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1. Introduction

Transaction Language 1 (TL1) is defined for OS/NE (machine-to-machine) interfaces. Operations functions such as surveillance, memory administration, and access and testing use short messages to cause specific actions at the NE. *Transactions* are the initiation, communication, and execution of these actions. Many, but not all, of these transactions require two-way interactive exchange of related messages. TL1 is defined by restricting the features used in the message definitions and the form transmitted by each side of the OS/NE interface. The scope of this section includes the specification of a general syntax and commonly applied semantics for the TL1 OS/NE interface. Each TL1 message is expressed in American Standard Code for Information Interchange (ASCII) characters.

Complete implementation-level requirements for TL1 are specified in GR-831-CORE, *Language for Operations Application Messages*.

2. TL1 Message Specification

This section defines the language structures used in the input and output messages that pass between the switch and an operations system. It also specifies syntax and semantics conventions.

2.1 TL1 General Message Syntax

The following table lists the specification characters, using the Backus-Naur Form (BNF), that define the syntax:

Symbol	Syntax Definition
< >	Encloses a symbol character (e.g., <*int-num*> can specify any integer number).
[ ]	Encloses an optional symbol or information unit (e.g., *a[b]c* represents *abc* or *ac* as *b* is optional).
‘ ’	Encloses a literal character (e.g., *‘a’* really means literal character *a*, as opposed to a symbol representing a value).
( )	Encloses a group of symbols for the following operators:
*	*Post-fix* operator meaning that the preceding symbol or group of symbols may occur *zero* or more times (e.g., *a(bc)** represents *a* or *abc* or *abcbc* or ...).

^	Space (i.e., the literal blank character, used only in examples of messages).
+	*Post-fix* operator meaning that the preceding symbol or group of symbols may occur *one* or more times (e.g., *a(bc)*+ represents *abc* or *abcbc* or ...).
|	*Infix* operator meaning alternative; either the preceding or succeeding symbol may occur, but not both in succession (e.g., *a*|*b*|*c* represents *a* or *b* or c).
: : =	Separates the left and right sides of a grammar rule (e.g., *<digit> ::= (0|1|...|9)* is a grammar rule representing *the symbol <digit> is 0 or 1 or ... or* 9).

The syntax for *input messages* and *output messages* is considerably different. Among the fundamental differences are the application of *format effector*s, particularly *space*s, *linefeed*s, and *carriage return*s. Format effectors are meaningless when present in input messages and may or may not be ignored in output messages.

Input messages group parameters into *blocks* separated by *colons* and, within *parameter block*s, separated by *comma*s; *parameters* may be further modified with *compounding*, *ranging*, and *incrementing operator*s.

2.2 Characters and Information Units

The legal ASCII character set specified by TL1 is shown in the following matrix. Each column of the matrix is labeled by the most significant hexadecimal digit of the character code and each row by the least significant hexadecimal digit.

	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**
0			<sp>	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8		<can>	(	8	H	X	h	x
9	<ht>		)	9	I	Y	i	y
A	<lf>		*	:	J	Z	j	z
B	<vt>		+	;	K	[	k	{

C	<ff>	,	<	L	\	l	|
D	<cr>	-	=	M	]	m	}
E		.	>	N	^	n	~
F		/	?	O	_	o	

In the above matrix, the format effectors are defined thusly: <ht> = Horizontal Tab, <lf> = Line Feed, <vt> = Vertical Tab, <ff> = Form Feed, <cr> = Carriage Return, <can> = Cancel, and <sp> = Space. The cancel character <can> is legal for input messages (commands) only. The characters not used by TL1 are reserved for implementation-dependent use by lower layers of the communications protocol: PAD control, XON/XOFF stream control, etc.

Format effectors within input messages (i.e., spaces, tabs, carriage returns, etc.) are ignored, except within text strings, and thus do not terminate information units. For example, within a command, COMMAND CODE and COMMANDCODE are treated in exactly the same way. Within output messages, format effectors may or may not be ignored (see subsections 3.2, 3.3, and 3.4). The backslash (\ ) character is used for escape syntax within text strings; i.e., it causes the character following to be literally interpreted.

TL1 messages are built from basic entities called *information units* (analogous to English words) combined and delimited by punctuation characters. The types of information units are described in the following subsections.

2.2.1 Identifiers

An identifier starts with a letter and is followed by any number of letters or digits. For example, A, *ab*c, and *xy50* are valid identifiers. Identifiers are defined as follows:

```
<ident> ::= <let> (<let> | <dig>)*
```

2.2.2 Symbolic Names

A symbolic name must contain at least one *lette*r, *plus-sign (*+), *pound-sign (*#), or *percent-sign (*%) and optionally any *digit*s. For instance, *#7SW*S, *1A*0, *10*%, and *abc* are all valid symbolic names. Symbolic names are defined as follows:

```
<sym name> ::= <dig>*
   ((<let> | '+' | # | %) <dig>*)+
```

2.2.3 Alphanumerics

An alphanumeric starts with a letter or digit and is followed by any number of letters or digits. Alphanumerics, like identifiers and symbolic names, are used for names or other non-numeric information. Although lowercase is allowed, uppercase is the norm for most implementations (including the Lucent switch). Alphanumerics are defined as follows:

```
<alphanum> ::= (<let> | <dig>)+
```

2.2.4 Decimal Numbers

A decimal number is a string of decimal digits with an optional non-trailing period (.). It does not permit a leading plus-sign (+) or hyphen (-), or have any provision for exponential notation. Some examples are 88, .005, and 004.100, but 12. is not valid because of the trailing period (.). Leading zeros are optional except for values constrained to a fixed format (e.g., date and time). The optional leading D' (D apostrophe), indicating a decimal number, is permitted only in a particular parameter if it is so stated in the semantics of the command involving that parameter. Decimal numbers are defined as follows:

```
<dec num> ::= [D'] <dig>* [.] <dig>+
```

2.2.5 Nondecimal Numbers

The nondecimal number types, *hexadecima*l, *octa*l, *binar*y, and *keyed*, are permitted in TL1 only in a particular parameter if it is so stated in the semantics of the command involving that parameter. The switch does not utilize these information units.

2.2.6 Text Strings

A text string is any string of ASCII (alphanumeric and/or punctuation) characters (see the matrix in subsection 2.2) enclosed in double-quotes ("). This allows a great deal of flexibility in defining values because the limitations of identifiers and symbolic names are overcome at the small cost of quoting the characters for message entry. To enter a double-quote (") character within a text string, use an escaped double-quote (\"). Text strings are defined as follows:

```
<text str> ::= " (\" | \\ | <any character
   except " or \>)* "
```

2.2.7 Arithmetic Expressions

In TL1, arithmetic expressions are used to represent explicitly signed, positive or negative decimal numbers. The syntax is an optional plus-sign (+) or minus-sign (-), followed by a string of decimal digits with an optional non-trailing period. The entire expression is contained in parentheses to prevent parsing ambiguities. Examples of legal arithmetic expressions are (12), (-15), (+137.038), and (67.23). Arithmetic expressions are defined as follows:

```
<arith exp> ::= '(' ['+' | -] <dig>* [.]
   <dig>+ ')'
```

2.2.8 Numeric Strings

A numeric string is a subtype of decimal numbers consisting of only decimal digits. Each digit in the string is an ASCII representation of a numeric digit. Numeric strings are defined as follows:

```
<num str> ::= <dig>+
```

2.2.9 Integers

An integer is either a numeric string or an arithmetic expression not containing a period (decimal point). Integers are defined as follows:

```
<integer> ::= <num str> |
   '(' ['+' | -] <dig>+ ')'
```

2.2.10 Inner Strings

An inner string is similar to a text string but is used only within quoted lines of output messages (see subsections 3.3 and 3.4). Because the double-quote character (") has already been used to enclose the line, another symbol is needed to bracket text containing punctuation or other special characters. The symbol used is the escaped double-quote (\"). Within an inner string, a literal double-quote (") is represented by double double-quote (""), and a literal backslash (\) by double backslash (\\); for example,

```
"<startTextString>\"<startInnerString>""<and>
   \\<endInnerString>\" <endTextString>"
```

2.3 Parameter Block Syntax

A parameter block always follows a colon and contains a (possibly empty) list of parameters, separated by commas. In TL1, trailing colon (:) block separators may be omitted if there are no parameters entered in those last blocks. The parameter syntax, in general, consists of an optional parameter name, equal-sign (=), and a parameter value. However, the precise use of these options depends on the type of parameters entered in that block. A block shall only contain all position-defined parameters or all name-defined parameters. These two formats are characterized in the following subsections.

2.3.1 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 follow:

```
: 5, 6, Yes:
: , 6;
```

2.3.2 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).

The use of void parameters, indicated by adjacent separators, is valid only for positional entry and not for name-defined entry. Parameter defaulting is done by omitting a parameter entry. Three equivalent examples of a block of name-defined parameters are shown in the following (assuming the default values are as in the first example):

```
: P1=1.0, P2=2.0, P3=off:
```

-or-

```
:P3=off, P1=1.0:
```

-or-

```
:P2=2.0:
```

2.3.3 Name/Position Syntax Conflicts

The syntax of an entered block of parameters must be consistent with either a name-defined or a position-defined syntax. The following rules characterize resolution of potential syntax conflicts:

In TL1, a parameter block must be position-defined if:

- Any parameter values appear without parameter names (i.e., without NAME=)
- Any void parameters (indicated by adjacent separators) appear.

Otherwise, the parameter block has valid syntax for both a position-defined and a name-defined block.

In the case of position-defined parameters, entered parameter names must match the defined parameter positions. If more parameters are entered than are defined, the block is in error. But, if fewer are entered, defaults are applied to the trailing parameter positions.

When names are attached to all parameter entries, the association of the entry with the parameter definition is clear. If a parameter name appears more than once, an error will be generated. If a parameter does not appear at all, the parameter defaults to the specific default action defined for that particular parameter of that particular command.

2.4 Boolean Flag Parameters

Some messages use Boolean parameters (e.g., on/off, yes/no). A possible implementation is to represent one state by the presence of a symbol and the other by its absence. To minimize the introduction of new symbols, the parameter value symbol chosen may be the parameter name. While this mechanism is perfectly legal under TL1, the parameter actually has two values: the parameter name value represents one state, while a null symbol represents the (default) other state.

2.5 Defining Parameter Values

A parameter value consists of one or more TL1 information units that may be compounded and/or grouped together. When a parameter is defined for a particular command, the valid range of parameter values is defined, along with its interpretation. This includes the implicit set of units associated with any numeric values.

Although there are exceptions, usually parameter values are interpreted as character strings that must match exactly or as numeric values that must satisfy a given range. When numeric values are specified, they must have a default base associated with them. This will normally be the decimal base, but it may be binary or any other semantic interpretation desired for

that parameter. For TL1, the use of non-decimal numbers is not supported in general. If it is necessary to allow a parameter to be entered in bases other than its default base, it must be specifically stated in that parameter's description.

For non-numeric parameter values, typically a list of character strings will specify their valid values. The parameter values, unlike parameter names, are case sensitive; e.g., the identifiers “A1” and “a1” do not match.

A particular parameter may have a valid range that includes both numeric and character values. For example, a parameter SETTING may take on values of 0 to 15, the identifier NONE or the text string "N/A". Note that the slash (/) in "N/A" requires that it be entered as a text string.

A parameter value containing a single information unit is called a simple parameter argument. The compound arguments and argument grouping are described in the next two subsections.

2.5.1 Compound Arguments

Closely related information can be compounded into one parameter value by joining the information units with the hyphen character (-). For example, it may be desirable to use one parameter, LOCATION, to represent two map components, one given by a letter and the other by a number. LOCATION = A-21 is an instance of this type of construct.

Compounding is equivalent to two separate positional parameters combined into one, but compound fields cannot be omitted the way positional parameters can. For example, A--C is invalid syntax but A-null-C (where null is a literal parameter value meaning the parameter is missing) or A-""-C could be specified for use in a particular command. It is also permissible to specify both simple and compound values for the same parameter.

2.5.2 Grouping of Arguments

Both simple and compound arguments may be grouped together so one parameter may actually convey several arguments. This is done by using the connectors *ampersand (*&) and *double-ampersand (*&&).

The ampersand (&) character is most useful when a parameter takes on any combination of arguments in a specified set. If there are three OPTIONS (e.g., x, y, and z) that can be selected in any combination, some possible entries could be OPTIONS = x&z or OPTIONS = x&y&z.

The use of double-ampersand (&&) is reserved for expressing ranges of values. An example of this usage is RANGE = 1&&10 to enter the values 1,2,3,...,10. Compound parameters may be also grouped, but note that *double-ampersand (*&&) can only be used to range over the last field of the compound parameter (e.g., 2-5-1 && -10 means 2-5-1 & 2-5-2 & ... & 2-5-10).

In TL1, the use of double-ampersand (&&) for ranges cannot be used for a particular parameter unless it is specifically stated in the semantics of the parameter. In such cases, the ordering of parameter values must be defined. Unless otherwise stated, numeric values have the usual ordering.

3. Types of TL1 Messages

The TL1 syntax divides into four basic areas that specify the following four types of operations application messages:

- Input Command Messages
- Acknowledgments
- Output Response Messages
- Autonomous Messages

3.1 Input Command Messages

An input command message is a message to a network element (NE). The message requests the NE to perform some operations-related action. The general structure of a TL1 input message is of the form:

```
<command_code>:<staging_parameter_blocks>:
  <message_payload_block(s)>;
```

The *command code* determines the action (i.e., pragmatics) to be taken at the NE as a result of receiving the input message. The *staging parameter blocks* determine the target NE and the identity of the object to be acted upon by the input message. The *message payload block(s)* is the subject matter relating to the action to be performed by the input message. The *semi-colon* character *(*;) terminates a TL1 input message.

3.1.1 Command Code

Each command must begin with a command code consisting of a mandatory verb followed by up to two other optional modifiers, each separated by a hyphen.

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

3.1.1.1 Verb

The verb identifies the action to be taken at the NE as a result of receiving a TL1 message from an OS. The semantic values of the verb are defined within the context of the functional application in which the message is intended to be used (e.g., ENT, ED, RTRV).

3.1.1.2 Modifiers

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 *ver*b, is to be taken on an equipment object; a <*verb*>*-T0* indicates an action is being taken on a DS0 circuit (where T0 indicates transmission hierarchy level 0).

As another example, for switching NEs, the command <*verb*>-<*administrative view*> indicates an action is to be taken on an object entity within the specified *administrative view* of the switching NE database. The information groupings within a switching NE are called administrative views, in which individual data elements are represented in the form of flat tables or matrices. Each row of an administrative view represents an object entity; each column represents an attribute (parameter) shared by all of the object entities in the view. An administrative view is similar in concept to relations in relational database theory.

The second modifier may be used to further define the identity of the object upon which the action is to be taken. For example, the command DLT-ROUTE-SS7 will disconnect (DLT) an SS7 route. That is, the modifier ROUTE is further defined to only identify SS7 routes.

3.1.2 Staging Parameter Blocks

The *staging parameter blocks* are a series of four data blocks following the *command code* that provide information necessary to establish (i.e., *stage*) and uniquely identify an object entity within an NE to be managed by a remote OS and to specify certain options as to how the input command is to be executed in the NE. The *staging parameter blocks* determine the target NE and the identity of the object to be acted upon by the input message. The structure of the staging parameter blocks is of the form:

```
:[<tid>]:[<aid(s)>]:<ctag>:[general block]:
```

The first three staging parameter blocks are discussed in the following subsections. The general block is required for all input commands but its value can be null (i.e., the general block is represented by two successive colons). This is the case for the Lucent switch.

3.1.2.1 Target Identifier (TID) Block

TID is the Target Identifier. It identifies the destination network element (NE) to which the input command is directed. The value of the TID can be up to 20 alphanumeric characters long. Spaces are not allowed. TIDs are not case-sensitive. Although the TID block is required for all input commands, its value can be null (i.e., the TID block is represented by two successive colons) if an NE is the only target possible for a message sent on a connection. This is the case for the Lucent switch.

3.1.2.2 Access Identifier (AID) Block

AID is the Access Identifier. This block contains one or more parameters that uniquely identify the entities within the target NE that are the object of the input message. Section 120-400-000 of this reference guide lists the Access Identifiers used by the Lucent switch.

3.1.2.3 Correlation Tag (CTAG) Block

CTAG is the Correlation Tag. It correlates an input command with its associated output response(s). The value of the CTAG is a non-zero integer of up to six characters.

3.1.2.4 General Block

The general block includes support parameters whose values affect the way in which the input command is to be executed in the NE. The general block is required for all input commands but its value can be null (i.e., the general block is represented by two successive colons that are optional when no message payload follows). This is the case for the Lucent switch.

3.1.3 Message Payload

The remaining part of any TL1 input command is the message payload; that is *subject matter* of the *messag*e. This section of the message may consist of zero (for instance, for RTRV messages) or more data blocks in the following general form:

$(:<p_x>(,<p_x>)*)*;$

where "p_x" represents a parameter (i.e., data item). Each data block is delimited by colons (:) and the last is terminated by a semi-colon (;). Each data block may have an unlimited number of data items, each delimited by commas (,). For example, a payload consisting of three parameter blocks, each containing three parameters would be of the form

$\ldots:<p_1>,<p_2>,<p_3>:<p_4>,<p_5>,<p_6>:<p_7>,<p_8>,<p_9>;$

The data items within a data block may either be name-defined (of the form <*key_word*>=<*value*>) or position-defined where the values are specified and the keyword is implied by its position in the data block. All of the data items must be of the same type within a given data block. The semantics of the data items are operation domain-specific and vary according to the operation to be performed as a result of the input message.

Whenever an equal sign (=) is detected within a data block, the data block type is defined to be a name-defined data block. This implies the data block to be of the form:

```
…:Keyword1=<value>, Keyword2=<value>,…
   KeywordN=<value>:…
```

If a position-defined parameter (i.e., a value with no "keyword =") is included in a name-defined data block, an error will be generated indicating a data block error. That is according to the rule that data types cannot be intermixed in the same data block.

3.2 Acknowledgements

An *acknowledgment* is a short reply from the switch indicating that an input command message is being acted upon or has been immediately rejected. The essential purpose of an acknowledgment is to assure a human user that a command that takes a long time to execute has been received by the NE. An acknowledgement is sent if an output response message to the command cannot be transmitted within two seconds of receipt of the command. In general, an acknowledgment is later followed by an output response message to the command. However, in some circumstances, an acknowledgment is the only output message triggered by a command.

The *format* of an acknowledgment is as follows:

```
<acknowledgment code> ^ <ctag> <cr> <lf>
```

The acknowledgment code identifies the reason for the acknowledgment. The CTAG identifies the associated input command. The *less than* **(**<) character is the acknowledgment terminator. The following table shows the valid values for acknowledgment codes and their meanings.

Acknowledgement Code		Meaning
IP	In Progress	These acknowledgments imply that the command is being executed. They are used often for test and access messages requiring a long execution time, e.g., a 1-minute noise test. These acknowledgments may be followed by either completed or denied output response messages.
PF	Printout Follows	

OK	All Right	Command received and requested action initiated and completed.
NA	No Acknowledgement	Command received but control of the processing has been lost, making correct acknowledgement impossible. Initiation or execution of the command is uncertain. This acknowledgment can also be used to respond to a command that is garbled during transmission. If the CTAG value of the command could not be determined, then the single character *zero (*0) is used as the acknowledgment CTAG value.
NG	No Good	The command is valid, but the requested action conflicts with current system or equipment status. This acknowledgment is seldom used because specific error codes in output response messages can be employed to signify the same information.
RL	Repeat Later	Requested action cannot be executed due to unavailable system resources caused by system overload, excessive queue lengths, busy programs, etc. The command may be entered again later.

3.3 Output Response Messages

An *output response message* is a detailed reply (or set of replies) to an input command message. It contains information indicating whether the command was executed successfully and any data that needs to be returned to the OS/user. The general structure of a TL1 output response message is of the form:

```
<header> <response identification>
  [<text block>] <terminator>
```

The required *header* represents information common to all output response messages; i.e., it is independent of the type of output response. The required *response identification* identifies the type of output response message. The optional *text block* represents information specific to the particular output response message. The *terminator* indicates the termination or continuation of the output response message.

3.3.1 Header

The form of the *header* is

```
<cr><lf><lf>^^^<sid>^<year>-<month>-<day>^
  <hour>:<minute>:<second>
```

and is composed of a system identifier *(<sid>)* and date and time stamps.

The *<sid>* is restricted to 20 characters maximum and identifies the NE generating the message. The syntax of *<sid>* is any TL1 identifier (simple or compound) or text string. For the Lucent switch, the CLLI code is used for the source identifier. The *<sid>* value is checked by the NE against the *<tid>* parameter of the input command to verify that the NE's *<sid>* matches the command's intended target (i.e., *<tid>*).

The *<year>*-*<month>*-*<day>* construct generally represents the day on which the command is executed. This construct consists of three components separated by hyphens (-). Each component is specified by exactly two digits.

The *<hour>*:*<minute>*:*<second>* construct generally represents the time when the command is executed. This construct consists of three components separated by colons (:). Each component is specified by exactly two digits.

3.3.2 Response Identification

The form of the response identification is

```
<cr><lf>M^^<ctag>^<completion code>
```

and is composed of the character *M*, a *correlation tag (<ctag>)*, and a *completion code*. The character *M* signifies that the message is the response to an input command message. The output response message has the same *<ctag>* value as the corresponding input command message, thus enabling the OS to associate the received output response message with a previously sent command. The following table shows the valid values for completion codes and their meanings.

Code	Meaning
COMPLD	represents total successful execution of the input command.
DENY	represents total denial of the input command.
PRTL	represents partial successful execution of the input command. This response code is returned for output response to input commands specifying multiple AIDs of which only a subset (but not an empty subset) have been successfully executed. If all AIDs have failed to be executed, the response code is DENY.
DELAY	represents successful queuing of the input command submitted for delayed activation.
RTRV	represents output response of an input retrieve command (i.e., command verb = RTRV) that retrieves extensive amount of information from the NE and thus causes lengthy processing in the NE for gathering all the requested information. For

	effective operation, the NE may start returning available information to the OS even before all the requested information is gathered. In this case, the RTRV completion code may be used. Multiple responses with RTRV completion codes are permitted for the same RTRV command, but the final response must have a COMPLD completion code.

When the <*ctag*> of an input command cannot be identified (e.g., during dial-up asynchronous connections with noise and errors prevalent), either the 2-letter acknowledgment NA may be returned or the DENY response containing the appropriate error message with the <*ctag*> set to the single character *zero (*0) may be returned.

3.3.3 Text Block

The optional *text block* is used to represent information specific to the particular output response. The form of the *response text* is

```
((<cr><lf>^^^<unquoted line>)|
  (<cr><lf>^^^<quoted line>)|
  (<cr><lf>^^^<comment>))*
```

It consists of three possible types of components, namely, <*unquoted line*>, <*quoted line*>, or <*comment*>. Both <*unquoted line*> and <*quoted line*> are machine parsable, while <*comment*> is not. Each type of component may appear zero or more times within the *text block* and interleave with other component types in any order.

The <*unquoted line*> consists of name- or position-defined parameters separated by required whitespace *(*<*ws*>) and optional commas. A whitespace is a space character, a horizontal tab, a vertical tab, or a form feed. The most popular usage of the unquoted line component is for representing error codes in some response messages, e.g., in a denial response (i.e., when the response code is DENY). The error code is specified by four characters that may contain numerals after the first character, if appropriate (e.g., SN4W for Status error, Not equipped 4-Wire circuit).

The <*quoted line*> consists of parsable text and is always preceded and followed by the *double-quote* character ("). The syntax of the parsable text is equivalent to that of an input command message, i.e., a series of colon-delimited parameter blocks. Parameters within each block are separated by required commas and optional format effectors. Format effectors are space, horizontal tab, vertical tab, form feed, carriage return, and line feed.

The comment component is used to allow free format (i.e., human readable, not machine parsable) text. The free form text shall always be preceded by the pair of characters *slash asterisk (/*) and followed by the pair of characters *asterisk slash (*/). Note that either the *semicolon* (;) or the *greater than* (>) character does not terminate the output response message when they are present as part of a quoted line or within a text string.

3.3.4 Terminator

The form of the *terminator* is:

```
<cr> <lf> ( ; | > )
```

and is required as the termination block for all TL1 message types . The terminator is represented by either the *semicolon (*;) character or the *greater than* (>) character. The *semicolon (*;) character is used to indicate the termination of the output response message. The *greater than* (>) character is used to indicate that more output associated with this response will follow under another header.

The specified size of an output message may not exceed 4096 bytes. If the size of an output response message exceeds 4096 bytes, the output information is partitioned into multiple output response messages. A *continuation message* (i.e., subsequent message) must have another *header* and *response identification* with the same <*ctag*>, along with an additional <*text block*>. Each message is terminated by the *greater than* (>) character, except the last message, which is terminated by the *semicolon* (;) character to indicate the completion of the response. The (>) terminator is also used for intermediate responses in a timed measurement series.

3.4 Autonomous Messages

An *autonomous (automatic) message* is one generated by the switch either on a periodic timed basis or to report some unusual occurrence. It is sent without having an explicit input message associated with it. Typical scenarios where autonomous messages are used include:

- Reporting of alarmed and/or non-alarmed trouble events
- Reporting of scheduled diagnostic tests in the switch
- Reporting of Performance Monitoring Data
- Reporting of a change in the switch's database
- Periodic reporting of selected switch conditions.

The general structure of a TL1 autonomous message is:

```
<header> <auto id> [<text block>] <terminator>
```

The required *header* block represents information common to all output response and autonomous messages. The required *auto id* block identifies the severity and the nature of the autonomous message. This block contains the parameters *almcde* and *ATAG*, which are discussed in the following two subsections. The optional *text block* represents information specific to the particular autonomous message. The *terminator* indicates the completion or continuation of the autonomous message.

3.4.1 Header

The *header* is the standard response header defined in paragraph 3.3.1 above. It contains a system identifier *(<sid>)* and date and time stamps.

3.4.2 Autonomous Message Identification

The form of the *<auto id>* entry for an autonomous message is:

```
<cr> <lf> <almcde>^<atag>^<verb>
   [^<modifier>[^<modifier>]]
```

and comprises an *alarm code (<almcde>)*, an *autonomously-generated correlation tag (<atag>)*, and a *<verb>[^<modifier>[^<modifier>]]* entry.

3.4.2.1 Alarm Code (<almcde>)

The alarm code indicates the severity of an autonomous message. Valid values for *<almcde>* in decreasing order of severity are as follows:

<almcde>	Description
*C	Critical alarm
**	Major alarm
*^	Minor alarm
A^	Non-alarm message

Critical, Major, and Minor correspond to the reporting of alarmed events. The *Non-alarm message* designation is used when the switch is reporting non-alarmed events, periodic measurements, or results of previously scheduled diagnostics or audits. If multiple alarms are reported in the same message, the alarm code is the highest severity of those being reported.

3.4.2.2 Autonomously-Generated Correlation Tag (<atag>)

ATAG (Autonomously-generated correlation Tag) is a numeric transaction identifier similar to CTAG (see subsection 3.1.2.3). It is sequentially assigned by the switch and must be included in all autonomous messages. The TL1 agent automatically generates the ATAG value, which is used exclusively as a sequence number for autonomous messages. The value is a number from 1 to 9999. The first ATAG used is "1" when the agent first initializes or is reset. It automatically wraps. OSSs can use the ATAG to spot if messages are being lost.

3.4.2.3 <verb>[^<modifier>[^<modifier>]]

The *<verb>*[^*<modifier>*[^*<modifier>]]* entry identifies the nature of the spontaneous output and allows for quick identification of the semantics of the information in the text block. It consists of up to three valid TL1 identifiers separated by the *space character*, represented by a *caret* (^). The first identifier *(<verb>*) is the autonomous message verb and is a required entry. In most cases, the verb in an autonomous message will be REPT (Report). The autonomous message verb can have up to two optional modifiers. The first identifier following the verb modifies the verb. The second identifier specifies the object generating the message. Certain modifiers mean that the *<aid>* parameter (if it exists) is addressing a particular type of entity in the switch.

3.4.3 Text Block

The optional *text block* is used to represent information specific to the particular output response. The form of the *response text* is

```
((<cr><lf>^^^<unquoted line>)|
  (<cr><lf>^^^<quoted line>)|
  (<cr><lf>^^^<comment>))*
```

It consists of three possible types of components, namely, *<unquoted line>*, *<quoted line>*, or *<comment>*. Both *<unquoted line>* and *<quoted line>* are machine parsable, while *<comment>* is not. Each type of component may appear zero or more times within the *text block* and interleave with other component types in any order. Refer back to paragraph 3.3.3 for a more complete description of the individual components.

3.4.4 Terminator

The form of the *terminator* is:

```
<cr> <lf> ( ; | > )
```

and is required as the termination block for all TL1 message types. See paragraph 3.3.4 for more information regarding terminator types, and message size and continuation.

4. User Access Privilege Levels

User access privilege levels for commands are defined below in descending order of security. Higher levels include lower levels.

AccessPrivilege Levels	Description
ADMIN	Administrative permits the user to perform all TL1 commands including managing user accounts or profiles and downloading new software.
SW	SoftWare, in addition to all commands with security levels SA, NSA, and VIEW, allows the user to issue commands to download software. This level of access security applies to the System command CPY-MEM.
SA	Service-Affecting, in addition to all commands with security levels NSA and VIEW, allows the user to issue service-affecting commands. This level applies to DSFacility, Equipment, Signalling, and Test commands, and System command ED-DAT.
NSA	Non-Service-Affecting, in addition to all commands with security level VIEW, allows the user to issue non-service-affecting commands. This level applies to Log commands, System commands (excepting CPY-MEM and ED-DAT), and DSFacility commands ALW/INH/SCHED-PMREPT, INIT-REG, and SET-TH.
VIEW	VIEW allows the user to issue RTRV commands (except RTRV-IPHOST-SECU and RTRV-USER-SECU, which are ADMIN level) to view the switch's status and statistics information. This lowest level of access security also applies to ACT-USER (to log on), CANC-USER (to log off), ED-PID (with which users can change their passwords), and to REPT autonomous messages.

ALW/INH/OPR/RLS-LPBK-E1

Commands:

ALW-LPBK-E1: Allow Loopback E1 Facility

INH-LPBK-E1: Inhibit Loopback E1 Facility

OPR-LPBK-E1: Operate Loopback E1 Facility

RLS-LPBK-E1: Release Loopback E1 Facility

Descriptions:

ALW-LPBK-E1 permits the switch to automatically operate loopbacks on a specified E1 port in the switch. This command controls whether the switch will respond to remote loopback requests.

