remove all groups in the old protection scheme, followed by an ENT-FFP command to create the new protection scheme.
Command Syntax

<table>
<thead>
<tr>
<th>ED-FFP-&lt;FAC&gt;:&lt;tid&gt;&lt;AID&gt;:ctag&gt;:::[PSDIRN=&lt;psdirn&gt;],[RVRTV=&lt;rvtv&gt;],[WTR=&lt;wtr&gt;];</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;FAC&gt; indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.</td>
</tr>
<tr>
<td>2. &lt;tid&gt; is TID described in Chapter 1—&quot;TL1 Overview,&quot; <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>3. &lt;ctag&gt; is correlation tag described in Chapter 1—&quot;TL1 Overview,&quot; <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
</tr>
<tr>
<td>4. &lt;AID&gt; identifies either working port or protection port and is the AIDs shown in Appendix C—&quot;Access Identifiers,&quot; <strong>Facility AIDs.</strong></td>
</tr>
<tr>
<td>5. PSDIRN is protection-switching direction.</td>
</tr>
<tr>
<td>UNI - Unidirectional Protection Switching. This is the default.</td>
</tr>
<tr>
<td>BI - Bidirectional Protection Switching</td>
</tr>
<tr>
<td>6. RVRTV indicates revertive type. Valid values are {Y</td>
</tr>
<tr>
<td>Y - revertive</td>
</tr>
<tr>
<td>N - non-revertive</td>
</tr>
<tr>
<td>7. WTR indicates revertive time. Value is integer ( {1 \text{ to } 60 \text{ mins} }. )</td>
</tr>
</tbody>
</table>

**Example:**

ED-FFP-OC3:PETALUMA:FAC-2-1:123::WTR=15;
ED-FFP-STM4:LONDON:FAC-6-1:123::RVRT=N;

**TARGET:** TRAVERSE, TE100

**Note:** STM64 and OC192 commands are available only in TRAVERSE

### RTRV-FFP-(OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64)

**General Description**

This command is used to retrieve a linear 1+1 protection group.

**Command Syntax**

<table>
<thead>
<tr>
<th>RTRV-FFP-&lt;FAC&gt;:&lt;tid&gt;:&lt;AID&gt;:ctag::;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;FAC&gt; indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.</td>
</tr>
<tr>
<td>2. &lt;tid&gt; is TID described in Chapter 1—&quot;TL1 Overview,&quot; <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>3. &lt;ctag&gt; is correlation tag described in Chapter 1—&quot;TL1 Overview,&quot; <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
</tr>
<tr>
<td>4. AID identifies either the working or protection port and is the AIDs for OC3/12/48/192 as shown in Appendix C—&quot;Access Identifiers,&quot; <strong>Facility AIDs.</strong></td>
</tr>
</tbody>
</table>

**Example:**

RTRV-FFP-OC3:PETALUMA:FAC-2-1:123;
RTRV-FFP-STM16:LONDON:FAC-5-1:123;
Response Syntax

```plaintext
^^<SID>^^<YY:MM:DD>^^<HH:MM:SS>
M^^<ctag> COMPLD <cr> <lf>
^^<WORKING>,<PROTECT>::[PSDIRN=<psdirn>],
[RVRTV=<rvrtv>], [WTR=<wtr>],[NAME=<name>],[ID=<id>]
;```

1. `<WORKING>` identifies a working port and is the AID as shown in Appendix C—“Access Identifiers,” Facility AIDs.
2. `<PROTECT>` identifies a protection port and AID as shown in Appendix C—“Access Identifiers,” Facility AIDs.
3. `PSDIRN` is protection-switching direction.
   * UNI – Unidirectional Protection Switching. (Default)
   * BI – Bidirectional Protection Switching
4. `RVRTV` indicates revertive type. Valid values are:
   * Y – revertive (Default)
   * N – non-revertive
5. `WTR` indicates revertive time. Value is integer {1 to 60 mins}.
6. `NAME` indicates the protection group named assigned internally.
7. `ID` indicates the protection group ID assigned internally.

TARGET: TRAVERSE, TE100

Note: STM64 and OC192 commands are available only in TRAVERSE

**General Description**

This command is used to remove a linear 1+1 protection group.

**Command Syntax**

```
DLT-FFP-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}
```
1. `<FAC>` indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.
2. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<WORKING>` identifies a working port AID as shown in Appendix C—“Access Identifiers,” Facility AIDs.
5. `<PROTECT>` identifies a protection port AID as shown in Appendix C—“Access Identifiers,” Facility AIDs.

Example:

DLT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:123;
DLT-FFP-STM1:LONDON:FAC-5-1,FAC-6-1:123;

TARGET: TRAVERSE, TE100

Note: STM64 and OC192 commands are available only in TRAVERSE.
1+1 Path Protection

The commands in this section are for 1+1 Path Protection.

**ENT-FFP-{STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}**

**General Description**

This command is used to create 1+1 path protection groups.

**Command Syntax**

```
ENT-FFP:<RATE>:<tid>:<WORKING>,<protECT>:<ctag>::: [PSDIRN=<psdirn>], [RVRTV=<rvrtv>], [WTR=<wtr>];
```

1. `<RATE>` indicates the type of path for the 1+1 protection: STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12.
2. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<WORKING>` identifies a working port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
5. `<PROTECT>` identifies a protection port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.

**Example:**

```
ENT-FFP-STS1:PETALUMA:STS-3-2-1,STS-4-1-1:123;
```

**TARGET:** TRAVERSE, TE100

**Note:** STS48C and VC4_16C commands are available only on TRAVERSE. The VC11 command is not available in TE100.

**RTRV-FFP-{STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}**

**General Description**

This command is used to retrieve a 1+1 path protection group.

**Command Syntax**

```
RTRV-FFP:<RATE>:<tid>:<WORKING>,<PROTECT>;
```

1. `<RATE>` indicates the type of path for the 1+1 protection: STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12.
2. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<WORKING>` identifies a working port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
5. `<PROTECT>` identifies a protection port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
Example:

```
RTRV-FFP-STS1:PETALUMA:STS-3-2-1,STS-4-1-1:123;
```

**TARGET: TRAVERSE, TE100**

**Note:** STS48C and VC4_16C commands are available only on TRAVERSE. The VC11 command is not available in TE100.

---

**Response Syntax**

```
^<SID>^<YY:MM:DD>^<HH:MM:SS>
M^<ctag> COMPLD <cr> <lf>
^^^<WORKING>,<PROTECT>^^^;
```

1. `<WORKING>` identifies a working port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
2. `<PROTECT>` identifies a protection port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.

**TARGET: TRAVERSE, TE100**

**Note:** STS48C and VC4_16C commands are available only on TRAVERSE. The VC11 command is not available in TE100.

---

**DLT-FFP-{STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}**

**General Description**

This command is used to delete a 1+1 path protection group.

**Command Syntax**

```
DLT-FFP-{<RATE>}:<tid>:<WORKING>,<PROTECT>:<ctag>;
```

1. `<RATE>` indicates the type of path for the 1+1 protection: STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12.
2. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. `<WORKING>` identifies a working port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
5. `<PROTECT>` identifies a protection port AID as shown in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.

Example:

```
DLT-FFP-STS1:PETALUMA:STS-3-2-1,STS-4-1-1:123;
```

**TARGET: TRAVERSE, TE100**

**Note:** STS48C and VC4_16C commands are available only on TRAVERSE. The VC11 command is not available in TE100.
BLSR and MSSP Ring

BLSR and MSSP ring related TL1 commands only apply to Traverse.

The sequences of configuring a BLSR/MSSP ring are as follows:

- **ENT-RING-{BLSR/MSSP}** - Create a ring with name, WTR, etc.
- **ENT-NODE-{BLSR/MSSP}** - Add a node to the ring with ring-map info for the node.

(repeat as needed)

- **ENT-NODE-{BLSR/MSSP}** - Add a node to the ring with ring-map info for the node.
- **SYNC-RING-{BLSR/MSSP}** - Synchronize the ring.

After successful execution of the **SYNC-RING-{BLSR/MSSP}** command, the ring can be used to carry traffic.

If the **SYNC-RING-{BLSR/MSSP}** command fails, physical connectivity across the nodes should be checked and verified first to correct any misconnection. The **SYNC-RING-{BLSR/MSSP}** command can be issued again after all fiber spans are check, corrected and verified.

If the synchronization still fails, it is most likely the ring-map does not match the actual connectivity of nodes on the ring. The **ED-NODE-{BLSR/MSSP}** command can be used to modify the ring-map to make sure the configured ring-map matches the actual connectivity of the nodes on the ring.

When the ring becomes unsynchronized, due to K byte noises following card/node re-initialization, the **INIT-RING-{BLSR/MSSP}** command can be used to re-initialize the ring and clear outstanding switching requests (if any).

A new node can be added in-service to an existing ring, by using the **ENT-NODE-{BLSR/MSSP}** command. The procedure will first issue the **OPR-PROTNSW-{OC48/OC192/STM16/STM64}** to switch traffic away from the span where a new node will be added.

A existing node can be removed in-service from an existing ring by using the **DLT-NODE-{BLSR/MSSP}** command. The procedure will first issue the **OPR-PROTNSW-{OC48/OC192/STM16/STM64}** to switch traffic away from the span where the node will be removed.

**ENT-RING-{BLSR/MSSP}**

General Description

This command is used to create a ring for BLSR/MSSP. This is a domain-level TL1 command.

Command Syntax

```plaintext
```
**ED-RING-{BLSR/MSSP}**

**General Description**

This command is used to modify parameters for a BLSR/MSSP ring. This is a domain-level command.

**Command Syntax**

```
ED-RING-{BLSR/MSSP}::<tid>::<RING-AID>:<<ctag>::[RING-ID=<num>][,TYPE=<type>][,RATE=<rate>][,RVRTV=<y/n>][,WTR=<num>];
```
1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<RING-AID>` identifies the alphanumeric string for the name of the RING (between 1 and 20 characters).
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. `<RING-ID>` Indicates the numerical number assigned to the ring.
5. `<TYPE>` indicates the ring type.
   - 2F = 2 fiber BLSR/MSSP ring (Default)
   - 4F = 4 fiber BLSR/MSSP ring. *(Planned for future release.)*
6. `<RATE>` indicates the trunk speed of the ring
   - 2.5G = OC48/STM16 (Default)
   - 10G = OC192/STM64
7. `<RVRTV>` indicates revertive type.
   - Y = revertive
   - N = non-revertive. (Default)
8. WTR indicates wait-to-restore time in revertive mode. Value is integer {1 to 60 mins}. Default is 5 min.

Example:
```
ED-RING-BLSR:PETALUMA:BLSR-RING-1:ctag:::RVRTV=Y, WTR=10;
ED-RING-MSSP:PETALUMA:MSSP-RING-1:ctag:::NAME=London-East;
```

TARGET: TRAVERSE

**RTRV-RING-{BLSR/MSSP}**

**General Description**

This command is used to retrieve parameters for a BLSR/MSSP ring. This is a domain level command.

**Command Syntax**

```
RTRV-RING-{BLSR/MSSP}:<tid>:<RING-AID>:<ctag>[:::];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<RING-AID>` identifies the name of the ring.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
```
RTRV-RING-BLSR:PETALUMA:BLSR-RING-1:ctag;
RTRV-RING-MSSP:PETALUMA:MSSP-RING-1:ctag::;
```

TARGET: TRAVERSE
Response Syntax

```
^{<SID>{<YY:MM:DD>{<HH:MM:SS>
M^{<ctag> COMPLD <cr> <lf>
^{<RING-AID>: <ctag>: RING-ID=<nnnn>, TYPE=<type>, RATE=<rate>, RVRTV=<y/n>, WTR=<num>, STATE=<state> 
;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<RING-AID>` identifies the name of the ring.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `<RING-ID>` Indicates the numerical number assigned to the ring.
5. `<TYPE>` indicates the ring type.
   - 2F - 2 fiber BLSR/MSSP ring
   - 4F - 4 fiber BLSR/MSSP ring (Planned for future release.)
6. `<RATE>` indicates the trunk speed of the ring.
   - 2.5G - OC48/STM16
   - 10G - OC192/STM64
7. `<RVRTV>` indicates revertive type.
   - Y - revertive
   - N - non-revertive
8. `<WTR>` indicates wait-to-restore time in revertive mode.
9. `<STATE>` indicates the state of the ring.
   - SYNC - Ring has been synchronized
   - UNSYNC - Ring has not been synchronized

TARGET: TRAVERSE

DLT-RING-{BLSR/MSSP}

**General Description**

This command is used to delete a BLSR/MSSP ring. This is a domain-level command.

**Command Syntax**

```
DLT-RING-{BLSR/MSSP}:<tid>:<RING-AID>:<ctag>[::];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<RING-AID>` identifies the alphanumeric string for the name of the ring.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

- DLT-RING-BLSR:PETALUMA:BLSR-RING-1:ctag;
- DLT-RING-MSSP:PETALUMA:MSSP-RING-1:ctag::;
TARGET: TRAVERSE

**ENT-NODE-{BLSR/MSSP}**

**General Description**

This command is used to add a node to a BLSR/MSSP ring. The ‘ring map’ (APS-ID, East-Fiber, West-Fiber, East-APS-ID, West-APS-ID) is part of the node configuration parameters. This command can be issued at both the domain level and node level.

**Command Syntax**

```
ENT-NODE-{BLSR/MSSP}:<tid>[:<RING-AID>,<NODE>:<ctag>]
:::[POSITION=<position>],[EAST=<east>],[WEST=<west>],[EAPS-ID=<id>],[WAPS-ID=<id>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<RING-AID>` identifies the name for the ring.
3. `<NODE>` identifies the name of the node to be added into the ring.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
5. `<POSITION>` identifies the position of the node in the ring.
6. `<APS-ID>` identifies the auto protection switching ID of the node (0 to 15).
7. `<EAST>` identifies the access identifier for the east fiber of the node.
8. `<WEST>` identifies the access identifier for the west fiber of the node.
9. `<EAPS-ID>` identifies the auto protection switching ID of the east adjacent node (value 0 to 15).
10. `<WAPS-ID>` identifies the auto protection switching ID of the west adjacent node (value 0 to 15).

Example of domain level command to add node “Boston”:

```
ENT-NODE-BLSR::BLSR-RING-1,Boston:ctag:::POSITION=4,APS-ID=7,EAST=FAC-5-1,WEST=FAC-6-1,EAPS-ID=6,WAPS-ID=8;
```

Example of node level command to add node “London”:

```
ENT-NODE-MSSP::London:MSSP-RING-1:ctag:::POSITION=1,APS-ID=15,EAST=FAC-2-1,WEST=FAC-4-1,EAPS-ID=13,WAPS-ID=0;
```

TARGET : TRAVERSE

**ED-NODE-{BLSR/MSSP}**

**General Description**

This command is used to modify a node’s configuration for a BLSR/MSSP ring. This command can be issued at both domain level and node level.

**Command Syntax**

```
ED-NODE-{BLSR/MSSP}:<tid>[:<RING-AID>,<NODE>:<ctag>]
:::[POSITION=<position>],[EAST=<east>],[WEST=<west>],[EAPS-ID=<id>],[WAPS-ID=<id>];
```
Chapter 2  TL1 Commands
BLSR and MSSP Ring

1. <tid> is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. <RING-AID> identifies the AID for the RING.
3. <NODE> identifies the name of the node to be added into the ring.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
5. <POSITION> identifies the position of the node in the ring.
6. <APS-ID> identifies the auto protection switching ID of the node (0 to 15).
7. <EAST> identifies the access identifier for the east fiber of the node.
8. <WEST> identifies the access identifier for the west fiber of the node.
9. <EAPS-ID> identifies the auto protection switching ID of the east adjacent node (value 0 to 15).
10. <WAPS-ID> identifies the auto protection switching ID of the west adjacent node (value 0 to 15).

Example of node level command:

RTRV-NODE-BLSR::Boston:BLSR-RING-1:ctag::: APS-ID=7;

Example of domain level command:

RTRV-NODE-MSSP::MSSP-RING-1,London:ctag:::

**TARGET : TRAVERSE**

---

**RTRV-NODE-{BLSR/MSSP}**

**General Description**

This command is used to retrieve a node’s parameter for a BLSR/MSSP ring. This command can be issued at both the domain level and node level.

**Command Syntax**

RTRV-NODE-{BLSR/MSSP}:<tid>::<RING-AID>[,[<NODE>]:<ctag>[:...]];

1. <tid> is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. <RING-AID> identifies the AID for the RING.
3. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. <NODE> identifies the name of the node to be added into the ring.

Example of node level command:

RTRV-NODE-BLSR::Boston:BLSR-RING-1:ctag;

Example of domain level command:

RTRV-NODE-MSSP::MSSP-RING-1,London:ctag;
Response Syntax

```
^^<SID>;<YY:MM:DD>;<HH:MM:SS>
M^^<ctag> COMPLD <cr> <lf>
^^^<RING-AID> : <ctag> :: POSITION=<position>,APS-ID=<id>, EAST=<east>, WEST=<west>, APS-ID=<id>,<WAPS-ID=<id>>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<RING-AID>` identifies the AID for the RING.
3. `<NODE>` identifies the name of the node to be added into the ring.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
5. `<POSITION>` identifies the position of the node in the ring.
6. `<APS-ID>` identifies the auto protection switching ID of the node (0 to 15).
7. `<EAST>` identifies the access identifier for the east fiber of the node.
8. `<WEST>` identifies the access identifier for the west fiber of the node.
9. `<EAPS-ID>` identifies the auto protection switching ID of the east adjacent node (value 0 to 15).
10. `<WAPS-ID>` identifies the auto protection switching ID of the west adjacent node (value 0 to 15).

TARGET: TRAVERSE

**DLT-NODE-{BLSR/MSSP}**

**General Description**

This command is used to delete a node from a BLSR/MSSP ring. This command can be issued at both the domain level and node level.

**Command Syntax**

```
DLT-NODE-{BLSR/MSSP}:<tid>:<RING-AID>[,<NODE>]:<ctag>[:];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<RING-AID>` identifies the AID for the ring.
3. `<NODE>` identifies the name of the node to be added into the ring.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example of domain level command:

```
DLT-NODE-BLSR::BLSR-RING-1,Boston:ctag;
```

Example of node level command:

```
DLT-NODE-MSSP:London:MSSP-RING-1:ctag;
```

TARGET : TRAVERSE
**SYNC-RING-{BLSR/MSSP}**

**General Description**

This command is used to synchronize a ring for BLSR/MSSP. This is a domain level TL1 command. The ring-map will be checked against the physical connectivity for consistency. The command will fail if there is connectivity mismatch on any segment of the ring, node APS-ID replication, or ring-map mismatch.

**Command Syntax**

```plaintext
SYNC-RING-{BLSR/MSSP}:<tid>:<RING-AID>:<ctag>::;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<RING-AID>` identifies the name for the ring.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

SYNC-RING-BLSR:PETALUMA:BLSR-RING-1:ctag;
SYNC-RING-MSSP:PETALUMA:MSSP-RING-1:ctag::;

TARGET: TRAVERSE

**INIT-RING-{BLSR/MSSP}**

**General Description**

This command re-initializes a ring for BLSR/MSSP. This is a domain level TL1 command. All outstanding switching requests (automatic switching or external commands) are released after the execution of this command.

**Command Syntax**

```plaintext
INIT-RING-{BLSR/MSSP}:<tid>:<RING-AID>:<ctag>::;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<RING-AID>` identifies the name for the ring.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

INIT-RING-BLSR:PETALUMA:BLSR-RING-1:ctag;
INIT-RING-MSSP:PETALUMA:MSSP-RING-1:ctag::;

TARGET: TRAVERSE
Protection Switching

**OPR-PROTNSW-EQPT**

**General Description**

This command is used to operate an equipment protection switch. It uses one of the following options: Manual, Forced, or Lockout. An equipment protection switch is in effect until it is released by using the `RLS-PROTNSW-EQPT` command or overridden by a switch request of higher priority. Switch requests will not be saved in a queue: a higher-priority request overriding an existing request shall delete the lower-priority request.

**Command Syntax**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;tid&gt;</code></td>
<td>Storage Id</td>
</tr>
<tr>
<td><code>&lt;AID&gt;</code></td>
<td>AID</td>
</tr>
<tr>
<td><code>&lt;ctag&gt;</code></td>
<td>CTag</td>
</tr>
<tr>
<td><code>&lt;SC&gt;</code></td>
<td>Switching Command</td>
</tr>
</tbody>
</table>

1. AID identifies equipment to switch away from. See AIDs for cards in the Equipment section in Appendix C—“Access Identifiers,” Equipment AIDs.

2. SC is switching command. Valid values are: `{MAN|FRCD|LOCKOUT}`. 
   - MAN - manual switch
   - FRCD - forced switch
   - LOCKOUT - Lockout

Example:

```
OPR-PROTNSW-EQPT:KICKALUMA:SLOT-2:123::FRCD;
```

**TARGET: TRAVERSE**

The following table outlines the system behavior on the `OPR-PROTNSW-EQPT` (Manual/Force Switch) command for equipment protection group.

<table>
<thead>
<tr>
<th>When <code>OPR-PROTNSW-EQPT</code> command is applied to:</th>
<th>Which has a status of</th>
<th>The system behavior of Traverse</th>
<th>The system behavior when the clearing command is applied (<code>RLS-PROTNSW-EQPT</code>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Entity</td>
<td>Active</td>
<td>Switch traffic to the Protection Entity <strong>unless</strong> same priority or higher priority request exists. A lockout of protection and an equipment of protection entity fail have higher priority than this switch command.</td>
<td><strong>Non-revertive Mode</strong>: Traffic stays on Protection Entity. <strong>Revertive Mode</strong>: Traffic switches back to Working Entity.</td>
</tr>
</tbody>
</table>
The following table outlines the system behavior on **OPR-PROTNSW-EQPT** (Lockout) command for equipment protection group.

| Protection Entity | Active | Switch traffic to the Working equipment unless same priority or higher priority request exists. A lockout of protection and an equipment fail of working entity have higher priority than this switch command. | **Non-revertive Mode**: Traffic stays on Working Entity.  
**Revertive Mode**: Traffic stays on Working Entity. |
|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
**Revertive Mode**: Traffic switches back to Working Entity.                                                                                   |

AID in command identifies equipment to switch away from.

The following table outlines the system behavior on **OPR-PROTNSW-EQPT** (Lockout) command for equipment protection group.

<table>
<thead>
<tr>
<th>When a Lockout command is applied to:</th>
<th>Which has a status of</th>
<th>The system behavior of Traverse is</th>
<th>The system behavior when clearing the Lockout command is applied (<strong>RLS-PROTNSW-EQPT</strong>):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection entity</td>
<td>Standby</td>
<td>Prevent traffic from switching to the Protection entity (Disable APS).</td>
<td>Enable APS.</td>
</tr>
<tr>
<td>Protection entity</td>
<td>Active</td>
<td>First, switch traffic on the Protection equipment back to the Working equipment. Then, prevent traffic from the working equipment from being switched to the protection equipment (Disable APS).</td>
<td>Enable APS.</td>
</tr>
<tr>
<td>Working entity</td>
<td>Active</td>
<td>Reject the command with a comment “Apply Lockout to Protection entity”.</td>
<td>N/A</td>
</tr>
<tr>
<td>Working entity</td>
<td>Standby</td>
<td>Reject the command with a comment “Apply Lockout to Protection entity”.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
OPR-PROTNSW-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

**General Description**

This command is used to operate the facility protection switch on the specified entity. It uses one of the following options: Manual, Forced or Lockout. A facility protection switch is in effect until it is released by using the RLS-PROTNSW-<FAC> command or overridden by a switch request of higher priority. Switch requests will not be saved in a queue: a higher-priority request overriding an existing request shall delete the lower-priority request.

**Command Syntax**

<table>
<thead>
<tr>
<th>OPR-PROTNSW-&lt;FAC&gt;&lt;tid&gt;&lt;AID&gt;:&lt;ctag&gt;::&lt;SC&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> &lt;FAC&gt; indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.</td>
</tr>
<tr>
<td><strong>2.</strong> AID identifies the access identifier for the facility as defined in Appendix C—“Access Identifiers,” Facility AIDs.</td>
</tr>
<tr>
<td><strong>3.</strong> SC is switching command. Valid values are: {MAN</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
</tr>
<tr>
<td>OPR-PROTNSW-OC3:KICKALUMA:FAC-1-1:123::FRCD;</td>
</tr>
<tr>
<td>OPR-PROTNSW-STM64:LONDON:FAC-5-1:123::MAN;</td>
</tr>
<tr>
<td><strong>TARGET:</strong> TRAVERSE, TE100</td>
</tr>
</tbody>
</table>

**Note:** STM64 and OC192 commands are available in Traverse only.

The following table outlines the system behavior on the OPR-PROTNSW-<FAC> (Manual/Force Switch) command for facility protection groups.

<table>
<thead>
<tr>
<th>When OPR-PROTNSW-&lt;FAC&gt; command is applied to:</th>
<th>Which has a status of</th>
<th>The system behavior of Traverse</th>
<th>The system behavior when clearing command is applied (RLS-PROTNSW-&lt;FAC&gt;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Entity</td>
<td>Active</td>
<td>Switch traffic to the Protection Entity unless same priority or higher priority request exists. A lockout of protection and failure of protection entity have higher priority than this switch command.</td>
<td><strong>Non-revertive Mode:</strong> Traffic stays on Protection Entity.</td>
</tr>
<tr>
<td><strong>Revertive Mode:</strong> Traffic switches back to Working Entity.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following table outlines the system behavior on `OPR-PROTNSW-<FAC>` (SC=Lockout) command for facility protection groups.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection Entity</td>
<td>Active Switch traffic to the Working facility unless same priority or higher priority request exists. A lockout of protection and a failure of working entity have higher priority than this switch command.</td>
<td>Non-revertive Mode: Traffic stays on Working Entity.</td>
<td>Revertive Mode: Traffic stays on Working Entity.</td>
</tr>
</tbody>
</table>

The AID in the command identifies the facility to switch away from.

The following table outlines the system behavior on `OPR-PROTNSW-<FAC>` (SC=Lockout) command for facility protection groups.

<table>
<thead>
<tr>
<th>When a Lockout command is applied to:</th>
<th>Which has a status of</th>
<th>The system behavior of Traverse is</th>
<th>The system behavior when clearing the Lockout command is applied (<code>RLS-PROTNSW-&lt;FAC&gt;</code>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection entity</td>
<td>Standby</td>
<td>Prevent traffic from switching to</td>
<td>Enable APS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the Protection entity (Disable APS).</td>
<td></td>
</tr>
<tr>
<td>Protection entity</td>
<td>Active</td>
<td>First, switch traffic on the Protection equipment back to the Working equipment. Then, prevent traffic from the working equipment from being switched to the protection equipment (Disable APS).</td>
<td>Enable APS.</td>
</tr>
<tr>
<td>Working entity</td>
<td>Active</td>
<td>Reject the command with a comment “Apply Lockout to Protection entity”.</td>
<td>N/A</td>
</tr>
<tr>
<td>Working entity</td>
<td>Standby</td>
<td>Reject the command with a comment “Apply Lockout to Protection entity”.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
OPR-PROTNSW-{STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}

General Description

This command is used to operate a path level protection switch. It uses one of the following options: Manual, Forced or Lockout. A path protection switch is in effect until it is released by using the RLS-PROTNSW-<PATH> command or overridden by a switch request of higher priority. Switch requests will not be saved in a queue: a higher-priority request overriding an existing request shall delete the lower-priority request.

Command Syntax

<table>
<thead>
<tr>
<th>OPR-PROTNSW-&lt;PATH&gt;-&lt;tid&gt;-&lt;AID&gt;-&lt;ctag&gt;-&lt;SC&gt;;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;Path&gt; identifies the path type: STS1, STS3C, STS12C, STS48C, VT1, VC3, VC4, VC4_4C, VC4_16C, VC11,VC12.</td>
</tr>
<tr>
<td>2. AID identifies the path to “switch” away from. See Appendix C—“Access Identifiers,” SONET Path AIDs for listing of valid values.</td>
</tr>
<tr>
<td>3. SC is switching command. Valid values are: {MAN</td>
</tr>
<tr>
<td>MAN - manual switch</td>
</tr>
<tr>
<td>FRCD - forced switch</td>
</tr>
<tr>
<td>LOCKOUT - Lockout</td>
</tr>
</tbody>
</table>

Example:

OPR-PROTNSW-STS1:KICKALUMA:STS-1-1-1:123::FRCD;
OPR-PROTNSW-VC4:KICKALUMA:VC4-1-1-1:123::MAN;

TARGET: TRAVERSE, TE100

Note: STS48C and VC4-16C commands are available in TRAVERSE only. VC11 is not supported in TE100.

The following table outlines the system behavior on OPR-PROTNSW-<PATH> (SC=Manual/Force Switch) command.

<table>
<thead>
<tr>
<th>When OPR-PROTNSW-&lt;PATH&gt; command is applied to:</th>
<th>Which has a status of</th>
<th>The system behavior of Traverse</th>
<th>The system behavior when clearing command is applied (RLS-PROTNSW-&lt;PATH&gt;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Entity</td>
<td>Active</td>
<td>Select traffic from the Protection Entity unless same priority or higher priority request exists. A lockout of Protection Entity and failure condition both have higher priority than this switch command.</td>
<td>Non-revertive Mode: Select Traffic from Protection Entity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>revertive Mode: Select Traffic from the Working Entity.</td>
</tr>
</tbody>
</table>

When OPR-PROTNSW-<PATH> command is applied to:

When OPR-PROTNSW-<PATH> command is applied to:

When OPR-PROTNSW-<PATH> command is applied to:
The following table outlines the system behavior on `OPR-PROTNWS-<PATH>` (SC=Lockout) command.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection Entity</td>
<td>Active</td>
<td>Select traffic from the Working Entity unless same priority or higher priority request exists. A failure condition on the Working Entity has higher priority than this switch command.</td>
<td>Non-revertive Mode: Still select traffic from the Working Entity.</td>
<td>Revertive Mode: Still select Traffic from the Working Entity.</td>
</tr>
</tbody>
</table>

|-------------------|---------|---------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------|

AID in command identifies entity to switch away from.

The system behavior when clearing the Lockout command is applied (`RLS-PROTNSW-<PATH>`) is:

<table>
<thead>
<tr>
<th>When a Lockout command is applied to:</th>
<th>Which has a status of</th>
<th>The system behavior of Traverse is</th>
<th>The system behavior when clearing the Lockout command is applied (<code>RLS-PROTNSW-&lt;PATH&gt;</code>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection entity</td>
<td>Standby</td>
<td>Prevent traffic from being selected from the Protection entity (Disable APS).</td>
<td>Enable APS.</td>
</tr>
<tr>
<td>Protection entity</td>
<td>Active</td>
<td>First, select traffic from the Working entity. Then, prevent traffic from being selected from the Protection (Disable APS).</td>
<td>Enable APS.</td>
</tr>
<tr>
<td>Working entity</td>
<td>Active</td>
<td>Reject the command with a comment “Apply Lockout to Protection entity”.</td>
<td>N/A</td>
</tr>
<tr>
<td>Working entity</td>
<td>Standby</td>
<td>Reject the command with a comment “Apply Lockout to Protection entity”.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
RLS-PROTNSW-EQPT

General Description
The RLS-PROTNSW-EQPT command is used to release an equipment protection-switching request that was previously established with the OPR-PROTNSW-EQPT command. See system behavior below for details.

Command Syntax

RLS-PROTNSW-EQPT:<tid>:<AID>:<ctag>[::];

1. <tid> is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID identifies equipment to apply the release command. See AIDs for cards in the Equipment section in Appendix C—“Access Identifiers,” Equipment AIDs.
3. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RLS-PROTNSW-EQPT:KICKALUMA:SLOT-2:123::;
TARGET : TRAVERSE

RLS-PROTNSW-<FAC>

General Description
The RLS-PROTNSW-<FAC> command is used to release a facility protection-switching condition that was previously established with the OPR-PROTNSW-<FAC> command.

Command Syntax

RLS-PROTNSW-<FAC>:<tid>:<AID>:<ctag>[::];

1. <FAC> indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.
2. <tid> is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. AID identifies the facility AID described in Appendix C—“Access Identifiers,” Facility AIDs.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RLS-PROTNSW-OC3:KICKALUMA:FAC-1-1:123;
RLS-PROTNSW-STM16:LONDON:FAC-5-1:123;
TARGET : TRAVERSE, TE100

Note: STM64 and OC192 commands are available in TRAVERSE only.
RLS-PROTNSW-{STS1/3C/12C/48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}

General Description
The RLS-PROTNSW-<PATH> command is used to release a path protection-switching request that was previously established with the OPR-PROTNSW-<PATH> command.

Command Syntax

RLS-PROTNSW-<PATH><tid>:<AID>:<ctag>[;]

1. <PATH> identifies the path type: STS1, STS3C, STS12C, STS48C, VT1, VC3, VC4, VC4_4C, VC4_16C, VC11, VC12.
2. <tid> is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. AID identifies Working or Protection path and is the AID from the “STS” section in Appendix C—“Access Identifiers,” SONET Path AIDs.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RLS-PROTNSW-STS1:KICKALUMA:STS-1-1-1:123;
RLS-PROTNSW-VC4:LONDON:VC4-1-1-1:123;

TARGET : TRAVERSE, TE100

Note: STS48c and VC4-16C commands are available in TRAVERSE only. VC11 is not supported in TE100.

EX-SW- {OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description
The EX-SW-<FAC> is used to exercise the algorithm for switching from a working unit or facility to a protection facility. The NE goes through the algorithm to verify that the switching function is working, however, a protection switch is not executed. If this command is issued to a protection facility, the request will be denied.

Command Syntax

EX-SW-<FAC><tid>:<AID>:<ctag>[;]

1. <FAC> indicates the type of facility for the 1+1 protection: OC3, OC12, OC48, OC192, STM1, STM4, STM16, or STM64.
2. <tid> is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. AID identifies Working facility. Valid values are in Appendix C—“Access Identifiers,” Facility AIDs.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
Example:

```
EX-SW-OC3:KICKALUMA:FAC-1-1:123;
EX-SW-STM16:LONDON:FAC-1-1:123;
```

TARGET: TRAVERSE, TE100

**Note:** STM64 and OC192 command are available in TRAVERSE only.
Cross-connect

**ENT-CRS-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}**

**General Description**

This command is used to create an STS level or high-order VC3/VC4 cross connection, and to set transmuxing functions on a DS3 Transmux card. More specifically, the command **ENT-CRS-STS1**, when used on a DS3 Transmux card, is used to set DS3 Transmux mode and STS1 Transmux mode. Omission of an optional parameter results in the default value for that attribute.

**DS3 Transmux**

When this command is used on a DS3 Transmux card to transmux a DS3 signal, one of the AIDs would specify the DS3 facility containing the signal to be transmuxed. The example below shows transmultiplexing of a DS3 signal from a DS3 port onto a STS-1 signal on an OC-3 card:

```
ENT-CRS-STS1:PETALUMA:FAC-1-1,STS-1-1-3:123::2WAY;
```

Only the **ENT-CRS-STS1** command creates the DS3 Transmux service.

**STS1 Transmux**

This command is also used on a DS3 Transmux card to transmux a STS1 Transmux signal. The example below shows transmultiplexing of an STS1 Transmux signal onto a STS-1 signal on an OC-3 card:

```
ENT-CRS-STS1:PETALUMA:STS-2-1-1,STS-3-1-3:123:2WAY;FROMTMXAID=FAC-1-1;
```

This indicates the FROMAID STS-2-1-1 carries channelized DS3.

Only the **ENT-CRS-STS1** command creates the STS1 Transmux service.

**Command Syntax**

```
```
1. `<RATE>` identifies the type of cross connect: STS1, STS3C, STS12C, STS48C, VC3, VC4, VC4_4C, VC4_16C.
2. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. `<FROM-AID>` indicates the access identifier at source side of the cross connection.
   Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs. Valid facility DS3/E3 and EC1 AIDs are in Appendix C—“Access Identifiers,” Facility AIDs.
4. `<TO-AID>` indicates the access identifier at the sink end of the cross connection.
   Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” SONET Path AIDs.
5. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
6. `<CCT>` identifies the cross connection type. Value is {1WAY|2WAY}. Default value is 2WAY.
   - 1WAY - unidirectional
   - 2WAY - bi-directional
7. `RVRTV` indicates revertive type. Value is {Y|N}. Default is N.
   - Y = revertive
   - N = non-revertive
8. `WTR` indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.
9. `NAME` Indicates the name of the service
10. `CUST` Indicates the customer name
11. `DESC` Description of the service created
12. `RDLNE` Indicates whether the other parameters of service created is editable. Valid values are:
   - Y : Service is red lined. To edit red lined service, its RDLNE should be disabled and then the ED-CRS command can be issued.
   - N : Service is not red lined and can be edited. (Default).
13. `PROTTYPE` (Not supported in Rel 2.1). Indicates the protection type for the cross connect.
   - None : No protection provisioned
   - BLSR/MSSP (Traverse only) : BLSR protection
   - UPSR/SNCP (Traverse only) : UPSR protection
   - UPSRIngress/SNCPIngress (Traverse only) : UPSR Ingress node protection
   - 1Plus1APS : 1 + 1 APS protection
   - 1Plus1Path : 1+1 path protection
   - Any : Uses any available protection
14. `FROMPMTMPL` : PM template assigned to the FROM AID termination of cross connect.
15. `TOPMTMPL` : PM template assigned to the TO AID termination of cross connect.
16. `BNR` (Not supported in Rel 2.1). Indicates bridge and roll support.
   - Enabled: BNR enabled
   - Disabled: BNR disabled
17. `FROMTMXAID` (Traverse only) : Indicates the STS1 transmux port AID that converts the DS3 channelized signal into VT mapped signal received from FROMAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs. If TOTMXAID is provisioned then this parameter cannot be provisioned. NULL value resets the earlier provisioned value.
18. TOTMXAID (Traverse only): Indicates the STS1 transmux port AID which converts the DS3 channelized signal into VT mapped signal received from TOAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs. If FROMTXAID is configured this parameter cannot be entered. NULL value resets the earlier provisioned value.

19. TRANSSIGLBL: Indicates the forward signal label inserted in forward direction of the cross connect. Valid values are:
   - UNEQUIPPED:
     - NONSPECIFIC: Indicates Equipped-Nonspecific Payload. This is the default value.
     - VTSTRUCTURED: Indicates VT-structured STS-1 SPE.
     - LOCKEDVDT: Indicates locked virtual tributary (VT) mode.
     - DS3ASYNC: Indicates asynchronous mapping for E3 or DS3. (Planned for future release.)
     - DS4NAASYNC: Indicates asynchronous mapping for DS4NA or E4. (Planned for future release.)
     - ATM: Indicates mapping for ATM
     - DQDB: Indicates mapping for DQDB
     - FDDI: Indicates asynchronous mapping for ATM
     - HDLC-SONET: Indicates HDLC over SONET mapping
     - POSSCRAMBLE: Indicates POS with scrambling
     - GFP: Indicates GFP mapping
     - POSNOSCRAMBLE: Indicates POS without scrambling
     - TESTSIGNAL: Indicates the test signal is mapped.
     - TUGSTRUCTURED: Indicates TUG Structured
     - LOCKEDTU: Indicates locked TU
     - E3: Indicates asynchronous mapping for E3
     - E4: Indicates asynchronous mapping for E4
   - VCAIS

20. TRANSTRCFMT (For VC commands only): Indicates the trace format. Valid values are:
   - 16Bytes: 16 bytes trace format
   - 64Bytes: 64 bytes trace format

21. TRANSPATHTRC: Indicates the alphanumerical string sent over J1 bytes.
22. **EXPSIGLBL**: Indicates the reverse signal label in reverse direction of the cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC: Indicates Equipped-Nonspecific Payload. This is default value.
   - VТSTRUCTURED: Indicates VT-structured STS-1 SPE
   - LOCKEDVT: Indicates locked virtual tributary (VT) mode.
   - DS3ASYNC: Indicates asynchronous mapping for E3 or DS3. *(Planned for future release.)*
   - DS4NAASYNC: Indicates asynchronous mapping for DS4NA or E4. *(Planned for future release.)*
   - ATM: Indicates mapping for ATM
   - DQDB: Indicates mapping for DQDB
   - FDDI: Indicates asynchronous mapping for ATM
   - HDLC-SONET: Indicates HDLC over SONET mapping
   - POSSCRAMBLE: Indicates POS with scrambling
   - GFP: Indicates GFP mapping
   - POSNOSCRAMBLE: Indicates POS without scrambling
   - TESTSIGNAL: Indicates the test signal is mapped.
   - TUGSTRUCTURED Indicates TUG Structured
   - LOCKEDTU: Indicates locked TU
   - E3: Indicates asynchronous mapping for E3
   - E4: Indicates asynchronous mapping for E4
   - VCAIS

23. **EXPTRCFMT** *(For VC commands only)*: Indicates the trace format. Valid values are:
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes trace format

24. **EXPATRCHTRC**: Indicates the alphanumerical string expected over J1 bytes.

25. **TRANSPARENCY**: Indicates whether the overheads are transported transparently over cross connect. This parameter is applicable for STS12C and STS48C rates only. To enable this feature, control data should be disabled. Valid values are:
   - ENABLED - Overheads are transparently passed.
   - DISABLED - Overheads are terminated.

26. **HOLDOFFTIMER** *(Supported only for TE100)*: Indicates hold off time. Value range is 0 to 1000. Applicable for STS1/3C/12C, VC3, VC4, VC4-4C rates only.

27. `<pst>` is the primary state. Valid values are `{IS|OOS}`.
   - IS = in service: puts the entity in the IS-NR primary state. *(Default)*
   - OOS = out of service: puts the entity in the OOS-MA primary state.
Chapter 2  TL1 Commands

Cross-connect

Response Syntax
See response format in Chapter 3—“Generic Output Response Format.”

**ED-CRS- {STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}**

General Description
This command modifies an STS level or high-order VC3/VC4 cross connection configuration information. Omission of an optional parameter results in no change to that attribute.

Command Syntax

<table>
<thead>
<tr>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The following example shows a 2-way STS1 cross-connect between two OC-n ports.</td>
</tr>
<tr>
<td>ENT-CRS-STS1:PETALUMA:STS-9-1-4,STS-7-1-2:123::2WAY::IS;</td>
</tr>
<tr>
<td>The following example shows a 2-way VC4 cross-connect between two STM-n ports:</td>
</tr>
<tr>
<td>ENT-CRS-VC3:LONDON:VC4-9-1-1,VC4-7-1-2:123::2WAY::IS;</td>
</tr>
<tr>
<td>The following example shows a 2-way STS1 cross-connect between a DS3 interface in slot 9 and an OC-n port in slot 7:</td>
</tr>
<tr>
<td>ENT-CRS-STS1:PETALUMA:FAC-9-1,STS-7-1-2:123::2WAY::IS;</td>
</tr>
<tr>
<td><strong>TARGET: TRAVERSE, TE100</strong></td>
</tr>
</tbody>
</table>

**Note:** STS48C and VC4-16C commands are available in TRAVERSE only.

ED-CRS-<RATE>:<tid>:<FROM-AID>,<TO-AID>:<ctag>::[<CCT>]: [RVRTV=<rvrtv>], [WTR=<wtr>], [NAME=<name>], [CUST=<cust>], [DESC=<desc>], [RDLNE=<rdline>], [PROTOTYPE=<prototype>], [FROMPMTMPL=<frompmtmpl>], [TOPMTMPL=<toppmtmpl>], [BNR=<bnr>], [FROMTMXAID=<fromtmxaid>], [TOTMXAID=<totmxaid>], [TRANSIGLBL=<transiglbl>], [TRANSPATHTRC=<transpathtrc>], [EXPSIGLBL=<revsiglbl>], [EXPPATHTRC=<reppathtrc>], [TRASPARENCY=<transparency>], [HOLDOFFTIMER=<holdofftime>], [ADMSTATE=<admstate>]: [<PST>];

1. <RATE> identifies the type of cross connect: STS1, STS3C, STS12C, STS48C, VC3, VC4, VC4_4C, VC4_16C.
2. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. <FROM-AID> indicates an identifier at one end of the STS cross connection. Format: FAC<-slot>-<port> for DS3 or EC1 interfaces or STS<-slot>-<port>-<sts> for STS time slots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs. Valid facility DS3 and EC1 AIDs are in Appendix C—“Access Identifiers,” Facility AIDs.
4. <TO-AID>: indicates an identifier at the other end of the STS cross connection. Format: STS<-slot>-<port>-<sts> for STS time slots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
5. `<ctag>`: is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

6. `<CCT>`: identifies the cross connection type. Valid values are: {1WAY|2WAY}.
   1WAY = unidirectional
   2WAY = bi-directional (Default)

7. `RVRTV`: indicates revertive type. Valid values are: {Y|N}.
   Y = revertive
   N = non-revertive (Default)

8. `WTR`: indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.

9. NAME: Indicates the name of the service

10. CUST: Indicates the customer name

11. DESC: Description of the service created

12. RDLNE: Indicates whether the other parameters of service created is editable. Valid values are:
   Y - Service is red lined. To edit a red lined service, its RDLNE should be disabled and then the ED-CRS command can be issued.
   N - Service is not red lined and can be edited. (Default)

13. PROTTYPE (Not supported in Rel 2.1): Indicates the protection type for the cross connect. Valid values are:
   None : No protection provisioned
   BLSR/MSSP (Traverse only): BLSR protection
   UPSR/SNCP (Traverse only): UPSR protection
   UPSRIngress/SNCPIngress (Traverse only): UPSR Ingress node protection
   1Plus1APS: 1 + 1 APS protection
   1Plus1Path: 1+1 path protection
   Any: Available protection is availed.

14. FROMPMTMPL: PM template assigned to the FROM AID of termination for cross connect.

15. TOPMTMPL: PM template assigned to the TO AID of termination for cross connect.

16. BNR (Not supported in Rel 2.1): Indicates bridge and roll support
   Enabled : BNR enabled
   Disabled : BNR disabled

17. FROMTMXAID (Traverse only): Indicates the STS1 transmux port AID which converts the DS3 channelized signal into VT mapped signal received from FROMAID and vice versa. Valid values are shown in STSITMX section of Appendix C—“Access Identifiers,” Facility AIDs. If TOTMXAID is provisioned, then this parameter cannot be provisioned. NULL value resets the earlier provisioned value.

18. TOTMXAID (Traverse only): Indicates the STS1 transmux port AID that converts the DS3 channelized signal into VT mapped signal received from TOAID and vice versa. Valid values are shown in STSITMX section of Appendix C—“Access Identifiers,” Facility AIDs. If FROMTMXAID is provisioned, then this parameter cannot be provisioned. This parameter can be provisioned only for the ED-CRS-STS1 command. NULL value resets the earlier provisioned value.
19. **TRANSSIGLBL**: Indicates the forward signal label inserted in forward direction of the cross connect. Valid values are:
- UNEQUIPPED
- NONSPECIFIC: Indicates Equipped-Nonspecific Payload. (Default)
- VSTRUCTURED: Indicates VT-structured STS-1 SPE
- LOCKEDVDT: Indicates locked virtual tributary (VT) mode.
- DS3ASYNC: Indicates asynchronous mapping for E3 or DS3. *(Planned for future release.)*
- DS4NAASYNC: Indicates asynchronous mapping for DS4NA or E4. *(Planned for future release.)*
- ATM: Indicates mapping for ATM
- DQDB: Indicates mapping for DQDB
- FDDI: Indicates asynchronous mapping for ATM
- HDLC-SONET: Indicates HDLC over Sonet mapping
- POSSSCRAMBLE: Indicates POS with scrambling
- GFP: Indicates GFP mapping
- POSNOSCRAMBLE: Indicates POS without scrambling
- TESTSIGNAL: Indicates the test signal is mapped.
- TUGSTRUCTURED: Indicates TUG Structured
- LOCKEDTU: Indicates locked TU
- E3: Indicates asynchronous mapping for E3
- E4: Indicates asynchronous mapping for E4
- VCAIS

20. **TRANSTRCFMT** *(For VC commands only)*: Indicates the trace format. Valid values are:
- 16Bytes: 16 bytes trace format
- 64Bytes: 64 bytes trace format

21. **TRANSPATHTRC**: Indicates the alphanumerical string sent over J1 bytes.
22. **EXPSIGLBL**: Indicates the reverse signal label in reverse direction of the cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC: Indicates Equipped-Nonspecific Payload. (Default)
   - VTSTRUCTURED: Indicates VT-structured STS-1 SPE
   - LOCKEDVT: Indicates locked virtual tributary (VT) mode.
   - DS3ASYNC: Indicates asynchronous mapping for E3 or DS3. *(Planned for future release.)*
   - DS4NAASYNC: Indicates asynchronous mapping for DS4NA or E4. *(Planned for future release.)*
   - ATM: Indicates mapping for ATM
   - DQDB: Indicates mapping for DQDB
   - FDDI: Indicates asynchronous mapping for ATM
   - HDLC-SONET: Indicates HDLC over Sonet mapping
   - POSSCRAMBLE: Indicates POS with scrambling
   - GFP: Indicates GFP mapping
   - POSNOSCRAMBLE: Indicates POS without scrambling
   - TESTSIGNAL: Indicates the test signal is mapped.
   - TUGSTRUCTURED: Indicates TUG Structured
   - LOCKEDTU: Indicates locked TU
   - E3: Indicates asynchronous mapping for E3
   - VCAIS

23. **EXPRTRCFMT** (For VC commands only): Indicates the trace format.
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes Trace Format

24. **EXPPATHTRC**: Indicates the alphanumerical string expected over J1 bytes.
   - E4 - Indicates asynchronous mapping for E4

25. **TRANSPARENCY**: indicates whether the overheads are transported transparently over cross connect. This parameter is applicable for STS12C and STS48C rates only. To enable this feature control data should be disabled. Valid values are:
   - ENABLED - Overheads are transparently passed.
   - DISABLED - Overheads are terminated.

26. **HOLDOFFTIMER** (Supported only for TE100): Indicates hold off time. Value range is 0 to 1000. Applicable for STS1/3C/12C, VC3, VC4, VC4-4C rates only.

27. `<pst>`: The primary state. Valid values are `{IS|OOS}`.
   - IS = in service: puts the entity in the IS-NR primary state. (Default)
   - OOS = out of service: puts the entity in the OOS-MA primary state.

Example:
```
ED-CRS-STS1:PETALUMA:STS-9-1-4,STS-7-5-2:123::2WAY:RDLNE=Y:OOS;
```

**TARGET**: TRAVERSE, TE100

**Note**: STS48C and VC4-16C commands are available in TRAVERSE only.
Response Syntax

See response format in Chapter 3—“Generic Output Response Format.”

**RTRV-CRS-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}**

General Description

This command retrieves a cross connection configuration information for the specified access identifier.

**Command Syntax**

<table>
<thead>
<tr>
<th>RTRV-CRS-&lt;Rate&gt;:&lt;tid&gt;:[&lt;FROM-AID&gt;,&lt;TO-AID&gt;]:&lt;ctag&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;RATE&gt; identifies the type of cross connect: STS1, STS3C, STS12C, STS48C, VC3, VC4, VC4_4C, VC4_16C.</td>
</tr>
<tr>
<td>2. &lt;tid&gt; is target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID)</strong>.</td>
</tr>
<tr>
<td>3. &lt;FROM-AID&gt; indicates an identifier at one end of the STS cross connection.</td>
</tr>
<tr>
<td>Format: FAC-&lt;slot&gt;-&lt;port&gt; for DS3 or EC1 interfaces or STS-&lt;slot&gt;-&lt;port&gt;-&lt;sts&gt; for STS time slots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” <strong>SONET Path AIDs</strong>, <strong>AU-4 Mapped SDH Path AIDs</strong>, and <strong>AU-3 Mapped SDH Path AIDs</strong>. Valid facility DS3 and EC1 AIDs are in Appendix C—“Access Identifiers,” <strong>Facility AIDs</strong>.</td>
</tr>
<tr>
<td>4. &lt;TO-AID&gt; indicates an identifier at the other end of the STS cross connection.</td>
</tr>
<tr>
<td>Format: STS-&lt;slot&gt;-&lt;port&gt;-&lt;sts&gt; for STS time slots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” <strong>SONET Path AIDs</strong>, <strong>AU-4 Mapped SDH Path AIDs</strong>, and <strong>AU-3 Mapped SDH Path AIDs</strong>.</td>
</tr>
<tr>
<td>5. &lt;ctag&gt; is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks</strong>, <strong>Correlation Tag (CTAG)</strong>.</td>
</tr>
</tbody>
</table>

The following example retrieves one specific cross connect:

**RTRV-CRS-STS1:PETALUMA:STS-1-1-1,STS-3-1-1:123;**

The following example retrieves all STS-3C level cross connects:

**RTRV-CRS-STS3C:PETALUMA::123;**

**TARGET : TRAVERSE, TE100**

**Note:** STS48c and VC4-16C commands are available in TRAVERSE only.
Response Syntax

```
^^^^SID'YY-MM-DD'HH:MM:SS
M^^CTAG'COMPLD
<rspblk>

Where multiple rspblk can appear for all standby and active crossconnect

<rspblk> is

^^^^<FROM-AID>,<TO-AID>,<CCT>,[RVRTV=<rvrtv>],[WTR=<wtr>]
[NAME=<name>],[CUST=<cust>],[DISC=<disc>],[RDLINE=<rdline>],[PROTOTYPE=<prototype>],
[FROMPMTMPL=<frompmtmpl>],[TOPMTMPL=<topmtmpl>],[BNR=<bnr>],
[FROMTEX=<fromtmxaid>],[TOTMXAID=<totmxaid>],[TRANSSIGBL=<transsiglbl>],
[TRANSTRCFMT=<transtrcfmt>],
[TRANSPATHTRC=<transpathtrc>],[EXPSIGBL=<expsiglbl>],[EXPTRCFMT=<exptrcfmt>],[EXPPATHTRC=<exppathtrc>],
[TRANSAPAREN=<transparency>],[HOLDOFFTIME=<holdofftime>],[SID=<sid>]<PST>,<SST>";
```
1. `<SID>` is TID as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Target Identifier (TID).**

2. `<FROM-AID>` indicates an identifier at one end of the STS cross connection.
   Format: `FAC-<slot>-<port>` for DS3 or EC1 interfaces or `STS-<slot>-<port>-<sts>` for STS timeslots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” **SONET Path AIDs.** Valid facility DS3 and EC1 AIDs are in Appendix C—“Access Identifiers,” **Facility AIDs.**

3. `<TO-AID>` indicates an identifier at the other end of the STS cross connection.
   Format: `STS-<slot>-<port>-<sts>` for STS timeslots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” **SONET Path AIDs.**

4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

5. `<CCT>` identifies the cross connection type. Valid values are:
   - 1WAY - unidirectional
   - 2WAY - bi-directional (Default)

6. `RVRTV:` indicates revertive type. Valid values are:
   - Y - revertive
   - N - non-revertive (Default)

7. `WTR:` indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.

8. `NAME:` Indicates the name of the service

9. `CUST:` Indicates the customer name

10. `DESC:` Description of the service created

11. `RDLNE:` Indicates whether the other parameters of service created is editable. Valid values are:
    - Y - Service is redlined. To edit redlined service its RDLNE should be disabled and then ED command can be issued.
    - N - Service is not redlined and can be edited. (Default)

12. `PROTTYPE:` Indicates the protection type for the cross connect.
    - None: No protection provisioned
    - BLSR/MSSP (Traverse only): BLSR protection
    - UPSR/SCNP (Traverse only): UPSR protection
    - UPSRIngress/SCPIngress (Traverse only): UPSR Ingress node protection
    - 1Plus1APS: 1 + 1 APS protection
    - 1Plus1Path: 1+1 path protection
    - Any: Available protection is availed.

13. `FROMPMTMPL:` PM template assigned to the FROM AID of termination for cross connect.

14. `TOPMTMPL:` PM template assigned to the TO AID of termination for cross connect.

15. `BNR` (Not supported in Rel 2.1): Indicates Bridge and roll support.
    - Enabled- BNR enabled
    - Disabled - BNR disabled

16. `FROMTMXAID` (Traverse only): Indicates the STS1 transmux port AID that converts the DS3 channelized signal into VT mapped signal received from FROMAID and vice versa.
17. **TOTMXAID (Traverse only):** Indicates the STS1 transmux port AID that converts the DS3 channelized signal into VT mapped signal received from TOAID and vice versa.

18. **TRANSSIGLB:** Indicates the forward signal label inserted in forward direction of the cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC: Indicates Equipped-Nonspecific Payload. (Default)
   - VSTRUCTURED: Indicates VT-structured STS-1 SPE
   - LOCKEDVT: Indicates locked virtual tributary(VT) mode.
   - DS3ASYNC: Indicates asynchronous mapping for E3 or DS3. *(Planned for future release.)*
   - DS4NAASYNC: Indicates asynchronous mapping for DS4NA or E4. *(Planned for future release.)*
   - ATM: Indicates mapping for ATM
   - DQDB: Indicates mapping for DQDB
   - FDDI: Indicates asynchronous mapping for ATM
   - HDLC-SONET: Indicates HDLC over SONET mapping
   - POSSCRAMBLE: Indicates POS with scrambling
   - GFP: Indicates GFP mapping
   - POSNOSCRAMBLE: Indicates POS without scrambling
   - TESTSIGNAL: Indicates the test signal is mapped.
   - TUGSTRUCTURED: Indicates TUG Structured
   - LOCKEDTU: Indicates locked TU
   - E3: Indicates asynchronous mapping for E3
   - E4: Indicates asynchronous mapping for E4
   - VCAIS

19. **TRANSTRCFMT (For VC commands only):** Indicates the trace format
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes trace format

20. **TRANSFPATHTRC:** Indicates the alphanumerical string sent over J1 bytes
21. **EXPSIGLBL**: Indicates the reverse signal label in reverse direction of the cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC: Indicates Equipped-Nonspecific Payload. (Default)
   - VTSTRUCTURED: Indicates VT-structured STS-1 SPE
   - LOCKEDVT: Indicates locked virtual tributary(VT) mode.
   - DS3ASYNC: Indicates asynchronous mapping for E3 or DS3. *(Planned for future release.)*
   - DS4NAASYNC: Indicates asynchronous mapping for DS4NA or E4. *(Planned for future release.)*
   - ATM: Indicates mapping for ATM
   - DQDB: Indicates mapping for DQDB
   - FDDI: Indicates asynchronous mapping for ATM
   - HDLCSONET: Indicates HDLC over SONET mapping
   - POSSCRAMBLE: Indicates POS with scrambling
   - GFP: Indicates GFP mapping
   - POSNOSCRAMBLE: Indicates POS without scrambling
   - TESTSIGNAL: Indicates the test signal is mapped.
   - TUGSTRUCTURED: Indicates TUG Structured
   - LOCKEDTU: Indicates locked TU
   - E3: Indicates asynchronous mapping for E3
   - E4: Indicates asynchronous mapping for E4
   - VCAIS

22. **EXPTRCFMT** (For VC commands only): Indicates the trace format.
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes trace format

23. **EXPPATHTRC**: Indicates the alphanumerical string expected over J1 bytes.

24. **TRANSPARENCY**: indicates whether the overheads are transported transparently over cross connect. This parameter is applicable for STS12C and STS48C rates only. To enable this feature control data should be disabled. Valid values are:
   - ENABLED - Overheads are transparently passed.
   - DISABLED - Overheads are terminated.

25. **HOLDOFFTIMER** (Supported only for TE100): Indicates hold off time. Value range is 0 to 1000. Applicable for STS1/3C/12C, VC3, VC4, VC4-4C rates only.

26. **SID** indicates the service ID generated internally.

27. `<pst>` is the primary state. Value is `{IS|OOS}`.
   - IS - in service: puts the entity in the IS-NR primary state. (Default)
   - OOS - out of service: puts the entity in the OOS-MA primary state

28. `<sst>` is the secondary state. Value is `{CT|DSBLD}`. Default is IS.
   - ACT - Service is in active state.
   - DSBLD - Service is in disabled state.
### Cross-connect

**Example:**

PETALUMA 02-03-20 14:30:00  
M 123 COMPLD  
“FAC-5-1,STS-3-5-4:2WAY:NAME=SER1,SID=3:IS-NR,ACT”  
;

**TARGET : TRAVERSE, TE100**

**Note:** STS48C and VC4-16C commands are available in TRAVERSE only.

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**DLT-CRS-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4-4C/VC4-16C}**

**General Description**

This command deletes STS level or high-order VC3/VC4 cross-connect. A redline cross-connect cannot be deleted. Such a cross-connect must have its redline condition removed using the **ED-CRS-<RATE>** command first.

**Command Syntax**

```
DLT-CRS-<RATE>: <tid>:<FROM-AID>,<TO-AID>:<ctag>;
```

1. **<RATE>** identifies the type of cross connect: STS1, STS3C, STS12C, STS48C, VC3, VC4, VC4_4C, VC4_16C.
2. **<tid>** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
3. **<FROM-AID>** indicates an identifier at one end of the STS cross connection.  
   Format: FAC-<slot>-<port> for DS3 or EC1 interfaces or  
   STS-<slot>-<port>-<sts#> for STS timeslots within an OC-N signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” **SONET Path AIDs.** Valid facility DS3 and EC1 AIDs are in Appendix C—“Access Identifiers,” **Facility AIDs.**
4. **<TO-AID>** indicates an identifier at the other end of the STS cross connection.  
   Format: STS-<slot>-<port>-<sts> for STS timeslots within an OC-n signal. Valid STS AIDs are in “STS” section in Appendix C—“Access Identifiers,” **SONET Path AIDs.**
5. **<ctag>** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**

```
DLT-CRS-STS1:PETALUMA:FAC-5-1,STS-3-5-4:123;  
DLT-CRS-VC4:LONDON:VC4-5-1-1,VC4-6-1-1:123;  
```

**TARGET: TRAVERSE, TE100**

**Note:** STS48c and VC4-16C commands are available in TRAVERSE only.

**Response Syntax**

See response format in Chapter 3—“Generic Output Response Format.”
ENT-CRS-{VT1/VC11/VC12}

General Description

This command creates a VT1.5/VC11/VC12 level cross connection. The endpoint of VT1.5/VC11/VC12 cross connect can be either VT1/VC11/VC12 path AID or DS1/E1 facility or DS1/E1 subport of DS3 transmux facility. Omission of an optional parameter results in the default value for that attribute.

This command does not support creating multiple VT1.5/VC11/VC12 cross connections, and thus neither grouping nor ranging of the AIDs is allowed.

Command Syntax

ENT-CRS-{VT1/VC11/VC12};<tid>:<FROM-AID>,<TO-AID>:<ctag>::[<CCT>]:[RVRTV=<rvrtv>],[WTR=<wtr>],[NAME=<name>],[CUST=<cust>],[DESC=<desc>],[RDLNE=<rdlne>],[PROTTYPE=<prototype>],[FROMPMTMPL=<frompmtmpl>],[TOPMTPMPL=<topmtpmpl>],[BNR=<bnr>],[FROMTMXAID=<fromtmxAid>],[TOMXAID=<tomxAid>],[TRANSSIGLBL=<transsiglbl>],[TRANSPATHTRC=<transpathtrc>],[EXPSIGLBL=<expsiglbl>],[EXPAPATHTRC=<expapathtrc>],[SDBER=<sdber>],[SFBER=<sfber>],[HOLDOFFTIMER=<holdofftimer>];

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<FROM-AID>` indicates an identifier at the source end of the VT1/VC11/VC12 cross connection and is either the AID from the “VT1.5 or VC11/VC12” section in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs, the DS1/E1 facility AID of the DS1/E1 physical port, or the DS1/E1 subport within DS3TMX port specified in Appendix C—“Access Identifiers,” Facility AIDs.
3. `<TO-AID>` indicates an identifier at the sink end of the VT1/VC11/VC12 cross connection and is either the AID from the “VT1.5 or VC11/VC12” section in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs, the DS1/E1 facility AID of the DS1/E1 physical port, or the DS1/E1 subport within DS3TMX port specified in Appendix C—“Access Identifiers,” Facility AIDs.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
5. `<CCT>` identifies the cross connection type.
   1WAY - unidirectional
   2WAY - bi-directional (Default)
6. RVRTV indicates revertive type.
   Y - revertive
   N -non-revertive (Default)
7. WTR indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.
8. NAME Indicates the name of the service
9. CUST Indicates the customer name
10. DESC Description of the service created
11. RDLNE Indicates whether the other parameters of service created is editable. Valid values are:
   Y : Service is redlined. To edit redlined service, its RDLNE should be disabled and then ED command can be issued.
   N : Service is not redlined and can be edited. (Default)
12. PROTOTYPE (Not supported in Rel 2.1): Indicates the protection type for the cross connect
   None - No protection provisioned
   BLSR/MSSP (Traverse only) - BLSR protection
   UPSR/SNCP (Traverse only) - UPSR protection
   UPSRIngress/SNCPIngress (Traverse only) - UPSR Ingress node protection
   1Plus1APS - 1 + 1 APS protection
   1Plus1Path - 1+1 path protection
   Any - Any available protection is used.
13. FROMPMTMPL: PM template assigned to the FROM AID of termination for cross connect.
14. TOPMTMPL: PM template assigned to the TO AID of termination for cross connect.
15. BNR (Not supported in Rel 2.1): Indicated Bridge and roll support
   Enabled - BNR enabled
   Disabled - BNR disabled
16. FROMTMXAID (Traverse only): Indicates the STS1 transmux port AID, which converts the DS1 signal into VT, mapped signal received from FROMAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs. NULL value resets the earlier provisioned value.
17. TOTMXAID (Traverse only): Indicates the STS1 transmux port AID, which converts the DS1 signal into VT, mapped signal received from TOAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs. NULL value resets the earlier provisioned value.
18. TRANSSIGLBL: Indicates the signal label transmitted onto cross connect. Valid values are:
   UNEQUIPPED
   NONSPECIFIC (Default)
   DS1ASYNC
   DS1BITSYNC
   DS1BYTESYNC
   EXTENDEDGFp
19. TRANSPATHTRC: Indicates the alphanumerical string sent over J1 bytes. The default is NULL.
20. EXPSIGLBL: Indicates the expected signal label on cross connect. Valid values are:
   UNEQUIPPED
   NONSPECIFIC (Default)
   DS1ASYNC
   DS1BITSYNC
   DS1BYTESYNC
   EXTENDEDGFp
21. EXPPATHTRC: Indicates the alphanumerical string expected over J1 bytes. The default is NULL.
22. SDBER: Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are:
   1E-5 = 10-5
   1E-6 = 10-6 (Default)
   1E-7 = 10-7
   1E-8 = 10-8
23. SFBER: Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values are \{1E-3|1E-4|1E-5\}.
   1E-3 = 10-3 (Default)
   1E-4 = 10-4
   1E-5 = 10-5

24. HOLDOFFTIMER (Supported only for TE100): Indicates hold off time. Value range is 0 to 1000. Applicable for VT1 rate only.

25. `<pst>`: Indicates the primary state. Value is \{IS|OOS\}. Default is IS.
   - IS = in service: puts the entity in the IS-NR primary state.
   - OOS = out of service: puts the entity in the OOS-MA primary state.

Example:
The following example shows a point-to-point unprotected 2-way VT1 cross-connect.
```
ENT-CRS-VT1:PETALUMA: VT1-1-1-1-4-4, VT1-2-1-1-7-1:123::2WAY::IS;
ENT-CRS-VC11:LONDON: VC11-1-1-1-4-4, VC11-2-1-1-7-1:123::2WAY::IS;
ENT-CRS-VC12:LONDON: VC12-5-2-1-4-4, VC12-6-2-1-7-1:123::2WAY::OOS;
```

**Note:** VC11 command is available on Traverse only.

### ED-CRS-{VT1/VC11/VC12}

#### General Description
This command is used to modify a VT1.5/VC11/VC12 cross connection. The endpoint of VT1.5/VC11/VC12 cross connect can be either VT1.5/VC11/VC12 path AID or DS1/E1 facility or DS1/E1 subport of DS3 transmux facility. Omission of an optional parameter results in the default value for that attribute.

#### Command Syntax
```
ED-CRS-{VT1/VC11/VC12}:<tid>:<FROM-AID>,<TO-AID>:<ctag>::[<CCT>]:[RVRTV=<rvrtv>],[WTR=<wtr>][NAME=<name>],[CUST=<cust>],[DESC=<desc>],[RDLNE=<rdlne>],[PROTOTYPE=<prototype>],[FROMPMTMPL=<frompmtmpl>],[TOPMTPMPL=<topmtpmpl>],[BNR=<bnr>],[FROMTMXAIM=<fromtmxaid>],[TOTMXAID=<totmxaid>],[TRANSSIGLBL=<transsiglbl>],[TRANSPATHTRC=<transpathtrc>],[EXPSIGLBL=<expsiglbl>],[EXPPATHTRC=<exppathtrc>],[SDBER=<sber>],[SFBER=<sfbere>],[HOLDOFFTIMER=<holdofftimer>];[<PST>];
```
1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<FROM-AID>` indicates the access identifier at source end of the VT1/VC11/VC12 cross connection.
3. `<TO-AID>` indicates the access identifier at sink end of the VT1/VC11/VC12 cross connection.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
5. `<CCT>` identifies the cross connection type. Value is `{1WAY|2WAY}`. Default value is 2WAY.  
   1WAY = unidirectional  
   2WAY = bi-directional
6. `RVRTV`: indicates revertive type. Value is `{Y|N}`.  
   Y = revertive (Default)  
   N = non-revertive
7. `WTR`: indicates revertive time. Value is integer `{1 to 60 mins}`. Default is 5 min.
8. `NAME`: Indicates the name of the service.
9. `CUST`: Indicates the customer name.
10. `DESC`: Description of the service created.
11. `RDLNE`: Indicates whether the other parameters of the created service can be edited. Valid values are:  
    Y: Service is red lined. To edit red lined service, its RDLNE should be disabled and then ED command can be issued.  
    N: Service is not red lined and can be edited.
12. `PROTTYPE`: Indicates the protection type for the cross connect.  
    Non: No protection provisioned  
    BLSR/MSSP (Traverse only): BLSR protection  
    UPSR/SNCP (Traverse only): UPSR protection  
    UPSRIngress/SNCPIngress (Traverse only): UPSR Ingress node protection  
    1Plus1APS: 1 + 1 APS protection  
    1Plus1Path: 1+1 path protection  
    An: Any available protection is used
13. `FROMPMTMPL`: PM template assigned to the FROM AID of termination for cross connect.
14. `TOPMTMPL`: PM template assigned to the TO AID of termination for cross connect.
15. `BNR`: Indicates Bridge and roll support.  
    Enabled: BNR enabled  
    Disabled: BNR disabled
16. `FROMTMXAID` (Traverse only): Indicates the STS1 transmux port AID, which converts the DS1 signal into VT, mapped signal received from FROMAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs. NULL value resets the earlier provisioned value.
17. `TOTMXAID` (Traverse only): Indicates the STS1 transmux port AID, which converts the DS1 signal into VT, mapped signal received from TOAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs. NULL value resets the earlier provisioned value.
18. TRANSSIGLBL: Indicates the signal label transmitted onto cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC
   - DS1ASYNC
   - DS1BITSYNC
   - DS1BYTESYNC
   - EXTENDEDGFP

19. TRANSPATHTRC: Indicates the alphanumerical string sent over J1 bytes.

20. EXPSIGLBL: Indicates the expected signal label on cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC
   - DS1ASYNC
   - DS1BITSYNC
   - DS1BYTESYNC
   - EXTENDEDGFP

21. EXPPATHTRC: Indicates the alphanumerical string expected over J1 bytes.

22. SDBER: Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are:
   - $1E^{-5} = 10^{-5}$
   - $1E^{-6} = 10^{-6}$ Default value is $1E^{-6}$
   - $1E^{-7} = 10^{-7}$
   - $1E^{-8} = 10^{-8}$

23. SFBER: Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values are: {1E-3|1E-4|1E-5}
   - $1E^{-3} = 10^{-3}$ ; Default value is $1E^{-3}$.
   - $1E^{-4} = 10^{-4}$
   - $1E^{-5} = 10^{-5}$

24. HOLDOFFTIMER (Supported only for TE100): Indicates hold off time. Value range is 0 to 1000. Applicable for VT1 rate only.

25. <pst> is the primary state. Value is {IS|OOS}.
   - IS = in service: puts the entity in the IS-NR primary state. (Default)
   - OOS = out of service: puts the entity in the OOS-MA primary state.

Example:

ED-CRS-VT1:PETALUMA: VT1-1-1-1-4-4, VT1-2-1-1-7-1:123::1WAY:CUST=NEW:IS;
ED-CRS-VC11:LONDON: VC11-1-1-1-4-4, VC11-2-1-1-7-1:123::2WAY::OOS;
ED-CRS-VC12:LONDON: VC12-2-1-1-4-4, VC11-4-1-1-7-1:123::2WAY::IS;

TARGET : TRAVERSE, TE100

Note: VC11 command is available on Traverse only.
RTRV-CRS-{VT1/VC11/VC12}

General Description

This command retrieves VT1.5/VC11/VC12 cross connection configuration information for the specified access identifier. The endpoint of VT1.5/VC11/VC12 cross connect can be either VT1/VC11/VC12 path AID or DS1/E1 facility or DS1/E1 subport of DS3 transmux facility. Omission of an optional parameter results in the default value for that attribute.

Command Syntax

```
RTRV-CRS-[VT1/VC11/VC12]:<tid>:[<FROM-AID>], [<TO-AID>]:<ctag>[:<;>];
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<FROM-AID>` indicates the access identifier at the source end of the VT1/VC11/VC12 cross connection.
3. `<TO-AID>` indicates the access identifier at the sink end of the VT1/VC11/VC12 cross connection.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Correlation Tag (CTAG).