INH-LPBK-E1 lets the user prevent remote automatic loopback on an E1 port.

OPR-LPBK-E1 lets the user operate a loopback on a specified E1 port associated with a test access session in the switch. The loop may be accomplished at either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

RLS-LPBK-E1 lets the user release a loopback on a specified E1 port associated with a test access session in the switch. The loop may be released from either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

Category: Facility **Security:** SA for all commands

Input Formats:

```
ALW-LPBK-E1:[TID]:<src>:[CTAG];

INH-LPBK-E1:[TID]:<src>:[CTAG];

OPR-LPBK-E1:[TID]:<lpbk_id>:[CTAG]::[<locn>],[<orgn>],
   [<intext>],[<lpbktype>];

RLS-LPBK-E1:[TID]:<lpbk_id>:[CTAG]::[<locn>],[<orgn>],
   [<intext>],[<lpbktype>];
```

Output Format: none

Parameters:

src Identifies the AID (for ALW/INH) as an E1 port on an I/O Module in the switch.

Type: PORT
Range: IOM-{1-17}-E1-{1-28}
Default value: none

lpbk_id Identifies the AID (for OPR/RLS) as the E1 port on an I/O module in the switch on which the loopback is performed or released.

Type: PORT
Range: IOM-{1-17}-E1-{1-28}
Default value: none

locn Identifies the location where the loopback occurs. The value "FEND" is not supported.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

orgn Identifies the office originating the looped-back signal. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end office
NEND = Near end office
BOTH = Both offices
Default value: NULL

intext Directs the switch to provide or release a loopback that is with/without the benefit of signal processing, such as reshaping, recoding, scrambling, retiming, etc. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: EXT = External
INT = Internal
Default value: NULL

lpbktype Identifies the type of loopback signal to be operated or released. Depending on the transmission system, various parts of a signal may be looped back. For example, the LINE loopback may very well be a full metallic loopback, while a PAYLOAD loopback may result in a signal that has been recoded with new and different header and/or CRC information.

Type: enum
Range: LINE = 2.048 Mbps loopback signal
PAYLOAD = 2.048 Mbps loopback signal with framing stripped and then regenerated
Default value: LINE

Input Examples:

```
ALW-LPBK-E1::IOM-1-E1-1;

INH-LPBK-E1::IOM-1-E1-1;

OPR-LPBK-E1::IOM-1-E1-1;

RLS-LPBK-E1::IOM-1-E1-1;
```

Related Commands: none

ALW/INH/OPR/RLS-LPBK-OC3

Commands:

ALW-LPBK-OC3: Allow Loopback OC3 Facility

INH-LPBK-OC3: Inhibit Loopback OC3 Facility

OPR-LPBK-OC3: Operate Loopback OC3 Facility

RLS-LPBK-OC3: Release Loopback OC3 Facility

Descriptions:

ALW-LPBK-OC3 permits the switch to automatically operate loopbacks on a specified OC3 port in the switch. This command controls whether the switch will respond to remote loopback requests.

INH-LPBK-OC3 lets the user prevent remote automatic loopback on an OC3 port.

OPR-LPBK-OC3 lets the user operate a loopback on a specified OC3 port associated with a test access session in the switch. The loop may be accomplished at either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

RLS-LPBK-OC3 lets the user release a loopback on a specified OC3 port associated with a test access session in the switch. The loop may be released from either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

Category: Facility **Security:** SA for all commands

Input Formats:

```
ALW-LPBK-OC3:[TID]:<src>:[CTAG];

INH-LPBK-OC3:[TID]:<src>:[CTAG];

OPR-LPBK-OC3:[TID]:<lpbk_id>:[CTAG]::[<locn>],
   [<orgn>],[<intext>],[<lpbktype>];

RLS-LPBK-OC3:[TID]:<lpbk_id>:[CTAG]::[<locn>],
   [<orgn>],[<intext>],[<lpbktype>];
```

Output Format: none

Parameters:

src Identifies the AID (for ALW/INH) as an OC3 port on an I/O Module in the switch.

Type: OC
Range: IOM-{8,10}-OC3-{1-4}
Default value: none

lpbk_id Identifies the AID (for OPR/RLS) as the OC3 port on an I/O module in the switch on which the loopback is performed or released.

Type: OC
Range: IOM-{8,10}-OC3-{1-4}
Default value: none

locn Identifies the location where the loopback occurs. The value "FEND" is not supported.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

orgn Identifies the office originating the looped-back signal. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end office
NEND = Near end office
BOTH = Both offices
Default value: null

intext Directs the switch to provide or release a loopback that is with/without the benefit of signal processing, such as reshaping, recoding, scrambling, retiming, etc. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: EXT = External
INT = Internal
Default value: null

lpbktype Identifies the type of loopback signal to be operated or released. Depending on the transmission system, various parts of a signal may be looped back. For example, the LINE loopback may very well be a full metallic loopback, while a PAYLOAD loopback may result in a signal that has been recoded with new and different header and/or CRC information. However, loopbacks on OC3 ports can only be the LINE type.

Type: enum
Range: LINE = 155.52 Mbps loopback signal
Default value: LINE

Input Examples:

```
ALW-LPBK-OC3::IOM-8-OC3-1;

INH-LPBK-OC3::IOM-8-OC3-1;

OPR-LPBK-OC3::IOM-8-OC3-1::NEND,,,LINE;

RLS-LPBK-OC3::IOM-8-OC3-1::NEND,,,LINE;
```

Related Commands: none

ALW/INH/OPR/RLS-LPBK-STS1

Commands:

ALW-LPBK-STS1: Allow Loopback STS1 Facility

INH-LPBK-STS1: Inhibit Loopback STS1 Facility

OPR-LPBK-STS1: Operate Loopback STS1 Facility

RLS-LPBK-STS1: Release Loopback STS1 Facility

Descriptions:

ALW-LPBK-STS1 permits the switch to automatically operate loopbacks on a specified STS1 port in the switch. This command controls whether the switch will respond to remote loopback requests.

INH-LPBK-STS1 lets the user prevent remote automatic loopback on an STS1 port.

OPR-LPBK-STS1 lets the user operate a loopback on a specified STS1 port associated with a test access session in the switch. The loop may be accomplished at either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

RLS-LPBK-STS1 lets the user release a loopback on a specified STS1 port associated with a test access session in the switch. The loop may be released from either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

Category: Facility **Security:** SA for all commands

Input Formats:

```
ALW-LPBK-STS1:[TID]:<lpbk_id>:[CTAG];

INH-LPBK-STS1:[TID]:<lpbk_id>:[CTAG];

OPR-LPBK-STS1:[TID]:<lpbk_id>:[CTAG]::[<locn>],
   [<orgn>],[<intext>],[<lpbktype>];

RLS-LPBK-STS1:[TID]:<lpbk_id>:[CTAG]::[<locn>],
   [<orgn>],[<intext>],[<lpbktype>];
```

Output Format: none

Parameters:

lpbk_id Identifies the AID as an STS1 port on an I/O module in the switch.

Type: STS1
Range: IOM-{1-17}-STS1-{1-8}
Default value: none

locn Identifies the location where the loopback occurs. The value "FEND" is not supported.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

orgn Identifies the office originating the looped-back signal. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end office
NEND = Near end office
BOTH = Both offices
Default value: null

intext Directs the switch to provide or release a loopback that is with/without the benefit of signal processing, such as reshaping, recoding, scrambling, retiming, etc. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: EXT = External
INT = Internal
Default value: null

lpbktype Identifies the type of loopback signal to be operated or released. Depending on the transmission system, various parts of a signal may be looped back. For example, the LINE loopback may very well be a full metallic loopback, while a PAYLOAD loopback may result in a signal that has been recoded with new and different header and/or CRC information. However, loopbacks on STS1 ports can only be the LINE type. A null value indicates that this parameter is not applicable.

Type: enum
Range: LINE = 51.84 Mbps loopback signal
Default value: null

Input Examples:

```
ALW-LPBK-STS1::IOM-1-STS-1;

INH-LPBK-STS1::IOM-1-STS-1;

OPR-LPBK-STS1::IOM-1-STS-1:::NEND,,,LINE;

RLS-LPBK-STS1::IOM-1-STS-1:::NEND,,,LINE;
```

Related Commands: none

ALW/INH/OPR/RLS-LPBK-T1

Commands:

ALW-LPBK-T1: Allow Loopback DS1 Facility

INH-LPBK-T1: Inhibit Loopback DS1 Facility

OPR-LPBK-T1: Operate Loopback DS1 Facility

RLS-LPBK-T1: Release Loopback DS1 Facility

Descriptions:

ALW-LPBK-T1 permits the switch to automatically operate loopbacks on a specified T1 port in the switch. This command controls whether the switch will respond to remote loopback requests.

INH-LPBK-T1 lets the user prevent remote automatic loopback on a T1 port.

OPR-LPBK-T1 lets the user operate a loopback on a specified T1 port associated with a test access session in the switch. The loop may be accomplished at either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

RLS-LPBK-T1 lets the user release a loopback on a specified T1 port associated with a test access session in the switch. The loop may be released from either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

Category: Facility **Security:** SA for all commands

Input Formats:

```
ALW-LPBK-T1:[TID]:<src>:[CTAG];

INH-LPBK-T1:[TID]:<src>:[CTAG];

OPR-LPBK-T1:[TID]:<lpbk_id>:[CTAG]::[<locn>],[<orgn>],
   [<intext>],[<lpbktype>];

RLS-LPBK-T1:[TID]:<lpbk_id>:[CTAG]::[<locn>],[<orgn>],
   [<intext>],[<lpbktype>];
```

Output Format: none

Parameters:

src Identifies the AID (for ALW/INH) as a T1 port on an I/O Module in the switch.

Type: PORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

lpbk_id Identifies the AID (for OPR/RLS) as the T1 port on an I/O module in the switch on which the loopback is performed or released.

Type: PORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

locn Identifies the location where the loopback occurs. The value "FEND" is not supported.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

orgn Identifies the office originating the looped-back signal. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end office
NEND = Near end office
BOTH = Both offices
Default value: null

intext Directs the switch to provide or release a loopback that is with/without the benefit of signal processing, such as reshaping, recoding, scrambling, retiming, etc. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: EXT = External
INT = Internal
Default value: null

lpbktype Identifies the type of loopback signal to be operated or released. Depending on the transmission system, various parts of a signal may be looped back. For example, the LINE loopback may very well be a full metallic loopback, while a PAYLOAD loopback may result in a signal that has been recoded with new and different header and/or CRC information.

Type: enum
Range: LINE = 1.544 Mbps loopback signal
PAYLOAD = 1.544 Mbps loopback signal with framing stripped and then regenerated
Default value: LINE

Input Examples:

```
ALW-LPBK-T1::IOM-1-PORT-1;
INH-LPBK-T1::IOM-1-PORT-1;
OPR-LPBK-T1::IOM-1-PORT-1:::NEND,,,LINE;
RLS-LPBK-T1::IOM-1-PORT-1:::NEND,,,LINE;
```

Related Commands: none

ALW/INH/OPR/RLS-LPBK-T3

Commands:

ALW-LPBK-T3: Allow Loopback DS3 Facility

INH-LPBK-T3: Inhibit Loopback DS3 Facility

OPR-LPBK-T3: Operate Loopback DS3 Facility

RLS-LPBK-T3: Release Loopback DS3 Facility

Descriptions:

ALW-LPBK-T3 permits the switch to automatically operate loopbacks on a specified T3 port in the switch. This command controls whether the switch will respond to remote loopback requests.

INH-LPBK-T3 lets the user prevent remote automatic loopback on a T3 port.

OPR-LPBK-T3 lets the user operate a loopback on a specified T3 port associated with a test access session in the switch. The loop may be accomplished at either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

RLS-LPBK-T3 lets the user release a loopback on a specified T3 port associated with a test access session in the switch. The loop may be released from either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

Category: Facility **Security:** SA for all commands

Input Formats:

```
ALW-LPBK-T3:[TID]:<src>:[CTAG];

INH-LPBK-T3:[TID]:<src>:[CTAG];

OPR-LPBK-T3:[TID]:<lpbk_id>:[CTAG]::[<locn>],[<orgn>],
   [<intext>],[<lpbktype>];

RLS-LPBK-T3:[TID]:<lpbk_id>:[CTAG]::[<locn>],[<orgn>],
   [<intext>],[<lpbktype>];
```

Output Format: none

Parameters:

src Identifies the AID (for ALW/INH) as a T3 port on a DS3 I/O Module in the switch.

Type: T3
Range: IOM-{1-17}-T3-{1-8}
Default value: none

lpbk_id Identifies the AID (for OPR/RLS) as the T3 port on an I/O module in the switch on which the loopback is performed or released.

Type: T3
Range: IOM-{1-17}-T3-{1-8}
Default value: none

locn Identifies the location where the loopback occurs. The value "FEND" is not supported.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

orgn Identifies the office originating the looped-back signal. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end office
NEND = Near end office
BOTH = Both offices
Default value: null

intext Directs the switch to provide or release a loopback that is with/without the benefit of signal processing, such as reshaping, recoding, scrambling, retiming, etc. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: EXT = External
INT = Internal
Default value: null

lpbktype Identifies the type of loopback signal to be operated or released. Depending on the transmission system, various parts of a signal may be looped back. For example, the LINE loopback may very well be a full metallic loopback, while a PAYLOAD loopback may result in a signal that has been recoded with new and different header and/or CRC information. However, loopbacks on T3 ports can only be the LINE type.

Type: enum
Range: LINE = 44.736 Mbps loopback signal
Default value: LINE

Input Examples:

```
ALW-LPBK-T3::IOM-1-T3-1;

INH-LPBK-T3::IOM-1-T3-1;

OPR-LPBK-T3::IOM-1-T3-1:::NEND,,,LINE;

RLS-LPBK-T3::IOM-1-T3-1:::NEND,,,LINE;
```

Related Commands: none

DLT/ED/ENT/RTRV-E1

Commands:

DLT-E1: Delete E1 Facility

ED-E1: Edit E1 Facility

ENT-E1: Enter E1 Facility

RTRV-E1: Retrieve E1 Facility

Descriptions:

DLT-E1 lets the user disconnect an E1 port from operation.

ED-E1 lets the user edit parameters associated with an E1 port on an I/O module, or a timing port, in the switch. These parameters include framing, line code, service mode, timing reference, primary state, and secondary state.

ENT-E1 lets the user establish the parameters associated with an E1 port on an I/O module in the switch. These parameters include framing, line code, service mode, timing reference, primary state, and secondary state. ENT-E1 is dependent on ENT-EQPT; that is, ENT-E1 will not work unless ENT-EQPT has already been issued.

RTRV-E1 lets the user retrieve parameters associated with an E1 port. These parameters include framing, line code, service mode, timing reference, primary state, and secondary state.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-E1:[TID]:<ds_id>:[CTAG];

ED-E1:[TID]:<ds_id>:[CTAG]::[FMT=<fmt>],
   [LINECDE=<linecde>],[OMODE=<omode>],
   [TMGREF=<tmgref>],[IFTYPE=<iftype>]:[<pst>],
   [<sst>];

ENT-E1:[TID]:<ds_id>:[CTAG]::[FMT=<fmt>],
   [LINECDE=<linecde>],[OMODE=<omode>],
   [TMGREF=<tmgref>],[IFTYPE=<iftype>]:[<pst>],
   [<sst>];

RTRV-E1:[TID]:<ds_id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ds_id>:FMT=<fmt>,LINECDE=<linecde>,OMODE=<omode>,
      TMGREF=<tmgref>,IFTYPE=<iftype>:<pst>,[<sst>]"
;
```

Parameters:

ds_id Identifies the AID as an E1 port on an I/O Module in the switch.

Type: PORT
Range: IOM-{1-17}-E1-{1-28}
Default value: none

fmt Identifies the E1 digital signal framing format.

Type: enum
Range: CRC = CRC4
CRCMF = CRC4 and MultiFrame
DF = Double Frame format
MF = MultiFrame format
SLC96 = AT&T TR008 (Subscriber Loop Carrier) format (currently unsupported)
Default value: DF

linecde Identifies the signal inserted for zero code suppression on an E1.

Type: enum
Range: AMI = Alternate mark inversion (“bipolar”)
HDB3 = High Density Bipolar 3 (no more than three consecutive zeros can be transmitted.)
Default value: HDB3

omode Identifies what will be transmitted from the E1 output port when out of service.

Type: enum
Range: IDLE = Idle signal
AIS = Alarm Indication Signal
Default value: AIS

tmgref Identifies whether the TMG-A or TMG-B is to be used as the primary or secondary timing source for the system. This parameter is used only for configuring the BITS interface, and is presently not supported; leave it blank.

Type: enum
Range: PRI = Primary timing source
SEC = Secondary timing source
NONE = Not a timing source
Default value: NONE

iftype Identifies whether the subject E1 port affects the network or user side. This parameter presently supports only the value "NETWORK"; leave it blank.

Type: enum
Range: NETWORK = network side
USER = user side
Default value: NETWORK

pst Identifies the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

pst Identifies (in RTRV output) the primary state, and primary state qualifier, for the port.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous (faulted)
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: none

sst Identifies (in RTRV output) the secondary state of the port. The value indicates the desired secondary state of the port. A null value means no change to the current value. This parameter is not supported presently; leave it blank.

Type: enum
Range: FAF = Facilities Failure
LPBK = Loopback
RAI = Remote Alarm Indication
SGEO = Supporting Entity Outage
UAS = Unassigned
Default value: none

Input Examples:

```
DLT-E1::IOM-1-E1-1;

ED-E1::IOM-1-E1-1:::FMT=DF,LINECDE=HDB3,OMODE=AIS,
   IFTYPE=NETWORK:IS;

ENT-E1::IOM-1-E1-1:::FMT=DF,LINECDE=HDB3, OMODE=AIS,
   IFTYPE=NETWORK:IS;

RTRV-E1::IOM-1-E1-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-E1-1:FMT=DF,LINECDE=HDB3,OMODE=AIS,
      TMGREF=NONE,IFTYPE=NETWORK:IS"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-ENET

Commands:

DLT-ENET: Delete ENET Facility

ED-ENET: Edit ENET Facility

ENT-ENET: Enter ENET Facility

RTRV-ENET: Retrieve ENET Facility

Descriptions:

DLT-ENET lets the user disconnect an ENET port from operation.

ED-ENET lets the user edit parameters associated with an Ethernet port on an I/O module in the switch. These parameters include the port's transmission mode, format, usable bandwidth percentage, line speed, and primary state.

ENT-ENET lets the user establish the parameters associated with an Ethernet port on an I/O module in the switch. These parameters include the port's transmission mode, format, usable bandwidth percentage, line speed, and primary state. ENT-ENET is dependent on ENT-EQPT; that is, ENT-ENET will not work unless ENT-EQPT has already been issued.

RTRV-ENET lets the user retrieve parameters associated with an Ethernet port. These parameters include the port's transmission mode, format, usable bandwidth percentage, line speed, primary state, and secondary state.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-ENET:[TID]:<enetId>:[CTAG];

ED-ENET:[TID]:<enetId>:[CTAG]::[MODE=<mode>],
   [FORMAT=<format>],[BWLMT=<bwLmt>],
   [LINESPEED=<lineSpeed>]:[<pst>];

ENT-ENET:[TID]:<enetId>:[CTAG]::[MODE=<mode>],
   [FORMAT=<format>],[BWLMT=<bwLmt>],
   [LINESPEED=<lineSpeed>]:[<pst>];

RTRV-ENET:[TID]:<enetId>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<enetId>:MODE=<mode>,FORMAT=<format>,
      BWLMT=<bwLmt>,LINESPEED=<lineSpeed>:<pst>,
      [<sst>]"
;
```

Parameters:

enetId Identifies the AID (for DLT, ED, and RTRV output) as an Ethernet port on an I/O Module in the switch.

Type: ENET
Range: IOM-{8,10}-ENET-{1-4}
Default value: none

enetId Identifies the AID (for ENT and RTRV input) as an I/O module or an Ethernet port on an I/O module in the switch. A null value for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, parameters will be returned for all Ethernet ports configured on the specified I/O module.

Type: IOMorENET
Range: IOM-{8,10}[-ENET-{1-4}]
Default value: none

mode Identifies the transmission mode for the port; that is, whether communication on the port is in one direction at a time (half-duplex), both directions simultaneously (full-duplex), or whether the mode is determined automatically.

Type: enum
Range: AUTO = mode automatically negotiated
FULLDUPLEX = full-duplex mode
HALFDUPLEX = half-duplex mode
Default value: AUTONEG

format Identifies the Ethernet format. Reset the I/O module after changing the format, either by changing the state with the ED-EQPT command to OOS, then to IS, or by sequentially executing RMV-EQPT and RST-EQPT.

Type: enum
Range: ENET_802_3 = 802.3 format
ENET_DIX_II = Dix II format
VLAN = Virtual Local Area Network
Default value: ENET_DIX_II

bwLmt Identifies the percentage of the bandwidth for the port that can be used for VoIP bearer traffic, which limits the number of circuits placed on the Ethernet interface. If the percentage limit is lowered when the number of circuits is at the limit, new circuits cannot be set up on the interface until the number of circuits on the interface drops below the new limit.

Type: integer
Range: {20-95}
Default value: 80

lineSpeed Identifies the transmission speed for the port, in Mb/sec.

Type: enum
Range: 10 = 10 Mb/sec (Ethernet)
100 = 100 Mb/sec (Thinnet)
1000 = 1000 Mb/sec (gigabit)
AUTO = automatically determined
Default value: AUTO

pst Identifies the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

sst Identifies (in RTRV output) the secondary state of the port.

Type: enum
Range: ACT = Active
FAF = Facilities Failure
FEPO = Far End Processor Outage
FLT = Faulted
LPBK = Loopback
SGEO = Supporting Entity Outage
UAS = Unassigned
WRK = Working
Default value: AINS

Input Examples:

```
DLT-ENET::IOM-8-ENET-1;

ED-ENET::IOM-8-ENET-1:::MODE=AUTO,FORMAT=ENET_DIX_II,
   BWLMT=100,LINESPEED=AUTO:IS;

ENT-ENET::IOM-8-ENET-1:::MODE=AUTO,FORMAT=ENET_DIX_II,
   BWLMT=100,LINESPEED=AUTO:IS;

RTRV-ENET::IOM-8-ENET-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-8-ENET-1:MODE=AUTO,FORMAT=ENET_DIX_II,
      BWLMT=100,LINESPEED=AUTO:IS,ACT"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-ENET-ENDPTVOIP

Commands:

DLT-ENET-ENDPTVOIP: Delete ENET Facility Endpoint

ED-ENET-ENDPTVOIP: Edit ENET Facility Endpoint

ENT-ENET-ENDPTVOIP: Enter ENET Facility Endpoint

RTRV-ENET-ENDPTVOIP: Retrieve ENET Facility Endpoint

Descriptions:

DLT-ENET-ENDPTVOIP lets the user end the association of an Ethernet port with an Ethernet endpoint.

ED-ENET-ENDPTVOIP lets the user edit parameters of an Ethernet endpoint associated with an Ethernet port. These parameters include the subnet mask, the default gateway, the heartbeat and ARP message frequencies, the maximum heartbeat and ARP timeouts allowed, the number of successful heartbeat pings to be received before the endpoint can be considered in-service, the minimum and maximum UDP port numbers, and the primary state.

ENT-ENET-ENDPTVOIP lets the user establish the association of an Ethernet port with an Ethernet endpoint. Parameters include the IP addresses for the active and protected ports, the subnet mask, the default gateway, the heartbeat and ARP message frequencies, the maximum heartbeat and ARP timeouts allowed, the number of successful heartbeat pings to be received before the endpoint can be considered in-service, the minimum and maximum UDP port numbers, and the primary state. ENT-ENET-ENDPTVOIP will not work unless ENT-ENET has already been issued.

RTRV-ENET-ENDPTVOIP lets the user retrieve parameters associated with an Ethernet endpoint. These parameters include the IP addresses for the active and protected ports, the subnet mask, the default gateway, the heartbeat and ARP message frequencies, the maximum heartbeat and ARP timeouts allowed, the number of successful heartbeat pings to be received before the endpoint can be considered in-service, the minimum and maximum UDP port numbers, the primary state and qualifier, and the secondary state.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-ENET-ENDPTVOIP:[TID]:<enetId>:[CTAG];

ED-ENET-ENDPTVOIP:[TID]:<enetId>:[CTAG]::
   [SUBNETMASK=<subnetMask>],
   [DEFAULTGATEWAY=<defaultGateway>],
   [LNKMONPER=<lnkMonPer>],
   [LNKMAXTMOUTS=<lnkMaxTmouts>],
   [LNKUPNUM=<lnkUpNum>],[ARPINTERVAL=<arpInterval>],
   [ARPRETRIES=<arpRetries>],
   [UDPPORTMIN=<udpPortMin>],
   [UDPPORTMAX=<udpPortMax>]:[<pst>];

ENT-ENET-ENDPTVOIP:[TID]:<enetId>:[CTAG]::
   IPADDR=<ipAddr>,MATEIPADDR=<mateIpAddr>,
   SUBNETMASK=<subnetMask>,
   DEFAULTGATEWAY=<defaultGateway>,
   [LNKMONPER=<lnkMonPer>],
   [LNKMAXTMOUTS=<lnkMaxTmouts>],
   [LNKUPNUM=<lnkUpNum>],[ARPINTERVAL=<arpInterval>],
   [ARPRETRIES=<arpRetries>],
   [UDPPORTMIN=<udpPortMin>],
   [UDPPORTMAX=<udpPortMax>]:[<pst>];

RTRV-ENET-ENDPTVOIP:[TID]:[<enetId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<enetId>:IPADDRESS=<ipAddress>,
      MATEIPADDR=<mateIpAddr>,SUBNETMASK=<subnetMask>,
      DEFAULTGATEWAY=<defaultGateway>,
      LNKMONPER=<lnkMonPer>,
      LNKMAXTMOUTS=<lnkMaxTmouts>,
      LNKUPNUM=<lnkUpNum>,ARPINTERVAL=<arpInterval>,
      ARPRETRIES=<arpRetries>,
      UDPPORTMIN=<udpPortMin>,
      UDPPORTMAX=<udpPortMax>:<pst>,[<sst>]"
;
```

Parameters:

enetId Identifies the AID (for DLT, ED, and RTRV output) as an Ethernet endpoint associated with an Ethernet port on an I/O Module in the switch. A null value for the third part of the AID (in RTRV input only) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns parameters for all Ethernet endpoints associated with the specified Ethernet port.

Type: ENET
Range: IOM-{8,10}-ENET-{1-4}[-ENDPT-{1}]
Default value: none

ipAddr Identifies the IP address for the Ethernet endpoint.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

mateIpAddr Identifies the IP address for the standby Ethernet port on the protection IOM.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

subnetMask Identifies the subnet mask.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

defaultGateway Identifies the default gateway.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

lnkMonPer Identifies the frequency, in milliseconds, that IP ping heartbeat messages are sent by the VoIP IOM. A value of "0" disables sending heartbeat messages.

Type: integer
Range: {0, 100-5000}
Default value: 0

lnkMaxTmouts Identifies the number of consecutive IP ping heartbeat time-outs allowed before loss of IP connectivity and subsequent ENA-IOM failover. When the ENA-IOM is connected to a router through a series of switches that have 802.1D spanning tree protocol enabled (and the value of *lnkMonPer* is "1"), the number of consecutive timeouts must be greater than three times the configured forward delay timer configured in the Ethernet switches (default is 15 seconds).

Type: integer
Range: {10-65535}
Default value: 60

lnkUpNum Identifies the number of successful heartbeat pings to be received before the endpoint can be considered in-service.

Type: integer
Range: {0-10}
Default value: 0

arpInterval Identifies the frequency, in milliseconds, that ARP (Address Resolution Protocol) messages are sent by the VoIP IOM. A value of "0" disables sending ARP messages.

Type: integer
Range: {0, 100-5000}
Default value: 0

arpRetries Identifies the number of consecutive ARP time-outs allowed before loss of IP connectivity and subsequent ENA-IOM failover (when the standby ENA-IOM has not had an ARP failure).

Type: integer
Range: {10-250}
Default value: 60

udpPortMin Identifies the lowest-numbered port that can be used for UDP, when you want to limit the range of available ports. A value of "0" indicates no lower limit.

Type: integer
Range: {0-65535}
Default value: 0

udpPortMax Identifies the highest-numbered port that can be used for UDP, when you want to limit the range of available ports. A value of "0" indicates no upper limit.

Type: integer
Range: {0-65535}
Default value: 0

pst Identifies the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

pst Identifies (in RTRV output) the primary state, and primary state qualifier, for the port.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous (faulted)
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: none

sst Identifies (in RTRV output) the secondary state of the port.

Type: enum
Range: ACT = Active
FAF = Facilities Failure
FEPO = Far End Processor Outage
FLT = Faulted
LPBK = Loopback
SGEO = Supporting Entity Outage
UAS = Unassigned
WRK = Working
Default value: AINS

Input Examples:

```
DLT-ENET-ENDPTVOIP::IOM-8-ENET-1-ENDPT-1;

ED-ENET-ENDPTVOIP::IOM-8-ENET-1-ENDPT-1:::
   SUBNETMASK=255.255.255.0,DEFAULTGATEWAY=10.18.20.1,
   LNKMONPER=0,LNKMAXTMOUTS=0,LNKUPNUM=0,
   ARPINTERVAL=2000,ARPRETRIES=60,UDPPORTMIN=0,
   UDPPORTMAX=0:IS;

ENT-ENET-ENDPTVOIP::IOM-8-ENET-1-ENDPT-1:::
   IPADDR=10.18.20.11,MATEIPADDR=10.18.20.111,
   SUBNETMASK=255.255.255.0,DEFAULTGATEWAY=10.18.20.1,
   LNKMONPER=0,LNKMAXTMOUTS=0,LNKUPNUM=0,
   ARPINTERVAL=2000,ARPRETRIES=60,UDPPORTMIN=0,
   UDPPORTMAX=0:IS;

RTRV-ENET-ENDPTVOIP::IOM-8-ENET-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-8-ENET-1-ENDPT-1:IPADDR=10.18.20.11,
      MATEIPADDR=10.18.20.111,
      SUBNETMASK=255.255.255.0,
      DEFAULTGATEWAY=10.18.20.1,LNKMONPER=0,
      LNKMAXTMOUTS=0,LNKUPNUM=0,ARPINTERVAL=2000,
      ARPRETRIES=60,UDPPORTMIN=0,UDPPORTMAX=0:IS"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-OC3

Commands:

DLT-OC3: Delete OC3 Facility

ED-OC3: Edit OC3 Facility

ENT-OC3: Enter OC3 Facility

RTRV-OC3: Retrieve OC3 Facility

Descriptions:

DLT-OC3 lets the user disconnect an OC3 port from operation.

ED-OC3 lets the user edit parameters associated with an OC3 port on an I/O module in the switch. These parameters include line code, whether the switch is revertive, the value for the wait to revert timer, the Bit Error Rate thresholds for declaring the Signal Degrade and Signal Fail conditions, and the primary and secondary states.

ENT-OC3 lets the user establish the parameters associated with an OC3 port on an I/O module in the switch. These parameters include line code, whether the switch is revertive, the value for the wait to revert timer, the Bit Error Rate thresholds for declaring the Signal Degrade and Signal Fail conditions, and the primary and secondary states. ENT-OC3 is dependent on ENT-EQPT; that is, ENT-OC3 will not work unless ENT-EQPT has already been issued.

RTRV-OC3 lets the user retrieve parameters associated with an OC3 port. These parameters include line code, whether the switch is revertive, the value for the wait to revert timer, the Bit Error Rate thresholds for declaring the Signal Degrade and Signal Fail conditions, and the primary and secondary states.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-OC3:[TID]:<oc_id>:[CTAG];

ED-OC3:[TID]:<oc_id>:[CTAG]::[LINECDE=<linecde>],
   [SWMODE=<swMode>],[WTRTMR=<wtrTmr>],
   [SDTHR=<sdThr>],[SFTHR=<sfThr>]:[<pst>],[<sst>];

ENT-OC3:[TID]:<oc_id>:[CTAG]::[LINECDE=<linecde>],
   [SWMODE=<swMode>],[WTRTMR=<wtrTmr>],
   [SDTHR=<sdThr>],[SFTHR=<sfThr>]:[<pst>],[<sst>];

RTRV-OC3:[TID]:<oc_id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<oc_id>:LINECDE=<linecde>,SWMODE=<swMode>,
      WTRTMR=<wtrTmr>,SDTHR=<sdThr>,SFTHR=<sfThr>:
      <pst>,[<sst>]"
;
```

Parameters:

oc_id Identifies the AID (for DLT, ED, and RTRV output) as an OC3 port on an I/O Module in the switch.

Type: OC
Range: IOM-{8,10}-OC3-{1-4}
Default value: none

oc_id Identifies the AID (for ENT and RTRV input) as an OC3 I/O Module or an OC3 port on an I/O Module in the switch.

Type: IOMorOC
Range: IOM-{8,10}
IOM-{8,10}-OC3-{1-4}
Default value: none

linecde Identifies the signal inserted for zero code suppression on an OC3. This parameter is reserved for future use; leave it blank.

Type: enum
Range: NRZ = Non-Return to Zero
RZ = Return to Zero
Default value: NRZ

swMode Identifies the switch mode as revertive or non-revertive. Non-revertive eliminates the short disruption as the fiber fails back to the primary OC port.

Type: enum
Range: RVTV = revertive
NRVT = non-revertive
Default value: NRZ

wtrTmr Identifies the value for the wait to revert timer (when the value of *swMode* is “RVTV”); that is, the time in minutes the OC signal must be error free before reverting.

Type: integer
Range: {5-12}
Default value: 5

sdThr Identifies the Bit Error Rate (BER) threshold value for declaring the Signal Degrade (SD) condition as the exponent of one of the following BER values: 10^5, 10^6, 10^7, 10^8, 10^9. The threshold value for clearing the condition is one-tenth of this BER threshold value.

Type: integer
Range: {5-9}
Default value: 7

sfThr Identifies the Bit Error Rate (BER) threshold value for declaring the Signal Fail (SF) condition as the exponent of one of the following BER values: 10^3, 10^4, 10^5. The threshold value for clearing the condition is one-tenth of this BER threshold value.

Type: integer
Range: {3-5}
Default value: 3

pst Identifies (in ED and ENT) the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

pst Identifies (in RTRV output) the primary state of the port.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: IS

sst Identifies the secondary state of the port. The value indicates the desired secondary state of the port. A null value means no change to the current value.

Type: enum
Range: FLT = Faulted
FRCD = Forced
MAN = Manual
PSI = Protection switch Inhibited
PRTN = Protection
SGEO = Supporting Entity Outage
WRK = Working
WTR = Wait To Restore
Default value: NULL

Input Examples:

```
DLT-OC3::IOM-8-OC3-1;

ED-OC3::IOM-8-OC3-1:::LINECDE=NRZ,SWMODE=NRVT,
   WTRTMR=5,SDTHR=7,SFTHR=3:IS;

ENT-OC3::IOM-8-OC3-1:::LINECDE=NRZ,SWMODE=NRVT,
   WTRTMR=5,SDTHR=7,SFTHR=3:IS;

RTRV-OC3::IOM-8-OC3-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-8-OC3-1:LINECDE=NRZ,SWMODE=NRVT,WTRTMR=5,
      SDTHR=7,SFTHR=3:IS,WRK"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-STS1

Commands:

DLT-STS1: Delete STS1 Facility

ED-STS1: Edit STS1 Facility

ENT-STS1: Enter STS1 Facility

RTRV-STS1: Retrieve STS1 Facility

Descriptions:

DLT-STS1 lets the user disconnect an STS1port from operation.

ED-STS1 lets the user edit parameters associated with an STS1 port on an I/O module in the switch. These parameters include path trace and STS mapping information, line build-out, service mode, primary state, and secondary state.

ENT-STS1 lets the user establish the parameters associated with an STS1 port on an I/O module in the switch. These parameters include path trace and STS mapping information, line build-out, service mode, primary state, and secondary state. ENT-STS1 is dependent on ENT-EQPT; that is, ENT-STS1 will not work unless ENT-EQPT has already been issued.

RTRV-STS1 lets the user retrieve parameters associated with an STS1 port. These parameters include path trace and STS mapping information, line build-out, service mode, primary state, and secondary state.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-STS1:[TID]:<sts_id>:[CTAG];

ED-STS1:[TID]:<sts_id>:[CTAG]::[EXPTRC=<exptrc>],
   [STSMAP=<stsmap>],[TRC=<trc>],[LBO=<lbo>],
   [OMODE=<omode>],[TIMD=<timd>]:[<pst>],[<sst>];

ENT-STS1:[TID]:<sts_id>:[CTAG]::[EXPTRC=<exptrc>],
   [STSMAP=<stsmap>],[TRC=<trc>],[LBO=<lbo>],
   [OMODE=<omode>],[TIMD=<timd>]:[<pst>],[<sst>];

RTRV-STS1:[TID]:<sts_id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<sts_id>:EXPTRC=<exptrc>,STSMAP=<stsmap>,
      TRC=<trc>,LBO=<lbo>,OMODE=<omode>,TIMD=<timd>:
      <pst>,<sst>"
;
```

Parameters:

sts_id Identifies the AID (for DLT, ED, and RTRV output) as an STS1 port on an I/O Module in the switch.

Type: STS1
Range: IOM-{1-17}-STS1-{1-8}
Default value: none

sts_id Identifies the AID (for ENT and RTRV input) as an I/O module or an STS1 port on an I/O module in the switch.

Type: IOMorSTS1
Range: IOM-{1-17}
IOM-{1-17}-STS1-{1-8}
Default value: none

exptrc Identifies the expected Path Trace (J1) content.

Type: string
Range: up to 62 ASCII characters
Default value: none

stsmap Identifies the type of mapping supported by the STS-1 SPE (Synchronous Payload Envelope).

Type: enum
Range: VTLOCK = Identifies locked VT (Virtual Tributary, a unit of sub-SONET bandwidth that can be combined, or concatenated, for transmission through the network) mode; can't transport asynchronously mapped VT SPEs.
VTFLOAT = Identifies floating VT mode.
Default value: VTFLOAT

trc Identifies the path trace message to be transmitted. Trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string (the last two bytes of which are a CR and an LF), one byte at a time. A null value causes the switch to transmit 62 NULL chars (Hex 00), a CR, and an LF.

Type: string
Range: up to 62 ASCII characters
Default value: none

lbo Identifies the line build-out (in feet); that is, the attenuation distortion equalization setting to compensate for the length of the coaxial cable connecting to the port.

Type: integer
Range: {0-450}
Default value: not applicable

omode Specifies what will be transmitted from the STS1 output port when out of service.

Type: enum
Range: NORM = Normal (cross-connected data if mapped, idle signal as specified by the IDLE keyword if not mapped)
AIS = Alarm Indication Signal
Default value: AIS

timd Identifies whether Trace Identification Mismatch Detection is enabled. When enabled, the STS1 port specified by the AID is taken out of service when the Trace ID does not match.

Type: enum
Range: DISABLED
ENABLED
Default value: DISABLED

pst Identifies the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

sst Identifies the secondary state of the port. The value indicates the desired secondary state of the port. A null value means no change to the current value.

Type: enum
Range: ACT = Active
AINS = Automatic, In-service
FAF = Facilities Failure
FLT = Faulted
INIT = Initializing
LPBK = Loopback
MEA = Mismatch of Equipment and Attributes
MON = Monitor
NBK = No Backup
PRI = Protection Release Inhibited
PSI = Protection switch Inhibited
RWT = Remove Wait state
SGEO = Supporting Entity Outage
STBYC = Standby Cold
STBYH = Standby Hot
UAS = Unassigned
UEQ = Unequipped
WRK = Working
Default value: AINS

Input Examples:

```
DLT-STS1::IOM-1-STS1-1;

ED-STS1::IOM-1-STS1-1:::EXPTRC=EXPECTEDPATHTRACE,
   STSMAP=VTFLOAT,LBO=10,OMODE=AIS,TIMD=DISABLED:IS,
   AINS;

ENT-STS1::IOM-1-STS1-1:::EXPTRC=EXPECTEDPATHTRACE,
   STSMAP=VTFLOAT,LBO=10,OMODE=AIS,TIMD=DISABLED:IS,
   AINS;

RTRV-STS1::IOM-1-STS1-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-STS-1:EXPTRC=EXPECTEDPATHTRACE,
      STSMAP=VTFLOAT,TRC=PATHTRACEMESSAGE,LBO=0,
      OMODE=AIS,TIMD=DISABLED:IS,ACT"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-T1

Commands:

DLT-T1: Delete DS1 Facility

ED-T1: Edit DS1 Facility

ENT-T1: Enter DS1 Facility

RTRV-T1: Retrieve DS1 Facility

Descriptions:

DLT-T1 lets the user disconnect a T1 port from operation.

ED-T1 lets the user edit parameters associated with a T1 port on an I/O module, or a timing port, in the switch. These parameters include equalization/build-out, framing, line code, service mode, timing reference, primary state, and secondary state.

ENT-T1 lets the user establish the parameters associated with a DS1 port on an I/O module in the switch. These parameters include equalization/build-out, framing, line code, service mode, timing reference, primary state, and secondary state. ENT-T1 is dependent on ENT-EQPT; that is, ENT-T1 will not work unless ENT-EQPT has already been issued.

RTRV-T1 lets the user retrieve parameters associated with a DS1 port. These parameters include equalization/build-out, framing, line code, service mode, timing reference, primary state, and secondary state.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-T1:[TID]:<ds_id>:[CTAG];

ED-T1:[TID]:<ds_id>:[CTAG]::[EQLZ=<eqlz>],[FMT=<fmt>],
   [LINECDE=<linecde>],[OMODE=<omode>],
   [TMGREF=<tmgref>],[IFTYPE=<iftype>]:[<pst>],
   [<sst>];

ENT-T1:[TID]:<ds_id>:[CTAG]::[EQLZ=<eqlz>],
   [FMT=<fmt>],[LINECDE=<linecde>],[OMODE=<omode>],
   [TMGREF=<tmgref>],[IFTYPE=<iftype>]:[<pst>],
   [<sst>];

RTRV-T1:[TID]:<ds_id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ds_id>:EQLZ=<eqlz>,FMT=<fmt>,LINECDE=<linecde>,
      OMODE=<omode>,TMGREF=<tmgref>,IFTYPE=<iftype>:
      <pst>,[<sst>]"
;
```

Parameters:

ds_id Identifies the AID (for DLT) as a T1 port on an I/O Module in the switch.

Type: PORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

ds_id Identifies the AID (for ED and RTRV output) as a T1 port on an I/O module or a timing port in the switch.

Type: PORTorBITS
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
TMG-{A,B}
Default value: none

ds_id Identifies the AID (for ENT) as an I/O module or a T1 port on an I/O module in the switch.

Type: IOMorT3orPORT
Range: IOM-{1-17}
IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

ds_id Identifies the AID (for RTRV input) as an I/O module, a T1, STS1, or T3 port on an I/O module, or a timing port in the switch.

Type: IOMorT3orPORTorBITS
Range: IOM-{1-17}
IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}
IOM-{1-17}-STS1-{1-8}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
TMG-{A,B}
Default value: none

eqlz Identifies the attenuation distortion equalization setting to compensate for the length of a 22-gauge cable in feet. This parameter is not used when provisioning a T1 port on a T3 or STS1 I/O module.

Type: integer
Range: {0-655}
Default value: 0

fmt Identifies the DS1 digital signal framing format; a null value defaults to SF or "not applicable".

Type: enum
Range: SF = Superframe format
ESF = Extended Superframe format
ESF_NOFDL = Extended Superframe format – No Facilities Data Link
Default value: ESF

linecde Identifies the signal inserted for zero code suppression on a DS1.

Type: enum
Range: AMI = Alternate mark inversion ("bipolar")
B8ZS = Bipolar with 8-zero substitution
Default value: B8ZS

omode Identifies what will be transmitted from the DS1 output port when out of service.

Type: enum
Range: NORM = Normal (cross-connected data if mapped, idle signal as specified by the IDLE keyword if not mapped)
AIS = Alarm Indication Signal
Default value: AIS

tmgref Identifies whether the TMG-A or TMG-B is to be used as the primary or secondary timing source for the system. This parameter is used only for configuring the BITS interface, and is presently not supported; leave it blank.

Type: enum
Range: PRI = Primary timing source
SEC = Secondary timing source
NONE = Not a timing source
Default value: NONE

iftype Identifies whether the subject T1 port affects the network or user side. This parameter presently supports only the value "NETWORK"; leave it blank.

Type: enum
Range: NETWORK = network side
USER = user side
Default value: NETWORK

pst Identifies the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

sst Identifies the secondary state of the port. The value indicates the desired secondary state of the port. A null value means no change to the current value. This parameter is not supported presently; leave it blank.

Type: enum
Range: ACT = Active
AINS = Automatic, In-service
FAF = Facilities Failure
FLT = Faulted
INIT = Initializing
LPBK = Loopback
MEA = Mismatch of Equipment and Attributes
MON = Monitor
NBK = No Backup
PRI = Protection Release Inhibited
PSI = Protection switch Inhibited
RWT = Remove Wait state
SGEO = Supporting Entity Outage
STBYC = Standby Cold
STBYH = Standby Hot
UAS = Unassigned
UEQ = Unequipped
WRK = Working
Default value: AINS

Input Examples:

```
DLT-T1::IOM-1-PORT-1;

ED-T1::IOM-1-PORT-1:::EQLZ=10,FMT=ESF,LINECDE=B8ZS,
   OMODE=AIS:OOS;

ENT-T1::IOM-1-PORT-1:::EQLZ=10,FMT=ESF,LINECDE=B8ZS,
   OMODE=AIS:OOS;

RTRV-T1::IOM-1-PORT-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-PORT-1:EQLZ=10,FMT=ESF,LINECDE=B8ZS,
      OMODE=AIS,TMGREF=NONE,IFTYPE=NETWORK:IS,AINS"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-T3

Commands:

DLT-T3: Delete DS3 Facility

ED-T3: Edit DS3 Facility

ENT-T3: Enter DS3 Facility

RTRV-T3: Retrieve DS3 Facility

Descriptions:

DLT-T3 lets the user disconnect a T3 port from operation.

ED-T3 lets the user edit parameters associated with a T3 port on an I/O module, or a timing port, in the switch. These parameters include equalization/build-out, framing, line code, service mode, timing reference, primary state, and secondary state.

ENT-T3 lets the user establish the parameters associated with a DS3 port on an I/O module in the switch. These parameters include equalization/build-out, framing, line code, service mode, timing reference, primary state, and secondary state. ENT-T3 is dependent on ENT-EQPT; that is, ENT-T3 will not work unless ENT-EQPT has already been issued.

RTRV-T3 lets the user retrieve parameters associated with a DS3 port. These parameters include equalization/build-out, framing, line code, service mode, timing reference, primary state, and secondary state.

Category: Facility **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-T3:[TID]:<ds_id>:[CTAG];

ED-T3:[TID]:<ds_id>:[CTAG]::[AISC=<aisc>],
   [AIST=<aist>],[FMT=<fmt>],[IDLE=<idle>],
   [LBO=<lbo>],[LINECDE=<linecde>],[MAP=<map>],
   [OMODE=<omode>],[PBIT=<pbit>],[XBIT=<xbit>],
   [XBITRCV=<xbitrcv>],[XPOL=<xpol>]:[<pst>],[<sst>];

ENT-T3:[TID]:<ds_id>:[CTAG]::[AISC=<aisc>],
   [AIST=<aist>],[FMT=<fmt>],[IDLE=<idle>],
   [LBO=<lbo>],[LINECDE=<linecde>],[MAP=<map>],
   [OMODE=<omode>],[PBIT=<pbit>],[XBIT=<xbit>],
   [XBITRCV=<xbitrcv>],[XPOL=<xpol>]:[<pst>],[<sst>];

RTRV-T3:[TID]:<ds_id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ds_id>:AISC=<aisc>,AIST=<aist>,FMT=<fmt>,
      IDLE=<idle>,LBO=<lbo>,LINECDE=<linecde>,
      MAP=<map>,OMODE=<omode>,PBIT=<pbit>,XBIT=<xbit>,
      XBITRCV=<xbitrcv>,XPOL=<xpol>:<pst>,[<sst>]"
;
```

Parameters:

ds_id Identifies the AID (for DLT, ED, and RTRV output) as a T3 port on a DS3 I/O Module in the switch.

Type: T3
Range: IOM-{1-17}-T3-{1-8}
Default value: none

ds_id Identifies the AID (for ENT and RTRV input) as an I/O module or a T3 port on a DS3 I/O module in the switch.

Type: IOMorT3
Range: IOM-{1-17}
IOM-{1-17}-T3-{1-8}
Default value: none

aisc Identifies the alarm indication signal cause (can be one or more values connected with a "&"). This parameter is presently not supported; leave it blank.

Type: enum
Range: LOF = Loss of frame
LOS = Loss of signal
NONE = AIS cause not identified
Default value: NONE

aist Identifies the type of alarm indication signal (AIS) to be sent on the outgoing cross-connected signal when an AIS is on the incoming signal. This parameter is presently not supported; leave it blank.

Type: enum
Range: FONES = Translate to framed all ones
NAS = North American Standard
ONES = Translate to unframed all ones
Default value: NAS

fmt Identifies the DS3 digital signal framing format.

Type: enum
Range: ASYNC = asynchronous format
CBIT = C-bit parity format
Default value: ASYNC

idle Identifies whether the T3 port is set to ON or OFF. This parameter is presently not supported; leave it blank.

Type: enum
Range: OFF
ON
Default value: OFF

lbo Identifies the line build-out (in feet); that is, the attenuation distortion equalization setting to compensate for the length of the coaxial cable connecting to the port.

Type: integer
Range: {0-450}
Default value: 0

linecde Identifies the signal inserted for zero code suppression on a DS3.

Type: enum
Range: B3ZS = Bipolar with 3-zero substitution
CCHAN = Clear channel
Default value: B3ZS

map Identifies the form of mapping for DS3 payloads in SONET add/drop applications. A null value defaults to "NA". This parameter is presently not supported; leave it blank.

Type: enum (can be one or more values connected with an "&")
Range: ASYNC = asynchronous mapping
DL = SYNTRAN datalink is transported; only applicable with SYNC map.
NA = Not applicable
SYNC = Observable SYNTRAN mapping
Default value: NA

omode Specifies what will be transmitted from the DS3 output port when out of service.

Type: enum
Range: AIS = Alarm Indication Signal
NORM = Normal (cross-connected data if mapped, idle signal as specified by the non-editable IDLE keyword if not mapped)
Default value: AIS

pbit Identifies whether the P-bits are corrected on output. This parameter is presently not supported; leave it blank.

Type: enum
Range: OFF = P-bits are not changed (transparent)
ON = P-bits are altered to correct parity
Default value: OFF

xbit Identifies how X-bits are handled for this particular channel. This parameter is presently not supported; leave it blank.

Type: enum
Range: PASS = Pass X-bits with no modification (default)
XLAT = Translate X-bits to match terminating equipment.
Default value: PASS

xbitrcv Identifies the usage of the incoming X-bits.

Type: enum
Range: ALM0 = All the X-bits equal to 0 for indicating incoming remote alarm
ALM1 = All the X-bits equal to 1 for indicating incoming remote alarm
IGNORE = Ignore the X-bits.
Default value: ALM0

xpol Identifies the value/polarity to which the outgoing X-bits are forced.

Type: enum
Range: 0 = Set X-bits to fixed zero.
1 = Set X-bits to fixed one.
ALM0 = Set X-bits to zero for indicating alarm.
ALM1 = Set X-bits to one for indicating alarm.
Default value: ALM0

pst Identifies the primary state of the port. The value indicates the desired state of the port. A null value means no change to the current value.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: null

sst Identifies the secondary state of the port. The value indicates the desired secondary state of the port. A null value means no change to the current value. This parameter is presently not supported; leave it blank.

Type: enum
Range: AINS = Automatic, in service
Default value: null

Input Examples:

```
DLT-T3::IOM-1-T3-1;

ED-T3::IOM-1-T3-1:::AISC=LOS&LOF,AIST=NAS,
   FMT=ASYNC,IDLE=OFF,LBO=0,LINECDE=B3ZS,MAP=NA,
   OMODE=AIS,PBIT=OFF,XBIT=PASS,XBITRCV=ALM0,
   XPOL=ALM0:OOS;

ENT-T3::IOM-1-T3-1:::AISC=LOS&LOF,AIST=NAS,
   FMT=ASYNC,IDLE=OFF,LBO=0,LINECDE=B3ZS,MAP=NA,
   OMODE=AIS,PBIT=OFF,XBIT=PASS,XBITRCV=ALM0,
   XPOL=ALM0:OOS;

RTRV-T3::IOM-1-T3-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-1:AISC=LOS&LOF,AIST=NAS,FMT=ASYNC,
      IDLE=OFF,LBO=0,LINECDE=B3ZS,MAP=NA,OMODE=AIS,
      PBIT=OFF,XBIT=PASS,XBITRCV=ALM0,XPOL=ALM0:IS,
      AINS"
;
```

Related Commands: none

INIT-REG-E1 / RTRV-PM-E1

Commands:

INIT-REG-E1: Initialize Register E1 Facility

RTRV-PM-E1: Retrieve Performance Monitors E1 Facility

Descriptions:

INIT-REG-E1 instructs the switch to initialize one or more storage registers or event counters associated with specific E1 ports in the switch. In most cases, registers contain performance data.

RTRV-PM-E1 lets the user retrieve current and historical performance data for E1 ports on DS3 IOMs.

Category: Facility **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-E1:[TID]:<pm_id>:[CTAG]::<montype>,
   [<monval>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

```
RTRV-PM-E1:[TID]:<pm_id>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<aid>:MONTYPE=<montype>,MONVAL=<monval>,
      VLDTY=<vldty>,LOCN=<locn>,DIRN=<dirn>,
      TMPER=<tmper>,MONDAT=<mondat>,MONTM=<montm>"
;
```

Parameters:

pm_id Identifies the AID as an E1 port on a DS1 I/O module (by slot number and port number).

Type: PORT
Range: IOM-{1-17}-E1-{1-28}
Default value: none

aid Identifies the AID (for RTRV-PM output) as an E1 port on a DS1 I/O module (by slot number and port number).

Range: IOM-{1-17}-E1-{1-28}

montype Identifies a type of monitored parameter for E1 ports on DS3 IOMs.

Type: enum
Range: AISS = Alarm Indication Signal Seconds Count
ALL = All types
BBEC = Background Block Error Count
BBER1 = Background Block Error Ratio/Percentage (Type 1)
CV = Coding Violation
ESC = Errored Seconds Count
ESR1 = Errored Seconds Ratio/Percentage (Type 1)
ESR2 = Errored Seconds Ratio/Percentage (Type 2)
ESR3 = Errored Seconds Percentage (Type 3)
OOFS = Out Of Frame Seconds
LOSS = Loss of Signal Second Count
RAI = Received RAI Second Count
SESC = Severely Errored Seconds Count
SESR1 = Severely Errored Seconds Ratio/Percentage (Type 1)
SESR2 = Severely Errored Seconds Ratio/Percentage (Type 2)
SESR3 = Severely Errored Seconds Ratio/Percentage (Type 3)
SESR4 = Severely Errored Seconds Ratio/Percentage (Type 4)
UASC = Unavailable Seconds Count
Default value: ALL

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. See ITU-T G.826, Series G, for the range applicable for each *montype*. This parameter is presently unused (for INIT-REG); leave it blank. Accordingly, ratio-type monitored parameters have values set to 100 (percent) and seconds-count monitored parameters have values set to 900 seconds per 15-minute period or 86400 seconds per 24-hour period.

Type: integer
Range: {0-9999}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: none

locn Identifies the location of the storage registers or event counters identified by *montype*. A null value defaults to both “FEND” and “NEND”.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: both FEND and NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. A null value defaults to all applicable directions (currently only “BTH”). This parameter is presently unused; leave it blank. The switch currently returns only the value “BTH”.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-E1::IOM-1-E1-1;

RTRV-PM-E1::IOM-1-E1-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-E1-1:MONTYPE=ALL,MONVAL=100,VLDTY=COMPL,
      LOCN=NEND,DIRN=BTH,TMPER=15-MIN,MONDAT=04-08,
      MONTM=14-37"
;
```

Related Commands: none

INIT-REG-OC3 / RTRV-PM-OC3

Commands:

INIT-REG-OC3: Initialize Register OC3 Facility

RTRV-PM-OC3: Retrieve Performance Monitors OC3 Facility

Descriptions:

INIT-REG-OC3 instructs the switch to initialize one or more storage registers or event counters associated with specific OC3 ports in the switch. In most cases, registers contain performance data.

RTRV-PM-OC3 lets the user retrieve current and historical performance data for OC3 ports on IOMs.

Category: Facility **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-OC3:[TID]:<pm_id>:[CTAG]::<montype>,
   [<monval>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

```
RTRV-PM-OC3:[TID]:<pm_id>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<pm_id>:MONTYPE=<montype>,MONVAL=<monval>,
      VLDTY=<vldty>,LOCN=<locn>,DIRN=<dirn>,
      TMPER=<tmper>,MONDAT=<mondat>,MONTM=<montm>"
;
```

Parameters:

pm_id Identifies the AID as an OC3 port on an IOM (by slot number and port number).

Type: IOMorOC
Range: IOM-{1-17}-OC3-{1-4}
Default value: none

montype Identifies a type of monitored parameter for OC3 ports on IOMs.

Type: enum
Range: Specific monitored parameters for OC3 are listed in GR-253 and GR-199 Appendix C.8
Default value: ALL

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. See ITU-T G.826, Series G, for the range applicable for each *montype*. This parameter is presently unused (for INIT-REG); leave it blank. Accordingly, ratio-type monitored parameters have values set to 100 (percent) and seconds-count monitored parameters have values set to 900 seconds per 15-minute period or 86400 seconds per 24-hour period.

Type: integer
Range: {0-9999}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it. This parameter is not supported presently; its value will be “NULL”.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: none

locn Identifies the location of the storage registers or event counters identified by *montype*. This parameter is presently not supported; leave it blank.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. A null value defaults to all applicable directions (currently only "BTH"). This parameter is presently unused; leave it blank. The switch currently returns only the value "BTH".

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods. This parameter is presently not supported; leave it blank.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: 15-MIN

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-OC3::IOM-1-OC3-1;

RTRV-PM-OC3::IOM-1-OC3-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-OC3-1:MONTYPE=ALL,MONVAL=100,VLDTY=NULL,
      LOCN=NEND,DIRN=BTH,TMPER=15-MIN,MONDAT=04-08,
      MONTM=14-37"
;
```

Related Commands: none

INIT-REG-T1 / RTRV-PM-T1

Commands:

INIT-REG-T1: Initialize Register DS1 Facility

RTRV-PM-T1: Retrieve Performance Monitors DS1 Facility

Descriptions:

INIT-REG-T1 instructs the switch to initialize one or more storage registers or event counters associated with specific T1 ports in the switch. In most cases, registers contain performance data.

RTRV-PM-T1 lets the user retrieve current and historical performance data for T1 ports on DS3 IOMs.

Category: Facility **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-T1:[TID]:<pm_id>:[CTAG]::<montype>,
   [<monval>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

```
RTRV-PM-T1:[TID]:<pm_id>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<aid>:MONTYPE=<montype>,MONVAL=<monval>,
      VLDTY=<vldty>,LOCN=<locn>,DIRN=<dirn>,
      TMPER=<tmper>,MONDAT=<mondat>,MONTM=<montm>"
;
```

Parameters:

pm_id Identifies the AID as a T1 port on an I/O module. A null value for the T1 port on a DS3 I/O module is equivalent to "ALL"; that is, by leaving the "PORT" field blank, information for all T1 ports on the specified T3/STS1 port will be returned.

Type: T3orPORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}[-PORT-{1-28}]
IOM-{1-17}-T3-{1-8}[-PORT-{1-28}]
Default value: none

aid Identifies the AID (for RTRV-PM output) as a T1 port on an I/O module (by slot number and port number).

Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}

montype Identifies a type of monitored parameter for T1 ports on DS3 IOMs, as defined in ANSI T1.231-1997.

Type: enum
Range: AISS-P = Alarm Indication Signal Seconds Count – Path
ALL = All types
CSS-P = Controlled Slip Second – Path
CSS-PFE = Controlled Slip Second – Path, Far End
CV-L = Coding Violation – Line
CV-P = Coding Violation – Path
CV-PFE = Coding Violation – Path, Far End
ES-L = Errored Second – Line
ES-LFE = Errored Second – Line, Far End
ES-P = Errored Second – Path
ES-PFE = Errored Second – Path, Far End
ESA-P = Errored Second, type A – Path
ESA-PFE = Errored Second, type A – Path, Far End
ESB-P = Errored Second, type B – Path
ESB-PFE = Errored Second, type B – Path, Far End
FC = Failure Count
FC-FE = Failure Count – Far End
LOSS-L = Loss of Signal Seconds – Line
SAS-P = SEF/AIS (Severely Errored Frame / Alarm Indication Signal) Second – Path
SEFS-PFE = Severely Errored Frame Second – Path, Far End
SES-L = Severely Errored Second – Line
SES-P = Severely Errored Second – Path
SES-PFE = Severely Errored Second – Path, Far End
UAS-P = Unavailable Second – Path
UAS-PFE = Unavailable Second – Path, Far End
Default value: none

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. See ANSI T1.231-1997 for the range applicable for each *montype*. This parameter is presently unused (for INIT-REG); leave it blank.

Type: integer
Range: {0-9999}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: none

locn Identifies the location of the storage registers or event counters identified by *montype*. A null value defaults to both “FEND” and “NEND”.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: both FEND and NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. A null value defaults to all applicable directions (currently only “BTH”). This parameter is presently unused; leave it blank. The switch currently returns only the value “BTH”.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-T1::IOM-1-T3-1-PORT-1:::ALL,,NEND,,24-HR;

RTRV-PM-T1::IOM-1-T3-1-PORT-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-1-PORT-1:MONTYPE=ALL,MONVAL=100,
      VLDTY=COMPL,LOCN=NEND,DIRN=BTH,TMPER=15-MIN,
      MONDAT=04-08,MONTM=14-37"
;
```

Related Commands: none

INIT-REG-T3 / RTRV-PM-T3

Commands:

INIT-REG-T3: Initialize Register DS3 Facility

RTRV-PM-T3: Retrieve Performance Monitors DS3 Facility

Descriptions:

INIT-REG-T3 instructs the switch to initialize one or more storage registers or event counters associated with specific T3 ports in the switch. In most cases, registers contain performance data.