Example:

```
RTRV-CRS-VT1P:PETALUMA:VT1-1-1-1-6-1,VT1-1-1-7-1-2:123;
RTRV-CRS-VC1:1:LONDON:VC11-1-1-1-6-1,VC11-1-1-7-1-2:123;
RTRV-CRS-VC2:1:LONDON:VC12-3-1-1-6-1,VC12-3-1-7-1-2:125;
```

Note: VC11 command is available on TRAVERSE only.

Response Syntax

```
<rspblk>;
```

Where multiple `<rspblk>` can appear for all standby and active crossconnect

```
<rspblk> is
```

```
<FROM-AID>;<TO-AID>;<CCT>;<RVRTV=<rvtv>],[WTR=<wrt>],[NAME=<name>],[CUST=<cust>],[DESC=<description>],[RDLNE=<rdln>],[PROTTYPE=<prototype>],[FROMPMTMPL=<frompmtmpl>],[TOPMTMPL=<topmtmpl>],[BNR=<bnr>],[FROMTMXAIM=<fromtmxaim>],[TOTMXAIM=<totmxaim>],[TRANSIGBL=<transiglbl>],[TRANSPATHTRC=<transpathtrc>],[EXPSIGBL=<expsglbl>],[EXPPATHTRC=<exppathtrc>],[SDBER=<sdbber>],[SFBER=<sfber>],[HOLDDOFFTIMER=<holdofftimer>],[SID=<sid>];:<PST>[,<SST>];
```
1. `<SID>` is TID as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Target Identifier (TID).
2. `<FROM-AID>” indicates the access identifier at source end of the VT1/VC11/VC12 cross connection.
3. `<TO-AID>` indicates the access identifier at sink end of the VT1/VC11/VC12 cross connection.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
5. `<CCT>`: identifies the cross connection type. Valid values are: `{1WAY|2WAY}`.
   1WAY = unidirectional
   2WAY = bi-directional (Default)
6. `RVRTV`: indicates revertive type. Valid values are `{Y|N}`.
   Y = revertive
   N = non-revertive (Default)
7. `WTR`: indicates revertive time. Value is integer `{1 to 60 mins}`. Default is 5 min.
8. `NAME`: Indicates the name of the service.
9. `CUST`: Indicates the customer name.
10. `DESC`: Description of the service created.
11. `RDLNE`: Indicates whether the other parameters of created service can be edited. Valid values are:
    Y - Service is red lined. To edit a red lined service, its RDLNE should be disabled and then the `ED` command can be issued.
    N - Service is not red lined and can be edited. (Default)
12. `PROTTYPE` (Not supported in Rel 2.1): Indicates the protection type for the cross connect
    None - No protection provisioned
    BLSR/MSSP (Traverse only) - BLSR protection
    UPSR/SNCP (Traverse only) - UPSR protection
    UPSRIngress/SNCPIngress (Traverse only) - UPSR Ingress node protection
    1Plus1APS - 1 + 1 APS protection
    1Plus1Path - 1+1 path protection
    Any - Any available protection is used
13. `FROMPMTMPL`: PM template assigned to the FROM AID of termination for cross connect.
14. `TOPMTMPL`: PM template assigned to the TO AID of termination for cross connect.
15. `BNR` (Not supported in Rel 2.1): Indicates Bridge and roll support.
    Enabled - BNR enabled
    Disabled - BNR disabled
16. `FROMTMXAID` (Traverse only): Indicates the STS1 transmux port AID, which converts the DS1 signal into VT, mapped signal received from FROMAID and vice versa. Valid values are shown in STS1TMX section of Appendix C—“Access Identifiers,” Facility AIDs.
17. `TOTMXAID` (Traverse only): Indicates the STS1 transmux port AID, which converts the DS1 signal into VT, mapped signal received from TOAID and vice versa. Valid v
18. **TRANSSIGLBL**: Indicates the signal label transmitted onto cross connect. Valid values are:
- UNEQUIPPED
- NONSPECIFIC
- DS1ASYNC
- DS1BITSYNC
- DS1BYTESYNC
- EXTENDEDGFP

19. **TRANSPATHTRC**: Indicates the alphanumerical string sent over J1 bytes.

20. **EXPSIGLBL**: Indicates the expected signal label on cross connect. Valid values are:
- UNEQUIPPED
- NONSPECIFIC
- DS1ASYNC
- DS1BITSYNC
- DS1BYTESYNC
- EXTENDEDGFP

21. **EXPPATHTRC**: Indicates the alphanumerical string expected over J1 bytes.

22. **SDBER**: Identifies the Signal Degrade Bit Error Rate for line degradation. Valid values are:
- $1E^{-5} = 10^{-5}$
- $1E^{-6} = 10^{-6}$ (Default)
- $1E^{-7} = 10^{-7}$
- $1E^{-8} = 10^{-8}$

23. **SFBER**: Identifies the Signal Fail Bit Error Rate threshold that will cause an APS switch. Valid values are:
- $1E^{-3} = 10^{-3}$ (Default)
- $1E^{-4}$
- $1E^{-5}$

24. **HOLDOFFTIMER** (Supported only for TE100): Indicates hold off time. Value range is 0 to 1000. Applicable for VT1 rate only.

25. **SID** indicates the service ID generated internally.

26. **<pst>** is the primary state. Valid values are:
- **IS** = in service: puts the entity in the IS-NR primary state. (Default)
- **OOS** = out of service: puts the entity in the OOS-MA primary state.

27. **<sst>** is the secondary state. Valid values are:
- **ACT** = Service is in an active state. (Default)
- **DSBLD** = Service is in a disabled state.

**Note**: VC11 command is available on TRAVERSE only.
**DLT-CRS-{VT1/VC11/VC12}**

**General Description**

This command deletes a VT1.5/VC11/VC12 cross connection configuration. A redline cross-connect cannot be deleted. Such a cross connect must have its redline condition removed via the **ED-CRS-{VT1/VC11/VC12}** command first.

**Command Syntax**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DLT-CRS-{VT1/VC11/VC12}: &lt;tid&gt;:[&lt;FROM-AID&gt;],[&lt;TO-AID&gt;]:&lt;ctag&gt;[:];</code></td>
<td></td>
</tr>
</tbody>
</table>
1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<FROM-AID>` indicates the access identifier at the source end of the VT1/VC11/VC12 cross connection.
3. `<TO-AID>` indicates the access identifier at the sink end of the VT1/VC11/VC12 cross connection.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

The following example deletes one VT1.5 cross connect with specified source and destination:

`DLT-CRS-VT1:PETALUMA: VT1-1-1-1-4-4, VT1-2-1-1-7-1:123;`

The following example deletes all VC11 cross connects sourced on VC11-1-1-1-4-4:

`DLT-CRS-VC11:LONDON: VC11-1-1-1-4-4,:123;`

The following example deletes all VC12 cross connects:

`DLT-CRS-VC12:LONDON,:123;`

**Target:** TRAVERSE, TE100

**Note:** VC11 command is available on TRAVERSE only.

**Response Syntax**

See response format in Chapter 3—“Generic Output Response Format.”
ENT-AU3/AU4

General Description
This command creates the AU3/AU4 endpoints to be transported across the Traverse/TE-100.

Command Syntax

```
ENT-AU3/AU4::<tid>::<AID>:<VCXSLOT>:<ctag>::<AUTYPE>:<RVRTV=<rvrtv>,<WTR=<wtr>,<NAME=<name>,<CUST=<cust>,<DESC=<desc>,<PROTTYPE=<prottype>,<PMTMPL=<pmtmpl>,<TRANS SIGLBL=<transsiglbl>,<TRANS TRCFMT=<transtrcfmt>,<TRANS PATHTRC=<transpathtrc>,<EXPSIGLBL=<expsiglbl>,<EXPTRCFMT=<exptrcfmt>,<EXPPATHTRC=<exppathtrc>,::<PST>;`
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<AID>` indicates an identifier of AU3/AU4 endpoints. Valid values are specified in VC3/VC4 section of Appendix C—“Access Identifiers,” AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. `<VCXSLOT>` indicates the slot supporting the VCX conversion using VCX card. Valid values are specified in Appendix C—“Access Identifiers,” Equipment AIDs.
4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
5. `<AUTYPE>`: Indicates the type of Administration function performed. Valid values are:
   - GROOMING - Grooms the VC11/VC12 into AU3/AU4
   - VC3_TO_VC4 - Grooms the VC3 into VC4. Applicable for AU4 command only.
6. `<RVRTV>`: indicates revertive type.
   - Y = revertive
   - N = non-revertive (Default)
7. `<WTR>`: indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.
8. `<NAME>`: Indicates the name of the service.
9. `<CUST>`: Indicates the customer name.
10. `<DESC>`: Description of the service created.
11. `<PROTTYPE>` (Not supported in Rel 2.1): Indicates the protection type for the cross connect.
    - None - No protection provisioned
    - BLSR/MSSP ( Traverse only) - BLSR protection
    - UPSR/SNCP ( Traverse only) - UPSR protection
    - UPSRIngress/SNCPIngress ( Traverse only) - UPSR Ingress node protection
    - 1Plus1APS - 1+1 APS protection
    - 1Plus1Path - 1+1 path protection
    - Any - Any available protection is used
12. `<PMTMPL>`: PM template assigned to the endpoint.
13. TRANSSIGLBL: Indicates the forward signal label inserted in forward direction of the cross connect. Valid values are:
- UNEQUIPPED
- NONSPECIFIC - Indicates Equipped-Nonspecific Payload. (Default)
- TUGSTRUCTURED - Indicates the TUG structure
- LOCKEDTU - Indicates locked TU
- E3 - Indicates asynchronous mapping for E3
- E4 - Indicates asynchronous mapping for E4
- ATM - Indicates mapping for ATM
- DQDB - Indicates mapping for DQDB
- FDDI - Indicates asynchronous mapping for ATM
- HDLC-SONET - Indicates HDLC over SONET mapping
- POSSCRAMBLE - Indicates POS with scrambling
- GFP - Indicates GFP mapping
- POSNOSCRAMBLE - Indicates POS without scrambling
- TESTSIGNAL - Indicates the test signal is mapped.
- VCAIS
14. TRANSTRCFMT: Indicates the trace format.
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes trace format

15. TRANS PATHTRC: Indicates the alphanumerical string sent over J1 bytes.

16. EXPSIGLBL: Indicates the reverse signal label in reverse direction of the cross connect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC - Indicates Equipped-Nonspecific Payload. (Default)
   - TUGSTRUCTURED - Indicates the TUG structure
   - LOCKED TU - Indicates locked TU
   - E3 - Indicates asynchronous mapping for E3
   - E4 - Indicates asynchronous mapping for E4
   - ATM - Indicates mapping for ATM
   - DQDB - Indicates mapping for DQDB
   - FDDI - Indicates asynchronous mapping for ATM
   - HDLC-SONET - Indicates HDLC over SONET mapping
   - POSSCRAMBLE - Indicates POS with scrambling
   - GFP - Indicates GFP mapping
   - POSNOSCRAMBLE - Indicates POS without scrambling
   - TESTSIGNAL - Indicates the test signal is mapped.
   - VCAIS

17. EXPTRCFMT: Indicates the trace format.
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes trace format

18. EXPPATHTRC Indicates the alphanumerical string expected over J1 bytes.

19. <pst> is the primary state.
   - IS = in service: puts the entity in the IS-NR primary state. (Default)
   - OOS = out of service: puts the entity in the OOS-MA primary state.

Example:
ENT-AU3:PETALUMA:VC3HO-1-1-1,SLOT-2:123:::OOS; (for TE100)
ENT-AU3:PETALUMA:VC3HO-1-1-1-1,SLOT-2:123:::OOS; (for Traverse)

TARGET : TRAVERSE, TE100

Response Syntax
See the response format in Chapter 3—“Generic Output Response Format.”

ED-AU3/AU4

General Description
This command edits the AU3/AU4 endpoints to be transported across the NE.
Command Syntax

ED-AU3/AU4:[<tid>]:<AID>,[<VCXSLOT>]:<ctag>,[AUTYPE]:[RVRTV=<rvrtv>],[WTR=<wtr>],[NAME=<name>],[CUST=<cust>],[DESC=<desc>],[PROTTYPE=<protype>],[PMTMPL=<pmtmpl>],[TRANSTRCFMT=<transtrcfmt>],[TRANSPATHTRC=<transpathtrc>],[EXPSIGLBL=<expsiglbl>],[EXPPATHTRC=<exppathtrc>]:[<PST>];

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates an identifier of AU3/AU4 endpoints. Valid values are specified in VC3/VC4 section of Appendix C—“Access Identifiers,” AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. <VCXSLOT> indicates the slot supporting the VCX conversion using VCX card. Valid values are specified in Appendix C—“Access Identifiers,” Equipment AIDs.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
5. AUTYPE : Indicates the type of Administration function performed.
   GROOMING : Grooms the VC11/VC12 into AU3/AU4.
   VC3_TO_VC4 : Grooms VC3 into VC4. Applicable for AU4 command only.
6. RVRTV indicates revertive type.
   Y = revertive
   N = non-revertive (Default)
7. WTR indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.
8. NAME Indicates the name of the service.
9. CUST Indicates the customer name.
10. DESC Description of the service created.
11. PROTTYPE (Not supported in Rel 2.1): Indicates the protection type for the cross connect.
    None : No protection provisioned
    BLSR/MSSP (Traverse only) : BLSR protection
    UPSR/SNCP (Traverse only) : UPSR protection
    UPSRIngress/SNCPIngress (Traverse only) : UPSR Ingress node protection
    1Plus1APS : 1 + 1 APS protection
    1Plus1Path : 1+1 path protection
    Any : Available protection is availed.
12. PMTMPL: PM template assigned to the endpoint.
13. **TRANSSIGLBL:** Indicates the forward signal label inserted in forward direction of the crossconnect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC - Indicates Equipped-Nonspecific Payload. (Default)
   - TUGSTRUCTURED - Indicates the TUG structure
   - LOCKEDTU - Indicates locked TU
   - E3 - Indicates asynchronous mapping for E3
   - E4 - Indicates asynchronous mapping for E4
   - ATM - Indicates mapping for ATM
   - DQDB - Indicates mapping for DQDB
   - FDDI - Indicates asynchronous mapping for ATM
   - HDLC-SONET - Indicates HDLC over SONET mapping
   - POSSCRAMBLE - Indicates POS with scrambling
   - GFP - Indicates GFP mapping
   - POSNOSCRAMBLE - Indicates POS without scrambling
   - TESTSIGNAL - Indicates the test signal is mapped.
   - VCAIS

14. **TRANSTRCFMT:** Indicates the trace format
   - 16Bytes - 16 bytes trace format
   - 64Bytes - 64 bytes trace format

15. **TRANSPATHTRC:** Indicates the alphanumerical string sent over J1 bytes.

16. **EXPSIGLBL:** Indicates the reverse signal label in reverse direction of the crossconnect. Valid values are:
   - UNEQUIPPED
   - NONSPECIFIC - Indicates Equipped-Nonspecific Payload. (Default)
   - TUGSTRUCTURED - Indicates the TUG structure
   - LOCKEDTU - Indicates locked TU
   - E3 - Indicates asynchronous mapping for E3
   - E4 - Indicates asynchronous mapping for E4
   - ATM - Indicates mapping for ATM
   - DQDB - Indicates mapping for DQDB
   - FDDI - Indicates asynchronous mapping for ATM
   - HDLC-SONET - Indicates HDLC over SONET mapping
   - POSSCRAMBLE - Indicates POS with scrambling
   - GFP - Indicates GFP mapping
   - POSNOSCRAMBLE - Indicates POS without scrambling
   - TESTSIGNAL - Indicates the test signal is mapped.
   - VCAIS
Chapter 2 TL1 Commands

Cross-connect

17. EXPTRCFMT : Indicates the trace format
   16Bytes - 16 bytes trace format
   64Bytes - 64 bytes trace format

18. EXPYPATHTRC Indicates the alphanumerical string expected over J1 bytes.

19. <pst> is the primary state.
   IS - in service: puts the entity in the IS-NR primary state. (Default)
   OOS - out of service: puts the entity in the OOS-MA primary state

Example:
ED-AU3:PETALUMA:VC3HO-1-1-1,SLOT-2:123:::OOS; (for TE100)
ED-AU3:PETALUMA:VC3HO-1-1-1-1,SLOT-2:123:::OOS; (for Traverse)

TARGET : TRAVERSE, TE100

Response Syntax
See response format in Chapter 3—“Generic Output Response Format.”

RTRV-AU3/AU4

General Description
This command retrieves the AU3/AU4 endpoints to be transported across the NE.

Command Syntax

```
RTRV-AU3/AU4:[<tid>]:<AID>:<ctag>[:];
```

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates an identifier of AU3/AU4 endpoints. Valid values are specified in VC3/VC4 section of Appendix C—“Access Identifiers,” AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RTRV-AU4:PETALUMA:VC4-1-1:123; (for TE100)
RTRV-AU4:PETALUMA:VC4-1-1-1:123; (for Traverse)

TARGET : TRAVERSE, TE100

Response Syntax

```
^^^SID^YY-MM-DD^HH:MM:SSM^^CTAG^COMPLD
(^^^<AID>,<VCXSLOT>:<AUTYPE>:[RVRTV=<rvrtv>],[WTR=<wtr>],[NAME=<name>],[CUST=<cust>],[DESC=<desc>],[PROTOTYPE=<prootype>],[PMTMPL=<pmtmpl>],[TRANSSIGLBL=<transsiglbl>],[TRANSTRCFMT=<transrcfmt>],[TRANSPATHTRC=<transpathtrc>],[EXPSSIGLBL=<expssiglbl>],[EXPTRCFMT=<exptrcfmt>],[EXPYPATHTRC=<expypathtrc>],[ADMSTATE=<admstate>],[UPGRDSTATE=<upgrdstate>],[SID=<sid>];<PST>,<SST>*);
```
1. `<SID>` is TID as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Target Identifier (TID).

2. `<AID>` indicates an identifier of AU3/AU4 endpoints. Valid values are specified in VC3/VC4 section of Appendix C—“Access Identifiers,” AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.

3. `<VCXSLOT>` indicates the slot supporting the VCX conversion using VCX card. Valid values are specified in Appendix C—“Access Identifiers,” Equipment AIDs.

4. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

5. `AUTYPE`: Indicates the type of Administration function performed.
   - GROOMING - Grooms the VC11/VC12 into AU3/AU4
   - VC3_TO_VC4 - Grooms the VC3 into VC4. Applicable for AU4 command only.

6. `RVRTV`: indicates revertive type.
   - Y - revertive
   - N - non-revertive (Default)

7. `WTR`: indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.

8. `NAME`: Indicates the name of the service

9. `CUST`: Indicates the customer name

10. `DESC`: Description of the service created

11. `PROTTYPE` (Not supported in Rel 2.1): Indicates the protection type for the cross connect
   - None - No protection provisioned
   - BLSR/MSSP (Traverse only) - BLSR protection
   - UPSR/SNCP (Traverse only) - UPSR protection
   - UPSRIngress/SNCPIngress (Traverse only) - UPSR Ingress node protection
   - 1Plus1APS - 1 + 1 APS protection
   - 1Plus1Path - 1+1 path protection
   - Any - Any available protection is used

12. `PMTMPL`: PM template assigned to the endpoint.
    - POSNOSCRAMBLE - Indicates POS without scrambling
    - TESTSIGNAL - Indicates the test signal is mapped.
    - VCAIS

13. `TRANSSIGLBL`: Indicates the forward signal label inserted in forward direction of the cross connect. Valid values are:
    - UNEQUIPPED
    - NONSPECIFIC - Indicates Equipped-Nonspecific Payload. (Default)
    - TUGSTRUCTURED - Indicates the TUG structure.
    - LOCKEDTU - Indicates locked TU
    - E3 - Indicates asynchronous mapping for E3
    - E4 - Indicates asynchronous mapping for E4
    - ATM - Indicates mapping for ATM
    - DQDB - Indicates mapping for DQDB
    - FDDI - Indicates asynchronous mapping for ATM
HDLC-SONET - Indicates HDLC over SONET mapping
POSSCRAMBLE - Indicates POS with scrambling
GFP - Indicates GFP mapping

14. TRANSTRCFMT: Indicates the trace format.
   16Bytes - 16 bytes trace format
   64Bytes - 64 bytes trace format

15. TRANSPATHTRC: Indicates the alphanumerical string sent over J1 bytes.

16. EXPSIGLBL: Indicates the reverse signal label in reverse direction of the cross connect. Valid values are:
   UNEQUIPPED
   NONSPECIFIC - Indicates Equipped-Nonspecific Payload. (Default)
   TUGSTRUCTURED - Indicates the TUG structure
   LOCKEDTU - Indicates locked TU
   E3 - Indicates asynchronous mapping for E3
   E4 - Indicates asynchronous mapping for E4
   ATM - Indicates mapping for ATM
   DQDB - Indicates mapping for DQDB
   FDDI - Indicates asynchronous mapping for ATM
   HDLC-SONET - Indicates HDLC over SONET mapping
   POSSCRAMBLE - Indicates POS with scrambling
   GFP - Indicates GFP mapping
   POSNOSCRAMBLE - Indicates POS without scrambling
   TESTSIGNAL - Indicates the test signal is mapped.
   VCAIS

17. EXPTRCFMT: Indicates the trace format
   16Bytes - 16 bytes trace format
   64Bytes - 64 bytes trace format

18. EXPPATHTRC: Indicates the alphanumerical string expected over J1 bytes.

19. ADMSTATE: Indicates the administrative state of alarm generation.
    UNLOCK - Alarm generation is enabled
    LOCK - Alarm generation is disabled

20. UPGRADESTATE: indicates the service upgrade state. Valid values are:
    NONE
    RFR-STOPED
    RFR-STOP-FAILED
    RFR-INPR
    RFR-OK
    RFR-FAILED

21. SID indicates the service ID generated internally.

22. <pst> is the primary state.
    IS - in service: puts the entity in the IS-NR primary state. (Default)
    OOS - out of service: puts the entity in the OOS-MA primary state
23. `<sst>` is the secondary state.
   ACT - Service is in an active state. (Default)
   DSBLD - Service is in a disabled state.

TARGET: TRAVERSE, TE100

DLT-AU3/AU4

General Description
This command deletes the AU3/AU4 endpoints to be transported across the NE.

Command Syntax

```
DLT-AU3/AU4: [<tid>]:<AID>:<ctag>[::];
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<AID>` indicates an identifier of AU3/AU4 endpoints. Valid values are specified in VC3/VC4 section of Appendix C—“Access Identifiers,” AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
DLT-AU3:PETALUMA:VC3HO-1-1-1:123; (for TE100)
DLT-AU3:PETALUMA:VC3HO-1-1-1:123; (for Traverse)

TARGET: TRAVERSE, TE100

Response Syntax
See response format in Chapter 3—“Generic Output Response Format.”
Auto Message Generation Control

**ALW-MSG-ALL**

**General Description**
This command permits the shelf to resume transmission of automatic messages after having been in the **INHIBIT-MESSAGE** mode.

**Command Syntax**

```
ALW-MSG-ALL:<tid>::<AID>:<ctag>::;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Access Identifier (AID).** Valid value is ALL.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:** To allow the autonomous messages to be reported.

```
ALW-MSG-ALL:KICKALUMA:ALL:123;
```

**TARGET:** TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-SYNC**

**General Description**
This command permits the shelf to resume transmission of automatic messages after having been in the **INHIBIT-MESSAGE** mode.

**Command Syntax**

```
ALW-MSG-SYNC:<tid>::<ctag>::;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:** To allow the autonomous messages to be reported.

```
ALW-MSG-SYNC:PETALUMA::123;
```

**TARGET:** TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-BITS**

**General Description**
This command permits the shelf to resume transmission of automatic messages for DS1 BITS facility after having been in the **INHIBIT-MESSAGE** mode.
### Command Syntax

**ALW-MSG-BITS:<tid>:[<AID>]:<ctag>[:[][],[]];**

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is an access identifier as described in Chapter 1—“TL1 Overview,” **Access Identifier (AID).** Valid values are BITS-A, BITS-B. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” **Grouping of Parameter Arguments** for rules).
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:** To allow the autonomous messages to be reported.

```
ALW-MSG-BITS:KICKALUMA:BITS-A:123;
TARGET: TRAVERSE, TE100
```

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-{T1/E1}**

### General Description

This command permits the shelf to resume transmission of automatic messages for DS1/E1 facility(ies) after having been in the INHIBIT-MESSAGE mode.

**Command Syntax**

**ALW-MSG-{T1/E1}:<tid>:[<AID>]:<ctag>[:[][],[]];**

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is an access identifier as described in Chapter 1—“TL1 Overview,” **Access Identifier (AID).** Valid values for DS1/E1 AID are shown in Appendix C—“Access Identifiers,” **Facility AIDs**. If not specified ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” **Grouping of Parameter Arguments** for rules).
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:** To allow the autonomous messages to be reported.

```
ALW-MSG-{T1/E1}:KICKALUMA:FAC-1-1:123;
ALW-MSG-E1:LONDON:FAC-1-1:123;
```

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-{T3/EC1/E3}**

### General Description

This command permits the shelf to resume transmission of automatic messages for DS3/EC1/E3 facility after having been in the INHIBIT-MESSAGE mode.
**Command Syntax**

\[
\text{ALW-MSG-}\{\text{T3/EC1/E3}\}:<\text{tid}>:[<\text{AID}>]:<\text{ctag}>[::[,,]];
\]

1. \(\text{tid}\) is target identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks Target Identifier (TID).
2. \(\text{AID}\) is an access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for DS3/EC1/E3 AID are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. \(\text{ctag}\) is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:** To allow the autonomous messages to be reported.

\[
\text{ALW-MSG-T3:KICKALUMA:FAC-1-1:123;}
\text{ALW-MSG-EC1:KICKALUMA:FAC-1-8:123;}
\text{ALW-MSG-E3:KICKALUMA:FAC-1-1:123;}
\]

**TARGET:** TRAVERSE, TE100

**Note:** EC1 command is available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-T3TMX**

**General Description**

This command permits the shelf to resume transmission of automatic messages for T3TMX facility after having been in the INHIBIT-MESSAGE mode.

**Command Syntax**

\[
\text{ALW-MSG-T3TMX:<tid>:[<\text{AID}>]:<\text{ctag}>[::[,,]];}
\]

1. \(\text{tid}\) is target identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks Target Identifier (TID).
2. \(\text{AID}\) is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for T3TMX AID are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. \(\text{ctag}\) is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:** To enable the autonomous messages to be reported.

\[
\text{ALW-MSG-T3TMX:KICKALUMA:FAC-1-1:123;}
\]

**TARGET:** TRAVERSE

See response format in Chapter 3—“Generic Output Response Format.”
ALW-MSG-TMXDS1

General Description

This command permits the shelf to resume transmission of automatic messages for TMX subport facility(ies) after having been in the INHIBIT-MESSAGE mode.

Command Syntax

```
ALW-MSG-TMXDS1:<tid>[:<AID>][:ctag][:][,][,];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks** Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks**, **Access Identifier (AID)**. Valid values for TMX DS1 AID are shown in Appendix C—“Access Identifiers,” **Facility AIDs**. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” **Grouping of Parameter Arguments** for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks**, **Correlation Tag (CTAG)**.

Example: To allow the autonomous messages to be reported.

```
ALW-MSG-TMXDS1:KICKALUMA:DS1-2-1-1:123;
```

TARGET : TRAVERSE

See response format in Chapter 3—“Generic Output Response Format.”

ALW-MSG-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64} :<tid>[:<AID>][:ctag][:][,][,];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks** Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks**, **Access Identifier (AID)**. Valid values for OC-n/STM-n AID are shown in Appendix C—“Access Identifiers,” **Facility AIDs**. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” **Grouping of Parameter Arguments** for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks**, **Correlation Tag (CTAG)**.

Example: To allow the autonomous messages to be reported.

```
ALW-MSG-OC3:KICKALUMA:FAC-1-1:123;
ALW-MSG-STM64:LONDON:FAC-7-1:123;
```
Auto Message Generation Control

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TARGET : TRAVERSE, TE100

**Note:** OC192 and STM64 commands are available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}**

**General Description**

This command permits the shelf to resume transmission of automatic messages for STS1/STS3C/STS12C/STS48C or VC3/VC4/VC4-4C/VC4-16C paths after having been in the INHIBIT-MESSAGE mode.

**Command Syntax**

\[
\text{ALW-MSG-}\{\text{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4\_4C/VC4\_16C}\} :<\text{tid}>[:<\text{AID}>]:<\text{ctag}>::::; \]

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for STS AIDs are shown in Appendix C—“Access Identifiers,” SONET Path AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To enable the autonomous messages to be reported.

ALW-MSG-STS1:KICKALUMA:STS-1-1-1:123;
ALW-MSG-STS1:LONDON:VC4-1-1-1:123;

TARGET : TRAVERSE, TE100

**Note:** STS48c and VC4_16c commands are available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”

**ALW-MSG-{VT1/VC11/VC12}**

**General Description**

This command permits the shelf to resume transmission of automatic messages for VT1.5/VC11/VC12 paths after having been in the INHIBIT-MESSAGE mode.

**Command Syntax**

\[
\text{ALW-MSG-}\{\text{VT1/VC11/VC12}\} :<\text{tid}>[:<\text{AID}>]:<\text{ctag}>::::; \]

Example: To enable the autonomous messages to be reported.
Auto Message Generation Control

ALW-MSG-EOS

General Description

This command permits the shelf to resume transmission of automatic messages for EOS CTP after having been in the INHIBIT-MESSAGE mode.

Command Syntax

ALW-MSG-EOS:<tid>[:<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for VT1.5/VC11/VC12 AIDs are shown in Appendix C—“Access Identifiers,” SONET Path AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To enable the autonomous messages to be reported.

ALW-MSG-VT1:KICKALUMA:VT-1-1-1-7-1:123;
ALW-MSG-VC11:LONDON:VC11-1-1-1-7-1:123;
ALW-MSG-VC12:LONDON:VC12-1-1-1-7-1:123;

TARGET : TRAVERSE, TE100

Note: Note : VC11 command is available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”

ALW-MSG-EOS
**ALW-MSG-SFP**

**General Description**

This command permits the shelf to resume transmission of SFP related automatic messages after having been in the INHIBIT-MESSAGE mode.

**Command Syntax**

```
ALW-MSG-SFP:<tid>[:<AID>][:<ctag>];
```

1. *tid* is target identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Target Identifier (TID).
2. *AID* is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for SFP AIDs are shown in Appendix C—“Access Identifiers,” Facility AIDs in the SFP AIDs section. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. *ctag* is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To enable the autonomous messages to be reported.

```
ALW-MSG-SFP:KICKALUMA:OPT-1-1:123;
ALW-MSG-SFP:KICKALUMA:OPT-1-ALL:123;
```

**TARGET : TE100**

See response format in Chapter 3—“Generic Output Response Format.”

**INH-MSG-ALL**

**General Description**

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific equipment unit, facility, and path are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

**Command Syntax**

```
INH-MSG-ALL:<tid>[:<AID>][:<ctag>[:,:][:,:]];
```

1. *tid* is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. *AID* is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid value is ALL. If not specified ALL , will be assumed.
3. *ctag* is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
INH-MSG-SYNC

General Description

This command instructs the shelf to enter a mode in which certain automatic messages associated with synchronization subsystem are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

Command Syntax

INH-MSG-SYNC:<tid>:[AID]:<ctag>[::[,,]];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are TMGSYS, TMGOUT-A, and TMGOUT-B. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.
INH-MSG-SYNC:KICKALUMA::123::;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format.”

INH-MSG-BITS

General Description

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific DS1 BITs facility(ies) are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.
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Auto Message Generation Control

INH-MSG-BITS:<tid>:[<AID>]:<ctag>[:,[,]];  

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are BITS-A, and BITS-B. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.
INH-MSG-BITS:KICKALUMA:BITS-A:123::;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format.”

INH-MSG-{T1/E1}

General Description
This command instructs the shelf to enter a mode in which certain automatic messages associated with specific DS1/E1 facility are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

Command Syntax

INH-MSG-{T1/E1}:<tid>:[<AID>]:<ctag>[:,[,]]; 

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid DS1/E1 AID values are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.
INH-MSG-T1:KICKALUMA:FAC-1-1:123::;
INH-MSG-E1:LONDON:FAC-4-1:123::;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format.”
INH-MSG-{T3/EC1/E3}

General Description

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific DS3/EC1/E3 facility are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

Command Syntax

INH-MSG-{T3/EC1/E3}::<tid>[:<AID>]:<ctag>[::[,:][,:]];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid DS3/EC1/E3 AID values are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.

INH-MSG-T3:KICKALUMA:FAC-1-1:123::;
INH-MSG-EC1:KICKALUMA:FAC-1-1:123::;
INH-MSG-E3:KICKALUMA:FAC-1-1:123::;

TARGET : TRAVERSE, TE100

Note: EC1 command is available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”

INH-MSG-T3T MX

General Description

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific T3T MX facility(ies) are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.
Command Syntax

INH-MSG-T3TMX:<tid>[:<AID>][:<ctag>][:,][,];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid T3TMX AID values are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.
INH-MSG-T3TMX:KICKALUMA:FAC-1-1:123::;

TARGET : TRAVERSE

See response format in Chapter 3—“Generic Output Response Format.”

INH-MSG-TMXDS1

General Description

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific TMX subport facility(ies) are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

Command Syntax

INH-MSG-TMXDS1:<tid>[:<AID>][:<ctag>][:,][,];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid TMXDS1 AID values are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.
INH-MSG-TMXDS1:KICKALUMA:DS1-2-1-1:123::;

TARGET : TRAVERSE

See response format in Chapter 3—“Generic Output Response Format.”
**INH-MSG-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}**

**General Description**

This command instructs the shelf to enter a mode in which certain automatic messages associated with a specific OC-n or STM-n facility are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

**Command Syntax**

```
INH-MSG-{ OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64} :<tid>:[:<AID>]:<ctag>[:::[,][,]]; 
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid OC3/12/48/192 AID values are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To inhibit the autonomous messages to be reported to the OSS.

INH-MSG-OC3:KICKALUMA:FAC-1-1:123::;
INH-MSG-STM64:LONDON:FAC-8-1:123::;

**TARGET**: TRAVERSE, TE100

**Note**: OC192 and STM64 commands are available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”

**INH-MSG-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}**

**General Description**

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific STS or VC3/VC4 paths are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

**Command Syntax**

```
INH-MSG-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C} :<tid>:[:<AID>]:<ctag>[:::[,][,]]; 
```
Auto Message Generation Control

**General Description**

This command instructs the shelf to enter a mode in which certain automatic messages associated with specific VT1/VC11/VC12 are prevented from being transmitted. This command assumes that only one circuit exists over which messages are sent to the OSS. This command should not have any effect on indicators in the office where the shelf resides or on the shelf itself. During the entire period of message inhibition, the shelf continues to respond to RETRIEVE-ALARM and RETRIEVE-CONDITION requests. The condition may be restored to normal with the ALLOW-MESSAGE command.

**Command Syntax**

```
INH-MSG-{VT1/VC11/VC12}:<tid>:[<AID>]:<ctag>::[::[,:][,:]];
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid VT1/VC11/VC12 AID values are shown in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:** To inhibit the autonomous messages to be reported to the OSS.

```
INH-MSG-STS1:KICKALUMA:STS-1-1-1:123::;
INH-MSG-VC4:LONDON:VC4-1-1-1:123::;
```

**Note:** STS48c and VC-4-16c command are available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format.”
**INH-MSG-EOS**

**General Description**
This command informs the shelf to stop the transmission of automatic messages for EOS CTP after having been in the ALLOW-MESSAGE mode.

**Command Syntax**

```
INH-MSG-EOS:<tid>:[<AID>]:<ctag>;
```

1. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `AID` is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for EOS CTP AIDs are shown in Appendix C—“Access Identifiers” in the EOS CTP AIDs section. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example: To Enable the autonomous messages to be reported.

```
INH-MSG-EOS:KICKALUMA:EOS-3-1:123;
```

**TARGET : TE100**

See response format in Chapter 3—“Generic Output Response Format.”

**INH-MSG-SFP**

**General Description**
This command informs the shelf to stop transmission of SFP related automatic messages after having been in the ALLOW-MESSAGE mode.

**Command Syntax**

```
INH-MSG-SFP:<tid>:[<AID>]:<ctag>;
```

1. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `AID` is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for SFP AIDs are shown in Appendix C—“Access Identifiers,” Facility AIDs in the SFP AIDs section. If not specified, ALL will be assumed. Grouping and ranging of AIDs is not allowed (see Chapter 1—“TL1 Overview,” Grouping of Parameter Arguments for rules).
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
Example: To enable the autonomous messages to be reported.

<table>
<thead>
<tr>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>INH-MSG-SFP:KICKALUMA:OPT-1-1:123;</td>
</tr>
<tr>
<td>INH-MSG-SFP:KICKALUMA:OPT-1-ALL:123;</td>
</tr>
</tbody>
</table>

**TARGET : TE100**

See response format in Chapter 3—“Generic Output Response Format.”
**RTRV-ALM-ALL**

**General Description**

The RTRV-ALM-ALL command retrieve and send the current status of all active alarm conditions. The alarm notification code, condition, or severity to be retrieved is specified using the input parameters as a filter.

The RTRV-ALM-ALL command only reports EQPT, COM, and rr (T1, T3, OC3/12/48/192, EC1, STS1/3C/12C/48C, VT1, E1, E3, STM1/4/16/64, VC11, VC12, VC3, VC4, VC4_4C, VC4_16C) alarms.

To retrieve all the NE alarms, issue all of the following commands:

RTRV-ALM-ALL
RTRV-ALM-ENV
RTRV-ALM-SYNC

**Command Syntax**

<table>
<thead>
<tr>
<th>RTRV-ALM-ALL:&lt;tid&gt;:[&lt;AID&gt;]:&lt;ctag&gt;[:&lt;NTFCNCDE&gt;],[&lt;CONDTYPE&gt;],[&lt;SRVEFF&gt;][,,];</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. tid is target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Access Identifier (AID).</strong> Valid values are listed in Appendix C—“Access Identifiers,” Equipment AIDs, Facility AIDs, SONET Path AIDs, and COM AID.</td>
</tr>
<tr>
<td>3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
</tr>
<tr>
<td>4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:</td>
</tr>
<tr>
<td>CR – critical alarm</td>
</tr>
<tr>
<td>MJ – major alarm</td>
</tr>
<tr>
<td>MN – minor alarm</td>
</tr>
<tr>
<td>If not specified, all NTFCNCDE is assumed.</td>
</tr>
<tr>
<td>5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment”. If not specified, all CONDTYPE is assumed.</td>
</tr>
<tr>
<td>6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:</td>
</tr>
<tr>
<td>SA – service affecting</td>
</tr>
<tr>
<td>NSA – non service affecting</td>
</tr>
<tr>
<td>If not specified, all SRVEFF is assumed.</td>
</tr>
</tbody>
</table>

Example: To retrieve all minor alarms.

RTRV-ALM-ALL:KICKALUMA:123::MN,,,,;

TARGET : TRAVERSE, TE100
Response Syntax

```plaintext
^^^SID^YY-MM-DD^HH:MM:SS
M^"CTAG^COMPLD
^^^"<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
  [<OCRTM>],[<CONDDESCR>],";

Note: Trailing parameters not necessary in the response or in autonomously reported messages.
```

1. SID is tid as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Equipment AIDs, Facility AIDs, SONET Path AIDs, and COM AID.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates type of the entity (e.g. T3, T1).
5. NTFCNCDE is a 2-character-notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
6. CONDTYPE is the condition types of the entity. Values are all as shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment” except for those under the Environment section.
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event. Format is mm-dd.
9. OCRTM identifies the time of day that the triggering event occurred. Format is hh-mm.
10. CONDDESCR provides the detailed description of the trouble.

Example: To retrieve all minor alarms.
```
RTRV-ALM-ALL:KICKALUMA:123::MN;
  KICKALUMA 02-05-24 11:27:30
  M 123 COMPLD
  "FAC1-1,DS1:MN,LOS,NSA,,,,," 
     .     . 
     .     . 
  "FAC-1-1,OC3:MN,DQL,NSA,,,,," 

TARGET : TRAVERSE, TE100
```
RTRV-ALM-COM

General Description

This command retrieves and reports the current alarms of the common equipment/NE.

Command Syntax

RTRV-ALM-COM:<tid>:[<AID>]:<ctag>[:[<NTFCNCDE>],[<CONDTYPE>]]...];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in ED-EQPT. Valid value is COM. If not specified, COM is assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified, all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in COM section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:
RTRV-ALM-COM:PETALUMA:COM:123;

TARGET : TRAVERSE, TE100

Response Syntax

^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDATA>],
   [<OCRRT>],[<CONDDESCR>],";


Chapter 2  TL1 Commands
Alarm and Condition Retrieval

RTRV-ALM-ENV

General Description
This command command retrieves all the current alarm states associated with an environmental alarm input.

Command Syntax

RTRV-ALM-ENV:<tid>[:<AID>][:<ctag>[:<NTFCNCDE>][:<ALMTYPE>]];

Example:
RTRV-ALM-COM:PETALUMA:COM:123::,;,
PETALUMA 02-04-24 10:03:50
M 123 COMPLD
"COM,COM:MN,LOGINFAILED,NSA,04-24,10-03,,"
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-ALM-ENV

General Description
This command command retrieves all the current alarm states associated with an environmental alarm input.

Command Syntax

RTRV-ALM-ENV:<tid>[:<AID>]:<ctag>[:<NTFCNCDE>][:<ALMTYPE>]];

1. SID is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” COM AID.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates the type of the entity (e.g. T3, T1).
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   CR – critical alarm
   MJ – major alarm
   MN – minor alarm
6. CONDTYPE indicates the condition types of the entity. Values are shown in the COM section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   SA – service affecting
   NSA – non service affecting
8. OCREDAT identifies the date of the triggering event. Format is mm-dd.
9. OCRTM identifies the time of day that the triggering event occurred. Format is hh-mm.
10. CONDDESCR provides the detailed description of the trouble.
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **ENV AIDs (Environment).** If not specified, all will be assumed.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified all will be assumed.

5. ALMTYPE is a single type of alarm condition type being reported. Value is shown in Environment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:
RTRV-ALM-ENV:PETALUMA:ENV-IN-1:123;
TARGET : TRAVERSE, TE100

---

**Response Syntax**

```plaintext
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^"<AID>:<NTFCNCDE>,<ALMTYPE>,<OCRDAT>,<OCRTM>[,<ALMMSG>]"
```

1. SID is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers” in the ENV AIDs (Environment) section.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm

5. ALMTYPE is the condition types of the entity. Values are shown in the COM section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”

6. OCRDAT identifies the date of the triggering event. Format is mm-dd.

7. OCRTM identifies the time of day that the triggering event occurred. Format is hh-mm.

8. ALMMSG is the text message associated with the environmental alarm. It is comprised of a maximum of 40 characters and must be enclosed within a pair of escaped quotes (\").
Example:
RTRV-ALM-ENV:PETALUMA:ENV-IN-1:123;
PETALUMA 02-04-24 10:03:50
M 123 COMPLD
“ENV-IN-1:MN,OPENDR,04-24,10-03,"OPEN DOOR"”
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-ALM-SYNC**

**General Description**

This command retrieves the current alarms associated with the selected clock type.

**Command Syntax**

RTRV-ALM-SYNC:<tid>:<AID>[:<ctag>],[<NTFCNCDE>:],<CONDTYPE>[,<SRVEFF>,...];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are:
   - TMGSYS
   - TMGOUT-A
   - TMGOUT-B
   If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in the SYNC section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:
RTRV-ALM-SYNC:PETALUMA:TMSYS:123::MN,;
Response Syntax

^^^SID‘YY-MM-DD‘HH:MM:SS
M^^CTAG‘COMPLD
^^^^<AID>,<AIDTYPE >:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
[<OCRTM>],[],:[CONDDESCR],]"
;

1. SID is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are:
   - TMGSYS
   - TMGOUT-A
   - TMGOUT-B
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE is type of entity. Value is SYNC.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
6. CONDTYPE indicates the condition types of the entity. Values are shown in the COM section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event. Format is mm-dd.
9. OCRTM identifies the time of day that the triggering event occurred. Format is hh-mm.
10. CONDDESCR provides the detailed description of the trouble.

Example:
RTRV-ALM-SYNC:PETALUMA:TMSYS:123::MN,,;
PETALUMA 02-04-24 10:03:50
M 123 COMPLD
"TMGSYS,SYNC:MN,OSSCILLATOR,NSA,04-24,10-03,,"
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.
RTRV-ALM-EQPT

General Description

This command retrieves and reports the specified current alarm conditions on the requested equipment. Existing conditions satisfying all input parameters are reported in the message response.

Command Syntax

RTRV-ALM-EQPT:<tid>[:<AID>]:<ctag>[:[:<NTFCNCDE>],[:<CONDTYPE>],[:<SRVEFF>],...];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers” in the Equipment AIDs section. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in the Equipment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified all will be assumed.

Example:

RTRV-ALM-EQPT:PETALUMA:SLOT-1:123;

TARGET : TRAVERSE, TE100

Response Syntax

^^^SID^YY-MM-DD^HH:MM:SS
M^"CTAG^COMPLD
^^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
[<OCRTM>],[<CONDDESCR>],"
RTRV-ALM-BITS

General Description

This command retrieves and reports the specified current alarm conditions on the requested DS1 BITS entity. Existing conditions satisfying all input parameters are reported in the message response.

Command Syntax

RTRV-ALM-BITS:<tid>[::<AID>[:<ctag>[:,<NTFCNCDE>],<CONDTYPE>,<SRVEFF>]];

Example: To retrieve all alarms on the equipment in slot 1.

RTRV-ALM-EQPT:PETALUMA:SLOT-1:123;
PETALUMA 02-04-12 09:03:50
M 123 COMPLD
"SLOT-1,EQPT:CR,LOS,SA,04-12,08-03,,;",";
TARGET: TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.
### Alarm and Condition Retrieval

1. **Response Syntax**

   ^^^SID^YY-MM-DD^HH:MM:SS
   M^CTAG^COMPLD
   ^^^"<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
   [:<OCRTM>,[::<CONDDESCR>]]" ;

   1. **SID** is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
   2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are BITS-A and BITS-B.
   3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
   4. **NTFCNCDE** is a 2-character notification code associated with a single alarm. Valid values are:
      - CR – critical alarm
      - MJ – major alarm
      - MN – minor alarm
      If not specified, all will be assumed.
   5. **CONDTYPE** is the condition types of the entity. Values are shown in the DS1 BITS section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
   6. **SRVEFF** identifies the effect on service caused by this alarm condition. Valid values are:
      - SA – service affecting
      - NSA – non service affecting
      If not specified, all will be assumed.
General Description

This command retrieves and reports the specified current alarm conditions on the requested DS1/E1 entity. Existing conditions satisfying all input parameters are reported in the message response.

Command Syntax

```
RTRV-ALM-{T1/E1}:<tid>[:<AID>]:<ctag>[:<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>]][,,];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the DS1/E1 section. If not specified all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in the DS1 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting

Example:

```
RTRV-ALM-BITS:PETALUMA:FAC-1-1:123:,,,
PETALUMA 02-04-24 10:03:50
M 123 COMPLD
"BITS-A,BITS:MN,LOS,NSA,04-24,10-03,,"
;  
TARGET : TRAVERSE, TE100
```

See response format in Chapter 3—“Generic Output Response Format” for error case response.
Chapter 2  TL1 Commands
Alarm and Condition Retrieval

Example:
RTRV-ALM-T1:KICKALUMA:FAC-5-14:ctag::CR;
RTRV-ALM-E1:LONDON:FAC-1-2:ctag;

TARGET : TRAVERSE, TE100

Response Syntax

```plaintext
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
    [<OCRTM>],:[<CONDDESCR>];
```

1. SID is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the DS1 section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates type of the entity. Valid value is T1/E1.
5. NTFCNCDE is a 2-character-notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
6. CONDTYPE is the condition types of the entity. Values are shown in the DS1 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event.
9. OCRTM identifies the time of day that the triggering event occurred.
10. CONDDESCR provides the detailed description of the trouble.

Example:
RTRV-ALM-T1:PETALUMA:FAC-1-1:123::,;,
   PETALUMA 02-04-24 10:03:50
M 123 COMPLD
   "FAC-1-1,T1:MN,LOS,NSA,04-24,10-03:,";

TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.
**RTRV-ALM-{T3/EC1/E3}**

**General Description**

This command retrieves and reports the specified current alarm conditions on the requested DS3/EC1/E3 entity. Existing conditions satisfying all input parameters are reported in the message response.

**Command Syntax**

```
RTRV-ALM-{T3/EC1/E3} :<tid>[:]<AID>[:]<ctag>[:][<NTFCNCDE>,<CONDTYPE>][,<SRVEFF>,][,] ;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the DS3/EC1/E3 section. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified, all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in DS3/E3 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting

Example:
```
RTRV-ALM-T3:KICKALUMA:FAC-5-14:ctag::CR;
RTRV-ALM-EC1:KICKALUMA:FAC-1-2:ctag;
RTRV-ALM-E3:KICKALUMA:FAC-5-2:ctag::,SA;
```

**Target:** TRAVERSE, TE100

**Note:** EC1 command is available only in TRAVERSE.

**Response Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
M^CTAG^COMPLD
^^^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
    [<OCRTM>],[<CONDDESCR>],"
    ;
```
Chapter 2  TL1 Commands
Alarm and Condition Retrieval

1. SID is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the DS3 section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates type of the entity. Valid value is T3.
5. TFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
6. CONDTYPE is the condition types of the entity. Values are shown in the DS3 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event.
9. OCRTM identifies the time of day that the triggering event occurred.
10. CONDDESCR provides the detailed description of the trouble.

Example:
RTRV-ALM-T3:PETALUMA:FAC-1-1:123::,,
PETALUMA 02-04-24 10:03:50
M 123 COMPLD
"FAC-1-1,T3:CR,LOPSA,04-24,10-03,,:"
;
TARGET : TRAVERSE, TE100

Note:  EC1 command is available only in TRAVERSE

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-ALM-T3TMX

General Description
This command retrieves and reports the specified current alarm conditions on the requested T3TMX entity. Existing conditions satisfying all input parameters are reported in the message response.

Command Syntax

RTRV-ALM-T3TMX:<tid>:{<AID>}:<ctag>:::{<NTFCNCDE>},<CONDTYPE>:,{<SRVEFF>},[,...];
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the T3TMX section. If not specified, all will be assumed.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified, all will be assumed.

5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in T3TMX section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified, all will be assumed.

```
TARGET : TRAVERSE
```

Response Syntax

```
^^^<TID>,<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[,]<OCRDAT>,[,]<OCRTM>,[[:<CONDDESCR>],]
```

1. SID is TID as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the T3TMX section.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

4. AIDTYPE is type of entity. Valid value is T3TMX.

5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm

6. CONDTYPE indicates the condition types of the entity. Values are shown in the T3 TMX section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
Chapter 2 TL1 Commands
Alarm and Condition Retrieval

RTRV-ALM-TMXDS1
General Description
This command retrieves and reports the specified current alarm conditions on the requested TMX support entity. Existing conditions satisfying all input parameters are reported in the message response.

Command Syntax
RTRV-ALM-TMXDS1:<tid>,<AID>,<ctag>[:<NTFCNCD>],[<CONDTYPE>],[<SRVEFF>],...;
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under TMX subport section. If not specified all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   If not specified, all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in the TMX subport section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment”. If not specified, all will be assumed.
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified all will be assumed.

**TARGET : TRAVERSE**

**Response Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^<AID>,<AIDDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
   [<OCRTM>],[[:<CONDDESCR>]],"
```

;
Chapter 2 TL1 Commands

Alarm and Condition Retrieval

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-ALM-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}**

**General Description**
This command retrieves and reports the specified current alarm conditions on the requested OC-n/STM-n entity. Existing conditions satisfying all input parameters are reported in the message response.

**Command Syntax**

```
RTRV-ALM-{ OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}:
<tid>:[:<AID>:]:<ctag>[:::<<NTFCNCDE>,::<CONDTYPE>,::<SRVEFF>],]
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs.** If not specified, all will be assumed.

3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

4. **NTFCNCDE** is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR – not reported
   If not specified, all will be assumed.

5. **CONDTYPE** indicates a single type of alarm condition type being reported. Value is shown in the OC3/12/48/192/STM1/STM4/STM16/STM64 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

6. **SRVEFF** identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified, all will be assumed.

Example:

```
RTRV-ALM-OC3:PETALUMA:FAC-1-1:123::,,,,;
RTRV-ALM-STM64:LONDON:FAC-1-1:123::,,,,;
```

**TARGET : TRAVERSE, TE100**

**Note:** OC192 and STM64 commands are available only on TRAVERSE.

### Response Syntax

```
^<SID>^YY-MM-DD^HH:MM:SS
M^CTAG^COMPLD
^<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>[,;<OCRDAT>],
[,<OCRTM>],[,;<CONDDESCR>]]"
```

---

**Response Syntax**
### RTRV-ALM-STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C

#### General Description

This command retrieves and reports the specified current alarm conditions on the requested STS or VC path. Existing conditions satisfying all input parameters are reported in the message response.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID</td>
<td>Target Identifier (TID)</td>
</tr>
<tr>
<td>AID</td>
<td>Access Identifier (AID)</td>
</tr>
<tr>
<td>ctag</td>
<td>Correlation Tag (CTAG)</td>
</tr>
<tr>
<td>AIDTYPE</td>
<td>Indicates the type of the entity</td>
</tr>
<tr>
<td>NTFCNCDE</td>
<td>Notification code associated with a single alarm</td>
</tr>
<tr>
<td>CONDTYPE</td>
<td>Indicates the condition types of the entity</td>
</tr>
<tr>
<td>SRVEFF</td>
<td>Identifies the effect on service caused by this alarm condition</td>
</tr>
<tr>
<td>OCRDAT</td>
<td>Identifies the date of the triggering event</td>
</tr>
<tr>
<td>OCRTM</td>
<td>Identifies the time of day that the triggering event occurred</td>
</tr>
<tr>
<td>CONDDESCR</td>
<td>Provides the detailed description of the trouble</td>
</tr>
</tbody>
</table>

**Example:**

```
RTRV-ALM-OC3:PETALUMA:FAC-1-1:123:::;;;;
PETALUMA 02-04-24 10:03:50
M 123 COMPLD
"PETALUMA,123,OC3:CR,LOP,SA,04-24,10-03,;";
```

**Note:** OC192 and STM64 commands are available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format” for error case response.