RTRV-PM-T3 lets the user retrieve current and historical performance data for DS3 ports.

Category: Facility **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-T3:[TID]:<pm_id>:[CTAG]::<montype>,
   [<monval>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

```
RTRV-PM-T3:[TID]:<pm_id>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<aid>:MONTYPE=<montype>,MONVAL=<monval>,
      VLDTY=<vldty>,LOCN=<locn>,DIRN=<dirn>,
      TMPER=<tmper>,MONDAT=<mondat>,MONTM=<montm>"
;
```

Parameters:

pm_id Identifies the AID either as a DS3 I/O module (by slot number), or as a T3 port on a DS3 I/O module (by slot number and port number).

Type: IOMorT3
Range: IOM-{1-17}
IOM-{1-17}- T3-{1-8}
Default value: none

aid Identifies the AID (for RTRV-PM output) either as a DS3 I/O module (by slot number), or as a T3 port on a DS3 I/O module (by slot number and port number).

Range: IOM-{1-17}
IOM-{1-17}-T3-{1-8}

montype Identifies a type of monitored parameter, as defined in ANSI T1.231-1997.

Type: enum

Range: AISS-P = Alarm Indication Signal Seconds – Path
ALL = All types
CVCP-P = Coding Violation – Path, DS3 CP-bit parity
CVCP-PFE = Coding Violation – Path, Far End, DS3 CP-bit parity
CVL = Coding Violation – Line
CVP-P = Coding Violation – Path, P-bit parity
ESA-L = Errored Second , type A – Line
ESACP-P = Errored Second , type A – Path, DS3 CP-bit parity
ESACP-PFE = Errored Second , type A – Path, DS3 CP-bit parity, Far End
ESAP-P = Errored Second , type A – Path, DS3 P-bit parity
ESB-L = Errored Second , type B – Line
ESBCP-P = Errored Second , type B – Path, DS3 CP-bit parity
ESBCP-PFE = Errored Second , type B – Path, DS3 CP-bit parity, Far End
ESBP-P = Errored Second , type B – Path, DS3 P-bit parity
ESCP-P = Errored Second – Path, DS3 CP-bit parity
ESCP-PFE = Errored Second – Path, DS3 CP-bit parity, Far End
ESL = Errored Second – Line
ESP-P = Errored Second – Path, P-bit parity
FCCP-PFE = Failure Count – Path, DS3 CP-bit parity, Far End
FCP = Failure Count – Path, Near End
LOSS-L = Loss of Signal Seconds count – Line
SAS-P = SEF/AIS Second count
SASCP-P = SEF/AIS Second – CP-bit parity
SES-P = Severely Errored Second – Path
SESCP-P = Severely Errored Second – Path, DS3 CP-bit parity
SESCP-PFE = Severely Errored Second – Path, DS3 CP-bit parity, Far End
SESL = Severely Errored Second – Line
UASCP-P = Unavailable Second – Path, DS3 CP-bit parity
UASCP-PFE = Unavailable Second – Path, DS3 CP-bit parity, Far End
UASP-P = Unavailable Second – Path, P-bit parity

Default value: none

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. See ANSI T1.231-1997 for the range applicable for each *montype*. This parameter is presently unused (for INIT-REG); leave it blank.

Type: integer
Range: {0-9999}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP". Do not set the value to “0-UP” when the value of *montype* is “ALL”, as the large amount of data returned could overload the output buffer of the client application and cause the TL1 session to freeze.

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: none

locn Identifies the location of the storage registers or event counters identified by *montype*. A null value defaults to both “FEND” and “NEND”. The value “FEND” applies only to T3 ports with C-bit parity format for DS3 digital signal framing (The value of *fmt* in ENT-T3 is “CBIT”.).

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: both FEND and NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. A null value defaults to all applicable directions (currently only "BTH"). This parameter is presently unused; leave it blank. The switch currently returns only the value "BTH".

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-T3::IOM-1-T3-1:::ALL,,NEND,,24-HR;
```

```
RTRV-PM-T3::IOM-1-T3-1-PORT-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-1:MONTYPE=ALL,MONVAL=100,VLDTY=COMPL,
      LOCN=NEND,DIRN=BTH,TMPER=15-MIN,MONDAT=04-08,
      MONTM=14-37"
;
```

Related Commands: none

OPR/RLS-LPBK-ENET

Commands:

OPR-LPBK-ENET: Operate Loopback ENET Facility

RLS-LPBK-ENET: Release Loopback ENET Facility

Descriptions:

OPR-LPBK-ENET lets the user operate a loopback on a specified (out of service) Ethernet port associated with a test access session in the switch. The loop may be accomplished at either the near or the far end, or on the line. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV-COND message.

RLS-LPBK-ENET lets the user release a loopback on a specified Ethernet port associated with a test access session in the switch. The loop may be released from either the near or the far end. The switch issues an error response if not in a state that allows a loopback to occur. A switch that has a loopback in effect includes the appropriate condition type information in response to a RTRV COND message.

Category: Facility **Security:** SA for both commands

Input Formats:

```
OPR-LPBK-ENET:[TID]:<enetId>:[CTAG]::[<locn>],
   [<orgn>],[<intext>],[<lpbktype>];
```

```
RLS-LPBK-ENET:[TID]:<enetId>:[CTAG]::[<locn>],
   [<orgn>],[<intext>],[<lpbktype>];
```

Output Format: none

Parameters:

enetId Identifies the AID as the Ethernet port on an I/O module in the switch on which the loopback is performed or released.

Type: ENET
Range: IOM-{8,10}-ENET-{1-4}
Default value: none

locn Identifies the location where the loopback occurs. The value "FEND" is not supported.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

orgn Identifies the office originating the looped-back signal. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end office
NEND = Near end office
BOTH = Both offices
Default value: null

intext Directs the switch to provide or release a loopback that is with/without the benefit of signal processing, such as reshaping, recoding, scrambling, retiming, etc. A null value indicates that this parameter is not applicable. This parameter is not supported presently; leave it blank.

Type: enum
Range: EXT = External
INT = Internal
Default value: null

lpbktype Identifies the type of loopback signal to be operated. Depending on the transmission system, various parts of a signal may be looped back. For example, the LINE loopback may very well be a full metallic loopback, while a PAYLOAD loopback may result in a signal that has been recoded with new and different header and/or CRC information. A null value indicates that this parameter is not applicable. This parameter is presently not supported; leave it blank.

Type: enum
Range: LINE = 44.736 Mbps loopback signal
PAYLOAD = 44.512 Mbps loopback signal
Default value: null

Input Examples:

```
OPR-LPBK-ENET::IOM-8-ENET-1;
RLS-LPBK-ENET::IOM-8-ENET-1;
```

Related Commands: none

OPR/RLS-PROTNSW-OC3

Commands:

OPR-PROTNSW-OC3: Operate Protection switch OC3 Facility

RLS-PROTNSW-OC3: Release Protection switch OC3 Facility

Descriptions:

OPR-PROTNSW-OC3 lets the user initiate an external SONET line protection request on an OC3 port. The request remains active until it is released via the RLS-PROTNSW-OC3 command or is overridden by a higher priority, externally initiated or automatic, protection switch request. The following switch commands are supported (in order of decreasing priority): LOCKOUT (Lockout), FRCD (Forced switch) and MAN (Manual switch).

- Manual switch of Protection Line (to Working Line): If the AID identifies the protection line, then service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.
- Manual switch of Working Line (to Protection Line): If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.
- Forced switch of Protection Line (to Working Line): If the AID identifies the protection line, then service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.
- Forced switch of Working Line (to Protection Line): If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.
- Lockout of Protection Line: If the AID identifies protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

RLS-PROTNSW-OC3 lets the user release an external SONET line protection request.

Category: Facility **Security:** SA for both commands

Input Formats:

```
OPR-PROTNSW-OC3:[TID]:<oc_id>:[CTAG]::<sc>;
RLS-PROTNSW-OC3:[TID]:<oc_id>:[CTAG];
```

Output Format: none

Parameters:

oc_id Identifies the AID as the OC3 port on an I/O module in the switch to switch to protection (for OPR) or switch back from protection (for RLS). Although the range of IOMs is {1-17}, you cannot use slots 5, 6, 9, 12, or 13.

Type: ENET
Range: IOM-{1-17}-OC3-{1-4}
Default value: none

sc Identifies the external APS request (switch command).

Type: enum
Range: FRCD = Forced switch of working to protection
LOCKOUT = Lockout of protection
MAN = Manual switch of working to protection
Default value: none

Input Examples:

```
OPR-PROTNSW-OC3::IOM-8-OC3-1:::FRCD;
RLS-PROTNSW-OC3::IOM-8-OC3-1;
```

Related Commands: none

RTRV-INFO-STS1

Command:

RTRV-INFO-STS1: Retrieve Information STS1 Facility

Description:

RTRV-INFO-STS1 lets the user retrieve information about STS1 ports. Retrieved information includes the path trace message, the content of the STS SPE, the STS Path RDI, and the Signal Label portion of the V5 byte.

Category: Facility **Security:** View

Input Format:

```
RTRV-INFO-STS1:[TID]:<sts_id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<sts_id>:STSTRACE=<ststrace>,
      STSPAYLOAD=<stspayload>,PATHRDI=<pathrdi>,
      VTPAYLOAD=<vtpayload>"
;
```

Parameters:

sts_id Identifies the AID as an I/O module or an STS1 port on an I/O module in the switch.

Type: IOMorSTS1
Range: IOM-{1-17}
IOM-{1-17}-STS1-{1-8}
Default value: none

ststrace Identifies the path trace message to be received. Trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string (the last two bytes of which are a CR and an LF), one byte at a time. A null value causes the switch to transmit 62 NULL chars (Hex 00), a CR, and an LF.

Type: string
Range: up to 62 ASCII characters
Default value: none

stspayload Identifies the STS Path Signal Label byte (C2), as defined in GR-253, to indicate the content of the STS SPE (Synchronous Payload Envelope).

Type: integer
Range: three digits representing a two-character hex code
Default value: none

pathrdi Identifies the STS Path RDI (Remote Defect Indicator) signal portion of the STS Path Status byte (G1), as defined in GR-253, to convey the Path terminating status and performance back to the originating STS PTE (Path Terminating Equipment).

Type: integer
Range: four digits representing a three-character hex code
Default value: none

vtpayload Identifies the Signal Label portion of the VT Path Overhead byte (V5) for the 28 possible virtual tributaries

Type: string
Range: up to 28 digits separated by commas
Default value: none

Input Example:

```
RTRV-INFO-STS1::IOM-1-STS1-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-STS1-1:STSTRACE=TRACE1,STSPAYLOAD=123,
      PATHRDI=1234,VTPAYLOAD=2,2,2,2,2,2,2,2,2,2,2,2,
      2,2,2,2,2,2,2,2,2,2,2,2,2,2"
;
```

Related Commands: none

RTRV-PM-C

Command:

RTRV-PM-C: Retrieve Performance Monitoring Compressed

Description:

RTRV-PM-C lets the user retrieve current and historical performance data for all ports on an IOM in a compressed format; that is, it returns performance data only for those montypes that exceed their specified thresholds, regardless of the type of port.

Category: Facility **Security:** View

Input Format:

```
RTRV-PM-C:[TID]:<pm_id>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<pm_id>:<montype>,<monval>,[<vldty>],[<locn>],
      [<dirn>],[<tmper>],[<mondat>],[<montm>]"
;
```

Parameters:

pm_id Identifies the AID as a DS3 I/O module by slot number.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum

Range: AISS-P = Alarm Indication Signal Seconds – Path
ALL = All types
CVCP-P = Coding Violation – Path, DS3 CP-bit parity
CVCP-PFE = Coding Violation – Path, Far End, DS3 CP-bit parity
CVL = Coding Violation – Line
CVP-P = Coding Violation – Path, P-bit parity
ESA-L = Errored Second , type A – Line
ESACP-P = Errored Second , type A – Path, DS3 CP-bit parity
ESACP-PFE = Errored Second , type A – Path, DS3 CP-bit parity, Far End
ESAP-P = Errored Second , type A – Path, DS3 P-bit parity
ESB-L = Errored Second , type B – Line
ESBCP-P = Errored Second , type B – Path, DS3 CP-bit parity
ESBCP-PFE = Errored Second , type B – Path, DS3 CP-bit parity, Far End
ESBP-P = Errored Second , type B – Path, DS3 P-bit parity
ESCP-P = Errored Second – Path, DS3 CP-bit parity
ESCP-PFE = Errored Second – Path, DS3 CP-bit parity, Far End
ESL = Errored Second – Line
ESP-P = Errored Second – Path, P-bit parity
FCCP-PFE = Failure Count – Path, DS3 CP-bit parity, Far End
FCP = Failure Count – Path, Near End
LOSS-L = Loss of Signal Seconds count – Line
SAS-P = SEF/AIS Second count
SASCP-P = SEF/AIS Second – CP-bit parity
SASCP-PFE = Far End SEF/AIS Second – CP-bit parity
SES-P = Severely Errored Second – Path
SESCP-P = Severely Errored Second – Path, DS3 CP-bit parity
SESCP-PFE = Severely Errored Second – Path, DS3 CP-bit parity, Far End
SESL = Severely Errored Second – Line
UASCP-P = Unavailable Second – Path, DS3 CP-bit parity
UASCP-PFE = Unavailable Second – Path, DS3 CP-bit parity, Far End
UASP-P = Unavailable Second – Path, P-bit parity

Default value: ALL

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

monval Identifies (in output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates.

Type: integer
Range: {1-9999}
Default value: none

vldty Identifies (in output) the validity of the monitored interval.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: none

locn Identifies the location of the storage registers or event counters identified by *montype*.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. The switch currently returns only the value “BTH”.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR".

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
NA = Not applicable (no value)
Default value: 15-MIN

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Example:

```
RTRV-PM-C::IOM-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-1:ALL,100,PRTL,FEND,RCV,24-HR,04-08,
      08-45"
;
```

Related Commands: None

RTRV-PM-RSRC

Command:

RTRV-PM-RSRC: Retrieve Performance Monitoring Resource

Description:

RTRV-PM-RSRC lets the user retrieve current and historical performance data for CPUs on a Compute Module (in an IOM slot) or on a System Processor module; that is, it returns performance data only for those montypes that exceed their specified thresholds, regardless of the type of CPU.

Category: Facility **Security:** View

Input Format:

```
RTRV-PM-RSRC:[TID]:<pm_id>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<pm_id>:<montype>,<monval>,[<vldty>],[<locn>],
      [<dirn>],[<tmper>],[<mondat>],[<montm>]"
;
```

Parameters:

pm_id Identifies the AID as a CPU on a Compute Module (in an IOM slot) or on a System Processor module. If you do not specify a CPU, the returned data applies to CPU-A.

Type: IOMODULE
Range: IOM-{1-17}[-CPU-{A-D}]
SP-{A,B}[-CPU-{A,B}]
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data.

Type: enum

Range: ALL = All types
avgCpuUsage = average percent of the CPU used in the last time period
blkDevFree = The number of available block devices (1-999)
blkDevOpen = the number of block devices open (1-999)
bufsDenied = the number of mBuf/cluster requests that failed (1-99999)
charDevFree = The number of available character devices (1-999)
charDevOpen = the number of character devices open (1-999)
clustersFree = the number of IP memory clusters free (1-99999)
clustersUsed = the number of IP memory clusters used (1-99999)
cpuMemDisk = Return all CPU, memory, and disk monitored types
diskFree1 = Current amount of NV storage marked as free by the OS (1-1000000 KB)
diskFree2 = Current amount of NV storage marked as free by the OS (1-1000000 KB)
diskFree3 = Current amount of NV storage marked as free by the OS (1-1000000 KB)
diskFree4 = Current amount of NV storage marked as free by the OS (1-1000000 KB)
diskFree5 = Current amount of NV storage marked as free by the OS (1-1000000 KB)
diskUsed1 = Current amount of non-volatile storage (disk) marked as used by the OS (1-1000000 KB)
diskUsed2 = Current amount of non-volatile storage (disk) marked as used by the OS (1-1000000 KB)
diskUsed3 = Current amount of non-volatile storage (disk) marked as used by the OS (1-1000000 KB)
diskUsed4 = Current amount of non-volatile storage (disk) marked as used by the OS (1-1000000 KB)
diskUsed5 = Current amount of non-volatile storage (disk) marked as used by the OS (1-1000000 KB)
filesFree = The number of available files (1-999)
filesOpen = The total number of open files (1-999)
filesOpenDisk = the number of disk files open (1-999)
filesOpenNFS = the number of NFS files open (1-999)
mBufsFree = the number of IP memory buffers free (1-99999)

mBufsUsed = the number of IP memory buffers used (1-99999)
memFree = Current amount of memory marked as free by the OS (1-1000000 KB)
memUsed = Current amount of memory marked as used by the OS (1-1000000 KB)
peakCpuUsage = Peak CPU usage during last time period in percent
pipesFree = The number of available pipes (1-999)
pipesOpen = the number of pipes open (1-999)
procsActive = the number of processes launched (1-999)
procsFree = The number of process slots that are free (1-999)
procsReady = The number of processes in the ready state (1-999)
procsRunning = The number of processes in the running state (1-999)
procsStopped = The number of processes in the stopped state (1-999)
procsSuspended = The number of processes in the suspended state (1-999)
procsWaiting = The number of processes in the waiting state (1-999)
procsZombie = The number of processes in the zombie state (1-999)
socketsFree = The number of available sockets (1-999)
socketsOpen = the number of sockets open (1-999)
threadsActive = the number of threads launched (1-999)
threadsDead = Whats a dead thread? (1-999)
threadsFree = The number of thread slots that are free (1-999)
threadsReady = The number of threads in the ready state (1-999)
threadsRunning = The number of threads in the running state (1-999)
threadsStopped = The number of threads in the stopped state (1-999)
threadsSuspended = The number of threads in the suspended state (1-999)
threadsWaiting = The number of threads in the waiting state (1-999)
threadsZombie = The number of threads in the zombie state (1-999)

Default value: ALL

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP". This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

monval Identifies (in output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates.

Type: integer
Range: {1-9999}
Default value: none

vldty Identifies (in output) the validity of the monitored interval.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: none

locn Identifies the location of the storage registers or event counters identified by *montype*. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. The switch currently returns only the value “BTH”. This parameter is not supported presently; leave it blank.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". This parameter is not supported presently; leave it blank.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
NA = Not applicable (no value)
Default value: 15-MIN

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Example:

```
RTRV-PM-RSRC::SP-A;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "SP-A-CPU-A:PEAKCPUUSAGE,13,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:AVGCPUUSAGE,5,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:MEMUSED,561260,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:MEMFREE,216980,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:DISKUSED1,19615,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:DISKFREE1,13253,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:DISKUSED2,26366,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:DISKFREE2,18304,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:DISKUSED3,12458,,,,60-SEC,1-28,14-27-0"
   "SP-A-CPU-A:DISKFREE3,43243,,,,60-SEC,1-28,14-27-0"
;
```

Related Commands: None

RTRV/SET-TH-E1

Commands:

RTRV-TH-E1: Retrieve Threshold E1 Facility

SET-TH-E1: Set Threshold E1 Facility

Descriptions:

RTRV-TH-E1 lets the user retrieve the current threshold level of one or more monitored performance counts associated with specific E1 ports in the switch. The violation of these thresholds will trigger a condition. Provision thresholds with SET-TH.

SET-TH-E1 lets the user set the performance monitoring parameter threshold levels for E1 ports on DS3 IOMs. This command cannot be used to turn off threshold crossing alerts; i.e., the threshold level cannot be set to some "non-applicable" value. The switch sends a REPT ALM or REPT EVT message when thresholds are exceeded, depending on the notification code associated with the threshold condition. Threshold setting for multiple monitored parameters requires multiple invocations of this command – wildcarding is not permitted.

Category: Facility **Security:** NSA for SET-TH, View for RTRV-TH

Input Formats:

```
RTRV-TH-E1:[TID]:<pm_id>:[CTAG]::[<montype>],[<locn>],
   [<tmper>];

SET-TH-E1:[TID]:<pm_id>:[CTAG]::<montype>,<thlev>,
   [<locn>],[<dirn>],[<tmper>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pm_id>:<montype>,[<locn>],<thlev>,[<tmper>]"
;
```

Parameters:

pm_id Identifies the AID as an E1 port on an I/O module.

Type: PORT
Range: IOM-{1-17}-E1-{1-28}
Default value: none

montype Identifies a type of monitored parameter for E1 ports on DS3 IOMs, as defined in ITU-T G.826, Series G. A null value (in RTRV input) is equivalent to "ALL".

Type: enum
Range: AISS = Alarm Indication Signal Seconds Count
ALL = All types
BBEC = Background Block Error Count
BBER1 = Background Block Error Ratio/Percentage (Type 1)
CV = Coding Violation
ESC = Errored Seconds Count
ESR1 = Errored Seconds Ratio/Percentage (Type 1)
ESR2 = Errored Seconds Ratio/Percentage (Type 2)
ESR3 = Errored Seconds Percentage (Type 3)
LOSS = Loss of Signal Second Count
OOFS = Out Of Frame Seconds
RAI = Received RAI Second Count
SESC = Severely Errored Seconds Count
SESR1 = Severely Errored Seconds Ratio/Percentage (Type 1)
SESR2 = Severely Errored Seconds Ratio/Percentage (Type 2)
SESR3 = Severely Errored Seconds Ratio/Percentage (Type 3)
SESR4 = Severely Errored Seconds Ratio/Percentage (Type 4)
UASC = Unavailable Seconds Count
Default value: ALL

thlev Identifies (for SET-TH and RTRV-TH output) the current threshold level for the monitored parameter identified by *montype*.

Type: integer
Range: {0 – 536870911}
Default value: none

locn Identifies the location of the storage registers or event counters to be initialized. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction in which to set the threshold relative to the entity identified by the AID. This parameter is not supported presently; leave it blank.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR".

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: 15-MIN

Input Examples:

```
RTRV-TH-E1::IOM-1-E1-1:::LOSS,,,15-MIN;
```

```
SET-TH-E1::IOM-1-E1-1:::LOSS,900,,,15-MIN;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-E1-1:LOSS,NEND,BTH,900,15-MIN"
;
```

Related Commands: none

RTRV/SET-TH-T1

Commands:

RTRV-TH-T1: Retrieve Threshold DS1 Facility

SET-TH-T1: Set Threshold DS1 Facility

Descriptions:

RTRV-TH-T1 lets the user retrieve the current threshold level of one or more monitored performance counts associated with specific T1 ports in the switch. The violation of these thresholds will trigger a condition. Provision thresholds with SET-TH.

SET-TH-T1 lets the user set the performance monitoring parameter threshold levels for T1 ports on DS3 IOMs. This command cannot be used to turn off threshold crossing alerts; i.e., the threshold level cannot be set to some "non-applicable" value. The switch sends a REPT ALM or REPT EVT message when thresholds are exceeded, depending on the notification code associated with the threshold condition. Threshold setting for multiple monitored parameters requires multiple invocations of this command – wildcarding is not permitted.

Category: Facility **Security:** NSA for SET-TH, View for RTRV-TH

Input Formats:

```
RTRV-TH-T1:[TID]:<pm_id>:[CTAG]::[<montype>],[<locn>],
   [<tmper>];

SET-TH-T1:[TID]:<pm_id>:[CTAG]::<montype>,<thlev>,
   [<locn>],[<dirn>],[<tmper>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pm_id>,[<entitytype>]:<montype>,[<locn>],<thlev>,
      [<tmper>]"
;
```

Parameters:

pm_id Identifies the AID (for SET and RTRV output) as a T1 port on an I/O module.

Type: T3orPORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}[-PORT-{1-28}]
IOM-{1-17}-T3-{1-8}[-PORT-{1-28}]
Default value: none

pm_id Identifies the AID (for RTRV input) as either a T1, T3, or STS1 port on an I/O module.

Type: T3orPORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}[-PORT-{1-28}]
IOM-{1-17}-T3-{1-8}[-PORT-{1-28}]
Default value: none

entitytype Identifies (for RTRV-TH output) the type of facility, link, or other addressable entity targeted by the message.

Type: enum
Range: ALL = Keyword for all entities in range.
COM = Common – designates the switch
EQPT = Equipment
LINE = Subscriber line
LINK = Link (except OS/NE link)
PLK = Packet link
SLK = Signaling link
T0 = DS0
T1 = DS1
T3 = DS3
TRK = Trunk
Default value: not applicable for output

montype Identifies a type of monitored parameter for T1 ports on DS3 IOMs, as defined in ANSI T1.231-1997. A null value (in RTRV input) is equivalent to "ALL".

Type: enum

Range: AISS-P = Alarm Indication Signal Seconds Count – Path
ALL = All types (RTRV input only – not valid for SET)
CSS-P = Controlled Slip Second – Path
CV-L = Coding Violation – Line
CV-P = Coding Violation – Path
CV-PFE = Coding Violation – Path, Far End
ES-L = Errored Second – Line
ES-LFE = Errored Second – Line, Far End
ES-P = Errored Second – Path
ES-PFE = Errored Second – Path, Far End
ESA-P = Errored Second, type A – Path
ESA-PFE = Errored Second, type A – Path, Far End
ESB-P = Errored Second, type B – Path
ESB-PFE = Errored Second, type B – Path, Far End
FC = Failure Count
FC-FE = Failure Count – Far End
LOSS-L = Loss of Signal Seconds – Line
SAS-P = SEF/AIS (Severely Errored Frame / Alarm Indication Signal) Second – Path
SEFS-PFE = Severely Errored Frame Second – Path, Far End
SES-L = Severely Errored Second – Line
SES-P = Severely Errored Second – Path
SES-PFE = Severely Errored Second – Path, Far End
UAS-P = Unavailable Second – Path
UAS-PFE = Unavailable Second – Path, Far End

Default value: ALL

thlev Identifies (for SET-TH and RTRV-TH output) the current threshold level for the monitored parameter identified by *montype*. The value for *thlev* (in SET-TH) must be within the range specified for the affected *montype* in Table 17 of ANSI T1.231-1997 (extracted below).

Type: integer
Range:

Parameter	Threshold range	
	15 minute	Day
CV	1-16383	1-1048575
CSS, ES, SAS, SES, UAS	1-900	1-65535

Notes:
1. For CVs, the upper end of the range is based on a 14-bit register for the 15-minute interval and a 20-bit register for the 1-day interval.
2. The 15-minute and 1-day ranges for the CSS, ES, SAS, SES, and UAS parameters correspond to 100% and 76% of possible seconds, respectively.

Default value: none

locn Identifies the location of the storage registers or event counters to be initialized. A null value defaults to both "FEND" and "NEND".

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: both FEND and NEND

dirn Identifies the direction in which to set the threshold relative to the entity identified by the AID. A null value defaults to all applicable directions (currently only "BTH"). This parameter is not supported presently; leave it blank.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

Input Examples:

```
RTRV-TH-T1::IOM-1-T3-1-PORT-1:::LOSS-L,NEND,15-MIN;

SET-TH-T1::IOM-1-T3-1-PORT-1:::LOSS-L,900,NEND,,
   15-MIN;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-1-PORT-1,T1:LOSS-L,NEND,900,15-MIN"
;
```

Related Commands: none

RTRV/SET-TH-T3

Commands:

RTRV-TH-T3: Retrieve Threshold DS3 Facility

SET-TH-T3: Set Threshold DS3 Facility

Descriptions:

RTRV-TH-T3 lets the user retrieve the current threshold level of one or more monitored performance counts associated with specific T3 ports in the switch. The violation of these thresholds will trigger a condition. Provision thresholds with SET-TH.

SET-TH-T3 lets the user set the performance monitoring parameter threshold levels for T3 ports. This command cannot be used to turn off threshold crossing alerts; i.e., the threshold level cannot be set to some "non-applicable" value. The switch sends a REPT ALM or REPT EVT message when thresholds are exceeded, depending on the notification code associated with the threshold condition. Threshold setting for multiple monitored parameters requires multiple invocations of this command – wildcarding is not permitted.

Category: Facility **Security:** NSA for SET-TH, View for RTRV-TH

Input Formats:

```
RTRV-TH-T3:[TID]:<pm_id>:[CTAG]::[<montype>],[<locn>],
   [<tmper>];
```

```
SET-TH-T3:[TID]:<pm_id>:[CTAG]::<montype>,<thlev>,
   [<locn>],[<dirn>],[<tmper>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pm_id>,[<entitytype>]:<montype>,[<locn>],<thlev>,
      [<tmper>]"
;
```

Parameters:

pm_id Identifies the AID (for SET and RTRV input) either as a DS3 I/O module (by slot number), or as a T3 port on a DS3 I/O module (by slot number and port number).

Type: IOMorT3
Range: IOM-{1-17}
IOM-{1-17}- T3-{1-8}
Default value: none

pm_id Identifies the AID (for RTRV output) as a T3 port on a DS3 I/O Module in the switch.

Type: T3
Range: IOM-{1-17}-T3-{1-8}
Default value: none

entitytype Identifies (for RTRV-TH output) the type of facility, link, or other addressable entity targeted by the message.

Type: enum
Range: ALL = Keyword for all entities in range.
COM = Common – designates the switch
EQPT = Equipment
LINE = Subscriber line
LINK = Link (except OS/NE link)
PLK = Packet link
SLK = Signaling link
T0 = DS0
T1 = DS3
T3 = DS3
TRK = Trunk
Default value: not applicable for output

montype Identifies a type of monitored parameter for T1 ports on DS3 IOMs, as defined in ANSI T1.231-1997. A null value (in RTRV input) is equivalent to "ALL". Monitored parameters at the far end are valid only when the value of *fmt* in ENT-T3 is “CBIT”.

Type: enum

Range: AISS-P = Alarm Indication Signal Seconds – Path
ALL = All types (RTRV input only – not valid for SET)
CVCP-P = Coding Violation – Path, DS3 CP-bit parity
CVL = Coding Violation – Line
CVP-P = Coding Violation – Path, P-bit parity
ESA-L = Errored Second , type A – Line
ESACP-P = Errored Second , type A – Path, DS3 CP-bit parity
ESACP-PFE = Errored Second , type A – Path, DS3 CP-bit parity, Far End
ESAP-P = Errored Second , type A – Path, DS3 P-bit parity
ESB-L = Errored Second , type B – Line
ESBCP-P = Errored Second , type B – Path, DS3 CP-bit parity
ESBCP-PFE = Errored Second , type B – Path, DS3 CP-bit parity, Far End
ESBP-P = Errored Second , type B – Path, DS3 P-bit parity
ESCP-P = Errored Second – Path, DS3 CP-bit parity
ESCP-PFE = Errored Second – Path, DS3 CP-bit parity, Far End
ESL = Errored Second – Line
ESP-P = Errored Second – Path, P-bit parity
FCCP-PFE = Failure Count – Path, DS3 CP-bit parity, Far End
FCP = Failure Count – Path, Near End
LOSS-L = Loss of Signal Seconds count – Line
SAS-P = SEF/AIS Second count
SES-P = Severely Errored Second – Path
SESCP-P = Severely Errored Second – Path, DS3 CP-bit parity
SESCP-PFE = Severely Errored Second – Path, DS3 CP-bit parity, Far End
SESL = Severely Errored Second – Line
UASCP-P = Unavailable Second – Path, DS3 CP-bit parity
UASCP-PFE = Unavailable Second – Path, DS3 CP-bit parity, Far End
UASP-P = Unavailable Second – Path, P-bit parity

Default value: ALL

thlev Identifies (for SET-TH and RTRV-TH output) the current threshold level for the monitored parameter identified by *montype*. The value for *thlev* (in SET-TH) must be within the range specified for the affected *montype* in Table 17 of ANSI T1.231-1997 (extracted below).

Type: integer
Range:

Parameter	Threshold range	
	15 minute	Day
CV	1-16383	1-1048575
CSS, ES, SAS, SES, UAS	1-900	1-65535

Notes:
1. For CVs, the upper end of the range is based on a 14-bit register for the 15-minute interval and a 20-bit register for the 1-day interval.
2. The 15-minute and 1-day ranges for the CSS, ES, SAS, SES, and UAS parameters correspond to 100% and 76% of possible seconds, respectively.

Default value: none

locn Identifies the location of the storage registers or event counters to be initialized. A null value defaults to both "FEND" and "NEND".

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: both FEND and NEND

dirn Identifies the direction in which to set the threshold relative to the entity identified by the AID. A null value defaults to all applicable directions (currently only "BTH"). This parameter is not supported presently; leave it blank.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

Input Examples:

```
RTRV-TH-T3::IOM-1-T3-1:::LOSS-L,NEND,15-MIN;
```

```
SET-TH-T3::IOM-1-T3-1:::LOSS-L,900,NEND,,15-MIN;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3,T3:LOSS-L,NEND,900,15-MIN"
;
```

Related Commands: none

RTRV-STATE-PORTS

Command:

RTRV-STATE-PORTS: Retrieve State Ports

Description:

RTRV-STATE-PORTS lets the user retrieve the primary and secondary states for all ports on a specific IOM.

Category: Facility **Security:** View

Input Format:

```
RTRV-STATE-PORTS:[TID]:<ioModule>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<port>:<pst>,<sst>"
;
```

Parameters:

ioModule Identifies the AID (in input) as an I/O module in the switch.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

port Identifies the AID (in output) as a T1 port on an I/O Module in the switch.

Type: PORT
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

pst Identifies the primary state of the port.

Type: enum
Range: IS = In-Service
IS-NR = In-Service, Normal
OOS = Out-Of-Service
OOS-AU = Out-Of-Service, Autonomous
OOS-MA = Out-Of-Service, Managed
OOS-AUMA = Out-Of-Service, Autonomous and Managed
Default value: none

sst Identifies the secondary state of the port.

Type: enum
Range: ACT = Active
FAF = Facilities Failure
FEPO = Far End Processor Outage
FLT = Faulted
LPBK = Loopback
SGEO = Supporting Entity Outage
UAS = Unassigned
WRK = Working
Default value: AINS

Input Example:

```
RTRV-STATE-PORTS::IOM-2;
```

Output Examples:

Example 1: DS1 IOM

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-2-PORT-1:OOS-AU,FAF"
   "IOM-2-PORT-2:OOS-AU,FAF"
   "IOM-2-PORT-3:OOS-AU,FAF"
   "IOM-2-PORT-4:OOS-AU,FAF"
   "IOM-2-PORT-5:OOS-AU,FAF"
   "IOM-2-PORT-6:OOS-AU,FAF"
   "IOM-2-PORT-7:OOS-AU,FAF"
   "IOM-2-PORT-8:OOS-AU,FAF"
   "IOM-2-PORT-9:OOS-AU,FAF"
   "IOM-2-PORT-10:OOS-AU,FAF"
   "IOM-2-PORT-11:OOS-AU,FAF"
   "IOM-2-PORT-12:OOS-AU,FAF"
   "IOM-2-PORT-13:OOS-AU,FAF"
   "IOM-2-PORT-14:OOS-AU,FAF"
```

```
   "IOM-2-PORT-15:OOS-AU,FAF"
   "IOM-2-PORT-16:OOS-AU,FAF"
   "IOM-2-PORT-17:OOS-AU,FAF"
   "IOM-2-PORT-18:OOS-AU,FAF"
   "IOM-2-PORT-19:OOS-AU,FAF"
   "IOM-2-PORT-20:OOS-AU,FAF"
   "IOM-2-PORT-21:OOS-AU,FAF"
   "IOM-2-PORT-22:OOS-AU,FAF"
   "IOM-2-PORT-23:OOS-AU,FAF"
   "IOM-2-PORT-24:OOS-AU,FAF"
   "IOM-2-PORT-25:OOS-AU,FAF"
   "IOM-2-PORT-26:IS"
   "IOM-2-PORT-27:IS"
   "IOM-2-PORT-28:IS"
;
```

Example 2: DS3 IOM

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-2-T3-1-PORT-1:OOS-AU,FAF"
   […]
   "IOM-2-T3-1-PORT-28:OOS-AU,FAF"
   "IOM-2-T3-2-PORT-1:OOS-AU,FAF"
   […]
   "IOM-2-T3-2-PORT-28:OOS-AU,FAF"
   […]
;
```

Related Commands: none

NOTES

DLT/ENT/RTRV-IPROUTE

Commands:

DLT-IPROUTE: Delete IPROUTE

ENT-IPROUTE: Enter IPROUTE

RTRV-IPROUTE: Retrieve IPROUTE

Descriptions:

DLT-IPROUTE lets the user delete an established route.

ENT-IPROUTE lets the user establish an IP route from a gateway on the local subnet to a specified destination network.

RTRV-IPROUTE lets the user retrieve the IP address of the gateway on the local subnet used to reach a specified destination network.

Category: Equipment **Security:** SA for all commands

Input Formats:

```
DLT-IPROUTE:[TID]:<srcid>:[CTAG];
ENT-IPROUTE:[TID]:<srcid>:[CTAG]::GATEWAY=<gateway>;
RTRV-IPROUTE:[TID]:<srcid>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<srcid>:GATEWAY=<gateway>"
;
```

Parameters:

srcid Identifies the AID as a configured route by defining the affected module, the destination IP address, and the subnet mask in CIDR (Classless Inter-Domain Routing) notation. You can add a default gateway to an SP by specifying destination IP address "0.0.0.0" with subnet mask "0" (and the mandatory subnet gateway parameter). The subnet mask must be "0" when the IP address is "0.0.0.0". You cannot use IP address "127.0.0.1" (reserved for loopback) or "255.255.255.255" (reserved for broadcast).

Type: string
Range: <spOrIom>-<destIpAddr>-<subnetMask>, where
spOrIom = IOM-{8,10}
SPMGT (results in a static route established over the management interface)
SPSIG (results in a static route established over either the ACCESS or CORE signaling interfaces)
destIpAddr = {0-255}.{0-255}.{0-255}.{0-255}
subnetMask = {0-32}
Default value: none

gateway Identifies the IP address of the gateway on the local subnet used to reach the specified destination network. You cannot use IP addresses "0.0.0.0" (reserved for loopback), "127.0.0.1" (reserved for loopback), and "255.255.255.255" (reserved for broadcast).

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

Input Examples:

```
DLT-IPROUTE::SPMGT-0.0.0.0-0;

ENT-IPROUTE::SPMGT-0.0.0.0-0:::GATEWAY=10.15.0.1;

RTRV-IPROUTE::SPMGT-0.0.0.0-0;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "SPMGT-0.0.0.0-0:GATEWAY=10.15.0.1"
;
```

Related Commands: none

ED/RTRV-CHASSIS-EQPT

Commands:

ED-CHASSIS-EQPT: Edit Chassis Equipment

RTRV-CHASSIS-EQPT: Retrieve Chassis Equipment

Descriptions:

ED-CHASSIS-EQPT lets the user edit the properties of the switch chassis. Use ED-CHASSIS-EQPT to set the system's CLLI code and IP addresses. The IP addresses for the element manager, craft, and signaling ports must be on different networks.

RTRV-CHASSIS-EQPT lets the user retrieve the properties of the switch chassis. Retrieved properties include the system's shelf number, gateway function, CLLI code, location, and IP addresses.

Category: Equipment **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-CHASSIS-EQPT:[TID]:[<com>]:[CTAG]::
    [SHELFID=<shelfId>],[CHASSISTYPE=<chassisType>],
    [CLLI=<clli>],[LOC=<loc>],
    [CRAFTIPSPA=<craftIPSPA>],
    [CRAFTIPSPB=<craftIPSPB>],[EMIPSPA=<emIPSPA>],
    [EMIPSPB=<emIPSPB>],[EMIPCHASSIS=<emIPChassis>],
    [SIGACC0IPSPA=<sigAcc0IPSPA>],
    [SIGACC1IPSPA=<sigAcc1IPSPA>],
    [SIGACC0IPSPB=<sigAcc0IPSPB>],
    [SIGACC1IPSPB=<sigAcc1IPSPB>],
    [SIGACCIPSPA=<sigAccIPSPA>],
    [SIGACCIPSPB=<sigAccIPSPB>],
    [SIGACCCHASSIS=<sigAccChassis>],
    [SIGCORE0IPSPA=<sigCore0IPSPA>],
    [SIGCORE1IPSPA=<sigCore1IPSPA>],
    [SIGCORE0IPSPB=<sigCore0IPSPB>],
    [SIGCORE1IPSPB=<sigCore1IPSPB>],
    [SIGCOREIPSPA=<sigCoreIPSPA>],
    [SIGCOREIPSPB=<sigCoreIPSPB>],
    [SIGCORECHASSIS=<sigCoreChassis>],
    [CRAFTIPMASK=<craftIPMask>],[EMIPMASK=<emIPMask>],
    [SIGACCIPMASK=<sigAccIPMask>],
    [SIGCOREIPMASK=<sigCoreIPMask>],
    [DNSIP1=<dnsIP1>],[DNSIP2=<dnsIP2>],
    [NTPSERVIP1=<ntpservIP1>],
    [NTPSERVIP2=<ntpservIP2>],
    [ACCPORTMODE=<accPortMode>],
    [COREPORTMODE=<corePortMode>],
    [EMPORTMODE=<emPortMode>],
    [ACCFAILOVERTMR=<accFailOverTmr>],
    [COREFAILOVERTMR=<coreFailOverTmr>],
    [EMFAILOVERTMR=<emFailOverTmr>],
    [DNSNAME=<dnsName>];

RTRV-CHASSIS-EQPT:[TID]:[<com>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<com>:SHELFID=<shelfId>,CHASSISTYPE=<chassisType>,
      CLLI=<clli>,LOC=<loc>,CRAFTIPSPA=<craftIPSPA>,
      CRAFTIPSPB=<craftIPSPB>,EMIPSPA=<emIPSPA>,
      EMIPSPB=<emIPSPB>,EMIPCHASSIS=<emIPChassis>,
      SIGACC0IPSPA=<sigAcc0IPSPA>,
      SIGACC1IPSPA=<sigAcc1IPSPA>,
      SIGACC0IPSPB=<sigAcc0IPSPB>,
      SIGACC1IPSPB=<sigAcc1IPSPB>,
      SIGACCIPSPA=<sigAccIPSPA>,
      SIGACCIPSPB=<sigAccIPSPB>,
      SIGACCCHASSIS=<sigAccChassis>,
      SIGCORE0IPSPA=<sigCore0IPSPA>,
      SIGCORE1IPSPA=<sigCore1IPSPA>,
      SIGCORE0IPSPB=<sigCore0IPSPB>,
      SIGCORE1IPSPB=<sigCore1IPSPB>,
      SIGCOREIPSPA=<sigCoreIPSPA>,
      SIGCOREIPSPB=<sigCoreIPSPB>,
      SIGCORECHASSIS=<sigCoreChassis>,
      CRAFTIPMASK=<craftIPMask>,EMIPMASK=<emIPMask>,
      SIGACCIPMASK=<sigAccIPMask>,
      SIGCOREIPMASK=<sigCoreIPMask>,
      DNSIP1=<dnsIP1>,DNSIP2=<dnsIP2>,
      NTPSERVIP1=<ntpservIP1>,
      NTPSERVIP2=<ntpservIP2>,
      ACCPORTMODE=<accPortMode>,
      COREPORTMODE=<corePortMode>,
      EMPORTMODE=<emPortMode>,
      ACCFAILOVERTMR=<accFailOverTmr>,
      COREFAILOVERTMR=<coreFailOverTmr>,
      EMFAILOVERTMR=<emFailOverTmr>,DNSNAME=<dnsName>"
;
```

Parameters:

com Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

shelfId Identifies the shelf containing the switch; the factory default “NULL” indicates "not applicable." This parameter has meaning only for installations containing more than one Lucent Gateway Platform.

Type: enum
Range: 1-64
Default value: not applicable

chassisType Identifies the gateway function for the switch. The factory default is “NULL”.

Type: enum
Range: MG = Media gateway
SG_MGC = signaling gateway and media gateway controller
Default value: not applicable

clli Identifies the CLLI code for the switch. The factory default is “NULL”.

Type: string
Range: up to 20 alphanumeric characters
Default value: not applicable

loc Identifies the location of the switch. The factory default is “NULL”.

Type: string
Range: up to 63 alphanumeric characters
Default value: not applicable

craftIPSPA Identifies the IP address of the craft port on SP A. The factory default is “NULL”.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

craftIPSPB Identifies the IP address of the craft port on SP B. The factory default is “NULL”.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

emIPSPA Identifies the IP address of the element manager port on SP A. The factory default is “NULL”.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

emIPSPB Identifies the IP address of the element manager port on SP B. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

emIPChassis Identifies the IP address of the management interface regardless of SP. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAcc0IPSPA Identifies the IP address of access port 0 on SP A. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAcc1IPSPA Identifies the IP address of access port 1 on SP A. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAcc0IPSPB Identifies the IP address of access port 0 on SP B. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAcc1IPSPB Identifies the IP address of access port 1 on SP B. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAccIPSPA Identifies the alias IP address of the access interface on SP A regardless of port. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAccIPSPB Identifies the alias IP address of the access interface on SP B regardless of port. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAccChassis Identifies the IP address of the access signaling interface regardless of SP. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCore0IPSPA Identifies the IP address of core port 0 on SP A. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCore1IPSPA Identifies the IP address of core port 1 on SP A. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCore0IPSPB Identifies the IP address of core port 0 on SP B. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCore1IPSPB Identifies the IP address of core port 1 on SP B. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCoreIPSPA Identifies the alias IP address of the core interface on SP A regardless of port. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCoreIPSPB Identifies the alias IP address of the core interface on SP B regardless of port. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCoreChassis Identifies the IP address of the core signaling interface regardless of SP. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

craftIPMask Identifies the craft interface subnet mask. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

emIPMask Identifies the element manager interface subnet mask. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigAccIPMask Identifies the access signaling interface subnet mask. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

sigCoreIPMask Identifies the core signaling interface subnet mask. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

dnsIP1 Identifies the IP address of the primary Domain Name Server. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

dnsIP2 Identifies the IP address of the secondary Domain Name Server. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

ntpservIP1 Identifies the IP address of the primary Network Time Protocol server. If neither NTP server is provisioned, the internal clock in the switch derives the time from either the internal UNIX clock, the BITS interface, or an IOM. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

ntpservIP2 Identifies the IP address of the secondary Network Time Protocol server. The factory default is "NULL".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

accPortMode Identifies the transmission mode and speed for the access signaling Ethernet interface on SP A; that is, whether communication on the port is in one direction at a time (half-duplex), both directions simultaneously (full-duplex), at 10 Mb/sec speed, at 100 Mb/sec speed, or whether the mode is determined automatically. The factory default is "AUTONEG".

Type: enum
Range: AUTONEG = mode automatically negotiated
10FULLDUPLEX = 10 Mb/sec speed, full-duplex mode
10HALFDUPLEX = 10 Mb/sec speed, half-duplex mode
100FULLDUPLEX = 100 Mb/sec speed, full-duplex mode
100HALFDUPLEX = 100 Mb/sec speed, half-duplex mode
Default value: not applicable

corePortMode Identifies the transmission mode and speed for the core signaling Ethernet interface on SP A; that is, whether communication on the port is in one direction at a time (half-duplex), both directions simultaneously (full-duplex), at 10 Mb/sec speed, at 100 Mb/sec speed, or whether the mode is determined automatically. The factory default is "AUTONEG".

Type: enum
Range: AUTONEG = mode automatically negotiated
10FULLDUPLEX = 10 Mb/sec speed, full-duplex mode
10HALFDUPLEX = 10 Mb/sec speed, half-duplex mode
100FULLDUPLEX = 100 Mb/sec speed, full-duplex mode
100HALFDUPLEX = 100 Mb/sec speed, half-duplex mode
Default value: not applicable

emPortMode Identifies the transmission mode and speed for the management signaling Ethernet interface; that is, whether communication on the port is in one direction at a time (half-duplex), both directions simultaneously (full-duplex), at 10 Mb/sec speed, at 100 Mb/sec speed, or whether the mode is determined automatically. The factory default is "AUTONEG".

Type: enum
Range: AUTONEG = mode automatically negotiated
10FULLDUPLEX = 10 Mb/sec speed, full-duplex mode
10HALFDUPLEX = 10 Mb/sec speed, half-duplex mode
100FULLDUPLEX = 100 Mb/sec speed, full-duplex mode
100HALFDUPLEX = 100 Mb/sec speed, half-duplex mode
Default value: not applicable

accFailOverTmr Identifies the time, in seconds, the active access signaling interface is down before fault declaration and SP failover. The factory default is "30".

Type: integer
Range: {1-65535}
Default value: none

coreFailOverTmr Identifies the time, in seconds, the active core signaling interface is down before fault declaration and SP failover. The factory default is "30".

Type: integer
Range: {1-65535}
Default value: none

emFailOverTmr Identifies the time, in seconds, the active management signaling interface is down before fault declaration and SP failover. The factory default is "180".

Type: integer
Range: {1-65535}
Default value: none

dnsName Identifies the domain name for the switch. The factory default is "NULL".

Type: string
Range: up to 64 alphanumeric characters
Default value: not applicable

Input Examples:

```
ED-CHASSIS-EQPT::::SHELFID=1,CHASSISTYPE=MG,
   CLLI=NULL,LOC=NULL,CRAFTIPSPA=0.0.0.0,
   CRAFTIPSPB=0.0.0.0,EMIPSPA=0.0.0.0,
   EMIPSPB=0.0.0.0,EMIPCHASSIS=0.0.0.0,
   SIGACC0IPSPA=0.0.0.0,SIGACC1IPSPA=0.0.0.0,
   SIGACC0IPSPB=0.0.0.0,SIGACC1IPSPB=0.0.0.0,
   SIGACCIPSPA=0.0.0.0,SIGACCIPSPB=0.0.0.0,
   SIGACCCHASSIS=0.0.0.0,SIGCORE0IPSPA=0.0.0.0,
   SIGCORE1IPSPA=0.0.0.0,SIGCORE0IPSPB=0.0.0.0,
   SIGCORE1IPSPB=0.0.0.0,SIGCOREIPSPA=10.17.35.26,
   SIGCOREIPSPB=10.17.35.27,
   SIGCORECHASSIS=10.17.35.28,
   CRAFTIPMASK=0.0.0.0,EMIPMASK=0.0.0.0,
   SIGACCIPMASK=0.0.0.0,SIGCOREIPMASK=255.255.0.0,
   DNSIP1=0.0.0.0,DNSIP2=0.0.0.0,NTPSERVIP1=0.0.0.0,
   NTPSERVIP2=0.0.0.0,ACCPORTMODE=AUTONEG,
   COREPORTMODE=AUTONEG,EMPORTMODE=AUTONEG,
   ACCFAILOVERTMR=30,COREFAILOVERTMR=30,
   EMFAILOVERTMR=180,DNSNAME=NULL;

RTRV-CHASSIS-EQPT;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "COM:SHELFID=1,CHASSISTYPE=MG,CLLI=NULL,LOC=NULL,
      CRAFTIPSPA=0.0.0.0,CRAFTIPSPB=0.0.0.0,
      EMIPSPA=0.0.0.0,EMIPSPB=0.0.0.0,
      EMIPCHASSIS=0.0.0.0,SIGACC0IPSPA=0.0.0.0,
      SIGACC1IPSPA=0.0.0.0,SIGACC0IPSPB=0.0.0.0,
      SIGACC1IPSPB=0.0.0.0,SIGACCIPSPA=0.0.0.0,
      SIGACCIPSPB=0.0.0.0,SIGACCCHASSIS=0.0.0.0,
      SIGCORE0IPSPA=0.0.0.0,SIGCORE1IPSPA=0.0.0.0,
      SIGCORE0IPSPB=0.0.0.0,SIGCORE1IPSPB=0.0.0.0,
      SIGCOREIPSPA=10.17.35.26,
      SIGCOREIPSPB=10.17.35.27,
      SIGCORECHASSIS=10.17.35.28,CRAFTIPMASK=0.0.0.0,
      EMIPMASK=0.0.0.0,SIGACCIPMASK=0.0.0.0,
      SIGCOREIPMASK=255.255.0.0,DNSIP1=0.0.0.0,
      DNSIP2=0.0.0.0,NTPSERVIP1=0.0.0.0,
      NTPSERVIP2=0.0.0.0,ACCPORTMODE=AUTONEG,
      COREPORTMODE=AUTONEG,EMPORTMODE=AUTONEG,
      ACCFAILOVERTMR=30,COREFAILOVERTMR=30,
      EMFAILOVERTMR=180,DNSNAME=NULL"
;
```

Related Commands:

RTRV-INFO-CHASSIS

ED/RTRV-TMGREF

Commands:

ED-TMGREF: Edit Timing Reference

RTRV-TMGREF: Retrieve Timing Reference

Descriptions:

ED-TMGREF lets the user change the port to use for the timing reference on the switch.

RTRV-TMGREF lets the user retrieve the properties associated with the timing reference source(s) on the switch.

Category: Equipment **Security:** NSA for ED, View for RTRV

Input Formats:

```
ED-TMGREF:[TID]:[<src>]:[CTAG]::<primarySrcType>;
RTRV-TMGREF:[TID]:[<src>]:[CTAG]::[<prisrc>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:<prisrc>,<ref>,<lockState>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

primarySrcType Identifies (for ED) the primary source for the timing reference. If the primary source is an IOM from one of the IOM sets in the range, the other IOM in that set is the secondary source. IOM-{1,2} are used if the timing reference is on a T1 port, and IOM-{8,10} are used if the timing reference is on an optical port. If the timing reference is from the BITS interface (TMG-E1/T1), select the primary source with the ENT-T1 command.

Type: enum
Range: IOM-{1,2}
IOM-{8,10}
TMG-E1
TMG-T1
Default value: none

prisrc Identifies (for RTRV) the primary source for the timing reference. If the primary source is an IOM from one of the IOM sets in the range, the other IOM in that set is the secondary source. IOM-{1,2} are used if the timing reference is on a T1 port, and IOM-{8,10} are used if the timing reference is on an optical port. If the timing reference is from the BITS interface (TMG), primary source selection is accomplished with the ENT-T1 command. A null value is equivalent to "ALL"; that is, by leaving the field blank, the properties of both the primary and secondary sources will be returned.

Type: enum
Range: IOM-{1,2}
IOM-{8,10}
TMG
Default value: none

ref Identifies the state of the timing reference source. If the timing reference is from the BITS interface (TMG), *ref* indicates whether the source is primary or secondary. If the timing reference is from an IOM, *ref* indicates whether the source is in service and active, in service and on standby, or out of service.

Type: enum
Range: ACTIVE
OOS
PRIMARY
SECONDARY
STANDBY
Default value: none

lockState Identifies whether the timing reference source is locked; that is, whether the source is enabled to provide the timing reference.

Type: enum
Range: FLT
FREERUN
HOLDOVER
IS
LOCKED
LOCKED_IOM1
LOCKED_IOM10
LOCKED_IOM2
LOCKED_IOM8
LOCKED_TMGA
LOCKED_TMGB
OOS
UNLOCKED
Default value: none

Input Examples:

```
ED-TMGREF:::::IOM-1;

RTRV-TMGREF;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "COM:TMG-A,PRIMARY,IS"
   "COM:TMG-B,SECONDARY,OOS"
   "COM:SP-A-TMGMODULE,OOS,LOCKED_TMGA"
   "COM:SP-B-TMGMODULE,ACTIVE,LOCKED_TMGA"
;
```

Related Commands: none

RTRV-INFO-CHASSIS

Command:

RTRV-INFO-CHASSIS: Retrieve INFO CHASSIS

Description:

RTRV-INFO-CHASSIS lets the user retrieve information about the switch chassis. Retrieved properties include the chassis' serial number, hardware version, CLEI code, network element type, number of slots in the chassis, and number of faults.

Category: Equipment **Security:** View

Input Format:

```
RTRV-INFO-CHASSIS:[TID]:[<com>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<com>:SERIALNUMBER=<serialNumber>,
      HWVERSION=<hwVersion>,CLEI=<clei>,
      NETYPE=<neType>,SLOTCOUNT=<slotCount>,
      CRITICALFAULTS=<criticalFaults>,
      MAJORFAULTS=<majorFaults>,
      MINORFAULTS=<minorFaults>,TEMPFAULT=<tempFault>,
      TEMPFAULTCOUNT=<tempFaultCount>,
      POWERA=<powerA>,POWERB=<powerB>"
;
```

Parameters:

com Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

serialNumber Identifies the serial number for the switch.

Type: string
Range: ANSI characters
Default value: none

hwVersion Identifies the hardware version for the switch.

Type: string
Range: ANSI characters
Default value: none

clei Identifies the CLEI code for the switch.

Type: string
Range: 10 alphanumeric characters
Default value: none

neType Identifies the switch as a specific type of network element.

Type: enum
Range: ADM = Add drop multiplexer.
ADTS = Automated digital timing system.
APS = Automatic protection switching equipment.
CS = Circuit switch.
DCS = Digital cross-connect switch.
DLC = Digital loop carrier system.
EDSX = Electronic digital signal cross-connect.
EM = Environment monitors.
ISDN = Integrated services digital network switch.
LBRV = Low bit rate voice terminal.
LDS = Local digital switch.
LTE = Line terminating equipment.
MUX = Multiplexer.
PS = Packet switch.
REP = Repeater.
SCP = Service control point.
SS = Supervisory system.
STP = Signal transfer point.
TSG = Timing signal generator.
Default value: none

slotCount Identifies the number of slots in the chassis. The value is 21 for the Lucent Gateway Platform.

Type: integer
Range: {1-21}
Default value: none

criticalFaults Identifies the number of critical faults in the switch.

Type: integer
Range: {1-9999}
Default value: none

majorFaults Identifies the number of major faults in the switch.

Type: integer
Range: {1-9999}
Default value: none

minorFaults Identifies the number of minor faults in the switch.

Type: integer
Range: {1-9999}
Default value: none

tempFault Indicates whether there is currently an outstanding temperature fault against the chassis.

Type: enum
Range: OKAY = no outstanding temperature fault
FAIL = outstanding temperature fault exists
Default value: none

tempFaultCount Identifies the number of temperature faults that have occurred in the switch since initialization.

Type: integer
Range: {1-9999}
Default value: none

powerA Identifies the state of power feed A.

Type: enum
Range: OKAY = power is present at power feed A
FAIL = power not present at power feed A
Default value: none

powerB Identifies the state of power feed B.

Type: enum
Range: OKAY = power is present at power feed B
FAIL = power not present at power feed B
Default value: none

Input Example:

```
RTRV-INFO-CHASSIS;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "COM:SERIALNUMBER=0000000103102171,HWVERSION=A-2,
      CLEI=BAMBE00ERA,NETYPE=ISDN,SLOTCOUNT=21,
      CRITICALFAULTS=0,MAJORFAULTS=0,MINORFAULTS=3,
      TEMPFAULT=OKAY,TEMPFAULTCOUNT=0,POWERA=OKAY,
      POWERB=OKAY"
;
```

Related Commands:

ED/RTRV-CHASSIS-EQPT

ALW/INH-EX-EQPT / RTRV-EXSCHED-EQPT / SCHED-EX-EQPT

Commands:

ALW-EX-EQPT: Allow Exercise Equipment

INH-EX-EQPT: Inhibit Exercise Equipment

RTRV-EXSCHED-EQPT: Retrieve Exercise Schedule Equipment

SCHED-EX-EQPT: Schedule Exercise Equipment

Descriptions:

ALW-EX-EQPT instructs the switch to allow scheduled periodic exercises for an IOM or SP card in the switch.

INH-EX-EQPT instructs the switch to inhibit scheduled periodic exercises for an IOM or SP card in the switch.

RTRV-EXSCHED-EQPT retrieves parameters associated with scheduled periodic exercises for an IOM or SP card in the switch.

SCHED-EX-EQPT lets the user schedule periodic exercises for an IOM or SP card in the switch. When SCHED-EX-EQPT is issued against an IOM that is not provisioned, the command will return a DENY "entity does not exist". You cannot schedule periodic exercises for a protection IOM. Deleting an IOM deletes its scheduling information.

Category: Equipment **Security:** NSA for ALW/INH/SCHED, View for RTRV

Input Formats:

```
ALW-EX-EQPT:[TID]:<iomOrSp>:[CTAG];

INH-EX-EQPT:[TID]:<iomOrSp>:[CTAG];

RTRV-EXSCHED-EQPT:[TID]:[<iomOrSp>]:[CTAG];

SCHED-EX-EQPT:[TID]:<iomOrSp>:[CTAG]::::[<invl>],
   [<statm>],[<numinvl>],[<reptmode>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iomOrSp>:<invl>,<statm>,<numinvl>,<reptmode>,
      <inhmode>"
;
```

Parameters:

iomOrSp Identifies the AID as the SP/TMG or I/O module for which to allow or inhibit scheduled periodic exercises (for ALW/INH), the module for which scheduled periodic exercises exist (for RTRV), or the module for which to schedule periodic exercises (for SCHED). A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, parameters associated with scheduled periodic exercises will be returned for all configured modules.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

invl Identifies the interval; i.e., the frequency at which the exercise runs. The switch returns a value of "0-HR" for *invl* when you run RTRV-EXSCHED-EQPT the first time (that is, before you've ever run SCHED-EX-EQPT).

Type: enum
Range: {1-31}-DAY
{1-24}-HR
Default value: 24-HR

statm Identifies the start time; i.e., the time to begin the scheduled exercise. The format for *statm* is HOD-MOH (hour-of-day, minute-of-hour). Default is the current time of day.

Type: enum
Range: {0-23}-{0-59}
Default value: current time of day

numinvl Identifies the number of intervals; i.e., it specifies the number of times to run a particular scheduled exercise. The default value of "0" indicates that the exercise is to be stopped, or is stopped. A value of "1000" indicates that the scheduled exercise will run until *numinvl* is changed.

Type: integer
Range: {0-1000}
Default value: 0

reptmode Identifies the report mode, which indicates how to report the results of an executed scheduled event.

Type: enum
Range: ALL = Report results of all exercises
FAIL = Report results of failed exercises
NULL = On input, defaults to FAIL
Default value: FAIL

inhmode Identifies (in RTRV output) whether periodic exercises are currently allowed or inhibited on the IOM.

Type: enum
Range: ALW = periodic exercises are allowed
INH = periodic exercises are inhibited
Default value: none

Input Examples:

```
ALW-EX-EQPT::IOM-4;

INH-EX-EQPT::IOM-4;

RTRV-EXSCHED-EQPT::IOM-4;

SCHED-EX-EQPT::IOM-4:::,2-0,1000;
```

The above example schedules an IOM protection switch once a day at 2 AM until the schedule is changed.