### RTRV-ALM-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}
Command Syntax

```
RTRV-ALM- { STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C } :
:tid>:[<AID>];:<ctag>;;[<NTFCNCDE>];[<CONDTYPE>], [SRVEFF][,,];
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
4. **NTFCNCDE** is a 2-character notification code associated with a single alarm. Valid values are:
   - **CR** – critical alarm
   - **MJ** – major alarm
   - **MN** – minor alarm
   - **NR** – not reported
5. **CONDTYPE** indicates a single type of alarm condition type being reported. Value is shown in STS section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
6. **SRVEFF** identifies the effect on service caused by this alarm condition. Valid values are:
   - **SA** – service affecting
   - **NSA** – non service affecting

**Example:**
```
RTRV-ALM-STS1:PETALUMA:STS-1-1-1:123::,,,:,:;
RTRV-ALM-VC4:LONDON:VC4-5-1-1:123::,,,:,:;
```

**TARGET : TRAVERSE, TE100**

**Note:** STS48c and VC4-16c commands are available only on TRAVERSE.

Response Syntax

```
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
     <OCRTM>,[:,[CONDDESCR]],"
   ;
```

1. **SID** is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
4. **AIDTYPE** is type of entity. Value values are STS1, STS3C, STS12C, and STS48C.
Chapter 2  TL1 Commands

Alarm and Condition Retrieval

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-ALM-{VT1/VC11/VC12}:<tid>:[<AID>]:<ctag>[:<NTFCNCDE>[,<CONDTYPE>][,<SRVEFF>]][,..];**

5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   CR – critical alarm
   MJ – major alarm
   MN – minor alarm
   NR – Not reported. Information is kept in NE.

6. CONDTYPE indicates the condition types of the entity. Values are shown in the STS section of  
   Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment”.

7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   SA – service affecting
   NSA – non service affecting

8. OCRDAT identifies the date of the triggering event

9. OCRTM identifies the time of day that the triggering event occurred

10. CONDDESCR provides the detailed description of the error condition

**Note:** STS48c and VC4-16c commands are available only on TRAVERSE.

**General Description**

This command retrieves and reports the specified current alarm conditions on the  
requested VT1/VC11/VC12 path. Existing conditions satisfying all input parameters  
are reported in the message response.

**Command Syntax**

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-ALM-{VT1/VC11/VC12}:<tid>:[<AID>]:<ctag>[:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>][,..];**
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.

3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - If not specified all will be assumed.

5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in VT section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment”. If not specified, ALL will be assumed.

6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   - If not specified, all will be assumed.

**Example:**

```
RTRV-ALM-VT1:PETALUMA:VT-1-1-1-7-1:123::,,,,;
RTRV-ALM-VC11:PETALUMA:VC11-1-1-1-7-1:123::,,,,;
RTRV-ALM-VC12:PETALUMA:VC12-1-1-1-7-1:123::,,,,;
```

**TARGET : TRAVERSE, TE100**

**Note:** VC11 command is available only on TRAVERSE.

---

**Response Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
   <OCRTM>,[].[CONDDESCR],]
;```

---
Chapter 2  TL1 Commands
Alarm and Condition Retrieval

1. SID is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs in the VT path section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. CRDTYPE is the card type. Valid values are listed in Appendix D—“Card Type Coding.”
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
6. CONDTYPE indicates the condition types of the entity. Values are shown in the VT section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event. Format is mm-dd.
9. OCRTM identifies the time of day that the triggering event occurred. Format is hh-mm.
10. CONDDESCRIPT provides the detailed description of the trouble

TARGET: TRAVERSE, TE100

Note: VC11 command is available only on TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-ALM-ETH**

**General Description**

This command retrieves and reports the specified current alarm conditions on the requested Ethernet facility. Existing conditions satisfying all input parameters are reported in the message response.

**Command Syntax**

RTRV-ALM-ETH:<tid>:[<AID>]:[<ctag>][::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,]];
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the Ethernet section. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character-notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR – not reported
   If not specified, all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified, all will be assumed.

Example:
RTRV-ALM-ETH:PETALUMA:FAC-1-1:123::,,,,;
TARGET : TRAVERSE, TE100

Response Syntax

```
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDA>],
[<OCRTM>],[[:CONDDESCR]],"
```

;
Chapter 2  TL1 Commands
Alarm and Condition Retrieval

1. SID is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the Ethernet section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates type of AID. Valid value is ETH.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   CR – critical alarm
   MJ – major alarm
   MN – minor alarm
   NR Not reported. Information is kept in NE.
6. CONDTYPE is the condition types of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   SA – service affecting
   NSA – non service affecting
8. OCRDAT identifies the date of the triggering event
9. OCRTM identifies the time of day that the triggering event occurred
10. CONDDESC Rich provides the detailed description of the trouble

TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-ALM-EOS

General Description
This command retrieves and reports the specified current alarm conditions on the requested EOS CTP entity. Existing conditions satisfying all input parameters are reported in the message response.

Command Syntax

RTRV-ALM-EOS:<tid>[<AID>]:<ctag>[:,<NTFCNCDE>],<CONDTYPE>, [<SRVEFF>],...];
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for EOS CTP AIDs are shown in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. NTFCNDCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR – not reported
   If not specified, all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in Ethernet section of Appendix E—“CONDTYPE, CONDE FF, and NTFCNDCDE Assignment.” If not specified, all will be assumed.
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified, all will be assumed.

Example:
RTRV-ALM-EOS:PETALUMA:FAC-1-1:123::,,,,;
TARGET TRAVERSE, TE100

Response Syntax

```plaintext
^^SID^YY-MM-DD^HH:MM:SS
M^CTAG^COMPLD
^^<AID>,<AIDTYPE>,<NTFCNDCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAUX>],
   [<OCRDAUX>]?,[<CONDDESCR>]]
```

RTRV-ALM-SFP

**General Description**

This command retrieves and reports the specified current alarm conditions on the requested SFP entity. Existing conditions satisfying all input parameters are reported in the message response.

**Command Syntax**

```
RTRV-ALM-SFP:<tid>:[<AID>]:<ctag>[:<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][];
```
Response Syntax

`<tid>,<AID>,<AIDTYPE>,<NTFCNCD>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[:[CONDDESCR]],"``
### Chapter 2  TL1 Commands

#### Alarm and Condition Retrieval

**RTRV-COND-ALL**

**General Description**

This command command retrieves all current standing condition and alarm on the shelf.

**Command Syntax**

```
RTRV-COND-ALL:<tid>::<ctag>
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. **TYPEREQ** is type of condition or state to be retrieved. Value is any standing condition in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

**Example:**

```
RTRV-COND-ALL:PETALUMA::123::;
```

**TARGET**: TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.
Response Syntax

```plaintext
^{^<SID YY-MM-DD hh:mm:ss
M^{^<CTAG COMPLD
^{^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
         <OCRTM>,[{CONDDESCR}]
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs under the VT1.5 section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates the type of entity.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   CR - critical alarm
   MJ - major alarm
   MN - minor alarm
   NA - not alarmed
   NR - not reported
6. CONDTYPE is the condition type of the entity. Values are shown in the VT1.5 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   SA - Service-affecting condition, immediate action required.
   NSA - Non service-affecting condition.
8. OCRDAT date which the event occurred mm-dd.
9. OCRTM time that the event occurred hh-mm-ss.
10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:
```
RTRV-COND-ALL:PETALUMA::123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
   "VT1-1-1-1-1,VT1OC3:CR,LOP-V,SA,,,,,"LOSS OF POINTER":""
```
```
TARGET : TRAVERSE, TE100
```

See response format in _Ref354674 for error case response.

**RTRV-COND-SYNC**

**General Description**

This command retrieves the current condition of the selected clock type alarm indicators.
Command Syntax

RTRV-COND-SYNC:<tid>:[<AID>]:<ctag>[:<TYPEREQ>][,...]];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are:
   - TMGSYS
   - TMGOUT-A
   - TMGOUT-B
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. TYPEREQ is type of condition or state to be retrieved. Valid values are:
   - MANWKSWPR
   - FRCDWKSWPR
   - LOCKOUTOFPR
   - OSCILLATOR
   - SYNC
   - ALLREFFLT
   - If not specified, all will be assumed.

TARGET : TRAVERSE, TE100

Response Syntax

```plaintext
<<<SID"yy-mm-dd"hh:mm:ss
M"CTAG COMPLD
<<<"<AID>,<AIDTYPE>:<ntfencde>,<condtype>,<srveff>,<OCRDAT>,<OCRTM>:, [:<conddescr>],[<AIDDET>]"
```

;
1. SID is tid described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **SONET Path AIDs** in the SYNC section.
   - TMGSYS
   - TMGOUT-A
   - TMGOUT-A
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE indicates entity type. Valid value is SYNC.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NA – not alarmed
   - NR – not reported
6. CONDTYPE is the condition types of the entity. Values are shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. OCRDAT date which the event occurred yy-mm-dd
9. OCRTM time which the event occurred hh-mm-ss
10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.
11. [AIDDDET] provides identifier of specific timing source having trouble. If AID = TMGSYS then AIDDDET = facility AIDs or BITS-(1, 2). If AID = TMGSYS then AIDDDET = facility AIDs.
12. [SSM] is sync message received.

Example:
RTRV-COND-SYNC:PETALUMA:TMGSYS:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
"TMGSYS,SYNC:MN,OSCILLATOR,NSA,02-05-27,14-10-27,""Oscillator off normal range"",BITS-A"
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.
RTRV-COND-EQPT

General Description

This command retrieves and reports the requested current conditions on the equipment(s). This command is a superset of the RTRV-ALM-EQPT command and returns all condition satisfying all input parameters regardless of notification code.

Command Syntax

<table>
<thead>
<tr>
<th>RTRV-COND-EQPT: &lt;tid&gt;:[&lt;AID&gt;]:&lt;ctag&gt;[::[&lt;TYPEREQ&gt;]][,...]];</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. tid is target identifier described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID)</strong>.</td>
</tr>
<tr>
<td>2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Access Identifier (AID)</strong>. Valid values are listed in Appendix C—“Access Identifiers” in the Equipment AIDs section. If not specified, all will be assumed.</td>
</tr>
<tr>
<td>3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Correlation Tag (CTAG)</strong>.</td>
</tr>
<tr>
<td>4. TYPEREQ is type of condition or state to be retrieved. Value is any standing condition under EQPT section in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.” If not specified, all will be assumed.</td>
</tr>
</tbody>
</table>

Example:

RTRV-COND-EQPT: KICKALUMA:SLOT-1:123;

Response Syntax

```plaintext
^^^^SID YY-MM-DD hh:mm:ss
M"CTAG COMPLD
^^^^"<AID>,<AIDTYPE>,<NTFCNCD>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,
      <OCRTM>,[CONDDESCR]"
```

;
1. SID is tid described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Chapter 2—“TL1 Commands” in the Equipment AIDs section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE is entity type. Valid value is EQPT.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR - critical alarm
   - MJ - major alarm
   - MN - minor alarm
   - NA - not alarmed
   - NR - not reported
6. CONDTYPE is the condition types of the entity. Values are shown in the Equipment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. OCRDAT date which the event occurred yy-mm-dd
9. OCRTM time which the event occurred hh-mm-ss
10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:
RTRV-COND-EQPT:KICKALUMA:SLOT-1:123;;
    KICKALUMA 02-05-27 14:10:27
    M 123 COMPLD
    “SLOT-1,EQPT:CR,IMPROPRMVL,SA,,,,,"IMPROPER CARD REMOVAL",""
    
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-COND-BITS**

**General Description**
This command command retrieves the current standing condition or state of the DS1 BITS entity alarm indicators.

**Command Syntax**

```
RTRV-COND-BITS:<tid>:[<AID>]:<ctag>[::<TYPEREQ>][,,];
```
Chapter 2  TL1 Commands
Alarm and Condition Retrieval

1. tid is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are BITS-A and BITS-B. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. TYPEREQ is type of condition or state to be retrieved. Value is any standing condition in the DS1 BITS section in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:
RTRV-COND-BITS:PETALUMA:BITS-A:123::;
TARGET : TRAVERSE, TE100

Response Syntax

```
^^^SID YY-MM-DD hh:mm:ss
M^^CTAG COMPLD
^^^"<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
    [<OCRTM>],,[CONDDESCR]"
```

1. SID is tid described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are BITS-A and BITS-B.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates type of entity. Valid value is BITS.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NA – not alarmed
   - NR – not reported
6. CONDTYPE is the condition types of the entity. Values are shown in the DS1 BITS section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. OCRDAT date which the event occurred yy-mm-dd
9. OCRTM time which the event occurred hh-mm-ss
10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.
Example:
RTRV-COND-BITS:PETALUMA:BITS-A:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
“BITS-A,BITS:CR,LOS,SA,,,;”"LOSS OF SIGNAL;"
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-COND-{T1/E1}

General Description
This command retrieves the current standing condition or state of the DS1/E1 entity alarm indicators.

Command Syntax

RTRV-COND-{T1/E1}:<tid>:[<AID>]:<ctag>[::<TYPEREQ>][,,,"];

1. tid is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. TYPEREQ is the type of condition or state to be retrieved. Value is any standing condition in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:
RTRV-COND-T1:PETALUMA:FAC-1-1:123::;
RTRV-COND-E1:LONDON:FAC-5-1:123::;
TARGET : TRAVERSE, TE100

Response Syntax

^^^SID YY-MM-DD hh:mm:ss
^M^CTAG COMPLD
^MMMM< AID>,< AIDTYPE>,< NTFCNCDE>,< CONDTYPE>,< SRVEFF>,[< OCRDAT>],
[< OCRTM>],[:[CONDDESCR]]
;
1. SID is tid described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs.**
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE indicates the type of entity. Valid value is T1/E1.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR - Not reported. Information is kept in NE.
6. CONDTYPE is the condition types of the entity. Values are shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF: indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. OCARDAT: date which the event occurred yy-mm-dd
9. OCRTM :time which the event occurred hh-mm-ss
10. [CONDESCR] is <1…62 alphanumeric characters> Detailed text description of the trouble.

Example:
```
RTRV-COND-T1:PETALUMA:FAC-1-1:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
 "FAC-1-1,T1:CR,LOS,SA,,,,:"LOSS OF SIGNAL\""
```

TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-COND-{T3/EC1/E3}**

**General Description**

This command retrieves the current standing condition or state of the DS3 entity alarm indicators.

**Command Syntax**

```
RTRV-COND-{T3/EC1/E3}:<tid>:[<AID>]::<ctag>[:[<TYPEREQ>][[..]]);
```
1. tid is target identifier described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed Appendix C—“Access Identifiers,” **Facility AIDs**. If not specified, all will be assumed.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

4. TYPEREQ is the type of condition or state to be retrieved. Value is any standing condition in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD DE Assignment.” If not specified, all will be assumed.

Example:

```
RTRV-COND-T3:PETALUMA:FAC-1-1:123::;
RTRV-COND-EC1:PETALUMA:FAC-1-1:123::;
RTRV-COND-E3:LONDON:FAC-1-1:123::;
```

**TARGET : TRAVERSE, TE100**

**Note:** EC1 command is available only in TRAVERSE.

---

**Response Syntax**

```
^SID YY-MM-DD hh:mm:ss
M^CTAG COMPLD
^AID>,<AIDTYPE>:<NTFCNCD DE>,<CONDTYPE>,<SRVEFF>[,<OCR DAT>],
[<OCRTM>],[<CONDDESC R]"
;```

```
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See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-COND-T3TMX

General Description
This command retrieves the current standing condition or state of the T3TMX entity alarm indicators.

Command Syntax

RTRV-COND-T3TMX:<tid>:[<AID>]:<ctag>[:<TYPEREQ>][];
1. tid is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the T3TMX section. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. TYPEREQ is type of condition or state to be retrieved. Value is any standing condition in the TMX section in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:
RTRV-COND-T3TMX:PETALUMA:FAC-1-1:123::;

TARGET : TRAVERSE

Response Syntax

```
^^^SID YY-MM-DD hh:mm:ss
M^^CTAG COMPLD
^^[^<AID>],[<AIDTYPE>],[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],[<CONDDESCR>]
```

1. SID is tid described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the T3TMX section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates the type of entity. Valid value is T3TMX.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR - Not reported. Information is kept in NE.
6. CONDTYPE is the condition type of the entity. Values are shown in the T3TMX section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. OCルド date which the event occurred mm-dd
9. OCRTM time which the event occurred hh-mm-ss
10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.
RTRV-COND-TMXDS1

**General Description**

This command retrieves the current standing condition or state of the TMX subport entity alarm indicators.

**Command Syntax**

```
RTRV-COND-TMXDS1:<tid>:[<AID>]:<ctag>[::<TYPEREQ>][,,,,];
```

1. `tid` is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `AID` is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the TMXDS1 section. If not specified, all will be assumed.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `TYPEREQ` is type of condition or state to be retrieved. Value is any standing condition in the TMXDS1 section in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

**Example:**

```
RTRV-COND-TMXDS1:PETALUMA:DS1-1-1-1-1:123;
```

TARGET : TRAVERSE

See response format in Chapter 3—“Generic Output Response Format” for error case response.

```
RTRV-COND-TMXDS1

Example:
RTRV-COND-T3TMX:PETALUMA:FAC-1-1:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
"FAC-1-1,T3TMX:CR,LOS,SA,,,,:""LOSS OF SIGNAL;""
;
```

```
TARGET : TRAVERSE
```

```
^^^SID YY-MM-DD hh:mm:ss
M^^CTAG COMPLD
^^^"[<AID>],[<AIDTYPE>],[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],[<OCRDAT>],
[<OCRTM>],[:CONDDESCR]"
;```
### Alarm and Condition Retrieval

#### General Description

This command retrieves the current standing condition or state of the OC-n/STM-n entity alarm indicators.

#### Command Syntax

```plaintext
RTRV-COND-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}:<tid>[:<AID>][:<ctag>[:<TYPEREQ>][,,,[];]
```

1. **SID** is tid described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the TMXDS1 section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **AIDTYPE** indicates the type of entity. Valid value is TMXDS1.
5. **NTFCNCDE** is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR - Not reported. Information is kept in NE.
6. **CONDTYPE** is the condition type of the entity. Values are shown in the TMXDS1 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. **OCRDAT** date which the event occurred mm-dd
9. **OCRTM** time which the event occurred hh-mm-ss
10. **CONDDESCR** is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:

```plaintext
RTRV-COND-TMXDS1:PETALUMA:DS1-1-1-1:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
"FAC-1-1,TMXDS1:CR,LOS,SA,,,,,:"LOSS OF SIGNAL""
```

```
TARGET : TRAVERSE
```

See response format in Chapter 3—“Generic Output Response Format” for error case response.
1. tid is target identifier described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs**. If not specified, all will be assumed.

3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

4. TYPEREQ is the type of condition or state to be retrieved. Value is any standing condition in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

Example:

RTRV-COND-OC3:PETALUMA:FAC-1-1:123::;
RTRV-COND-STM4:LONDON:FAC-1-1:123::;

**TARGET : TRAVERSE, TE100**

**Note:** OC192 and STM64 commands are applicable only for TRAVERSE.

---

**Response Syntax**

```
***SID YY-MM-DD hh:mm:ss
M"CTAG COMPLD
***"<AID>,<AIDTYPE >:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
[<OCRTM>],[<CONDDESC>]
```

;
General Description
This command retrieves the current standing condition or state of the STS or VC3/4 level path alarm indicators.

Command Syntax

RTRV-COND-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}

Example:

RTRV-COND-OC3:PETALUMA:FAC-1-1:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
   "FAC-1-1, OC3:CR,LOS,SA,,,:"LOSS OF SIGNAL;"
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-COND-{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}
1. tid is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed in Appendix C—“Access Identifiers,” **SONET Path AIDs**. If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
4. TYPEREQ is the type of condition or state to be retrieved. Value is any condition in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.” If not specified, all will be assumed.

**Example:**
```
RTRV-COND-STS1:PETALUMA:STS-1-1-1:123::;
RTRV-COND-VC4:LONDON:VC4-1-1-1:123::;
```

**TARGET : TRAVERSE, TE100**

**Note:** STS48c and VC4-16c commands are applicable only for TRAVERSE.

**Response Syntax**
```
^^^SID YY-MM-DD hh:mm:ss
M^CTAG COMPLD
^^^^<AID>,<AIDTYPE>,<NTFCNCD>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
    [<OCRTM>],[<CONDDESCR>]
```

1. SID is tid as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid value are listed in Appendix C—“Access Identifiers,” SONET Path AIDs.

3. tag is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

4. AIDTYPE indicates type of entity.

5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR - Not reported. Information is kept in NE.

6. CONDTYPE is the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”

7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.

8. OCARDAT date which the event occurred yy-mm-dd

9. OCRTM time which the event occurred hh-mm-ss

10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:
RTRV-COND-STS1:PETALUMA:STS-1-1-1:123::;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
"STS-1-1-1,STS1:CR,LOP-P,SA,,,,:"LOSS OF POINTER,""
;

Note: STS48c and VC4-16c commands are applicable only for TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-COND-{VT1/VC11/VC12}

General Description
This command retrieves the current standing condition or state of the VT1/VC11/VC12 path alarm indicators.

Command Syntax

RTRV-COND-{VT1/VC11/VC12}::<tid>::::<AID>::::<ctag>::::<TYPEREQ>::;
1. tid is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid value are listed in Appendix C—“Access Identifiers,” **SONET Path AIDs.** If not specified, all will be assumed.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

4. TYPEREQ is the type of condition or state to be retrieved. Value is any standing condition in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

**Example:**

RTRV-COND-VT1:PETALUMA:VT-1-1-1-7-1:123::;
RTRV-COND-VC11:LONSON:VC11-1-1-1-7-1:123::;
RTRV-COND-VC12:LONDON:VC12-1-1-1-7-1:123::;

**TARGET : TRAVERSE, TE100**

**Note:** VC11 commands is applicable only for TRAVERSE.

---

**Response Syntax**

```text
^\^\^<SID> YY-MM-DD hh:mm:ss
*\^\^CTAG COMPLD
^\^\^\^\^\^\^\^<AID>,<AIDTYPE>,<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,<CONDDESCR>
```

1. SID is tid as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid value are listed in Appendix C—“Access Identifiers,” **SONET Path AIDs.**
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE indicates type of access identifier.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
6. CONDTYPE is the condition type of the entity. Values are shown in the VT section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
8. OCRDAT date which the event occurred yy-mm-dd
9. OCRTM time which the event occurred hh-mm-ss
10. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.
**RTRV-COND-ETH**

**General Description**
This command retrieves the current standing condition or state of the Ethernet entity alarm indicators.

**Command Syntax**

```
RTRV-COND-ETH:<tid>[:<AID>]:<ctag>::[<TYPEREQ>][,,,:];
```

1. `tid` is target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `AID` is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the Ethernet section. If not specified, all will be assumed.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. `TYPEREQ` is type of condition or state to be retrieved. Value is any standing condition in the Ethernet section in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.

**Response Syntax**

```
^^SID YY-MM-DD hh:mm:ss
M^^CTAG COMPLD
^^^^[^<AID>],[^<AIDTYPE>],[^NTFCNCDE],[^CONDTYPE],[^SRVEFF],[^<OCRDAT>],
[^<OCRTM>],[^CONDDESCR]
```

Example:

```
RTRV-COND-ETH:PETALUMA:FAC-1-1:123::;
TARGET : TRAVERSE, TE100
```

**Note:** NOTE VC11 commands is applicable only for TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format” for error case response.
Chapter 2  TL1 Commands
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1. SID is tid described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the the Ethernet section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates the type of entity. Valid value is ETH.
5. NTFCNCDCE is a 2-character-notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR - Not reported. Information is kept in NE.
6. Condtype is the condition types of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDCE Assignment.”
7. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   - SA -Service-affecting condition, immediate action required.
   - NSA -Non service-affecting condition.
8. OCRDAT date which the event occurred mm-dd
9. OCRTM time which the event occurred hh-mm-ss
10. [CONDDESC] is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:
RTRV-COND-ETH:PETALUMA:FAC-1-1:123;;
   PETALUMA 02-05-27 14:10:27
M 123 COMPLD
   “FAC-1-1, ETH:CR,LOS,SA,....;"LOSS OF SIGNAL;"
;
TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

RTRV-COND-EOS

General Description
This command retrieves the current standing condition or state of the requested EOS CTP entity alarm indicators.

Command Syntax

RTRV-COND-EOS::<tid>::[<AID>];::<ctag>::[<NTFCNCDCE>],[<CONDTYPE>],[<SRVEFF>];
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Access Identifier (AID). Valid values for EOS CTP AIDs are shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Correlation Tag (CTAG).
4. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR – not reported
   If not specified all will be assumed.
5. CONDTYPE is a single type of alarm condition type being reported. Value is shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.” If not specified, all will be assumed.
6. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
   If not specified, all will be assumed.

Example:
```
RTRV-COND-EOS:PETALUMA:FAC-1-1:123::,,,,;
```
```
TARGET : TRAVERSE, TE100
```

Response Syntax
```
^^^SID^YY-MM-DD^HH:MM:SS
M^^CTAG^COMPLD
^^^^<AID>,<AIDTYPE>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
[<OCRTM>],,[:[CONDDESCR]],]
;```
```
1. SID is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values for EOS CTP AIDs are shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates type of AID. Valid value is ETH.
5. NTFCNCD is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR Not reported. Information is kept in NE.
6. CONDTYPE indicates the condition type of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event
9. OCRTM identifies the time of day that the triggering event occurred
10. CONDESCR provides the detailed description of the trouble

RTRV-COND-SFP:

TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

**RTRV-COND-SFP**

**General Description**

This command retrieves the current standing condition or state of the requested SP entity alarm indicators.

**Command Syntax**

```
RTRV-COND-SFP:<tid>:[<AID>]:<ctag>[:[,<NTFCNCD>],[<CONDTYPE>],[<SRVEFF>]]];
```
<table>
<thead>
<tr>
<th>Response Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example:</strong></td>
</tr>
<tr>
<td>RTRV-COND-SFP:PETALUMA:FAC-1-1:123:,,,,;</td>
</tr>
<tr>
<td>TARGET : TE100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>tid</th>
<th>AID</th>
<th>ctag</th>
<th>NTFCNCDE</th>
<th>CONDTYPE</th>
<th>SRVEFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>is target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID)</strong>.</td>
<td>is access identifier as described in Chapter 1—“TL1 Overview,” <strong>Access Identifier (AID)</strong>. Valid values for SFP AIDs are shown in Appendix C—“Access Identifiers,” <strong>Facility AIDs</strong> in the SFP AID section. If not specified, all will be assumed.</td>
<td>is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks</strong>, <strong>Correlation Tag (CTAG)</strong>.</td>
<td>is a 2-character-notification code associated with a single alarm. Valid values are: CR – critical alarm MJ – major alarm MN – minor alarm NR – not reported If not specified, all will be assumed.</td>
<td>is a single type of alarm condition type being reported. Value is shown in the Ethernet section of Appendix E—“CONDTYPE, CONDE FF, and NTFCNCDE Assignment.” If not specified, all will be assumed.</td>
<td>identifies the effect on service caused by this alarm condition. Valid values are: SA – service affecting NSA – non service affecting If not specified, all will be assumed.</td>
</tr>
</tbody>
</table>
1. SID is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values for SFP AIDs are shown in Appendix C—“Access Identifiers,” **Facility AIDs** in the SFP AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE indicates the type of AID. Valid value is ETH.
5. NTFCNCDE is a 2-character notification code associated with a single alarm. Valid values are:
   - CR – critical alarm
   - MJ – major alarm
   - MN – minor alarm
   - NR – Not reported. Information is kept in NE.
6. CONDTYPE indicates the condition types of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
7. SRVEFF identifies the effect on service caused by this alarm condition. Valid values are:
   - SA – service affecting
   - NSA – non service affecting
8. OCRDAT identifies the date of the triggering event
9. OCRTM identifies the time of day that the triggering event occurred
10. CONDDESCR provides the detailed description of the trouble

**TARGET : TE100**

See response format in Chapter 3—“Generic Output Response Format” for error case response.
### Alarm Reporting

#### REPT ALM COM

**General Description**
This automatic message is system-generated to report the current alarm condition of the common equipment/NE.

**Message Syntax**
```
^^SID"YY-MM-DD'HH:MM:SS
almcde"atag"REPT"ALM"COM
^^COM:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,
   [:<conddescr>]"
; 
```

1. **almcde** is a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   * **C** = Critical.
   * **M** = for Major alarm.
   * **s** = for Minor alarm.
   * **A** = non alarm message
2. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   * **CR** = Critical alarm.
   * **MJ** = Major alarm
   * **MN** = Minor alarm
   * **CL** = Cleared alarm.
3. **CONDTYPE** indicates the condition type of the entity. Values are shown in the Environment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
4. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   * **SA** - Service-affecting condition, immediate action required.
   * **NSA** - Non service-affecting condition.
5. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared in mm-dd format.
6. **OCRTM** Occurrence Time. Indicates the time the alarm condition occurred or was cleared in hh-mm-ss format.
7. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.

**TARGET** : TRAVERSE, TE100

---

#### REPT ALM ENV

**General Description**
This automatic message is generated to report an alarm associated with an environmental alarm input. Environmental (ENV) alarm status changes are reported with this autonomous message. The ENV alarm conditions can be retrieved at any time using the RTRV-ALM-ENV command.
Message Syntax

```plaintext
^^^SID^YY-MM-DD^HH:MM:SS
almcde^^ATAG^REPT^ALM ENV
^^^^<AID>:<NTFCNCDE>,<ALMTYPE>,<OCRDAT>,<OCRTM>[,<ALMMSG>]"
```

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” ENV AIDs (Environment).
2. almcde is a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are: :
   * C = Critical.
   * ** = for Major alarm.
   * * = for Minor alarm.
   A = non alarm message
3. NTFCNCDE is the two-character notification code associated with a signal alarm condition. Valid values are:
   CR = Critical alarm.
   MJ = Major alarm
   MN = Minor alarm
   CL = Cleared alarm.
4. ALMTYPE : up to a 10-character string. Value is an environmental alarm type defined by the customer, such as BATTERY or HITEMP. Valid alarm types are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. OCRDAT Indicates the date on which the alarm condition occurred or was cleared in mm-dd format.
6. OCRTM Occurrence Time. Indicates the time the alarm condition occurred or was cleared in hh-mm-ss format.
7. ALMMSG is an alarm message. This is a text string providing a short description of the environment trouble. (This parameter is also defined by the customer.)

Example:
The following example message indicates a customer-defined alarm (door-open) has been detected on ENV-IN-1.

```
PETALUMA 02-05-05 14:30:00
* 001 REPT ALM ENV
   "ENV-IN-1:MN,OPENDR,05-05,12-30-00,"OPEN DOOR:"
```

TARGET: TRAVERSE, TE100
**REPT ALM SYNC**

**General Description**

This automatic message is generated to report a timing alarm (SYNC). The SYNC alarm conditions can be retrieved at any time using the `RTRV-ALM-SYNC` or `RTRV-COND-SYNC` commands.

**Message Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
almcde^^ATAG^REPT^ALM^SYNC
^^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,
   :[<conddescr>]"
```

1. **almcde**: a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   * C = Critical.
   * ** = for Major alarm.
   * * = for Minor alarm.
   A = non alarm message
2. **AID** is the access identifier for timing. Valid values are:
   - **TMGSYS** = system timing
   - **TMGOUT-A, 2** = primary and secondary timing output subsystems respectively
3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   - **CR** = Critical alarm.
   - **MJ** = Major alarm
   - **MN** = Minor alarm
   - **CL** = Cleared alarm
4. **CONDTYPE** indicates the condition type of the entity. Values are listed in the SYNC section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - **SA** - Service-affecting condition, immediate action required.
   - **NSA** - Non service-affecting condition.
6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared in mm-dd format.
7. **OCRTM** Occurrence Time. Indicates the time the alarm condition occurred or was cleared in hh-mm-ss format.
8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.
### REPT ALM EQPT

#### General Description

This system-generated automatic message reports the current alarms of the specified equipment entity.

#### Message Syntax

```
^^^SID^YY-MM-DD^HH:MM:SS
almcde^^atag^REPT^ALM^EQPT
^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,
     :[<conddescr>]"
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers” in the Equipment AIDs section.
2. **almcde**: a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   - *C* = Critical
   - ** = for Major alarm
   - * = for Minor alarm.
   - A = non alarm message
3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   - CR = Critical alarm
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm
4. **CONDTYPE** indicates the condition types of the entity. Values are listed in the Equipment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
**REPT ALM BITS**

**General Description**

A system-generated automatic message to report the current alarms of the specified BITS facility.

**Message Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
almcde="atag"REPT^ALM^BITS
^^^"AID"^<NTFCNCDE>^<CONDTYPE>^<SRVEFF>^<OCRDAT>^<OCRTM>^,
  :[<conddescr>]"
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are BITS-A and BITS-B.

2. **almcde** is a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   * C = Critical.
   ** = for Major alarm.
   * = for Minor alarm.
   A = non alarm message; for use with NTFCNCDE = CL

3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   CR = Critical alarm.
   MJ = Major alarm
   MN = Minor alarm
   CL = Cleared alarm.

4. **CONDTYPE** indicates the condition types of the entity. Values are listed in the DS1 BITS section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”

6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

7. **OCRTM** Occurrence Time. Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.

8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:

```
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM EQPT
"SLOT-1:CR,IMPROPRMVL,SA,05-05,14-30-00,:,"Improper card removal''''
; TARGET : TRAVERSE, TE100
```
5. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   SA - Service-affecting condition, immediate action required.
   NSA - Non service-affecting condition.
6. OCRDAT Indicates the date on which the alarm condition occurred or was cleared. Format is
   mm-dd.
7. OCRTM Occurrence Time. Indicates the time that the alarm condition occurred or was cleared.
   Format is hh-mm-ss.
8. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:
```
^^^PETALUMA'02-05-05'14:30:00
** 001 REPT ALM BITS
   "BITS-A-CR,LOS,SA,05-05,14-30-00,,:""LOSS OF SIGNAL:""
```
TARGET : TRAVERSE, TE100
### Alarm Reporting

**REPT ALM \{T3/EC1/E3\}**

**General Description**

A system-generated automatic message to report the current alarms of the specified DS3/EC1/E3 facility.

---

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AID is the access identifier as described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Access Identifier (AID).</strong> Valid values are listed in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong></td>
</tr>
</tbody>
</table>
| 2. | almcode: a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:  
*  
** = for Major alarm.  
* = for Minor alarm.  
A = non alarm message; for use with NTFCNCD = CL |
| 3. | NTFCNCD = the two-character notification code associated with a signal alarm condition. Valid values are:  
CR = Critical alarm.  
MJ = Major alarm  
MN = Minor alarm  
CL = Cleared alarm. |
| 4. | CONDTYPE indicates the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.” |
| 5. | SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:  
SA Service-affecting condition, immediate action required.  
NSA Non service-affecting condition. |
| 6. | OCRDAT Indicates the date on which the alarm condition occurred or was cleared. In mm-dd format. |
| 7. | OCRTM Occurrence Time. Indicates the time the alarm condition occurred or was cleared. In hh-mm-ss format. |
| 8. | [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble. |

Example:

```
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM T1
"FAC-1-1:CR,LOS,SA,05-05,14-30-00,:,"LOSS OF SIGNAL,""
; 
```

TARGET : TRAVERSE, TE100
Message Syntax

```plaintext
^^^SID^YY-MM-DD^HH:MM:SS
almcde^^atag^REPT^ALM^\{T3/EC1/E3\}

```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs**.

2. **almcde** is a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   * C = Critical.
   * ** = for Major alarm.
   * * = for Minor alarm.
   * A = non alarm message

3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   * CR = Critical alarm.
   * MJ = Major alarm
   * MN = Minor alarm
   * CL = Cleared alarm.

4. **CONDTYPE** is the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”

5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   * SA - Service-affecting condition, immediate action required.
   * NSA - Non service-affecting condition.

6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

7. **OCRTM** Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.

8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:

```plaintext
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM T3
"FAC-1-1:CR,LOS,SA,05-05,14-30-00,,:"LOSS OF SIGNAL\"");
```

**TARGET** : TRAVERSE, TE100

**Note**: EC1 command is applicable only for TRAVERSE.
**REPT ALM T3TMX**

**General Description**

This system-generated automatic message reports the current alarms of the specified T3TMX facility.

**Message Syntax**

```
^^^sid^yy-mm-dd^hh:mm:ss
almcde="atag"REPT"ALM"T3TMX
^^^<AID>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,
    [:[<CONDDESCR>:],"]
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the T3TMX section.
2. **almcde:** a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   * C = Critical.
   * ** = for Major alarm.
   * * = for Minor alarm.
   A = non alarm message
3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   CR = Critical alarm.
   MJ = Major alarm
   MN = Minor alarm
   CL = Cleared alarm.
4. **CONDTYPE** indicates the condition type of the entity. Values are shown in T3TMX section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   SA - Service-affecting condition, immediate action required.
   NSA - Non service-affecting condition.
6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
7. **OCRTM** Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.

**Example:**

```
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM T3TMX
"FAC-1-1:CR,LOS,SA,05-05,14-30-00,,:""LOSS OF SIGNAL:"
```

;
TARGET : TRAVERSE

REPT ALM TMXDS1

General Description
A system-generated automatic message to report the current alarms of the specified TMX subport facility.

Message Syntax

```plaintext
^^^sid^yy-mm-dd^hh:mm:ss
almcde^^atag^REPT^ALM^TMXDS1
^^^^<AID>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,,
    [:[<CONDDESCR>],]
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” *Staging Parameter Blocks, Access Identifier (AID).* Valid values are listed in Appendix C—“Access Identifiers,” *Facility AIDs* in the TMXDS1 section.
2. **almcde** is a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   - *C = Critical.*
   - ** = for Major alarm.
   - * = for Minor alarm.
   - A = non alarm message
3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   - CR = Critical alarm.
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm
4. **CONDTYPE** is the condition types of the entity. Values are listed in TMXDS1 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
7. **OCRTM** Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.
Example:

```
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM TMXDS1
"FAC-1-1:CR,LOS,SA,05-05,14-30-00,,:"LOSS OF SIGNAL\""
;
TARGET : TRAVERSE
```

**REPT ALM {OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}**

**General Description**

A system-generated automatic message to report the current alarms of the specified OC-n or STM-n entity.

**Message Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
almcde^^atag^REPT^ALM^{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}
^^^"<AID>:<NTFCNCD>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,<CONDDESCR>\""
[]
;
```
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AID is the access identifier as described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Access Identifier (AID).</strong> Valid values are listed in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong></td>
</tr>
<tr>
<td>2.</td>
<td><strong>almcde:</strong> a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>*C = Critical.</td>
</tr>
<tr>
<td></td>
<td>** = for Major alarm.</td>
</tr>
<tr>
<td></td>
<td>* = for Minor alarm.</td>
</tr>
<tr>
<td></td>
<td>A = non alarm message</td>
</tr>
<tr>
<td>3.</td>
<td><strong>NTFCNCD</strong>E is the two-character notification code associated with a signal alarm condition. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>CR = Critical alarm.</td>
</tr>
<tr>
<td></td>
<td>MJ = Major alarm</td>
</tr>
<tr>
<td></td>
<td>MN = Minor alarm</td>
</tr>
<tr>
<td></td>
<td>CL = Cleared alarm.</td>
</tr>
<tr>
<td>4.</td>
<td><strong>CONDTYPE</strong> is the condition type of the entity. Values are listed in OC3/12/48/192 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”</td>
</tr>
<tr>
<td>5.</td>
<td><strong>SRVEFF</strong> indicates the effect on service caused by the alarm condition. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>SA - Service-affecting condition, immediate action required.</td>
</tr>
<tr>
<td></td>
<td>NSA - Non service-affecting condition.</td>
</tr>
<tr>
<td>6.</td>
<td><strong>OCRDAT</strong> Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.</td>
</tr>
<tr>
<td>7.</td>
<td><strong>OCRTM</strong> Occurrence Time. Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.</td>
</tr>
<tr>
<td>8.</td>
<td><strong>[CONDDESCR]</strong> is &lt;1...62 alphanumeric characters&gt; Detailed text description of the trouble.</td>
</tr>
</tbody>
</table>

Example:

```plaintext
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM OC3
"FAC-1-1:CR,LOS,SA,05-05,14-30-00,,:"LOSS OF SIGNAL","
; 
```

**TARGET:** TRAVERSE, TE100

**Note:** OC192 and STM64 commands are applicable only for TRAVERSE.

**REPT ALM {STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}**

**General Description**

This system-generated automatic message reports the current alarms of the specified STS or VC3/VC4 level path facility.
### Message Syntax

```
^<SID>^YY-MM-DD^HH:MM:SS
almcde^^atag^REPT^ALM^{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C}
^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,
[:[<CONDDESCR>],]
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **SONET Path AIDs.**
2. **almcde** : a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   - *C* = Critical alarm
   - ** = for Major alarm
   - * = for Minor alarm
   - A = non alarm message
3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition. Valid values are:
   - CR = Critical alarm
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm
4. **CONDTYPE** is the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.
6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
7. **OCRTM** Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.

**Example:**
```
^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM STS1
"STS-1-1-1:CR,LOP-PSA,05-05,14-30-00:,":"LOSS OF POINTER",""
```

**TARGET : TRAVERSE, TE100**

**Note:** STS48c and VC4-16c commands are applicable only for TRAVERSE.
**REPT ALM (VT1/VC11/VC12)**

**General Description**

This system-generated automatic message reports the current alarms of the specified VT1/VC11/VC12 path facility.

**Message Syntax**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>^^^sid^yy-mm-dd^hh:mm:ss</strong></td>
<td>- AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs.</td>
</tr>
</tbody>
</table>
| **almcde**:tag:REPT^ALM^{VT1/VC11/VC12} | - almcde is a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:  
  *C = Critical  
  ** = for Major alarm  
  * = for Minor alarm  
  A = non alarm message |
| **^^^<AID>:<NTFCNCDCE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,[:<[CONDDESCR>]],” | - NTFCNCDCE is the two-character notification code associated with a signal alarm condition. Valid values are:  
  CR = Critical alarm  
  MJ = Major alarm  
  MN = Minor alarm  
  CL = Cleared alarm |
| 1. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:  
  SA - Service-affecting condition, immediate action required.  
  NSA - Non service-affecting condition. | 5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:  
  SA - Service-affecting condition, immediate action required.  
  NSA - Non service-affecting condition. |
| 2. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd. | 6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd. |
| 3. **OCRTM** Occurrence Time. Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss. | 7. **OCRTM** Occurrence Time. Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss. |
| 4. **CONDDESCR** is <1...62 alphanumeric characters> Detailed text description of the trouble. | 8. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble. |

**Example:**

```
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM VT1
  "FAC-2-1:CR,LOP-V,SA,05-05,14-30-00,,:"LOSS OF POINTER;"
```


### REPT ALM ETH

#### General Description

This system-generated automatic message reports the current alarms of the specified Ethernet facility.

#### Message Syntax

```plaintext
^^^SID^YY-MM-DD^HH:MM:SS
almcde^"atag"^REPT^"ALM"^ETH
^^^"<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,",
    [:[<CONDDESCR>]],"
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the Ethernet section.

2. **almcde** is a one- to two-character Alarm code indicating the severity of the automatic message.
   Valid values are:
   - *C = Critical
   - ** = for Major alarm
   - * = for Minor alarm
   - A = non alarm message

3. **NTFCNCDE** is the two-character notification code associated with a signal alarm condition.
   Valid values are:
   - CR = Critical alarm.
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm

4. **CONDTYPE** indicates the condition type of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”

5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.

6. **OCRDAT** Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

7. **OCRTM** Occurrence Time. Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.

8. **[CONDDESCR]** is <1...62 alphanumeric characters> Detailed text description of the trouble.
**REPT ALM EOS**

**General Description**
This system-generated automatic message reports the current alarms of the specified EOS CTP entity.

**Message Syntax**

```
\^\^\^\$\^\^\^\^\^\^\^\$PETALUMA^02-05-05^14:30:00
** 001 REPT ALM ETH
“FAC-1-1:CR,LOS,SA,05-05,14-30-00,,;"LOSS OF SIGNAL;"
;
TARGET : TRAVERSE, TE100
```

### REPT ALM EOS

1. **AID**: is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” EOS CTP AIDs.
2. **almcde**: a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   - *C* = Critical.
   - ** = for Major alarm.
   - * = for Minor alarm.
   - A = non alarm message
3. **NTFCNCDE**: is the two-character notification code associated with a signal alarm condition. Valid values are:
   - CR = Critical alarm.
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm.
4. **CONDTYPE**: indicates the condition type of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
5. **SRVEFF** indicates the effect on service caused by the alarm condition. Valid values are:
   - SA - Service-affecting condition, immediate action required.
   - NSA - Non service-affecting condition.

6. **OCRDAT** (Occurrence Date) Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

7. **OCRTM** (Occurrence Time) Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.

8. **[CONDDESCR]** is <1...62 alphanumeric characters>. Detailed text description of the trouble.

Example:
```
^^^PETALUMA^02-05-05^14:30:00
** 001 REPT ALM EOS
"EOS-1-1:CR,LOM-P,SA,05-05,14-30-00,,:"Loss of multiframe synchronization - STS\""
;
TARGET : TRAVERSE, TE100
```

### REPT ALM SFP

**General Description**

This automatic message is system-generated to report the current alarms of the specified SFP entity.

**Message Syntax**

```
^^^SID^YY-MM-DD^HH:MM:SS
almcde^^atag^REPT^ALM^SFP
^^^"<AID>:<NTFCNDCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,<CONDDESCR>\"
;```

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the SFP section.

2. almcd: a one- to two-character Alarm code indicating the severity of the automatic message. Valid values are:
   *C = Critical.
   ** = for Major alarm.
   * = for Minor alarm.
   A = non alarm message

3. NTFCNCD: is the two-character notification code associated with a signal alarm condition. Valid values are:
   CR = Critical alarm.
   MJ = Major alarm
   MN = Minor alarm
   CL = Cleared alarm.

4. CONDTYPE is the condition type of the entity. Values are shown in the Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”

5. SRVEFF indicates the effect on service caused by the alarm condition. Valid values are:
   SA - Service-affecting condition, immediate action required.
   NSA - Non service-affecting condition.

6. OCRDAT: Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

7. OCRTM (Occurrence Time): Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.

8. [CONDDESCR] is <1...62 alphanumeric characters>; Detailed text description of the trouble.

Example:
```
^^^^PETALUMA'02-05-05'14:30:00
** 001 REPT ALM SFP
"OPT-1-1:CR,SFPRMV,SA,05-05,14-30-00,:"SFP Removed""
;
```

TARGET : TE100
Event Reporting

**REPT EVT COM**

**General Description**

This message is generated to report an event associated with common equipment element.

**Message Syntax**

```
^^^SID'yy-mm-dd'hh:mm:ss
A^^ATAG'REPT'EVT'COM
^^^"<AID>:<CONDTYPE>,<CONDEFF>,<ocrdat>,<ocrtm>,,,, ,:[<CONDDESCR>],"]"
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid value is COM.
2. **CONDTYPE** indicates the condition type of the entity. Values are shown in the COM section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. **CONDEFF** indicates the event effect on the conditions of the entity. Valid values are:
   - **CL**: Standing condition cleared.
   - **SC**: Standing condition raised.
   - **TC**: Transient condition.
4. **OCRDAT** (Occurrence Date.) Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. **OCRTM** (Occurrence Time.) Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. **[CONDDESCR]** is <1...62 alphanumeric characters>. Detailed text description of the trouble.

Example:

```
PETALUMA 02-05-05 14:30:00
A 123 REPT EVT COM
^^^"COM: LOGINFAIL,TC,02-05,14-30-00,,, ,:"login failed",","}
```

**TARGET : TRAVERSE, TE100**

**REPT EVT SYNC**

**General Description**

This system-generated automatic message reports a synchronization event. The table below shows parameter combinations for synchronization events.

<table>
<thead>
<tr>
<th>AID</th>
<th>CONDTYPE</th>
<th>CONDEFF</th>
<th>CONDDESCR</th>
<th>AIDDET</th>
<th>SSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMGSYS</td>
<td>MANWKSWPR</td>
<td>SC</td>
<td>Manual switch – revertive switching</td>
<td>OC-n and EC-1 Facility AIDs and BITS-(1,2)</td>
<td></td>
</tr>
</tbody>
</table>
### Event Reporting

**Message Syntax**

```
^^^SID^yy-mm-dd^hh:mm:ss
A^^ATAG^REPT^EVT^SYNC
^^^"<AID>:<CONDTYPE>,<SRVEFF>,<ocrdat>,<ocrtm>,,,,[<CONDDESCR>], [<AIDDET>],[<SSM>]"
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Sync AIDs.
2. **CONDTYPE** indicates the condition type of the entity. Values are shown in the equipment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. **CONDEFF** indicates the event effect on the conditions of the entity. Values are:
   - CL: Standing condition cleared.
   - SC: Standing condition raised.
   - TC: Transient condition.
4. **OCRDAT** (Occurrence Date.) Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. **OCRTM** (Occurrence Time.) Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. [CONDDESCR] is <1...62 alphanumeric characters>. Detailed text description of the trouble.
7. [AIDDET] provides identifier of specific timing source having trouble. If AID = TMGSYS then AIDDET = facility AIDs or BITS-(1,2). If AID = TMGOUT-A or TMGOUT-B then AIDDET = facility AIDs.
8. [SSM] is a synchronization message.

<table>
<thead>
<tr>
<th>AID</th>
<th>EVENT</th>
<th>MESSAGE</th>
<th>FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMGSYS TMGOUT-A,2</td>
<td>MANWKSWPR</td>
<td>TC</td>
<td>Manual switch – nonrevertive switching</td>
</tr>
<tr>
<td>TMGSYS TMGOUT-A,2</td>
<td>FRCDWKSWPR</td>
<td>SC</td>
<td>Forced switch</td>
</tr>
<tr>
<td>TMGSYS TMGOUT-A,2</td>
<td>LOCKOUTOFPR</td>
<td>SC</td>
<td>Lockout</td>
</tr>
<tr>
<td>OC-n and EC-1 Facility AIDs and BITS-(1,2)</td>
<td>SSM</td>
<td>TC</td>
<td>Sync status message changed</td>
</tr>
<tr>
<td>TMGSYS TMGOUT-A,2</td>
<td>SYNCSW</td>
<td>TC</td>
<td>Sync reference switched</td>
</tr>
</tbody>
</table>
## REPT EVT EQPT

### General Description

This system-generated automatic message reports an event associated with an equipment entity. The event may trigger an alarm (or event) or not, depending on the default attributes.

### Message Syntax

```plaintext
^^^SID^yy-mm-dd^hh:mm:ss
A^^ATAG^REPT^EVT EQPT
^^^<AID>:<CONDTYPE>,<CONDEFF>,<ocrdat>,<ocrtm>,,,,[,<TMPER>]
[:[<CONDDESCR>],]
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers” in the Equipment AIDs section.
2. **Condtype** indicates the condition types of the entity. Values are listed in the equipment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. **CONDEFF** indicates the event effect on the conditions of the entity. Valid values are:
   - CL Standing condition cleared.
   - SC Standing condition raised.
   - TC Transient condition.
4. **OCRDAT** (Occurrence Date.) Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. **OCRTM** (Occurrence Time.) Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. **[TMPER]** is the accumulation time period for performance monitoring information. Valid values are:
   - 1-DAY: 1-day time period.
   - 15-MIN: 15-minute time period.
7. **[CONDDESC]** is <1...62 alphanumeric characters>. Detailed text description of the trouble.
**REPT EVT BITS**

**General Description**

This system-generated automatic message reports an event associated with a BITS entity. The event may trigger an alarm (or event) or not, depending on the default attributes. These attributes can be modified using the `SET-ATTR-BITS` command.

**Message Syntax**

```
~~~SID`yy-mm-dd`hh:mm:ss
A`ATAG`REPT`EVT BITS
```

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```
Event Reporting

Example:

PETALUMA 02-05-05 14:30:00
A  123 REPT EVT BITS
“BITS-A:T-CVL,TC,05-05,14-30-00,,15-MIN:"THRESHOLD CROSSING";”,
;
TARGET : TRAVERSE, TE100

REPT EVT {T1/E1}

General Description

This automatic message is generated by the system to report an event associated with a T1/E1 entity. The event may trigger an alarm (or event) or not, depending on the default attributes. This message format is also used to report events associated with the DS1 line carrying the BITS.

Message Syntax

'^SID'yy-mm-dd'hh:mm:ss
A'^ATAG'Rept'EVT {T1/E1}
'^'^<AID>:<CONDTYPE>,<CONDEFF>,<ocrdat>,<ocrtm>>,[,<TMPER>]
]:<CONDDESCR>],”
;

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
2. Condtype indicates the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. CONDEFF indicates the event effect on the conditions of the entity. Valid values are:
   CL: Standing condition cleared.
   SC: Standing condition raised.
   TC: Transient condition.
4. OCRDAT (Occurrence Date.) Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. OCRTM (Occurrence Time.) Indicates the time the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. [TMPER] is the accumulation time period for performance monitoring information. Valid values are:
   1-DAY: 1-day time period.
   15-MIN: 15-minute time period.
7. [CONDDESCR] is <1...62 alphanumeric characters> Detailed text description of the trouble.
REPT EVT {T3/EC1/E3}

General Description

This automatic message is generated by the system to report an event associated with a T3/EC1/E3 entity. The event may trigger an alarm (or event) depending on the default attributes.

Message Syntax

Example:

PETALUMA 02-05-05 14:30:00
A 123 REPT EVT T1
“FAC-1-1:T-CVL, TC, 05-05, 14-30-00, 15-MIN:"THRESHOLD CROSSING;"
;
TARGET : TRAVERSE, TE100

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
2. CONDTYPE indicates the condition type of the entity. Values are shown in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. CONDEFF indicates the event effect on the conditions of the entity. Valid values are:
   CL: Standing condition cleared.
   SC: Standing condition raised.
   TC: Transient condition.
4. OCRDAT (Occurrence Date.) Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. OCRTM (Occurrence Time.) Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. TMPER is the accumulation time period for performance monitoring information. Valid values are:
   1-DAY: 1-day time period.
   15-MIN: 15-minute time period.
7. CONDDESCR is <1...62 alphanumeric characters>. Detailed text description of the trouble.
Example:

    PETALUMA 02-05-05 14:30:00
    A 123 REPT EVT T3
    "FAC-1-1: LPBKTERM,SC,05-05,14-29-00,",;"TERMINAL LOOPBACK",;"

TARGET : TRAVERSE, TE100

**Note:** EC1 command is applicable only for TRAVERSE.

**REP EVT T3TMX**

**General Description**

This system-generated automatic message reports an event associated with a T3TMX entity. The event may trigger an alarm (or event) depending on the default attributes.

**Message Syntax**

<table>
<thead>
<tr>
<th>^^SID^yy-mm-dd^hh:mm:ss</th>
</tr>
</thead>
<tbody>
<tr>
<td>A^ATAG^REPT^EVT T3TMX</td>
</tr>
<tr>
<td>^^&lt;AID&gt;:&lt;CONDTYPE&gt;,&lt;CONDEFF&gt;,&lt;ocrdat&gt;,&lt;ocrtm&gt;,,,,[,&lt;TMPER&gt;]</td>
</tr>
<tr>
<td>[:[&lt;CONDDESCR&gt;],]&quot;</td>
</tr>
</tbody>
</table>

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the T3TMX section.
2. **CONDTYPE** indicates the condition type of the entity. Values are shown in T3TMX section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. **CONDEFF** indicates the event effect on the conditions of the entity. Valid values are:
   - CL: Standing condition cleared.
   - SC: Standing condition raised.
   - TC: Transient condition.
4. **OCRDAT** Occurrence Date. Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. **OCRTM** Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. **TMPER** is the accumulation time period for performance monitoring information. Valid values are:
   - 1-DAY 1-day time period.
7. **CONDDESCR** is <1...62 alphanumeric characters>. Detailed text description of the trouble.
REP EVT TMXDS1

General Description

This system-generated automatic message reports an event associated with an EC1 entity. The event may trigger an alarm (or event) depending on the default attributes.

Message Syntax

Example:

PETALUMA 02-05-05 14:30:00
A 123 REPT EVT T3TMX
“FAC-1-1: T-ESL,TC,05-05,14-15-00,,15-MIN:"THRESHOLD CROSSING;","
;
TARGET : TRAVERSE

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under TMXDS1.
2. CONDTYPE indicates the condition type of the entity. Values are shown in TMXDS1 section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”
3. CONDEFF indicates the event effect on the conditions of the entity. Valid values are:
   CL: Standing condition cleared.
   SC: Standing condition raised.
   TC: Transient condition.
4. OCRDAT Occurrence Date. Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. OCRTM Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. TMPER is the accumulation time period for performance monitoring information. Valid values are:
   1-DAY 1-day time period.
   15-MIN 15-minute time period.
7. CONDDESC is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:

PETALUMA 02-05-05 14:30:00
A 123 REPT EVT TMXDS1
“FAC-1-1: T-ESL,TC,05-05,14-15-00,,15-MIN:"THRESHOLD CROSSING;","
;
## Event Reporting

### REPT EVT {OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

#### General Description

This system-generated automatic message reports an event associated with an OC-n or STM-n entity. The event may trigger an alarm (or event) depending on the default attributes. These attributes can be modified using the SET-ATTR-{} command. For protection switching event, the AID identifies the Working entity.

#### Message Syntax

```
TARGET : TRAVERSE

REPT EVT {OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description

This system-generated automatic message reports an event associated with an OC-n or STM-n entity. The event may trigger an alarm (or event) depending on the default attributes. These attributes can be modified using the SET-ATTR-{} command. For protection switching event, the AID identifies the Working entity.

Message Syntax

```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AID</td>
<td>Access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs.</td>
</tr>
<tr>
<td>Condtype</td>
<td>Indicates the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”</td>
</tr>
<tr>
<td>CONDEFF</td>
<td>Indicates the event effect on the conditions of the entity. Valid values are: CL: Standing condition cleared. SC: Standing condition raised. TC: Transient condition.</td>
</tr>
<tr>
<td>OCRDAT</td>
<td>Occurrence Date. Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.</td>
</tr>
<tr>
<td>OCRTM</td>
<td>Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.</td>
</tr>
<tr>
<td>TMPER</td>
<td>The accumulation time periods for performance monitoring information. Valid values are: 1-DAY: 1-day time period. 15-MIN: 15-minute time period.</td>
</tr>
<tr>
<td>CONDDESCR</td>
<td>Detailed text description of the trouble.</td>
</tr>
</tbody>
</table>

Example:

```
PETALUMA 02-05-05 14:30:00
A  123 REPT EVT OC3
"FAC-1-1: T-ESS,SC,05-05,14-16-00,,,,,15-MIN:"THRESHOLD CROSSING",";
```

**Note:** OC192 and STM64 commands are applicable only for TRAVERSE.
REPT EVT {VT1/VC11/VC12}

General Description

This system-generated automatic message reports an event associated with a VT1/VC11/VC12 entity. The event may trigger an alarm (or event) depending on the default attributes. These attributes can be modified using the SET-ATTR-{VT1/VC1/V12} command.

Message Syntax

\[^{SID}yy-mm-dd^hh:mm:ss\]
\[^{ATAG}REPT^EVT \{VT1/VC1/VC12\}\]
\[^{AID:<CONDTYP,Th,CONDEFF,,,\[<TMER\]}
\[^{<CONDDESCR>}\]

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid value are listed in Appendix C—“Access Identifiers,” SONET Path AIDs.
2. CONDTYPE indicates the condition type of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment.”
3. CONDEFF indicates the event effect on the conditions of the entity. Valid values are:
   - CL: Standing condition cleared.
   - SC: Standing condition raised.
   - TC: Transient condition.
4. OCARDAT Occurrence Date. Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.
5. OCRTM Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.
6. TMER is the accumulation time periods for performance monitoring information. Valid values are:
   - 1-DAY: 1-day time period.
   - 15-MIN: 15-minute time period.
7. CONDDESCR is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:

PETALUMA 02-05-05 14:30:00
A 123 REPT EVT VT1
"VT-1-1-7-1:T-CVV,TC,05-05,14-16-00,,,15-MIN:\"THRESHOLD CROSSING\","
; 

TARGET : TRAVERSE, TE100

Note: VC11 command is applicable only for TRAVERSE.
REPT EVT \{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C\}

**General Description**

This system-generated automatic message reports an event associated with an STS or VC3/VC4 path level path entity. The event may trigger an alarm (or event) depending on the default attributes. These attributes can be modified using the SET-ATTR-\{STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4-4C/VC4-16C\} command.

**Message Syntax**

```plaintext
^^^SID^yy-mm-dd^hh:mm:ss
A^ATAG^REPT^EVT {STS1/STS3C/STS12C/STS48C/VC3/VC4/VC4_4C/VC4_16C }
^^^"<AID>:<CONDTYPE>,<CONDEFF>,<ocrdat>,<ocrtm>,,,,[,<TMPER>] :
[:,:,<CONDDESCR>],"
;}
```

1. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid value are listed in Appendix C—“Access Identifiers,” SONET Path AIDs.

2. **CONDTYPE** indicates the event condition of the entity. Values are listed in Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”

3. **CONDEFF** indicates the event effect on the conditions of the entity. Valid values are:
   - CL: Standing condition cleared.
   - SC: Standing condition raised.
   - TC: Transient condition.

4. **OCRDAT**: Occurrence Date. Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

5. **OCRTM**: Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.

6. **TMPER**: is the accumulation time periods for performance monitoring information. Valid values are:
   - 1-DAY 1-day time period.

7. **CONDDESCR** is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:

```
PETALUMA 02-05-05 14:30:00
A 123 REPT EVT STS1
"STS-1-1-1:T-CVP,TC,05-05,14-16-00,,,,,15-MIN:""THRESHOLD CROSSING:"",""
;
```

**Note:** STS48c and VC4-16c commands are applicable only for TRAVERSE.
REPT EVT ETH

General Description

This system-generated automatic message reports an event associated with an Ethernet entity. The event may trigger an alarm (or event) depending on the default attributes.

Message Syntax

```plaintext
^^^SID^yy-mm-dd^hh:mm:ss
A^^ATAG^REPT^EVT^ETH
^^^<AID>:<CONDTYPE>,<CONDEFF>,<ocrdat>,<ocrtm>,,,,[<TMPER>]
    ;[<CONDDESCR>],"
```

1. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs under Ethernet.

2. CONDTYPE indicates the event condition of the entity. Values are listed in Ethernet section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCD Assignment.”

3. CONDEFF indicates the event effect on the conditions of the entity. Values are:
   - CL: Standing condition cleared.
   - SC: Standing condition raised.
   - TC: Transient condition.

4. OCARDAT Occurrence Date. Indicates the date on which the alarm condition occurred or was cleared. Format is mm-dd.

5. OCRTM Occurrence Time. Indicates the time that the alarm condition occurred or was cleared. Format is hh-mm-ss.

6. TMPER is the accumulation time periods for performance monitoring information. Values are:
   - 1-DAY: 1-day time period.
   - 15-MIN: 15-minute time period.

7. CONDDESCR is <1...62 alphanumeric characters> Detailed text description of the trouble.

Example:
   PETALUMA 02-05-05 14:30:00
   A 123 REPT EVT ETH
   "FAC-1-1:LPBKTERM,SC,05-05,14-29-00,","TERMINAL LOOPBACK",",";

TARGET : TRAVERSE, TE100
Performance Monitoring


**General Description**

This command retrieves data on T1/T3/T3TMX/TMXDS1/EC1/OC3/OC12/OC48/OC192/E1/E3/STM1/STM4/STM16/STM64/ETH performance monitoring registers. The system will return all stored values including the current value.

**Command Syntax**


1. **TID** is target identifier.
2. **AID** is the access identifier. Valid values are in Appendix C—“Access Identifiers” Equipment AIDs and Facility AIDs. From Equipment AIDs on those AIDs are applicable where NGE cards are provisioned.
3. **CTAG** is correlation tag.
4. **MONTYPE** indicates the type of monitored parameter for which a value is received. Value is shown in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID) for different facility and path types. If not specified, ALL will be assumed.
5. **TMPER** is the accumulation time period. Values are:  
   - 1-DAY 1-day time period.  
   If TMPER is not specified, 15-MIN will be assumed.
6. **MONDAT** identifies the beginning date of the PM period. Format is yy-mm-dd. If not specified, current date will be assumed.
7. **MONTM** identifies the beginning time of day of the PM period. Format is hh-mm-ss. If not specified, current time period will be assumed.

**Example:**  
RTRV-PM-T1::FAC-1-1:123::,,,,15-MIN,;  
TARGET : TRA VERSE, TE100  
**Note:** OC192, STM64, EC1, T3TMX, and TMXDS1 commands are applicable only for TRA VERSE.

**Response Syntax**

```
^{\^}SID YY-MM-DD hh:mm:ss  
M^{\^}CTAG COMPLD  
<rspblk>*;
```

Response contains multiple response block for each montype

Where respblk is

```
^{\^\^}<AID>,[<AIDTYPE>];  
<MONTM>,<MONVAL>,[<VLDTY>],[<LOCN>],[<DIRN>],[<TMPER>],[<MONDAT>],[<MONTM>] " <cr> <lf>*  
```


1. SID is the same as the tid described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. AIDTYPE indicates the access identifier type. Valid values are: T3|T1|OC3|OC12|OC48|OC192|ETH|E1|E3|STM1|STM4|STM16|STM64
5. MONTYPE indicates the type of monitored parameter for which a value is received. Value is shown in Appendix B—“Performance Monitoring Type Coding.” If not specified, ALL will be assumed.
6. MONVAL is the PM register value for MONTYPE
7. VLDTY is validity indicator (COMPL, PRTL)
8. LOCN is the location where monitoring occurs (NEND or FEND)
9. DIRN is the direction that the monitoring point faces (RCV or TRMT)
10. TMPER identifies the accumulation time period for performance parameters.
11. MONDAT identifies the beginning date of the PM period. Format is mm-dd.
12. MONTM identifies the beginning time of day of the PM period. Format is hh-mm.

Example:
RTRV-PM-T1:PETALUMA:FAC-1-1:123::,, ,15-MIN, ;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
“FAC-1-1,T1:CVL,21,COMPL, , ,15-MIN,05-11,12-45” ;

TARGET : TRAVERSE, TE100

Note: OC192, STM64, EC1, T3TMX, TMXDS1 commands are applicable only for TRAVERSE.

See response format in Chapter 3—“Generic Output Response Format” for error case response.


General Description

Command Syntax

<TID>;<AID>;<CTAG> ;,,<TMPER> ;
RTRV-PM-{STS1/STS3C/STS12C/STS48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}

General Description
This command retrieves data on STS1/STS3C/STS12C/STS48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12 performance monitoring registers. The system will return all stored values including the current value.

Command Syntax

[::[<MONTYPE >],,,<TMPER>, [<MONDAT>],[<MONTM>]]};

1. TID is target identifier.
2. AID is the access identifier. Valid values are given in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. CTAG is correlation tag.
4. MONTYPE indicates the type of monitored parameter for which a value is received. Value is shown in Appendix B—“Performance Monitoring Type Coding” for different facility and path type. If not specified, ALL will be assumed.
5. TMPER is the accumulation time period. Values are:
   1-DAY 1-day time period.
   15-MIN 15-minute time period.
   If TMPER is not specified, 15-MIN will be assumed.
6. MONDAT identifies the beginning date of the PM period. Format is mm-dd. If not specified, the current date will be assumed.
7. MONTM identifies the beginning time of day of the PM period. Format is hh-mm. If not specified, the current time period will be assumed.

Example:
RTRV-PM-T1::FAC-1-1:123::,,,,15-MIN;
TARGET : TRAVERSE, TE100

**Note:** STS48C/VC4_16C/VC11 commands are applicable only for TRAVERSE.

### Response Syntax

```
^##SID YY-MM-DD hh:mm:ss
M^CTAG COMPLD
^## "<AID>, [<AIDTYPE>];
<MONTYPE>,<MONVAL>,[<VLDTY>],[<LOCN>],[<DIRN>],[<TMPER>],[<MONDAT>],[<MONTM>] " <cr> <lf>
```

where

1. SID is the same as the tid described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier defined in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.**
3. CTag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. AIDTYPE indicates the access identifier type. Valid values are: STS|ETHSTS|ETHVC3HO|ETHVC4|VC3HO|VC4|VT1|ETHVT1|VC12HO|ETHVC12HO.
5. MONTYPE indicates the type of monitored parameter for which a value is received. Value is listed in Appendix B—“Performance Monitoring Type Coding.” If not specified, ALL will be assumed.
6. MONVAL is the PM register value for MONTYPE.
7. VLDTY is validity indicator. Valid values are: COMPL, PRTL
8. LOCN is the location where monitoring occurs. Valid values are: NEND or FEND
9. DIRN is the direction that the monitoring point faces. Valid values are: RCV or TRMT
10. TMPER identifies the accumulation time period for performance parameters.
11. MONDAT identifies the beginning date of the PM period. Format is mm-dd.
12. MONTM identifies the beginning time of day of the PM period. Format is hh-mm.

**Example:**

```
RTRV-PM-STS1:PETALUMA:STS-1-1-1:123::,,,,15-MIN,;
PETALUMA 02-05-27 14:10:27
M 123 COMPLD
  "STS-1-1,STS1:CVP21,COMPL, ,15-MIN,05-11,12-45"
```

TARGET : TRAVERSE, TE100

**Note:** STS48C/VC4_16C/VC11 commands are applicable only for TRAVERSE

See response format in Chapter 3—“Generic Output Response Format” for error case response.
INIT-REG-{STS1/STS3C/STS12C/STS48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}

General Description
This command resets the STS1/STS3C/STS12C/STS48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12 performance monitoring registers.

Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
<th>Description</th>
</tr>
</thead>
</table>
| INIT-REG-{STS1/STS3C/STS12C/STS48C/VT1/VC3/VC4/VC4_4C/VC4_16C/VC11/VC12}::<TID>::<AID>::<CTAG>::<TMPER>| 1. TID is target identifier.  
2. AID is the access identifier. Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.  
3. CTAG is correlation tag.  
4. TMPER is the accumulation time period. Valid values are:
   - 1-DAY 1-day time period.  
   - If TMPER is not specified, 15-MIN will be assumed. |

Example:
INIT-REG-STS1::STS-1-1-1:123::<CTAG>::<TMPER>;

TARGET: TRAVERSE, TE100

Note: STS48C/VC4_16C/VC11 commands are applicable only for Traverse

RTRV-PM-EOS

General Description
This command retrieves data on EOS performance monitoring registers. The system will return all stored values including the current value.

Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTRV-PM-EOS::&lt;TID&gt;::&lt;AID&gt;::&lt;CTAG&gt;[:::&lt;MONTYPE&gt;]::&lt;TMPER&gt;[:::&lt;MONDAT&gt;],::&lt;MONTM&gt;</td>
<td></td>
</tr>
</tbody>
</table>
1. TID is target identifier.
2. AID is the access identifier. Valid values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs.
3. CTAG is correlation tag.
4. MONTYPE indicates the type of monitored parameter for which a value is received. Value is listed in Appendix B—“Performance Monitoring Type Coding” for different facility and path type. If not specified ALL will be assumed.
5. TMPER is the accumulation time period. Valid values are:
   - 1-DAY 1-day time period.
   - If TMPER is not specified, 15-MIN will be assumed.
6. MONDAT identifies the beginning date of the PM period. Format is mm-dd. If not specified, current date will be assumed.
7. MONTM identifies the beginning time of day of the PM period. Format is hh-mm. If not specified, current time period will be assumed.

Example:
RTRV-PM-EOS::EOS-1-1:123::,,,,15-MIN,;
TARGET : TE100

Response Syntax

```plaintext
^n^SID YY-MM-DD hh:mm:ss
M^CTAG COMPLD
^"<AID>, [<AIDTYPE>];
<MONTYPE>,<MONVAL>,[<VLDTY>],[<LOCN>],[<DIRN>],[<TMPER>],[<MONDAT>],[<MONTM>] " <cr> <lf>
```

where
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Performance Monitoring

1. SID is the same as the tid described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are listed in Appendix C—“Access Identifiers,” SONET Path AIDs, AU-4 Mapped SDH Path AIDs, and AU-3 Mapped SDH Path AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Correlation Tag (CTAG).
4. AIDTYPE indicates access identifier type. Valid values are STS|ETHSTS|ETHVC3HO|ETHVC4|VC3HO|VC4|VT1|ETHVT1|VC12HO|ETHVC12HO.
5. MONTYPE indicates the type of monitored parameter for which a value is received. Value is listed in Appendix B—“Performance Monitoring Type Coding”. If not specified, ALL will be assumed.
6. MONVAL is the PM register value for MONTYPE.
7. VLDTY is validity indicator. Valid values are: COMPL, PRTL
8. LOCN is the location where monitoring occurs. Valid values are: NEND or FEND
9. DIRN is the direction that the monitoring point faces. Valid values are: RCV or TRMT
10. TMPER identifies the accumulation time period for performance parameters.
11. MONDAT identifies the beginning date of the PM period. Format is mm-dd.
12. MONTM identifies the beginning time of day of the PM period. Format is hh-mm.

TARGET : TRAVERSE, TE100

See response format in Chapter 3—“Generic Output Response Format” for error case response.

INIT-REG-EOS

General Description
This command resets the EOS CTP performance monitoring registers.

Command Syntax

INIT-REG-EOS:<TID>:<AID>:<CTAG> ::,,,,<TMPER>;

1. TID is target identifier.
2. AID is the access identifier. Valid values are listed in Appendix C—“Access Identifiers” in the EOS CTP AIDs section.
3. CTAG is correlation tag.
4. TMPER is the accumulation time period. Valid values are:
   1-DAY: 1-day time period.
   15-MIN: 15-minute time period.
   If TMPER is not specified, 15-MIN will be assumed.

Example:
INIT-REG-EOS::EOS-1-1:123::,,,,15-MIN;
## Remove and Restore

### RMV-{T1/E1}

**General Description**

This command removes a T1/E1 port (facility) from service (place into maintenance state, \(<\text{pst}> = \text{OOS-MA}, \langle\text{sst}\rangle = \text{MT}\)).