```
SCHED-EX-EQPT::SP-A:::7-DAY,4-30,8;
```

The above example schedules an SP protection switch once a week for eight weeks. An SP switch includes a SF protection switch.

```
SCHED-EX-EQPT::IOM-41;
```

The above example turns off a protection exercise, as *numinvl* is zero.

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "IOM-1:24-HR,2-0,1000,FAIL,ALW"
;
```

Related Commands: none

ALW/INH-SWTOPROTN-EQPT / SW-TOPROTN-EQPT

Commands:

ALW-SWTOPROTN-EQPT: Allow Switch To Protection Equipment

INH-SWTOPROTN-EQPT: Inhibit Switch To Protection Equipment

SW-TOPROTN-EQPT: Switch To Protection Equipment

Descriptions:

ALW-SWTOPROTN-EQPT instructs the switch to allow automatic or manual switching to protection of a previously-inhibited I/O Module. ALW-SWTOPROTN-EQPT applies only to I/O Modules configured as primary (working, protected). The AID parameter specifies the working I/O Module being allowed. This function is sometimes called release lockon or release lockout.

INH-SWTOPROTN-EQPT instructs the switch to inhibit automatic or manual switching to protection of an I/O Module. INH-SWTOPROTN-EQPT applies only to I/O Modules configured as primary. The AID parameter specifies the working I/O Module being inhibited. This function is sometimes called release lockon or release lockout.

SW-TOPROTN-EQPT instructs the switch to perform a protection switch; i.e., to switch the traffic from a specified working module to the protection module. SW-TOPROTN-EQPT cannot be issued to a module for which an INH-SWTOPROTN-EQPT command has been issued, unless an ALW-SWTOPROTN-EQPT command is issued first.

Category: Equipment **Security:** SA for all commands

Input Formats:

```
ALW-SWTOPROTN-EQPT:[TID]:<sw_id>:[CTAG];

INH-SWTOPROTN-EQPT:[TID]:<sw_id>:[CTAG]::[<dirn>];

SW-TOPROTN-EQPT:[TID]:<iomOrSp>:[CTAG]::[<mode>],
   [<protid>],[<dirn>];
```

Output Formats: none

Parameters:

sw_id Identifies the AID (for ALW/INH) as an I/O module in the switch.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

iomOrSp Identifies the AID (for SW-TOPROTN-EQPT) as an SP/TMG or I/O module in the switch.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

mode Identifies how the module specified by the AID will be removed from service. This parameter is not supported presently; leave it blank.

Type: string
Range: ASCII characters
Default value: none

protid Identifies the protection unit to be switched when there is more than one protection unit. This parameter is not supported, as there is only one protection unit; leave it blank.

Type: string
Range: ASCII characters
Default value: none

dirn The direction relative to the I/O module in the switch to which the command pertains. This parameter is not supported; leave it blank.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: NA

Input Examples:

```
ALW-SWTOPROTN-EQPT::IOM-4;

INH-SWTOPROTN-EQPT::IOM-4;

SW-TOPROTN-EQPT::IOM-4;
```

Related Commands:

ALW/INH-SWTOWKG-EQPT SW-TOWKG-EQPT

ALW/INH-SWTOWKG-EQPT / SW-TOWKG-EQPT

Commands:

ALW-SWTOWKG-EQPT: Allow Switch To Working Equipment

INH-SWTOWKG-EQPT: Inhibit Switch To Working Equipment

SW-TOWKG-EQPT: Switch To Working Equipment

Descriptions:

ALW-SWTOWKG-EQPT instructs the switch to allow automatic or manual switching to working of a previously-inhibited I/O Module.

INH-SWTOWKG-EQPT instructs the switch to inhibit automatic or manual switching back to working of an I/O Module.

SW-TOWKG-EQPT instructs the switch to switch a protected working unit back to working; i.e., to switch traffic from the protection module back to a specified working module. SW-TOWKG-EQPT cannot be issued to a module for which an INH-SWTOWKG-EQPT command has been issued, unless an ALW-SWTOWKG-EQPT command is issued first.

Category: Equipment **Security:** SA for all commands

Input Formats:

```
ALW-SWTOWKG-EQPT:[TID]:<src>:[CTAG];
INH-SWTOWKG-EQPT:[TID]:<src>:[CTAG]::[<dirn>];
SW-TOWKG-EQPT:[TID]:<sw_id>:[CTAG]::[<mode>],[<dirn>];
```

Output Formats: none

Parameters:

src Identifies the AID (for ALW/INH) as an I/O module in the switch.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

sw_id Identifies the AID (for SW-TOWKG-EQPT) as an SP/TMG or I/O module in the switch.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

mode Identifies how the module specified by the AID will be restored to service. This parameter is not supported presently; leave it blank.

Type: string
Range: ASCII characters
Default value: none

dirn The direction relative to the I/O module in the switch to which the command pertains. This parameter is not supported; leave it blank.

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: NA

Input Examples:

```
ALW-SWTOWKG-EQPT::IOM-4;
INH-SWTOWKG-EQPT::IOM-4;
SW-TOWKG-EQPT::IOM-4;
```

Input Example:

```
ALW-SWTOWKG-EQPT::IOM-4;
```

Related Commands:

```
ALW/INH-SWTOPROT-EQPT     SW-TOPROTN-EQPT
```

CPY-MEM

Command:

CPY-MEM: Copy Memory

Description:

CPY-MEM instructs the switch to copy data from a specified memory storage device (internal or external) to another. This command is used to upgrade the firmware on I/O and System Processor Modules.

Category: Equipment **Security:** SW

Input Format:

```
CPY-MEM:[TID]:<src>:[CTAG];
```

Output Format: none

Parameters:

src Identifies the AID as an SP/TMG or I/O module in the switch.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

Input Example:

```
CPY-MEM::IOM-4;
```

Related Commands: None

DLT/ED/ENT/RTRV-EQPT

Commands:

DLT-EQPT: Delete Equipment

ED-EQPT: Edit Equipment

ENT-EQPT: Enter Equipment

RTRV-EQPT: Retrieve Equipment

Descriptions:

DLT-EQPT lets the user disconnect an I/O Module; that is, it allows removing an IOM from the recognized system configuration.

ED-EQPT lets the user edit the properties of the switch module. Use ED-EQPT to change a module's type, redundancy, memory and processor utilization thresholds, software version, and desired state.

ENT-EQPT lets the user initialize the properties of an I/O Module. Use ENT-EQPT to set a module's redundancy, memory and processor utilization thresholds, software version, and desired state.

RTRV-EQPT lets the user retrieve the properties of the switch module. Retrieved properties include the module's type, redundancy, memory and processor utilization thresholds, software version, and primary and secondary states.

Category: Equipment **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-EQPT:[TID]:<ioModule>:[CTAG];

ED-EQPT:[TID]:<iomOrSp>:[CTAG]::
    [IOMODULETYPE=<ioModuleType>],[REDUNDANCY=<rn>],
    [SPMEMTHRESHOLD=<spMemThreshold>],
    [SPNVMEMTHRESHOLD=<spNVMemThreshold>],
    [SPBUSYTHRESHOLD=<spBusyThreshold>],
    [SWVERSION=<swVersion>]:[<pst>];

ENT-EQPT:[TID]:<ioModule>:[CTAG]::<ioModuleType>,<rn>,
   <spMemThreshold>,<spNVMemThreshold>,
   <spBusyThreshold>,<swVersion>:<pst>;

RTRV-EQPT:[TID]:[<iomOrSp>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iomOrSp>::[<moduleType>],[<rn>],<spMemThreshold>,
      <spNVMemThreshold>,<spBusyThreshold>,
      [<swVersion>]:<primaryState>,[<secondaryState>]"
;
```

Parameters:

ioModule Identifies the AID (for DLT and ENT) as an I/O module in the switch.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

iomOrSp Identifies the AID (for ED and RTRV) as an SP/TMG or I/O module in the switch.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

ioModuleType Identifies (for ED and ENT) the type of I/O module by its CLEI code.

Type: string
Range: 10 alphanumeric characters
Default value: none

moduleType Identifies (for RTRV output) the type of module by its CLEI code.

Type: string
Range: 10 alphanumeric characters
Default value: none

rn Identifies the redundancy of the module.

Type: enum
Range: PRI = Primary unit of a pair of units. This is the protected unit.
SEC = Secondary unit in a pair of units. This is the protecting unit.
SX = This is a simplex entity.
Default value: none

spMemThreshold Identifies the memory utilization threshold percentage.

Type: integer
Range: {0-100}
Default value: none

spNVMemThreshold Identifies the disk space utilization threshold percentage.

Type: integer
Range: {0-100}
Default value: none

spBusyThreshold Identifies the CPU utilization threshold percentage.

Type: integer
Range: {0-100}
Default value: none

swVersion Identifies the software version for the IOM.

Type: string
Range: ASCII characters, typically four integers separated by periods
Default value: none

pst Identifies (for ED and ENT) the primary state of the IOM. The value indicates the desired state of the IOM.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: none

primaryState Identifies (for RTRV output) the primary state of the module. Although this parameter is a string, its values are restricted to IS (In-Service) and OOS (Out-Of-Service), with OOS having possible qualifiers of AU (Autonomous) and MA (Management).

Type: string
Range: alphanumeric characters
Default value: none

secondaryState Identifies (for RTRV output) the secondary state of the module. Although this parameter is a string, its values are restricted to the following:

- ACT = Active
- FLT = Faulted
- INIT = Waiting for initialization
- MEA = Provisioned mismatch
- NBK = No backup
- PRI = Protection release inhibited
- PSI = Protection switch inhibited
- STBYC = Standby cold
- STBYH = Standby hot
- UAS = Unassigned
- UEQ = Unequipped
- UPDT = Update (CPY-MEM currently being performed)
- WRK = Working

Type: string
Range: alphanumeric characters
Default value: none

Input Examples:

```
DLT-EQPT::IOM-4;

ED-EQPT::IOM-4:::IOMODULETYPE=BA9IX72AAA,
   REDUNDANCY=PRI,SPMEMTHRESHOLD=90,
   SPNVMEMTHRESHOLD=90,SPBUSYTHRESHOLD=90,
   SWVERSION=5.0.1.0:IS;

ENT-EQPT::IOM-4:::BA9IX72AAA,SX,90,90,90,5.0.1.0:IS;

RTRV-EQPT::IOM-4;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "IOM-4:BA9IX72AAA,SX,90,90,90,5.0.1.0:IS,ACT"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-EQPT-ALL
RMV/RST-EQPT
```

DLT/ED/ENT/RTRV-EQPT-ALL

Commands:

DLT-EQPT-ALL: Delete Equipment

ED-EQPT-ALL: Edit Equipment

ENT-EQPT-ALL: Enter Equipment

RTRV-EQPT-ALL: Retrieve Equipment

Descriptions:

DLT-EQPT-ALL lets the user disconnect an I/O Module; that is, it allows removing an IOM from the recognized system configuration.

ED-EQPT-ALL lets the user edit the properties of the switch module. Use ED-EQPT-ALL to change a module's type, redundancy, memory and processor utilization thresholds, software version, rear module type, and desired state.

ENT-EQPT-ALL lets the user initialize the properties of an I/O Module. Use ENT-EQPT-ALL to identify a module and set its redundancy, memory and processor utilization thresholds, software version, rear module type, and desired state.

RTRV-EQPT-ALL lets the user retrieve the properties of the switch module. Retrieved properties include the module's type, redundancy, memory and processor utilization thresholds, software version, and primary and secondary states.

Category: Equipment **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-EQPT-ALL:[TID]:<ioModule>:[CTAG];

ED-EQPT-ALL:[TID]:<iomOrSp>:[CTAG]::
    [IOMODULETYPE=<ioModuleType>],[REDUNDANCY=<rn>],
    [SPMEMTHRESHOLD=<spMemThreshold>],
    [SPNVMEMTHRESHOLD=<spNVMemThreshold>],
    [SPBUSYTHRESHOLD=<spBusyThreshold>],
    [SWVERSION=<swVersion>],
    [REARMODULETYPE=<rearModuleType>]:<pst>;
```

```
ENT-EQPT-ALL:[TID]:<ioModule>:[CTAG]::
   IOMODULETYPE=<ioModuleType>,REDUNDANCY=<rn>,
   MEMTHRESHOLD=<spMemThreshold>,
   NVMEMTHRESHOLD=<spNVMemThreshold>,
   BUSYTHRESHOLD=<spBusyThreshold>,
   SWVERSION=<swVersion>,
   [REARMODULETYPE=<rearModuleType>]:<pst>;

RTRV-EQPT-ALL:[TID]:[<iomOrSp>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iomOrSp>:[IOMODULETYPE=<moduleType>],
      [REDUNDANCY=<rn>],MEMTHRESHOLD=<spMemThreshold>,
      NVMEMTHRESHOLD=<spNVMemThreshold>,
      BUSYTHRESHOLD=<spBusyThreshold>,
      [SWVERSION=<swVersion>],
      [REARMODULETYPE=<rearModuleType>]:
      <primaryState>,[<secondaryState>]"
;
```

Parameters:

ioModule Identifies the AID (for DLT and ENT) as an I/O module in the switch.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

iomOrSp Identifies the AID (for ED and RTRV) as an SP/TMG or I/O module in the switch.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

ioModuleType Identifies (for ED and ENT) the type of I/O module by its CLEI code.

Type: string
Range: 10 alphanumeric characters
Default value: none

moduleType Identifies (for RTRV output) the type of module by its CLEI code.

Type: string
Range: 10 alphanumeric characters
Default value: none

rn Identifies the redundancy of the module.

Type: enum
Range: PRI = Primary unit of a pair of units. This is the protected unit.
SEC = Secondary unit in a pair of units. This is the protecting unit.
SX = This is a simplex entity.
Default value: none

spMemThreshold Identifies the memory utilization threshold percentage.

Type: integer
Range: {0-100}
Default value: none

spNVMemThreshold Identifies the disk space utilization threshold percentage.

Type: integer
Range: {0-100}
Default value: none

spBusyThreshold Identifies the CPU utilization threshold percentage.

Type: integer
Range: {0-100}
Default value: none

swVersion Identifies the software version for the IOM.

Type: string
Range: ASCII characters, typically four integers separated by periods
Default value: none

rearModuleType Identifies the type of rear module by its CLEI code.

Type: string
Range: 10 alphanumeric characters
Default value: none

pst Identifies (for ED and ENT) the primary state of the module. The value indicates the desired state of the module.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: none

primaryState Identifies (for RTRV output) the primary state of the module. Although this parameter is a string, its values are restricted to IS (In-Service) and OOS (Out-Of-Service), with OOS having possible qualifiers of AU (Autonomous) and MA (Management).

Type: string
Range: alphanumeric characters
Default value: none

secondaryState Identifies (for RTRV output) the secondary state of the module. Although this parameter is a string, its values are restricted to the following:

- ACT = Active
- FLT = Faulted
- INIT = Waiting for initialization
- MEA = Provisioned mismatch
- NBK = No backup
- PRI = Protection release inhibited
- PSI = Protection switch inhibited
- STBYC = Standby cold
- STBYH = Standby hot
- UAS = Unassigned
- UEQ = Unequipped
- UPDT = Update (CPY-MEM currently being performed)
- WRK = Working

Type: string
Range: alphanumeric characters
Default value: none

Input Examples:

```
DLT-EQPT-ALL::IOM-4;

ED-EQPT-ALL::IOM-4:::IOMODULETYPE=BA9IX72AAA,
   REDUNDANCY=PRI,SPMEMTHRESHOLD=90,
   SPNVMEMTHRESHOLD=90,SPBUSYTHRESHOLD=90,
   SWVERSION=5.0.1.0:IS;

ENT-EQPT-ALL::IOM-4:::IOMODULETYPE=BA9IX72AAA,
   REDUNDANCY=SX,MEMTHRESHOLD=90,NVMEMTHRESHOLD=90,
   BUSYTHRESHOLD=90,SWVERSION=5.0.1.0:IS;

RTRV-EQPT-ALL::IOM-4;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "IOM-4:IOMODULETYPE=BA9IX72AAA,REDUNDANCY=SX,
      MEMTHRESHOLD=90,NVMEMTHRESHOLD=90,
      BUSYTHRESHOLD=90,SWVERSION=5.0.1.0:IS,ACT"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-EQPT
RMV/RST-EQPT
```

RMV/RST-EQPT

Commands:

RMV-EQPT: Remove Equipment

RST-EQPT: Restore Equipment

Descriptions:

RMV-EQPT lets the user remove from service an I/O module or the standby SP module. The command takes the module from an in-service state and places it in a maintenance state. You can initiate service-affecting diagnostic routines or replacement after removing a module from service. You also can remove a module from service with ED-EQPT or ED-EQPT-ALL.

RST-EQPT lets the user restore a module to service. RST-EQPT takes the entity from a maintenance state to an in-service state for which the unit is ready to provide its service functions.

Category: Equipment **Security:** SA for both commands

Input Formats:

```
RMV-EQPT:[TID]:<iomOrSp>:[CTAG]::[<mode>],
   [<state>];
```

```
RST-EQPT:[TID]:<iomOrSp>:[CTAG]::[<mode>];
```

Output Format: none

Parameters:

iomOrSp Identifies the AID as an SP/TMG or I/O module in the switch.

Type: IOMorSP
Range: IOM-{1-17}
SP-{A-B}
Default value: none

mode Identifies (for RMV) how the module specified by the AID will be removed from service, or (for RST) whether the switch performs automatic testing of the module being restored to service to verify good working condition. This parameter is not supported presently as the switch always performs automatic testing of the equipment being restored to service; leave the field blank.

Type: string
Range: ASCII characters
Default value: none

state Identifies (for RMV) the state into which the specified entity will be moved. This parameter is not supported presently; leave it blank.

Type: string
Range: ASCII characters
Default value: none

Input Examples:

```
RMV-EQPT::IOM-4;
RST-EQPT::IOM-4;
```

Input Example:

```
RMV-EQPT::IOM-4;
```

Related Commands:

DLT/ED/ENT/RTRV-EQPT DLT/ED/ENT/RTRV-EQPT-ALL

RTRV-FAN-EQPT

Command:

RTRV-FAN-EQPT: Retrieve FAN Equipment

Description:

RTRV-FAN-EQPT lets the user retrieve parameters associated with the fan assembly in the switch.

Category: Equipment **Security:** View

Input Format:

```
RTRV-FAN-EQPT:[TID]:<fan>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<fan>:<status>,<failures>"
;
```

Parameters:

fan Identifies the AID as the fan assembly in the switch.

Type: FAN
Range: FAN
Default value: none

status Indicates whether the fan assembly is operating normally.

Type: enum
Range: OKAY
FAIL
Default value: none

failures Indicates the number of fan failures since initialization.

Type: integer
Range: {1-9999}
Default value: none

Input Example:

```
RTRV-FAN-EQPT::FAN;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "FAN:OKAY,0"
;
```

Related Commands: None

RTRV-INFO-EQPT

Command:

RTRV-INFO-EQPT: Retrieve Information Equipment

Description:

RTRV-INFO-EQPT lets the user retrieve information about a module in the switch. Retrieved information include the module's CLEI code, description, software and hardware versions, serial number, self-test status, type and number of ports, number of faults, operating status, amount of available and used memory and disk space, and processor utilization.

Category: Equipment **Security:** View

Input Format:

```
RTRV-INFO-EQPT:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iomOrSp>:[<clei>],[<desc>],[<swVersion>],
      [<hwVersion>],[<serialNumber>],
      [<selfTestStatus>],[<portType>],<portCount>,
      <externalFaults>,<internalFaults>,<inService>:
      <memFree>,<memUsed>,<nvMemFree>,<nvMemUsed>,
      <spAveBusy>:[<rearClei>],[<rearDesc>],
      [<rearHwVersion>],[<rearSerialNumber>],[<prtg>]"
;
```

Parameters:

iomOrSp Identifies the AID either as a front I/O module (by slot number), as a front SW/FAB A or B module, or as a front SP/TMG A or B module. A null value is equivalent to "ALL"; that is, by leaving the field blank, information will be returned for all configured modules.

Type: IOMorSPorSF
Range: IOM-{1-17}
SF-{A-B}
SP-{A-B}
Default value: none

clei Identifies the CLEI code for the front module specified by *src*.

Type: string
Range: 10 alphanumeric characters
Default value: none

desc Identifies a text description of the module specified by *src*.

Type: string
Range: alphanumeric characters
Default value: none

swVersion Identifies the software version for the module specified by *src*.

Type: string
Range: ASCII characters, typically four integers separated by periods
Default value: none

hwVersion Identifies the hardware version for the module specified by *src*.

Type: string
Range: ASCII characters, typically four integers separated by periods
Default value: none

serialNumber Identifies the serial number for the module specified by *src*.

Type: string
Range: alphanumeric characters
Default value: none

selfTestStatus Identifies whether the module passed or failed its self-test.

Type: enum
Range: FAIL
PASS
Default value: none

portType Identifies the type of port.

Type: enum
Range: T1
T3
UNKNOWN
Default value: none

portCount Identifies the number of ports.

Type: integer
Range: {1-9999}
Default value: none

externalFaults Identifies the number of module faults whose cause is external to the module; e.g., a loss of signal fault on an IOM.

Type: integer
Range: {1-9999}
Default value: none

internalFaults Identifies the number of module faults whose cause is internal to the module; e.g., a loss of heartbeat fault on an IOM.

Type: integer
Range: {1-9999}
Default value: none

inService Identifies whether the equipment is in service.

Type: enum
Range: N = Equipment is not in service
Y = Equipment is in service
Default value: none

memFree Identifies the amount of free memory as a percentage.

Type: integer
Range: {0-100}
Default value: none

memUsed Identifies the amount of memory used as a percentage.

Type: integer
Range: {0-100}
Default value: none

nvMemFree Identifies the amount of free disk space as a percentage.

Type: integer
Range: {0-100}
Default value: none

nvMemUsed Identifies the amount of disk space used as a percentage.

Type: integer
Range: {0-100}
Default value: none

spAveBusy Identifies CPU utilization as a percentage.

Type: integer
Range: {0-100}
Default value: none

rearClei Identifies the CLEI code for the rear module corresponding to the front module specified by *src*.

Type: string
Range: 10 alphanumeric characters
Default value: none

rearDesc Identifies a text description of the rear module corresponding to the front module specified by *src*.

Type: string
Range: alphanumeric characters
Default value: none

rearHwVersion Identifies the hardware version for the rear module corresponding to the front module specified by *src*.

Type: string
Range: ASCII characters, typically four integers separated by periods
Default value: none

rearSerialNumber Identifies the serial number for the rear module corresponding to the front module specified by *src*.

Type: string
Range: alphanumeric characters
Default value: none

prtg Identifies the faulted IOM being protected by the protection IOM.

Type: IOMODULE
Range: IOM-{1-17}
Default value: none

Input Example:

```
RTRV-INFO-EQPT::IOM-1;
```

Output Example:

```
   lucent 2004-04-22 14:37:49
M  0 COMPLD
   "IOM-1:BA9IAA0AAA,\"Lucent 28-port DS1 Front
      Module\",5.0.1.0,A-M,0000000235000134,PASS,,
      0,1,0,N:0,0,0,0,0:BA9IBC0AAA,\"Lucent 28-port
      DS1 Rear Module\",,0000000000000066,"
;
```

Related Commands: None

OPR/SET-ACO

Commands:

OPR-ACO: Operate Alarm Cutoff

SET-ACO: Set Alarm Cutoff

Descriptions:

OPR-ACO instructs the switch to cut off the office audible alarm indications without changing the local alarm indications

SET-ACO instructs the switch to set the alarm cutoff mode for an entity. The various modes describe the degree to which the switch is permitted to provide an automatic ACO function.

Category: Fault **Security:** SA for both commands

Input Formats:

```
OPR-ACO:[TID]:[<aco_id>]:[CTAG];
SET-ACO:[TID]:<aco_id>:[CTAG]::<aco>;
```

Output Formats: none

Parameters:

aco_id Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

aco Identifies the mode of alarm cutoff operation provided by the switch.

Type: enum
Range: DELD = ACO is delayed to allow announcement
IMED = ACO introduced automatically and immediately at the switch
MAN = ACO introduced by OS command or manual operation
Default value: none

Input Examples:

```
OPR-ACO;
SET-ACO::COM:::DELD;
```

Related Commands: none

RTRV-ALM-<AidType>

Command:

RTRV-ALM-<AidType>: Retrieve Alarm (ALL, COM, E1, ENET, EQPT, OC, STS1, T1, T3)

Description:

RTRV-ALM generates a report on the current state of alarm conditions within the switch. The RTRV-COND command generates a report on both alarms and conditions.

Category: Fault **Security:** View

Input Format:

```
RTRV-ALM-<AidType>:[TID]:[<alm_id>]:[CTAG]::
   [NTFCNCDE=<ntfcncde>],[CONDTYPE=<condtype>],
   [SRVEFF=<srveff>],[OCRDAT=<ocrdat>],
   [OCRTM=<ocrtm>],[DESC=<desc>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<alm_id>,[<entitytype>]:<ntfcncde>,<condtype>,
      <srveff>,<ocrdat>,<ocrtm>,<desc>,<tblisltd>"
;
```

Parameters:

AidType Identifies the type of entity within the switch from which to retrieve alarms.

Type: ReptAid
Range: ALL = Designates the switch and all entities within it
COM = Common – designates the switch as a discreet entity
E1 = E1 ports
ENET = Ethernet ports
EQPT = Equipment – designates major assemblies
OC = OC3 ports
STS1 = STS1 ports
T1 = T1 ports
T3 = T3 ports
Default value: none

alm_id Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

ntfcncde Identifies the notification code of the event that caused the condition to be reported. This indicates the alarm level. A null value is equivalent to "ALL"; that is, by leaving the field blank, all event notification codes configured in the system will be returned.

Type: enum
Range: CL = Cleared. Never used in provisioning requests or returned in RTRVs - only active conditions are available through the RTRV-EVT/COND/ALM messages and by definition their notification codes are never CL/CLEAR.
CR = Critical
MJ = Major
MN = Minor
NA = Not Alarmed
Default value: none

condtype Indicates the condition type for an alarm or a reported event.

Type: string
Range: alphanumeric characters
Default value: NULL

srveff Identifies the effect on service caused by the alarm condition.

Type: enum
Range: SA = Service-affecting condition.
NSA = Non-service-affecting condition
Default value: NULL

ocrdat Identifies the date when the specific event or violation occurred.

Type: enum
Range: <YYYY>-{1-12}-{1-31) = <year>-{month}-{day of month}
Default value: NULL

ocrtm Identifies the time when the specific event or violation occurred.

Type: enum
Range: {0-23}-{0-59}-{0-59} = {hour}-{minute}-{second}
{0-23}-{0-59} = {hour}-{minute}
Default value: NULL

desc Describes the alarm condition.

Type: string
Range: alphanumeric characters
Default value: NULL

tblisltd Identifies (in output) an integer representing the alarm.