**Command Syntax**

```
RMV-{T1/E1}:<tid>:<AID>:<CTAG>[:[:][:]];  
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:**

```
RMV-T1:PETALUMA:FAC-1-1:123;  
RMV-E1:PETALUMA:FAC-1-1:123;  
```

**TARGET : TRAVERSE, TE100**

**Note:** RMV-E1 is not supported in Rel 2.0.

### RST-{T1/E1}

**General Description**

This command restores a T1/E1 facility that was previously removed using RMV-T1 command.

**Command Syntax**

```
RST-{T1/E1}:<tid>:<AID>:<CTAG>[:[:]];  
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:**

```
RST-T1:PETALUMA:FAC-1-1:123;  
RST-E1:PETALUMA:FAC-1-1:123;  
```

**TARGET : TRAVERSE, TE100**

**Note:** RST-E1 is not supported in Rel 2.0.
RMV-{T3/EC1/E3}

**General Description**

This command removes a T3/EC1/E3 port (facility) from service (place into maintenance state, <pst> = OOS-MA, <sst> = MT).

**Command Syntax**

```
RMV-{T3/EC1/E3}:<tid>:<AID>:<CTAG>[::[,:]];  
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:**

```
RMV-T3:PETALUMA:FAC-1-1:123;  
RMV-E3:PETALUMA:E3-3-1:123;  
RMV-EC1:PETALUMA:FAC-1-1:123;  
```

**TARGET : TRAVERSE, TE100**

**Note:** EC1 command is applicable only for TRAVERSE. RMV-E3 is not supported in Rel 2.0.

RST-{T3/EC1/E3}

**General Description**

This command restores a T3/EC1/E3 facility that was previously removed using RMV-{} command.

**Command Syntax**

```
RST-{T3/EC1/E3}:<tid>:<AID>:<CTAG>[::];  
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:**

```
RST-T3:PETALUMA:FAC-1-1:123;  
RST-E3:PETALUMA:E3-3-1:123;  
RST-EC1:PETALUMA:FAC-1-1:123;  
```
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Remove and Restore

**RMV-T3-TMX**

**General Description**
The RMV-T3-TMX command removes a T3-TMX port (facility) from service (place into maintenance state, <pst> = OOS-MA, <sst> = MT).

**Command Syntax**

```
RMV-T3-TMX:<tid>:<AID>:<CTAG>[::];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid T3TMX AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the DS3TMX section.
3. ctag is correlation tag described in Chapter 1—”TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**

```
RMV-T3-TMX:PETALUMA:FAC-1-1:123;
```

**TARGET** : TRAVERSE.

**Note:** EC1 command is applicable only for TRAVERSE. RST-E3 is not supported in Rel 2.0

**RST-T3-TMX**

**General Description**
The RST-T3-TMX command restores a T3-TMX facility that was previously removed using the RMV-T3-TMX command.

**Command Syntax**

```
RST-T3-TMX:<tid>:<AID>:<CTAG>[::];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid DS3TMX AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the DS3TMX section.
3. ctag is correlation tag described in Chapter 1—”TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**

```
RST-T3-TMX:PETALUMA:FAC-1-1:123;
```

**TARGET** : TRAVERSE.
RMV-STS1-TMX

General Description
The RMV-STS1-TMX command removes an STS1-TMX port (facility) from service (place into maintenance state, <pst> = OOS-MA, <sst> = MT).

Command Syntax

```
RMV-STS1-TMX:<tid>:<AID>:<CTAG>[:[]];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid STS1-TMX AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the STS1 TMX section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
RMV-STS1-TMX:PETALUMA:FAC-1-1:123;
```

TARGET : TRAVERSE

RST-STS1-TMX

General Description
The RST-STS1-TMX command restores an STS1-TMX facility that was previously removed using the RMV-STS1-TMX command.

Command Syntax

```
RST-STS1-TMX:<tid>:<AID>:<CTAG>[:[]];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid STS1-TMX AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the STS1 TMX section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
RST-STS1-TMX:PETALUMA:FAC-1-1:123;
```

TARGET : TRAVERSE

RMV-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description
This command removes an OC-n/STM-n facility from service (place into maintenance state, <pst> = OOS-MA, <sst> = MT).
Command Syntax


1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RMV-OC3:PETALUMA:FAC-1-1:123;
RMV-STM1:PETALUMA:FAC-1-1:123;

TARGET : TRAVERSE, TE100

Note: OC-192 and STM-64 commands are available only for TRAVERSE. STM commands are not available in Rel 2.0.

RST-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description
This command restores an OC-n/STM-n facility that was previously removed using the RMV-{} command.

Command Syntax


1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RST-OC3:PETALUMA:FAC-1-1:123;
RST-STM64:PETALUMA:FAC-1-1:123;

TARGET : TRAVERSE, TE100

Note: OC-192 and STM-64 commands are available only for TRAVERSE. STM commands are not available in Rel 2.0.
RMV-ETH

General Description
This command removes a Ethernet port (facility) from service (place into maintenance state, <pst> = OOS-MA, <sst> = MT).

Command Syntax

```
RMV-ETH:<tid>:<AID>:<CTAG>[:[:[],]];  
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

RMV-ETH:PETALUMA:FAC-1-1:123;

TARGET : TRAVERSE, TE100

RST-ETH

General Description
This command restores an ETH facility that was previously removed using the RMV-ETH command.

Command Syntax

```
RST-ETH:<tid>:<AID>:<CTAG>[:[:[],]];  
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

RST-ETH:PETALUMA:FAC-1-1:123;

TARGET : TRAVERSE, TE100
**System Timing**

Layer 1 failure of a signal bearing a timing signal triggers the appropriate REPT^ALM^rr message.

**ED-SYNCN**

**General Description**

This command is used to set the global parameters for clock signal source.

**Command Syntax**

```
ED-SYNCN:<tid>::<ctag>:::[SYNCMODE=<syncmode>],
[INMSG=<inmsg>],[RVRTV=<rvrtv>],[WTR=<wtr>],[QLTYRES=<qltyres>],
[SQUELCHORAIS=<squelchorais>],[STANDARD=<standard>]
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. **SYNCMODE** is timing mode. Valid values are:
   - EXTERNAL = derive system timing from the BITS. (Default)
   - LINE = derive system timing from a line interface (OC3/12/48/192, STM1/4/16/64, or EC1).
4. **INMSG** indicates to the system whether to process incoming sync message. Valid values are:
   - Y = the system to process the received SSM
   - N = the system not to process received SSM
5. **RVRTV** indicates revertive type. Valid values are:
   - Y = revertive
   - N = non-revertive (Default)
6. **WTR** indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.
7. **QLTYRES** indicates the expected quality below which to switch to backup source. Valid values are:
   - PRS = Stratum 1 traceable
   - STU = synchronized, traceability unknown
   - ST2 = stratum 2 traceable
   - ST3 = stratum 3 traceable.
   - ST4
   - DUS
   - USER = Reserved for Network Synchronization Use
   - IDLE
SET-SYNCN-REF

General Description

The clock signal for the outgoing is always derived from the line interface. The clock signal for the system timing can be derived from the line interface or the incoming BITS.

This command allows configuration of the source for the system-timing clock and defines the priority listing of the synchronization references.

Table 1-4  SET-SYNCN-REF Synchronization References

<table>
<thead>
<tr>
<th>AID</th>
<th>SYNCMODE</th>
<th>SYNCLIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMGSYS</td>
<td>EXTERNALINE</td>
<td>LINEREF AIDs or BITS (A, B)</td>
</tr>
<tr>
<td>TMGOUT - A</td>
<td>LINE</td>
<td>LINEREF AIDs, the ordering of the listing may be different than that of TMGOUT - A but the AIDs in the listing must be the same.</td>
</tr>
<tr>
<td>TIMEOUT - B</td>
<td>LINE</td>
<td>LINEREF AIDs, the ordering of the listing may be different than that of TMGOUT - A but the AIDs in the listing must be the same.</td>
</tr>
</tbody>
</table>

When all references fail, the internal clock automatically enters Holdover mode. If the failure condition of the references remains for an extended time period, the system enters Freerunning mode.

At system initialization, if no references are set up the system enters Freerunning mode instead.

Example:

ED-SYNCN:PETALUMA:SYS:123::SYNCMODE=EXTERNAL;

TARGET : TRAVERSE, TE100
If the system is configured to process incoming sync messages, and if the received synchronization messages over the primary source indicate clock signal quality worse than that of the secondary source, the system automatically switches to the secondary source and so on. If the received sync messages over all reference source indicate clock signal quality worse than the internal clock, the system automatically switches to internal clock mode.

TMGOUT-A and TMGOUT-B must share the same timing references. However, the priority of the references can be set differently between TMGOUT-A and TMGOUT-B.

**Command Syntax**

```
SET-SYNCH-REF:<tid>;<AID>;<ctag>::SYNCLIST=<PRIO1REF>&<PRIO2REF>
[&<PRIOR3REF>&<PRIOR4REF>];
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier for timing. Valid values are:
   - TMGSYS = system timing
   - TMGOUT-A = primary timing output subsystem
   - TMGOUT-B = secondary timing output subsystem
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **SYNCLIST** = a prioritized listing of timing sources, should contain the
   `<PRIO1REF>&<PRIO2REF> [&<PRIOR3REF>&<PRIOR4REF>]` Valid values for PRIOR1-4REF are:
   - BITS-A and BITS-B if SYNCMODE = EXTERNAL
   - LINEREF1-4 AIDs for facility references (OC3/12/48/192, STM1/4/16/64 and/or EC1) if timing mode = LINE. For TE100, LINEREF1-2 are valid.
   - NO_REF- if no reference needs to be specified.

**Example:**

```
SET-SYNCH-REF:PETALUMA:TMGSYS:123:: SYNCLIST=BITS-A&BITS-B;
SET-SYNCH-REF:PETALUMA:TMGOUT-A:123:: SYNCLIST=LINEREF1&LINEREF2&NO_REF&NOREF;
```

**TARGET** : TRAVERSE, TE100

---

**ED-BITS**

**General Description**

This command is used to edit parameter values for the DS1 BITS facility. On an edit command, if a parameter value is to remain the same, leave the parameter out of the command syntax.

The shelf will always send out SSM based on a received SSM from an active timing reference.

**Command Syntax**

```
ED-BITS:<tid>;<[AID]>;::<LINECDE=<linecde>,][LBO=<lbo>,][LOF=<lof>,]
[FMT=<fmt>,][INMSG=<inmsg>,][MODE=<mode>,][ASSMR=<assmr>,][SSMSA=<ssmsa>];::<pst>
```

---

Release TN3.1.x (unchanged)   Turin Networks   Page 1-241
1. tid is the target identifier described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. \(<\text{AID}>\) is the Access Identifier for the DS1 BITS facilities. Valid values are listed in Appendix C—“Access Identifiers,” **Sync AIDs.** Grouping and ranging of AIDs is not allowed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. LINECDE: Indicates DS1 line code. Valid when AID is null. Valid values are:
   - AMI – Alternative Mark Inversion. (Default)
   - B8ZS – Bipolar 8 zero substitution
   **Note:** The value of this attribute cannot be changed while the entity is in IS state.
5. LBO Indicates the Line Build out setting. Valid when AID is null. Valid values are:
   - D1 {0-133ft} (Default)
   - D2 {133-266ft}
   - D3 {266-399ft}
   - D4 {399-533ft}
   - D5 {533-665ft}
   - D6 = "Short Haul 660ft"
   - D7 = "Long Haul 0dB"
   - D8 = "Long Haul 7.5dB"
   - D9 = "Long Haul 15dB"
   - D10 = "Long Haul 22.5dB"
   - 120OHM(ITU mode)
6. LOF indicates to the system whether to monitor out-of-frame/loss-of-frame (OOF/LOF) condition. This indicator is valid for incoming BITS only. Valid when AID is null. Valid values are:
   - Y - monitor for OOF/LOF condition. (Default)
   - N - do not monitor for OOF/LOF condition.
7. FMT Indicates the DS1 digital signal format. Valid when AID is null. Valid values are:
   - SF - indicates Superframe Format. ANSI mode option
   - ESF - indicates Extended Superframe format. (Default)
   - BASIC – Basic format ITU mode value
   - MFRM – Multiframe format. ITU mode option
   **Note:** The value of this attribute cannot be changed while the entity is in IS state.
8. INMSG: Indicates whether SSM will be present over this T1 BITS. Valid when AID is null. Valid values are:
   - Y = Yes (Default)
   - N = No
RTRV-BITS

General Description

This command is used to retrieve DS1 BITS attributes.

Command Syntax

RTRV-BITS:<tid>:<AID>:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is Access Identifier for the DS1 BITS facilities. Valid values are in Appendix C—“Access Identifiers,” Sync AIDs. Grouping and ranging of AIDs is not allowed.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
TARGET : TRAVERSE, TE100

Response Syntax

```
<cr> <lf> <lf>
^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD  <cr> <lf>
^^^"<AID>::[LINECDE=<linecde>],[LBO=<lbo>],[LOF=<lof>]#
,[FMT=<fmt>],[INMSG=<inmsg>],[ASSMR=<assmr>],[ASSMT=<ssmt>],[MODE=<mode>],[SSMSA=<ss
msa>],[<pst>],[<sst>]" + <cr> <lf>
```

1. `<AID>` is the Access Identifier for the DS1 BITS facilities. Valid values are listed in Appendix C—“Access Identifiers,” Sync AIDs.
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. `LINECDE` Indicates DS1 line code. Valid values are:
   - AMI – Alternative Mark Inversion.
   - B8ZS – Bipolar 8 zero substitution
4. `LBO` Indicates the Line Build out setting. Valid values are:
   - D1 {0-133ft} (Default)
   - D2 {133-266ft}
   - D3 {266-399ft}
   - D4 {399-533ft}
   - D5 {533-665ft}
   - D6 "Short Haul 660ft"
   - D7 "Long Haul 0dB"
   - D8 "Long Haul 7.5dB"
   - D9 "Long Haul 15dB"
   - D10 "Long Haul 22.5dB"
   - 120OHM (ITU mode)
5. `LOF` indicates to the system whether to monitor out-of-frame/loss-of-frame (OOF/LOF) condition. This indicator is valid for incoming BITS only. Valid values are:
   - Y - monitor for OOF/LOF condition.
   - N - do not monitor for OOF/LOF condition.
6. `FMT` Indicates the DS1 digital signal format. Valid values are:
   - SF - indicates Superframe Format
   - ESF - indicates Extended Superframe format. (Default)
   - BASIC – Basic format ITU mode value
   - MFRM – Multiframe format. ITU mode option
7. INMSG indicates whether the Input Sync Message will be considered in determining the timing signal that would be used. Valid values are:
   Y - process the received Sync Status Message (SSM).
   N - ignore the received SSM. (Default)

8. SSMR indicates the SSM received. Valid values are:
   PRS = Stratum 1 traceable
   STU = synchronized, traceability unknown
   ST2 = stratum 2 traceable
   ST3 = stratum 3 traceable.
   ST4
   DUS
   USER = Reserved for Network Synchronization Use
   IDLE

9. SSMT indicates the SSM received. Valid values are:
   PRS = Stratum 1 traceable
   STU = synchronized, traceability unknown
   ST2 = stratum 2 traceable
   ST3 = stratum 3 traceable
   ST4
   DUS
   USER = Reserved for Network Synchronization Use
   IDLE

10. MODE: Indicates the clock mode.
    ANSI mode options are:
    - 2M : Clock is 2 Mhz composite clock.
    - T1 : Clock is in T1 mode
    ITU mode options are:
    - E1 : Clock is E1 mode.
    - 64K : 64 K clock.

11. ASSMR indicates the SSMR to be assigned. Valid values are:
    PRC = Stratum 1 traceable
    SSUA
    SSUB
    SEC
    DUS = Do not use
    AUTO
12. SSMSA indicates the SSM. Available with E1 clock. Valid values are:
   - SA4
   - SA5
   - SA6
   - SA7
   - SA8
13. `<pst>` Current Primary State.
14. `<sst>` Current secondary state of the system.

Example:
```
RTRV-BITS:PETALUMA:BITS-A:123;

PETALUMA 02-04-20 14:30:00
M 123 COMPLD
"BITS-A::LINECDE=AMI,LBO=D2,LOF=Y,FMT=EFS,INMSG=Y, SSMS=ST2:OOS"
; 
TARGET : TRAVERSE, TE100
```

**SET-SYNCN-LINEREF**

**General Description**

This command allows configuration of the line source reference AIDs with the line interface facility. These line source reference AIDs are used for assigning facility reference to external and system timing.

LINEREF1, LINEREF2, LINEREF3 and LINEREF4 AIDs are defined for line reference.

<table>
<thead>
<tr>
<th>SET-SYNCN-LINEREF</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;tid&gt;</code>::<code>&lt;AID&gt;</code>::<code>&lt;ctag&gt;</code>::<code>&lt;REFAID&gt;</code>[<code>DUS=</code>&lt;dus&gt;];</td>
</tr>
</tbody>
</table>

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier for line reference. Valid values are:
   - {LINEREF1,LINEREF2,LINEREF3,LINEREF4} for Traverse
   - {LINEREF1,LINEREF2} for TE100
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **REFAID** is a line facility of type OC3/12/48/192, STM1/4/16/64 or EC1. AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs.** TE100 does not support EC1, OC192 and STM64 REFAID.
5. **DUS** indicates insertion of Disvalue.
   - Y = DUS to be inserted
   - N = Do not insert DUS (Default)

Example:
```
SET-SYNCN-LINEREF:PETALUMA:LINEREF1:123::FAC-1-1:DUS=N;
```
### General Description

This command retrieves parameters for timing subsystems.

### Command Syntax

**RTRV-SYNCHN**

**TARGET : TRAVERSE, TE100**

#### RTRV-SYNCHN

<table>
<thead>
<tr>
<th><strong>General Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This command retrieves parameters for timing subsystems.</td>
</tr>
</tbody>
</table>

**Command Syntax**

```
RTRV-SYNCHN:<tid>[:<AID>]:<ctag>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier for timing. Valid values are:
   - **TMGSYS** = system timing
   - **TMGOUT-A** = primary timing output subsystem
   - **TMGOUT-B** = secondary timing output subsystem
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**TARGET : TRAVERSE, TE100**

#### Response Syntax

```
^^^^SID YY-MM-DD hh:mm:ssM~CTAG COMPLD
    (^****<AID>::SYNCHMODE=<synchmode>,CLKMODE=<clkmode>,INMSG=<inmsg>, RVRTV=<RVRTV>,
     WTR=<wtr>,QLYTRES=<qlytres>, HOLDQLYT=<holdqlyt>, STANDARD=<standard>,
     SQUELCHORAIS=<squelchorais>)~*;
```

Repeated for all AIDS.
1. AID is the access identifier for timing. Valid values are:
   - TMGSYS = system timing
   - TMGOUT-A = primary timing output subsystem
   - TMGOUT-B = secondary timing output subsystem

2. SYNCMODE is timing mode. Valid values are:
   - EXTERNAL = external timing from BITS (Default)
   - LINE = line timing from an OC3/12/48/192, STM1/4/16/64 or EC1 interface.
   - INTERNAL = internal timing (no synchronization to outside source)

3. CLKMODE indicates internal clock mode
   - NORMAL
   - HOLDOVER = internal clock enters holdover mode when all references failed
   - FREERUN = internal clock enters free-running mode when all references failed

4. INMSG indicates to the system whether to process incoming sync message. Valid values are:
   - Y = the system to process the received SSM
   - N = the system not to process received SSM

5. RVRTV indicates revertive type.
   - Y = revertive (Default)
   - N = non-revertive

6. WTR indicates revertive time. Value is integer [1 to 60 minutes]. Default is 5 min.

7. QLTYRES indicates the expected quality below which to switch to backup source. Valid values are:
   - PRS = Stratum 1 traceable
   - STU = synchronized, traceability unknown
   - ST2 = stratum 2 traceable
   - ST3 = stratum 3 traceable
   - ST4
   - DUS
   - USER = Reserved for Network Synchronization Use
   - IDLE

8. HOLDQLTY indicates the Stratum 3 as the quality of signal at the holdover

9. STANDARD indicates the standard. Valid values are:
   - ANSI : For north America operations
   - ITU : For operation outside North America

10. SQUELCHORAIS. Valid values are:
    - PRS = Stratum 1 traceable
    - STU = synchronized, traceability unknown
    - ST2 = stratum 2 traceable
    - ST3 = stratum 3 traceable
    - ST4
    - DUS
    - USER = Reserved for Network Synchronization Use
    - IDLE
RTRV-SYNCN-REF

General Description

This command retrieves parameters for references from a timing subsystem.

Command Syntax

RTRV-SYNCN-REF:<tid>:[<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier for timing. Valid values are:
   TMGSYS = system timing
   TMGOUT-A = primary timing output subsystem
   TMGOUT-B = secondary timing output subsystem
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Response Syntax

^^^SID YY-MM-DD hh:mm:ss
M^^CTAG COMPLD
<rspblk>;

where <rspblk> has the format and repeated for each reference in the timing subsystem:
^^^<AID>:<REF>,[<SSMQL>],<PSSTAT>,<REFSTAT>" ;
1. AID is the access identifier for timing. Valid values are:
   TMGSYS = system timing
   TMGOUT-A = primary timing output subsystem
   TMGOUT-B = secondary timing output subsystem
2. REF is the AID for the reference source. REF = BITS-A, BITS-B, or one of the Line References LINEREF1, LINEREF2, LINEREF3 or LINEREF4. For TE100, LINEREF3 and LINEREF4 are not valid.
3. SSMQL indicates synchronization status messages being received. Valid values are:
4. PSSTAT is sync switch status. Valid values are:
   NOREQ
   AUTO = auto-switch in place
   MAN = manual switch in place
   FRCD = forced switch in place
   LOCKOUT = lockout in place
5. REFSTAT is reference usage status. Valid values are:
   ACT = active
   STBY = hot standby

TARGET : TRAVERSE, TE100

**RTRV-SYNCR-LINEREF**

**General Description**

This command retrieves parameters for references from a timing subsystem.

**Command Syntax**

RTRV-SYNCR-LINEREF:<tid>:[<AID>]:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier for line reference. Valid values are: LINEREF1, LINEREF2, LINEREF3, LINEREF4
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

TARGET : TRAVERSE, TE100
### Response Syntax

```
^^^SID YY-MM-DD hh:mm:ss
M^^CTAG COMPLD
<rspblk>;
```

where `<rspblk>` has the format and repeated for each line reference in the timing subsystem:

```
(^^^"<AID>:<REFAID>,<SSMR>,<SSMT>,<DUS>,<REFSTAT>")*
```

1. **AID** is the access identifier for line reference. Valid values are:
   - `LINEREF1,LINEREF2,LINEREF3,LINEREF4`
2. **REFAID** is a line facility of type OC3/12/48/192, STM1/4/16/64 or EC1. AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs**. TE100 does not support EC1, OC192 and STM64 REFAID.
3. **SSMR** indicates the SSM received. Valid values are:
   - **PRS** = Stratum 1 traceable
   - **STU** = synchronized, traceability unknown
   - **ST2** = stratum 2 traceable
   - **ST3** = stratum 3 traceable
   - **ST4**
   - **DUS**
   - **USER** = Reserved for Network Synchronization Use
   - **IDLE**
4. **SSMT** indicates the SSM received. Valid values are:
   - **PRS** = Stratum 1 traceable
   - **STU** = synchronized, traceability unknown
   - **ST2** = stratum 2 traceable
   - **ST3** = stratum 3 traceable
   - **ST4**
   - **DUS**
   - **USER** = Reserved for Network Synchronization Use
   - **IDLE**
5. **DUS** indicates insertion of Disvalue. Valid values are:
   - **Y** = DUS to be inserted
   - **N** = Do not set DUS (Default)
6. **REFSTAT** is reference usage status. Valid values are:
   - **ACT** = active
   - **STBY** = hot standby

**TARGET : TRAVERSE, TE100**
OPR-SYNCNSW

Loss of a timing source triggers a REPT^ALM^<facility> message with a CONDTYPE = SYNC, NTFNCNDE=MN, and SRVEFF=NSA for individual signal loss. Loss of all timing sources triggers a REPT ALM SYNC message with CONDTYPE=ALLREFFLT, NTFNCNDE=MJ, SRVEFF=SA. When all external timing is lost, the not reported condition HLDOVRSYNC (holdover sync mode) is raised. Once timing has been unavailable for long enough that synchronization is not secure, the not reported condition HLDOVRSYNC is cleared and the not reported condition FRNGSYNC (freerunning sync mode) is raised.

General Description

OPERATE-SYNCHRONIZATION SWITCH instructs the shelf to switch synchronization references. Synchronization reference switches initiated with this command remain active until they are released via the RELEASE-SYNCHRONIZATION SWITCH command or are overridden by a synchronization reference failure.

Command Syntax

<table>
<thead>
<tr>
<th>OPR-SYNCNSW:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;::&lt;REFAID&gt;,&lt;SC&gt;;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).</td>
</tr>
<tr>
<td>2. AID is the access identifier for timing subsystem. Valid values are:</td>
</tr>
<tr>
<td>TMGSYS = system timing</td>
</tr>
<tr>
<td>TMGOUT-A = primary timing output subsystem</td>
</tr>
<tr>
<td>TMGOUT-B = secondary timing output subsystem</td>
</tr>
<tr>
<td>3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).</td>
</tr>
<tr>
<td>4. REFAID identifies the new synchronization reference that will be used. Valid values are:</td>
</tr>
<tr>
<td>When SYNCHMODE is EXTERNAL:</td>
</tr>
<tr>
<td>– BITS-A</td>
</tr>
<tr>
<td>– BITS-B</td>
</tr>
<tr>
<td>When SYNCHMODE is LINE:</td>
</tr>
<tr>
<td>– LINEREF1-4 AIDs for facility (OC3/12/48/192, STM1/4/16/64 and/or EC1) references</td>
</tr>
<tr>
<td>Note: LINEREF3-4 are not available in TE100.</td>
</tr>
<tr>
<td>5. SC is switching command. Valid values are:</td>
</tr>
<tr>
<td>MAN = manual. Requested rejected if requested timing source is deemed unacceptable.</td>
</tr>
<tr>
<td>FRCD = forced. Request will be completed regardless of current settings.</td>
</tr>
<tr>
<td>LOCKOUT = Prevent from using a given timing source.</td>
</tr>
</tbody>
</table>

Example:

OPR-SYNCNSW:PETALUMA:TMGSYS:123::LINEREF1,MAN;

TARGET : TRAVERSE, TE100
**RLS-SYNCNSW**

**General Description**

The RELEASE-SYNCHRONIZATION SWITCH command (RLS-SYNCHSW) instructs the shelf to release (i.e., switch back to the previous synchronization reference) a synchronization reference switch request that was initiated with the OPERATE-SYNCHRONIZATION SWITCH command, provided the previous synchronization reference is not in a failed state. This returns the choice of timing source back to the NEs automatic control.

Grouping and ranging of AIDs not allowed.

**Command Syntax**

```
RLS-SYNCSNSW:<tid>:<AID>:<ctag>::<REFAID>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier for timing subsystem. Valid values are:
   - TMGSYS = shelf input timing
   - TMGOUT-A = primary timing output subsystem
   - TMGOUT-B = secondary timing output subsystem
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **REFAID** identifies the new synchronization reference that will be used. Valid values are:
   - When SYNCHMODE is EXTERNAL:
     - BITS-A
     - BITS-B
   - When SYNCHMODE is LINE:
     - LINEREF1-4 AIDs for facility (OC3/12/48/192, STM1/4/16/64 and/or EC1) references
   - **Note:** LINEREF3-4 are not available in TE100.

Example:

RLS-SYNCSNSW:PETALUMA:TMGSYS:123::LINEREF1;

TARGET : TRAVERSE, TE100
Diagnostics

**OPR-LPBK-{T1/E1}**

**General Description**

This command instructs the shelf to operate a loopback on a specified DS1/E1 facility. To loopback a DS1/E1 on a DS3 facility, the AID used must be the AID of the DS1/E1 subport on the DS3 facility. If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

**Command Syntax**

```
OPR-LPBK-{T1/E1}:<tid>:<AID>:<ctag>::,,,<LPBKTYPE>;
```

- **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
- **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
- **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
- **LPBKTYPE** indicates the type of loopback to be performed. Supported Loopback types are equipment, facility, and terminal.
  - **FACILITY** = facility loopback (Incoming signal is immediately connected to the associated transmitter after optical to electrical conversion)
  - **TERMINAL** = terminal loopback (Signal is looped towards system by connecting the outgoing signal before electrical to optical conversion)

**Example:**

```
OPR-LPBK-T1:PETALUMA:FAC-1-1:123::,,,FACILITY;
OPR-LPBK-E1:PETALUMA:FAC-1-1:123::,,,TERMINAL;
```

TARGET : TRAVERSE, TE100

**OPR-LPBK-{T3/EC1/E3}**

**General Description**

This command instructs the shelf to operate a loopback on a specified DS3/EC1/E3 facility. If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

**Command Syntax**

```
OPR-LPBK-{T3/EC1/E3}:<tid>:<AID>:<ctag>::,,,<LPBKTYPE>;
```

- **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
- **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
- **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:**

```
OPR-LPBK-T3:PETALUMA:FAC-3-1:123::,,,FACILITY;
OPR-LPBK-EC1:PETALUMA:FAC-3-1:123::,,,TERMINAL;
```

TARGET : TRAVERSE, TE100
**OPR-LPBK-T3TMX**

**General Description**

This command instructs the shelf to operate a loopback on a specified T3TMX facility.

If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

**Command Syntax**

```
OPR-LPBK-T3TMX:<tid>:<AID>:<ctag>::,,,<LPBKTYPE>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid T3TMX AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** in the T3TMX section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. LPBKTYPE indicates the type of loopback to be performed. Supported Loopback types are facility and terminal.

   FACILITY = facility loopback. Incoming signal is immediately connected to the associated transmitter after optical to electrical conversion.

   TERMINAL = terminal loopback. Signal is looped towards system by connecting the outgoing signal before electrical to optical conversion.

Example:
```
OPR-LPBK-T3:PETALUMA:FAC-1-1:123::,,,FACILITY;
OPR-LPBK-E3:PETALUMA:FAC-1-1:123::,,,FACILITY;
OPR-LPBK-EC1:PETALUMA:FAC-1-1:123::,,,TERMINAL;
```

TARGET : TRAVERSE

**Note:** EC1 command is applicable only for TRAVERSE.
**OPR-LPBK-STS1TMX**

**General Description**

This command instructs the shelf to operate a loopback on a specified STS1TMX facility. If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

**Command Syntax**

```
OPR-LPBK-STS1TMX:<tid>:<AID>:<ctag>::,,,<LPBKTYPE>;
```

1. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” [Target Identifier (TID)](#).
2. `AID` is the access identifier as described in Chapter 1—“TL1 Overview,” [Staging Parameter Blocks, Access Identifier (AID)]. Valid STS1TMX AID values are listed in Appendix C—“Access Identifiers,” [Facility AIDs](#) in the STS1TMX section.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” [Staging Parameter Blocks, Correlation Tag (CTAG)].
4. `LPBKTYPE` indicates the type of loopback to be performed. Supported Loopback types are facility and terminal.
   - `FACILITY` = facility loopback. Incoming signal is immediately connected to the associated transmitter after optical to electrical conversion.
   - `TERMINAL` = terminal loopback. Signal is looped towards system by connecting the outgoing signal before electrical to optical conversion.

**Example:**

```
OPR-LPBK-STS1TMX:PETALUMA:FAC-1-1:123::,,,FACILITY;
```

**TARGET : TRAVERSE**

**OPR-LPBK-TMXDS1**

**General Description**

This command instructs the shelf to operate a loopback on a specified subport of TMX facility. If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

**Command Syntax**

```
OPR-LPBK-TMXDS1:<tid>:<AID>:<ctag>::,,,<LPBKTYPE>;
```
OPR-LPBK-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}

General Description
This command instructs the shelf to operate a loopback on a specified OC-n/STM-n facility. If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

Command Syntax

| 1. | tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID). |
| 2. | AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs. |
| 3. | ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG). |
| 4. | LPBKTYPE indicates the type of loopback to be performed. Supported Loopback types are facility and terminal. FACILITY = facility loopback. Incoming signal is immediately connected to the associated transmitter after optical to electrical conversion. TERMINAL = terminal loopback. Signal is looped towards system by connecting the outgoing signal before electrical to optical conversion. |

Example:
OPR-LPBK-OC3:PETALUMA:FAC-1-1-1:123::,,,FACILITY;
OPR-LPBK-STM1:PETALUMA:FAC-1-1-1:123::,,,FACILITY;
OPR-LPBK-ETH

General Description
This command instructs the shelf to operate a loopback on a specified Ethernet facility. If the specified entity is not in a state that allows a loopback to occur, an error response is issued.

Command Syntax

OPR-LPBK-ETH:<tid>:<AID>:<ctag>::,,<LPBKTYPE>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the Ethernet section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. LPBKTYPE indicates the type of loopback that is to be performed. Supported Loopback type is: TERMINAL = terminal loopback. Signal is looped towards the system by connecting the outgoing signal before electrical to optical conversion.

Example:
OPR-LPBK-ETH:PETALUMA:FAC-1-1:123::,,TERMINAL;

TARGET : TRAVERSE, TE100

RLS-LPBK-{T1/E1}

General Description
This command instructs the shelf to release loopback on a specified DS1/E1 facility.

Command Syntax

RLS-LPBK-{T1/E1}:<tid>::[<AID>]:<ctag>[:];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
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RLS-LPBK-{T3/EC1/E3}

General Description

This command instructs the shelf to release loopback on a specified DS3/EC1/E3 facility.

Command Syntax

Example:
RLS-LPBK-T3:T1:PETALUMA:FAC-1-1:123;
RLS-LPBK-E1:PETALUMA:FAC-1-1:123;

TARGET : TRAVERSE, TE100

Note: RLS-LPBK-E1 is not supported in Release 2.0.

RLS-LPBK-{T3/EC1/E3}:<tid>:[<AID>]:<ctag>[::,,];

1. tid is target identifier as described in Chapter 1—"TL1 Overview," Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—"TL1 Overview," Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—"Access Identifiers," Facility AIDs.
3. ctag is correlation tag described in Chapter 1—"TL1 Overview," Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RLS-LPBK-T3:PETALUMA:FAC-1-1:123;
RLS-LPBK-E3:PETALUMA:FAC-1-1:123;
RLS-LPBK-EC1:PETALUMA:FAC-1-1:123;

TARGET : TRAVERSE, TE100

Note: EC1 command is applicable only for TRAVERSE. RLS-LPBK-E3 is not supported in Release 2.0.

RLS-LPBK-T3TMX

General Description

This command instructs the shelf to release loopback on a specified DS3TMX facility. The optional [<LPBKTYPE>] field defaults to the current existing loopback type.

Command Syntax

Example:
RLS-LPBK-T3TMX:<tid>:[<AID>]:<ctag>[::,,];
**General Description**

This command instructs the shelf to release loopback on a specified STS1TMX facility. The optional [LPBKTYPE] field defaults to the current existing loopback type.

**Command Syntax**

```
RLS-LPBK-STS1TMX:<tid>:[<AID>]:<ctag>[::,,];
```

1. *tid* is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. *AID* is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid DS3TMX AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the DS3TMX section.
3. *ctag* is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
RLS-LPBK-STS1TMX:PETALUMA:FAC-1-1:123;
```

**TARGET : TRAVERSE**

---

**General Description**

This command instructs the shelf to release loopback on a specified subport of TMX facility. The optional [LPBKTYPE] field defaults to the current existing loopback type.

**Command Syntax**

```
RLS-LPBK-TMXDS1:<tid>:[<AID>]:<ctag>[::,,];
```

1. *tid* is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. *AID* is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid STS1TMX AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the STS1TMX section.
3. *ctag* is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
RLS-LPBK-TMXDS1:PETALUMA:FAC-1-1:123;
```

**TARGET : TRAVERSE**
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid subport of TMX AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** under the DSITMX section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
RLS-LPBK-TMDS1:PETALUMA:DS1-1-1-1:123;

**TARGET : TRAVERSE**

**RLS-LPBK-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64}**

**General Description**
This command instructs the shelf to release loopback on a specified OC-n/STM-n facility.

**Command Syntax**

\[
\text{RLS-LPBK-{OC3/OC12/OC48/OC192/STM1/STM4/STM16/STM64} :<tid>[:<AID>]:<ctag>[::,,];}
\]

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs**.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
RLS-LPBK-OC3:PETALUMA:FAC-1-1:123;
RLS-LPBK-STM64:PETALUMA:FAC-1-1:123;

**TARGET : TRAVERSE, TE100**

**Note:** OC192 and STM64 commands are applicable only for TRAVERSE.

**RLS-LPBK-ETH**

**General Description**
This command instructs the shelf to release loopback on a specified Ethernet facility.

**Command Syntax**

\[
\text{RLS-LPBK-ETH:<tid>[:<AID>]:<ctag>[::,,];}
\]
CHG-TSTSIG-{T3/EC1/E3}

General Description
This command instructs the shelf to insert a test signal on a specified T3/EC1/E3 facility.

Command Syntax
CHG-TSTSIG-{T3/EC1/E3}:<tid>:<AID>:<ctag>::<tstsignaltype>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. TSTSIGTYPE: Indicates Test Signal inserted on facility. Valid values are:
   CLEAR: No test signal is inserted
   PRBS-15: Pseudo Random bit sequence test signal
   PRBS-23: Pseudo Random bit sequence test signal
   FIXED-24BIT: 24 bit repeating pattern test signal

Example:
CHG-TSTSIG-T3:PETALUMA:FAC-1-1:123::CLEAR;
CHG-TSTSIG-E3:PETALUMA:FAC-1-1:123::CLEAR;
CHG-TSTSIG-EC1:PETALUMA:FAC-1-1:123::CLEAR;

TARGET: TRAVERSE, TE100

Note: EC1 command is applicable only for TRAVERSE.

CHG-TSTSIG-T3TMX

General Description
This command instructs the shelf to release loopback on a specified T3 TMX facility.
Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHG-TSTSIG-T3TMX:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;::&lt;testsigtype&gt;;</td>
<td></td>
</tr>
</tbody>
</table>
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).  
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid T3TMX AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs in the T3TMX section.  
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).  
Example: CHG-TSTSIG-T3TMX: PETALUMA:FAC-1-1:123::CLEAR; TARGET : TRAVERSE. |
COPY-RFILE

General Description

This command is to request an NE to initiate an FTP or FTTD session and get the
generic software from the Transport Element. The file transfer is always assumed to be
from the remote server to shelf either via direct ftp or through fttd (i.e., Remoteserver to
Shelf). If the FTTD url is specified, the file must be downloaded using an FTTD
application; otherwise, it must be downloaded directly through the FTP application.

The download procedure first looks for `modids.txt` before downloading the image for
any slot to perform manifest check on the image. Currently, the software releases
contain `modids.txt` in the base path only. Therefore, the `<url-path>` must be the base
path.

Command Syntax

COPYRFILE:<tid>::[<AID>]:ctag:[,[<date>],[<time>],,]:SRC=<srcurl>:[,desturDEST=<l>,[,<txfrtype>],]
[,[DNLCSTYPE=<dnltype>],[,OVERWRITE=<overwrite>],[,FTTD=<fttdurl>];

1. `<tid>` - A TID is provided to allow specification of a target NE and composed of less than or equal
to 20 ASCII letters or numbers.

2. `<AID>` - An optional AID is provided to allow specification of equipment within the shelf. Valid
values are equipment AIDs as listed in Appendix C—“Access Identifiers” in the Equipment AIDs
section.
   If the AID is not present in the command, the system assumes the command is a request to
download all files for all equipment.

3. `<date>` - The date on which the command has to be executed. Expected date format is `yy-mm-dd`. If no
date is specified, the current date is assumed.
   Where:
   `<yy>` - indicates the year of software load activation.
   `<mm>` - indicates the month of software load activation.
   `<dd>` - indicates the date of software load activation.
   `<TIME>` - Indicates the exact time at which software load activation should occur. Format is
   `hh-mm-ss`.

4. `<time>` - The time at which the command has to be executed. Expected date format is `hh-mm-ss`. If no
time is specified the current time is assumed.
   Where:
   `<hh>` - indicates the hour of activation.
   `<mm>` - indicates the minute of activation.
   `<ss>` - indicates the second of activation.
5. `<ctag>` - The correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

6. `<srcurl>` - Specifies the source of the file to be transferred. This parameter has the following forms:
   `<ftpurl>`.
   `<ftpurl>` - Specifies an FTP URL: "ftp://<userid>:<password>@<ftphost>:<port>/<url-path>"
   Where:
   - `<ftphost>`: The fully qualified domain name of a network host of the ftp function. The use of IP addresses as defined in RFC-1738 [7] is supported.
   - `<userid>`: The user identification for the host in the URL.
   - `<password>`: The user password for the host in the URL.
   - `<url-path>`: The rest of the locator consists of data specific to the scheme. It is known as the "url-path". It supplies the details of how the specified resource can be accessed. The url-path has the following syntax:
     - `<cwd1>/<cwd2>/.../<cwdN>/;`
     - Where:
       - `<cwd1>` through `<cwdN>` are strings that identify directory levels. The card type is detected by the system and accordingly the image is loaded. The `<cwd1>` - `<cwdN>` portion of the url-path is interpreted as a series of FTP commands as each of the cwd elements is to be supplied, sequentially, as the argument to an FTP CWD (change working directory) command.

7. `<dsturl>`: Specifies the destination of the file to be transferred. This parameter has the following forms: `<ftpurl>`
   `<ftpurl>` - Specifies an FTP URL: "ftp://<userid>:<password>@<ftphost>:<port>/<url-path>"
   Where:
   - `<ftphost>`: The fully qualified domain name of a network host of the ftp function. The use of IP addresses as defined in RFC-1738 [7] is supported.
   - `<userid>`: The user identification for the host in the URL.
   - `<password>`: The user password for the host in the URL.
   - `<url-path>`: The rest of the locator consists of data specific to the scheme. It is known as the "url-path". It supplies the details of how the specified resource can be accessed. The url-path has the following syntax:
     - `<cwd1>/<cwd2>/.../<cwdN>/;`
     - Where:
       - `<cwd1>` through `<cwdN>` are strings that identify directory levels. The card type is detected by the system and accordingly the image is loaded. The `<cwd1>` - `<cwdN>` portion of the url-path is interpreted as a series of FTP commands as each of the cwd elements is to be supplied, sequentially, as the argument to an FTP CWD (change working directory) command.
8. TXFRTYPE (Not supported in Release 2.0): File transfer type. Valid values are:
   SWDL - Indicates the command is being used for software download from remote FTP file server to SNE. This will be the default TXFRTYPE when the user does not enter TXFRTYPE parameter.
   RFR - Indicates the command is being used for file transfer from remote FTP file server to SNE.
   RFBU - Indicates the command is being used for file transfer from SNE to remote FTP file server.

   Note: This value is not supported in Release 2.1.

9. DNLDTYPE: Indicates whether the files should overwrite an existing file located at the destination. Valid only when TXFRTYPE is SWDL. This parameter has the following values:
   INIT - Delete all contents before writing files.
   MERGE - Overwrite existing files of same directory location and filename without deleting the old file. (Default)

10. OVERWRITE: This parameter is applicable only when TXFRTYPE is either RFR or RFBU. Valid values are:
    Y : Overwrite the existing file.
    N : Do not overwrite the existing file.

11. <fttdurl>: Specifies the file transfer translation device NSAP address. This parameter has the following forms: <fttdurl>  (Not supported in Release 2.0)
   <fttdurl> - Specifies an FTTD URL: "fttd://<username>:<passwd>@<fttdhost"
   fttdhost: NSAP address or TID of GNE providing FT-TD services.
   username: User name used to login to the FTTD NE.
   passwd: Password used to login to the FTTD NE.

   Note: In Release 2.1, only TID is supported.

The following example automatically detects the card type in SLOT-11 and downloads the corresponding image to this card:
COPY-RFILE::SLOT-11:123:::
SRC="ftp://usr:password@10.3.10.10:21//usr/localhome/tornado/builds/ASG.X2B.060/flash"
;

The following example downloads the appropriate images to all the slots on the shelf:
COPY-RFILE::ALL:123:::
SRC="ftp://usr:password@10.3.10.10:21//usr/localhome/tornado/builds/ASG.X2B.060/flash"
;

TARGET : TRAVERSE, TE100

Note: Scheduling is not supported for single file transfer, i.e., when TXFRTYPE is RFR/RFBU, general block parameters DATE and TIME are not applicable.
REPT EVT FXFR

General Description
The following autonomous message is sent after the software download.

Command Syntax

```
^<TID>^<YY-MM-DD>^<HH:MM:SS>
A''<atag>REPT'EVT'FXFR
[^<AID>:^<FILEURL>,<FXFR_STATUS>,<FXFR_RSLT>:[CONDDESCR]'CRLF]
;
```

1. `<FILEURL>` - Indicates files URL: “file://<host>/<url-path>”.
2. `<FXFR_STATUS>` - Indicates the file transfer status as follows:
   - START - Indicates file transfer has started.
   - COMPLD - Indicates file transfer has completed.
3. `<FXFR_RSLT>` - Indicates success or failure of the file transfer. This parameter is only displayed when the file transfer has completed (that is `fxfr_status` is COMPLD). Valid values are:
   - SUCCESS - Indicates a successful file transfer.
   - FAILURE - Indicates a failed file transfer.
4. `[CONDDESCR]` is `<1...62 alphanumeric characters>; Detailed text description of file transfer status.

Example:
```
PETALUMA 02-05-01 10:00:00
A 0100 REPT EVT FXFR
" file://1.2.3.4:21/COMPANY/release/R1.1/oc3,COMPLD,SUCCESS"
;
COMPANYTRA3 09-07-12 10:24:02
A 1 REPT EVT FXFR
"SLOT-16:file://192.168.20.121/builds/pvm.o.dfl,COMPLD,SUCCESS:"Single File Transfer;"
;
TARGET : TRAVERSE, TE100
```

RTRV-SWDL-STATUS

General Description
This command is used to retrieve the software download status of the various equipment slots in a shelf. If no AID is entered or if ALL is entered, the software download status for all slots is retrieved.

Command Syntax

```
RTRV-SWDL-STATUS:<tid>:[<AID>]:<ctag>;
```
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. <AID> is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are in Appendix C—“Access Identifiers,” **Equipment AIDs.**

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:

```
RTRV-SWDL-STATUS:PETALUMA:SLOT-3:123;
RTRV-SWDL-STATUS:PETALUMA::123;
TARGET : TRAVERSE, TE100
```

Response Syntax

```
<cr> <lf> ^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD
^^<BASEPATH><basepath>,FTPHOST=<ftphost>,FTPUSERNAME=<ftpusername>,FFTDHOST=<fttdhost>,FTTDUSE
RNAME=<fttdusername>*^<cr><lf>
AID::[DNLDTYPE=<dnldtype>],[DNLDSTATUS=<dnldstatus>],[DNLDSCHED=<dnlssched>],[PROGRESS=<progress>
>],[ACTTYPE=<acttype>],[ACTSTATUS=<actstatus>],[ACTSCHED=<actsched>],[ACTSWLOAD=<actswload>],[STBYS
WLOAD=<stbyswload>]"<cr><lf>
```

1. <AID>: is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid values are listed in Appendix C—“Access Identifiers,” **Equipment AIDs.**

2. BASEPATH: is the relative directory on the FTP server from where the file will be downloaded.

3. FTPHOST: is the IP address of the FTP server from where the software load must be downloaded.

4. FTPUSERNAME: is the user name of the FTP server from where the software load must be downloaded.

5. FTTDHOST: is the TID of the gateway NE that implements the FTTD (File Transfer Translation Device) functionality.

6. FTTDUSERNAME: is the user name of the gateway NE.

7. DNLDTYPE: indicates whether or not the files should overwrite an existing file located at the destination. This parameter has the following values:
   INIT - delete all contents before writing files.
   MERGE - Overwrite existing files of same directory location and filename without deleting old file. (Default)
8. **DNLDSTATUS**: indicates software download status. This parameter has the following values:
   - **NONE**: If no download has been scheduled.
   - **INPROGRESS**: If download is in progress.
   - **FAILED**: If scheduled download has failed because of some reason.
   - **OK**: Download has succeeded.
   - **ABORTED**: If download was aborted by issuing ABORT-FXFR command.
   - **RETRY**: If download has failed and NE is retrying to complete the download.
   - **SCHEDULED**: If download has been scheduled for a later time.

9. **DNLDSCHED**: Provides information about download schedule in the format "yy-MM-dd HH-mm-ss". If no download has been scheduled, the “NOTSET” value is returned for this parameter.

10. **PROGRESS**: Indicates the software download progress in percentage terms. This parameter is updated after every 20% completion in the software to be downloaded.

11. **ACTTYPE**: Indicates the type of activation. Valid values are:
    - **SA**: indicates service-affecting upgrade allowed.
    - **NSA**: indicates service-affecting upgrade not allowed. Thus applying downloaded files causing service impact will be denied. The rejection will be on a per slot basis and an event indicating the rejection will be sent to the user. (Default)
    - **SPARE**: This option is to be used when the internal software checks need to be bypassed while activating the newly downloaded software load. This option should be used with utmost care. This option basically ignores any failure conditions like communication failure related to the slot on which software load has to be activated.

12. **ACTSTATUS**: Indicates activation status. Valid values are:
    - **NONE**: If no activation has been scheduled.
    - **INPROGRESS**: If activation is in progress.
    - **FAILED**: If scheduled activation has failed because of some reason.
    - **OK**: Activation has succeeded.
    - **ABORTED**: If activation was aborted.
    - **SCHEDULED**: If activation has been scheduled for a later time.

13. **ACTSCHED**: Provides information about activation schedule in the format "yy-MM-dd HH-mm-ss". If no activation has been scheduled “NOTSET” value is returned for this parameter.

14. **ACTSWLOAD**: Current active software load.

15. **STBYSWLOAD**: Current standby software load.
General Description

Using the COPY-RFILE command RFBU option, a TL1 user can upload a single file out of the NE. This command is used to retrieve a single file upload status.

Command Syntax

```
RTRV-FILEUPLOAD-STATUS:<tid>::<ctag>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
Example:
RTRV-FILEUPLOAD-STATUS:PETALUMA::123;
TARGET : TRAVERSE, TE100

Response Syntax

RTRV-FILEUPLOAD-STATUS:PETALUMA::ctag;
<Target> <Timestamp> <SID> 

M^<ctag> COMPLD

^^^"<AID>::[SRCURL=<srcurl>],[DESTURL=<desturl>],[FTPHOST=<ftphost>],[FTPU_USERNAME=<ftpusername>],[FTTD_HOST=<fttdhost>],[FTTDUSERNAME=<fttdusername>],[STATUS=<status>]"<cr><lf>*

1. `<AID>` is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid values are in Appendix C—“Access Identifiers” in the Equipment section. This is the slot number of the card from where the file is being retrieved.

   Note: In Rel. 2.1, file retrieval is supported only from the active GCM in case of Traverse and from the active SC card in case of TE100.

2. SRCURL is the relative directory on the NE from where the file will be uploaded. The format for this parameter is the same as that for the `<srcurl>` parameter in the COPY-RFILE command.

3. DESTURL is the relative directory on the FTP server, where the uploaded file will be copied. The format for this parameter is the same as that for the `<desturl>` parameter in the COPY-RFILE command.

4. FTPHOST is the IP address of the FTP server to where the file has to be uploaded.

5. FTPUSERNAME is the user name of the FTP server to where the file has to be uploaded.

6. FTTDHOST is the TID of the gateway NE that implements the FTTD (File Transfer Translation Device) functionality. This parameter is used in case the NE from where the file being uploaded is reachable only via a GNE.

7. FTTDUSERNAME is the user name of the gateway NE.

8. STATUS. The current status of file upload operation. Valid values are:

   NONE
   INPROGRESS
   FAILED
   SUCCESS

Example:
RTRV-FILEUPLOAD-STATUS:PETALUMA::ctag;
<Target> <Timestamp> <SID> 

M^<ctag> COMPLD

"SLOT-16::SRCURL=file://flash:/pvm.o.dfl,DESTURL=file://builds/pvm.o.dfl,FTPHOST=192.168.20.121,FTPU_USERNAME=tmb,FTTDHOST=,FTTDUSERNAME=,STATUS=INPROGRESS"

TARGET : TRAVERSE, TE100
**APPLY**

**General Description**

The following command requests the shelf to apply the downloaded software.

**Command Syntax**

```
APPLY:<tid>[:<AID>]:<ctag>[:[,<date>],[<time>],]<TYPE>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **<AID>** - An optional AID is provided to allow specification of equipment within the shelf. Valid values are equipment AIDs as shown in Appendix C—“Access Identifiers” in the Equipment AIDs section.
   - If the AID is not present in the command, the system will assume the command as a request to apply the downloaded files for all equipments. Software upgrade causing NSA will be rejected and the rejection will be on a per card basis. An event indicating the rejection will be generated.
3. **date** - is the date on which the command has to be executed. Expected date format is yy-MM-dd. If no date is specified the current date is assumed.
   - Where:
     - `<yy>` - indicates the year of software load activation.
     - `<mm>` - indicates the month of software load activation.
     - `<dd>` - indicates the date of software load activation.
   - `<TIME>` - Indicates the exact time at which software load activation should occur. It takes the following format:
     - `<hh-mm-ss>`
4. **time** - is the time at which the command has to be executed. Expected date format is HH-mm-ss. If no time is specified the current time is assumed.
   - Where:
     - `<hh>` - indicates the hour of activation.
     - `<mm>` - indicates the minute of activation.
     - `<ss>` - indicates the second of activation.
5. **TYPE** – Indicates the type of activation. An optional parameter.
   - **SA** - indicates service-affecting upgrade allowed.
   - **NSA** - indicates service-affecting upgrade not allowed, thus applying downloaded files causing service impact will be denied. The rejection will be on a per slot basis and an event indicating the rejection will be sent to the user. (Default)
   - **SPARE** – This option is to be used when the internal software checks need to be bypassed while activating the newly downloaded software load. This option should be used with utmost care. This option basically ignores any failure conditions like communication failure related to the slot on which software load has to be activated.

**Example:**

```
APPLY:PETALUMA::123;
```

**TARGET** : TRAVERSE, TE100
**ABORT-FXFR**

**General Description**

If at any point of time the software download procedure on any slot needs to aborted, the `ABORT` command can be used. It can also be used to cancel any scheduled software download. If any software procedure (scheduled or in progress) is being aborted, any corresponding scheduled activation procedure(s) will also be cancelled.

**Command Syntax**

```
ABORT-FXFR:[<tid>]:<AID>:<ctag>:[<TXFRTYPE>];
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **<AID>** - Valid values are equipment AIDs as shown in Appendix C—“Access Identifiers” in the Equipment AIDs section. This is a mandatory parameter. It indicates the slot number on which software download has to be aborted.
3. **TXFRTYPE** - Indicates the type of software download procedure that needs to be aborted. An optional parameter. **NOTE:** This parameter is not supported in Rel. 2.1. Valid values are:
   - **SWDL** - indicates that any software download procedure on the slot indicated by AID parameter (scheduled or in progress) needs to be aborted. This aborts any activation schedule as well. (Default)
   - **RFR** - indicates that any single file transfer procedure to the NE on the slot indicated by AID parameter from remote FTP server (scheduled or in progress) needs to be aborted. **Note:** This value is not supported for Release 2.1.
   - **RFBU** - indicates that any single file transfer procedure from the NE on the slot indicated by AID parameter to remote FTP server (scheduled or in progress) needs to be aborted. **Note:** This value is not supported for Release 2.1.

**Example:**

```
APPLY:PETALUMA::123;
```

**TARGET : TRAVERSE, TE100**
Ethernet

This section contains commands related for Ethernet equipment, interfaces, and services. These commands supports both legacy and NGE models.

**ED-EQPT-ETH**

**General Description**

This command is used to edit parameter values for the Ethernet equipment. On an edit command, if a parameter value is to remain the same, leave the parameter out of the command syntax.

**Command Syntax**

```
ED-EQPT-ETH:<tid>:<AID>:<ctag>:::[MACAGING=<macging>],[LOHOLDOFFTMR=<loholdofftmr>],[HOHOLDOFFTMR=<hoholdofftmr>],[LCASLOWTR=<lcaslowtr>],[LCASHOWTR=<lcashowtr>],[LOMAP=<lomap>],[ALTETHTYPE=<altethtype>],[FEALTETHTYPE=<fealtethtype>],[FEEOSALTETHTYPE=<feeoaltethtype>],[EGRCOS1PRTY=<egrcos1prty>],[EGRCOS2PRTY=<egrcos2prty>],[EGRCOS3PRTY=<egrcos3prty>];
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier for the Ethernet card. Valid values are listed in Appendix C—“Access Identifiers” in the Equipment AIDs section.
3. **MACAGING:** Aging timer of MAC addresses (5 to 1,000,000 seconds). Default value is 300 seconds. For TE100 following values are valid: 280, 4200, 12600, 50400, 180000.
4. **LOHOLDOFFTMR** LCAS Holdoff timer (0 to 100) for high-order path (units of 100ms). Default value is 1.
5. **HOHOLDOFFTMR** LCAS Holdoff timer (0 to 100) for low-order path (units of 100ms). Default value is 1.
6. **LCASLOWTR:** LCAS wait-to-restore timer (1 to 60 min) for low-order path. Default value is 5.
7. **LCASHOWTR:** LCAS wait-to-restore timer (1 to 60 min) for high-order path. Default value is 5.
8. **LOMAP:** Low order Mapping supported. Valid values are:
   - VT15/VC11 (Default)
   - VT2/VC12
9. **ALTETHTYPE:** Alternate VLAN tag supported. Valid values are:
   - 8100 (Default)
   - 9100
10. **FEALTETHTYPE:** Alternate vlan tag supported is valid for FE ports. Valid values are:
    - Y - Valid for FE
    - N - Not valid for FE
11. **FEEOSALTETHTYPE:** Alternate vlan tag supported is valid for FE EOS. Valid values are:
    - Y - Valid for FE EOS
    - N - Not valid for FE EOS
12. **EGRCOS1PRTY/EGRCOS2PRTY/EGRCOS3PRTY:** Egress priority value for different COS. Valid values are 0 to 7.

**Note:** This parameter is applicable to TE100 only.

Example:
```
ED-EQPT-ETH:PETALUMA:SLOT-3:ctag:::BRDGPRTY=5;
```
**General Description**

This command is used to retrieve Ethernet attributes of equipment.

**Command Syntax**

```
RTRV-EQPT-ETH:<tid>:<AID>:<ctag>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. **AID** is the Access Identifier for the Ethernet card. Valid values are shown in Appendix C—“Access Identifiers” in the Equipment AIDs section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

**Example:**

```
RTRV-EQPT-ETH:PETALUMA:SLOT-3:123:;
```

**Note:** Command is not available in Rel 2.0.

**Response Syntax**

```
<cr><lf><cr>
<SID>^<YY-MM-DD>^<HH:MM:SS> <cr><lf>
M^<ctag> COMPLD
```

```
AID::[MACAGING=<macging>,][LOHOLDOFFTMR=<loholdofftmr>],[LCASHOHOLDOFFTMR=<lcashoholdofftmr>],[LCASLOWTR=<lcaslowtr>],[HOWTR=<howtr>],[LOMAP=<lomap>],[ALTETHTYPE=<altethtype>],[FEALTETHTYPE=<fealtethtype>],[FEEOSALTETHTYPE=<feeosaltethtype>],[EGRCOS1PRTY=<egrcos1prty>],[EGRCOS2PRTY=<egrcos2prty>],[EGRCOS3PRTY=<egrcos3prty>];
```

ED-STP

**General Description**

This command is used to edit the spanning tree protocol attributes of equipment.

**Command Syntax**

```
ED-STP:<tid>:<AID>:<ctag>:::BRDGPRTY=<brdgprty>;
```
RTRV-STP

**General Description**

This command is used to retrieve spanning tree protocol attributes of equipment.

**Command Syntax**

```
RTRV-STP:<tid>:<AID>:<ctag>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the Access Identifier for the Ethernet card. Valid values are shown in Appendix C—“Access Identifiers” in the Equipment AIDs section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **BRDGPRTY**: Priority (0 to 15) assigned for rapid spanning tree protocol. Default is 8.

**Example:**

```
ED-STP:PETALUMA:SLOT-3:123:;
TARGET : TRAVERSE, TE100
```

---

**Response Syntax**

```
<cr> <lf> <lf>^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^<ctag> COMPLD
^^^^<AID>:[BRDGID=<brdgid>],[BRDGPRTY=<brdgprty>],[ROOTID=<rootid>],[ROOTPRTPRTY=<rootprtprty>],[ROOTPRTID=<rootaid>]: <pst>,<sst>^<cr><lf>
```

1. **AID** is the Access Identifier for the Ethernet card. Valid values are shown in Appendix C—“Access Identifiers” in the Equipment AIDs section.
2. **BRDGID**: 8-byte string of bridge ID number for rapid spanning tree protocol.
3. **BRDGPRTY**: Priority (0 to 15) assigned for rapid spanning tree protocol. Default is 8.
4. **ROOTID**: Bridge ID of the root bridge.
5. **ROOTPRTPRTY**: Priority of the Port number connected to the root bridge.
6. **ROOTPRTID**: Port ID connected to the root bridge.
### General Description
This command is used to retrieve the MAC table.

### Command Syntax

```
RTRV-MACTBL:<tid>:<AID>:<ctag>[::[<PRTID>],[<VLANID>],[<MACADDR>],[PRTTYPE],[<SERVICE>]];]
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the Access Identifier for the Ethernet card. Valid values are shown in Appendix C—“Access Identifiers” in the Equipment AIDs section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **PRTID**: MAC table requested for Ethernet port. Valid integer port number.
5. **VLANID**: MAC table requested for specified VLAN ID.
6. **MACADDR**: Retrieve for specified MAC address in format aa:bb:cc:dd:ee:ff
7. **PRTTYPE**: Retrieve MAC table for specified port type. Valid values are:
   - GBE
   - ETH
   - LAG (Traverse only)
   - EOS
8. **SERVICE**: Retrieve for particular service. Name of the service.

### Example

```
RTRV-MACTBL:PETALUMA:SLOT-3:123::GBE-3-1;
```

### Response Syntax

```
<cr> <lf> <^t><YY-MM-DD><HH:MM:SS> <cr> <lf>
M<^c><ctag> COMPLD
<^m><AID>::MACADDR=<MACADDR>,[VLANID=<vlanid>],PRTID=<prrid>^*<cr><lf>
```

Repeated the row for each MAC address.
1. AID is the Access Identifier for the Ethernet card. Valid values are shown in Appendix C—“Access Identifiers” in the Equipment AIDs section.
2. PRTID MAC table requested for Ethernet port. Valid integer port number.
3. VLANID: MAC table requested for specified VLAN ID.
4. MACADDR: Retrieve for specified MAC address in format aa:bb:cc:dd:ee:ff
5. PRTTYPE: Retrieve MAC table for specified port type. Valid values are:
   GBE
   ETH
   LAG (Traverse only)
   EOS
6. SERVICE: Retrieve MAC addresses for particular service. Name of the service.

Example:
RTRV-MACTBL:PETALUMA:SLOT-3:123::GBE-3-1;
<cr> <lf> <lf>
^^^< PETALUMA >^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD
^^^"SLOT-3 ::1,22,00:01:22:ff"+<cr><lf>;
TARGET : TRAVERSE, TE100

DLT-MAC

General Description
This command is used to delete dynamic entries in the MAC table.

Command Syntax

```
DLT-MAC:<tid>::<AID>::<ctag>::[<PRTID>::]<VLANID>::[<MACADDR>::]<PRTTYPE>::[<SERVICE>::];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the Access Identifier for the Ethernet card. Valid values are listed in Appendix C—“Access Identifiers” in the Equipment AIDs section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. PRTID: Delete MAC entries for Ethernet port. Valid integer port number.
5. VLANID: Delete MAC entries for specified VLAN ID.
6. MACADDR: Delete MAC entries for MAC address specified in format aa:bb:cc:dd:ee:ff
7. PRTTYPE: Delete MAC entries for specified port type. Valid values are:
   GBE
   ETH
   LAG (Traverse only)
   EOS
8. SERVICE: Delete MAC entries for particular service. Name of the service.
**ED-ETH**

**General Description**

This command is used to edit parameter values for the Ethernet facility. If a parameter value is to remain the same, leave the parameter out of the command syntax.

**Command Syntax**

```
ED-ETH:<tid>:<AID>:<ctag>:::[SPEED=<speed>],[AUTONEGO=<autonego>],[ADHD10M=<adhd10m>],[ADFD10M=<adfd10m>],[ADHD100M=<adhd100m>],[ADFD100M=<adfd100m>],[ADHD1000M=<adhd1000m>],[ADFD1000M=<adfd1000m>],[ADPAUSE=<adpause>],[ADPAUSERX=<adpauserx>],[ADPAUSERTX=<adpausertx>],[PAUSEFR=<pausefr>],[FORCE-MODE=<forcemode>],[TAGGING=<tagging>],[FRAMETYPE=<frametype>],[JUMBOFR=<jumbofr>],[JUMBOSIZE=<jumbosize>],[LIP=<lip>],[ALTVLANETHTYPE=<altvlanethtype>],[MIR=<mir>],[CUST=<custname>],[CUSTTAG=<custtag>],[ALMPROF=<almprof>],[PMTEMPLATE=<pmttemplate>],[XOVER=<xover>],[DUPLEX=<duplex>],[LSRCTL=<lsrctl>],[RECPLSWDT=<recplswdt>],[LSRMODE=<lsrmode>],[INGRPRTY=<ingrprty>]:[<pst>];
```
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the Access Identifier for the Ethernet facility. Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs.**
3. SPEED (Traverse only): \{100T\10T\} For 100TX port.
4. AUTONEGO indicates if auto negotiation is on or off. Valid for 100TX.
   - ON = enabled (Default)
   - OFF = disabled
5. ADHD10M/ADHD100M/ADHD1000M indicates if the 10/100/1000 Mbps half duplex mode is included in the advertisement of auto negotiation. Valid for NGE only.
   - Y = Included in advertisement. (Default)
   - N = Not included in advertisement.
6. ADFD10M/ADFD100M/ADFD1000M indicates if the 10/100/1000 Mbps full duplex mode is included in the advertisement of auto negotiation. Valid for NGE only.
   - Y = Included in advertisement. (Default)
   - N = Not included in advertisement.
7. ADPAUSE indicates the advertised PAUSE parameter when auto-negotiation is enabled. For 100TX NGE port.
   - ON = Enabled. (Default)
   - OFF = Disabled
8. ADPAUSETX indicates the advertised PAUSE TX parameter when auto-negotiation is enabled. For GBE NGE port.
   - Enabled. (Default)
   - Disabled
9. ADPAUSERX indicates the advertised PAUSE RX parameter when auto-negotiation is enabled. For GBE NGE port.
   - Enabled. (Default)
   - Disabled
10. PAUSEFR indicates the forced PAUSE parameter when auto-negotiation is disabled. For NGE only.
    - Enabled (Default)
    - Disabled
    - RxOnly (Not valid for ETH100TX)
    - TxOnly (Not valid for ETH100TX)
11. FORCE-MODE (Traverse only. Not supported in Rel 2.1) indicates the forced speed and half- or full-duplex mode to use when auto negotiation is disabled.
    - HD10M = 10 Mbps half duplex
    - FD10M = 10 Mbps full duplex
    - HD100M = 100 Mbps half duplex
    - FD100M = 100 Mbps full duplex
    - FD1000M = 1000Mbps full duplex (applicable to GbE ports)
12. TAGGING: indicates the tagging mode for the port.
   PORTAGGED: Port tagging. (Default)
   CUSTTAGGED: Customer tagging
   SVCTAGGED: Service tagging
   UNTAGGED (TE100 only): Untagged

13. FRAMETYPE (Traverse only): indicates the type of Ethernet frames. For NGE only.
   IEEE-SNAP

14. JUMBOFR: indicates if jumbo frames are supported. On TE100 this parameter is applicable for
   GBE port only.
   Enabled = Jumbo frames are supported. (Default)
   Disabled = Jumbo frames are not supported

15. JUMBOSZ: indicates the size of jumbo frames (1522 to 9600 bytes) supported when
    JUMBOFR=ENABLED. For TE100 only one frame size (i.e., 9600) is supported.
    IEEE-802
    ETHERnet-II (Default)

16. LIP (Traverse only): indicates if link integrity propagation is enabled. This parameter only applies
    to Ethernet cards prior to R2.0. New Ethernet cards introduced thereafter have LIP control on the
    line service (Refer to ENT-ETHSVC-LINE command).
    Y = Link integrity propagation is on (enabled).
    N = Link integrity propagation is off (disabled). (Default)

17. ALTVLANETHTYPE: indicates the Ethertype value in the two-byte length/type field for VLAN
    tagged frames. The default shall be the normally used value 0x8100. Some vendors use other
    Ethertype values (for example, Extreme uses 0x9100). To interoperate, the parameter can be
    modified. Valid values are:
    8100 (Default)
    CUSTOM - This indicates the user-defined value. For example 9100, etc.

18. MIR: indicates the maximum information rate for the port before generating PAUSE for ingress
    policing. The value range is 1 to 1000 Mbps, in crements of 1 Mbps. The default value is the port
    speed.

19. CUST: Indicates the customer name. None indicates no customer selected.

20. CUSTTAG: Indicates the customer description for this facility. None indicates no customer
    description.

21. ALMPROF: indicates the alarm profile for the Ethernet port.

22. PMTPL: indicates the PM template for the Ethernet port.

23. XOVER: indicates the crossover selection. For 100TX only.
    Y = Crossover selection is enabled
    N = Crossover selection is disabled. (Default)

24. DUPLEX indicates half duplex or full duplex for 100TX port only
    HALF
    FULL (Default)
25. LSRCTL to switch on laser. For Optical Ethernet port only.
   ON (Default)
   OFF
26. LSRMODE (Traverse only): Indicates operation mode of auto laser shutdown.
   DISABLED - Auto laser shutdown function is disabled. (Default)
   AUTOMATIC - Auto laser shutdown function is in automatic recovery mode.
   MANUAL - Auto laser shutdown function is in manual recovery mode.
27. RECPLSWDT (Traverse only): Indicates the recovery pulse width for auto laser shutdown (ALS) recovery. Value range is 2 to 10 seconds. Default is 5 seconds.
28. INGRPTRY (TE100 only): Ingress priority setting. Valid values are 0 through 7. Default is 0.
29. PRINTINUSE (TE100 only):
30. <pst> Desired Primary State.
   IS
   OOS

Example:
ED-ETH:PETALUMA:FAC-1-1:ctag::::OOS;
TARGET : TRAVERSE, TE100

RTRV-ETH

General Description
This command is used to retrieve Ethernet port attributes.

Command Syntax

RTRV-ETH:<tid>:<AID>:<ctag>;;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier for the Ethernet port. Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the Ethernet section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RTRV-ETH:PETALUMA:FAC-1-1:123;;
TARGET : TRAVERSE, TE100

Response Syntax
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TID</strong></td>
<td>Target Identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td><strong>AID</strong></td>
<td>Access Identifier for the Ethernet facility. Valid values are listed in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong></td>
</tr>
<tr>
<td><strong>SPEED</strong></td>
<td>Traverse only {100T</td>
</tr>
<tr>
<td><strong>AUTONEGO</strong></td>
<td>indicates if auto negotiation is on or off. Valid for 100TX</td>
</tr>
<tr>
<td><strong>MACADDR</strong></td>
<td>indicates MAC address of Ethernet port.</td>
</tr>
<tr>
<td><strong>ADHD10M/ADHD100M/ADHD1000M</strong></td>
<td>indicates if the 10/100/1000 Mbps half duplex mode is included in the advertisement of auto negotiation. Valid for NGE only.</td>
</tr>
<tr>
<td><strong>ADFD10M/ADFD100M/ADFD1000M</strong></td>
<td>indicates if the 10/100/1000 Mbps full duplex mode is included in the advertisement of auto negotiation. Valid for NGE only.</td>
</tr>
<tr>
<td><strong>ADPAUSE</strong>, <strong>ADPAUSERX</strong>, <strong>ADPAUSETX</strong></td>
<td>indicates the advertised PAUSE parameter when auto-negotiation is enabled. For 100TX NGE port.</td>
</tr>
<tr>
<td><strong>ADPAUSE RX</strong></td>
<td>indicates the advertised PAUSE rx parameter when auto-negotiation is enabled. For GBE NGE port.</td>
</tr>
</tbody>
</table>

1. **TID** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the Access Identifier for the Ethernet facility. Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs.**
3. **SPEED** ( Traverse only ) \{100T|10T\} For 100Tx port
4. **AUTONEGO**: indicates if auto negotiation is on or off. Valid for 100TX
   - ON = Enabled (Default)
   - OFF = Disabled
5. **MACADDR** indicates MAC address of Ethernet port.
6. **ADHD10M/ADHD100M/ADHD1000M**: indicates if the 10/100/1000 Mbps half duplex mode is included in the advertisement of auto negotiation. Valid for NGE only.
   - Y = Included in advertisement
   - N = Not included in advertisement
7. **ADFD10M/ADFD100M/ADFD1000M**: indicates if the 10/100/1000 Mbps full duplex mode is included in the advertisement of auto negotiation. Valid for NGE only.
   - Y = Included in advertisement
   - N = Not included in advertisement
8. **ADPAUSE**: indicates the advertised PAUSE parameter when auto-negotiation is enabled. For 100TX NGE port.
   - Y = Enabled
   - N = Disabled
9. **ADPAUSETX**: indicates the advertised PAUSE tx parameter when auto-negotiation is enabled. For GBE NGE port.
   - Enabled
   - Disabled
10. **ADPAUSE RX**: indicates the advertised PAUSE rx parameter when auto-negotiation is enabled. For GBE NGE port.
    - Enabled
    - Disabled
11. PAUSEFR: indicates the forced PAUSE parameter when auto-negotiation is disabled. For NGE only.
   Enabled
   Disabled
   RxOnly (Not valid for ETH100TX)
   TxOnly (Not valid for ETH100TX)

12. FORCE-MODE (Traverse only. Not supported in Rel 2.1): indicates the forced speed and half- or full-duplex mode to use when auto negotiation is disabled.
   HD10M - 10 Mbps half duplex
   FD10M - 10 Mbps full duplex
   HD100M - 100 Mbps half duplex
   FD100M - 100 Mbps full duplex
   FD1000M - 100Mbps full duplex (applicable to GbE ports)

13. TAGGING: indicates the tagging mode for the port.
   PORTTAGGED - Port tagging
   CUSTTAGGED - Customer tagging
   SVCTAGGED - Service tagging
   UNTAGGED (TE100 only) - Untagged

14. FRAMETYPE (Traverse only): indicates the type of Ethernet frames. For NGE only.
   SNAP - IEEE SNAP
   802 - IEEE 802
   ETHII - Ethernet II

15. JUMBOFR indicates if jumbo frames are supported
   Enabled - Jumbo frames are supported
   Disabled - Jumbo frames are not supported

16. JUMBOSZ indicates the size of jumbo frames (1522 to 9600 bytes) supported when JUMBOFR= ENABLED. For TE100 only one frame size (i.e., 9600) is supported on GBE port only.

17. LIP (Traverse only) indicates if link integrity propagation is enabled. This parameter only applies to Ethernet cards prior to R2.0. New Ethernet cards introduced thereafter have LIP control on the line service (Refer to ENT-ETHSVC-LINE command).
   Y - Link integrity propagation is on (enabled)
   N - Link integrity propagation is off (disabled)

18. LIPST (Traverse only): indicates current state of LIP.
   OK
   Rmt-Eth-Fail
   Rx-Path-Fail
   Loc-Eth-Fail
   Tx-Path-Fail

19. ALTVLANETHTYPE: indicates the Ethertype lave in the two-byte length/type field for VLAN tagged frames. The default shall be the normally used value 0x8100. Some vendors use other Ethertype values (for example, Extreme uses 0x9100). To interoperate, the parameter can be modified.
20. MIR: indicates the maximum information rate for the port before generating PAUSE for ingress policing. The value range is 1 to 1000 Mbps, in increments of 1 Mbps. The default value is the port speed.
21. CUST: Indicates the customer name. None indicates no customer selected.
22. CUSTTAG: Indicates the customer description for this facility. None indicates no customer description.
23. ALMPROF: indicates the alarm profile for the Ethernet port.
24. PMTPL: indicates the PM template for the Ethernet port.
25. XOVER: indicates the crossover selection. For 100TX only.
   Y - Crossover selection is enabled
   N - Crossover selection is disabled
26. DUPLEX: indicates half duplex or full duplex for 100TX port only
   HALF
   FULL
27. LSRCTL: to switch on laser. For Optical Ethernet port only.
   ON
   OFF
28. LSRMODE (Traverse only): Indicates operation mode of auto laser shutdown.
   DISABLED - Auto laser shutdown function is disabled.
   AUTOMATIC - Auto laser shutdown function is in automatic recovery mode.
   MANUAL - Auto laser shutdown function is in manual recovery mode.
29. RECPLSWDT (Traverse only): Indicates the recovery pulse width for auto laser shutdown (ALS) recovery. Value range is 2 to 10 seconds. The default value is 5 seconds.
30. TXSTATE: Indicates the current state of optical laser.
   ON
   OFF
31. INGRPRTRY (TE100 only): Ingress priority setting. Valid values are 0 through 7. Default is 0.
32. <pst>: Current primary state.
33. <sst>: Current secondary state.

TARGET : TRAVERSE, TE100
**RTRV-ETH-STATUS**

**General Description**

This command is used to retrieve the Ethernet port current status.

**Command Syntax**

RTRV-ETH-STATUS:<tid>:<AID>:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier for the Ethernet port. Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** under the Ethernet section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**

RTRV-ETH-STATUS:PETALUMA:FAC-1-1:123;;

TARGET : TRAVERSE, TE100

**Response Syntax**

<cr> <lf> <lf>

^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD

^^^<AID>::<PAUSEFRST=<pausefrst>,[SPEED=<speed>],[DUPLEXST=<duplexst>],[XOVERST=<xoverst>],[LNKST=<lnkst>]: <pst>,<sst>"+<cr><lf>

1. AID is the Access Identifier for the Ethernet facility. Valid values are listed in Appendix C—“Access Identifiers,” **Facility AIDs.**
2. PAUSEFRST: Valid values are:
   - Enabled
   - Disabled
   - RxOnly (Not valid for ETH100TX)
   - TxOnly (Not valid for ETH100TX)
3. SPEED: Negotiated speed. Valid values are 1000T|100T|10T
4. DUPLEXST: Valid values HALF or FULL
5. XOVERST: Valid values are:
   - Y : Crossover cable
   - N : Straight cable
6. LINKST
   - Enabled
   - Disabled

TARGET : TRAVERSE, TE100

**Note:** Command valid for NGE only.
OPR-RENEGO-ETH

General Description
This command is used to initiate renegotiation over the Ethernet facility.

Command Syntax

OPR-RENEGO-ETH:[<tid>]:<AID>:<ctag>[:];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the Access Identifier for the Ethernet facility. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
OPR-RENEGO-ETH:PETALUMA:FE-3-1:ctag;

TARGET : TRAVERSE, TE100

Note: Command not supported in Release TR2.1. Command valid for NGE only.

ED-ETH-QOS

General Description
This command is used to edit QOS parameter values for the Ethernet facility. If a parameter value is to remain the same, then leave the parameter out of the command syntax.

Command Syntax

ED-ETH-QOS:<tid>::<AID>::<ctag>::[FIFORATE=<fiforate>],[PHBGTYPE=<phbgtype>],[WFQW1=<wfqw1>],[WFQW2=<wfqw2>],[WFQW3=<wfqw3>],[WFQW4=<wfqw4>],[COS1MODE=<cos1mode>],[COS1GREENMIN=<cos1greenmin>],[COS1GREENMAX=<cos1greenmax>],[COS1YELLOWMIN=<cos1yellowmin>],[COS1YELLOWMAX=<cos1yellowmax>],[COS2MODE=<cos2mode>],[COS2GREENMIN=<cos2greenmin>],[COS2GREENMAX=<cos2greenmax>],[COS2YELLOWMIN=<cos2yellowmin>],[COS2YELLOWMAX=<cos2yellowmax>],[COS3MODE=<cos3mode>],[COS3GREENMIN=<cos3greenmin>],[COS3GREENMAX=<cos3greenmax>],[COS3YELLOWMIN=<cos3yellowmin>],[COS3YELLOWMAX=<cos3yellowmax>],[COS4MODE=<cos4mode>],[COS4GREENMIN=<cos4greenmin>],[COS4GREENMAX=<cos4greenmax>],[COS4YELLOWMIN=<cos4yellowmin>],[COS4YELLOWMAX=<cos4yellowmax>],[SHAPING=<shaping>],[CLFR=<clfr>];
**General Description**

This command is used to retrieve Ethernet port QOS parameters.

**Command Syntax**

```
RTRV-ETH-QOS:<tid>:<AID>:<ctag>:
```

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>tid is target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>2.</td>
<td>AID is the Access Identifier for the Ethernet facility. Valid values are shown in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong></td>
</tr>
<tr>
<td>3.</td>
<td>FIFORATE: Indicates the Shaping rate when queue policy is FIFO. Range is (1 to 1000 Mbps for GBE and 1 to 100 for FE). Default for FE is 100 and for GBE is 1000.</td>
</tr>
</tbody>
</table>
| 4.   | PHBGTYPE: Queuing policy (Per hop behavior group type)  
FIFO = FIFO based queue policy  
PRTY = Priority based queue policy  
WFQ = Weighted fair queue policy |
| 5.   | WFQW1/WFQW2/WFQW3/WFQW4: Weight of the CoS1 through CoS4 queues. Range is 1 to 100. For TE100, WFQW4 is not valid. (CoS – Class of Service). |
| 6.   | COS1MODE/COS2MODE/COS3MODE/COS4MODE (Traverse only): Valid values are:  
CUSTOM  
DEFAULT (Default) |
| 7.   | COS1YELLOWMIN/COS2YELLOWMIN/COS3YELLOWMIN/COS4YELLOWMIN (Traverse only): Indicates the minimum bandwidth of y (yellow) marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0. |
| 8.   | COS1YELLOWMAX/COS2YELLOWMAX/COS3YELLOWMAX/COS4YELLOWMAX (Traverse only): Indicates the maximum bandwidth of Yellow marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0. |
| 9.   | COS1GREENMIN/COS1GREENMIN/COS1GREENMIN/COS1GREENMIN (Traverse only): Indicates the minimum bandwidth of Green marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0. |
| 10.  | COS1GREENMAX/COS1GREENMAX/COS1GREENMAX/COS1GREENMAX (Traverse only): Indicates the maximum bandwidth of g (Green) marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0. |
| 11.  | SHAPING: Shaping enabled or disabled.  
Enabled = enabled  
Disabled = disabled (Default) |
| 12.  | CLFR: (TE100 only): Indicates name of the classifier. |

Example:
```
ED-ETH-QOS:PETALUMA:FAC-1-1:ctag::FIFORATE=10;
```

**TARGET**: TRAVERSE, TE100
1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier for the Ethernet port. Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** under the Ethernet section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**Example:**
```
RTRV-ETH-QOS:PETALUMA:FAC-1-1:123:;
```
```
TARGET : TRAVERSE, TE100
```

**Response Syntax**
```
<cr> <lf><SID> <cr> <lf><ctag> COMPLD
```
```
<COS1YELLOWMAX>=<cos1yellowmax>], [COS1GREENMAX]=<cos1greenmax>], [COS1GREENMIN]=<cos1greenmin>], [COS1YELLOWMIN]=<cos1yellowmin>], [COS2MODE]=<cos2mode>], [COS2GREENMIN]=<cos2greenmin>], [COS2GREENMAX]=<cos2greenmax>], [COS2YELLOWMIN]=<cos2yellowmin>], [COS2YELLOWMAX]=<cos2yellowmax>], [COS3MODE]=<cos3mode>], [COS3GREENMIN]=<cos3greenmin>], [COS3GREENMAX]=<cos3greenmax>], [COS3YELLOWMIN]=<cos3yellowmin>], [COS3YELLOWMAX]=<cos3yellowmax>], [COS4MODE]=<cos4mode>], [COS4GREENMIN]=<cos4greenmin>], [COS4GREENMAX]=<cos4greenmax>], [COS4YELLOWMIN]=<cos4yellowmin>], [COS4YELLOWMAX]=<cos4yellowmax>], [SHAPING]=<shaping>], [CLFR]=<clfr>
```
4. **COS1YELLOWMAX/COS2YELLOWMAX/COS3YELLOWMAX/COS4YELLOWMAX**
   (Traverse only): Indicates the maximum bandwidth of Yellow marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
5. **COS1GREENMIN/COS1GREENMIN/COS1GREENMIN/COS1GREENMIN**
   (Traverse only): Indicates the minimum bandwidth of Green marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
6. **COS1GREENMAX/COS1GREENMAX/COS1GREENMAX/COS1GREENMAX**
   (Traverse only): Indicates the maximum bandwidth of g marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
7. **SHAPING:** Shaping enabled or disabled.
   - Enabled = enabled
   - Disabled = disabled (Default)
8. **CLFR (TE100 only):** Indicates name of the classifier.

**TARGET : TRAVERSE, TE100**

**Note:** Command valid for NGE only.

```
RTRV-ETH-QUEUE: <tid>:<AID>:<ctag>;
```
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.

2. AID is the access identifier for the Ethernet port. Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” **Facility AIDs** under the Ethernet section.

3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

**Example:**

RTRV-ETH-QUEUE:PETALUMA:FAC-1-1:123:;

TARGET : TE100

**Response Syntax**

```
<cr> <lf> <ctag>:COMPLD
<ctag>:<AID>::[QUEUE1=<queue1>,[COS1GREENMIN=<cos1greenmin>],[COS1GREENMAX=<cos1greenmax>],
[COS1YELLOWMIN=<cos1yellowmin>],[COS1YELLOWMAX=<cos1yellowmax>],[QUEUE2=<queue2>],[COS2GREENMIN=<cos2greenmin>],[COS2GREENMAX=<cos2greenmax>],[COS2YELLOWMIN=<cos2yellowmin>],[COS2YELLOWMAX=<cos2yellowmax>],
[QUEUE3=<queue3>],[COS3GREENMIN=<cos3greenmin>],[COS3GREENMAX=<cos3greenmax>],[COS3YELLOWMIN=<cos3yellowmin>],[COS3YELLOWMAX=<cos3yellowmax>],[QUEUE4=<queue4>],[COS4GREENMIN=<cos4greenmin>],[COS4GREENMAX=<cos4greenmax>],[COS4YELLOWMIN=<cos4yellowmin>],[COS4YELLOWMAX=<cos4yellowmax>]
```

1. **QUEUE1/ QUEUE2/ QUEUE3/ QUEUE4**: Queue status. Integer value to represent queue count.
2. **COS1YELLOWMIN/COS2YELLOWMIN/COS3YELLOWMIN/COS4YELLOWMIN** (Traverse only): Indicates the minimum bandwidth usage of Yellow marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
3. **COS1YELLOWMAX / COS2YELLOWMAX / COS3YELLOWMAX / COS4YELLOWMAX** (Traverse only): Indicates the maximum bandwidth usage of Yellow marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
4. **COS1GREENMIN/COS2GREENMIN /COS3GREENMIN/COS4GREENMIN** (Traverse only): Indicates the minimum bandwidth usage of Green marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
5. **COS1GREENMAX/COS2GREENMAX/COS3GREENMAX/COS4GREENMAX** (Traverse only): Indicates the maximum bandwidth usage of Green marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.

TARGET : TE100

**ENT-EOS**

**General Description**

This command is used to create an EOS (Ethernet over SONET/SDH) port on an Ethernet card. An EOS is a virtual port facing the network side.
## Command Syntax

```
ENT-EOS:<tid>:<AID>:<ctag>:::CCSIZE=<ccsize>,CCTYPE=<cctype>,[CUST=<cust>],[DESC=<desc>],[SGRPID=<
sgrpid>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>],[GFPFCS=<gfpcfcs>],[LCAS=<lcas>],[LCASWTR=<
lcaswtr>],[LCASHOLDOFF=<lcasholdoff>],[VLANETHYPE=<vlanethype>],[TAGGING=<tagging>],[RSTP=<rstp>],[PAT
HCOST=<pathcost>],[ROOTPRTPRTY=<rootprtprty>],[PLCTTHRES=<plecthres>],[PLCRTHRES=<plecrthres>],[TE10
0LCASCOMP=<te100lcascomp>],[INGRPRTY=<ingrppty>]::<pst>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** in the Ethernet service AID section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **CCTYPE:** indicates the concatenation type. Valid values are:
   - CONTIGUOUS = contiguous concatenation
   - VIRTUAL = virtual concatenation. (Default)
5. **CCSIZE:** indicates the concatenation size. Valid values are:
   - VT1.5 - VT1.5 concatenation size
   - STS1 - STS-1 concatenation size
   - STS3C - STS-3c concatenation size
   - VC11 - VC11 concatenation size
   - VC12 - VC12 concatenation size
   - VC3-HO - VC 3 concatenation size. (Default)
   - VC4 - VC4 concatenation size
6. **CUST:** Indicates the customer name. None indicates no customer selected.
7. **DESC:** Indicates the customer description for this facility. None indicates no customer description.
8. **ALMPROF:** indicates the alarm profile for the Ethernet port.
9. **PMTMPL:** indicates the PM template for the Ethernet port.
10. **SGRPID:** indicates the service group id.
11. **GFPFCS:** Indicates insertion of FCS in GFP encapsulation
   - Enabled - Insert FCS
   - Disabled - Don’t insert FCS. (Default)
12. **LCAS:** Indicates if LCAS is enabled
   - Enabled - LCAS enabled. (Default)
   - Disabled - LCAS disabled
13. **LCASWTR:** Indicates if LCAS WTR is applicable
   - Enabled - Apply wait-to-restore for LCAS.
   - Disabled - No wait-to-restore for LCAS. (Default)
14. **LCASHOLDOFF:** Indicates if LCAS hold off is applicable
   - Enabled - Apply Holdoff for LCAS.
   - Disabled - No holdoff for LCAS. (Default)
Chapter 2  TL1 Commands

Ethernet

15. VLANETHETYPE: Indicates Ethertype used in vlan tagged field. Valid values are:
   810. (Default)
   CUSTOM

16. TAGGING: indicates the tagging mode
   PORTTAGGED : Port tagging. (Default)
   CSTTLAGGED : Customer tagging
   SVCTAGGED : Service tagging

17. RSTP: Indicates if spanning tree protocol is enabled
   Enabled - Enabled
   Disabled - Disabled. (Default)

18. PATHCOST: RSTP cost for the path over this port (1 to 15). Default is 8.

19. ROOTPRTPRTY: RSTP priority for this port (1 to 15). Default is 8.

20. PLCTTHRES: Threshold value for partial loss of capacity, TX (0 to 64). Default is 0.

21. PLCRTHRES: Threshold value for partial loss of capacity, RX (0 to 64). Default is 0.

22. TE100LCASCOMP (Traverse only): Valid values are:
   Enabled = Compatibility with TE100 LCAS.
   Disabled = No Compatibility with TE100 LCAS. (Default).

23. INGPUTRY (TE100 only): Ingress priority setting. Valid values are 0 to 7. Default is 0.

24. <pst> Desired Primary State.
   IS

25. OOS (Default)

Example:
ENT-EOS:PETALUMA:EOS-7-5:ctag::VT1:

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.

ED-EOS

General Description

This command is used to modify an EOS (Ethernet over SONET/SDH) port on an Ethernet card.

Command Syntax

ED-EOS:[<tid>]:<AID>:<etag>::
   [CCSIZE=<ccsize>],[CTYPE=<ctype>],[CUST=<cust>],[DESC=<desc>],[SGRPIID=<sgrpid>],[ALMPROF=<almprof>],[PMTMPL=<pmtmpl>],[GFPFCS=<gfpfcs>],[LCAS=<lcas>],[LCASWTR=<lcaswtr>],[LCASHOLOFF=<lcasholoff>],[VLANETHETYPE=<vlanethetype>],[TAGGING=<tagging>],[RSTP=<rstp>],[PATHCOST=<pathcost>],[ROOTPRTPRTY=<rootprtrpty>],[PLCTTHRES=<plctthres>],[PLCRTHRES=<plcrthres>],[TE100LCASCOMP=<te100lcascomp>],[INGRPRTY=<ingrprty>];[<pst>];
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** in the Ethernet service AID section.
3. ct is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
4. CCTYPE: indicates the concatenation type. Valid values are:
   - CONTIGUOUS - contiguous concatenation
   - VIRTUAL - virtual concatenation
5. CCSIZE: indicates the concatenation size. Valid values are:
   - VT1.5 - VT1.5 concatenation size
   - STS1 - STS-1 concatenation size
   - STS3C - STS-3c concatenation size
   - VC11 - VC11 concatenation size
   - VC12 - VC12 concatenation size
   - VC3-HO - VC 3 concatenation size. (Default)
   - VC4 - VC4 concatenation size
6. CUST: Indicates the customer name. None indicates no customer selected.
7. DESC: Indicates the customer description for this facility. None indicates no customer description.
8. ALMPROF: indicates the alarm profile for the Ethernet port.
9. PMTMLP: indicates the PM template for the Ethernet port.
10. SGRPID: indicates the service group ID.
11. GFPFCS: Indicates insertion of FCS in GFP encapsulation.
    - Enabled - Insert FCS
    - Disabled - Don’t insert FCS. (Default)
12. LCAS: Indicates if LCAS is enabled
    - Enabled - LCAS enabled. (Default)
    - Disabled - LCAS disabled
13. LCASWTR: Indicates if LCAS WTR is applicable.
    - Enabled - Apply wait-to-restore for LCAS.
    - Disabled - No wait-to-restore for LCAS. (Default)
14. LCAHOLDOFF: Indicates if LCAS hold off is applicable.
    - Enabled - Apply Holdoff for LCAS.
    - Disabled - No holdoff for LCAS. (Default)
15. VLANETHTYPE: Indicates Ethertype used in vlan tagged field. Valid values are:
    - 8100 (Default)
    - CUSTOM
16. TAGGING: indicates the tagging mode.
17. PORRTAGGED : Port tagging. (Default)
    - CUSTTAGGED : Customer tagging
    - SVCTAGGED : Service tagging
**RTRV-EOS**

**General Description**

This command is used to retrieve the parameters of an EOS (Ethernet over SONET/SDH) port on an Ethernet card.

**Command Syntax**

```
RTRV-EOS:[<tid>]:<AID>::<ctag>;<pst> Desired Primary State.
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs in the Ethernet service AID section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
Response Syntax

```
<cr> <lf> <lf>
^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD

^^^<AID>:: <cr> <lf> <lf>
COMPLD^^<AID>::<cr> <lf> M^^<ctag>
COMPLD^^<AID>::<cr> <lf> MON^<ctag>
COMPLD^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M^^<ctag>
COMPLD^^<AID>::<cr> <lf> MON^<ctag>

```

```
Chapter 2 TL1 Commands

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. EOS-AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs in the Ethernet service AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. CCTYPE: indicates the concatenation type. Valid values are:
   CONTIGUOUS - contiguous concatenation
   VIRTUAL - virtual concatenation
5. CCSIZE: indicates the concatenation size. Valid values are:
   VT1.5 - VT1.5 concatenation size
   STS1 - STS-1 concatenation size
   STS3C - STS-3c concatenation size
   VC11 - VC11 concatenation size
   VC12 - VC12 concatenation size
   VC3-HO - VC 3 concatenation size. (Default).
   VC4 - VC4 concatenation size
6. CUST: Indicates the customer name. None indicates no customer selected.
7. DESC: Indicates the customer description for this facility. None indicates no customer description.
8. ALMPROF: indicates the alarm profile for the Ethernet port.
9. PMTMPL: indicates the PM template for the Ethernet port.
10. SGRPID: indicates the service group id.
11. GFPFCS: Indicates insertion of FCS in GFP encapsulation.
    Enabled - Insert FCS
    Disabled - Don’t insert FCS. (Default)
12. LCAS: Indicates if LCAS is enabled.
    Enabled - LCAS enabled. (Default)
    Disabled - LCAS disabled
13. LCASWTR: Indicates if LCAS WTR is applicable
   Enabled - Apply wait-to-restore for LCAS.
   Disabled - No wait-to-restore for LCAS. (Default)
14. LCASHOLDOFF: Indicates if LCAS hold off is applicable
   Enabled - Apply Holdoff for LCAS.
   Disabled - No holdoff for LCAS. (Default)
15. VLANETHTYPE: Indicates Ethertype used in vlan tagged field. Valid values are:
   8100 (Default)
   CUSTOM
16. TAGGING: indicates the tagging mode.
   PORTTAGGED : Port tagging. (Default)
   CUSTTAGGED : Customer tagging
   SVCTAGGED : Service tagging
17. RSTP : Indicates if spanning tree protocol is enabled.
   Enabled - Enabled
   Disabled - Disabled. (Default)
18. PATHCOST : RSTP cost for the path over this port (1 to 15). Default is 8.
19. ROOTPRPRTY : RSTP priority for this port (1 to 15). Default is 8.
20. MBRCNT : Number of EOS members (1 to 8).
21. ACTSRCMBR : Number of active source members.
22. ACTSINKMBR : Number of active sink members.
23. RSTPPRTST : RSTP port status. Valid values are:
   DISABLED
   LISTENING
   LEARNING
   FORWARDING
   BLOCKING
24. RSTPPRTROLE : Role of this EOS port.
   DISABLED
   ROOT
   DESIGNATED
   ALTERNATE
   BACKUP
   MASTER
25. PLCTTHRES : Threshold value for partial loss of capacity, TX (0 to 64). Default is 0.
26. PLCRTTHRES : Threshold value for partial loss of capacity, RX (0 to 64)
27. TE100LCASCOMP (Traverse only). Valid values are:
   Enabled = Compatibility with TE100 LCAS
   Disabled = No Compatibility with TE100 LCAS
28. INGPRTRY (TE100 only): Ingress priority setting. Valid values are 0-7. Default is 0.
29. SPEED (TE100 only). Valid values are:
   10T
   100T
   1000T
   10000T
30. <pst> Current Primary State.
31. <sst> Current secondary state.

Example:
RTRV-EOS:PETALUMA:EOS-7-5:ctag;

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.

**DLT-EOS**

**General Description**

This command is used to delete an EOS (Ethernet over SONET/SDH) port on an Ethernet card.

**Command Syntax**

DLT-EOS::<tid>::<AID>::<ctag>::

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the Ethernet service AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
DLT-EOS:PETALUMA:EOS-5-1:ctag;

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.

**ED-EOS-QOS**

**General Description**

This command is used to edit QOS parameter values for the EOS facility. If a parameter value is to remain the same, then leave the parameter out of the command syntax.
Command Syntax

**ED-EOS-QOS:**<tid>::<AID>:::<ctag>::[:FIFORATE=<FIFORATE>],[:PHBGTYPE=<phbgtype>],[:WFQW1=<wfqw1>],[:WFQW2=<wfqw2>],[:WFQW3=<wfqw3>],[:WFQW4=<wfqw4>],[:COS1MODE=<cos1mode>],[:COS1GREENMIN=<cos1greenmin>],[:COS1YELLOWMIN=<cos1yellowmin>],[:COS1YELLOWMAX=<cos1yellowmax>],[:COS2MODE=<cos2mode>],[:COS2GREENMIN=<cos2greenmin>],[:COS2YELLOWMIN=<cos2yellowmin>],[:COS2YELLOWMAX=<cos2yellowmax>],[:COS3MODE=<cos3mode>],[:COS3GREENMIN=<cos3greenmin>],[:COS3GREENMAX=<cos3greenmax>],[:COS3YELLOWMIN=<cos3yellowmin>],[:COS3YELLOWMAX=<cos3yellowmax>],[:COS4MODE=<cos4mode>],[:COS4GREENMIN=<cos4greenmin>],[:COS4GREENMAX=<cos4greenmax>],[:COS4YELLOWMIN=<cos4yellowmin>],[:COS4YELLOWMAX=<cos4yellowmax>],[:SHAPING=<shaping>],[:CLFR=<clfr>];

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the Ethernet service AID section.
3. **FIFORATE:** Indicates the Shaping rate when queue policy is FIFO. Range is (1 to 1000 Mbps for GBE and 1 to 100 for FE). Default for FE is 100 and for GBE is 1000.
4. **PHBGTYPE:** Queuing policy (Per hop behavior group type)
   - FIFO - FIFO based queue policy
   - PRTY - Priority based queue policy
   - WFQ - Weighted fair queue policy
5. **WFQW1/WFQW2/WFQW3/WFQW4:** Weight of the COS1-4 queues. Range is 1 to 100. For TE100 WFQW4 is not valid.
6. **COS1MODE/COS2MODE/COS3MODE/COS4MODE (Traverse only):** For TE100 COS3MODE and COS4MODE are not valid. Valid values are:
   - CUSTOM
   - DISABLED
7. **COS1YELLOWMIN/COS2YELLOWMIN/COS3YELLOWMIN/COS4YELLOWMIN** (Traverse only): Indicates the minimum bandwidth of y marked traffic of COS1-4 services. Valid values are 0 to 8000 (in KB). Default is 0.
8. **COS1YELLOWMAX/COS2YELLOWMAX/COS3YELLOWMAX/COS4YELLOWMAX** (Traverse only): Indicates the maximum bandwidth of y marked traffic of COS1-4 services. Valid range is 0 to 8000 (in KB). Default is 0.
9. **COS1GREENMIN/COS3GREENMIN/COS4GREENMIN** (Traverse only): Indicates the minimum bandwidth of g marked traffic of COS1-4 services. Valid range is 0 to 8000 (in KB). Default is 0.
10. **COS1GREENMAX/COS3GREENMAX/COS4GREENMAX** (Traverse only): Indicates the maximum bandwidth of g marked traffic of COS1-4 services. Valid range is 0 to 8000 (in KB). Default is 0.
11. **SHAPING:** Shaping enabled or disabled.
    - Enabled - enabled
    - Disabled - disabled (default)
12. **CLFR:** Indicates name of the classifier.

Example:

ED-EOS-QOS:PETALUMA:EOS-3-1::<ctag>::FIFORATE=10;
Target Identifier (TID)

This command is used to retrieve EOS port QOS parameters.

Command Syntax

RTRV-EOS-QOS:<tid>:<AID>:<ctag>;;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier for the Ethernet port. Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs under the Ethernet section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RTRV-EOS-QOS:PETALUMA:EOS-3-1:123;;

TARGET : TRAVERSE, TE100

Response Syntax

<cr><lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS><cr><lf>M^^<ctag> COMPLD

<cr><lf>^^^^<AID>::[FIFORATE=<fiforate>],[PHBGTYPE=<phbgtype>],[WFQW1=<wfqw1>],[WFQW2=<wfqw2>],[WFQW3=<wfqw3>],[WFQW4=<wfqw4>],[COS1MODE=<cos1mode>],[COS1GREENMIN=<cos1greenmin>],[COS1GREENMAX=<cos1greenmax>],[COS1YELLOWMIN=<cos1yellowmin>],[COS1YELLOWMAX=<cos1yellowmax>],[COS2MODE=<cos2mode>],[COS2GREENMIN=<cos2greenmin>],[COS2GREENMAX=<cos2greenmax>],[COS2YELLOWMIN=<cos2yellowmin>],[COS2YELLOWMAX=<cos2yellowmax>],[COS3MODE=<cos3mode>],[COS3GREENMIN=<cos3greenmin>],[COS3GREENMAX=<cos3greenmax>],[COS3YELLOWMIN=<cos3yellowmin>],[COS3YELLOWMAX=<cos3yellowmax>],[COS4MODE=<cos4mode>],[COS4GREENMIN=<cos4greenmin>],[COS4GREENMAX=<cos4greenmax>],[COS4YELLOWMIN=<cos4yellowmin>],[COS4YELLOWMAX=<cos4yellowmax>],[SHAPING=<shaping>],[CLFR=<clfr>]++<cr><lf>

1. AID is the Access Identifier for the Ethernet facility. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs.
2. FIFORATE: Indicates the Shaping rate when queue policy is FIFO. Range is (1 to 1000 Mbps for GBE and 1 to 100 for FE). Default for FE is 100 and for GBE is 1000.
3. PHBGTYPE: Queuing policy (Per hop behavior group type)
   FIFO = FIFO based queue policy
   PRTY = Priority based queue policy
   WFQ = Weighted fair queue policy
4. WFQW1/WFQW2/WFQW3/WFQW4: Weight of the COS1-4 queues. Range is 1 to 100. For TE100 WFQW4 is not valid.
### General Description
This command is used to retrieve EOS port Queue status.

### Command Syntax

#### RTRV-EOS-QUEUE:<tid>:<AID>:<ctag>;

1. **tid**: target identifier as described in Chapter 1—“TL1 Overview,” *Staging Parameter Blocks, Target Identifier (TID).*
2. **AID**: access identifier for the Ethernet port. Valid Ethernet AID values are listed in Appendix C—“Access Identifiers,” *Facility AIDs* under the Ethernet section.
3. **ctag**: correlation tag described in Chapter 1—“TL1 Overview,” *Staging Parameter Blocks, Correlation Tag (CTAG).*

Example:

```plaintext
RTRV-EOS-QUEUE:PETALUMA:EOS-3-1:123;;
```

TARGET : Traverse
Response Syntax

```
<cr> <lf> <lf>^^^^<SID>^<YY-MM-DD> <cr> <lf>M^^<ctag> COMPLD
^^^^<AID>::[QUEUE1=<queue1>,][QUEUE2=<queue2>,][QUEUE3=<queue3>,][QUEUE4=<queue4>],[COS1YELLOWMIN=<cos1yellowmin>,][COS1YELLOWMAX=<cos1yellowmax>,][COS1GREENMIN=<cos1greenmin>,][COS1GREENMAX=<cos1greenmax>,][COS2YELLOWMIN=<cos2yellowmin>,][COS2YELLOWMAX=<cos2yellowmax>,][COS2GREENMIN=<cos2greenmin>,][COS2GREENMAX=<cos2greenmax>,][COS3YELLOWMIN=<cos3yellowmin>,][COS3YELLOWMAX=<cos3yellowmax>,][COS3GREENMIN=<cos3greenmin>,][COS3GREENMAX=<cos3greenmax>,][COS4YELLOWMIN=<cos4yellowmin>,][COS4YELLOWMAX=<cos4yellowmax>,][COS4GREENMIN=<cos4greenmin>,][COS4GREENMAX=<cos4greenmax>] "<cr><lf>
```

1. QUEUE1/ QUEUE2/ QUEUE3/ QUEUE4: Queue status. Integer value to represent queue count. QUEUE3 and QUEUE4 are not supported in TE100.
2. COS1YELLOWMIN/COS2YELLOWMIN/COS3YELLOWMIN/COS4YELLOWMIN (Traverse only): Indicates the minimum bandwidth usage of y marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
3. COS1YELLOWMAX/COS2YELLOWMAX/COS3YELLOWMAX/COS4YELLOWMAX (Traverse only): Indicates the maximum bandwidth usage of y marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
4. COS1GREENMIN/COS2GREENMIN/COS3GREENMIN/COS4GREENMIN (Traverse only): Indicates the minimum bandwidth usage of g marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
5. COS1GREENMAX/COS2GREENMAX/COS3GREENMAX/COS4GREENMAX (Traverse only): Indicates the maximum bandwidth usage of g marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.

TARGET : Traverse

**Note:** Command valid for NGE only.

### ENT-EOS-MBR

**General Description**

This command is used to add members to an EOS virtual port. With dynamic LCAS, this command allows the network operator to increase the EOS transport capacity by adding CTPs.

**Command Syntax**

```
ENT-EOS-MBR:<tid>::<AID>::<ctag>::<CCT>::MBRAID=<mbraid>,[ALMPROF=<almprof>];<pst>;
```
ED-EOS-MBR

General Description
This command is used to edit member of an EOS virtual port.

Command Syntax

ED-EOS-MBR:<tid>:<AID>:<ctag>::[CCT]:[ALMPROF=<almprof>],[MBRAID=<mbraid>];<pst>;
RTRV-EOS-MBR

General Description

This command is used to retrieve the parameters of an EOSMBR (Ethernet over SONET/SDH) port on an Ethernet card.

Command Syntax

RTRV-EOS-MBR:[<tid>];<AID>;<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid EOSMBR AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the EOSMBR AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. CCT Indicates directionality. Valid values are:
   - TX
   - RX
   - BI: Bidirectional
5. ALMPROF: indicates the alarm profile.
6. MBRAID: Member AID. This parameter is not supported in Rel. 2.1.
7. <pst>: Desired Primary State.
   - IS
   - OOS

Example:
TARGET: TRAVERSE, TE100

Response Syntax

<cr> <lf> <lf>
^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M^^<ctag> COMPLD
("<AID>:<CCT>:[MBRAID=<mbraid>],[ALMPROF=<almprof>]:pst")<cr> <lf>
General Description

Use this command to retrieve the status parameters of an EOSMBR (Ethernet over SONET/SDH) port on an Ethernet card.

Command Syntax

```
RTRV-EOS-MBRSTATUS: [<tid>];<AID>;<ctag>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid EOSMBR AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the EOSMBR AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
RTRV-EOS-MBR:PETALUMA:EOSMBR-7-5-1:ctag;
```

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.
### DLT-EOS-MBR

**General Description**

This command is used to remove members from an EOS virtual port. With dynamic LCAS, this command allows the network operator to decrease the EOS transport capacity by removing CTPs.

**Command Syntax**

```plaintext
DLT-EOS-MBR::[<tid>]:<AID>:<ctag>;
```
ENT-POL

General Description
This command is used to create the policer.

Command Syntax

```
ENT-POL::AID:<ctag>::[<bwprofcos1>],[<bwprofcos2>],[<bwprofcos3>],[<bwprofcos4>];
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid EOSMBR AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the EOSMBR AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. bwprofcos1-4 : Name of the bandwidth profile assigned to cos1-cos4. For TE100 only bwprofcos1 is applicable.

Example:
ENT-POL::POL-3-1::<ctag>::BwProf1;

TARGET : TRAVERSE, TE100

ED-POL

General Description
This command is used to edit the policer.

Command Syntax

```
ED-POL::AID:<ctag>::[<bwprofcos1>],[<bwprofcos2>],[<bwprofcos3>],[<bwprofcos4>];
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid POL AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. bwprofcos1-4 : Name of the bandwidth profile assigned to cos1-cos4. For TE100 only bwprofcos1 is applicable.
### General Description

This command is used to retrieve a policer.

### Command Syntax

**RTRV-POL**

```plaintext
RTRV-POL::AID:<ctag>::
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid POL AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs.
3. ctag is the correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
4. bwprofcos1-4: Name of the bandwidth profile assigned to cos1-cos4. For TE100 only bwprofcos1 is applicable.

**Example:**

```
ED-POL::POL-3-1:<ctag>::BwProf1;
```

**TARGET : TRAVERSE, TE100**

### Response Syntax

```
<cr> <lf> <i>^<SID>^<YY-MM-DD>^<HH:MM:SS> <lf> <i><M^<ctag> COMPLD
```

```
^<"AID>::bwprofcos1>,<bwprofcos2>,<bwprofcos3>,<bwprofcos4">*;
```

repeated for each AID
### DLT-POL

**General Description**

This command is used to delete a policer.

**Command Syntax**

```
DLT-POL::AID:<ctag>;
```

1. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. `AID` is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid POL AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs**.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
4. `bwprofcos1-4` : Name of the bandwidth profile assigned to cos1-cos4. For TE100 only `bwprofcos1` is applicable.

**Example:**

```
RTRV-POL:PETALUMA:POL-3-1:ctag;
```

**TARGET : TRAVERSE, TE100**

**Note**: Command valid for NGE only.

---

### ENT-LAG

**General Description**

This command is used to create a link aggregation group (LAG).

**Command Syntax**

```
ENT-LAG:[<tid>];<AID>;<ctag>:
```

1. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. `AID` is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID)**. Valid POL AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs**.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

**Example:**

```
DLT-POL::POL-3-1:<ctag>;
```

**TARGET : TRAVERSE, TE100**
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** in the Ethernet service AID section.
3. CTAG is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. TYPE is the type of the Ethernet interfaces for this LAG.
   - FE = 10/100 Mbps Fast Ethernet
   - GbE = Gigabit Ethernet
5. DESC is the user given description string during creation of the LAG.
6. CUST is the name of the customer using this LAG.
7. ALMPROF is the alarm profile to use. When unspecified, the default alarm profile will be used.
8. PMTPL is the PM template to use. When unspecified, the default PM template will be used.
9. VLANETHTYPE: Indicates Ethertype used in vlan tagged field. Valid values are:
   - 8100 (Default)
   - CUSTOM
10. TAGGING: indicates the tagging mode
    - PORTTAGGED - Port tagging (Default)
    - CUSTTAGGED - Customer tagging
    - SVCTAGGED - Service tagging
11. MBRLOSTTHRES: Partial loss of threshold. Valid range is 0-8. Default value is 0.
12. ADVSPEED. Advertised speed. Valid values are:
    - 10T
    - 100T
    - 1000T
    - 10000T
13. FRCDSPEED. Forced Speed. Valid values are:
    - 10T
    - 100T
    - 1000T
    - 10000T
14. AUTONEGO. Indicates if auto negotiation is on or off. Valid for 100TX.
    - ON = enabled (Default)
    - OFF = disabled
15. JUMBOFR indicates if jumbo frames are supported
    - Enabled. Jumbo frames are supported. (Default)
    - Disabled. Jumbo frames are not supported
16. JUMBOSZ indicates the size of jumbo frames (1522 to 9600 bytes) supported when JUMBOFR=ENABLED. For TE100 only one frame size (i.e., 9600) is supported on GBE port only. Default is 9216.
17. MIR indicates the maximum information rate for the port before generating PAUSE for ingress policing. The value range is 1 to 1000 Mbps, in increments of 1 Mbps. Default value is 100Mbps.
18. ADVPAUSE. Advertised pause is on or off. Valid values are:
   ON = enabled (Default)
   OFF = disabled
   TX
   RX
19. FRCDPAUSE. Manual pause. Valid values are:
   ON = enabled (Default)
   OFF = disabled
   TX
   RX
20. DUPLEX indicates half duplex or full duplex. Valid values are:
   HALF
   FULL (Default)
21. PST: Is the Administrative state. Valid values are:
   • IS (Unlocked)
   • OOS (Locked) (Default)

Example:
ENT-LAG:PETALUMA:LAG-5-4:ctag::FE:CUST=customer1;
TARGET : TRA VERSE

ED-LAG

General Description
This command is used to modify parameters for a link aggregation group (LAG).

Command Syntax

ED-LAG:[<tid>]:<LAG-AID>:<ctag>:::[LINK-TYPE=<type>] [,CUSTOMER=<customer>] [ALM-TEMPL=<template>] [PM-TEMPL=<template>];

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid LAG AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs in the Ethernet service AID section.
3. CTAG is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. TYPE: is the type of the Ethernet interfaces for this LAG.
   FE - 10/100 Mbps Fast Ethernet
   GbE - Gigabit Ethernet
5. DESC: is the user given description string during creation of the LAG.
6. CUST: is the name of the customer using this LAG.
7. ALMPROF: is the alarm profile to use. When unspecified, the default alarm profile will be used.
8. PMTML: is the PM template to use. When unspecified, the default PM template will be used.
9. VLANETHTYPE: Indicates Ethertype used in vlan tagged field. Valid values are:
   8100 (Default)
   CUSTOM
10. TAGGING: indicates the tagging mode
    PORTTAGGED - Port tagging (Default)
    CUSTTAGGED - Customer tagging
    SVCTAGGED - Service tagging
11. MBRLOSSTHRES: Partial loss of threshold. Valid range is 0 to 8. Default value is 0.
12. ADVSPEED. Advertised speed. Valid values are:
    10T
    100T
    1000T
    10000T
13. FRCDSPEED. Forced Speed. Valid values are:
    10T
    100T
    1000T
    10000T
14. AUTONEGO. Indicates if auto negotiation is on or off. Valid for 100TX
    ON = enabled (Default)
    OFF = disabled
15. JUMBOFR indicates if jumbo frames are supported
    Enabled. Jumbo frames are supported. (Default)
    Disabled. Jumbo frames are not supported
16. JUMBOSZ indicates the size of jumbo frames (1522 to 9600 bytes) supported when
    JUMBOFR=ENABLED. For TE100 only one frame size (i.e., 9600) is supported on GBE port
    only. Default is 9216.
17. MIR indicates the maximum information rate for the port before generating PAUSE for ingress
    policing. The value range is 1 to 1000 Mbps, in increments of 1 Mbps. Default value is 100Mbps.
18. ADVPAUSE. Advertised pause. Valid values are:
    ON = enabled (Default)
    OFF = disabled
    TX
    RX
19. FRCDPause. Manual pause. Valid values are:
    ON = enabled (Default)
    OFF = disabled
    TX
    RX
20. DUPLEX indicates half duplex or full duplex. Valid values are:
   - HALF
   - FULL (Default)

21. PST. Is the Administrative state. Valid values are:
   - IS (Unlocked)
   - OOS (Locked) (Default)

**TARGET : TRAVERSE**

### RTRV-LAG

**General Description**

This command is used to retrieve the parameters of a LAG (link aggregation group).

**Command Syntax**

```
RTRV-LAG:<[<tid>]><AID>:<ctag>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **LAG-AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the Ethernet service AID section.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

### Response Syntax

```
<cr> <lf>
^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>
M<<ctag> COMPLD

^<<AID>^TYPE=<type>,CUST=<cust>,[DESC=<desc>],[ALMPROF=<almprof>],[PMTMPL=<pmtemplate>],[VLANE THTYPE=<lanethtype>],[TAGGING=<tagging>],[MBRLOSSTHRES=<mbrlossthres>],[ADVSPD=<advspeed>],[FR CDSPEED=<frcdspeed>],[AUTONEGO=<autonego>],[JUMBOFR=<jumbofr>],[JUMBOSZ=<jumbosz>],[MIR=<mir >],[ADVPAUSE=<advpause>],[FRCDPAUSE=<frcdpause>],[DUPLEX=<duplex>],[MBRCNT=<mbrcnt>]:<pst>,<sst>”
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **LAG-AID** is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).**
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **TYPE** is the type of the Ethernet interfaces for this LAG.
   - FE - 10/100 Mbps Fast Ethernet
   - GbE - Gigabit Ethernet
5. DESC: is the user given description string during creation of the LAG.
6. CUST: is the name of the customer using this LAG.
7. ALMPROF: is the alarm profile to use. When unspecified, the default alarm profile will be used.
8. PMTPL: is the PM template to use. When unspecified, the default PM template will be used.
9. VLANETHTYPE: Indicates Ethertype used in vlan tagged field. Valid values are:
   8100 (Default)
   CUSTOM
10. TAGGING: indicates the tagging mode.
    PORTTAGGED - Port tagging. (Default)
    CUSTTAGGED - Customer tagging
    SVCTAGGED - Service tagging
11. MBRLOSSTHRES: Partial loss of threshold. Valid range is 0-8. Default value is 0.
12. ADVSPEED: Advertised speed. Valid values are:
    10T
    100T
    1000T
13. 10000T
14. FRCDSPEED: Forced Speed. Valid values are:
    10T
    100T
    1000T
    10000T
15. AUTONEGO: Indicates if auto negotiation is on or off. Valid for 100TX.
    ON - enabled (Default)
    OFF - disabled
16. JUMBOFR: indicates if jumbo frames are supported.
    Enabled. Jumbo frames are supported. (Default)
    Disabled. Jumbo frames are not supported.
17. JUMBOSZ: indicates the size of jumbo frames (1522 to 9600 bytes) supported when
    JUMBOFR=ENABLED. For TE100 only one frame size (i.e., 9600) is supported on GBE port
    only. Default is 9216.
18. MIR: indicates the maximum information rate for the port before generating PAUSE for ingress
    policing. The value range is 1 to 1000 Mbps, in increments of 1 Mbps. Default value is 100Mbps.
19. ADVPAUSE: Advertised pause. Valid values are:
    ON - enabled (Default)
    OFF - disabled
    TX
    RX
20. FRCDPAUSE: Manual pause. Valid values are:
    ON - enabled (default)
    OFF - disabled
    TX
    RX
**DLT-LAG**

**General Description**
This command is used to delete a link aggregation group (LAG).

**Command Syntax**

```
DLT-LAG: [<tid>]:<LAG-AID>:<ctag>;
```

1. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `AID` is the access identifier as described in SChapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** in the Ethernet service AID section.
3. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

**ED-LAG-QOS**

**General Description**
This command is used to edit QoS parameter values for the LAG facility. If a parameter value is to remain the same, leave the parameter out of the command syntax.

**Command Syntax**

```
ED-LAG-QOS: <AID>:<ctag>:::[FIFORATE=<FIFORATE>],[PHBGTYPE=<phbgtype>],[WFQW1=<wfqw1>],[WFQW2=<wfqw2>],[WFQW3=<wfqw3>],[WFQW4=<wfqw4>],[COS1MODE=<cos1mode>],[COS1GREENMIN=<cos1greenmin>],[COS1YELLOWMIN=<cos1yellowmin>],[COS1YELLOWMAX=<cos1yellowmax>],[COS2MODE=<cos2mode>],[COS2GREENMIN=<cos2greenmin>],[COS2YELLOWMIN=<cos2yellowmin>],[COS2YELLOWMAX=<cos2yellowmax>],[COS3MODE=<cos3mode>],[COS3GREENMIN=<cos3greenmin>],[COS3YELLOWMIN=<cos3yellowmin>],[COS3YELLOWMAX=<cos3yellowmax>],[COS4MODE=<cos4mode>],[COS4GREENMIN=<cos4greenmin>],[COS4YELLOWMIN=<cos4yellowmin>],[COS4YELLOWMAX=<cos4yellowmax>],[SHAPING=<shaping>];
```
### General Description

This command is used to retrieve EOS port QoS parameters.

### Command Syntax

```
RTRV-EOS-QOS:<tid>:<AID>:<ctag>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs in the Ethernet service AID section.
3. FIFORATE: Indicates the Shaping rate when queue policy is FIFO. Range is 1 to 1000 Mbps for GBE and 1 to 100 for FE. Default for FE is 100 and for GBE is 1000.
4. PHBGTYPE: Queuing policy (Per hop behavior group type)
   - FIFO = FIFO based queue policy
   - PRTY = Priority based queue policy
   - WQ = Weighted fair queue policy
5. WFQW1/WFQW2/WFQW3/WFQW4: Weight of the COS1-4 queues. Range is 1 to 100.
6. COS1MODE/COS2MODE/COS3MODE/COS4MODE: For TE100 COS3MODE and COS4MODE are not valid. Valid values are:
   - CUSTOM
   - DISABLED
7. COS1YELLOWMIN/COS2YELLOWMIN/COS3YELLOWMIN/COS4YELLOWMIN: Indicates the minimum bandwidth of y marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.
8. COS1YELLOWMAX/COS2YELLOWMAX/COS3YELLOWMAX/COS4YELLOWMAX: Indicates the maximum bandwidth of y marked traffic of COS1-4 services. Valid range 0 to 8000 (in KB). Default is 0.
9. COS1GREENMIN/COS1GREENMIN/COS1GREENMIN/COS1GREENMIN: Indicates the minimum bandwidth of g marked traffic of COS1-4 services. Valid range 0 to 8000 (in KB). Default is 0.
10. COS1GREENMAX/COS1GREENMAX/COS1GREENMAX/COS1GREENMAX: Indicates the maximum bandwidth of g marked traffic of COS1-4 services. Valid range 0 to 8000 (in KB). Default is 0.
11. SHAPING: Shaping enabled or disabled.
    - Enabled = enabled
    - Disabled = disabled (Default)

Example:
```
ED-LAG-QOS:PETALUMA:LAG-3-1:ctag:::FIFORATE=10;
```
1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs in the Ethernet service AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:

```
RTRV-LAG-QOS:PETALUMA:LAG-3-1:123:;
```

```
TARGET : TRAVERSE
```

**Note:** Command valid for NGE only.

**Response Syntax**

```
<cr> <lf> <lf> ^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M<ctag> COMPLD
^^<AID>::[FIFORATE=<fiforate>],[PHBGTYPE=<phbgtype>],[WFQW1=<wfqw1>],[WFQW2=<wfqw2>],[WFQW3=<wfqw3>],[WFQW4=<wfqw4>],[COS1MODE=<cos1mode>],[COS1GREENMIN=<cos1greenmin>],[COS1GREENMAX=<cos1greenmax>],[COS1YELLOWMIN=<cos1yellowmin>],[COS1YELLOWMAX=<cos1yellowmax>],[COS2MODE=<cos2mode>],[COS2GREENMIN=<cos2greenmin>],[COS2GREENMAX=<cos2greenmax>],[COS2YELLOWMIN=<cos2yellowmin>],[COS2YELLOWMAX=<cos2yellowmax>],[COS3MODE=<cos3mode>],[COS3GREENMIN=<cos3greenmin>],[COS3GREENMAX=<cos3greenmax>],[COS3YELLOWMIN=<cos3yellowmin>],[COS3YELLOWMAX=<cos3yellowmax>],[COS4MODE=<cos4mode>],[COS4GREENMIN=<cos4greenmin>],[COS4GREENMAX=<cos4greenmax>],[COS4YELLOWMIN=<cos4yellowmin>],[COS4YELLOWMAX=<cos4yellowmax>],[SHAPING=<shaping>]" +<cr><lf>
```
ENT-LAG-MBR

General Description
This command is used to add members to a link aggregation group (LAG).
This command will not succeed if
- The member Ethernet port to be added is not on the same card as the LAG.
- The member Ethernet port has a different type (FE or GBE) than the LAG.
- The LAG already contains the maximum number (8) of Ethernet ports.

### 1. AID
AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid LAG AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs in the Ethernet service AID section.

### 2. FIFORATE
FIFORATE: Indicates the Shaping rate when queue policy is FIFO. Range is (1 to 1000 Mbps for GBE and 1 to 100 for FE). Default for FE is 100 and for GBE is 1000.

### 3. PHBGTYPE
PHBGTYPE: Queuing policy (Per hop behavior group type)
- FIFO = FIFO based queue policy
- PRTY = Priority based queue policy
- WFQ = Weighted fair queue policy

### 4. WFQW1/WFQW2/WFQW3/WFQW4
Weight of the COS1-4 queues. Range is 1 to 100.

### 5. COS1MODE/COS2MODE/COS3MODE/COS4MODE
- For TE100: COS3MODE and COS4MODE are not valid. Valid values are:
  - CUSTOM
  - DISABLED
- For other types: Valid values are:
  - CUSTOM
  - DISABLED

### 6. COS1YELLOWMIN/COS2YELLOWMIN/COS3YELLOWMIN/COS4YELLOWMIN
Indicates the minimum bandwidth of y marked traffic of COS1-4 services. Valid values 0 to 8000 (in KB). Default is 0.

### 7. COS1YELLOWMAX/COS2YELLOWMAX/COS3YELLOWMAX/COS4YELLOWMAX
Indicates the maximum bandwidth of y marked traffic of COS1-4 services. Valid range 0 to 8000 (in KB). Default is 0.

### 8. COS1GREENMIN/COS2GREENMIN/COS3GREENMIN/COS4GREENMIN
Indicates the minimum bandwidth of g marked traffic of COS1-4 services. Valid range 0 to 8000 (in KB). Default is 0.

### 9. COS1GREENMAX/COS2GREENMAX/COS3GREENMAX/COS4GREENMAX
Indicates the maximum bandwidth of g marked traffic of COS1-4 services. Valid range 0 to 8000 (in KB). Default is 0.

### 10. SHAPING
SHAPING: Shaping enabled or disabled.
- Enabled = enabled (Default)
- Disabled = disabled

### TARGET: TRAVERSE
Note: Command valid for NGE only.
**ENT-LAG-MBR**\(^{[<tid>]};<LAGAID>;;<MBRAID>;::<ctag>::::MBRID=<mbrid>;\)

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. LAGAID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** in the LAG AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. MBRAID indicates the access identifier of the Ethernet interface as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).**
5. MBRID indicates the sequence number of the link member to be added into the LAG. Valid values are 1 to 8.

**TARGET:** TRAVERSE

**Note:** Command valid for NGE only.

---

**DLT-LAG-MBR**

**General Description**

Use this command to remove members from a link aggregation group (LAG).

**Command Syntax**

\[DLT-LAG-MBR;[<tid>];<AID>;::<ctag>::::MBRID=<mbrid>;\]

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Access Identifier (AID).** Valid LAG AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the LAG AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. MBRID indicates the sequence number of the link member to be added into the LAG. Valid values are 1 to 8.

**TARGET:** TRAVERSE

**Note:** Command valid for NGE only.

---

**RTRV-LAG-MBR**

**General Description**

This command is used to retrieve the parameters of a LAG member port on an Ethernet card.
ENT-BRIDGE

This command creates Ethernet normal bridge and aggregate bridge services. A bridge service forwards packets among a set of ports on an Ethernet card. A port could be a physical Ethernet interface, EOS port, or a LAG. Ports can be added to or removed from a bridge service.

Command Syntax

```
ENT-BRIDGE::<AID>::<ctag>:::TYPE=<type>,[SLOT=<slotnum>],[DESC=<desc>],[CUST=<cust>],[SVLANID=<svlanid>],[CVLANID=<cvlanid>],[PRRTAGTYPE=<prttagtype>]::[<psr>];
```

Response Syntax

```
RTRV-LAG-MBR:[<tid>]:<AID>::<ctag>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the access identifier as described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Access Identifier (AID). Valid LAG AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the LAG AID section.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

```
RTRV-LAG-MBR:PETALUMA:LAG-7-1:ctag;
```

TARGET : TRAVERSE

Note: Command valid for NGE only.
This command edits Ethernet normal bridge and aggregate bridge services.

Example:
ENT-BRIDGE:PETALUMA:bridge1:ctag::SLOT-3.TYPE=BRIDGE;

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.
Command Syntax

```
ED-BRIDGE::<AID>;<ctag>::TYPE=<type>,[SLOT=<slotnum>]
[DESC=<desc>],[CUST=<cust>],[SVLANID=<svlanid>],[CVLANID=<cvlanid>],[PRTTAGTYPE=<prttagtype>];[<pst>];
```

1. `tid` is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. `<AID>` indicates bridge service name.
4. `SLOT` (Traverse only): Slot number AID. Valid values are described in Appendix C—“Access Identifiers” in the Equipment AIDs section.
5. `TYPE`: Indicates the type of bridge service.
   - AGGRBRIDGE - Aggregated bridge service
   - BRIDGE - Normal bridge service
6. `DESC`: Customer description string.
7. `CUST`: Indicates the customer name. None indicates no customer selected.
8. `VLANID` (Traverse only): VLAN Id. Valid range is 0 to 4094.
9. `SVLANID` (TE100 only): Service vlan ID. Valid range is 0 to 3999.
10. `CVLANID` (TE100 only): Customer vlan ID. Valid range is 0 to 3999.
11. `PRTTAGTYPE` (TE100 only): Indicates the port tagging type combination used in the system.
    The combination involves Port-based, Untagged, Service Tag and Customer tag members.
    Following are the valid combinations.
    - PB-Only - No configuration required for CVLANID and SVLANID
    - PB-UT - No configuration required for CVLANID and SVLANID
    - PB-CT - CVLANID must be provisioned
    - PB-ST - SVLANID must be provisioned.
    - UT-Only - No configuration required for CVLANID and SVLANID
    - UT-CT - CVLANID must be provisioned
    - UT-ST - SVLANID must be provisioned
    - CT-Only - CVLANID must be provisioned
    - CT-ST - Both CVLANID and SVLANID must be provisioned
    - ST-Only - SVLANID must be provisioned
12. `PST` is the primary state.
   - IS - in service (Default)
   - OOS - out of service

Example:
```
ED-BRIDGE:PETALUMA:bridge1:ctag :::CVLANID=5, PRTTAGTYPE=UTCT;
```

**TARGET** : TRAVERSE, TE100

**Note**: Command valid for NGE only.
**RTRV-BRIDGE**

**General Description**

This command is used to retrieve the parameters of an Ethernet bridge service.

**Command Syntax**

```
RTRV-BRIDGE::<AID>::<ctag>;
```

1. `tid` is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. `<AID>` indicates bridge service name.

**Example:**

```
RTRV-BRIDGE:PETALUMA:bridge1:ctag;
```

**TARGET : TRAVERSE, TE100**

**Note:** Command valid for NGE only.

**Response Syntax**

```
<TIME.COMPLD^^<ctag> COMPLD^^
("<AID>::TYPE=<type>,[SLOT=<slotnum>],[DESC=<desc>],[CUST=<cust>],[SVLANID=<svlanid>],[CVLANID=<cvlanid>],[PRRTAGTYPE=<prrtagtype>],[SID=<sid>],[ADMSTATE=<admstate>],[UPGRADESTATE=<upgradestate>],[BW=<bw>]:pst,sst")*;
```

```
```
1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. `<AID>` indicates bridge service name.
4. SLOT (Traverse only) : Slot number AID. Valid values are described in Appendix C—“Access Identifiers” in the Equipment AIDs section.
5. TYPE : Indicates the type of bridge service.
   AGGRBRIDGE - Aggregated bridge service.
   BRIDGE - Normal bridge service
6. DESC : Customer description string.
7. CUST : Indicates the customer name. None indicates no customer selected.
8. VLANID (Traverse only): VLAN Id. Valid range is 0-4094.
9. SVLANID (TE100 only) : Service vlan ID. Valid range is 1-3999.
10. CVLANID (TE100 only): Customer vlan ID. Valid range is 0-3999.
11. PRTTAGTYPE (TE100 only): Indicates the port tagging type combination used in system. The combination involves Port Based, Untagged, Service Tag and Customer tag members. Following are the valid combinations:
   PB-Only - No configuration required for CVLANID and SVLANID
   PB-UT - No configuration required for CVLANID and SVLANID
   PB-CT - CVLANID must be provisioned
   PB-ST - SVLANID must be provisioned.
   UT-Only - No configuration required for CVLANID and SVLANID
   UT-CT - CVLANID must be provisioned
   UT-ST - SVLANID must be provisioned
   CT-Only - CVLANID must be provisioned
   CT-ST - Both CVLANID and SVLANID must be provisioned
   ST-Only - SVLANID must be provisioned
This command deletes Ethernet normal bridge and aggregate bridge services.

**Command Syntax**

```
DLT-BRIDGE::<AID>::<ctag>;
```
### ENT-BRIDGE-MBR

#### General Description

This command is used to add port members to a bridge. The port to be added can be any one of the following:

- Physical Ethernet interface
- EOS port
- LAG (Not applicable to TE100).

#### Command Syntax

```
ENT-BRIDGE-MBR::<AID>,<MBRAID>:<ctag>:::MBRID=<mbrid>,[CLFR=<clfr>],[POL=<pol>],[PRTYBIT=<prtybit>],[MARKINGBIT=<markingbit>],[VLANTYPE=<vlantype>],[VLAINID=<vlanid>],[AGGRMBR=<aggrmbr>];
```

1. **tid** is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. **<AID>** indicates bridge service name.

#### Example:

```
DLT-BRIDGE:PETALUMA:bridge1:ctag;
```

**TARGET : TRAVERSE, TE100**

**Note:** Command valid for NGE only.

---

<table>
<thead>
<tr>
<th>ENT-BRIDGE-MBR::&lt;AID&gt;,&lt;MBRAID&gt;::&lt;ctag&gt;::::::MBRID=&lt;mbrid&gt;,&lt;CLFR=&lt;clfr&gt;],[POL=&lt;pol&gt;],[PRTYBIT=&lt;prtybit&gt;],[MARKINGBIT=&lt;markingbit&gt;],[VLANTYPE=&lt;vlantype&gt;],[VLAINID=&lt;vlanid&gt;],[AGGRMBR=&lt;aggrmbr&gt;];</th>
</tr>
</thead>
</table>
| 1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
| 2. **<AID>** indicates bridge service name.
| 3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
| 4. **MBRAID:** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” **Facility AIDs** and **Ethernet EOS/LAG/POL/BRIDGE AIDs**. LAG is not applicable to TE100.
| 5. **MBRID ID for member. Integer value.**
| 6. **CLFR:** indicates the name of the classifier.
| 7. **POL:** indicates the AID of the policer. Valid values are described in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs**.
| 8. **VLAINID (Traverse only): VLAN ID of the member.**
| 9. **PRTYBIT (Traverse only): Priority bit setting. Valid value range is 0 to 7. Default value is 0.**
| 10. **MARKINGBIT (Traverse only): Marking bit setting. Valid values are:**
| COPY
| MARK (Default)
ED-BRIDGE-MBR

**General Description**
This command is used to edit port members on a bridge.

**Command Syntax**

```
ED-BRIDGE-MBR::<AID>,<MBRAID>::ctag>:::MBRID=<mbrid>,[CLFR=<clfr>],[POL=<pol>],[PRTYBIT=<prtybit>],[MARKINGBIT=<markingbit>],[VLANTYPE=<vlantype>],[VLANID=<vlanid>];
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **<AID>** indicates bridge service name.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. **MBRAID**: indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” **Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs**. LAG is not applicable to TE100.
5. **MBRID** ID for member. Integer value.
6. **CLFR**: indicates the name of the classifier.
7. **POL**: indicates the AID of the policer. Valid values are described in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs**.
8. **VLANID** (Traverse only). VLAN ID of the member.
9. **PRTYBIT** (Traverse only): Priority bit setting. Valid value range is 0 to 7. Default value is 0.
10. **MARKINGBIT** (Traverse only): Marking bit setting. Valid values are:
    - COPY
    - MARK (Default)
11. **VLANTYPE**: Priority Bit setting. Valid values are:
    - UNTAGGED/PRTYTAGGED
    - TAGGED
    - SERVICEVLANID (Default)
**RTRV-BRIDGE-MBR**

**General Description**

This command is used to retrieve the parameters of a bridge member.