Type: integer
Range: up to four digits
Default value: NULL

Input Example:

```
RTRV-ALM-EQPT:::::NTFCNCDE=MN;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "IOM-14,EQPT:MN,PRCDRERR,NSA,2004-10-29,04-34-27,
      \"Module in Slot 14 present but not
      provisioned\",79"
   "IOM-15,EQPT:MN,PROTNA,NSA,2004-10-29,04-47-52,
      \"Module in slot 15 is unprotected\",839"
   "IOM-1,EQPT:MN,PROTNA,NSA,2004-10-29,04-56-20,
      \"Module in slot 1 is unprotected\",839"
   "IOM-4,EQPT:MN,PROTNA,NSA,2004-10-29,05-00-15,
      \"Module in slot 4 is unprotected\",839"
;
```

Related Commands:

```
RTRV-COND-<ReptAid>
```

RTRV-COND-<ReptAid>

Command:

RTRV-COND-<ReptAid>: Retrieve Condition (ALL, COM, E1, ENET, EQPT, OC, STS1, T1, T3)

Description:

RTRV-COND instructs the switch to return the current standing condition and/or state associated with one or more specified facilities or equipment units in the switch. The RTRV-ALM command generates a report on just alarms.

Category: Fault **Security:** View

Input Format:

```
RTRV-COND-<ReptAid>:[TID]:[<src>]:[CTAG]::[<typereq>],
   [<locn>],[<dirn>],[<tmper>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<aid>,<aidtype>:CONDTYPE=<condtype>,
      SRVEFF=<srveff>,MONDAT=<mondat>,OCRTM=<ocrtm>,
      LOCN=<locn>,CONTSTATE=<contstate>,INVL=<invl>,
      DESC=<desc>"
;
```

Parameters:

ReptAid Identifies the type of entity within the switch from which to retrieve alarms and conditions.

Type: ReptAid
Range: ALL = Designates the switch and all entities within it
COM = Common – designates the switch as a discreet entity
E1 = E1 ports
ENET = Ethernet ports
EQPT = Equipment – designates major assemblies
OC = OC3 ports
STS1 = STS1 ports
T1 = T1 ports
T3 = T3 ports
Default value: none

src Identifies the input AID as the switch.

Type: COM
Range: COM
Default value: COM

aid Identifies the output AID as a specific entity within the switch.

Range: alphanumeric characters

aidtype Identifies, in the output AID block, the type of entity within the switch from which to retrieve alarms.

Range: ALL = Designates the switch and all entities within it
COM = Common – designates the switch as a discreet entity
ENET = Ethernet ports
EQPT = Equipment – designates major assemblies
STS1 = STS1 ports
T1 = T1 ports
T3 = T3 ports

typereq Identifies, in input, the type of condition to be retrieved. A null value defaults to all applicable condition types.

Type: string
Range: alphanumeric characters
Default value: none

condtype Identifies, in output, the current standing condition and/or state associated with the equipment specified in the AID block.

Range: alphanumeric characters

srveff Identifies, in output, the effect on service caused by the condition.

Range: SA = Service-affecting condition.
NSA = Non-service-affecting condition

mondat Identifies, in output, the monitored date. The value indicates the beginning date for the period defined by *tmper*. The format is MM-DD.

Range: {1-12}-{1-31}

ocrtm Identifies, in output, the time when the specific event or violation occurred.

Range: {0-23}-{0-59}-{0-59} = {hour}-{minute}-{second}
{0-23}-{0-59} = {hour}-{minute}

locn Identifies, in both input and output, the location of the switch. A null value defaults to all applicable locations.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: none

dirn Identifies, in input, the direction relative to the entity in the switch. A null value defaults to all applicable directions (currently, RCV is the only valid value).

Type: enum
Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive
Default value: RCV

tmper Identifies, in input, the period of time for which to retrieve standing conditions. This parameter is presently not used.; leave it blank

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: none

contstate Identifies, in output, the control state of the external control.

Range: NA = Not applicable (duration is momentary)
OPER = Operated
RLS = Released

invl Identifies, in output, the interval between the next scheduled test or exercise to be executed by the switch.

Range: {1-31}-DAY = Interval in days (up to one month)
{1-24}-HR = Interval in hours (up to one day)
{1-1440}-MIN = Interval in minutes (up to one day)
NA = Not applicable (duration is momentary)

desc Describes, in output, the alarm condition.

Range: alphanumeric characters

Input Example:

```
RTRV-COND-COM:::::LOS,FEND,RCV;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "COM,T1:CONDTYPE=LOS,SRVEFF=NSA,MONDAT=10-29,
      OCRTM=08-45-40,LOCN=FEND,CONTSTATE=NA,
      INVL=1-HR,DESC=LOSS OF SIGNAL"
;
```

Related Commands:

```
RTRV-ALM-<ReptAid>
```

NOTES

RTRV-ATTR-LOG / SET-ATTR-LOG

Commands:

RTRV-ATTR-LOG: Retrieve Attribute Log

SET-ATTR-LOG: Set Attribute Log

Descriptions:

RTRV-ATTR-LOG lets the user retrieve the current attributes for an existing log in the switch. Use it to review these attributes prior to making changes with the SET-ATTR-LOG command. These attributes govern how many, how long, and what kinds of messages are logged.

SET-ATTR-LOG lets the user set the attributes associated with a message log in the switch. If an associated log already exists, the new values specified by the command replace the previous values. The switch also logs execution of this command.

Category: Log **Security:** NSA for SET, View for RTRV

Input Formats:

```
RTRV-ATTR-LOG:[TID]:[<log_id>]:[CTAG]::[<lognm>];
```

```
SET-ATTR-LOG:[TID]:[<log_id>]:[CTAG]::<lognm>,
   [<clrlog>],[<maxmsg>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<lognm>,[<maxmsg>]"
;
```

Parameters:

log_id Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

lognm Identifies the name of a log for which to set or retrieve log attributes. The call capture (CALLCAPT) and call capture verbose (CALLCAPTV) logs are not included in the set of values for RTRV as they have no retrievable attributes. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the maximum number of messages for all logs will be returned.

Type: enum
Range: AO = autonomous output log – All autonomous message output (a subset of the system log)
BKUP = backup log – All output from running backup scripts (success/failure messages, error messages, etc.)
BULK = bulk download log – All output from EXEC-BULK-DOWNLOAD
CALLCAPT = call capture log – All records of in-progress calls for which capture sessions have been initiated with the ENT-CALL-CAPT command
CALLCAPTV = call capture verbose log – All records of in-progress calls for which capture sessions have been initiated with the ENT-CALL-CAPTVERBOSE command
FRAUD = fraud calls log – All records of calls designated as fraudulent
MSG = messages log – All TL1 commands entered into the system
SEC = security log – All logins, logouts, failed login attempt messages, etc.
SECBKUP = security backup log – All logins, logouts, failed login attempt messages, etc.
SYS = system log – All system messages (processes started, alarms, events, informational messages, etc.)
Default value: none

clrlog Controls the clearing of the log. There is no implementation difference between the values “CLR” and “DLT” to the TL1 user; both values delete the entire log file.

Type: enum
Range: CLR = Clear log
DLT = Delete log
NOCLR = Don’t clear log
Default value: NOCLR

maxmsg Identifies the maximum number of messages to be logged. The patch (PATCH), bulk download (BULK), and call capture (CALLCAPT) logs can each have only a single message that contains the contents of the log file for the most recent patch install attempt or capture session.

Type: integer
Range: {1-9999}
Default value: 1000 for autonomous output log (AO)
1000 for messages log (MSG)
400 for security log (SEC)
1000 for system log (SYS)

Input Examples:

```
RTRV-ATTR-LOG;
```

```
SET-ATTR-LOG::COM:::MSG,NOCLR,1000;
```

Output Example:

```
   LUCENT 2004-10-29 14:37:49
M  0 COMPLD
   "SYS,500"
   "MSG,1000"
   "AO,1000"
   "SEC,400"
;
```

Related Commands:

```
RTRV-LOG
```

RTRV-LOG

Command:

RTRV-LOG: Retrieve Log

Description:

RTRV-LOG lets the user retrieve the contents of one of the logs.

Category: Log **Security:** View

Input Format:

```
RTRV-LOG:[TID]:[<log_id>]:[CTAG]::<lognm>;
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   /*
   "<free-format-text log message 1>"
   "<free-format-text log message 2>"
   "<free-format-text log message 3>"
    .
    .
    .
   "<free-format-text log message n>"
   */
;
```

Parameters:

log_id Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

lognm Identifies the name of a log for which to retrieve the contents.

Type: enum
Range: AO = autonomous output log – All autonomous message output (a subset of the system log)
BKUP = backup log – All output from running backup scripts (success/failure messages, error messages, etc.)
BULK = bulk download log – All output from EXEC-BULK-DOWNLOAD
CALLCAPT = call capture log – All records of in-progress calls for which capture sessions have been initiated with the ENT-CALL-CAPT command
CALLCAPTV = call capture verbose log – All records of in-progress calls for which capture sessions have been initiated with the ENT-CALL-CAPTVERBOSE command
FRAUD = fraud calls log – All records of calls designated as fraudulent
MSG = messages log – All TL1 commands entered into the system
SEC = security log – All logins, logouts, failed login attempt messages, etc.
SECBKUP = security backup log – All logins, logouts, failed login attempt messages, etc.
SYS = system log – All system messages (processes started, alarms, events, informational messages, etc.)
Default value: none

Note: There are no output parameters – The normal response is the standard response block and the contents of the specified log.

Input Example:

```
RTRV-LOG:::::MSG;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   /*
   "2004-10-29 11:49:01:lucent:rtrv-eqpt"
   "2004-10-29 11:49:28:lucent:rtrv-ss7-trk::1"
   "2004-10-29 11:54:22::act-user::lucent:::******"
   "2004-10-29 11:54:35:lucent:rtrv-log:::::sec"
   */
;
```

Related Commands:

RTRV/SET-ATTR-LOG

CANC/DLT/ED/ENT/RTRV-USER-SECU

Commands:

CANC-USER-SECU: Cancel User Security

DLT-USER-SECU: Delete User Security

ED-USER-SECU: Edit User Security

ENT-USER-SECU: Enter User Security

RTRV-USER-SECU: Retrieve User Security

Descriptions:

CANC-USER-SECU lets an administrator terminate a user's existing TL1 session. The AID block contains the user identifier.

DLT-USER-SECU lets an administrator remove a user. The AID block contains the user identifier.

ED-USER-SECU allows an administrator to edit a user's access privileges, password, or password properties. The AID block contains the user identifier. Use this command to change the user's password, access privilege, password aging interval, password update grace period, time out interval, and whether the user is allowed to execute commands related to CALEA.

ENT-USER-SECU allows an administrator to add a user account. The AID block contains the user identifier. Use this command to set the user's password, access privilege, password aging interval, password update grace period, time out interval, and whether the user is allowed to execute commands related to CALEA.

RTRV-USER-SECU lets an administrator retrieve the privilege/security parameters of one or more users. It does not return users' passwords. Only an administrator may invoke the general version of this command.

Category: Security **Security:** ADMIN for all commands

Input Formats:

```
CANC-USER-SECU:[TID]:<uid>:[CTAG];

DLT-USER-SECU:[TID]:<uid>:[CTAG];

ED-USER-SECU:[TID]:<uid>:[CTAG]::[<pid>],[<cid>],
   [<uap>]:[PAGE=<page>],[PCND=<pcnd>],
   [TMOUT=<tmout>],[CALEA=<calea>];

ENT-USER-SECU:[TID]:<uid>:[CTAG]::<pid>,<cid>,<uap>:
   [PAGE=<page>],[PCND=<pcnd>],[TMOUT=<tmout>],
   [CALEA=<calea>];

RTRV-USER-SECU:[TID]:[<uid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<uid>:<uap>:[PAGE=<page>],[PCND=<pcnd>],
      [TMOUT=<tmout>],[CALEA=<calea>]"
;
```

Parameters:

uid Identifies the user. The UID is the user ID or login name.

Type: string
Range: 8 – 16 alphanumeric characters
Default value: none

pid Identifies the user's initial password, which should contain at least one number and one letter.

Type: string
Range: 8 – 16 alphanumeric characters
Default value: none

cid Identifies the channel. This parameter is presently not supported; leave it blank for ED. For ENT, however, you must enter a value of any alphanumeric string up to 20 characters or the command will fail.

Type: string
Range: up to 20 alphanumeric characters
Default value: none

uap Identifies the user's access privilege. The values in the range are defined in descending order of security. Higher levels include lower levels.

Type: enum
Range: ADMIN = Administrative permits the user to perform all TL1 commands including managing user accounts or profiles and downloading new software.
SW = SoftWare, in addition to all commands with security levels SA, NSA, and VIEW, allows the user to issue commands to download software. This level of access security applies to the System command CPY-MEM and all OS Access System commands.
SA = Service-Affecting, in addition to all commands with security levels NSA and VIEW, allows the user to issue service-affecting commands. This level applies to DSFacility, Equipment, Signalling, and Test commands, and System command ED-DAT.
NSA = Non-Service-Affecting, in addition to all commands with security level VIEW, allows the user to issue non-service-affecting commands. This level applies to Log commands, System commands (excepting CPY-MEM and ED-DAT), and Facility commands INIT-REG, ALW/INH/SCHED-PMREPT, and SET-TH.
VIEW = VIEW allows the user to issue RTRV commands (except RTRV-IPHOST-SECU and RTRV-USER-SECU, which are ADMIN level) to view the switch's status and statistics information. This lowest level of access security also applies to ACT-USER (to log on), CANC-USER (to log off), ED-PID (with which users can change their passwords), and to REPT autonomous messages.
Default value: none

page Indicates the password aging interval, in days. At the end of the interval the password expires and the user receives a prompt to replace the existing password. When greater than zero, *page* forces users to change their passwords. This limits the time in which an intruder who has learned a username/password pair can use that account. Setting the value of *page* to "0" makes the password perpetual. For typical long-term users, *page* is generally set to a value much greater than *passwdChgFreq* (set in ED-SYS-SECU). However, temporary users, who will have access for a period less than the value of *passwdChgFreq* and who must change passwords only on first use, can have values of *page* smaller than that set for *passwdChgFreq*.

Type: enum
Range: {0-999}, typically 45 to 60
Default value: 90

pcnd Indicates the number of days that a user can use the existing password after the password aging interval has elapsed before an update is mandatory.

Type: enum
Range: {0-999}, typically 7
Default value: 7

tmout Identifies the time out interval in minutes. If there are no messages between the user and the switch over the *tmout* interval, the session is logged off.

Type: enum
Range: {0-99}
Default value: 30

calea Identifies whether the user is allowed to execute commands related to CALEA (Communications Assistance to Law Enforcement Act). The user must already have an access privilege level of "SA" or higher.

Type: BoolYN
Range: Y = Enabled
N = Disabled
Default value: N

Input Examples:

```
CANC-USER-SECU::JOHNUSER;

DLT-USER-SECU::JOHNUSER;

ED-USER-SECU::JOHNUSER:::LUCENT,,VIEW:PAGE=90,PCND=7,
   TMOUT=30,CALEA=N;

ENT-USER-SECU::JOHNUSER:::LUCENT,NULL,VIEW:PAGE=90,
   PCND=7,TMOUT=30,CALEA=N;

RTRV-USER-SECU::JOHNUSER;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "JOHNUSER:VIEW:PAGE=45,PCND=7,TMOUT=30,CALEA=N"
;
```

Related Commands:

```
ED-PID
```

DLT/ED/ENT/RTRV-PRFL-PFP

Commands:

DLT-PRFL-PFP: Delete Profile Packet Flood Protection

ED-PRFL-PFP: Edit Profile Packet Flood Protection

ENT-PRFL-PFP: Enter Profile Packet Flood Protection

RTRV-PRFL-PFP: Retrieve Profile Packet Flood Protection

Descriptions:

DLT-PRFL-PFP lets an administrator remove a packet flood protection, or packet policing, profile. You cannot delete a profile that is an attribute of an IP filtering rule established with ENT-RULE-IPFLTR.

ED-PRFL-PFP lets an administrator change the attributes of a packet flood protection, or packet policing, profile. Put the profile out of service before executing this command.

ENT-PRFL-PFP lets an administrator establish a packet flood protection, or packet policing, profile.

RTRV-PRFL-PFP lets an administrator to retrieve the attributes of a packet flood protection, or packet policing, profile.

Category: Security **Security:** ADMIN for all commands

Input Formats:

```
DLT-PRFL-PFP:[TID]:[<pfpPrflId>]:[CTAG];

ED-PRFL-PFP:[TID]:<pfpPrflId>:[CTAG]::
   [PFPTYPE=<pfpType>],[ALARMTHRESH=<alarmThresh>],
   [DROPTHRESH=<dropThresh>],[POLLFREQ=<pollFreq>]:
   [<pst>];

ENT-PRFL-PFP:[TID]:<pfpPrflId>:[CTAG]::
   [PFPTYPE=<pfpType>],[ALARMTHRESH=<alarmThresh>],
   [DROPTHRESH=<dropThresh>],[POLLFREQ=<pollFreq>]:
   [<pst>];

RTRV-PRFL-PFP:[TID]:[<pfpPrflId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pfpPrflId>:PFPTYPE=<pfpType>,
      ALARMTHRESH=<alarmThresh>,
      DROPTHRESH=<dropThresh>,POLLFREQ=<pollFreq>:
      <pst>"
;
```

Parameters:

pfpPrflId Identifies the AID as a packet flood protection (PFP) profile. A null value (in RTRV or DLT) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns parameters for, or deletes, all configured PFP profiles.

Type: integer
Range: {1-32}
Default value: none

pfpType Identifies the type of packet flood protection for the profile.

Type: enum
Range: ALARMDROP = alarm is generated when the value of *alarmThresh* is greater than zero and is exceeded, and packets matching the rule are dropped when the value of *dropThresh* is greater than zero and is exceeded
ALARMDROPLOG = alarm is generated when the value of *alarmThresh* is greater than zero and is exceeded, and packets matching the rule are dropped when the value of *dropThresh* is greater than zero and is exceeded, and the headers of the dropped packets are logged
ALARMONLY = alarm is generated when the value of *alarmThresh* is greater than zero and is exceeded
Default value: ALARMONLY

alarmThresh Identifies the alarm threshold in packets per second. A value of "0" is equivalent to "NULL".

Type: integer
Range: {0-65535}
Default value: 0

dropThresh Identifies the threshold, in packets per second, above which packets matching the rule are dropped. A value of "0" is equivalent to "NULL".

Type: integer
Range: {0-65535}
Default value: 0

pollFreq Identifies how often the packet statistics are polled to check against the provisioned packet-per-second thresholds. The polling frequency determines the minimum amount of time until an alarm can be generated or cleared, or other action taken (such as dropping packets).

Type: integer
Range: {5-300}
Default value: 60

pst Identifies the primary state for the profile.

Type: string
Range: IS = In Service (profile can be applied to an IP filtering rule)
OOS = Out Of Service (profile cannot be applied)
Default value: OOS

Input Examples:

```
DLT-PRFL-PFP::1;

ED-PRFL-PFP::1:::PFPTYPE=ALARMONLY,ALARMTHRESH=0,
   DROPTHRESH=0,POLLFREQ=60:OOS;

ENT-PRFL-PFP::1:::PFPTYPE=ALARMONLY,ALARMTHRESH=0,
   DROPTHRESH=0,POLLFREQ=60:OOS;

RTRV-PRFL-PFP;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:PFPTYPE=ALARMONLY,ALARMTHRESH=0,DROPTHRESH=0,
      POLLFREQ=60:OOS"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-RULE-IPFLTR
ED/RTRV-SYS-SECU
```

DLT/ED/ENT/RTRV-RULE-IPFLTR

Commands:

DLT-RULE-IPFLTR: Delete Rule IP Filter

ED-RULE-IPFLTR: Edit Rule IP Filter

ENT-RULE-IPFLTR: Enter Rule IP Filter

RTRV-RULE-IPFLTR: Retrieve Rule IP Filter

Descriptions:

DLT-RULE-IPFLTR allows an administrator to remove an IP filtering rule on a specific SP processor. Put the rule out of service before executing this command.

ED-RULE-IPFLTR allows an administrator to change the attributes of an IP filtering rule on a specific SP processor. Put the rule out of service before executing this command.

ENT-RULE-IPFLTR allows an administrator to establish an IP filtering rule on a specific SP processor when IP filtering is enabled at a system level.

RTRV-RULE-IPFLTR allows an administrator to retrieve the attributes of an IP filtering rule on a specific SP processor.

Category: Security **Security:** ADMIN for all commands

Input Formats:

```
DLT-RULE-IPFLTR:[TID]:<ruleId>:[CTAG];

ED-RULE-IPFLTR:[TID]:<ruleId>:[CTAG]::[SRCIP=<srcIp>],
   [SRCPORTSTART=<srcPortStart>],
   [SRCPORTEND=<srcPortEnd>],[DESTIP=<destIp>],
   [DESTPORTSTART=<destPortStart>],
   [DESTPORTEND=<dstPortEnd>],
   [IPHDRPRTCL=<ipHdrPrtcl>],[APP=<app>],
   [RULETYPE=<ruleType>],[PFPPRFLID=<pfpPrflId>],
   [RANK=<rank>]:[<pst>];
```

```
ENT-RULE-IPFLTR:[TID]:<ruleId>:[CTAG]::
   [SRCIP=<srcIp>],[SRCPORTSTART=<srcPortStart>],
   [SRCPORTEND=<srcPortEnd>],[DESTIP=<destIp>],
   [DESTPORTSTART=<destPortStart>],
   [DESTPORTEND=<dstPortEnd>],
   [IPHDRPRTCL=<ipHdrPrtcl>],[APP=<app>],[SRC=<src>],
   [RULETYPE=<ruleType>],[PFPPRFLID=<pfpPrflId>],
   [RANK=<rank>]:[<pst>];

RTRV-RULE-IPFLTR:[TID]:[<ruleId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ruleId>:SRCIP=<srcIp>,
      SRCPORTSTART=<srcPortStart>,
      SRCPORTEND=<srcPortEnd>,DESTIP=<destIp>,
      DESTPORTSTART=<destPortStart>,
      DESTPORTEND=<dstPortEnd>,
      IPHDRPRTCL=<ipHdrPrtcl>,APP=<app>,SRC=<src>,
      RULETYPE=<ruleType>,PFPPRFLID=<pfpPrflId>,
      RANK=<rank>:<pst>"
;
```

Parameters:

ruleId Identifies the AID as a combination of the system processor (SP) interface and the rule number for the interface. A null value in RTRV is equivalent to "ALL"; that is, by leaving the field blank, the switch returns parameters for all rule numbers on both SP interfaces. A null value for the second part of the AID (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns parameters for all rule numbers for the specified SP interface.

Type: string
Range: <sp>[-<ruleNum>], where
sp = SPMGT (management interface)
SPSIG (signaling interface)
ruleNum = {1-1024}
Default value: none

srcIp Identifies the packet source IP address as a combination of the IP address and the number of bits in the network mask to apply to the specified IP address (thus allowing a range of addresses). A null value for *netMask* defaults to a value of "32".

Type: string
Range: <ipAddr>[-<netMask>], where
ipAddr = {0-255}.{0-255}.{0-255}.{0-255}
netMask = {1-32}
Default value: NULL

srcPortStart Identifies the starting port number for the range of ports on the packet source IP address. A value of "0" is equivalent to "NULL".

Type: integer
Range: {0-65535}
Default value: 0

srcPortEnd Identifies the ending port number for the range of ports on the packet source IP address. The value of *staPortEnd* must be greater than or equal to the value for *staPortStart*. A value of "0" is equivalent to "NULL".

Type: integer
Range: {0-65535}
Default value: 0

destIp Identifies the packet destination IP address as a combination of the IP address and the number of bits in the network mask to apply to the specified IP address (thus allowing a range of addresses). A null value for *netMask* defaults to a value of "32".

Type: string
Range: <ipAddr>[-<netMask>], where
ipAddr = {0-255}.{0-255}.{0-255}.{0-255}
netMask = {1-32}
Default value: NULL

destPortStart Identifies the starting port number for the range of ports on the packet destination IP address. A value of "0" is equivalent to "NULL".

Type: integer
Range: {0-65535}
Default value: 0

destPortEnd Identifies the ending port number for the range of ports on the packet destination IP address. The value of *destPortEnd* must be greater than or equal to the value for *destPortStart*. A value of "0" is equivalent to "NULL".

Type: integer
Range: {0-65535}
Default value: 0

ipHdrPrtcl Identifies the IP header protocol. When the value is a number (within the range 0-255, else the application rejects the command) the switch interprets it as a value in the IP header protocol field. When the value is alphabetic the application rejects the command when the value doesn't match one of the protocols supported by the switch (ICMP, SCTP, TCP, TCP-UDP, UDP).

Type: string
Range: up to 10 characters
Default value: NULL

app Identifies the application to which the rule applies. This allows applying rules for multiple non-contiguous ports when the value of *sp* in *ruleId* is "SPSIG", and allows multiple rules for ports used by the Element Manager when the value of *sp* in *ruleId* is "SPMGT"

Type: enum
Range: ARP
CALEA
EMS
FTP
GDI
IUA
M3UA
MEGACO
NONE
PING
SIP
TELNET
TL1
TRACEROUTE
TRUSTEDIP
Default value: NONE

src Identifies the source of the rule.

Type: enum
Range: PROTOCOL = system-created rule depending on configuration and application (for example, opening MEGACO ports for a media gateway or a media gateway controller)
SYSTEM = default system rule not dependent on configuration (for example, block NFS and TFTP)
USER = user-provisioned rules
Default value: USER

ruleType Identifies the type of rule.

Type: enum
Range: BLOCK = drop all traffic matching this rule
PASS = allow all traffic matching this rule
POLICE = apply a packet flood protection (PFP) profile to the rule
Default value: BLOCK

pfpPrflId Identifies the packet flood protection (PFP) profile, previously established via ENT-PRFL-PFP, when the value of *ruleType* is "POLICE".

Type: integer
Range: {1-32}
Default value: NULL

rank Identifies the unique ordering of the rule in the rule set. Default ordering is in the order of entry. Multiplying the rule number by 10 allows space for reordering via ED-ROLE-IPFLTR as opposed to requiring deletion and reentering. Adding 10000 to the product allows sufficient space for default and protocol-generated rules (There can be many rules in a Lucent Network Controller when it supports many media gateways.).

Type: integer
Range: {10000-22000}
Default value: <the value of *ruleNum* in *ruleId*> * 10 + 10000

pst Identifies the primary state for the rule.

Type: string
Range: IS = In Service (Rule is applied when the value of *ipFltrEnable* in SYS-SECU is "Y"
OOS = Out Of Service (Rule is not applied)
Default value: OOS

Input Examples:

```
DLT-RULE-IPFLTR::SPSIG-1;

ED-RULE-IPFLTR::SPSIG-1:::SRCIP=192.168.0.204-32,
   SRCPORTSTART=0,SRCPORTEND=0,DESTIP=77.16.0.208-32,
   DESTPORTSTART=0,DESTPORTEND=0,IPHDRPRTCL=NULL,
   APP=NONE,RULETYPE=BLOCK,PFPPRFLID=NULL,RANK=10010:
   OOS;

ENT-RULE-IPFLTR::SPSIG-1:::SRCIP=192.168.0.204-32,
   SRCPORTSTART=0,SRCPORTEND=0,DESTIP=77.16.0.208-32,
   DESTPORTSTART=0,DESTPORTEND=0,IPHDRPRTCL=NULL,
   APP=NONE,SRC=USER,RULETYPE=BLOCK,PFPPRFLID=NULL,
   RANK=10010:OOS;

RTRV-RULE-IPFLTR;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "SPSIG-1:SRCIP=192.168.0.204-32,SRCPORTSTART=0,
      SRCPORTEND=0,DESTIP=77.16.0.208-32,
      DESTPORTSTART=0,DESTPORTEND=0,IPHDRPRTCL=NULL,
      APP=NONE,SRC=USER,RULETYPE=BLOCK,PFPPRFLID=NULL,
      RANK=10010:OOS"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-PRFL-PFP
ED/RTRV-SYS-SECU
```

ED-PID

Command:

ED-PID: Edit Password

Description:

ED-PID allows users to change their passwords. Users must issue ED-PID after their initial log-ins to create encrypted passwords known only to them. Only users with Admin privilege can enter another user's identification and access changes.

Category: Security **Security:** View

Input Format:

```
ED-PID:[TID]:<uid>:[CTAG]::<oldpid>,<newpid>;
```

Output Format: none

Parameters:

uid Identifies the user. The UID is the user ID or login name.

Type: string
Range: 8 – 16 characters
Default value: none

oldpid Identifies the user's old password, which should contain at least one number and one letter.

Type: string
Range: 8 – 16 characters
Default value: none

newpid Identifies the user's new password, which should contain at least one number and one letter. The system prevents the user from reusing the most recently used five passwords (or the current password) when selecting a new password.

Type: string
Range: 8 – 16 characters
Default value: none

Input Example:

```
ED-PID::JOHNUSER:::1OLDPASSWORD,1NEWPASSWORD;
```

Related Commands:

DLT/ED/ENT/RTRV-USER-SECU

ED/RTRV-SYS-SECU

Commands:

ED-SYS-SECU: Edit System Security

RTRV-SYS-SECU: Retrieve System Security

Descriptions:

ED-SYS-SECU allows an administrator to edit security parameters associated with a Lucent Gateway Platform. Use this command to set the maximum allowable number of invalid session setup attempts, the alert condition duration, the time out intervals, the period in which to generate a password expiration alert message, the lower limit for the password aging interval, the heartbeat interval, whether the TCP connection is enabled, the assigned ports for alarm queue sessions and the Element Manager, the maximum elapsed time for a user to reconnect to the TL1 agent after an alarm queue session disconnect, whether IP filtering is enabled, and the allowed interval between reported TL1 events or alarms.

RTRV-SYS-SECU allows an administrator to retrieve security parameters associated with a Lucent Gateway Platform. Use this command to retrieve the maximum allowable number of invalid session setup attempts, the alert condition duration, the time out intervals, the period in which to generate a password expiration alert message, the lower limit for the password aging interval, the heartbeat interval, whether the TCP connection is enabled, the assigned ports for alarm queue sessions and the Element Manager, the maximum elapsed time for a user to reconnect to the TL1 agent after an alarm queue session disconnect, whether IP filtering is enabled, and the allowed interval between reported TL1 events or alarms.