**Command Syntax**

```
RTRV-BRIDGE-MBR::<AID>[,[<MBRAID>];]<ctag>;
```

12. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
13. `<AID>` indicates bridge service name.
14. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
15. MBRAID indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” **Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs.** LAG is not applicable to TE100.

**Response Syntax**

```
<cr><lf>^^^<SID><YY-MM-DD><HH:MM:SS><cr><lf>M^^<ctag> COMPLD
^^^^("<AID>,<MBRAID>::MBRID=<mbrid>,[CLFR=<clf>],[POL=<pol>],[MARKINGBIT=<markbit>],[PRTYBIT=<prtybit>],[VLANTYPE=<vlantype>],[VLANID=<vlanid>],[AGGR=<aggr>]*
```

repeated for each MBRAID

---

**Example:**

```
ED-BRIDGE-MBR:PETALUMA:Bridge1:ctag::MBRID=2,POL=POL-3-1;
```

**TARGET:** TRAVERSE, TE100

**Note:** Command valid for NGE only.
DLT-BRIDGE-MBR

General Description
This command is used to delete the parameters of a bridge member.

Command Syntax

DLT-BRIDGE-MBR::<AID>,<MBRID>:<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates bridge service name.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. MBRID: ID for member. Integer value.
## ENT-BRIDGE-MAC
### General Description
This command is used to add a MAC address to a bridge as a static entry.

### Command Syntax
```
ENT-BRIDGE-MAC:[<tid>]:<AID>,<MBRAID>:<ctag>::<MACADDR>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **<AID>** indicates bridge service name.
3. **MBRAID** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
4. **MACADDR** is the MAC address to be added to the specified port of the bridge in the xx.xx.xx.xx.xx format.

### Example:
```
ENT-BRIDGE-MAC:PETALUMA:Service1,FAC-5-3:ctag::11.33.33.33.3c.5d;
```

### Note:
Command valid for NGE only.

## RTRV-BRIDGE-MAC
### General Description
This command is used to retrieve the parameters of a bridge member.

### Command Syntax
```
RTRV-BRIDGE-MAC::<AID>,<MBRAID>::<ctag>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **<AID>** indicates bridge service name.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. **MBRAID** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
### Response Syntax

```plaintext
<cr> <lf> <ld><SID><yy-mm-dd><hh:mm:ss> <cr> <ld>M<ctag> COMPLD

\^\^\^"<AID>,<MBRAID>::MACADDR=<macaddr>"*;
```

repeated for each MACADDR

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **<AID>** indicates bridge service name.
3. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. **MBRAID** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
5. **MACADDR** is the MAC Address.

```plaintext
<cr> <lf> <ld>PETALUMA<yy-mm-dd><hh:mm:ss> <cr> <ld>M<ctag> COMPLD

\^\^\^"Service1,EOS-3-1::MACADDR=01:01:01:01:01:01";
```

**TARGET**: TRAVERSE, TE100

**Note**: Command valid for NGE only.

---

### DLT-BRIDGE-MAC

**General Description**

This command is used to delete a MAC address from a bridge.

**Command Syntax**

```plaintext
DLT-BRIDGE-MAC[:<tid>]:<AID>,<MBRAID>::<ctag>::<MACADDR>;
```

1. **tid** is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **<AID>** indicates bridge service name.
3. **MBRAID** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
4. **MACADDR** is the MAC address to be added to the specified port of the bridge in the xx.xx.xx.xx.xx.xx format.

**Example:**

```plaintext
DLT-BRIDGE-MAC:PETALUMA:Service1,FAC-5-3:ctag::ff:cc:dd:ee:01:01:02;
```

**TARGET**: TRAVERSE, TE100

**Note**: Command valid for NGE only.

---

### ENT-ETHLINE

This command creates Ethernet line services.
Command Syntax

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN-ETHLINE</td>
<td>EDIT Ethernet line service.</td>
</tr>
</tbody>
</table>

**Command Syntax**

```
ENT-ETHLINE::<AID>::<ctag>::::<MBRAID1>,<MBRAID2>::[DESC=<desc>],[CUST=<cust>],[SVLANID=<svlanid>],[CVLANID=<cvlanid>],[LIP=<lip>],[<pst>];
```

1. **tid** is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. **<AID>** indicates the bridge service name.
4. **MBRAID1** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
5. **MBRAID2** indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
6. **DESC** : Customer description string.
7. **CUST** : Indicates the customer name. None indicates no customer selected.
8. **SVLANID** : Service vlan ID. For Traverse, the valid range is 0-4094. For TE100, this value is 1-3999. For Traverse, the default value is 0. For TE100, the default value is 1.
9. **CVLANID** (Traverse only) : Customer VLAN ID. For Traverse, the valid range is 0-4094. For TE100, this value is 0-3999. Default value is 1.
10. **LIP** : indicates if link integrity propagation is enabled.
    - **Enabled** = Link integrity propagation is ON.
    - **Disabled** = Link integrity propagation is OFF. (Default)
11. **PST** is the primary state.
    - **IS** = in service (Default)
    - **OOS** = out of service

**Example:**

```
ENT-ETHLINE:PETALUMA:bridge1,FAC-3-1,EOS-3-1:ctag::SLOT-3;
```

**Note:** Command valid for NGE only.

**ED-ETHLINE**

**General Description**

This command edits Ethernet line service.

**Command Syntax**

```
ED-ETHLINE::<AID>::<ctag>::::<[DESC=<desc>],[CUST=<cust>],[SVLANID=<svlanid>],[CVLANID=<cvlanid>],[LIP=<lip>],[<pst>];
```

---

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RTRV-ETHLINE

General Description
Use this command to retrieve the parameters of an Ethernet line service.

Command Syntax

```
RTRV-ETHLINE::[<AID>]:<ctag>;
```

1. `tid` is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. `<AID>` indicates bridge service name.

Example:
```
RTRV-ETHLINE:PETALUMA:bridge1:ctag;
```

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.
Response Syntax

`<\r> <\t> ^^SID^^YY-MM-DD^^<\r> <\t> ^^ctag^^COMPLD^^`

"<\AID>:<MBRAID1>:<MBRAID2>:<DESC><CUST><SVLANID><CVLANID><LIP><SID><ADMSTATE><UPGRADESTATE>:pst,sst")*;<\r> <\t>

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <\AID> indicates bridge service name.
4. MBRAID1 indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
5. MBRAID2 indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
6. DESC : Customer description string.
7. CUST : Indicates the customer name. None indicates no customer selected.
8. SVLANID : Service vlan ID. For Traverse valid range is 0-4094. For TE100 this value is 1-3999. For Traverse default value is 0. For TE100 default value is 1.
9. CVLANID (TE100 only) : Customer vlan ID. For Traverse valid range is 0-4094. For TE100 this value is 0-3999. Default value is 1.
10. LIP : indicates if link integrity propagation is enabled. Valid values are:
    - Enabled = Link integrity propagation is ON.
    - Disabled = Link integrity propagation is OFF. (Default)
11. ADMSTATE Indicates the administrative state of alarm generation. Valid values are:
    - UNLOCK : Alarm generation is enabled
    - LOCK : Alarm generation is disabled
12. UPGRADESTATE : indicates the service upgrade state. Valid values are:
    - NONE
    - RFR-STOPED
    - RFR-STOP-FAILED
    - RFR-INPR
    - RFR-OK
    - RFR-FAILED
13. SID indicates the service ID generated internally
14. <\pst> is the primary state. Valid values are:
    - IS = in service: puts the entity in the IS-NR primary state. (Default)
    - OOS = out of service: puts the entity in the OOS-MA primary state
15. <\sst> is the secondary state. Valid values are:
    - ACT = Service is in an active state. (Default)
    - DSBLD = Service is in a disabled state
DLT-ETHLINE

General Description
This command deletes an Ethernet line service.

Command Syntax

```
DEL-ETHLINE::<AID>::ctag;
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID> indicates bridge service name.

Example:
DLT-ETHLINE:PETALUMA:bridge1:ctag;

TARGET : TRAVERSE, TE100

Note: Command valid for NGE only.

ED-ETHLINE-MBR

General Description
This command is used to edit port members to a line.

Command Syntax

```
ED-ETHLINE-MBR::<AID>,<MBRAID>::<ctag>::<MBRID>=<mbrid>[,CLFR=<clfr>],[POL=<pol>],[PRTYBIT=<prtybit>],[MARKINGBIT=<markingbit>],[VLANTYPE=<vlantype>],[VLANID=<vlanid>];
```
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RTRV-ETHLINE-MBR

General Description
This command is used to retrieve the parameters of a line member.

Command Syntax

RTRV-ETHLINE-MBR::<AID>,<MBRAID>::<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates bridge service name.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. MBRAID indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
5. MBRID: ID for member. Integer value.
6. CLFR (Traverse only) indicates the name of the classifier.
7. POL (Traverse only) indicated the AID of the policer. Valid values are described in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs.
8. PRTYBIT (Traverse only): Priority bit setting. Valid values range is 0-7. Default value is 0.
9. MARKINGBIT (Traverse only): Marking bit setting. Valid values are:
   COPY
   MARK (Default)
10. VLANTYPE: Priority Bit setting. Valid values are:
   UNTAGGED/PRTYTAGGED
   TAGGED
   SERVICEVLANID (Default)
11. VLANID (Traverse only). VLAN ID of the member.

Example:
ED-ETHLINE-MBR:PETALUMA:Bridge1,EOS-1-1:ctag::POL=POL-3-1;

TARGET : TRAVERSEE, TE100
Note: Command valid for NGE only.
Response Syntax

```
<cr> <lf> <lf> ^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M^<ctag> COMPLD
^^^("<AID>,<MBRAID>::[MBRID=<mbrid>],[CLFR=<clf>],[POL=<pol>],[MARKINGBIT=<markingbit>],
PRTYBIT=<prtybit>],[VLANTYPE=<vlantype>],[VLANID=<vlanid>])*
```

repeated for each MBRAID

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates bridge service name.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks,
   Correlation Tag (CTAG).
4. MBRAID indicates the access identifier of the EOS, LAG or physical port. Valid values are described in
   Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs.
5. MBRID: ID for member. Integer value.
6. CLFR (Traverse only) indicates the name of the classifier.
7. POL (Traverse only) indicated the AID of the policer. Valid values are described in
   Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs.
8. PRTYBIT (Traverse only): Priority bit setting. Valid values are 0 through 7. Default value is 0.
9. MARKINGBIT (Traverse only): Marking bit setting. Valid values are:
   COPY
   MARK (Default)
10. VLANTYPE: Priority Bit setting. Valid values are:
    UNTAGGED/PRTYTAGGED
    TAGGED
    SERVICEVLANID (Default)
11. VLANID (Traverse only). VLAN ID of the member.

```
<cr> <lf> <lf> PETALUMA<YY-MM-DD><HH:MM:SS> <cr> <lf> M<ctag> COMPLD
^^^"Service1,EOS-3-1::1,CLFR=MyClass,POL=POL-3-1";
```

TARGET : TRAVERSE, TE100

**Note:** Command valid for NGE only.

**ENT-ETHLINE-MAC**

**General Description**

This command is used to add MAC address to an Ethernet line service as a static entry.

**Command Syntax**

```
ENT-ETHLINE-MAC:[<tid>]:<AID>,<MBRAID>:<ctag>::<MACADDR>;
```
RTRV-ETHLINE-MAC

General Description

This command is used to retrieve the MAC parameters of an Ethernet line service member.

Command Syntax

RTRV-ETHLINE-MAC::<AID>,<MBRAID>::<ctag>;

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates Ethernet line service name.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. MBRAID indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs.
5. MACADDR is the MAC address to be added to the specified port of the bridge in the xx.xx.xx.xx.xx.xx format

Example:
ENT-ETHLINE-MAC:PETALUMA:Service1, FAC-5-3:ctag::11.33.33.3c.5d;

TARGET : Traverse

Note: Command valid for NGE only.
DLT-ETHLINE-MAC

General Description
This command is used to delete a MAC address static entry from an Ethernet line.

Command Syntax

```
DLT-ETHLINE-MAC:[<tid>]:<AID>,<MBRAID>:<ctag>::<MACADDR>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <AID> indicates bridge service name.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
4. MBRAID indicates the access identifier of the EOS, LAG or physical port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs and Ethernet EOS/LAG/POL/BRIDGE AIDs. LAG is not applicable to TE100.
5. MACADDR is the MAC Address.

Example:

```
DLT-ETHLINE-MAC:PETALUMA:Service1,FAC-5-3:ctag::ff:cc:dd:ee:01:01:02;
```

TARGET : TRAVERSE

**Note:** Command valid for NGE only.

ENT-ETHSER-P2PD

General Description
This command creates a dedicated point-to-point (P2PD) Ethernet service.

Command Syntax

```
ENT-ETHSER-P2PD::<AID>::<ctag>::<FROMAID>,<TOAID>::[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],[EOSTAG=<eostag>],[EOSBW=<eosbw>],[DATARATE=<datarate>];
```
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General Description

This command edits a dedicated point-to-point Ethernet service.

Command Syntax

ED-ETHSER-P2PD::<AID>::<ctag>::<FROMAID>,<TOAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],[EOSTAG=<eostag>],[EOSBW=<eosbw>],[DATARATE=<datarate>],[<pst>];
RTRV-ETHSER-P2PD

General Description

This command is used to retrieve the parameters of a dedicated point-to-point Ethernet service.

Command Syntax

RTRV-ETHSER-P2PD:[<AID>]:<ctag>;
1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates point-to-point Ethernet service name.

Example:
RTRV-ETHSER-P2PD:PETALUMA:svc1:ctag;

TARGET : TRAVERSE, TE100

**Note:** Command valid for legacy Ethernet cards only.

---

**Response Syntax**

```
<cr> <lf> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>COMPLD^^^<cr> <lf>

("<AID>:<FROMAID>,<TOAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],[EOSTAG=<eostag>],[EOSBW=<eosbw>],[DATARATE=<datarate>],[SID=<sid>],[ADMSTATE=<admstate>],[UPGRDSTATE=<upgrdstate>]:pst,sst")*;<cr> <lf>
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates bridge service name.
4. FROMAID indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” **Facility AIDs.**
5. TOAID indicates the destination access identifier. Valid values are:
   - FAC-<slot>-<port> in case it is an Ethernet facility.
   - T-<tunnelname> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the Ethernet service AID section.
   - VCB-<VCBundlename> in case of VC Bundle endpoints. VC bundle endpoints are created using the ENT-VCB command.
6. DESC : Customer description string.
7. CUST : Indicates the customer name. None indicates no customer selected.
8. VLANID : Service VLAN ID. Valid range is 1 to 4093.
9. EOSTAG : Specifies if packets (either sent or received) on the path have VLAN tags. Valid values are:
   - Enabled (Default). Packets will have VLAN tags.
   - Disabled. Packets will not have VLAN tags.
10. EOSBW: EOS bandwidth.
11. DATARATE indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1Mbps. Default value is 1.
12. SID indicates the service ID generated internally.
13. ADMSTATE Indicates the administrative state of alarm generation. Valid values are:
   - UNLOCK : Alarm generation is enabled
   - LOCK : Alarm generation is disable
### General Description

This command deletes a dedicated point-to-point Ethernet service.

### Command Syntax

```
DEL-ETHSER-P2PD::<AID>::<ctag>;
```

1. **tid** is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. **ctag** is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. **<AID>** indicates point-to-point Ethernet service name.

Example:

```
DLT-ETHSER-P2PD:PETALUMA:svc1:ctag;
```

**Note:** Command valid for legacy Ethernet cards only.
ENT-ETHSER-P2PS

General Description

This command creates a shared point-to-point (P2PS) Ethernet service.

Command Syntax

```
ENT-ETHSER-P2PS::<AID>:<ctag>::<FROMAID>,<TOAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],
[DATARATE=<datarate>];:<pst>;
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID>: indicates point-to-point shared Ethernet service name.
4. FROMAID: indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs.
5. TOAID: indicates the destination access identifier. Valid values are:
   - FAC-<slot>-<port> - in case it is an Ethernet facility.
   - T-<tunnelname> - in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the Ethernet service AID section.
   - VCB-<VCBundlename> - in case of VC Bundle endpoints. VC bundle endpoints are created using the ENT-VCB command.
6. DESC: Customer description string.
7. CUST: Indicates the customer name. None indicates no customer selected.
8. VLANID: Service vlan ID. Valid range is 1-4093.
9. DATARATE: indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0-1000 in crements of 1Mbps. Default value is 1.
10. PST: is the primary state.
    - IS - in service (Default)
    - OOS - out of service

Example:

```
ENT-ETHSER-P2PS:PETALUMA:svc1:ctag :: FAC-3-1,EOS-3-1;
```

TARGET : Traverse

Note: Command valid for legacy Ethernet cards only.

ED-ETHSER-P2PS

General Description

This command edits a shared point-to-point Ethernet service.

Command Syntax

```
ED-ETHSER-P2PS::<AID>:<ctag>::<FROMAID>,<TOAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],
[DATARATE=<datarate>];:<pst>;
```

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General Description
This command is used to retrieve the parameters of a shared point-to-point Ethernet service.

Command Syntax

RTRV-ETHSER-P2PS::<AID>:<ctag>;

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID> indicates point-to-point shared Ethernet service name.
4. FROMAID indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” Facility AIDs.
5. TOAID indicates the destination access identifier. Valid values are:
   FAC-<slot>-<port> in case it is an Ethernet facility.
   T-<tunnelname> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the Ethernet service AID section.
   VCB-<VCBundlename> in case of VC Bundle endpoints. VC bundle endpoints are created using the ENT-VCB command.
6. DESC: Customer description string.
7. CUST: Indicates the customer name. None indicates no customer selected.
8. VLANID: Service VLAN ID. Valid range is 1 to 4093.
9. DATARATE: indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1Mbps. Default value is 1.
10. PST: is the primary state.
   IS = in service (Default)
   OOS = out of service

Example:
ED-ETHSER-P2PS:PETALUMA:svc1:ctag :: EOS-3-1,FE-3-1:CVLANID=5;

TARGET : Traverse

Note: Command valid for legacy Ethernet cards only.

RTRV-ETHSER-P2PS

RTRV-ETHSER-P2PS::<[AID]>:<ctag>;

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID> indicates point-to-point Ethernet service name.

Example:
RTRV-ETHSER-P2PS:PETALUMA:svc1:ctag;
TARGET: TRAVERSE, TE100

**Note:** Command valid for legacy Ethernet cards only.

### Response Syntax

```
<cr> <lf> <cr> <lf> <SID> <yy-mm-dd> <cr> <lf> M<ctag> COMPLD<cr> <lf>
```

(\^<AID>:<FROMAID>:<TOAID>:\[DESC=<desc>\],\[CUST=<cust>\],\[VLANID=<vlanid>\],\[DATARATE=<datarate>\],\[SID=<sid>\],\[ADMSTATE=<admstate>\],\[UPGRDSTATE=<upgrdstate>\]:pst,sst\])*;<cr> <lf>

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates bridge service name.
4. FROMAID: indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” **Facility AIDs.**
5. TOAID: indicates the destination access identifier. Valid values are:
   - FAC,<slot>,<port> in case it is an Ethernet facility.
   - T,<tunnelname> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the Ethernet service AID section.
   - VCB,<VCBundlename> in case of VC Bundle endpoints. VC bundle endpoints are created using the ENT~VCB command.
6. DESC: Customer description string.
7. CUST: Indicates the customer name. None indicates no customer selected.
8. VLANID: Service vlan ID. Valid range is 1 to 4093.
9. DATARATE: indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1Mbps. Default value is 1.
10. SID: indicates the service ID generated internally.
11. ADMSTATE: Indicates the administrative state of alarm generation. Valid values are:
    - UNLOCK - Alarm generation is enabled
    - LOCK - Alarm generation is disabled
12. UPGRADESTATE: indicates the service upgrade state. Valid values are:
    - NONE
    - RFR-STOPED
    - RFR-STOP-FAILED
    - RFR-INPR
    - RFR-OK
    - RFR-FAILED
13. <pst>: is the primary state. Valid values are:
    - IS - in service: puts the entity in the IS-NR primary state. (Default)
    - OOS - out of service: puts the entity in the OOS-MA primary state.
**DLT-ETHSER-P2PS**

**General Description**
This command deletes a shared point-to-point Ethernet service.

**Command Syntax**

```
DEL-ETHSER-P2PS::<AID>::<ctag>;;
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates point-to-point Ethernet service name.

**Example:**

```
DLT-ETHSER-P2PS:PETALUMA:svc1:ctag;
```

**TARGET : Traverse**

**Note:** Command valid for legacy Ethernet cards only.

**ENT-ETHSER-IAS**

**General Description**
This command creates an Internet Access Service (IAS).

**Command Syntax**

```
ENT-ETHSER-IAS::<AID>::<ctag>;;<FROMAID>::<TOAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],[PKTTYPE=<pkttype>],[COS=<cos>],[IPCOS=<ipcos>],[ISPDATARATE=<ispdatarate>],[EOSBW=<eosbw>]:[<pst>] ;
```

**TARGET : Traverse**

**Note:** Command valid for legacy Ethernet cards only.
### ED-ETHSER-IAS

**General Description**

This command edits an Internet Access Service.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. tid</strong></td>
<td>is the target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier</strong> (TID).</td>
</tr>
<tr>
<td><strong>2. ctag</strong></td>
<td>is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks</strong>, <strong>Correlation Tag</strong> (CTAG).</td>
</tr>
<tr>
<td><strong>3. &lt;AID&gt;</strong></td>
<td>indicates the IAS service name.</td>
</tr>
<tr>
<td><strong>4. FROMAID</strong></td>
<td>indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” <strong>Facility AIDs</strong>.</td>
</tr>
<tr>
<td><strong>5. TOAID</strong></td>
<td>indicates the destination access identifier. Valid values are: FAC-&lt;slot&gt;-&lt;port&gt; in case it is an Ethernet facility. EOS-&lt;slot&gt;-&lt;maxEOS&gt; in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” <strong>Ethernet EOS/LAG/POL/BRIDGE AIDs</strong> under the Ethernet service AID section.</td>
</tr>
<tr>
<td><strong>6. DESC</strong></td>
<td>Customer description string.</td>
</tr>
<tr>
<td><strong>7. CUST</strong></td>
<td>Indicates the customer name. None indicates no customer selected.</td>
</tr>
<tr>
<td><strong>8. VLANID</strong></td>
<td>Service VLAN ID. Valid range is 1 to 4093.</td>
</tr>
<tr>
<td><strong>9. PKTTYPE</strong></td>
<td>Specify if the Ethernet frames transmitted to and received from Ethernet ports have VLAN tags. Valid values are: Tagged (Default): Ethernet ports must have VLAN tags. Untagged: Ethernet ports must not have VLAN tags.</td>
</tr>
<tr>
<td><strong>10. COS</strong></td>
<td>The class of service for this service. This value is applied to the date received from source port and submitted to transport path. Valid values are: Premium (Default) BestEffort</td>
</tr>
<tr>
<td><strong>11. IPCOS</strong></td>
<td>If the endpoint is a service provider set the ISP class of service for the data going over the Ethernet port connected to the ISP router. Valid values are: Premium BestEffort (Default)</td>
</tr>
<tr>
<td><strong>12. ISPDATARATE</strong></td>
<td>indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in crements of 1Mbps. Default value is 1.</td>
</tr>
<tr>
<td><strong>13. EOSBW</strong></td>
<td>Valid if destination port is another GBE port. Integer value between 1 and 48.</td>
</tr>
<tr>
<td><strong>14. PST</strong></td>
<td>is the primary state. Valid values are: IS = in service (Default) OOS = out of service</td>
</tr>
</tbody>
</table>

**Example:**

```
ENT-ETHSER-IAS:PETALUMA:svc1:ctag :: FAC-3-1,EOS-3-1;
```

**TARGET**: Traverse

**Note**: Command valid for legacy Ethernet cards only.
### Command Syntax

<table>
<thead>
<tr>
<th>ED-ETHSER-IAS::&lt;AID&gt;::&lt;ctag&gt;::[&lt;FROMAID&gt;,&lt;TOAID&gt;]:[DESC=&lt;desc&gt;],[CUST=&lt;cust&gt;],[VLANID=&lt;vlanid&gt;],[PKTTYPE=&lt;pkttype&gt;],[COS=&lt;cos&gt;],[IPCOS=&lt;ipcos&gt;],[ISPDATARATE=&lt;ispdatarate&gt;],[EOSBW=&lt;eosbw&gt;]:[&lt;pst&gt;] ;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
</tr>
<tr>
<td>2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
</tr>
<tr>
<td>3. &lt;AID&gt; indicates the IAS service name.</td>
</tr>
<tr>
<td>4. FROMAID indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” <strong>Facility AIDs.</strong></td>
</tr>
<tr>
<td>5. TOAID indicates the destination access identifier. Valid values are: FAC-&lt;slot&gt;-&lt;port&gt; in case it is an Ethernet facility. EOS-&lt;slot&gt;-&lt;maxEOS&gt; in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” <strong>Ethernet EOS/LAG/POL/BRIDGE AIDs</strong> under the Ethernet service AID section.</td>
</tr>
<tr>
<td>6. DESC: Customer description string.</td>
</tr>
<tr>
<td>7. CUST: Indicates the customer name. None indicates no customer selected.</td>
</tr>
<tr>
<td>8. VLANID: Service VLAN ID. Valid range is 1 to 4093.</td>
</tr>
<tr>
<td>9. PKTTYPE: Specify if the Ethernet frames transmitted to and received from Ethernet ports have VLAN tags. Valid values are: Tagged (Default) - Ethernet ports must have VLAN tags. Untagged - Ethernet ports must not have VLAN tags.</td>
</tr>
<tr>
<td>10. COS: The class of service for this service. This value is applied to the date received from source port and submitted to transport path. Valid values are: Premium (Default) BestEffort</td>
</tr>
<tr>
<td>11. IPCOS: If the endpoint is a service provider set the ISP class of service for the data going over the Ethernet port connected to the ISP router. Valid values are: Premium BestEffort (Default)</td>
</tr>
<tr>
<td>12. ISPDATARATE: indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1Mbps. Default value is 1.</td>
</tr>
<tr>
<td>13. EOSBW: Valid if destination port is another GBE port. Integer value between 1-48.</td>
</tr>
<tr>
<td>14. PST: is the primary state. IS - in service (Default) OOS - out of service</td>
</tr>
</tbody>
</table>

**Example:**

```
ED-ETHSER-IAS:PETALUMA:svc1:ctag ::EOS-3-1,FE-3-1;CVLANID=5;
```

**TARGET : Traverse**

**Note:** Command valid for legacy Ethernet cards only.
RTRV-ETHSER-IAS

General Description
This command is used to retrieve the parameters of an Internet Access Service.

Command Syntax

RTRV-ETHSER-IAS:[<AID>]:=ctag;

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks,
   Correlation Tag (CTAG).
3. <AID> indicates IAS service name.

Example:
RTRV-ETHSER-IAS:PETALUMA:svc1:ctag;

TARGET : Traverse

Note: Command valid for legacy Ethernet cards only.

Response Syntax

<cr><lf><lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr><lf>M^^<ctag> COMPLD^^^
("<AID>:=FROMAID>,<TOAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],[PKTTYPE=<pkttype>],[CO
S=<cos>],[IPCO=<ipcos>],[ISPDATARATE=<ispdatarate>],[EOSBW=<eosbw>],[SID=<sid>],[ADMSTATE=<admsta
ter>],[UPGRDSTATE=<upgrdstate>]:pst,sst")*;<cr><lf>
1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates IAS service name.
4. FROMAID indicates the source access identifier of the physical Ethernet port. Valid values are described in Appendix C—“Access Identifiers,” **Facility AIDs.**
5. TOAID indicates the destination access identifier. Valid values are:
   - FAC-<slot>-<port> in case it is an Ethernet facility.
   - EOS-<slot>-<maxEOS> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the Ethernet service AID section.
6. DESC: Customer description string.
7. CUST: Indicates the customer name. None indicates no customer selected.
8. VLANID: Service VLAN ID. Valid range is 1-4093.
9. PKTTYPE: Specify if the Ethernet frames transmitted to and received from Ethernet ports have VLAN tags. Valid values are:
   - Tagged (Default): Ethernet ports must have VLAN tags.
   - Untagged: Ethernet ports must not have VLAN tags.
10. COS: The class of service for this service. This value is applied to the date received from source port and submitted to transport path. Valid values are:
    - Premium (Default)
    - BestEffort
11. IPCOS: If the endpoint is a service provider set the ISP class of service for the data going over the Ethernet port connected to the ISP router. Valid values are:
    - Premium
    - BestEffort (Default)
12. ISPDATARATE indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0-1000 in increments of 1Mbps. Default value is 1
13. EOSBW. Valid if destination port is another GBE port. Integer value between 1-48.
14. SID indicates the service ID generated internally.
15. ADMSTATE Indicates the administrative state of alarm generation. Valid values are:
   UNLOCK : Alarm generation is enabled
   LOCK : Alarm generation is disabled
16. UPGRADESTATE : indicates the service upgrade state. Valid values are:
   NONE
   RFR-STOPED
   RFR-STOP-FAILED
   RFR-INPR
   RFR-OK
   RFR-FAILED
17. <pst> is the primary state. Valid values are:
   IS = in service: puts the entity in the IS-NR primary state. (Default)
   OOS = out of service: puts the entity in the OOS-MA primary state
18. <sst> is the secondary state. Valid values are:
   ACT = Service is in active state. (Default)
   DSBLD = Service is in disabled state

TARGET : Traverse

Note: Command valid for legacy Ethernet cards only.

Example:
<cr> <lf> <lf>^^^PETALUMA^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>M^^<ctag> COMPLD
^^^"Service1:
FAC-3:1:EOS-3:1:CUST=G,DESC=xyz,VLANID=5,SID=1,ADMSTATE=LOCK,UPGRADESTATE=None:IS,ACT";<
<cr> <lf>

DLT-ETHSER-IAS

General Description
This command deletes an Internet Access Service.

Command Syntax

DLT-ETHSER-IAS::<AID>::<ctag>;

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID> indicates IAS service name.

Example:
DLT-ETHSER-IAS:PETALUMA:svc1:ctag;
**ENT-ETHSER-TLS**

**General Description**
This command creates a Transparent LAN Service (TLS).

**Command Syntax**

```
ENT-ETHSER-TLS:<AID>:<ctag>::
<SRCAID>:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>],[LOCBW=<locbw>],[DATARATE=<datarate>],[PARTTRAFCON=<parttrafcon>];[<pst>];
```

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates TLS service name.
4. SRCAID indicates the source access identifier. Valid values are:
   - FAC-<slot>-<port> in case it is an Ethernet facility.
   - EOS-<slot> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the Ethernet service AID section.
5. DESC: Customer description string.
6. CUST: Indicates the customer name. None indicates no customer selected.
7. VLANID: Service vlan ID. For Traverse valid range is 1 to 4093.
8. DATARATE: indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1 Mbps. Default value is 1. There is no traffic contract for a TLS service on an Ethernet port.
9. LOCBW: Selects the bandwidth (in Mbps) for TLS traffic originating from this node. Valid range is 1 to 1000 Mbps. The value of this parameter should be less than that of the DATARATE parameter.
10. PARTTRAFCON: Partition Traffic Contract. Valid values are:
    - Enabled - To enable a contract on this TLS service.
    - Disabled (Default) - Indicates there is no guaranteed bandwidth dedicated to local Ethernet traffic from this node.
11. PST: is the primary state.
    - IS - in service (Default)
    - OOS - out of service

**Example:**
ENT-ETHSER-IAS:PETALUMA:svc1:ctag :FAC-3-1;

**TARGET : Traverse**

**Note:** Command valid for legacy Ethernet cards only.
ED-ETHSER-TLS

General Description
This command edits a Transparent LAN Service.

Command Syntax

ED-ETHSER-TLS::<AID>::<ctag>::[<FROMAID>,<TOAID>]:[DESC=<desc>],[CUST=<cust>],[VLANID=<vlanid>], [LOCBW=<locbw>],[DATARATE=<datarate>],[PARTTRAFCON=<parttrafcon>];:<pst>;

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID> indicates TLS service name.
4. SRCAID indicates the source access identifier. Valid values are:
   FAC::<slot>::<port> in case it is an Ethernet facility.
   EOS::<slot>::<maxEOS> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” Ethernet EOS/LAG/POL/BRIDGE AIDs under the Ethernet service AID section.
5. DESC: Customer description string.
6. CUST: Indicates the customer name. None indicates no customer selected.
7. VLANID: Service VLAN ID. For Traverse valid range is 1 to 4093.
8. DATARATE indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1Mbps. Default value is 1. There is no traffic contract for a TLS service on an Ethernet port.
9. LOCBW: Selects the bandwidth (in Mbps) for TLS traffic originating from this node. Valid range is 1 to 1000 Mbps. The value of this parameter should be less than that of DATARATE parameter.
10. PARTTRAFCON: Partition Traffic Contract. Valid values are:
    Enabled - To enable a contract on this TLS service.
    Disabled (default) - So that there is not guaranteed bandwidth dedicated to local Ethernet traffic from this node.
11. PST is the primary state.
    IS - in service (Default)
    OOS - out of service

Example:
ED-ETHSER-IAS:PETALUMA:svc1:: EOS-3-1:CVLANID=5;

TARGET : Traverse

Note: Command valid for legacy Ethernet cards only.

RTRV-ETHSER-TLS

General Description
This command is used to retrieve the parameters of a Transparent LAN Service.
## Command Syntax

**RTRV-ETHSER-TLS::[<AID>]:<ctag>;;**

1. `tid` is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `ctag` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. `<AID>` indicates TLS service name.

**Example:**

RTRV-ETHSER-TLS:PETALUMA:svc1:ctag::EOS-3-1;

**TARGET**: Traverse

**Note:** Command valid for legacy Ethernet cards only.

## Response Syntax

```
<cr> <lf> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M^^<ctag> COMPLD^^^ 
("<AID>::<SRCAID>::[DESC=<desc>,[CUST=<cust>,[VLANID=<vlanid>,[LOCBW=<locbw>,[DATARATE=<datarate>,[PARTTRAFCON=<parttrafcon>,[SID=<sid>,[ADMSTATE=<admstate>,[UPGRDSTATE=<upgrdstate>]:pst,sst 
")*;<cr> <lf> 
```
1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. <AID> indicates TLS service name.
4. SRCAID indicates the source access identifier. Valid values are:
   - FAC-<slot>-<port> in case it is an Ethernet facility.
   - EOS-<slot>-<maxEOS> in case of EOS endpoints. Valid EOS AID values are listed in Appendix C—“Access Identifiers,” **Ethernet EOS/LAG/POL/BRIDGE AIDs** under the Ethernet service AID section.
5. DESC: Customer description string.
6. CUST: Indicates the customer name. None indicates no customer selected.
7. VLANID: Service VLAN ID. For Traverse valid range is 1 to 4093.
8. DATARATE: indicates the amount of data (in Mbps) the service can send without having any data dropped. Range is 0 to 1000 in increments of 1Mbps. Default value is 1. There is not traffic contract for a TLS service on an Ethernet port.
9. LOCBW: Selects the bandwidth (in Mbps) for TLS traffic originating from this node. Valid range is 1 to 1000 Mbps. The value of this parameter should be less than that of DATARATE parameter.
10. PARTTRAFCON: Partition Traffic Contract. Valid values are:
    - Enabled - To enable a contract on this TLS service.
    - Disabled (default) - Indicates there is no guaranteed bandwidth dedicated to local Ethernet traffic from this node.
11. SID: indicates the service ID generated internally.
12. ADMSTATE: Indicates the administrative state of alarm generation. Valid values are:
    - UNLOCK - Alarm generation is enabled
    - LOCK - Alarm generation is disabled
13. SID: indicates the service ID generated internally.
14. ADMSTATE: Indicates the administrative state of alarm generation. Valid values are:
   UNLOCK - Alarm generation is enabled
   LOCK - Alarm generation is disabled
15. UPGRADESTATE: indicates the service upgrade state. Valid values are:
   NONE
   RFR-STOpeed
   RFR-STOP-FAILED
   RFR-INPR
   RFR-OK
   RFR-FAILED
16. <pst> is the primary state. Valid values are:
   IS - in service (Default). Puts the entity in the IS-NR primary state.
   OOS - out of service. Puts the entity in the OOS-MA primary state.
17. <sst> is the secondary state. Valid values are:
   ACT - Service is in active state (Default)
   DSBLD - Service is in disabled state

TARGET: Traverse

Note: Command valid for legacy Ethernet cards only.

Example:
<cr> <lf> ^^PETALUMA^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> ^M^<ctag> COMPLD
^^^"Service1:
FAC-3-1:CUST=G,DESC=xyz,VLANID=5,SID=1,ADMSTATE=LOCK,UPGRADESTATE=NONE:IS,ACT";<cr> <lf>

DLT-ETHSER-TLS

General Description
This command deletes a Transparent LAN Service.

Command Syntax

DLT-ETHSER-TLS::<AID>:<ctag>;

1. tid is the target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. ctag is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. <AID> indicates TLS service name.

Example:
DLT-ETHSER-IAS:PETALUMA:svc1:ctag;

TARGET: Traverse

Note: Command valid for legacy Ethernet cards only.
DCC Tunnel Commands

This section contains commands to configure DCC tunnels for the system. The optical facility must be created prior to creating DCC tunnels across the optical facilities.

ENT-DCCTUNNEL

General Description
Use this command to create DCC tunnels across the optical facility specified by the FROM-AID and TO-AID. This command also activates the dcc tunnel after creating it.

Command Syntax

ENT-DCCTUNNEL:<tid>:<FROM-AID>,<TO-AID>:<ctag>[:[:]];  

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. FROM-AID is the Access Identifier of the DCC channel on the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers” in the DCC AID section. Grouping and ranging of AIDs is not allowed.
3. TO-AID is the Access Identifier of the DCC channel on the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers” in the DCC AID section. Grouping and ranging of AIDs is not allowed.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example of command to create a DCC tunnel at the edge node of the tunnel:
ENT-DCCTUNNEL:NODE1:STS-7-1-1,STS-8-1-1:123;

Example of command to create a DCC tunnel at the intermediate node of the tunnel:
ENT-DCCTUNNEL:NODE2:STS-8-1-1,STS-9-1-1:123;

TARGET : TRAVERSE, TE100

DLT-DCCTUNNEL

General Description
This command is used to delete a DCC tunnel across the optical facility specified by FROM-AID and TO-AID. This command deactivates the DCC tunnel and then deletes it.

Command Syntax

DLT-DCCTUNNEL:<tid>:<FROM-AID>,<TO-AID>:<ctag>[:[:]];
DCC Tunnel Commands

RTRV-DCCTUNNEL

General Description
This command is used to retrieve a DCC tunnel.

Command Syntax

RTRV–DCCTUNNEL:[<tid>]:[FROM-AID,TO-AID];<ctag>;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. FROM-AID is the Access Identifier of the DCC channel on the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers” in the DCC AID section. Grouping and ranging of AIDs is not allowed.
3. TO-AID is the Access Identifier of the DCC channel on the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers” in the DCC AID section. Grouping and ranging of AIDs is not allowed.
4. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example of command to delete a DCC tunnel at the intermediate node of the tunnel:
DLT-DCCTUNNEL: NODE2: STS-8-1-1,STS-9-1-1:123;

TARGET : TRAVERSE, TE100

Response Syntax

^^^SID^YY-MM-DD^HH:MM:SSM^^CTAG^COMPLD
<rspblk>;
where multiple resp block can be displayed.
^^^"FROM-AID","TO-AID":<TUNNELID>=<TUNNELID>,STATUS=<status>,LASTERR=<lasterr>"
1. sid is shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**

2. FROM-AID is the Access Identifier of the DCC channel on the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers” in the DCC AID section. Grouping and ranging of AIDs is not allowed.

3. TO-AID is the Access Identifier of the DCC channel on the OC-n/STM-n facility. Valid values are shown in Appendix C—“Access Identifiers” in the DCC AID section. Grouping and ranging of AIDs is not allowed.

4. TUNNELID: Tunnel identifier created internally.

5. STATUS indicates the status of the DCC Tunnel. Valid values are:
   - PROVISIONED: DCC tunnel is provisioned
   - ACTINPROG: DCC tunnel is in the process of activation
   - ACTIVATED: DCC tunnel is activated
   - ACTFAILED: DCC tunnel activation failed.
   - DEACTINPROG: DCC tunnel deactivation in progress
   - DEACTFAILED: DCC tunnel deactivation failed.

6. LASTERR : String indicating the previous error encountered while activation.

Example:

```
RTRV-DCCTUNNEL::NODE2:STS-8-1-1,STS-9-1-1::TUNNELID=1,STATUS=ACTIVATED,LASTERR=""
```

**TARGET**: Traverse
### DCC Path Commands

This section contains commands to configure DCC path for the system.

**ENT-DCCPATH-STS1/STS3C/STS12C/VC3/VC4/VC4_4C**

#### General Description

This command is used to add a DCC path.

#### Command Syntax

```markdown
ENT-DCCPATH-STS1/STS3C/STS12C/VC3/VC4/VC4_4C:<tid>:<AID>:<ctag>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. `<AID>` is the Access Identifier of the DCC path. Valid values are shown in Appendix C—“Access Identifiers” in the DCC Path AID section. Grouping and ranging of AIDs is not allowed.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

**Example of command to create a DCC path:**

```
ENT-DCCPATH-STS1:NODE1:STS-1-1:123;
ENT-DCCPATH-VC3:NODE1:VC3HO-1-1-1:123;
```

TARGET : TE100

---

**DLT-DCCPATH-STS1/STS3C/STS12C/VC3/VC4/VC4_4C**

#### General Description

This command is used to delete a DCC path.

#### Command Syntax

```markdown
DLT-DCCPATH-STS1/STS3C/STS12C/VC3/VC4/VC4_4C:<tid>:<AID>:<ctag>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. `<AID>` is the Access Identifier of the DCC path. Valid values are shown in Appendix C—“Access Identifiers” in the DCC Path AID section. Grouping and ranging of AIDs is not allowed.
3. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

**Example of command to delete a DCC path:**

```
DLT-DCCPATH-STS1:NODE1:STS-1-1:123;
DLT-DCCPATH-VC3:NODE1:VC3HO-1-1-1:123;
```

TARGET : TE100
RTRV-DCCPATH-STS1/STS3C/STS12C/VC3/VC4/VC4_4C

General Description

This command is used to retrieve a DCC tunnel.

Command Syntax

| DLT- DCCPATH-STS1/STS3C/STS12C/VC3/VC4/VC4_4C:<tid>::<ctag>;
| 1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
| 2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.

Example:

RTRV-DCCPATH-STS1:NODE1::123;
RTRV-DCCPATH-VC3:NODE1::123;
TARGET : TE100

Response Syntax

```
^^^SID^YY-MM-DD^HH:MM:SSM^^CTAG^COMPLD
<rspblk>;
where multiple resp block can be displayed.
^^^<AID>^`

1. AID is the Access Identifier of the DCC PATH. Valid values are shown in Appendix C—“Access Identifiers” in the DCC Path AID section.

Example:

RTRV-DCCPATH-STS1:NODE2::123;
^^^<SID>^<YY:MM:DD>^<HH:MM:SS>
M^^<ctag>^COMPLD <cr> <lf>
"STS-1-1"
; 
TARGET : TE100
```
**IP Provisioning**

**ENT-IPROUTE**

**General Description**

This command is used to add a static route on the node.

**Command Syntax**

```
ENT-IPROUTE:[<tid>]:<ctag>::
DESTIP=<destip>,DESTMASK=<destmask>,GATEWAY=<gateway>,[EXPORT=<export>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. DESTIP is the IP address of destination.
3. DESTMASK is the IP mask of the destination.
4. GATEWAY is the gateway IP address.
5. EXPORT is the route exported to routing domain (OSPF).
   - Y - Route is exported to routing domain.
   - N - Route is not exported to routing domain.

**Example:**

```
ENT-IPROUTE:PETALUMA::123::DESTIP=10.3.10.144,DESTMASK=255.255.255.0,GATEWAY=10.3.0.1;
```

**TARGET : TRAVERSE, TE100**

**ED-IPROUTE**

**General Description**

This command is used to edit a static route on the node.

**Command Syntax**

```
ED-IPROUTE:[<tid>]:<ctag>::
DESTIP=<destip>,[DESTMASK=<destmask>],[GATEWAY=<gateway>],[EXPORT=<export>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. DESTIP is the IP address of destination.
3. DESTMASK is the IP mask of the destination.
4. GATEWAY is the gateway IP address.
5. EXPORT is the route exported to routing domain (OSPF).
   - Y - Route is exported to routing domain.
   - N - Route is not exported to routing domain.

**Example:**

```
ED-IPROUTE:PETALUMA::123::DESTIP=10.3.10.144,DESTMASK=255.255.255.0,GATEWAY=10.3.0.1;
```

**TARGET : TRAVERSE, TE100**
**RTRV-IPROUTE**

**General Description**

This command is used to retrieve IP routes.

**Command Syntax**

<table>
<thead>
<tr>
<th>RTRV–IPROUTE</th>
<th>[&lt;tid&gt;]:[CTAG]:[DESTIP=&lt;destip&gt;];</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &lt;tid&gt; is target identifier as described in Chapter 1—“TL1 Overview,” <strong>Target Identifier (TID).</strong></td>
<td></td>
</tr>
<tr>
<td>2. &lt;ctag&gt; is correlation tag described in Chapter 1—“TL1 Overview,” <strong>Staging Parameter Blocks, Correlation Tag (CTAG).</strong></td>
<td></td>
</tr>
<tr>
<td>3. DESTIP is the IP address of destination.</td>
<td></td>
</tr>
</tbody>
</table>

Example:

RTRV-IPROUTE:PETALUMA::123::DESTIP=10.3.10.1;

TARGET : TRAVERSE, TE100

**Response Syntax**

```
\[
\text{sid}\text{ YY-MM-DD HH:MM:SSM }\text{CTAG}\text{COMPLD}
\text{<rspblk>;
where multiple resp block can be displayed.}
\]
```

\[
\text{DESTIP=<destip>,DESTMASK=<destmask>,GATEWAY=<gateway>,EXPORT=<export>";}
\]

1. sid is shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. DESTIP is the IP address of destination.
3. DESTMASK is the IP mask of the destination.
4. GATEWAY is the gateway IP address.
5. EXPORT is the route exported to routing domain (OSPF).
   - Y - Route is exported to routing domain.
   - N - Route is not exported to routing domain.

Example:

RTRV-IPROUTE:PETALUMA::123::DESTIP=10.3.10.1;

```
\[
\text{<sid> YY-MM-DD HH:MM:SSM }\text{CTAG}\text{COMPLD}
\text{<cr> <lf>}
\text{DESTIP=10.3.10.1,DESTMASK=255.255.255.0,GATEWAY=10.3.0.1,EXPORT=N}
\]
```

TARGET : TRAVERSE, TE100
DLT-IPROUTE

General Description
This command is used to delete a static route on the node.

Command Syntax

| DLT-IPROUTE:[:]<tid>::<ctag>::DESTIP=<destip>;
| 1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
| 2. DESTIP is the IP address of destination.

Example:
DLT-IPROUTE:PETALUMA:123::DESTIP=10.3.10.144;

TARGET : TRAVERSE, TE100
This section contains commands to configure OSI protocols on the system. It consists of commands to configure TARP, ISIS, and other OSI protocols.

**ED-TTD-LVPORT**

**General Description**

This command is used to set the Length Value TCP port for TL1 translation device.

**Command Syntax**

```
ED-TTD-LVPORT::<tid>::<CTAG>::<LVPORT>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Correlation Tag (CTAG).
3. `LVPORT` is TCP port number for TTD Length Value service.
   Range is 1024 to 65535

Example:

```
ED-TTD-LVPORT:PETALUMA::123::3456;
```

TARGET : TRAVERSE, TE100

**ED-TTD-RAWPORT**

**General Description**

This command is used to set the Length Value TCP port for TL1 translation device.

**Command Syntax**

```
ED-TTD-RAWPORT::<tid>::<CTAG>::<RAWPORT>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Correlation Tag (CTAG).
3. `RAWPORT` is TCP port number for TTD raw port service.
   Range is 1024 to 65535

Example:

```
ED-TTD-RAWPORT:PETALUMA::123::3456;
```

TARGET : TRAVERSE, TE100

**ED-TTD-TELNETPORT**

**General Description**

This command is used to set the telnet TCP port for TL1 translation device.
Command Syntax

**ED–TTD-TELNETPORT**[:<tid>]:<CTAG>::TELNETPORT;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. TELNETPORT is TCP port number for TTD telnet service. Range is 1024 to 65535

Example:
ED-TTD-TELNETPORT:PETALUMA::123:3456;

TARGET : TRAVERSE, TE100

**RTRV–TTD–PORTS**

**General Description**
This command is used to retrieve TL1 translation device ports.

**Command Syntax**

**RTRV–TTD–PORTS**[:<tid>]:<ctag>;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. TELNETPORT is TCP port number for TTD telnet service. Range is 1024 to 65535

Example:
RTRV-TTD-PORTS:PETALUMA::123;

**Response Syntax**

```
^^^sid^YY-MM-DD^HH:MM:SS
M^^<ctag> COMPLD
^^"LVPORT=<lvport>,RAWPORT=<rawport>,TELNETPORT=<telnetport>"
```

;
Chapter 2 TL1 Commands

ED-OSINET

General Description
Use this command to edit system OSI NET values.

Command Syntax

```
ED-OSINET:<tid>::<ctag>::<TITLE>:[TYPE=<type>];
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. `<TITLE>`: network title for OSI. The length of TITLE string is between 14 and 56. If no “,” are included, the maximum length is 38. Characters allowed are 0 to 9, A to F, a to f and ‘.’
4. `<TYPE>`: Indicates OSI system type. Valid values are:
   - ES - System is End System
   - IS - System is Intermediate System

Example:

```
ED-OSINET:PETALUMA::123::24.0000.0000.0000.0000.0000.0000.1212:TYPE=IS;
ED-OSINET:PETALUMA::123::240000000000000000000000001212;
```

TARGET : TRAVERSE, TE100

RTRV-OSINET

General Description
This command is used to retrieve the OSI NET value stored in the system.
**Command Syntax**

RTRV-OSINET:<tid>::<ctag>;

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
RTRV-OSINET:PETALUMA::123;
TARGET : TRAVERSE, TE100

**Response Syntax**

```
^^^sid^YY-MM-DD^HH:MM:SS
M^^<ctag> COMPLD
^^^"NETWORKTITLE=<networktitle>,TYPE=<type>"
;
```

1. `sid` is shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `tid` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
3. `NETWORKTITLE` is OSI network title of the node. The length of the TITLE string is between 14 and 56. If no “.” are included, the maximum length is 38. Characters allowed are 0-9, A-F, a-f and ‘.’
4. **TYPE:** Indicates OSI system type. Valid values are:
   - ES - System is End System
   - IS - System is Intermediate System

Example:
RTRV-OSINET:PETALUMA::123;
```
^^^^<SID>^<YY:MM:DD>^<HH:MM:SS>
M^^<ctag>^COMPLD <lf>
^^^^ NETWORKTITLE=24.0000.0000.0000.0000.0000.0000.1212,TYPE=IS" 
```
TARGET : TRAVERSE, TE100

**ED-OSISEL**

**General Description**

This command is used to edit the selector value for system. The system requires a power cycle to use the new edited values.

**Command Syntax**

ED-OSISEL:<tid>::<ctag>:::
[TL1PSAP=<tl1psap>],[FTAMPSAP=<ftampsap>],[TP4NSEL=<tp4nsel>],
[TARPNSEL=<tarpnsel>],[AETITLE=<aetitle>];
RTRV-OSISEL

**General Description**

This command is used to retrieve the OSI selector value stored in the system for a different application.

**Command Syntax**

RTRV-OSISEL:<tid>::<ctag>;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**

Example:
RTRV-OSISEL:PETALUMA::123;

**Response Syntax**

```plaintext
^^^sid^YY-MM-DD^HH:MM:SS
M^<ctag> COMPLD
^^^[TL1PSAP=<tl1psap>],[FTAMPSAP=<ftampsap>],[TP4NSEL=<tp4nsel>],
[TARPSEL=<tarpnsel>],[AETITLE=<aetitle>]
```

TARGET : TRAVERSE, TE100
## ENT-TADRMAP

### General Description

This command is used to create a static tarp cache entry.

### Command Syntax

**ENT-TADRMAP**:<tid>::<ctag>::NETADDR=<netaddr>,TID=<tid>;

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG)**.
3. NETADDR: network address of the system. The length of the NADDR string is between 14 and 56. If no “.” are included, the maximum length is 38. Characters allowed are 0-9, A-F, a-f and ‘.’
4. TID is target identifier of remote system as described in Section 1—**TL1 Overview and Commands**, Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Target Identifier (TID)**.

Example:

```
ENT-TADRMAP:PETALUMA:123:::NETADDR=240000000000000000000000001212,TID=ACTON;
```

TARGET : TRAVERSE, TE100
RTRV-TADRMAP

General Description

This command is used to retrieve tarp cache entries.

Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTRV-TADRMAP:&lt;tid&gt;::&lt;ctag&gt;;</td>
</tr>
</tbody>
</table>

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:

RTRV-TADRMAP:PETALUMA::123;

TARGET : TRAVERSE, TE100

Response Syntax

<table>
<thead>
<tr>
<th>Response Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>^^^sid^YY-MM-DD^HH:MM:SS</td>
</tr>
<tr>
<td>M^&lt;ctag&gt; COMPLD</td>
</tr>
<tr>
<td>^^^&quot;NETADDR=&lt;netaddr&gt;,TID=&lt;tid&gt;&quot;*</td>
</tr>
<tr>
<td>;</td>
</tr>
</tbody>
</table>

1. sid is shelf ID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. NETADDR: network address of the system. The length of the NADDR string is between 14 and 56. If no “,” are included, the maximum length is 38. Characters allowed are 0-9, A-F, a-f and ‘.’
4. TID is target identifier of remote system as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).

Example:

RTRV-TARP-TDC:PETALUMA::123;

^^^<SID>^<YY:MM:DD>^<HH:MM:SS>
M^<ctag> COMPLD <cr> <lf>
^^^"NETADDR=24.0000.0000.0000.0000.0000.0000.1212,TID=ACTON"
^^^"NETADDR=24.0000.0000.0000.0000.0000.0000.1214,TID=ACTON"

;  

TARGET : TRAVERSE, TE100
DLT-TADRMAP

General Description
This command is used to delete an entry in the static tarp cache. Each delete command deletes one entry in the tarp cache.

Command Syntax

```
DLT-TADRMAP:<tid>::<ctag>::::TID=<tid>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. TID is target identifier of remote system as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).

Example:
DLT-TARP-TDC:PETALUMA::123:::TID=ACTON;

TARGET : TRAVERSE, TE100

ENT-TTD-ACL

General Description
Use this command to add a permitted IP address to an access control list entry.

Command Syntax

```
ENT-TTD-ACL:<tid>::<ctag>::<IPADDR>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. IPADDR IP address permitted to access Node.

Example:
ENT-TTD-ACL:PETALUMA::123::10.2.3.4;

TARGET : TRAVERSE, TE100

RTRV-TTD-ACL

General Description
This command is used to retrieve translation device access list entries.

Command Syntax

```
RTRV-TTD-ACL:<tid>::<ctag>;
```
Response Syntax

```
1. sid is shelf ID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. tid is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
3. IPADDR IP address permitted to access translation device services of the Node.
```

Example:
RTRV-TTD-ACL::PETALUMA::123;
TARGET : TRAVERSE, TE100

DLT-TTD-ACL

General Description
This command is used to delete IP address from access control list entry.

Command Syntax

```
1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. IPADDR IP address permitted to access Node.
```

Example:
DLT-TTD-ACL:PETALUMA::123::10.2.3.4;
TARGET : TRAVERSE, TE100
**ENT-ESIS-ROUTE**

**General Description**

This command is used to edit the static route table. Each edit command creates one entry of static route.

**Command Syntax**

```
ENT-ESIS-ROUTE:[<tid>]:::<ctag>::<DEST>,<SLOT>,<PORT>; For Rel 2.0
ENT-ESIS-ROUTE:[<tid>]:::<ctag>::<DEST>,<PRTAID>; Not applicable for Rel 2.0;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. `<DEST>` is network address of the remote system. The length of `<DEST>` string is between 2 and 56 characters. If no “.” are included, the maximum length is 38. Characters allowed are 0-9, A-F, a-f and ‘.’
4. `<SLOT>`: the SONET slot through which the destination is reachable.
5. `<PORT>`: the SONET port having DCC over which the destination is reachable.
6. `<PRTAID>`: the AID to identify optical OC-n/STM-n facilities. Valid values are shown in Appendix C—“Access Identifiers,” Facility AIDs.

**Example:**

```
ENT-ESIS-ROUTE:PETALUMA:123::1475600055,1,1; For Rel 2.0.
ENT-ESIS-ROUTE:PETALUMA:123::1475600055,OC3-1;
ENT-ESIS-ROUTE:PETALUMA:123::1475600055,FAC-1-1;
```

**TARGET : TRAVERSE, TE100**

---

**RTRV-ESIS-ROUTE**

**General Description**

This command is used to retrieve the static route table.

**Command Syntax**

```
RTRV-ESIS-ROUTE:[<tid>]:::<ctag>;
```

1. `<tid>` is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<ctag>` is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

**Example:**

```
RTRV-ESIS-ROUTE:PETALUMA:123;
```

**TARGET : TRAVERSE, TE100**
**Response Syntax**

`^\^\^sid'=YY-MM-DD':HH:MM:SS
M^\^<ctag> COMPLD
^\^" NETADDR=<netaddr>,[SLOT=<slot>],[PORT=<port>],[PRTAID=<prtaid>]"*
;`

1. sid is shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
3. NETADDR: network address of the system. The length of the NADDR string is between 2 and 56 characters. If no “.” are included, the maximum length is 38. Characters allowed are 0-9, A-F, a-f and ‘.’
4. SLOT: the SONET slot through which the destination is reachable.
5. PORT: the SONET port having DCC over which the destination is reachable.
6. PRTAID: the AID to identify optical OC-n/STM-n facilities. Valid values are shown in Appendix C—“Access Identifiers,” **Facility AIDs.**

Example:

RTRV-ESIS-ROUTE:PETALUMA::123;
`^\^\^<SID>=<YY-MM-DD>=<HH:MM:SS>
M^\^<ctag> COMPLD <cr> <lf>
^\^"NETADDR=1475600055,SLOT=1,PORT=1"
^\^"NETADDR=1475600066,SLOT=1,PORT=2"
;`

TARGET : TRAVERSE, TE100

---

**DLT-ESIS-ROUTE**

**General Description**

Use this command to delete static routes from the static route table.

**Command Syntax**

`DLT-ESIS-ROUTE:[<tid>];:<ctag>::<DEST>;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
3. DEST: network address of the remote system. The length of the DEST string is between 2 and 56 characters. If no “.” are included, the maximum length is 38. Characters allowed are 0-9, A-F, a-f and ‘.’

Example:

DLT-ESIS-ROUTE:PETALUMA:123::1475600055;

TARGET : TRAVERSE, TE100
ENT-ISIS-AREA

General Description
This command is used to edit the static route table. Each edit command creates one static route entry.

Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT-ISIS-AREA:&lt;tid&gt;::&lt;ctag&gt;::&lt;AREAADDR&gt;;;</td>
</tr>
</tbody>
</table>

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. AREAADDR: area address supported by ISIS domain. The length of the AREAADDR string is between 2 and 26 characters. Characters allowed are 0-9, A-F, and a-f.

Example:
ENT-ISIS-AREA:PETALUMA:123::1475600055;
TARGET : TRAVERSE, TE100

RTRV-ISIS-AREA

General Description
This command is used to retrieve configured area addresses.

Command Syntax

<table>
<thead>
<tr>
<th>Command Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTRV-ISIS-AREA:[&lt;tid&gt;]:&lt;ctag&gt;;;</td>
</tr>
</tbody>
</table>

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).

Example:
RTRV-ISIS-AREA:PETALUMA:123;
TARGET : TRAVERSE, TE100

Response Syntax

```
"^\^\"sid^YY-MM-DD^HH:MM:SS
M"^\<ctag> COMPLD
"^\"AREAADDR=<areaaddr>"^\"*;
```
DLT-ISIS-AREA

General Description

This command is used to delete the ISIS area address.

Command Syntax

DLT-ISIS-AREA:<tid>::<ctag>::<AREAADDR>;

1. <tid> is target identifier as described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. <ctag> is correlation tag described in Chapter 1—“TL1 Overview,” Staging Parameter Blocks, Correlation Tag (CTAG).
3. AREAADDR: area address supported by ISIS domain. The length of the AREAADDR string is between 2 and 26 characters. Characters allowed are 0-9, A-F, a-f.

Example:

DLT-ISIS-AREA:PETALUMA:123::1475600055;
TARGET : TRAVERSE, TE100
Templates

This section contains commands to configure alarm profiles, performance monitoring, classifier, and bandwidth templates.

The following types of alarm profiles are supported in Traverse/TE100:

<table>
<thead>
<tr>
<th>Profile Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPTP</td>
<td>Alarm profile for SONET Facility</td>
</tr>
<tr>
<td>ETHPTP</td>
<td>Alarm profile for Ethernet Facility</td>
</tr>
<tr>
<td>SHELF</td>
<td>Alarm profile for Shelf</td>
</tr>
<tr>
<td>DS3PTP</td>
<td>Alarm profile for DS3/EC1 Facility</td>
</tr>
<tr>
<td>DS1PTP</td>
<td>Alarm profile for DS1 Facility</td>
</tr>
<tr>
<td>STS</td>
<td>Alarm profile for SONET crossconnect STS endpoint</td>
</tr>
<tr>
<td>VT</td>
<td>Alarm profile for SONET crossconnect VT endpoint</td>
</tr>
<tr>
<td>E1PTP</td>
<td>Alarm profile for E1 facility</td>
</tr>
<tr>
<td>E3PTP</td>
<td>Alarm profile for E3 facility</td>
</tr>
<tr>
<td>SDHHO</td>
<td>Alarm profile for SDH high order crossconnect endpoint VC3/VC4</td>
</tr>
<tr>
<td>SDHLO</td>
<td>Alarm profile for SDH low order crossconnect endpoint VC11/VC12</td>
</tr>
<tr>
<td>SDHPTP</td>
<td>Alarm profile for SDH crossconnect</td>
</tr>
<tr>
<td>EOS</td>
<td>Alarm profile for EOS port on Ethernet side for SONET</td>
</tr>
<tr>
<td>EOSCTP</td>
<td>Alarm profile for EOS crossconnect termination point from SONET side</td>
</tr>
<tr>
<td>SDHEOS</td>
<td>Alarm profile for EOS port on Ethernet side for SDH</td>
</tr>
<tr>
<td>SDHEOSCTP</td>
<td>Alarm profile for EOS crossconnect termination point from SDH side</td>
</tr>
<tr>
<td>LAG</td>
<td>Alarm profile for Link Aggregation port</td>
</tr>
<tr>
<td>SERVER</td>
<td>Alarm profile for EMS server</td>
</tr>
</tbody>
</table>

The following types of performance templates are supported in Traverse/TE100:

<table>
<thead>
<tr>
<th>PM Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPTP</td>
<td>Performance template for SONET Facility</td>
</tr>
<tr>
<td>STS</td>
<td>Performance template for SONET crossconnect STS endpoint</td>
</tr>
<tr>
<td>DS3PTP</td>
<td>Performance template for DS3 Facility</td>
</tr>
<tr>
<td>ETHPTP</td>
<td>Performance template for Ethernet Facility</td>
</tr>
<tr>
<td>EC1PTP</td>
<td>Performance template for EC1 Facility</td>
</tr>
<tr>
<td>DS1PTP</td>
<td>Performance template for DS1 Facility</td>
</tr>
<tr>
<td>VT</td>
<td>Performance template for SONET crossconnect VT endpoint</td>
</tr>
</tbody>
</table>
### ENT-ALMPROF-<ProfileType>

**General Description**

This command is used to create an alarm profile.

**Command Syntax**

```
ENT-ALMPROF-SPTP/ETHPTP/SHELF/DS3PTP/DS1PTP/STS/VT/E1PTP/E3PTP/SDHOO/SDHLO/SDHPTP/EOS/EOSCTP/SDHEOS/SDHEOSCTP/ Lag/SERVER:[<tid>]:<AID>:ctag;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. `AID`: the name of the alarm profile.

**Example:**

```
ENT-ALMPROF-SPTP:PETALUMA:SONETPROF:123;
```

**TARGET : Server TL1**

### ED-ALMPROF-<ProfileType>

**General Description**

This command is used to edit alarm profiles.

**Command Syntax**

```
ED-ALMPROF-SPTP/ETHPTP/SHELF/DS3PTP/DS1PTP/STS/VT/E1PTP/E3PTP/SDHOO/SDHLO/SDHPTP/EOS/EOSCTP/SDHEOS/SDHEOSCTP/LAG/SERVER:[<tid>]:<AID>:ctag;<CONDTYPE>=<ENABLE>&<SRVEFF>&<NTFCNDE>*;
```

---

<table>
<thead>
<tr>
<th>Profile Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1PTP</td>
<td>Performance template for E1 facility</td>
</tr>
<tr>
<td>E3PTP</td>
<td>Performance template for E3 facility</td>
</tr>
<tr>
<td>SDHPTP</td>
<td>Performance template for SDH crossconnect</td>
</tr>
<tr>
<td>SDHOO</td>
<td>Performance template for SDH high order crossconnect path VC3/VC4.</td>
</tr>
<tr>
<td>SDHLO</td>
<td>Performance template for SDH low order crossconnect path VC11/VC12</td>
</tr>
<tr>
<td>VC11</td>
<td>Performance template for VC11 path</td>
</tr>
<tr>
<td>VC12</td>
<td>Performance template for VC12 path</td>
</tr>
<tr>
<td>EOS</td>
<td>Performance template for EOS port on Ethernet side for SONET</td>
</tr>
</tbody>
</table>
RTRV-ALMPROF-<ProfileType>

General Description

This command is used to retrieve alarm profiles.

Command Syntax

```
RTRV-ALMPROF- SPTP/ETHPTP/SHELF/DS3PTP/DS1PTP/STS/VT/E1PTP/E3PTP/SDHHO/SDHLO/SDHPTP/EOS/COSCTP/SDHEOS/SDHEOSCTP/LAG/SERVER: [<tid>]: AID: [ctag];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the alarm profile.
3. CONDTYPE: the condition type of the entity. Values are shown in the Environment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment”.
4. ENABLE: Enables or disables the CONDTYPE parameter in the alarm profile.
   - EN - Enables the condition type
   - DIS - Disables the condition type
5. NTFCNCDE: the two-character notification code associated with a signal alarm condition. Valid values are:
   - CR = Critical alarm
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm

Example:
```
ED-ALMPROF-SPTP:PETALUMA:SONETPROF:123:::DCCFAIL=EN&SA&CR;
```

TARGET : Server TL1.

Example:
```
RTRV-ALMPROF-<ProfileType>

General Description

This command is used to retrieve alarm profiles.

Command Syntax

RTRV-ALMPROF- SPTP/ETHPTP/SHELF/DS3PTP/DS1PTP/STS/VT/E1PTP/E3PTP/SDHHO/SDHLO/SDHPTP/EOS/COSCTP/SDHEOS/SDHEOSCTP/LAG/SERVER: [<tid>]: AID: [ctag];

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the alarm profile.
3. CONDTYPE: the condition type of the entity. Values are shown in the Environment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNCDE Assignment”.
4. ENABLE: Enables or disables the CONDTYPE parameter in the alarm profile.
   - EN - Enables the condition type
   - DIS - Disables the condition type
5. NTFCNCDE: the two-character notification code associated with a signal alarm condition. Valid values are:
   - CR = Critical alarm
   - MJ = Major alarm
   - MN = Minor alarm
   - CL = Cleared alarm
```
6. **SRVEFF**: indicates the effect on service caused by the alarm condition. Valid values are:
   - **SA**: Service-affecting condition, immediate action required.
   - **NSA**: Non service-affecting condition.

Example:

```
RTRV-ALMPROF-SPTP:PETALUMA:SONETPROF:123;
```

**TARGET**: Server TL1.

### Response Syntax

```
^<SID>^YY-MM-DD^HH:MM:SSM^CTAG^COMPLD
"<AID>:[<CONDTYPE>=<ENABLE>&<SRVEFF>&<NTFCNDCDE>]*/
```

For each `CONDTYPE` the `"[<CONDTYPE>=<ENABLE>&<SRVEFF>&<NTFCNDCDE>]"` block is repeated.

1. **sid**: shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. **AID**: is the name of the alarm profile.
3. **CONDTYPE**: the condition type of the entity. Values are shown in the Environment section of Appendix E—“CONDTYPE, CONDEFF, and NTFCNDCDE Assignment”.
4. **ENABLE**: Enables or disables the `CONDTYPE` parameter in the alarm profile.
   - **EN**: Enables the condition type
   - **DIS**: Disables the condition type
5. **NTFCNDCDE**: the two-character notification code associated with a signal alarm condition. Valid values are:
   - **CR**: Critical alarm
   - **MJ**: Major alarm
   - **MN**: Minor alarm
   - **CL**: Cleared alarm
6. **SRVEFF**: indicates the effect on service caused by the alarm condition. Valid values are:
   - **SA**: Service-affecting condition, immediate action required.
   - **NSA**: Non service-affecting condition.

Example:

```
RTRV-IPROUTE:PETALUMA::123::DESTIP=10.3.10.1;
^<SID>^<YY:MM:DD>^<HH:MM:SS>
M^<ctag>^COMPLD <cr> <lf>
"SONETPROF:DCCFAIL=EN&SA&CR,AIS-L=EN&NSA&MJ "
```

**TARGET**: Server TL1
**Templates**

**DLT-ALMPROF-<ProfileType>**

**General Description**
This command is used to create a alarm profile.

**Command Syntax**

```
DLT-ALMPROF-SPTP/ETHPTP/
SHELF/DSS3PTP/DST1PTP/STS/VT/E1PTP/E3PTP/SDHHO/SDHLO/SDHPTP/EOS/EOSCSTP/
SDHEOS/SDHEOSCSTP/LAG/SERVER:[<tid>]:AID:ctag;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the alarm profile.

Example:
```
DLT-ALMPROF-SPTP:PETALUMA:SONETPROF:123;
```

**Target : Server TL1**

**ENT-PMTMPL-<PMType>**

**General Description**
This command is used to create a PM template.

**Command Syntax**

```
ENT-PMTMPL-SPTP/STS/DSS3PTP/ETHPTP/EC1PTP/DS1PTP/VT/E1PTP/E3PTP/SDHPTP/
SDHHO/SDHLO/VC11/VC12/EOS;::<tid>;AID:<AID>:ctag::<ID>,
[<ALLTHRES>];[<ALLCOLL>];[<MONTYPE>_COLL=<montype_coll>]*,
[<MONTYPE>_15M=<montype_15m>]*,[<MONTYPE>_24H=<montype_24h>]*;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID: the name of the performance monitoring template.
3. ID: Integer number used as Template ID. This parameter is mandatory when creating a template on a node.
4. ALLTHRES: Indicates to clear all threshold values or set to default values. If this parameter is provided `<MONTYPE>_COLL, <MONTYPE>_15M, the <MONTYPE>_24H parameters cannot be entered. Valid values are:
   - CLEAR - Clear all threshold values.
   - DEFAULT - Set to default all threshold values.
5. ALLCOLL: Indicates collection of all montypes counters. If this parameter is provided `<MONTYPE>_COLL, <MONTYPE>_15M, the <MONTYPE>_24H parameters cannot be entered. Valid values are:
   - Y - Collect all the montypes counters.
   - N - Don’t collect any montypes counters.
6. `<MONTYPE>_COL`: Indicate to whether collect or not specified `<MONTYPE>`. MONTYPE values are provided in Appendix B—“Performance Monitoring Type Coding”. Valid values are:
   - Y - Collect the `<MONTYPE>` counter.
   - N - Don’t collect `<MONTYPE>` counter.

7. `<MONTYPE>_15M`: Indicate 15M threshold value of `<MONTYPE>`. MONTYPE values are provided in Appendix B—“Performance Monitoring Type Coding”. Value is an integer.

8. `<MONTYPE>_24H`: Indicate 24H threshold value of `<MONTYPE>`. MONTYPE values are provided in Appendix B—“Performance Monitoring Type Coding”. Value is an integer.

Example:

To create the PM template named `MYTMPL` with ID 5, collect all montype, and set the threshold values to default:

```
ENT-PMTMPL-SPTP:Petaluma:MYTMPL:123::5,DEFAULT,Y;
```

To create the PM template named `MYTMPL` with ID 5, set the threshold values of CV-S montype, and to disallow the collection of FC-L montype:

```
```

```
TARGET : Server TL1
```

### ED-PMTMPL-<PMTYPE>

**General Description**

This command is used to edit a PM template.

**Command Syntax**

```
ED-PMTMPL-SPTP/STS/DS3PTP/ETHPTP/EC1PTP/DS1PTP/VT/E1PTP/E3PTP/SDHPTP/SDHHO/
SDHLO/VC11/VC12/EOS:[<tid>]:<AID>:ctag::[<ALLTHRES>],[<ALLCOLL>];
[<MONTYPE>_COLL=<montype_coll>]*,[<MONTYPE>_15M=<montype_15m>]*,[<MONTYPE>_24H=<montype_24h>]*;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the name of the performance monitoring template.
3. ALLTHRES: Indicates to clear all threshold values or set it to default value. If this parameter is provided `<MONTYPE>_COLL`, `<MONTYPE>_15M`, `<MONTYPE>_24H` parameters cannot be entered. Valid values are
   - CLEAR - Clear all threshold values.
   - DEFAULT - Set to default all threshold values.
4. ALLCOLL: Indicates collection of all montypes counters. If this parameter is provided `<MONTYPE>_COLL`, `<MONTYPE>_15M`, `<MONTYPE>_24H` parameters cannot be entered. Valid values are
   - Y - Collect all the montypes counters.
   - N - Don’t collect any montypes counters.
5. `<MONTYPE>_COLL`: Indicate whether or not to collect specified `<MONTYPE>`. `<MONTYPE>` values are provided in Appendix B—“Performance Monitoring Type Coding”. Valid values are:
   Y - Collect the `<MONTYPE>` counter.
   N - Don’t collect `<MONTYPE>` counter.

6. `<MONTYPE>_15M`: Indicate 15M threshold value of `<MONTYPE>`. `<MONTYPE>` values are provided in Appendix B—“Performance Monitoring Type Coding”. Value is an integer.

7. `<MONTYPE>_24H`: Indicate 24H threshold value of `<MONTYPE>`. `<MONTYPE>` values are provided in Appendix B—“Performance Monitoring Type Coding”. Value is an integer.

Example:
To edit the PM template named MYTMPL with ID 5, collect all montype, and set the threshold values to default:
ED-PMTMPL-SPTP:PETALUMA:MYTMPL:123::DEFAULT,Y;
To edit the PM template named MYTMPL, set the threshold values of CV-S mon type, and to disallow the collection of FC-L montype:

TARGET : Server TL1

RTRV-PMTMPL-<PMTypetype>

General Description
This command is used to retrieve a PM template.

Command Syntax

RTRV-PMTMPL-SPTP/STS/ETHTP/EC1TP/DS1TP/VT/E1TP/E3TP/SDHPTP/SDHLOPATH/VC11PATH/VC12PATH/EOS:[<tid>]:[<AID>]:[CTAG];

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the name of the performance monitoring template.

Example:
RTRV-PMTMPL-SPTP:PETALUMA:SONETPROF:123;

TARGET : Server TL1

Response Syntax

```
<^<SID YY-MM-DD hh:mm:ssM^<CTAG COMPLD>^>
"<AID>:<ID>:<MONTYPE_COLL>=<montype_coll>]*,<MONTYPE_15M>=<montype_15m>]*,
[<MONTYPE_24H>=<montype_24h>]*";
```
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1. sid is shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the alarm profile.
3. <MONTYPE>_COLL : Indicate whether or not to collect specified <MONTYPE>. MONTYPE values are provided in Appendix B—“Performance Monitoring Type Coding”. Valid values are:
   Y - Collect the <MONTYPE> counter.
   N - Do not collect <MONTYPE> counter.
4. <MONTYPE>_15M : Indicates 15M threshold value of <MONTYPE>. MONTYPE values are provided in Appendix B—“Performance Monitoring Type Coding”. Value is an integer.
5. <MONTYPE>_24H : Indicates 24H threshold value of <MONTYPE>. MONTYPE values are provided in Appendix B—“Performance Monitoring Type Coding”. Value is an integer.

Example:
RTRV-PMTMPL-SPTP:PETALUMA::123::MYTMPL;
^<SID>^<YY:MM:DD>^<HH:MM:SS>
M^<ctag>^COMPLD <lf>
"MYPROF:3: CV-S_COL=Y, CV-S_15M=20, CV-S_24H=200";
TARGET : Server TL1

DLT-PMTMPL-<PMTYPE>

**General Description**
This command is used to create an alarm profile.

**Command Syntax**

DLT-PMTMPL-SPTP/STS/DS3PTP/ETHPTP/EC1PTP/DS1PTP/VT/E1PTP/E3PTP/SDHPTP/SDHHOPATH/
SDHLOPATH/VC11PATH/VC12PATH/EOS: [<tid>]:AID:<ctag>;

1. <tid> is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the performance monitoring template.

Example:
DLT-PMTMPL-SPTP:PETALUMA:MYTMPL:123;
TARGET : Server TL1

ENT-CLFR

**General Description**
This command is used to create a classifier template.

**Command Syntax**

ENT-CLFR: [<tid>]:[<AID>]:<ctag>::<ID>:[[COS0=<cos0>], [IDP0=<idp0>], [COS1=<cos1>], [IDP1=<idp1>], [COS2=<cos2>], [IDP2=<idp2>], [COS3=<cos3>], [IDP3=<idp3>], [COS4=<cos4>], [IDP4=<idp4>], [COS5=<cos5>], [IDP5=<idp5>], [COS6=<cos6>], [IDP6=<idp6>], [COS7=<cos7>], [IDP7=<idp7>];
1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. AID: the name of the classifier.
4. COS0-7: Integer value between 1 and 4 to map incoming priority to COS queue.
5. IDP0-7: Suggest initial drop precedence based on incoming priority. Valid values are:
   Green (Default)
   Yellow

Example:
ENT-CLFR:PETALUMA:MyClassifier:123;

TARGET : TRAVERSE, Server TL1

**ED-CLFR**

**General Description**
This command is used to edit a classifier.

**Command Syntax**

```
ED-CLFR:<tid>:<AID>:<ctag>::[COS0=<cos0>],[IDP0=<idp0>],[COS1=<cos1>], [IDP1=<idp1>], [COS2=<cos2>], [IDP2=<idp2>], [COS3=<cos3>], [IDP3=<idp3>], [COS4=<cos4>], [IDP4=<idp4>], [COS5=<cos5>],[IDP5=<idp5>], [COS6=<cos6>] , [IDP6=<idp6>], [COS7=<cos7>],[IDP7=<idp7>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. AID is the name of the classifier.
3. COS0-7: Integer value between 1 and 4 to map incoming priority to COS queue.
4. IDP0-7: Suggest initial drop precedence based on incoming priority. Valid values are:
   Green (Default)
   Yellow

Example:
ED-CLFR:PETALUMA:MyClassifier:123::COS0=2,IDP0=yellow;

TARGET : TRAVERSE, Server TL1

**RTRV-CLFR**

**General Description**
This command is used to retrieve the NE classifier.

**Command Syntax**

```
RTRV-CLFR:[<tid>]:[<AID>];<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID)**.
2. AID is the name of the classifier.
### DLT-CLFR

#### General Description

This command is used to delete a classifier template.

#### Command Syntax

```
DLT-CLFR:[<tid>];<AID>;:<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<AID>` is the name of the classifier.

Example:

```
DLT-CLFR:PETALUMA:MyClassifier:123;
```

TARGET : TRAVERSE, Server TL1
**ENT-TE100-CLFR**

**General Description**

This command is used to create a classifier template

**Command Syntax**

```
ENT-TE100-CLFR:[<tid>]:<AID>:<ctag>::[<ID>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<AID>`: the name of the classifier.
3. `<ID>`: unique integer ID assigned to the classifier. Mandatory for Node command.

**Example:**

```
ENT-TE100-CLFR:PETALUMA:MyClassifier:123;
```

**Target:** TE100, Server TL1

**ED-TE100-CLFR**

**General Description**

This command is used to edit the classifier.

**Command Syntax**

```
ED-TE100-CLFR:[<tid>]:<AID>:<ctag>:::[COS0=<cos0>],[COS1=<cos1>],[COS2=<cos2>],[COS3=<cos3>],
[COS4=<cos4>],[COS5=<cos5>],[COS6=<cos6>],[COS7=<cos7>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<AID>` is the name of the classifier.
3. `<COS0>-7`: Integer value between 1 and 3 to map incoming priority to COS queue.

**Example:**

```
ED-TE100-CLFR:PETALUMA:MyClassifier:123:::COS0=1,COS1=2;
```

**Target:** TE100, Server TL1

**RTRV-TE100-CLFR**

**General Description**

This command is used to retrieve a classifier.

**Command Syntax**

```
RTRV-TE100-CLFR:[<tid>][:<AID>]:<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<AID>` is the name of the classifier.
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Response Syntax

Example:
RTRV-TE100-CLFR:PETALUMA:MyClassifier:123;
TARGET : TE100 , Server TL1

DLT-TE100-CLFR

General Description
This command is used to delete a classifier template.

Command Syntax

DLT-TE100-CLFR:<tid>;<AID>;<ctag>;
1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the name of the classifier.

Example:
DLT-TE100-CLFR:PETALUMA:MyClassifier:123;
TARGET : TE100 , Server TL1

ENT-BWPROF

General Description
This command is used to create a bandwidth profile.

Command Syntax

ENT-BWPROF:<tid>;<AID>;<ctag>[:<ID>];[CIR=<cir>],[CBS=<cbs>],[EIR=<eir>],[EBS=<ebs>];
### ED-BWPROF

**General Description**

This command is used to edit bandwidth profile.

**Command Syntax**

```
ED-BWPROF:<tid>:<AID>:ctag:::[CIR=<cir>],[CBS=<cbs>],[EIR=<eir>],[EBS=<ebs>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the bwprofile.
3. ID: the unique integer ID assigned to the bwprofile. Mandatory for Node command.
4. CIR: Integer value for committed information rate. Range is 1 to 1000 (in Mbps). Default is 1000.
5. CBS: Integer value for committed burst size. Range is 2 to 16000 (in Kbps). Default is 16000.
6. EIR: Integer value for excess information rate. Range is 1 to 1000 (in Mbps). Default is 1000.
7. EBS: Integer value for excess burst size. Range is 2 to 16000 (in Kbps). Default is 16000.

Example:

```
ED-BWPROF:PETALUMA:MyBwProf:123:::CIR=5,CBS=2;
```

TARGET : TRAVERSE, Server TL1

---

### RTRV-BWPROF

**General Description**

This command is used to retrieve bandwidth profile (bwprof).

**Command Syntax**

```
RTRV-BWPROF:<tid>:<AID>:ctag;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the classifier.
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Response Syntax

Example:

<table>
<thead>
<tr>
<th>Response Syntax</th>
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</thead>
<tbody>
<tr>
<td>&lt;cr&gt; &lt;lf&gt;</td>
</tr>
<tr>
<td>^^^^^&lt;AID&gt;:&lt;ID&gt;:[CIR=&lt;cir&gt;],[CBS=&lt;cbs&gt;],[EIR=&lt;eir&gt;],[EBS=&lt;ebs&gt;]*;</td>
</tr>
</tbody>
</table>

1. sid is shelf ID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID: is the name of the classifier.
3. ID: Integer bandwidth profile ID.
4. CIR: Integer value for committed information rate. Range is 1 to 1000 (in Mbps). Default is 1000.
5. CBS: Integer value for committed burst size. Range is 2 to 16000 (in Kbps). Default is 16000.
6. EIR: Integer value for excess information rate. Range is 1 to 1000 (in Mbps). Default is 1000.
7. EBS: Integer value for excess burst size. Range is 2 to 16000 (in Kbps). Default is 16000.

Example:

<table>
<thead>
<tr>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;cr&gt; &lt;lf&gt;</td>
</tr>
<tr>
<td>^^^^^MyBwProf:1:CIR=5,CBS=4;</td>
</tr>
</tbody>
</table>

**DLT-BWPROF**

**General Description**

This command is used to delete a bandwidth profile.

**Command Syntax**

DLT-BWPROF:[<tid>]:<AID>:<ctag>;

1. <tid> is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID: the name of the bandwidth profile.

Example:

<table>
<thead>
<tr>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLT-BWPROF:PETALUMA:MyBwProf:123;</td>
</tr>
<tr>
<td>TARGET : TRAVERSE, Server TL1</td>
</tr>
</tbody>
</table>

**ENT-TE100-BWPROF**

**General Description**

This command is used to create a bandwidth profile for the TE-100.
Command Syntax

**ENT-TE100-BWPROF:**

1. `<tid>` is TID described in Chapter 1—"TL1 Overview," **Target Identifier (TID).**
2. `AID` is the name of the bandwidth profile.
3. `ID` the unique integer ID assigned to bandwidth profile. Mandatory for Node command.

Example:

ENT-TE100-BWPROF:PETALUMA:MyBwProf:123;

TARGET : TE100, Server TL1

**ED-TE100-BWPROF**

**General Description**

This command is used to edit bandwidth profile for the TE-100.

**Command Syntax**

**ED-TE100-BWPROF:**

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `AID`: is the name of the classifier.
3. `CIR`: Integer value for committed information rate. Range is 1 to 1000 (in Mbps). Default is 1000.
4. `CBS`: Integer value for committed burst size. Range is 2 to 16000 (in Kbps). Default is 16000.

Example:

ED-TE100-BWPROF:PETALUMA:MyBwProf:123:::CIR=5,CBS=2;

TARGET : TE100, Server TL1

**RTRV-TE100-BWPROF**

**General Description**

This command is used to retrieve bandwidth profile for the TE-100.

**Command Syntax**

**RTRV-TE100-BWPROF:**

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `AID` is the name of the classifier.

Example:

RTRV-TE100-BWPROF:PETALUMA:MyBwProf:123;

TARGET : TE100, Server TL1
Response Syntax

```
<cr> <lf> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>M^^<ctag> COMPLD
^^^^("<AID>:<ID>:[CIR=<cir>],[CBS=<cbs>]")*;
```

1. `sid` is shelf ID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `AID` is the name of the classifier.
3. `ID`: Integer bandwidth profile ID.
4. `CIR`: Integer value for committed information rate. Range is 1 to 1000 (in Mbps). Default is 1000
5. `CBS`: Integer value for committed burst size. Range is 2 to 16000 (in Kbps). Default is 16000

Example:

```
<cr> <lf> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>M^^<ctag> COMPLD
^^^^"MyBwProf:1:CIR=5,CBS=4;"
```

TARGET : TE100 , Server TL1

**DLT-TE100-BWPROF**

**General Description**

This command is used to delete a bandwidth profile for the TE-100.

**Command Syntax**

```
DLT-TE100-BWPROF: [<tid>]:<AID>:<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `AID` is the name of the bandwidth profile.

Example:

```
DLT-TE100-BWPROF:PETALUMA:MyBwProf:123;
```

TARGET : TE100 , Server TL1
VC Bundle Commands

This section describes commands related to VC Bundle management on NEs.

**ENT-VCB**

**General Description**

This command is used to create a Virtual Circuit (VC) Bundle.

**Command Syntax**

```
ENT-VCB:<tid>[:<AID>]:<ctag>:::[DESC=<desc>,[CUST=<cust>],[ENCAPTYPE=<encaptype>],[CCTYPE=<cctype>],[LCAS=<lcas>],[RSTP=<rstp>],[PATHCOST=<pathcost>],[ROOTPRTPRTY=<rootprtprty>]:[<pst>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the VC bundle.
3. DESC: Customer description string.
4. CUST: Indicates the customer name. None indicates no customer selected.
5. ENCAPTYPE: Indicates the encapsulation type. Valid values are:
   - GFP for generic framing procedure encapsulation.
   - X.86 for X.86 encapsulation. (Default)
6. CCTYPE is the concatenation type. Valid values are:
   - Virtual - to bundle more than one standard path into a non-standard concatenation.
   - Standard - to change how Ethernet frame is encapsulated into an SDH/SONET frame.
7. PST is the primary state.
   - IS - in service (Default)
   - OOS - out of service

**Example:**

```
ENT-VCB:PETALUMA:VCB1:123;
```

TARGET : Server TL1

**Note:** This command is not supported in Rel. 2.1.

**ED-VCB**

**General Description**

This command is used to edit a Virtual Circuit (VC) Bundle.

**Command Syntax**

```
ED-VCB:[<tid>]:<AID>:<ctag>:::[DESC=<desc>,[CUST=<cust>],[ENCAPTYPE=<encaptype>],[CCTYPE=<cctype>],[LCAS=<lcas>],[RSTP=<rstp>],[PATHCOST=<pathcost>],[ROOTPRTPRTY=<rootprtprty>]:[<pst>];
```
### RTRV-VCB

**General Description**

This command is used to retrieve parameter details of a Virtual Circuit (VC) Bundle.

**Command Syntax**

```
RTRV-VCB:[<tid>]:[<AID>]:<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the VC bundle.

Example:

```
RTRV-VCB:PETALUMA:VCB1:123;
```
TARGET : Server TL1

Note: This command is not supported in Rel. 2.1.

Response Syntax

```
<Target Syntax>

1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the name of the VC bundle.
3. DESC: Customer description string.
4. CUST: Indicates the customer name. None indicates no customer selected.
5. ENCAPTYPE: Indicates the encapsulation type. Valid values are:
   GFP - for generic framing procedure encapsulation.
   X.86 - for X.86 encapsulation. (Default).
6. CCTYPE is the concatenation type. Valid values are:
   Virtual - to bundle more than one standard path into a non-standard concatenation.
   Standard - to change how Ethernet frame is encapsulated into an SDH/SONET frame.
7. LCAS: LCAS configuration. Valid values are:
   Enabled - to allow the system to remove any failed members from this service and continue to
   operate using a reduced capacity.
   Disabled (Default) - to stop the bundle from carrying traffic if a member fails.
8. RSTP: Enables or disables RSTP for TLS services. Valid values are:
   Enabled
   Disabled (Default)
9. PATHCOST: Path cost for RSTP port. Valid value in the range of 1 to 6. Default is 1. A lower value
   means this port is a more desirable port to become a root port.
10. ROOTPRTPRTY: Indicates the root port priority. Valid value is in the range of 1 to 15. Default is 8.
    A lower number means this RSTP port has the highest priority to become a root port.
11. SID: indicates the service ID generated internally.
12. ADMSTATE: Indicates the administrative state of alarm generation. Valid values are:
    UNLOCK - Alarm generation is enabled
    LOCK - Alarm generation is disabled
13. UPGRADESTATE indicates the service upgrade state. Valid values are:
    NONE
    RFR-STOPEDE
    RFR-STOP-FAILED
    RFR-INPR
    RFR-OK
    RFR-FAILED
```
**Chapter 2  TL1 Commands**

---

### VC Bundle Commands

**VC Bundle Commands**

---

#### DLT-VCB

**General Description**

This command is used to delete a Virtual Circuit (VC) Bundle.

**Command Syntax**

`DLT-VCB:[<tid>]:<AID>:<ctag>`

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `<AID>` is the name of the VC bundle.

Example:

`DLT-VCB:PETALUMA:VCB1:123;`

**TARGET : Server TL1**

---

#### ENT-VCB-MBR

**General Description**

This command is used to add members to a Virtual Circuit (VC) Bundle.

**Command Syntax**

`ENT-VCB-MBR:[<tid>]:<AID>:<ctag>;<vcbheadnodeid>,<vcbid>;<SVCNODE=<svcnodes>,SVCID=<svcids>];`

---

**14.** `<pst>` is the primary state. Valid values are:
   - IS - in service: puts the entity in the IS-NR primary state. (Default)
   - OOS - out of service: puts the entity in the OOS-MA primary state

**15.** `<sst>` is the secondary state. Valid values are:
   - ACT - Service is in active state. (Default)
   - DSBLD - Service is in disabled state

---

**Note:** This command is not supported in Rel. 2.1.

---

**Example:**

```
<cr> <lf> <lf> ^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M^<ctag> COMPLD
^^^"VCB1::ENCAPTYPE=GFP,CCTYPE=Virtual,LCAS=enabled,RSTP=enabled,PATHCOST=1,ROOTPRTPRTY=1,SID=1
,ADMSTATE=LOCK,UPGRDSTATE=NONE:OOS-MA,DSBLD;
```

**TARGET : Server TL1**

---

**Example:**

```
<cr> <lf> <lf> <cr> <lf> <cr> <lf> M^<ctag> COMPLD
```

**TARGET : Server TL1**

---

**Note:** This command is not supported in Rel. 2.1.

---

**Example:**

```
<cr> <lf> <lf> <cr> <lf> M^<ctag> COMPLD
```

**TARGET : Server TL1**

---

**Note:** This command is not supported in Rel. 2.1.

---

**Example:**

```
<cr> <lf> <lf> <cr> <lf> M^<ctag> COMPLD
```

**TARGET : Server TL1**

---

**Note:** This command is not supported in Rel. 2.1.

---

**Example:**

```
<cr> <lf> <lf> <cr> <lf> M^<ctag> COMPLD
```

**TARGET : Server TL1**

---

**Note:** This command is not supported in Rel. 2.1.
VC Bundle Commands

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the VC bundle.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. VCBHEADNODE: VC bundle head node string.
5. SVCID: Service identifier of the service to be deleted from the VC bundle.

**TARGET : Server TL1**

**Note:** This command is not supported in Rel. 2.1.

### DLT-VCB-MBR

**General Description**

This command is used to remove members from a Virtual Circuit (VC) Bundle.

**Command Syntax**

```
DLT-VCB-MBR: [tid]:<AID>:<ctag>::[vcbheadnodeid]:SVCID=<svcid>;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the VC bundle.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. VCBHEADNODE: VC bundle head node string.
5. SVCID: Service identifier of the service to be deleted from the VC bundle.

**TARGET : Server TL1**

**Note:** This command is not supported in Rel. 2.1.

### RTRV-VCB-MBR

**General Description**

This command is used to retrieve the parameters of a member of a Virtual Circuit (VC) Bundle.

**Command Syntax**

```
RTRV-VCB-MBR: [tid]:<AID>:<ctag>::[vcbheadnodeid];
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the VC bundle.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. VCBHEADNODE: VC bundle head node string.
Response Syntax

```
<cr> <lf> <lf>
 ^^<SID>^^<YY-MM-DD>^^<HH:MM:SS> <cr> <lf>
 M^^<ctag> COMPLD
 (^"<AID>:;
 :<vcb-head-nodeid>:<vcb-id>:<SVCNODE,SVCID,SVCNAME,TYPE,SEQ,TPTYPE,SVCIPADDR,PARTTYPE,SEENAME,SEEID")+<cr><lf>
 ;
```

1. tid is target identifier as described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the name of the VC bundle.
3. ctag is correlation tag described in Chapter 1—“TL1 Overview,” **Staging Parameter Blocks, Correlation Tag (CTAG).**
4. VCBHEADNODE: VC bundle head node string.
5. VCBID: VC bundle identifier.
6. SVCNODE: Node identifier of the service to be added to the VC bundle.
7. SVCID: Service identifier of the service to be added to the VC bundle.
8. SVCNAME: Member service name.
9. TYPE: Type of termination point. Valid values are:
   - SOURCE
   - DESTINATION
   - CONSTRAINT
   - MEMBER
10. SEQ: Sequence number
11. TPTYPE: Type of member service.
12. SVCIPADDR: Service node IP address.
13. PARTTYPE: Participation Type. Valid values are:
   - NONE
   - SUBSCRIBER
   - PROVIDER
14. SEENAME: Service endpoint name.
15. SEEID: Service endpoint identifier.

Example:

```
RTRV-VCB-MBR:PETALUMA:VCB1:ctag;
```

**TARGET : Server TL1**

**Note:** This command is not supported in Rel. 2.1.
**BLSR Commands**

This section contains commands related to BLSR ring management. These commands are applicable to Server TL1 only.

### ENT-BLSR

**General Description**

This command is used to create a BLSR ring from Server TL1.

**Command Syntax**

```
ENT-BLSR::<tid>::::<ctag>::::;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `PGNAME`: is the name of the BLSR ring being created.
3. `RINGTYPE`: is the type of BLSR ring being created. Valid values are:
   - OC48
   - OC192
4. `NODE0-15`: Node name of the node in ith position in BLSR ring. Range of “i” is between 0 and 15, both inclusive.
5. `NODEID0-15`: Node id of the node in the ith position in BLSR ring. Range of ‘i’ is between 0 and 15, both inclusive.
6. `EASTAID0-15`: EAST AID of the node in the ith position in BLSR ring. Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs. Only OC-n and STM-n AIDa are applicable.
7. `WESTAID0-15`: WEST AID of the node in the ith position in BLSR ring. Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs. Only OC-n and STM-n AIDa are applicable.
8. `RVRTV`: indicates revertive type. Valid values are:
   - Y - revertive (Default)
   - N - non-revertive
9. `WTR`: indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.

**Example:**

```
ENT-BLSR:PETALUMA::23:::PGNAME=BLSRRING,RINGTYPE=OC48,NODE0=TRA1,NODEID0=1,EASTAID1=FAC-1-1,WESTAID1=FAC-2-1,
NODE0=TRA1,NODEID0=1,EASTAID1=FAC-1-1,WESTAID1=FAC-2-1,RVRTV=Y,WTR=6;
```
**ED-BLSR**

**General Description**

This command is used to edit parameters of an existing BLSR ring.

**Command Syntax**

```
ED-BLSR::<tid>:::::PGNAME=<pgname>,[RVRTV=<rvrtv>],[WTR=<wtr>];
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `PGNAME:` is the name of the BLSR ring being created.
3. `RVRTV` indicates revertive type. Valid values are:
   - Y - revertive (Default)
   - N - non-revertive
4. `WTR:` indicates revertive time. Value is integer {1 to 60 mins}. Default is 5 min.

Example:

```
ED-BLSR:PETALUMA::123:::PGNAME=BLSRRING1,RVRTV=N,WTR=10;
```

**Response Syntax**

```
TARGET : Server TL1
```

---

**RTRV-BLSR**

**General Description**

This command is used to retrieve parameters of an existing BLSR ring.

**Command Syntax**

```
RTRV-BLSR::<tid>::::<AID>::::<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. `AID` is the Ring identifier of the BLSR Ring whose details are to be retrieved. This parameter is optional. If not entered, details of all existing BLSR rings is reported.

Example:

```
RTRV-BLSR:PETALUMA::123;
```

**Response Syntax**

```
<cr> <lf> <cr> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf>M^^<ctag> COMPLD
^^^("<AID>::[ PGNAME=<pgname>,[RINGTYPE=<ringtype>],[RVRTV=<rvrtv>],[WTR=<wtr>]]^)*;
```
BLSR Commands

DLT-BLSR

General Description

This command is used to delete a BLSR ring.

Command Syntax

DLT-BLSR:[<tid>];<AID>;<ctag>

1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the ring identifier of the BLSR Ring to be deleted.

Example:

dlt-blsr:petaluma:1:123;

TARGET : Server TL1

ENT-BLSRNODE

General Description

This command is used to add a node to an existing BLSR ring from Server TL1.

Command Syntax

ENT-BLSRNODE:[<tid>:]<AID>:<ctag>::NODEPOS=<nodepos>,NODE=<node>,NODEID=<nodeid>,EASTAID=<east aid>,WESTAID=<westaid>;

1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID: is the Ring identifier of the BLSR ring where the node is to be added.
3. NODEPOS: is the position of the node in the ring. Range of “i” is between 0 and 15, both inclusive.
4. NODE: is the name of the node being added to the BLSR ring.
5. NODEID: Node identifier of the node being added to the BLSR ring. Range of ‘i’ is between 0 and 15, both inclusive.
6. EASTAID: EAST AID of the node being added to the BLSR ring. Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs. Only OC-n and STM-n AIDa are applicable.
7. WESTAID: WEST AID of the node being added to the BLSR ring. Valid AID values are listed in Appendix C—“Access Identifiers,” Facility AIDs. Only OC-n and STM-n AIDa are applicable.

Example:
ENT-BLSR:PETALUMA:1:23::NODEPOS=3,NODE=TRA1,NODEID=3,EASTAID=FAC-1-1,WESTAID=FAC-2-1;

TARGET: Server TL1

RTRV-BLSRMAP

General Description
This command is used to retrieve the BLSR map details of an existing BLSR ring from Server TL1.

Command Syntax

RTRV-BLSRMAP:{<tid>:}<AID>:<ctag>;

1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the identifier of the BLSR ring with the map that is to be retrieved. If ‘ALL’ is entered as AID, then all map details of all BLSR rings will be retrieved.

Example:
RTRV-BLSRMAP:PETALUMA:1:23;

TARGET: Server TL1

Response Syntax

<!-- Side note: The response syntax provided seems to be a snippet or a partial example. The actual response syntax structure is not fully visible in the image. -->
BLSR Commands

**OPR-BLSRSYNC**

**General Description**

This command is used to synchronize a BLSR ring.

**Command Syntax**

```
OPR-BLSRSYNC:
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” **Target Identifier (TID).**
2. AID is the Ring identifier of the BLSR ring to be synchronized.

Example:

```
OPR-BLSRSYNC:PETALUMA:1:123;
```

TARGET : Server TL1
Role Based Access Control

This section contains commands related to role based access control.

Prior to TransNav Release TN 3.1, release privileges were based on users. A user used to have privileges associated with it. This model has been modified in this most recent release. From Release TN 3.1 onwards, the concept of functional user groups has been introduced.

A user can belong only to one functional group. A functional group will have privileges associated with it. The privileges of the functional group will apply to all the users belonging to that particular functional group. The various privileges are:

- Admin
- Equipment Manager
- Service Manager
- Fault Manager
- Report Manager

Admin privileges override all other privileges.

All nodes belonging to a particular functional group can be managed by users belonging to this functional group depending on the privileges applicable to the functional group.

ENT-USER-FUNCGRP

General Description

This command is used to create a functional user group.

Command Syntax

```
ENT-USER-FUNCGRP:[<tid>]:<AID>:<ctag>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<AID>` is the name of the functional group to be created.

Example:

```
ENT-USER-FUNCGRP:PETALUMA:funcgrp1:123;
```

TARGET : Server TL1

ED-USER-FUNCGRP

General Description

This command is used to edit the privileges applicable to the user’s belonging to a particular functional user group.

Command Syntax

```
ED-USER-FUNCGRP:[<tid>]:<AID>:<ctag>::[ADMMGR=<admmgr>],[EQPTMGR=<eqptmgr>],[SVCMGR=<svcmgr>],[FLTMGR=<fltmgr>],[REPTMGR=<rept,gr>];
```
RTRV-USER-FUNCGRP

General Description
This command is used to retrieve the privileges applicable to the user’s belonging to a particular functional user group.

Command Syntax

RTRV-USER-FUNCGRP:[<tid>]:::<ctag>;

1.  <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).

Example:
RTRV-USER-FUNCGRP:PETALUMA::123;

TARGET : Server TL1

Response Syntax

<cr> <lf> <cr> <lf> <SID> ^<YY-MM-DD> ^<HH:MM:SS> <cr> <lf> M^<ctag> COMPLD

^<grpname>::ADMMGR=<admmgr>,EQPTMGR=<eqptmgr>,SVCMGR=<svcmgr>,REPTMGR=<reptmgr>,FLTMGR=<flt mgr>^*;
Chapter 2  TL1 Commands
Role Based Access Control

DLT-USER-FUNCGRP

General Description
This command is used to delete a functional user group.

Command Syntax

```
DLT-USER-FUNCGRP:[<tid>];<AID>:<ctag>;
```

1.  `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2.  `<AID>` is the name of the functional group to be deleted.

Example:

```
DLT-USER-FUNCGRP:PETALUMA:funcgrp1:123;
```

TARGET : Server TL1

ENT-FUNCGRP-NODE

General Description
This command is used to add a node to an existing functional user group.
### Command Syntax

<table>
<thead>
<tr>
<th>Command</th>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTFUNCGRP-NODE</td>
<td><code>&lt;tid&gt;:</code>&lt;AID&gt;:&lt;ctag&gt;:::NODENAME=&lt;nodename&gt;;</td>
<td><strong>General Description</strong>&lt;br&gt;This command is used to add a user to an existing functional user group.</td>
</tr>
<tr>
<td>DLTFUNCGRP-NODE</td>
<td><code>&lt;tid&gt;:</code>&lt;AID&gt;:&lt;ctag&gt;:::NODENAME=&lt;nodename&gt;;</td>
<td><strong>General Description</strong>&lt;br&gt;This command is used to delete a node from an existing functional user group.</td>
</tr>
</tbody>
</table>

**Example:**

- **ENT-FUNCGRP-NODE**: `PETALUMA:funcgrp1:123::NODENAME=NODE1;`<br>`TARGET : Server TL1`

- **DLT-FUNCGRP-NODE**: `PETALUMA:funcgrp1:123::NODENAME=NODE1;`<br>`TARGET : Server TL1`
DLT-FUNCGRP-USER

General Description
This command is used to delete a user from an existing functional user group.

Command Syntax

```
DLT-FUNCGRP-USER[:<tid>]:<AID>::USERNAME=<username>;
```

1. `<tid>` is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<AID>` is the name of the functional group where the user is being deleted.
3. `<USERNAME>` is the name of the user being deleted from the functional group.

Example:

```
DLT-FUNCGRP-USER:PETALUMA:funcgrp1:123::USERNAME=USER1;
```

TARGET : Server TL1

RTRV-FUNCGRP-NODELIST

General Description
This command is used to retrieve the list of nodes belonging to a particular functional group.

Command Syntax

```
RTRV-FUNCGRP-NODELIST[:<tid>]:<AID>::;
```

1. `<tid>` : target identifier described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<AID>` is the name of the functional group from where the node list is being retrieved.

Example:

```
RTRV-FUNCGRP-NODELIST:PETALUMA:funcgrp1:123;
```

TARGET : Server TL1

Response Syntax

```
<cr> <lf> <Sid><YY-MM-DD><HH:MM:SS><cr> <rf>M<ctag> COMPLD
\"<grpname>::NODENAME=<nodename>\";
```

1. `sid`: the shelf ID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. `<GRPNAME>` is the name of the functional group for which node list has to be retrieved.
3. `<NODENAME>` is the node names belonging to the particular functional group.
RTRV-FUNCGRP-USERLIST

General Description
This command is used to retrieve the list of users belonging to a particular functional group.

Command Syntax

RTRV-FUNCGRP-USERLIST:[{<tid>}:];<AID>:<ctag>;

1. <tid> is TID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. AID is the name of the functional group from where the user list is being retrieved.

Example:
RTRV-FUNCGRP-USERLIST:PETALUMA:funcgrp1:123;
TARGET : Server TL1

Response Syntax

<cr> <lf> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M^^<ctag> COMPLD

1. sid is shelf ID described in Chapter 1—“TL1 Overview,” Target Identifier (TID).
2. GRPNAME is the name of the functional group from where the user list is being retrieved.
3. USERNAME is the user names belonging to the particular functional group.

Example:
<cr> <lf> <lf>^^^<SID>^<YY-MM-DD>^<HH:MM:SS> <cr> <lf> M^^<ctag> COMPLD

TARGET : Server TL1
Chapter 3
Generic Output Response Format

Introduction

In general, if a normal or error response to a TL1 command cannot be sent in less than two seconds, the following acknowledgment response will be sent:

IP <ctag>

After the above response, a new command input may be generated.

Normal Response

| cr lf lf |
| ^^^<SID>^^<YY-MM-DD>^^<HH:MM:SS> cr lf |
| M^^<CTAG>^^<completion_code> (cr lf |
| ^^^<AID>[[AID]{<parameter block>}+]) [cr lf |
| ^^^/*<optional_free_format_text>*/]* cr lf; |

where:

- <completion_code> ::= COMPLD | DELAY

COMPLD shall be returned upon successful completion of ACT, DLT, ED, ENT, CANC and RTRV commands submitted for immediate execution. DELAY shall be returned upon successful queuing of any command submitted for delayed activation.

Output messages indicating a failure of some form shall adhere to the following general formats:
Denial Response

A listing of supported error codes is shown in Appendix G—“TL1 Error Codes.”

Partial Error Response

PRTL shall be returned for responses to input commands specifying multiple AIDs of which only a subset (but not an empty set) have been successfully executed. If all AIDs have failed to be executed, the response will indicate a DENY code. For commands with only one AID, the response message shall also indicate a DENY if that AID has failed execution. Syntax, semantic, and pragmatic (e.g., object entity state or application-related) error codes, along with guidelines for error description usage are provided in Appendix G—“TL1 Error Codes.”

Acknowledgements

If an NE experiences an excessive delay in the processing of an input command, the NE should send an acknowledgment message indicating the pending state to the OS. For NTEs, this acknowledgment is required. The message format that indicates this In-Progress (IP) state of the input command is as follows:

```
IP^<CTAG> cr lf
```

The CTAG is the CTAG of the input command to which the acknowledgment refers. The value of the time delay after which the acknowledgment is sent is 2 seconds. The NE may send more than one acknowledgment message. In fact, the NE should continue to send IP acknowledgments at every interval of the designated delay period until the actual response is sent.

In addition to the IP positive acknowledgment, the NE should also be able to send back a “repeat-later” acknowledgment, which should have the following format:

```
RL^<CTAG> cr lf
```

This indicates to the OS that the NE is currently unable to process the command and should retry that command later. There is no fixed duration after which the retry is to be attempted.
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Appendix A

TL1 Login and Setup

Direct On Node  
To access TL1, telnet to the Node directly over port 9988 or 9989. Port number 9988 is a raw TCP port, where the Company Logo does not display and the echo is off.

Via Management System  
For Release 1.3 and earlier, Traverse 600/1600/2000 TL1 is only supported via TL1 gateway configuration illustrated in Figure 2-1. TL1 via Management System Configuration. In this configuration, the TransNav management system platform serves as the gateway with subtending NEs. Only one NE is required to be connected to the management system physically. Other nodes are attached to the management system via configurable SONET DCC channels.

Each NE must be assigned an SID. TL1 commands issued must contain the TID matching the SID of the target NE. The management system demultiplexes incoming TL1 commands and forwards them to the correct NE. The management system also acts as a conduit for northbound responses and autonomous messages from the attached nodes to the OSS.

Network operator must logon to the management system using the ACT-USER command. Correct User identifier and Password are required for a successful login.
The management system login should not be treated as a global login to subtending NE in the network. The default login command for the TransNav management system is:

```
ACT-USER::admin::<ctag>::admin;
```

After login into the management system, the network operator must logon to each NE with the `ACT-USER` command using the same username used to log into management system. A correct User identifier and Password combination is required for a successful login per Telcordia SR-1665 Issue 6. The default login for the NE is:

```
ACT-USER:<NE-sid>:admin::<ctag>::admin;
```

Accessing to the management system may be done via Telnet or other methods. Regardless of the method used, port number 7788 or 7789 must be specified in the connect command. Port number 7788 is a raw TCP/IP port; it will not echo and it will not prompt the user. Port number 7789 is a telnet port that uses the telnet protocol.

The following banner displays if telnet to 7789 is issued:

```
Turin Networks EMS TL1 NBI
Copyright 2001, 2002 Turin Networks, Inc.
All rights reserved.
```

```
TURIN>>
```

Assuming management system software is running on a local host and raw TCP/IP is used as the connection method, the following telnet command should be issued:

```
telnet <host name (IP address)> 7788
```

Once the telnet connection is successful, the network operator may proceed with TL1 session activation discussed earlier. Thus, the login sequence for a network with one node attached to the management system is:

- `telnet <host name (IP address)> 7788;`
- `ACT-USER::admin::<ctag>::admin;`
- `ACT-USER:<NE-sid>:admin::<ctag>::admin;`

Note that following the 7788 telnet connection request, the system does not return any greeting or command prompt.
Appendix B
Performance Monitoring Type Coding

Introduction
This appendix lists the performance monitoring type coding (MONTYPE) for each entity, as well as descriptions of each montype.

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Table 2-1  OC3/12/48/192 Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBYC-SFE</td>
<td></td>
</tr>
<tr>
<td>CBIC-SFE</td>
<td></td>
</tr>
<tr>
<td>CVS</td>
<td>Coding Violation count—Section</td>
</tr>
<tr>
<td>ESS</td>
<td>Errored Second count—Section</td>
</tr>
<tr>
<td>SESS</td>
<td>Severe Errored Second count—Section</td>
</tr>
</tbody>
</table>
### Table 2-1 OC3/12/48/192 Entity Monotypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEFSS</td>
<td>Severely Errored Framing Second count—Section</td>
</tr>
<tr>
<td>CVL</td>
<td>Coding Violation count—Line</td>
</tr>
<tr>
<td>ESL</td>
<td>Errored Second count—Line</td>
</tr>
<tr>
<td>SESL</td>
<td>Severe Errored Second count—Line</td>
</tr>
<tr>
<td>UASL</td>
<td>Unavailable Second Count—Line/Layer</td>
</tr>
<tr>
<td>FC-L</td>
<td>Failure Count—Line, Near End</td>
</tr>
<tr>
<td>CV-LFE</td>
<td>Coding Violation count—Line, Far End</td>
</tr>
<tr>
<td>ES-LFE</td>
<td>Errored Second count Line—Far End</td>
</tr>
<tr>
<td>SES-LFE</td>
<td>Severe Errored Second count Line—Far End</td>
</tr>
<tr>
<td>UAS-LFE</td>
<td>Unavailable Second Count—Line/Layer, Far End</td>
</tr>
<tr>
<td>FC-LFE</td>
<td>Failure Count—Line, Far End</td>
</tr>
<tr>
<td>PSCW-L</td>
<td>Protection Switching Count—Line</td>
</tr>
<tr>
<td>PSDW-L</td>
<td>Protection Switching Duration in second—Line</td>
</tr>
<tr>
<td>PSCP-L</td>
<td>Protection Switching Count</td>
</tr>
<tr>
<td>PSDP-L</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2-2 STS1/3C/12C/48C Entity Monotypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVP</td>
<td>Coding Violation count—Path</td>
</tr>
<tr>
<td>ESP</td>
<td>Errored Second count—Path</td>
</tr>
<tr>
<td>SESP</td>
<td>Severe Errored Second count—Path</td>
</tr>
<tr>
<td>UASP</td>
<td>Unavailable Second Count—Path</td>
</tr>
<tr>
<td>FC-P</td>
<td>Failure Count—Path, Near End</td>
</tr>
<tr>
<td>CV-PFE</td>
<td>Coding Violation count—Path, Far End</td>
</tr>
<tr>
<td>ES-PFE</td>
<td>Errored Second count Path—Far End</td>
</tr>
<tr>
<td>SES-PFE</td>
<td>Severe Errored Second count Path—Far End</td>
</tr>
</tbody>
</table>
### Table 2-2  STS1/3C/12C/48C Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAS-PFE</td>
<td>Unavailable Second Count—Path, Far End</td>
</tr>
<tr>
<td>FC-PFE</td>
<td>Failure Count—Path, Far End</td>
</tr>
<tr>
<td>CV-PFE</td>
<td>Coding Violation count—Path, Far End</td>
</tr>
</tbody>
</table>

### VT1.5

### Table 2-3  VT1.5 Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVV</td>
<td>Coding Violation count—VT-path</td>
</tr>
<tr>
<td>CV-VFE</td>
<td>Coding Violation count—VT-path, Far End</td>
</tr>
<tr>
<td>ESV</td>
<td>Errored Second count—VT path</td>
</tr>
<tr>
<td>ES-VFE</td>
<td>Errored Second count—VT path, Far End</td>
</tr>
<tr>
<td>SESV</td>
<td>Severe Errored Second count—VT Path</td>
</tr>
<tr>
<td>SES-VFE</td>
<td>Severe Errored Second count—VT Path, Far End</td>
</tr>
<tr>
<td>UASV</td>
<td>Unavailable Second Count—VT path</td>
</tr>
<tr>
<td>UASVFE</td>
<td>Unavailable Second Count—VT path, Far End</td>
</tr>
</tbody>
</table>

### DS3CC/DS3TMX

### Table 2-4  DS3CC/DS3TMX Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVL</td>
<td>Coding Violation count—Line</td>
</tr>
<tr>
<td>ESL</td>
<td>Errored Second count—Line</td>
</tr>
<tr>
<td>SESL</td>
<td>Severe Errored Second count—Line</td>
</tr>
<tr>
<td>CVP</td>
<td>Coding Violation count—Path</td>
</tr>
<tr>
<td>CVCP-P</td>
<td>Coding Violation count—Path, DS3 CP-bit parity</td>
</tr>
<tr>
<td>ESP</td>
<td>Errored Second count—Path</td>
</tr>
<tr>
<td>ESCP-P</td>
<td>Errored Second count—Path, DS3 CP-bit parity</td>
</tr>
<tr>
<td>SESP</td>
<td>Severe Errored Second count—Path</td>
</tr>
</tbody>
</table>
### Table 2-4  DS3CC/DS3TMX Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SESCP-P</td>
<td>Severe Errored Second count—Path, DS3 CP-bit parity</td>
</tr>
<tr>
<td>UACSP-P</td>
<td>Unavailable Second Count—Path, DS3 CP-bit parity</td>
</tr>
<tr>
<td>CVCP-PFE</td>
<td>Coding Violation count—Path, Far End, DS3 CP-bit parity</td>
</tr>
<tr>
<td>FCCP-PFE</td>
<td>Failure Count DS3/RAI event, Far End Path</td>
</tr>
<tr>
<td>ESCP-PFE</td>
<td>Errored Second count, Path, DS3 CP-bit parity, Far End</td>
</tr>
<tr>
<td>SESCP-PFE</td>
<td>Severe Errored Second count - Path, DS3 CP-bit parity, Far End</td>
</tr>
<tr>
<td>UASCP-PFE</td>
<td>Unavailable Second Count Path, DS3 CP-bit parity, Far End</td>
</tr>
<tr>
<td>FC-L</td>
<td>Failure Count—Line</td>
</tr>
<tr>
<td>UASP</td>
<td>Unavailable Second count—Path</td>
</tr>
</tbody>
</table>

### Table 2-5  EC1 Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVS</td>
<td>Coding Violation count - Section</td>
</tr>
<tr>
<td>ESS</td>
<td>Errored Second count – Section</td>
</tr>
<tr>
<td>SESS</td>
<td>Severe Errored Second count - Section</td>
</tr>
<tr>
<td>SEFSS</td>
<td>Severely Errored Framing Second count - Section</td>
</tr>
<tr>
<td>CVL</td>
<td>Coding Violation count – Line</td>
</tr>
<tr>
<td>ESL</td>
<td>Errored Second count – Line</td>
</tr>
<tr>
<td>SESL</td>
<td>Severe Errored Second count – Line</td>
</tr>
<tr>
<td>UASL</td>
<td>Unavailable Second Count - Line/Layer</td>
</tr>
<tr>
<td>FC-L</td>
<td>Failure Count - Line, Near End</td>
</tr>
<tr>
<td>CV-LFE</td>
<td>Coding Violation count – Line, Far End</td>
</tr>
<tr>
<td>ES-LFE</td>
<td>Errored Second count Line - Far End</td>
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### Table 2-5  EC1 Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES-LFE</td>
<td>Severe Errored Second count - Line - Far End</td>
</tr>
<tr>
<td>UAS-LFE</td>
<td>Unavailable Second Count - Line/Layer, Far End</td>
</tr>
<tr>
<td>FC-LFE</td>
<td>Failure Count - Line, Far End</td>
</tr>
</tbody>
</table>

### Table 2-6  T1/DS1TMX Entity Montypes

<table>
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<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
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<td>Coding Violation count - Line</td>
</tr>
<tr>
<td>ESL</td>
<td>Errored Second count - Line</td>
</tr>
<tr>
<td>ES-LFE</td>
<td>Errored Second count Line - Far End</td>
</tr>
<tr>
<td>SESL</td>
<td>Severe Errored Second count - Line</td>
</tr>
<tr>
<td>LOSS-L</td>
<td>Loss of Signal Seconds count - Line</td>
</tr>
<tr>
<td>CVP</td>
<td>Coding Violation count - Path</td>
</tr>
<tr>
<td>ESP</td>
<td>Errored Second count - Path</td>
</tr>
<tr>
<td>ES-PFE</td>
<td>Errored Second count Path - Far End</td>
</tr>
<tr>
<td>SESP</td>
<td>Severe Errored Second count - Path</td>
</tr>
<tr>
<td>SES-PFE</td>
<td>Severe Errored Second count Path - Far End</td>
</tr>
<tr>
<td>AISS-P</td>
<td>Alarm Indication Signal Seconds count Path</td>
</tr>
<tr>
<td>SAS-P</td>
<td>SEF/AIS second count</td>
</tr>
<tr>
<td>SEF-PFE</td>
<td>Severely Errored Framing Second count, Far End</td>
</tr>
<tr>
<td>CSS-P</td>
<td>Control Slip Seconds count - Path</td>
</tr>
<tr>
<td>CSS-PFE</td>
<td>Control Slip Seconds count - Path, Far End</td>
</tr>
<tr>
<td>UASP</td>
<td>Unavailable Second Count - Path</td>
</tr>
<tr>
<td>UAS-PFE</td>
<td>Unavailable Second Count - Path, Far End</td>
</tr>
<tr>
<td>FC-PFE</td>
<td>Failure Count - Path, Far End</td>
</tr>
<tr>
<td>FCP</td>
<td>Failure Count Path</td>
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<td>CV-PFE</td>
<td>Coding Violation - Path, Far End</td>
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</tbody>
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Table 2-7  Ethernet Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>TXUNICAST-L</td>
<td>Number of unicast frames transmitted with no errors</td>
</tr>
<tr>
<td>TXMLTCAST-L</td>
<td>Number of multicast frames that are not broadcast transmitted with no errors</td>
</tr>
<tr>
<td>TXBRDCAST-L</td>
<td>Number of broadcast frames transmitted with no errors</td>
</tr>
<tr>
<td>TXFRM-L</td>
<td>Number of frames transmitted (unicast, multi-cast, and broadcast) with no errors</td>
</tr>
<tr>
<td>TXPKT64-L</td>
<td>Number of transmitted 64-byte frames, including bad frames</td>
</tr>
<tr>
<td>TXPKT65-L</td>
<td>Number of transmitted frames, 65 to 127 bytes in length, including bad frames</td>
</tr>
<tr>
<td>TXPKT128-L</td>
<td>Number of transmitted frames, 128 to 255 bytes in length, including bad frames</td>
</tr>
<tr>
<td>TXPKT256-L</td>
<td>Number of transmitted frames, 256 to 511 bytes in length, including bad frames</td>
</tr>
<tr>
<td>TXPKT512-L</td>
<td>Number of transmitted frames, 512 to 1023 bytes in length, including bad frames</td>
</tr>
<tr>
<td>TXPKT1024-L</td>
<td>Number of transmitted frames, 1024 to 1518 bytes in length, including bad frames</td>
</tr>
<tr>
<td>TXPKT1519-L</td>
<td>Number of transmitted frames, greater than or equal to 1519 bytes in length including bad frames</td>
</tr>
<tr>
<td>RXUNICAST-L</td>
<td>Number of discarded outbound frames received by this port</td>
</tr>
<tr>
<td>RXMLTCAST-L</td>
<td>Number of transmitted pause control frames</td>
</tr>
<tr>
<td>RXBRDCAST-L</td>
<td>Number of bytes transmitted in good frames</td>
</tr>
<tr>
<td>RXFRM-L</td>
<td>Number of bytes transmitted in bad frames</td>
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<tr>
<td>RXMXXFRM-L</td>
<td>Number of unicast frames received, with length between 64 bytes and the maximum size, with no errors</td>
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<tr>
<td>RXPKT63-L</td>
<td>Number of multicast frames received, with length between 64 bytes and the maximum size, with no errors</td>
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<td>MONTYPE</td>
<td>Description</td>
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<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>RXPKT64-L</td>
<td>Number of broadcast frames received, with length between 64 bytes and the maximum size, with no errors</td>
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<tr>
<td>RXPKT65-L</td>
<td>Number of frames received (unicast, multicast, and broadcast) with no errors</td>
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<tr>
<td>RXPKT128-L</td>
<td>The number of frames, longer than the maximum size, received with no errors.</td>
</tr>
<tr>
<td>RXPKT256-L</td>
<td>The number of frames received, less than 64 bytes in length, received with no errors.</td>
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<tr>
<td>RXPKT512-L</td>
<td>The number of received 64-byte frames, including bad frames.</td>
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<tr>
<td>RXPKT1024-L</td>
<td>The number of received frames, 65 to 127 bytes in length, including bad frames.</td>
</tr>
<tr>
<td>RXPKT1519-L</td>
<td>The number of received frames, 128 to 255 bytes in length, including bad frames.</td>
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<tr>
<td>RXNODLM-L</td>
<td>The number of received frames, 256 to 511 bytes in length, including bad frames.</td>
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<tr>
<td>RXDISC-L</td>
<td>The number of received frames, 512 to 1023 bytes in length, including bad frames.</td>
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<tr>
<td>TXDISC-L</td>
<td>The number of received frames, 1024 to 1518 bytes in length, including bad frames.</td>
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<td>RXDLYDISC-L</td>
<td>The number of received frames, greater than or equal to 1519 bytes in length including bad frames.</td>
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<tr>
<td>RXMTUDISC-L</td>
<td>The number of frames received without start of frame delimiter detection but with carrier assertion.</td>
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<tr>
<td>RXALNERR-L</td>
<td>The number of inbound frames received by this port that were discarded by the forwarding process.</td>
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<tr>
<td>RXFCSERR-L</td>
<td>Number of frames discarded by this interface due to excessive transit delay through the bridge.</td>
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<tr>
<td>RXPAUSE-L</td>
<td>Number of frames discarded by this interface due to an excessive size.</td>
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<tr>
<td>TXPAUSE-L</td>
<td>Number of frames received which are not an integral number of octets and do not pass the FCS check.</td>
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<td>TXBYTES-L</td>
<td>Number of frames received which are an integral number of octets and do not pass the FCS check.</td>
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### Table 2-7  Ethernet Entity Montypes

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<td>The number of bytes transmitted in bad frames.</td>
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<td>RXBYTES-L</td>
<td>The number of bytes received in good frames.</td>
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<tr>
<td>RXBYTESBAD-L</td>
<td>The number of bytes received in bad frames.</td>
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<td>TXMLTCOLL-L</td>
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### Ethernet Equipment

**Table 2-8 Ethernet Equipment Entity Montypes**

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**Table 2-9 E1PTP Entity Montypes**

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### Table 2-9  E1PTP Entity Montypes

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### Table 2-10  E3PTP Entity Montypes

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**Table 2-10  E3PTP Entity Montypes**

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**Table 2-11  SDHPTP Entity Montypes**

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Table 2-12  SDHHOPATH Entity Montypes

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### Table 2-13   SDHLOPATH Entity Montypes

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### Table 2-14 VC11PATH Entity Montypes

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### Table 2-15 VC12PATH Entity Montypes

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### Table 2-15  VC12PATH Entity Montypes

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### Table 2-15 VC12PATH Entity Montypes

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### Table 2-16 EOS CTP Entity Montypes

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<td>TXDISC-L</td>
<td></td>
</tr>
<tr>
<td>RXUNICAST-L</td>
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</tr>
<tr>
<td>RXMLTCAST-L</td>
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<tr>
<td>RXBRDCAST-L</td>
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</tr>
<tr>
<td>RXFRM-L</td>
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</tr>
<tr>
<td>RXBYTES-L</td>
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<tr>
<td>RXDISC-L</td>
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<tr>
<td>GFPFCSDISC-L</td>
<td></td>
</tr>
<tr>
<td>GFPCHECDIS-L</td>
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</tr>
<tr>
<td>GFPPHECDISC-L</td>
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</tr>
<tr>
<td>GFPFCSORPHECDISC-L</td>
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</table>
## Table 2-16 EOS CTP Entity Montypes

<table>
<thead>
<tr>
<th>MONTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXMTUDISC-L</td>
<td></td>
</tr>
<tr>
<td>GFPHECCORR-L</td>
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</tr>
</tbody>
</table>
## Appendix C
### Access Identifiers

**Introduction**

Following is a listing of all Access Identifiers (AIDs) and valid AID ranges that are used for equipment provisioning for each facility/termination/assignable port, cross-connect level, etc.

### Equipment AIDs

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCM-(A-B)</td>
<td>Traverse General Control Module</td>
<td>GCM-A, GCM-B</td>
</tr>
<tr>
<td>SLOT-(1-N)</td>
<td>Traverse optical interface module, Transmux module in optical transmultiplexing mode, or VT/TU fabric module</td>
<td>SLOT-1, SLOT-16, SLOT-20</td>
</tr>
<tr>
<td>SLOT-(1-M)</td>
<td>Traverse electrical interface module (DS/E1, DS3/EC1/E3, Transmux in electrical transmultiplexing mode, or electrical Ethernet interface module) with equipment protection</td>
<td>SLOT-1, SLOT-12, SLOT-16</td>
</tr>
<tr>
<td>SLOT-(1-2)</td>
<td>TE-100 System Control modules</td>
<td>SLOT-1, SLOT-2</td>
</tr>
<tr>
<td>SLOT-3</td>
<td>TE-100 Interface module</td>
<td>SLOT-3</td>
</tr>
</tbody>
</table>
## Facility AIDs

### DS1 / E1

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse DS-1 facilities</td>
<td>FAC-5-7</td>
</tr>
<tr>
<td>Traverse E1 facilities</td>
<td>FAC-3-21</td>
</tr>
<tr>
<td>Traverse DS-1 facilities on TMX</td>
<td>DS1-5-1-28</td>
</tr>
<tr>
<td>Traverse E1 facilities on TMX</td>
<td>E1-5-12-21</td>
</tr>
<tr>
<td>TE-100 DS1 facility</td>
<td>T1-3-1</td>
</tr>
<tr>
<td>TE-100 E1 facility</td>
<td>E1-3-21</td>
</tr>
</tbody>
</table>

### DS3 / EC1/E3

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse DS-3 facility</td>
<td>FAC-12-28</td>
</tr>
<tr>
<td>Traverse EC1 facility</td>
<td>FAC-7-6</td>
</tr>
<tr>
<td>Traverse E3 facility</td>
<td>FAC-5-21</td>
</tr>
<tr>
<td>TE-100 DS3 facility</td>
<td>T3-3-1</td>
</tr>
<tr>
<td>TE-100 E3 facility</td>
<td>E3-3-3</td>
</tr>
</tbody>
</table>

### Ethernet

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse Ethernet facility</td>
<td>FAC-10-24</td>
</tr>
<tr>
<td>TE-100 10/100 Mbps Ethernet facility</td>
<td>FE-3-5</td>
</tr>
<tr>
<td>TE-100 Gigabit Ethernet facility</td>
<td>GBE-3-1</td>
</tr>
</tbody>
</table>

### OC-n/STM-n

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse OC-n or STM-n facility</td>
<td>FAC-4-8</td>
</tr>
<tr>
<td>TE-100 OC-3 facility</td>
<td>OC3-1, OC3-2</td>
</tr>
<tr>
<td>TE-100 OC-12 facility</td>
<td>OC12-1, OC12-2</td>
</tr>
<tr>
<td>TE-100 OC-48 facility</td>
<td>OC48-1, OC48-2</td>
</tr>
<tr>
<td>TE-100 STM-1 facility</td>
<td>STM1-1, STM1-2</td>
</tr>
</tbody>
</table>
### Appendix C Access Identifiers

**Ethernet EOS/LAG/POL/BRIDGE AIDs**

<table>
<thead>
<tr>
<th>OC-n/STM-n</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM4-(1-2)</td>
<td>TE-100 STM-4 facility</td>
<td>STM4-1, STM4-2</td>
</tr>
<tr>
<td>STM16-(1-2)</td>
<td>TE-100 STM-16 facility</td>
<td>STM16-1, STM16-2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SFP of OC-n/STM-n Facility</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPT-(1-2)-(1-2)</td>
<td>TE-100 SFP aid of OC-n and STM-n facility</td>
<td>OPT-1-1</td>
</tr>
<tr>
<td>FAC-(1-N)-(1-MaxPort)</td>
<td>Traverse OC-n or STM-n facility</td>
<td>FAC-4-8</td>
</tr>
</tbody>
</table>

**Ethernet EOS/LAG/POL/BRIDGE AIDs**

<table>
<thead>
<tr>
<th>EOS</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOS-(1-N)-(1-MaxEOS)</td>
<td>Traverse Ethernet over SONET/SDH virtual port</td>
<td>EOS-4-12</td>
</tr>
<tr>
<td>EOS-3-(1-MaxEOS)</td>
<td>TE-100 Ethernet over SONET/SDH virtual port</td>
<td>EOS-3-12</td>
</tr>
<tr>
<td>EOSMBR-(1-N)-(1-MaxEOS)-(1-MaxMbr)</td>
<td>Traverse EOS Member AID</td>
<td>EOSMBR-1-1-1</td>
</tr>
<tr>
<td>EOSMBR-3-(1-MaxEOS)-(1-MaxMbr)</td>
<td>TE-100 EOS Member AID</td>
<td>EOSMBR-1-1-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAG</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAG-(1-N)-(1-MaxLAG)</td>
<td>Traverse link aggregation group</td>
<td>LAG-4-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POL</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL-(1-N)-(1-MaxLAG)r</td>
<td>Traverse Policer</td>
<td>POL-4-1</td>
</tr>
<tr>
<td>POL-3-(1-MaxLAG)</td>
<td>TE-100 Policer</td>
<td>POL-3-1</td>
</tr>
</tbody>
</table>
## SONET Path AIDs

<table>
<thead>
<tr>
<th>VT1.5</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>VT1-(1-N)-(1-MaxPort)-(1-MaxSTS)-(1-7)-(1-4)</td>
<td>Traverse VT1.5 facilities for ADM mode or DCS non-MSAID mode</td>
<td>VT1-5-4-48-7-4</td>
</tr>
<tr>
<td>MVT1-(1-384)-(1-7)-(1-4)</td>
<td>Traverse VT1.5 facilities for DCS in MSAID-VTG-VT mode</td>
<td>MVT1-384-7-4</td>
</tr>
<tr>
<td>MVT1-(1-384)-(1-28)</td>
<td>Traverse VT1.5 facilities for DCS in MSAID-VT-Seq mode or MSAID-VT-GR253 mode</td>
<td>MVT1-1-25</td>
</tr>
<tr>
<td>VT1-(1-2)-(1-MaxSTS)-(1-7)-(1-4)</td>
<td>TE-100 VT1.5 facilities on OC-n ports</td>
<td>VT1-1-3-7-1</td>
</tr>
<tr>
<td>ETHVT1-3-(1-MaxSTS)-(1-7)-(1-4)</td>
<td>TE-100 VT1.5 facilities on EOS virtual ports ETH</td>
<td>VT1-3-7-1-1</td>
</tr>
</tbody>
</table>

### STS Description Example

<table>
<thead>
<tr>
<th>VT1.5</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>STS-(1-N)-(1-MaxPort)-(1-MaxSTS)</td>
<td>Traverse STS path in ADM mode</td>
<td>STS-12-1-48</td>
</tr>
<tr>
<td>MSTS-(1-384)</td>
<td>Traverse STS path in DCS MSAID mode</td>
<td>MSTS-1, MSTS-384</td>
</tr>
<tr>
<td>STS-(1-2)-(1-MaxSTS)</td>
<td>TE-100 STS path on OC-n ports</td>
<td>STS-1-1, STS-2-3</td>
</tr>
<tr>
<td>ETHSTS-3-(1-MaxSTS)</td>
<td>TE-100 STS path on EOS virtual ports ETH</td>
<td>ETHSTS—3-1</td>
</tr>
</tbody>
</table>
### AU-4 Mapped SDH Path AIDs

<table>
<thead>
<tr>
<th>VC11/VC12</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC11LO-(1-N)-(1-MaxPort)-(1-MaxAU4)-(1-3)-(1-7)-(1-4)</td>
<td>Traverse VC-11 facilities within AU-4 for ADM mode or DCS non-MSAID mode</td>
<td>VC11LO-5-2-1-3-7-4</td>
</tr>
<tr>
<td>VC12LO-(1-N)-(1-MaxPort)-(1-MaxAU4)-(1-3)-(1-7)-(1-3)</td>
<td>Traverse VC-12 facilities within AU-4 for ADM mode or DCS non-MSAID mode</td>
<td>VC12LO-3-8-1-2-1-1</td>
</tr>
<tr>
<td>VC11LO-(1-2)-(1-MaxAU4)-(1-3)-(1-7)-(1-4)</td>
<td>TE-100 VC-11 facilities on STM-n ports.¹</td>
<td>VC11LO-1-2-3-7-4</td>
</tr>
<tr>
<td>VC12LO-(1-2)-(1-MaxAU4)-(1-3)-(1-7)-(1-3)</td>
<td>TE-100 VC-12 facilities on STM-n ports.¹</td>
<td>VC12LO-2-1-2-5-1</td>
</tr>
<tr>
<td>ETHVC11LO-3-(1-MaxAU4)-(1-3)-(1-7)-(1-4)</td>
<td>TE-100 VC-11 facilities on EOS virtual ports.¹</td>
<td>ETHVC11LO-2-3-7-4</td>
</tr>
<tr>
<td>ETHVC12LO-3-(1-MaxAU4)-(1-3)-(1-7)-(1-3)</td>
<td>TE-100 VC-12 facilities on EOS virtual ports.² (not supported in TE3.0)</td>
<td>ETHVC12LO-1-2-5-1</td>
</tr>
</tbody>
</table>

¹ Not available in TE-100 Release TE3.0.

### VC3

<table>
<thead>
<tr>
<th>VC3</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC3LO-(1-N)-(1-MaxPort)-(1-MaxAU4)-(1-3)</td>
<td>Traverse AU-4/VC-3 path in ADM mode.</td>
<td>VC3LO-5-1-1-2</td>
</tr>
<tr>
<td>MVC3LO-(1-384)</td>
<td>Traverse VC3 path in DCS MSAID mode</td>
<td>MVC3LO-1, MVC3LO-384</td>
</tr>
<tr>
<td>VC3LO-(1-2)-(1-MaxAU4)-(1-3)</td>
<td>TE-100 AU-4/VC-3 path on STM-n ports.² (not supported in TE3.0)</td>
<td>VC3LO-1-1-1, VC3LO-2-2-16</td>
</tr>
<tr>
<td>ETHVC3LO-3-(1-MaxAU4)-(1-3)</td>
<td>TE-100 AU-4/VC-3 path on EOS virtual ports.² (not supported in TE3.0)</td>
<td>ETHVC3LO-1-1 ETHVC3LO-2-16</td>
</tr>
</tbody>
</table>
### AU-3 Mapped SDH Path AIDs

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse AU-4/VC-4/VC-4-4C/VC-4-16C path AID</td>
<td>VC4-10-2-1</td>
</tr>
<tr>
<td>TE-100 AU-4/VC-4/VC-4-4C path AID on STM-n ports</td>
<td>VC4-1-1, VC4-1-3</td>
</tr>
<tr>
<td>TE-100 AU-4/VC-4/VC-4-4C path AID on EOS virtual ports</td>
<td>ETHVC4-3-1, ETHVC4-3-3</td>
</tr>
</tbody>
</table>

### VC11/VC12 Sdh Path AIDs

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse VC-11 facilities in AU-3 for ADM mode or DCS non-MSAID mode</td>
<td>VC11HO-5-2-1-7-4</td>
</tr>
<tr>
<td>Traverse VC-12 facilities in AU-3 for ADM mode or DCS non-MSAID mode</td>
<td>VC12HO-3-8-2-1-1</td>
</tr>
<tr>
<td>Traverse VC11 facilities for DCS in MSAID-AU3-TUG2-VC11 mode</td>
<td>MVC11HO-1-1-1, MVC11HO-384-7-4</td>
</tr>
<tr>
<td>Traverse VC11 facilities for DCS in MSAID-AU3-VC11-Seq mode</td>
<td>MVC11HO-1-1, MVC11HO-384-28</td>
</tr>
<tr>
<td>Traverse VC12 facilities for DCS in MSAID-AU3-TUG2-VC12 mode</td>
<td>MVC12HO-1-1, MVC12HO-384-7-3</td>
</tr>
<tr>
<td>Traverse VC12 facilities for DCS in MSAID-AU3-VC12-Seq mode</td>
<td>MVC12HO-1-1, MVC12HO-384-21</td>
</tr>
<tr>
<td>TE-100 VC-11 facilities in AU-3 on STM-n ports (not supported in TE3.0)</td>
<td>VC11HO-1-2-7-4</td>
</tr>
<tr>
<td>TE-100 VC-12 facilities in AU-3 on STM-n ports</td>
<td>VC12HO-2-1-5-1</td>
</tr>
<tr>
<td>TE-100 VC-11 facilities in AU-3 on EOS virtual ports (not supported in TE3.0)</td>
<td>ETHVC11HO-2-7-4</td>
</tr>
<tr>
<td>TE-100 VC-12 facilities in AU-3 on EOS virtual ports</td>
<td>ETHVC12HO-1-5-1</td>
</tr>
</tbody>
</table>
### VC-3

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse AU-3/VC-3 path in ADM mode</td>
<td>VC3HO-5-1-1</td>
</tr>
<tr>
<td>Traverse VC3 path in DCS MSAID mode</td>
<td>MVC3HO-1, MVC3HO-384</td>
</tr>
<tr>
<td>TE-100 AU-4/VC-3 path on STM-n ports</td>
<td>VC3HO-1-1, VC3HO-2-16</td>
</tr>
<tr>
<td>TE-100 AU-4/VC-3 path on EOS virtual ports</td>
<td>ETHVC3HO-3-1 ETHVC3HO-3-16</td>
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</tbody>
</table>

### COM AID

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>For all common equipment (e.g., Node/Fan/Power)</td>
<td>COM</td>
</tr>
</tbody>
</table>

### ENV AIDs (Environment)

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV Input Relays</td>
<td>ENVIN-1</td>
</tr>
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</table>

### Sync AIDs

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<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary and secondary BITS sources</td>
<td>BITS-A, BITS-B</td>
</tr>
<tr>
<td>System timing</td>
<td>TMGSYS</td>
</tr>
<tr>
<td>Primary and secondary timing output subsystem</td>
<td>TMGOUT-A, TMGOUT-B</td>
</tr>
<tr>
<td>Line Reference</td>
<td>LINEREF-1, LINEREF-4</td>
</tr>
</tbody>
</table>
### DCC AIDs

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>STS-(1-N)-(1-MaxPort)-(1-MaxSTS) STS channel used to tunnel DCC for TRAVERSESTS-5-1-2</td>
<td></td>
</tr>
<tr>
<td>STS-(1-2)-(1-MaxSTS) STS channel used to tunnel DCC for TE100STS-2-1</td>
<td></td>
</tr>
<tr>
<td>STM0-(1-2)-(1-MaxSTM) STM channel used to tunnel DCC for TE100</td>
<td>STM0-2-1</td>
</tr>
</tbody>
</table>

### DCC Path AIDs

<table>
<thead>
<tr>
<th>DCC Path Aid</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>STS-(1-2)-(1-MaxSTS)</td>
<td>STS channel used to create DCC path for TE-100</td>
<td>STS-2-1</td>
</tr>
<tr>
<td>VC3HO-(1-2)-(AUG)-(1-MaxVC3)</td>
<td>TE-100 AU-3/VC-3 path on STM-n ports</td>
<td>VC3HO-1-1-1</td>
</tr>
<tr>
<td>VC3LO-(1-2)-(1-MaxAUG)-(1-MaxTUG3)</td>
<td>TE-100 AU-4/VC-3 path on STM-n ports</td>
<td>VC3LO-1-1-1</td>
</tr>
<tr>
<td>VC4-(1-2)-(1-MaxAUG)</td>
<td>TE-100 AU-4/VC-4/VC-4-4C path AID on STM-n ports</td>
<td>VC4-1-1</td>
</tr>
</tbody>
</table>

### EOS CTP AIDs

<table>
<thead>
<tr>
<th>DCC Path AID</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOS-(1-MaxSlot)-(EOS ID)</td>
<td>EOS CTP AIDs</td>
<td>EOS-2-1</td>
</tr>
</tbody>
</table>
# Appendix D

## Card Type Coding

**Introduction**

Use the information the following table to identify the type of equipment in a slot.

<table>
<thead>
<tr>
<th>CRDTYPE</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGCM</td>
<td>Traverse General Control Module with VT switching module</td>
<td></td>
</tr>
<tr>
<td>EGCM-VCX</td>
<td>Traverse General Control Module with VC switching module</td>
<td></td>
</tr>
<tr>
<td>EGCM-OC12</td>
<td>Traverse General Control Module with VT switching module and single OC12 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-OC12-VCX</td>
<td>Traverse General Control Module with VC switching module and single OC12 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-OC12-2</td>
<td>Traverse General Control Module with VT switching module and two OC12 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-OC12-2-VCX</td>
<td>Traverse General Control Module with VC switching module and two OC12 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-OC48</td>
<td>Traverse General Control Module with VT switching module and single OC48 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-OC48-VCX</td>
<td>Traverse General Control Module with VC switching module and single OC48 optic port</td>
<td></td>
</tr>
<tr>
<td>GCM</td>
<td>Traverse General Control Module</td>
<td></td>
</tr>
<tr>
<td>OC3</td>
<td>8 port OC3 optical module</td>
<td></td>
</tr>
<tr>
<td>OC3-4</td>
<td>4 port OC3 optical module</td>
<td></td>
</tr>
<tr>
<td>OC3-16</td>
<td>16 port OC3 optical module</td>
<td></td>
</tr>
<tr>
<td>OC12</td>
<td>4 port OC12 optical module</td>
<td></td>
</tr>
<tr>
<td>OC48</td>
<td>1 port OC48 optical module</td>
<td></td>
</tr>
<tr>
<td>CRDTYPE</td>
<td>Description</td>
<td>Comments</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>OC48-VCX</td>
<td>1 port OC48 optical module with VC switching module</td>
<td></td>
</tr>
<tr>
<td>OC48-2</td>
<td>2 port OC48 optical module</td>
<td></td>
</tr>
<tr>
<td>OC192</td>
<td>OC192 optical module</td>
<td></td>
</tr>
<tr>
<td>DS1</td>
<td>28 DS1 port electrical module</td>
<td></td>
</tr>
<tr>
<td>DS3CC</td>
<td>12 DS3CC/EC1 port electrical module</td>
<td></td>
</tr>
<tr>
<td>DS3-12</td>
<td>12 DS3CC/EC1 port electrical module</td>
<td></td>
</tr>
<tr>
<td>DS3-24</td>
<td>24 DS3CC/EC1 port electrical module</td>
<td></td>
</tr>
<tr>
<td>DS3TMX</td>
<td>12 DS3CC/EC1/STSTMX/DS3TMX port electrical module</td>
<td></td>
</tr>
<tr>
<td>VT</td>
<td>VT crossconnect switching module</td>
<td></td>
</tr>
<tr>
<td>VT-TU-5G</td>
<td>VT switching module with 5G capacity</td>
<td></td>
</tr>
<tr>
<td>STM1E</td>
<td>8 port STM-1E/EC3 card</td>
<td></td>
</tr>
<tr>
<td>ETH100TX</td>
<td>24-Port 10/100 TX Ethernet module</td>
<td></td>
</tr>
<tr>
<td>ETH100FX</td>
<td>16-Port 10/100 FX Ethernet module</td>
<td></td>
</tr>
<tr>
<td>GBE8XVC</td>
<td>8-Port 1000BASE-LX Gigabit Ethernet module with VC</td>
<td></td>
</tr>
<tr>
<td>GBE8XVCGFP</td>
<td>8-Port 1000BASE-LX Gigabit Ethernet module with VC and GFP module</td>
<td></td>
</tr>
<tr>
<td>GE2FE8F</td>
<td>2-Port 1000Base with 8-10/100Fx Ethernet module</td>
<td></td>
</tr>
<tr>
<td>GE2FE16T</td>
<td>2-Port 1000Base with 16-10/100Tx Ethernet module</td>
<td></td>
</tr>
<tr>
<td>GE4FE16T</td>
<td>4-Port 1000Base with 16-10/100Tx Ethernet module</td>
<td></td>
</tr>
<tr>
<td>GE2TGE2FFE16T</td>
<td>2-Port 1000Base and 2-Port 1000 BASE TX with 16-10/100Tx Ethernet module</td>
<td></td>
</tr>
<tr>
<td>EGCM-STM4</td>
<td>Traverse General Control Module with VT switching module and single STM4 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-STM4-VCX</td>
<td>Traverse General Control Module with VC switching module and single STM4 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-STM4-2</td>
<td>Traverse General Control Module with VT switching module and two STM4 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-STM4-2-VCX</td>
<td>Traverse General Control Module with VC switching module and two STM4 optic port</td>
<td></td>
</tr>
<tr>
<td>EGCM-STM16</td>
<td>Traverse General Control Module with VT switching module and single STM16 optic port</td>
<td></td>
</tr>
<tr>
<td>CRDTYPE</td>
<td>Description</td>
<td>Comments</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>EGCM- STM16-VCX</td>
<td>Traverse General Control Module with VC switching module and single STM16 optic port</td>
<td></td>
</tr>
<tr>
<td>STM1</td>
<td>8 port STM1 optical module</td>
<td></td>
</tr>
<tr>
<td>STM1-4</td>
<td>4 port STM1 optical module</td>
<td></td>
</tr>
<tr>
<td>STM1-16</td>
<td>16 port STM1 optical module</td>
<td></td>
</tr>
<tr>
<td>STM4</td>
<td>4 port STM4 optical module</td>
<td></td>
</tr>
<tr>
<td>STM16</td>
<td>1 port STM16 optical module</td>
<td></td>
</tr>
<tr>
<td>STM16-VCX</td>
<td>1 port STM16 optical module with VC switching module</td>
<td></td>
</tr>
<tr>
<td>STM16-2</td>
<td>2 port STM16 optical module</td>
<td></td>
</tr>
<tr>
<td>STM64</td>
<td>STM64 optical module</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>21 E1 port electrical module</td>
<td></td>
</tr>
<tr>
<td>E3CC</td>
<td>12 E3 port electrical module</td>
<td></td>
</tr>
<tr>
<td>E3-12</td>
<td>12 E3 port electrical module</td>
<td></td>
</tr>
<tr>
<td>E3-24</td>
<td>24 E3 port electrical module</td>
<td></td>
</tr>
<tr>
<td>SC-OC3</td>
<td>OC3 System card for TE-100</td>
<td></td>
</tr>
<tr>
<td>SC-OC12</td>
<td>OC12 System card for TE-100</td>
<td></td>
</tr>
<tr>
<td>SC-OC48</td>
<td>OC48 System card for TE-100</td>
<td></td>
</tr>
<tr>
<td>SC-STM1</td>
<td>STM1 System card for TE-100</td>
<td></td>
</tr>
<tr>
<td>SC-STM4</td>
<td>STM4 System card for TE-100</td>
<td></td>
</tr>
<tr>
<td>SC-STM16</td>
<td>STM16 System card for TE-100</td>
<td></td>
</tr>
<tr>
<td>IC</td>
<td>Interface card for TE-100</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E
CONDTYPE, CONDEFF, and NTFCNCDE Assignment

Introduction
Refer to the alarm description document.
Appendix F
Primary and Secondary State

Introduction
The following table shows a general mapping of a subset of TL1 PST per GR-1093 into the operational and administrative states.

<table>
<thead>
<tr>
<th>Equipment State</th>
<th>Operational State</th>
<th>Administrative State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported &lt;PST-SST&gt;:</td>
<td>Enabled</td>
<td>Unlocked</td>
</tr>
<tr>
<td>IS-{ACT</td>
<td>IDLE}</td>
<td>IS</td>
</tr>
<tr>
<td>OOS-AU, {UEQ</td>
<td>MEA</td>
<td>FLT}</td>
</tr>
<tr>
<td>OOS-AU, TS</td>
<td>OOS-AUMA, [UEQ</td>
<td>MEA</td>
</tr>
<tr>
<td>OOS-MA, {MT</td>
<td>SWDL}</td>
<td>OOS-MA</td>
</tr>
</tbody>
</table>

PST:
- IS: in service
- OOS-AU: out of service, autonomous
- OOS-AUMA: out of service, autonomous and management
- OOS-MA: out of service, management

SST:
- ACT: active
- FLT: fault
- MEA: mismatch of equipment and attributes
- STBY: standby
- SWDL: software download
- TS: test
- UEQ: unequipped
- WRK: working
## Facility State

<table>
<thead>
<tr>
<th>Supported [&lt;PST&gt;,&lt;SST&gt;]</th>
<th>PST</th>
<th>SST</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS- {ACT</td>
<td>IDLE} {STBY</td>
<td>WRK}</td>
</tr>
<tr>
<td>OOS-AU, {FAF</td>
<td>FLT</td>
<td>SGE0}</td>
</tr>
<tr>
<td>OOS-AUMA, [FAF</td>
<td>FLT</td>
<td>SGE0]</td>
</tr>
<tr>
<td>OOS-MA</td>
<td>OOS-MA: out of service, management</td>
<td>LPBKTERM: facility loopback</td>
</tr>
<tr>
<td>OOS-MA, {LPBKTERM</td>
<td>LPBFACILITY}</td>
<td></td>
</tr>
</tbody>
</table>

### Cross-connect State

<table>
<thead>
<tr>
<th>Supported [&lt;PST&gt;,&lt;SST&gt;]</th>
<th>PST</th>
<th>SST</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS, {RDLD}</td>
<td>IS: in service</td>
<td>ACT: Active</td>
</tr>
<tr>
<td>OOS-AU, SGE0 {RDLD}</td>
<td>OOS-AU: out of service, autonomous</td>
<td>DSBLD: Disabled</td>
</tr>
<tr>
<td>OOS-MA, {RDLD}</td>
<td>OOS-MA: out of service, management</td>
<td></td>
</tr>
</tbody>
</table>

### PST:
- IS: in service
- OOS-AU: out of service, autonomous
- OOS-AUMA: out of service, autonomous and management
- OOS-MA: out of service, management

### SST:
- ACT: active
- FAF: facility failure (e.g., LOS, LOF)
- FLT: fault
- LPBKTERM: terminal loopback
- SGE0: supporting entity outage
- STBY: standby
- WRK: working
### Appendix G

**TL1 Error Codes**

#### Introduction

An error code is a four-character mnemonic device in the response of an input command describing why the command cannot be executed. The error codes are grouped into categories of equipage (E), input (I), multiple error (M), privilege (P), and status (S). The following table contains the list of error codes and their descriptions.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EATN</td>
<td>Equipage, Not Valid for Access Type</td>
</tr>
<tr>
<td>ENAC</td>
<td>Equipage, Not equipped with Alarm Cutoff</td>
</tr>
<tr>
<td>ENAD</td>
<td>Equipage, Not equipped with Audit capability</td>
</tr>
<tr>
<td>ENAR</td>
<td>Equipage, Not equipped with Automatic Reconfiguration</td>
</tr>
<tr>
<td>ENDG</td>
<td>Equipage, Not equipped with Diagnostic capability</td>
</tr>
<tr>
<td>ENDS</td>
<td>Equipage, Not equipped with Duplex Switching</td>
</tr>
<tr>
<td>ENEA</td>
<td>Equipage, Not equipped with Error Analysis capability</td>
</tr>
<tr>
<td>ENEQ</td>
<td>Equipage, Not Equipped</td>
</tr>
<tr>
<td>ENEX</td>
<td>Equipage, Not equipped with Exercise capability</td>
</tr>
<tr>
<td>ENFL</td>
<td>Equipage, Not equipped for Fault Locating</td>
</tr>
<tr>
<td>ENMD</td>
<td>Equipage, Not equipped with Memory Device</td>
</tr>
<tr>
<td>ENPM</td>
<td>Equipage, Not equipped for Performance Monitoring</td>
</tr>
<tr>
<td>ENPS</td>
<td>Equipage, Not equipped with Protection Switching</td>
</tr>
<tr>
<td>ENRI</td>
<td>Equipage, Not equipped for Retrieving specified Information</td>
</tr>
<tr>
<td>ENRS</td>
<td>Equipage, Not equipped for Restoration</td>
</tr>
<tr>
<td>ENSA</td>
<td>Equipage, Not equipped for Scheduling Audit</td>
</tr>
<tr>
<td>ENSI</td>
<td>Equipage, Not equipped for Setting specified Information</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>ENSS</td>
<td>Equipage, Not equipped with Synchronization Switching</td>
</tr>
<tr>
<td>IBMS</td>
<td>Input, block missing.</td>
</tr>
<tr>
<td>ICNV</td>
<td>Input, Command Not Valid</td>
</tr>
<tr>
<td>IDNV</td>
<td>Input, Data Not Valid</td>
</tr>
<tr>
<td>IDRG</td>
<td>Input, Data Range</td>
</tr>
<tr>
<td>IIAC</td>
<td>Input, Invalid Access identifier</td>
</tr>
<tr>
<td>IICT</td>
<td>Input, Invalid Correlation Tag</td>
</tr>
<tr>
<td>IIIFM</td>
<td>Input, Invalid data Format</td>
</tr>
<tr>
<td>IIPG</td>
<td>Input, Invalid Parameter Grouping</td>
</tr>
<tr>
<td>IISP</td>
<td>Input, Invalid Syntax or Punctuation</td>
</tr>
<tr>
<td>IITA</td>
<td>Input, Invalid Target identifier</td>
</tr>
<tr>
<td>INUP</td>
<td>Input, Non-null Unimplemented Parameter</td>
</tr>
<tr>
<td>IPMS</td>
<td>Input, Parameter Missing</td>
</tr>
<tr>
<td>IPNV</td>
<td>Input, Parameter Not Valid</td>
</tr>
<tr>
<td>ISCH</td>
<td>Input, Syntax invalid Character (new Jul95)</td>
</tr>
<tr>
<td>ISPC</td>
<td>Input, Syntax invalid Punctuation (new Jul95)</td>
</tr>
<tr>
<td>PICC</td>
<td>Privilege, Invalid Command Code</td>
</tr>
<tr>
<td>PIMA</td>
<td>Privilege, Invalid Memory Address</td>
</tr>
<tr>
<td>PIMF</td>
<td>Privilege, Invalid Memory File</td>
</tr>
<tr>
<td>PIUI</td>
<td>Privilege, Illegal User Identity, Invalid UID</td>
</tr>
<tr>
<td>PLNA</td>
<td>Privilege, Login Not Active</td>
</tr>
<tr>
<td>SAAL</td>
<td>Status, Already Allowed</td>
</tr>
<tr>
<td>SABT</td>
<td>Status, Aborted</td>
</tr>
<tr>
<td>SAIN</td>
<td>Status, Already Inhibited</td>
</tr>
<tr>
<td>SAIS</td>
<td>Status, Already In Service</td>
</tr>
<tr>
<td>SAMS</td>
<td>Status, Already in Maintenance State</td>
</tr>
<tr>
<td>SAOP</td>
<td>Status, Already Operated</td>
</tr>
<tr>
<td>SAPR</td>
<td>Status, Already in Protection state</td>
</tr>
<tr>
<td>SARB</td>
<td>Status, All Resources Busy</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>SATF</td>
<td>Status, Automatic Test Failed</td>
</tr>
<tr>
<td>SCNA</td>
<td>Status, Command Not Able to be aborted</td>
</tr>
<tr>
<td>SCNf</td>
<td>Status, Command Not Found</td>
</tr>
<tr>
<td>SDAS</td>
<td>Status, Diagnosis Already Started</td>
</tr>
<tr>
<td>SDFA</td>
<td>Status, Duplex unit Failed</td>
</tr>
<tr>
<td>SDLD</td>
<td>Status, Duplex unit Locked</td>
</tr>
<tr>
<td>SDNA</td>
<td>Status, Duplex unit Not Available</td>
</tr>
<tr>
<td>SDNR</td>
<td>Status, Data Not Ready</td>
</tr>
<tr>
<td>SDNS</td>
<td>Status, Diagnosis Not Started yet</td>
</tr>
<tr>
<td>SFAS</td>
<td>Status, Fault locating Already Started</td>
</tr>
<tr>
<td>SFNS</td>
<td>Status, Fault locating Not Started yet</td>
</tr>
<tr>
<td>SLNS</td>
<td>Status, Log Not Started yet</td>
</tr>
<tr>
<td>SNOS</td>
<td>Status, Not currently Out of Service</td>
</tr>
<tr>
<td>SNPR</td>
<td>Status, Not in Protection state</td>
</tr>
<tr>
<td>SNRM</td>
<td>Status, system Not in Restoration Mode</td>
</tr>
<tr>
<td>SNSR</td>
<td>Status, No Switch Request outstanding</td>
</tr>
<tr>
<td>SNVS</td>
<td>Status, Not in Valid State</td>
</tr>
<tr>
<td>SPFA</td>
<td>Status, Protection unit Failed</td>
</tr>
<tr>
<td>SPLD</td>
<td>Status, Protection unit Locked</td>
</tr>
<tr>
<td>SPNA</td>
<td>Status, Process Not Able to be aborted</td>
</tr>
<tr>
<td>SPNF</td>
<td>Status, Process Not Found</td>
</tr>
<tr>
<td>SRCI</td>
<td>Status, Requested Command(s) Inhibited</td>
</tr>
<tr>
<td>SROF</td>
<td>Status, Requested Operation Failed</td>
</tr>
<tr>
<td>SRTO</td>
<td>Status, Reply Time-Out</td>
</tr>
<tr>
<td>SSRD</td>
<td>Status, Switch Request Denied</td>
</tr>
<tr>
<td>SSRE</td>
<td>Status, System Resources Exceeded</td>
</tr>
<tr>
<td>STAB</td>
<td>Status, Test Aborted</td>
</tr>
<tr>
<td>SWFA</td>
<td>Status, Working unit Failed</td>
</tr>
<tr>
<td>SWLD</td>
<td>Status, Working unit Locked</td>
</tr>
</tbody>
</table>
Appendix H
TL1 Quick Reference Guide

Introduction

Use this appendix to quickly find specific TL1 commands for the following areas:

- Login/Logout Commands, page 2-46
- Utility Commands, page 2-46
- Node Provisioning Commands, page 2-47
- Equipment Provisioning Commands, page 2-47
- Facility Provisioning Commands, page 2-48
- VT Path Commands, page 2-49
- STS1/3C/12C/48C Path Commands, page 2-49
- STS1/3C/12C/48C and VT1 Cross-connect Commands, page 2-49
- DCC Tunnel Commands, page 2-50
- Facility Protection Commands, page 2-50
- BLSR Protection Commands, page 2-51
- System Timing Commands, page 2-51
- Software Download Commands, page 2-52
- Test Access Setup Commands, page 2-52
- Facility Remove and Restore Commands, page 2-53
- Protection Switching Commands, page 2-53
- Fault Commands, page 2-54
- Alarm Reporting Messages, page 2-55
- Loopback Commands, page 2-60
- Performance Monitoring Commands, page 2-61
- OSI Commands, page 2-61
Login/Logout Commands

Table 2-17  Login / Logout Commands

<table>
<thead>
<tr>
<th>Command Type</th>
<th>Security Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT-USER:tid:&lt;uid&gt;::ctag&gt;::pid;x</td>
<td></td>
</tr>
<tr>
<td>CANC-USER-SECU:tid:&lt;uid&gt;::ctag;</td>
<td>X</td>
</tr>
<tr>
<td>CANC-USER:tid:&lt;uid&gt;::ctag;</td>
<td>X</td>
</tr>
<tr>
<td>DLT-USER-SECU:tid:&lt;uid&gt;::ctag;</td>
<td>X</td>
</tr>
<tr>
<td>ED-USER-SECU:tid:&lt;UID&gt;::ctag::&lt;NEWPID&gt;::&lt;UAP&gt;:[TMOUT=&lt;timeout&gt;];</td>
<td>X</td>
</tr>
<tr>
<td>ED-PID:tid:&lt;uid&gt;::ctag::&lt;oldpid&gt;::&lt;newpid&gt;;</td>
<td>X</td>
</tr>
<tr>
<td>ENT-USER-SECU:tid:&lt;UID&gt;::ctag::&lt;PID&gt;::&lt;UAP&gt;;</td>
<td>X</td>
</tr>
<tr>
<td>RTRV-USER-SECU:tid:&lt;uid&gt;::ctag;x</td>
<td></td>
</tr>
</tbody>
</table>

Utility Commands

Table 2-18  Utility Commands

<table>
<thead>
<tr>
<th>Command Type</th>
<th>Security Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET-SID:tid::ctag::sid;</td>
<td></td>
</tr>
<tr>
<td>RTRV-HDR:[tid]::ctag;</td>
<td></td>
</tr>
</tbody>
</table>
### Node Provisioning Commands

#### Table 2-19  Node Provisioning Commands

<table>
<thead>
<tr>
<th>Command Type</th>
<th>Security Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED-NE:&lt;tid&gt;::&lt;ctag&gt;::[NDIPADDR=&lt;ndipaddr&gt;, BKIPADDR=&lt;bkipaddr&gt;, BKIPMASK=&lt;bkipmask&gt;, BKGWIP=&lt;bgwip&gt;, [EMSIIPADDR=&lt;emsipaddr&gt;, EMSIPMASK=&lt;emsipmask&gt;, EMSGWIP=&lt;emsgwip&gt;], [GCMAIPADDR=&lt;gcmapiaddr&gt;, GCMAIPMASK=&lt;gcmapiipmask&gt;, GCMAGWIP=&lt;gcmagwip&gt;], [GCMBIPADDR=&lt;gcm bipaddr&gt;, GCMBIPMASK=&lt;gcm bipmask&gt;, GCMBGWIP=&lt;gcm bgwip&gt;], [NTP1IPADDR=&lt;ntp1ipaddr&gt;], [NTP2IPADDR=&lt;ntp2ipaddr&gt;], [LOCATION=&lt;location&gt;], [TZ=&lt;timezone&gt;], [OPMODE=&lt;opmode&gt;], [STANDARD=&lt;standard&gt;], [MSAIDFMT=&lt;msaidfmt&gt;], [NODEID=&lt;nodeid&gt;], [PROXYARP=&lt;proxyarp&gt;], [ALMPROF=&lt;almprof&gt;];</td>
<td></td>
</tr>
<tr>
<td>RTRV-NE:&lt;tid&gt;::&lt;ctag&gt;;</td>
<td></td>
</tr>
<tr>
<td>SET-SYS:&lt;tid&gt;::&lt;ctag&gt;::[NODEID=&lt;nodeid&gt;], [NDIPADDR=&lt;ipaddr&gt;], [STANDARD=&lt;standard&gt;], [OPMODE=&lt;opmode&gt;];</td>
<td></td>
</tr>
</tbody>
</table>

### Equipment Provisioning Commands

#### Table 2-20  Equipment Provisioning Commands

<table>
<thead>
<tr>
<th>Command Type</th>
<th>Security Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>INIT-SYS:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;::[&lt;ph&gt;];</td>
<td></td>
</tr>
<tr>
<td>ENT-EQPT:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;::[CRDNAME=&lt;crdname&gt;], [&lt;pst&gt;], [&lt;sst&gt;];</td>
<td></td>
</tr>
<tr>
<td>ED-EQPT:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;::[CRDNAME=&lt;crdname&gt;], [DS1NBR=&lt;ds1nbr&gt;], [DS1MAP=&lt;ds1map&gt;], [STS1SFBER=&lt;sts1sfber&gt;], [STS3SFBER=&lt;sts3sfber&gt;], [STS12SFBER=&lt;sts12sfber&gt;], [STS48SFBER=&lt;sts48sfber&gt;], [STS1SDBER=&lt;sts1sdber&gt;], [STS3SDBER=&lt;sts3sdber&gt;], [STS12SDBER=&lt;sts12sdber&gt;], [STS48SDBER=&lt;sts48sdber&gt;], [FEC=&lt;fec&gt;];</td>
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<td>DLT-EQPT:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;;</td>
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<td>RTRV-EQPT:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;;</td>
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## Table 2-21 Facility Provisioning Commands

<table>
<thead>
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<td>ED-T1::&lt;AID&gt;::&lt;ctag&gt;::[AISF=&lt;aisf&gt;],[AISM=&lt;aism&gt;],[AISGEN=&lt;aisgen&gt;],[LBO=&lt;lbo&gt;],[FMT=&lt;fmt&gt;],[LINECDE=&lt;linecde&gt;],[CUST=&lt;cust&gt;],[CUSTTAG=&lt;custtag&gt;],[ALMPROF=&lt;almprof&gt;],[PMTMPL=&lt;pmtmpl&gt;]:[&lt;pst&gt;];</td>
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<tr>
<td>CHG-FAC-MODE::&lt;AID&gt;::&lt;ctag&gt;::&lt;MODE&gt;;</td>
<td></td>
</tr>
<tr>
<td>ED-T3::&lt;AID&gt;::&lt;ctag&gt;::[AISM=&lt;aism&gt;],[AISF=&lt;aisf&gt;],[LBO=&lt;lbo&gt;],[FMT=&lt;fmt&gt;],[RDI=&lt;rdi&gt;],[CUST=&lt;cust&gt;],[CUSTTAG=&lt;custtag&gt;],[ALMPROF=&lt;almprof&gt;],[PMTMPL=&lt;pmtmpl&gt;]:[&lt;pst&gt;];</td>
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<tr>
<td>ED-EC1::&lt;AID&gt;::&lt;ctag&gt;::[AISM=&lt;aism&gt;],[LBO=&lt;lbo&gt;],[SFBER=&lt;sfber&gt;],[SDBER=&lt;sdbер&gt;],[CUST=&lt;cust&gt;],[CUSTTAG=&lt;custtag&gt;],[ALMPROF=&lt;almprof&gt;],[PMTMPL=&lt;pmtmpl&gt;]:[&lt;pst&gt;];</td>
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<tr>
<td>ED-T3-TMX::&lt;AID&gt;::&lt;ctag&gt;::[AISM=&lt;aism&gt;],[AISF=&lt;aisf&gt;],[LBO=&lt;lbo&gt;],[FMT=&lt;fmt&gt;],[DS1TOVTMAP=&lt;ds1tovtmap&gt;],[DS3MAP=&lt;ds3map&gt;],[CUST=&lt;cust&gt;],[CUSTTAG=&lt;custtag&gt;],[ALMPROF=&lt;almprof&gt;],[PMTMPL=&lt;pmtmpl&gt;],[SUBPRTMAP=&lt;subprtmap&gt;]:[&lt;pst&gt;];</td>
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<td>ED-STS1-TMX::&lt;AID&gt;::&lt;ctag&gt;::[AISM=&lt;aism&gt;],[AISF=&lt;aisf&gt;],[FMT=&lt;fmt&gt;],[DS1TOVTMAP=&lt;ds1tovtmap&gt;],[DS3MAP=&lt;ds3map&gt;],[CUST=&lt;cust&gt;],[CUSTTAG=&lt;custtag&gt;],[SUBPRTMAP=&lt;subprtmap&gt;]:[&lt;pst&gt;];</td>
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<td>ED-TMX-DS1::&lt;AID&gt;::&lt;ctag&gt;::[FMT=&lt;fmt&gt;],[ALMPROF=&lt;almprof&gt;],[PMTMPL=&lt;pmtmpl&gt;]:[&lt;pst&gt;];</td>
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<tr>
<td>ED-OC3/12/48/192::&lt;AID&gt;::&lt;ctag&gt;::[SFBER=&lt;sfber&gt;],[SDBER=&lt;sdbер&gt;],[LSRCTL=&lt;lsrcctl&gt;],[DCTYPE=&lt;dctype&gt;],[L2PROT=&lt;l2prot&gt;],[LAPDMODE=&lt;lapdmode&gt;],[LAPDROLE=&lt;lapdrole&gt;],[CTRLDATA=&lt;ctrldata&gt;],[RCDDDUS=&lt;rccduds&gt;],[FWDSECTRC=&lt;fwdsectrc&gt;],[FWDTRCFMT=&lt;fwdtrcfmt&gt;],[REVSECTRC=&lt;revsectrc&gt;],[REVTRCFMT=&lt;revtrcfmt&gt;],[ALMPROF=&lt;almprof&gt;],[CUST=&lt;cust&gt;],[CUSTTAG=&lt;custtag&gt;],[PMTMPL=&lt;pmtmpl&gt;],[SSBITTX=&lt;ssbittx&gt;],[LAPDMTU=&lt;lapdmtu&gt;],[LSRMODE=&lt;lsrmode&gt;]:[&lt;pst&gt;];</td>
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<td>ED-ETH::&lt;AID&gt;::&lt;ctag&gt;::[Speed=&lt;speed&gt;],[PAUSEFR=&lt;pausefr&gt;],[JUMBOFR=&lt;jumbofr&gt;],[JOMBOSZ=&lt;jombosz&gt;],[ETHERTYPE=&lt;ethertype&gt;]:[&lt;pst&gt;];</td>
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**VT Path Commands**

**Table 2-22 VT Path Commands**

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<th>Security Level</th>
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<td>RTRV-VT1:&lt;tid&gt;;&lt;&lt;AID&gt;;&lt;ctag&gt;;</td>
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**Table 2-23 STS1/3C/12C/48C Path Commands**

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<td>ED-STS1/3C/12C/48C:&lt;tid&gt;;&lt;aide&gt;:&lt;ctag&gt;::([AISP=&lt;aisp&gt;],[PDIP=&lt;pdip&gt;], [C2INSRT=&lt;c2insert&gt;],[C2EXPECT=&lt;c2expct&gt;],[SFBER=&lt;sfber&gt;],[SDBER=&lt;sdbber&gt;], [PTRC=&lt;pathtrace&gt;],[EXPTRC=&lt;exptrc&gt;],[VTORDER=&lt;vtorder&gt;]):&lt;PST&gt;);</td>
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<tr>
<td>RTRV-STS1/3C/12C/48C:&lt;tid&gt;;&lt;&lt;AID&gt;;&lt;ctag&gt;;</td>
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**Table 2-24 STS1/3C/12C/48C and VT1 Cross-connect Commands**

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<thead>
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<tr>
<td>ED-CRS-STS1/3C/12C/48C:&lt;tid&gt;;&lt;FROM-AID&gt;,&lt;TO-AID&gt;:&lt;ctag&gt;:::[&lt;CCT&gt;]; [NAME=&lt;name&gt;],[CUST=&lt;cust&gt;],[DESC=&lt;desc&gt;],[RDLNE=&lt;rdln&gt;],[FROMPMTMPL=&lt;frompmtmpl&gt;],[TOPMTMPL=&lt;toppmtmpl&gt;],[FROMTMXAID=&lt;fromtmxaid&gt;],[TOTMXAID=&lt;totmxaid&gt;],[TRANSSIGLBL=&lt;transiglbl&gt;],[TRANSPATHTRC=&lt;transpathtrc&gt;],[EXPSIGLBL=&lt;expsiglbl&gt;],[EXPPATHTRC=&lt;expfwdpathtrc&gt;],[TRASPARENCY=&lt;transparency&gt;],[ADMSTATE=&lt;admstate&gt;]:&lt;PST&gt;;</td>
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<tr>
<td>RTRV-CRS-STS1/3C/12C/48C:&lt;tid&gt;;&lt;[FROM-AID&gt;,&lt;TO-AID]&gt;;&lt;ctag&gt;::;</td>
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Table 2-24  STS1/3C/12C/48C and VT1 Cross-connect Commands

<table>
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<th>Security Level</th>
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<td>DLT-CRS-STS1/3C/12C/48C: &lt;tid&gt;:&lt;from-aid&gt;,&lt;to-aid&gt;:&lt;ctag&gt;[:];</td>
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</tr>
<tr>
<td>ENT-CRS-VT1: &lt;tid&gt;:&lt;FROM-AID&gt;,&lt;TO-AID&gt;:&lt;ctag&gt;[:]&lt;CCT&gt;:[NAME=&lt;name&gt;], [CUST=&lt;cust&gt;],[DESC=&lt;desc&gt;],[RDLNE=&lt;rdline&gt;],[FROMPMTMPL=&lt;frompmtmpl&gt;], [TOPMTMPL=&lt;toppmtmpl&gt;],[FROMTMXAID=&lt;fromtmxaid&gt;],[TOTMXAID=&lt;totmxaid&gt;], [TRANSSIGLBL=&lt;transsiglbl&gt;],[TRANSPATHTRC=&lt;transpathtrc&gt;], [EXPSIGLBL=&lt;expsiglbl&gt;],[EXPPATHTRC=&lt;exppathtrc&gt;], [SDBER=&lt;sdber&gt;], [SFBER=&lt;sfber&gt;]:[&lt;PST&gt;];</td>
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</tr>
<tr>
<td>ED-CRS-VT1: &lt;tid&gt;:&lt;FROM-AID&gt;,&lt;TO-AID&gt;:&lt;ctag&gt;[:]&lt;CCT&gt;:[NAME=&lt;name&gt;], [CUST=&lt;cust&gt;],[DESC=&lt;desc&gt;],[RDLNE=&lt;rdline&gt;],[FROMPMTMPL=&lt;frompmtmpl&gt;], [TOPMTMPL=&lt;toppmtmpl&gt;],[FROMTMXAID=&lt;fromtmxaid&gt;],[TOTMXAID=&lt;totmxaid&gt;], [TRANSSIGLBL=&lt;transsiglbl&gt;],[TRANSPATHTRC=&lt;transpathtrc&gt;], [EXPSIGLBL=&lt;expsiglbl&gt;],[EXPPATHTRC=&lt;exppathtrc&gt;], [SDBER=&lt;sdber&gt;], [SFBER=&lt;sfber&gt;], [ADMSTATE=&lt;admstate&gt;]:[&lt;PST&gt;];</td>
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<tr>
<td>RTRV-CRS-VT1: &lt;tid&gt;:&lt;FROM-AID&gt;,&lt;TO-AID&gt;:&lt;ctag&gt;[:];</td>
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<tr>
<td>DLT-CRS-VT1: &lt;tid&gt;:&lt;from-aid&gt;,&lt;to-aid&gt;:&lt;ctag&gt;[:];</td>
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DCC Tunnel Commands

Table 2-25  DCC Tunnel Commands

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<tr>
<td>DLT-DCCTUNNEL: &lt;tid&gt;:&lt;FROM-AID&gt;,&lt;TO-AID&gt;:&lt;ctag&gt;[:];</td>
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</tr>
<tr>
<td>RTRV-DCCTUNNEL: &lt;tid&gt;:[FROM-AID,TO-AID]:&lt;ctag&gt;;</td>
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Facility Protection Commands

Table 2-26  Facility Protection Commands

<table>
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<th>Command Type</th>
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<tr>
<td>ENT-FFP-OC3/12/48/192: &lt;tid&gt;:&lt;WORKING&gt;,&lt;protect&gt;:&lt;ctag&gt;::: [PSDIRN=&lt;psdirn&gt;], [RVRTV=&lt;rvrtv&gt;],[WTR=&lt;wtr&gt;];</td>
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Table 2-26 Facility Protection Commands

<table>
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<th>Command Type</th>
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</table>

BLSR Protection Commands

Not supported in R2.0 and R2.0E.

Table 2-27 System Timing Commands

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<th>Command Type</th>
<th>Security Level</th>
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<tbody>
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<td>ED-SYNCN:&lt;tid&gt;::&lt;ctag&gt;::[SYNCMODE=&lt;syncmode&gt;],[INMSG=&lt;inmsg&gt;],[RVRTV=&lt;rvrtv&gt;] [,WTR=&lt;wt&gt;],[QLTYRES=&lt;qltyres&gt;],[SQUELCHORASIS=&lt;squelchorais&gt;]</td>
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<tr>
<td>SET-SYNCN-REF:&lt;tid&gt;::&lt;ctag&gt;::SYNCLIST=&lt;PRIO1REF&gt;&amp;&lt;PRIO2REF&gt;&amp;&lt;PRIOR3REF&gt;&amp;&lt;PRIOR4REF&gt;;</td>
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<tr>
<td>ED-BITS:&lt;tid&gt;::&lt;ctag&gt;::LINECDE=&lt;linecde&gt;],[LBO=&lt;lbo&gt;],[LOF=&lt;lof&gt;],[FMT=&lt;fmt&gt;],[INMSG=&lt;inmsg&gt;],[MODE=&lt;mode&gt;],[ASSMR=&lt;assmr&gt;];[&lt;pst&gt;];</td>
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<td>RTRV-BITS:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;;</td>
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<td>SET-SYNCN-LINEREF:&lt;tid&gt;::&lt;AID&gt;::&lt;ctag&gt;::REFAID:[DUS=&lt;dus&gt;];</td>
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</tr>
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<td>RTRV-SYNCN::&lt;AID&gt;::&lt;ctag&gt;;</td>
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<td>RTRV-SYNC-REF::&lt;AID&gt;::&lt;ctag&gt;;</td>
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<td>RTRV-SYNCN-LINEREF::&lt;AID&gt;::&lt;ctag&gt;;</td>
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<td>OPR-SYNCNSW::&lt;AID&gt;::&lt;ctag&gt;::&lt;REFAID&gt;::&lt;SC&gt;</td>
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<tr>
<td>RLS-SYNCNSW::&lt;AID&gt;::&lt;ctag&gt;::&lt;REFAID&gt;::&lt;SC&gt;</td>
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### Software Download Commands

Table 2-28 Software Download Commands

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</tr>
<tr>
<td>REPT EVT FXFR</td>
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</tr>
<tr>
<td>&quot;^^^&quot;&lt;AID&gt;:&lt;FILEURL&gt;,&lt;FXFR_STATUS&gt;,&lt;FXFR_RSLT&gt;:[CONDDESCR]&quot;</td>
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<td>APPLY:&lt;tid&gt;[:&lt;AID&gt;]:&lt;ctag&gt;[::::TYPE=&lt;type&gt;]</td>
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</table>

### Test Access Setup Commands

Table 2-29 Test Access Setup Commands

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<tr>
<td>RTRV-TAP-{T1/T3/STS1/VT1}[:&lt;TID&gt;]:[&lt;TAP&gt;]:&lt;CTAG&gt;</td>
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<tr>
<td>DLT-TAP-{T1/T3/STS1/VT1}[:&lt;TID&gt;]:[&lt;TAP&gt;]:&lt;CTAG&gt;</td>
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<tr>
<td>CONN-TACC-{T1/T3/STS1/VT1}[:&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:&lt;TAP&gt;:&lt;MOD&gt;</td>
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<tr>
<td>CHG-ACCMD-{T1/T3/STS1/VT1}[:&lt;TID&gt;]:TAP:&lt;CTAG&gt;:&lt;MOD&gt;</td>
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<td>CHG-ACCMD-{T1/T3/STS1}[:&lt;TID&gt;]:TAP:&lt;CTAG&gt;:&lt;MD&gt;</td>
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<td>DISC-TACC:&lt;TID&gt;:TAP:&lt;CTAG&gt;</td>
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<td>REPT-INITZN:[&lt;TID&gt;]:::&lt;CTAG&gt;</td>
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<td>REPT-STAT:[&lt;TID&gt;]::::&lt;CTAG&gt;</td>
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<td>ENT-TAP-{T1/T3/STS1/VT1}[:&lt;TID&gt;]:[&lt;TAP&gt;]:&lt;CTAG&gt;:&lt;FAD1AID&gt;[:&lt;FAD2AID&gt;]</td>
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<td>RTRV-TAP-{T1/T3/STS1/VT1}[:&lt;TID&gt;]:[&lt;TAP&gt;]:&lt;CTAG&gt;</td>
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Facility
Remove and
Restore
Commands

Table 2-30  Facility Remove and Restore Commands

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<td>RST-T1:&lt;tid&gt;:&lt;AID&gt;:&lt;CTAG&gt;[::];</td>
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<td>RMV-T3/EC1:&lt;tid&gt;:&lt;AID&gt;:&lt;CTAG&gt;[::,];</td>
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<td>RST-T3/EC1:&lt;tid&gt;:&lt;AID&gt;:&lt;CTAG&gt;[::];</td>
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<td>RMV-T3-TMX:&lt;tid&gt;:&lt;AID&gt;:&lt;CTAG&gt;[::,];</td>
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<td>RST-T3-TMX:&lt;tid&gt;:&lt;AID&gt;:&lt;CTAG&gt;[::];</td>
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Protection
Switching
Commands

Table 2-31  Protection Switching Commands

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<td>RLS-PROTN-SEQPT:&lt;tid&gt;:&lt;AID&gt;:&lt;ctag&gt;;</td>
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## Fault Commands

### Table 2-32  Fault Commands

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<td>ALW-MSG-SYNC: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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</tr>
<tr>
<td>ALW-MSG-BITS: &lt;tid&gt;::&lt;ctag&gt;::::</td>
<td></td>
</tr>
<tr>
<td>ALW-MSG-T1: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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<td>ALW-MSG-T3/EC1: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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<td>ALW-MSG-T3TMX: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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<td>ALW-MSG-TMXDS1: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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<td>ALW-MSG-OC3/12/48/192: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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<td>ALW-MSG-STS1/3C/12C/48C: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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<td>INH-MSG-VT1: &lt;tid&gt;::&lt;ctag&gt;::::</td>
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### Table 2-32 Fault Commands

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### Table 2-33 Alarm Reporting Messages

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<td>^^^^SID’YY-MM-DD’HH:MM:SS</td>
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<td>REPT ALM ENV</td>
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<td>REPT ALM SYNC</td>
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<td>[:&lt;CONDDESCR&gt;],”</td>
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### Table 2-33  Alarm Reporting Messages

<table>
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<tr>
<td>REPT ALM EQPT</td>
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| `^^^SID^YY-MM-DD^HH:MM:SS`
| `almcde^^atag^REPT ALM EQPT`
| `^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,,`
| `[:[<CONDDESCR>],]` |
| ;             |               |
| REPT ALM BITS |               |
| `^^^SID^YY-MM-DD^HH:MM:SS`
| `almcde^^atag^REPT ALM T1`
| `^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,,`
| `[:[<CONDDESCR>],]` |
| ;             |               |
| REPT ALM T1   |               |
| `^^^SID^YY-MM-DD^HH:MM:SS`
| `almcde^^atag^REPT ALM T1`
| `^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,,`
| `[:[<conddescr>],]` |
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| REPT ALM T3   |               |
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| `almcde^^atag^REPT ALM T3`
| `^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,,`
| `[:[<conddescr>],]` |
| ;             |               |
| REPT ALM EC1  |               |
| `^^^SID^YY-MM-DD^HH:MM:SS`
| `almcde^^atag^REPT ALM EC1`
| `^^^<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,,,`
| `[:[<conddescr>],]` |
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| REPT ALM T3TMX |              |
| `^^^sid^yy-mm-dd^hh:mm:ss`
| `almcde^^atag^REPT^ALM^T3TMX`
| `^^^<AID>:<ntfcncde>,<conntype>,<srveff>,<ocrdat>,<ocrtm>,,,`
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| ;             |               |
Table 2-33  Alarm Reporting Messages

<table>
<thead>
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<th>Security Level</th>
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<td>[:]&lt;CONDDESCR&gt;;&quot;</td>
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<tr>
<td>REPT ALM OC3/12/48/192</td>
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<tr>
<td>^^^SID^&quot;YY-MM-DD&quot;^HH:MM:SS</td>
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### Table 2-33  Alarm Reporting Messages

<table>
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<tr>
<th>Command Type</th>
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<td>REPT EVT SYNC</td>
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<td>REPT EVT BITS</td>
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<tr>
<td>REPT EVT T1</td>
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<tr>
<td>REPT EVT T3</td>
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<tr>
<td>REPT EVT EC1</td>
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**Command Format**

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REPT EVT SYNC
^^^^SID'YY-MM-DD'HH:MM:SS
A^"^TAG^'REPT^'EVT^'SYNC
^^^^"<AID>:<CONDTYPE>,<SRVEFF>,<OCRDAT>,<OCRTM>,...,
[:,<CONDESCR>],[<AIDDET>],[<SSM>]"
;
```

```plaintext
REPT EVT EQPT
^^^^SID'YY-MM-DD'HH:MM:SS
A^"^TAG^'REPT^'EVT EQPT
^^^^"<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,<OCRTM>,...,[<TMPER>]
[:,<CONDESCR>],[<SSM>]"
;
```

```plaintext
REPT EVT BITS
^^^^SID'YY-MM-DD'HH:MM:SS
almcde^"^TAG^'REPT^'EVT T1
^^^^"<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,<OCRTM>,...,[<TMPER>]
[:,<CONDESCR>],[<SSM>]"
;
```

```plaintext
REPT EVT T1
^^^^SID'YY-MM-DD'HH:MM:SS
almcde^"^TAG^'REPT^'EVT T1
^^^^"<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,<OCRTM>,...,[<TMPER>]
[:,<CONDESCR>],[<SSM>]"
;
```

```plaintext
REPT EVT T3
^^^^SID'YY-MM-DD'HH:MM:SS
almcde^"^TAG^'REPT^'EVT T3
^^^^"<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,<OCRTM>,...,[<TMPER>]
[:,<CONDESCR>],[<SSM>]"
;
```

```plaintext
REPT EVT EC1
^^^^SID'YY-MM-DD'HH:MM:SS
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^^^^"<AID>:<CONDTYPE>,<CONDEFF>,<OCRDAT>,<OCRTM>,...,[<TMPER>]
[:,<CONDESCR>],[<SSM>]"
;
```
Table 2-33  Alarm Reporting Messages

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### Table 2-33  Alarm Reporting Messages

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<tr>
<td>RTRV-COND-T3/EC1:[tid]::[&lt;AID&gt;]:&lt;ctag&gt;[:&lt;TYPEREQ&gt;][...];</td>
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<tr>
<td>RTRV-COND-ETH:[tid]::[&lt;AID&gt;]:&lt;ctag&gt;[:&lt;TYPEREQ&gt;][...];</td>
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### Loopback Commands

### Table 2-34  Loopback Commands

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<thead>
<tr>
<th>Command Type</th>
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<tbody>
<tr>
<td>OPR-LPBK-T1:[&lt;TID&gt;]:&lt;AID&gt;::&lt;CTAG&gt;[:&lt;LPBKTYPE&gt;];</td>
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<tr>
<td>OPR-LPBK-T3/EC1:[&lt;TID&gt;]:&lt;AID&gt;::&lt;CTAG&gt;[:&lt;LPBKTYPE&gt;];</td>
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<tr>
<td>OPR-LPBK-T3T3MX:[tid]::&lt;AID&gt;::&lt;ctag&gt;[:&lt;LPBKTYPE&gt;];</td>
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<td>OPR-LPBK-TMXDS1:[&lt;tid]::&lt;AID&gt;::&lt;ctag&gt;[:&lt;LPBKTYPE&gt;];</td>
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</tr>
<tr>
<td>OPR-LPBK-OC3/12/48/192:[&lt;TID&gt;]:&lt;AID&gt;::&lt;CTAG&gt;[:&lt;LPBKTYPE&gt;];</td>
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</tr>
<tr>
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<td></td>
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<td>RLS-LPBK-ETH:.&lt;TID&gt;::[&lt;AID&gt;]:&lt;CTAG&gt;[:&lt;...&gt;];</td>
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Performance Monitoring Commands

### Table 2-35 Performance Monitoring Commands

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<th>Security Level</th>
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<td>INIT-REG-{STS1/STS3C/STS12C/STS48C/VT1}:&lt;TID&gt;:&lt;AID&gt;:&lt;CTAG&gt;:,&lt;TMPER&gt;;</td>
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<td>SET-TH-BITS:&lt;tid&gt;:&lt;AID&gt;:&lt;ctag&gt;:&lt;MONTYPE&gt;,&lt;THLEV&gt;,,[&lt;TMPER&gt;];</td>
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<tr>
<td>SET-TH-T1:&lt;tid&gt;:&lt;AID&gt;:&lt;ctag&gt;:&lt;MONTYPE&gt;,&lt;THLEV&gt;,,[&lt;TMPER&gt;];</td>
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<tr>
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<td></td>
</tr>
<tr>
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### Table 2-36 OSI Commands

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Table 2-36 OSI Commands

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<tr>
<td>RTRV–TTD-PORTS:[&lt;tid&gt;]:&lt;ctag&gt;;</td>
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</tr>
<tr>
<td>ED-OSINET:&lt;tid&gt;::&lt;ctag&gt;::&lt;TITLE&gt;[TYPE=&lt;type&gt;];</td>
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</tr>
<tr>
<td>RTRV-OSINET:&lt;tid&gt;::&lt;ctag&gt;;</td>
<td></td>
</tr>
<tr>
<td>ED-OSISEL:&lt;tid&gt;::&lt;ctag&gt;::[TL1PSAP=&lt;tl1psap&gt;],[FTAMPSAP=&lt;ftampsap&gt;],[TP4NSEL=&lt;tp4nsel&gt;],[TARPNSEL=&lt;tarpnsel&gt;],[AETITLE=&lt;aetitle&gt;];</td>
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</tr>
<tr>
<td>RTRV-OSISEL:&lt;tid&gt;::&lt;ctag&gt;;</td>
<td></td>
</tr>
<tr>
<td>ENT-TADRMAP:&lt;tid&gt;::&lt;ctag&gt;::&lt;NETADDR&gt;,&lt;TID&gt;;</td>
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</tr>
<tr>
<td>RTRV-TADRMAP:&lt;tid&gt;::&lt;ctag&gt;;</td>
<td></td>
</tr>
<tr>
<td>DLT-TADRMAP:&lt;tid&gt;::&lt;ctag&gt;::&lt;TID&gt;;</td>
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<tr>
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<td>RTRV-TTD-ACL:&lt;tid&gt;::&lt;ctag&gt;;</td>
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<tr>
<td>DLT-TTD-ACL:&lt;tid&gt;::&lt;ctag&gt;::&lt;IPADDR&gt;;</td>
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<tr>
<td>ENT-ESIS-ROUTE:[&lt;tid&gt;]:&lt;ctag&gt;::&lt;DEST&gt;,&lt;SLOT&gt;,&lt;PORT&gt;;</td>
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<tr>
<td>RTRV-ESIS-ROUTE:[&lt;tid&gt;]:&lt;ctag&gt;;</td>
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<tr>
<td>DLT-ESIS-ROUTE:[&lt;tid&gt;]:&lt;ctag&gt;::&lt;DEST&gt;;</td>
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<tr>
<td>ENT-ISIS-AREA:&lt;tid&gt;::&lt;ctag&gt;::&lt;AREAADDR&gt;;</td>
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## Appendix I

### Time Zones

**Introduction**

This appendix includes the valid time zones available for the Traverse.

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<tr>
<th>Time Zones</th>
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<th>Africa/Ofelia</th>
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<td>Africa/Johannesburg</td>
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<td>Africa/Accra</td>
<td>Africa/Kampala</td>
<td>Africa/Maputo</td>
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<td>Africa/Khartoum</td>
<td>Africa/Pto-Novo</td>
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<td>Africa/Kigali</td>
<td>Africa/Sao_Tome</td>
<td>America/Asuncion</td>
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<td>Africa/Asmera</td>
<td>Africa/Kinshasau</td>
<td>Africa/Timholt</td>
<td>America/Antigua</td>
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<tr>
<td>Africa/Banjul</td>
<td>Africa/Lagos</td>
<td>Africa/Tripoli</td>
<td>America/Aruha</td>
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<tr>
<td>Africa/Bissau</td>
<td>Africa/Lome</td>
<td>America/Windhoek</td>
<td>America/Aruba</td>
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<tr>
<td>Africa/Blantyre</td>
<td>Africa/Luanda</td>
<td>America/Barbados</td>
<td>America/Barbados</td>
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<td>Africa/Bujumbura</td>
<td>Africa/Lubumbashi</td>
<td>America/Asuncion</td>
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<tr>
<td>Africa/Cairo</td>
<td>Africa/Lusaka</td>
<td>America/Barbados</td>
<td>America/Barbados</td>
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<td>Africa/Casablanca</td>
<td>Africa/Malabo</td>
<td>America/Aruba</td>
<td>America/Barbados</td>
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<tr>
<td>Africa/Conakry (15)</td>
<td>Africa/Maputo</td>
<td>America/Aruha</td>
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<td>Africa/Dakar</td>
<td>Africa/Maseru</td>
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<tr>
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<td>Africa/Mbabane</td>
<td>America/Barbados</td>
<td>America/Barbados</td>
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<tr>
<td>Africa/Djibouti</td>
<td>Africa/Mogadishu</td>
<td>America/Barbados</td>
<td>America/Barbados</td>
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<tr>
<td>Africa/Douala</td>
<td>Africa/Monrovia</td>
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### Table 2-37 Traverse Time Zones

<p>| Time Zones                  |
|-----------------------------|-----------------|
| Africa/Freetown              | Africa/Nairobi  |
| America/Buenos_Aires        | America/Guaya   |
| America/Caracas              | America/Halifax |
| America/Cayenne              | America/Havana  |
| America/Cayman               | America/Indiana |
| America/Chicago              | America/Jamaica |
| America/Costa_Rica           | America/La_Paz  |
| America/Cuiaba               | America/Lima    |
| America/Curacao              | America/Los_Ang |
| America/Dawson_Creek        | America/Managua |
| America/Denver (30)         | America/Manaus  |
| America/Dominica            | America/Martinalle |
| America/Edmonton            | America/Mazatlan |
| America/El_Salvador         | America/Mexico_City |
| America/Fortaleza           | America/Miquelon |
| America/Godthab             | America/Montervideo |
| America/Grand_Turk          | America/Montreal |
| America/Grenada             | America/Montserrat |
| America/Guadeloupe          | America/Nassau  |
| America/Guatemala           | America/New_York |
| America/Guayaquil           | America/Noronha |
| America/Tijuana             | Asia/Baku       |
| America/Tortola             | Asia/Bangkok    |
| America/Vancouver           | Asia/Beirut     |
| America/Winnipeg            | Asia/Bishkek    |
| Antarctica/Cassey           | Asia/Brunei     |
| Antarctica/DumontDUrville   | Asia/Calcutta   |
| Antarctica/Mawson           | Asia/Colombo    |
| Antarctica/McMurdo          | Asia/Dacca      |
| Antarctica/Palmer           | Asia/Damascus   |
| ART                         | Asia/Dhaka      |
|                             | Asia/Katmandu   |
|                             | Asia/Krasnoyarsk|
|                             | Asia/Beirut     |
|                             | Asia/Kuala_Lumpur|
|                             | Asia/Kuwait     |
|                             | Asia/Macao      |
|                             | Asia/Magadan    |
|                             | Asia/Manila     |
|                             | Asia/Muscat     |
|                             | Asia/Nicosia    |
|                             | Asia/Novosibirsk|</p>
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