Category: Security **Security:** ADMIN for all commands

Input Formats:

```
ED-SYS-SECU:[TID]:[<src>]:[CTAG]::[MAXINV=<maxInv>],
    [DURAL=<dural>],[TMOUT=<tmout>],
    [PRELOGINTIMEOUT=<preLoginTimeOut>],
    [PASSWDEXPALERT=<passwdExpAlert>],
    [PASSWDCHGFREQ=<passwdChgFreq>],
    [HEARTBEAT=<heartbeat>],
    [TCPCONNENABLED=<tcpConnEnabled>],
    [ALMQPORT=<almqPort>],[ALMQTMO=<almqTmo>],
    [EMPORT=<emPort>],[IPFLTRENABLED=<ipFltrEnabled>],
    [EVENTINTERVAL=<eventInterval>];

RTRV-SYS-SECU:[TID]:[<src>]:[CTAG];
```

Output Format:

```
    SID DATE TIME
M   CTAG COMPLD
    "<src>:MAXINV=<maxInv>,DURAL=<dural>,
       TMOUT=<tmout>,PRELOGINTIMEOUT=<preLoginTimeOut>,
       PASSWDEXPALERT=<passwdExpAlert>,
       PASSWDCHGFREQ=<passwdChgFreq>,
       HEARTBEAT=<heartbeat>,
       TCPCONNENABLED=<tcpConnEnabled>,
       ALMQPORT=<almqPort>,ALMQTMO=<almqTmo>
       EMPORT=<emPort>,[IPFLTRENABLED=<ipFltrEnabled>],
       EVENTINTERVAL=<eventInterval>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

maxInv Identifies the maximum number of invalid session setup attempts allowed (such as illegal user IDs or passwords) before an intrusion attempt is suspected and alert messages are generated. The factory default is “3”.

Type: enum
Range: {0-9}
Default value: not applicable

dural Identifies the duration of an alert condition in hours, minutes, and seconds during which the channel suspected of an intrusion attempt is locked out. This impedes the efficiency of an automated password cracker. It is not longer than one minute typically, because a longer duration could cause service deterioration. The factory default is "0-0-30".

Type: enum
Range: {0-99}-{0-59}-{0-59}
Default value: not applicable

tmout Identifies the time out interval in minutes. If there are no messages between the user and the switch over the *tmout* interval, the session is logged off. The factory default is "30".

Type: enum
Range: {0-99}
Default value: not applicable

preLoginTimeOut Identifies the time out interval in minutes for the period between the initialization of the login process and the first entry by the user. If there are no messages between the user and the switch over the *preLoginTimeOut* interval, the session is logged off. Setting the value to 0 allows a user to receive autonomous messages from the switch without logging on (ACT-USER) and without being disconnected automatically. The factory default is "2".

Type: enum
Range: {0-99}
Default value: not applicable

passwdExpAlert Indicates the number of days, after the password aging interval has elapsed, that a password expiration alert message is generated for the user before the existing password can no longer be used. The factory default is "2".

Type: enum
Range: {0-30}
Default value: not applicable

passwdChgFreq Indicates the minimum number of days a password exists before a user can change it. Generally, *passwdChgFreq* is the lower limit for the password aging interval, for which *page* (in ED/ENT-USER-SECU) is the upper limit. When greater than zero, *passwdChgFreq* prohibits frequent password changing. The system stores the most recently used five passwords and prevents the user from reusing them (or the current password) when selecting a new password. Restricting password "flipping" and reuse makes the system more secure against intruders. A *passwdChgFreq* value of 20 days (the default) ideally prevents reuse of a password for a minumum of 120 days. In reality, this waiting period may not be achieved; for instance, when an Administrator using ENT-USER-SECU or ED-USER-SECU sets a password, the user must change the password immediately. Passwords assigned by the Administrator are remembered in the user's recent password list; but as they do not have a *passwdChgFreq* waiting period, they can be reused in less than (6 * *passwdChgFreq*) days. (Note: the Administrator may reuse recent passwords in ED-USER-SECU.) Set *passwdChgFreq* to be considerably less than the smallest value of *page* assigned to typical long-term users. Temporary users, who will have access for a period less than the value of *passwdChgFreq* and who must change passwords only on first use, can have values of *page* smaller than that set for *passwdChgFreq*. The factory default is “20”.

Type: enum
Range: {0-99}
Default value: not applicable

heartbeat Indicates the number of minutes that can pass without a REPT-COND automatic message being sent to the system administrators indicating the standing conditions on the switch. The REPT-COND automatic message is generated when no activity occurs within the heartbeat timeframe. Setting the value to the default of 0 deactivates the function. The factory default is “0”.

Type: enum
Range: {0-120}
Default value: not applicable

tcpConnEnabled Indicates whether the TCP connection is enabled. The factory default is “Y”.

Type: BoolYN
Range: Y = Enabled
N = Disabled (serial connections only)
Default value: not applicable

almqPort Identifies the port used for alarm queue sessions. The allowed range for *almqPort* precludes the use of any well-known TCP ports or ports already used by the switch. At present, the only value allowed is the factory default of "2363".

Type: enum
Range: {1025-1109}
{1111-1198}
{1200-1982}
{1986-2048}
{2050-2359}
{2362-5999}
{6010-6666}
{6668-6999}
{7001-65535}
Default value: not applicable

almqTmo Identifies the maximum elapsed time, in minutes, for a user to reconnect to the TL1 agent after a session disconnect or anomalous condition is detected; i.e., the maximum elapsed time during which alarm queuing can occur. If reconnection doesn't occur within the time specified by *almqTmo*, the alarm queue session is removed from the list of active alarm queue sessions and the alarms in the affected queue are discarded. Setting *almqTmo* to "0" globally disables alarm queuing and flushes queued events. The factory default is 0 (alarm queuing disabled).

Type: enum
Range: {0-4320}
Default value: not applicable

emPort Identifies the port used to connect to the Element Manager. At present, the only value allowed is the factory default of "2362".

Type: integer
Range: {1025-65535}
Default value: not applicable

ipFltrEnabled Identifies whether IP filtering is enabled through secure shell (SSH). Setting the value to "Y" enables IP filtering, thus placing the box in secure mode by requiring the use of SSH for network access for TL1 sessions in place of common facilities such as telnet, rlogin and FTP. The factory default is "N".

Type: BoolYN
Range: Y = IP filtering enabled
N = IP filtering disabled
Default value: not applicable

eventInterval Identifies the interval between TL1 events or alarms in milliseconds. The factory default is "150".

Type: integer
Range: {50-500}
Default value: not applicable

Input Examples:

```
ED-SYS-SECU::COM:::MAXINV=3,DURAL=0-0-30,
   TMOUT=30,PRELOGINTIMEOUT=2,PASSWDEXPALERT=7,
   PASSWDCHGFREQ=20,HEARTBEAT=0,TCPCONNENABLED=Y,
   ALMQPORT=2363,ALMQTMO=0,EMPORT=2362,
   IPFLTRENABLED=N,EVENTINTERVAL=150;

RTRV-SYS-SECU;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:MAXINV=3,DURAL=0-0-30,TMOUT=30,
      PRELOGINTIMEOUT=2,PASSWDEXPALERT=7,
      PASSWDCHGFREQ=20,HEARTBEAT=0,TCPCONNENABLED=Y,
      ALMQPORT=2363,ALMQTMO=0,EMPORT=2362,
      IPFLTRENABLED=N,EVENTINTERVAL=150"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-RULE-IPFLTR
RTRV-STATUS-ALMQ
```

RTRV/SET-ATTR-SECULOG

Commands:

RTRV-ATTR-SECULOG: Retrieve Attributes Security Log

SET-ATTR-SECULOG: Set Attributes Security Log

Descriptions:

RTRV-ATTR-SECULOG lets the user retrieve the security banner (that is, the free-format text warning, before access is granted, regarding unauthorized entry/use and possible consequences) for the switch.

SET-ATTR-SECULOG lets the user generate the security banner for the switch; that is, the free-format text warning, before access is granted, regarding unauthorized entry/use and possible consequences.

Description: RTRV-ATTR-SECULOG lets the user retrieve the security banner (that is, the free-format text warning, before access is granted, regarding unauthorized entry/use and possible consequences) for the switch.

Category: Security **Security:** ADMIN for SET, View for RTRV

Input Formats:

```
RTRV-ATTR-SECULOG:[TID]:[<src>]:[CTAG]::
   [WRNLN=<wrnLn>];
SET-ATTR-SECULOG:[TID]:[<src>]:[CTAG]::WRNLN=<wrnLn>,
   [WRNTX=<wrnTx>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:WRNLN=<wrnLn>,WRNTX=<wrnTx>"
;
```

Input Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

wrnLn Identifies, within the warning message, the line number that receives the new text specified by *wrnTx*. The switch supports up to 20 lines of text. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the entire security banner will be returned.

Type: integer
Range: {1-20}
Default value: none

wrnTx Identifies the free-format text warning on the line identified by *wrnLn*. A null value (not entering a value) results in a blank line.

Type: string
Range: up to 61 ASCII characters
Default value: none

Input Examples:

```
RTRV-ATTR-SECULOG;

SET-ATTR-SECULOG:::::WRNLN=1,WRNTX=This is a private
   computer system.  Unauthorized access or use ;
SET-ATTR-SECULOG:::::WRNLN=2,WRNTX= may lead to prosec
   ution.;
SET-ATTR-SECULOG:::::WRNLN=3;
```

Output Example:

```
   LUCENT 2005-04-22 14:37:49
M  0 COMPLD
   "COM:WRNLN=1,WRNTX=This is a private computer sys
      tem.  Unauthorized access or use "
   "COM:WRNLN=2,WRNTX= may lead to prosecution."
   "COM:WRNLN=3,WRNTX="
   "COM:WRNLN=4,WRNTX="
   "COM:WRNLN=5,WRNTX="
   "COM:WRNLN=6,WRNTX="
   "COM:WRNLN=7,WRNTX="
   "COM:WRNLN=8,WRNTX="
   "COM:WRNLN=9,WRNTX="
   "COM:WRNLN=10,WRNTX="
   "COM:WRNLN=11,WRNTX="
   "COM:WRNLN=12,WRNTX="
   "COM:WRNLN=13,WRNTX="
   "COM:WRNLN=14,WRNTX="
   "COM:WRNLN=15,WRNTX="
   "COM:WRNLN=16,WRNTX="
   "COM:WRNLN=17,WRNTX="
   "COM:WRNLN=18,WRNTX="
   "COM:WRNLN=19,WRNTX="
   "COM:WRNLN=20,WRNTX="
;
```

Related Commands: none

RTRV-STATUS-ALMQ

Command:

RTRV-STATUS-ALMQ: Retrieve Status Alarm Queue

Description:

RTRV-STATUS-ALMQ allows a user to retrieve parameters associated with alarm queuing sessions established for alarm queuing TCP ports defined with ED-SYS-SECU. Use this command to retrieve the affected alarm queuing session(s), the IP address for the switch, the date and time the session was established, the date and time alarm queuing began, the date and time of reconnection to the TL1 agent, and the current state of the alarm queue.

Category: Security **Security:** View

Input Format:

```
RTRV-STATUS-ALMQ:[TID]:[<almqSessionId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<almqSessionId>:SRCIPADDR=<srcIpAddr>,
      CONNECTTIMESTAMP=<connectTimestamp>,
      QUEUEINGTIMESTAMP=<queueingTimestamp>,
      REPLAYTIMESTAMP=<replayTimestamp>,
      ALMQSTATE=<almqState>"
;
```

Parameters:

almqSessionId Identifies the alarm queuing session for which to return status from the list of active alarm queuing sessions. *almqSessionID* is the hexadecimal representation of the IP address of the machine connecting to the alarm queue port. A null value is equivalent to "ALL"; that is, if the optional AID is omitted, the switch returns status for all sessions having alarm queuing enabled.

Type: AlmqSessionId
Range: up to eight hexadecimal characters
Default value: none

srcIpAddr Identifies the IP address for the client (i.e., the user's computer) used to access the alarm queue session port on the switch (defined by the parameter *almqPort* in the command ED-SYS-SECU).

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

connectTimestamp Identifies the date and time that the alarm queuing session was established.

Type: string
Range: {MM-DD-YYYY-HH-MM-SS}
Default value: none

queueingTimestamp Identifies the date and time alarm queuing began due to an anomalous or error condition.

Type: string
Range: {MM-DD-YYYY-HH-MM-SS}
Default value: none

replayTimestamp Identifies the date and time the user reconnects to the TL1 agent after a session disconnect or anomalous condition is detected, and replay of queued alarms begins.

Type: string
Range: {MM-DD-YYYY-HH-MM-SS}
Default value: none

almqState Identifies the current state of an alarm queue established on disconnection with the switch of a specific session on a client.

Type: enum
Range: CONNECTED = the client session is not disconnected from the switch; alarms do not queue.
QUEUEING = the client session is disconnected from the switch; alarms queue for subsequent replay.
REPLAYING = the client session has reconnected to the switch, which outputs the queued autonomous messages to the client.
Default value: none

Input Example:

```
RTRV-STATUS-ALMQ;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "a0a0002:SRCIPADDR=199.190.180.1,
      CONNECTTIMESTAMP=07-29-2004-08-35-00,
      QUEUEINGTIMESTAMP=07-29-2004-16-42-55,
      REPLAYTIMESTAMP=07-29-2004-16-55-27,
      ALMQSTATE=CONNECTED"
;
```

Related Commands:

ED/RTRV-SYS-SECU

NOTES

DLT/ED/ENT/RTRV-LSET

Commands:

DLT-LSET: Delete Link Set

ED-LSET: Edit Link Set

ENT-LSET: Enter Link Set

RTRV-LSET: Retrieve Link Set

Descriptions:

DLT-LSET lets the user delete an SS7 link set.

ED-LSET lets the user change the maximum number of links that can be active for an SS7 link set.

ENT-LSET lets the user add an SS7 link set. ENT-LSET will not work correctly unless the following commands have already been issued in the listed order: ENT-PRFL-SGPC, ENT-SG-PCOWN, ENT-SG-PC.

RTRV-LSET lets the user retrieve parameters associated with an SS7 link set.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-LSET:[TID]:<lsetId>:[CTAG];

ED-LSET:[TID]:<lsetId>:[CTAG]::
   ACTLNKREQD=<actLnkReqd>;

ENT-LSET:[TID]:<lsetId>:[CTAG]::OPC=<opc>,
   ADJDPC=<adjDpc>,[ACTLNKREQD=<actLnkReqd>];

RTRV-LSET:[TID]:[<lsetId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<lsetAid>:OPC=<opc>,ADJDPC=<adjDpc>,
      ACTLNKREQD=<actLnkReqd>"
;
```

Parameters:

lsetId Identifies the AID as an SS7 link set. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, parameters for all SS7 link sets configured in the system will be returned.

Type: LsetAid
Range: {1-64}
Default value: none

opc Identifies the own point code associated with the link set. *opc* must be the same format as *adjDpc*; additionally, both point codes must use the same MTP variant and have the same sub-service field (*mtpVariant* and *pcSsf* in SG-PCOWN and SG-PC).

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
Default value: none

adjDpc Identifies the adjacent DPC to which the link set connects. *adjDpc* must be the same format as *opc*; additionally, both point codes must use the same MTP variant and have the same sub-service field (*mtpVariant* and *pcSsf* in SG-PCOWN and SG-PC).

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
Default value: none

actLnkReqd Identifies the maximum number of links that can be active at any given time.

Type: integer
Range: {1-16}
Default value: 16

Input Examples:

```
DLT-LSET::1;

ED-LSET::1:::ACTLNKREQD=16;

ENT-LSET::1:::OPC=23-186-5,ADJDPC=192-43-156,
   ACTLNKREQD=16;

RTRV-LSET::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:OPC=23-186-5,ADJDPC=192-43-156,ACTLNKREQD=16"
;
```

Related Commands:

ED-STATE-LSET	INIT-REG-LSET
RTRV-PM-LSET	RTRV-STATUS-LSET

DLT/ED/ENT/RTRV-PRFL-HSLKL2

Commands:

DLT-PRFL-HSLKL2: Delete Profile High-Speed Link Layer 2

ED-PRFL-HSLKL2: Edit Profile High-Speed Link Layer 2

ENT-PRFL-HSLKL2: Enter Profile High-Speed Link Layer 2

RTRV-PRFL-HSLKL2: Retrieve Profile High-Speed Link Layer 2

Descriptions:

DLT-PRFL-HSLKL2 lets the user delete a profile describing the ATM traffic parameters for a high-speed signaling link at the NNI between the signaling gateway function in the NG and an RNC at a wireless base station.

ED-PRFL-HSLKL2 lets the user change the ATM traffic parameters affecting a high-speed signaling link at the NNI between the signaling gateway function in the NG and an RNC at a wireless base station.

ENT-PRFL-HSLKL2 lets the user create a profile describing Asynchronous Transfer Mode (ATM) traffic parameters for high-speed signaling links at the Network-Node Interface (NNI – a Lucent Network Gateway, or NG, configured for wireless access) between the signaling gateway function in the NG and a Radio Network Controller (RNC) at a wireless base station. The signaling links are on layer 2 of the Signaling ATM Adaptation Layer (SAAL) at the NNI. The SAAL provides the services by the ATM layers to support the functions required by the signaling layers. Layer 2 is the Service Specific Coordination Function (SSCF)

RTRV-PRFL-HSLKL2 lets the user retrieve a profile describing the ATM traffic parameters for a high-speed signaling link at the NNI between the signaling gateway function in the NG and an RNC at a wireless base station.

Category: VToA **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-PRFL-HSLKL2:[TID]:<nniPrfl2Aid>:[CTAG];

ED-PRFL-HSLKL2:[TID]:<nniPrfl2Aid>:[CTAG]::[N1=<n1>],
   [T1=<t1>],[T2=<t2>],[T3=<t3>],[RXQSZ=<rxQsz>],
   [TXQSZ=<txQsz>],[FLCSTARTTHRESH=<flcStartThresh>],
   [FLCSTOPTHRESH=<flcStopThresh>],
   [POLLTMR=<pollTmr>],[IDLETMR=<idleTmr>],
   [KEEPALIVETMR=<keepAliveTmr>],
   [NORESPTMR=<noRespTmr>],[CCTMR=<ccTmr>],
   [MAXCC=<maxCc>],[MAXPD=<maxPd>],
   [MAXSTAT=<maxStat>];

ENT-PRFL-HSLKL2:[TID]:<nniPrfl2Aid>:[CTAG]::[N1=<n1>],
   [T1=<t1>],[T2=<t2>],[T3=<t3>],[RXQSZ=<rxQsz>],
   [TXQSZ=<txQsz>],[FLCSTARTTHRESH=<flcStartThresh>],
   [FLCSTOPTHRESH=<flcStopThresh>],
   [POLLTMR=<pollTmr>],[IDLETMR=<idleTmr>],
   [KEEPALIVETMR=<keepAliveTmr>],
   [NORESPTMR=<noRespTmr>],[CCTMR=<ccTmr>],
   [MAXCC=<maxCc>],[MAXPD=<maxPd>],
   [MAXSTAT=<maxStat>];

RTRV-PRFL-HSLKL2:[TID]:[<nniPrfl2Aid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<nniPrfl2Aid>:CTAG::N1=<n1>,T1=<t1>,T2=<t2>,
      T3=<t3>,RXQSZ=<rxQsz>,TXQSZ=<txQsz>,
      FLCSTARTTHRESH=<flcStartThresh>,
      FLCSTOPTHRESH=<flcStopThresh>,POLLTMR=<pollTmr>,
      IDLETMR=<idleTmr>,KEEPALIVETMR=<keepAliveTmr>,
      NORESPTMR=<noRespTmr>,CCTMR=<ccTmr>,
      MAXCC=<maxCc>,MAXPD=<maxPd>,MAXSTAT=<maxStat>"
;
```

Parameters:

nniPrfl2Aid Identifies the AID as a high-speed link layer 2 profile. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, the system returns parameter values for all configured high-speed link layer 2 profiles.

Type: integer
Range: {1-128}
Default value: none

n1 Identifies the number of protocol data units (PDUs – protocol messages) transmitted.

Type: integer
Range: {1-64000}
Default value: 1000

t1 Identifies the Timer T1 value in seconds. Timer T1 specifies the period between the link release action and the next link re-establish action during the alignment.

Type: integer
Range: {1-15}
Default value: 5

t2 Identifies the Timer T2 value in seconds. Timer T2 specifies the period during which the Service Specific Coordination Function (SSCF) attempts alignment.

Type: integer
Range: {1-180}
Default value: 30

t3 Identifies the Timer T3 value in seconds. Timer T3 specifies the period between proving PDUs.

Type: decinum
Range: {0-1}
Default value: 0.1

rxQsz Identifies the number of PDUs waiting to be received.

Type: integer
Range: {100-1000}
Default value: 300

txQsz Identifies the number of PDUs waiting to be transmitted.

Type: integer
Range: {100-1000}
Default value: 300

flcStartThresh Identifies the threshold for starting flow control. MTP3 starts flow control when the number of PDUs waiting for transmittal falls below this value. A typical value is one-third the value of *txQsz*.

Type: integer
Range: {0-1000}
Default value: 0

flcStopThresh Identifies the threshold for stopping flow control. MTP3 ends flow control when the number of PDUs waiting for transmittal rises above this value. The value of *flcStopThresh* is greater than the value of *flcStartThresh* but less than the value of *txQsz*.

Type: integer
Range: {0-1000}
Default value: 0

pollTmr Identifies the maximum time in seconds between transmission of a POLL PDU, when SD (Sequenced connection – mode Data) PDUs are queued for transmission or are outstanding pending acknowledgment.

Type: decinum
Range: {0-1}
Default value: 0.1

idleTmr Identifies the maximum time in seconds the NG waits for SD PDUs before putting the link into the idle state.

Type: decinum
Range: {0-1}
Default value: 0.1

keepAliveTmr Identifies the maximum time in seconds between transmission of POLL PDUs, when no SD PDUs are queued for transmission or are outstanding pending acknowledgment. The value of *keepAliveTmr* cannot be less than the value of *pollTmr*.

Type: decinum
Range: {0-1}
Default value: 0.2

noRespTmr Identifies the maximum time in seconds between transmission of POLL PDUs, when no SD or SDP PDUs are queued for transmission or are outstanding pending acknowledgment. The value of *noRespTmr* cannot be less than or equal to the value of *keepAliveTmr*, *pollTmr*, and the roundtrip delay time.

Type: decinum
Range: {0-3}
Default value: 1.5

ccTmr Identifies the Connection Control timer value in seconds. The value of *ccTmr* represents the time between retransmissions of BGN, END, or RS messages, when an acknowledgment PDU has not been received. The value of *ccTmr* cannot be less than or equal to the roundtrip delay time.

Type: decinum
Range: {0-1}
Default value: 0.5

maxCc Identifies the number of times to retransmit a connection control message.

Type: integer
Range: {2-8}
Default value: 4

maxPd Identifies the maximum number of SD PDUs that can be sent before transmission of a POLL PDU.

Type: integer
Range: {300-1000}
Default value: 500

maxStat Identifies the maximum number of list elements (message segments) that may be included in a single STAT PDU.

Type: integer
Range: {3-67}
Default value: 67

Input Examples:

```
DLT-PRFL-HSLKL2::1;

ED-PRFL-HSLKL2::1:::N1=1000,T1=5,T2=30,T3=0.1,
   RXQSZ=300,TXQSZ=300,FLCSTARTTHRESH=0,
   FLCSTOPTHRESH=0,POLLTMR=0.1,IDLETMR=0.1,
   KEEPALIVETMR=0.2,NORESPTMR=1.5,CCTMR=0.5,MAXCC=4,
   MAXPD=500,MAXSTAT=67;

ENT-PRFL-HSLKL2::1:::N1=1000,T1=5,T2=30,T3=0.1,
   RXQSZ=300,TXQSZ=300,FLCSTARTTHRESH=0,
   FLCSTOPTHRESH=0,POLLTMR=0.1,IDLETMR=0.1,
   KEEPALIVETMR=0.2,NORESPTMR=1.5,CCTMR=0.5,MAXCC=4,
   MAXPD=500,MAXSTAT=67;

RTRV-PRFL-HSLKL2::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:N1=1000,T1=5,T2=30,T3=0.1,RXQSZ=300,TXQSZ=300,
      FLCSTARTTHRESH=0,FLCSTOPTHRESH=0,POLLTMR=0.1,
      IDLETMR=0.1,KEEPALIVETMR=0.2,NORESPTMR=1.5,
      CCTMR=0.5,MAXCC=4,MAXPD=500,MAXSTAT=67"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-PRFL-SGPC

Commands:

DLT-PRFL-SGPC: Delete Profile Signaling Gateway Point Code

ED-PRFL-SGPC: Edit Profile Signaling Gateway Point Code

ENT-PRFL-SGPC: Enter Profile Signaling Gateway Point Code

RTRV-PRFL-SGPC: Retrieve Profile Signaling Gateway Point Code

Descriptions:

DLT-PRFL-SGPC lets the user delete a profile for a destination point code on a signaling gateway.

ED-PRFL-SGPC lets the user edit a profile for a destination point code on a signaling gateway. Use this command to change the values of MTP3 timers for a point code.

ENT-PRFL-SGPC lets the user add a profile for a destination point code on a signaling gateway.

RTRV-PRFL-SGPC lets the user retrieve a profile for a destination point code on a signaling gateway.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-PRFL-SGPC:[TID]:<pcPrflId>:[CTAG];

ED-PRFL-SGPC:[TID]:<pcPrflId>:[CTAG]::
    [MTP3T6=<mtp3T6>],[MTP3T8=<mtp3T8>],
    [MTP3T10=<mtp3T10>],[MTP3T11=<mtp3T11>],
    [MTP3T18=<mtp3T18>],[MTP3ITUT19=<mtp3ITUT19>],
    [MTP3ITUT21=<mtp3ITUT21>],[MTP3T25=<mtp3T25>],
    [MTP3T28=<mtp3T28>],[MTP3T29=<mtp3T29>];

ENT-PRFL-SGPC:[TID]:<pcPrflId>:[CTAG]::
    [MTP3T6=<mtp3T6>],[MTP3T8=<mtp3T8>],
    [MTP3T10=<mtp3T10>],[MTP3T11=<mtp3T11>],
    [MTP3T18=<mtp3T18>],[MTP3ITUT19=<mtp3ITUT19>],
    [MTP3ITUT21=<mtp3ITUT21>],[MTP3T25=<mtp3T25>],
    [MTP3T28=<mtp3T28>],[MTP3T29=<mtp3T29>];

RTRV-PRFL-SGPC:[TID]:[<pcPrflId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pcPrflId>:MTP3T6=<mtp3T6>,MTP3T8=<mtp3T8>,
      MTP3T10=<mtp3T10>,MTP3T11=<mtp3T11>,
      MTP3T18=<mtp3T18>,MTP3ITUT19=<mtp3ITUT19>],
      MTP3ITUT21=<mtp3ITUT21>,MTP3T25=<mtp3T25>,
      MTP3T28=<mtp3T28>,MTP3T29=<mtp3T29>"
;
```

Parameters:

pcPrflId Identifies the AID as a destination point code profile on a signaling gateway.

Type: PcPrflId
Range: {1-128}
Default value: none

mtp3T6 Identifies the Timer T6 value (in seconds) for the MTP3 layer. Timer T6 specifies the delay to avoid mis-sequencing on rerouting.

Type: decinum
Range: {0-200}
Default value: 0.5

mtp3T8 Identifies the Timer T8 value (in seconds) for the MTP3 layer. Timer T8 is the transfer prohibited inhibition timer.

Type: decinum
Range: {0-500}
Default value: 0.8

mtp3T10 Identifies the Timer T10 value (in seconds) for the MTP3 layer. Timer T10 is the route set test timer.

Type: decinum
Range: {0-100}
Default value: 30

mtp3T11 Identifies the Timer T11 value (in seconds) for the MTP3 layer. Timer T11 is the transfer restrict timer.

Type: decinum
Range: {0-100}
Default value: 65

mtp3T18 Identifies the Timer T18 value (in seconds) for the MTP3 layer. Timer T18 is the transfer restricted inhibition timer.

Type: decinum
Range: {0-100}
Default value: 10

mtp3ITUT19 Identifies the Timer T19 value (in seconds) for the MTP3 layer. Timer T19 is the MTP restart supervision timer for variant ITU-1992.

Type: decinum
Range: {0-100}
Default value: 68

mtp3ITUT21 Identifies the Timer T21 value (in seconds) for the MTP3 layer. Timer T21 is the remote MTP restart timer for variant ITU-1992.

Type: decinum
Range: {0-100}
Default value: 65

mtp3T25 Identifies the Timer T25 value (in seconds) for the MTP3 layer. Timer T25 specifies the period to wait for a TRAFFIC RESTART ALLOWED message.

Type: decinum
Range: {0-100}
Default value: 10

mtp3T28 Identifies the Timer T28 value (in seconds) for the MTP3 layer. Timer T28 specifies the period to wait for a TRAFFIC RESTART WAITING message from an adjacent restarting signaling point.

Type: decinum
Range: {0-100}
Default value: 5

mtp3T29 Identifies the Timer T29 value (in seconds) for the MTP3 layer. Timer T29 is started when a TRA is sent in response to an unexpected TRA or TRW.

Type: decinum
Range: {0-100}
Default value: 60

Input Examples:

```
DLT-PRFL-SGPC::1;

ED-PRFL-SGPC::1:::MTP3T6=0.5,MTP3T8=0.8,MTP3T10=30,
   MTP3T11=65,MTP3T18=10,MTP3ITUT19=68,MTP3ITUT21=65,
   MTP3T25=10,MTP3T28=5,MTP3T29=60;

ENT-PRFL-SGPC::1:::MTP3T6=0.5,MTP3T8=0.8,MTP3T10=30,
   MTP3T11=65,MTP3T18=10,MTP3ITUT19=68,MTP3ITUT21=65,
   MTP3T25=10,MTP3T28=5,MTP3T29=60;

RTRV-PRFL-SGPC::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:MTP3T6=0.5,MTP3T8=0.8,MTP3T10=30,MTP3T11=65,
      MTP3T18=10,MTP3ITUT19=68,MTP3ITUT21=65,
      MTP3T25=10,MTP3T28=5,MTP3T29=60"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-SG-PC    INIT-REG-SGPC
RTRV-PM-SGPC
```

DLT/ED/ENT/RTRV-PRFL-SLKL2

Commands:

DLT-PRFL-SLKL2: Delete Profile Signaling Link Layer 2

ED-PRFL-SLKL2: Edit Profile Signaling Link Layer 2

ENT-PRFL-SLKL2: Enter Profile Signaling Link Layer 2

RTRV-PRFL-SLKL2: Retrieve Profile Signaling Link Layer 2

Descriptions:

DLT-PRFL-SLKL2 lets the user delete a signaling link MTP layer 2 profile.

ED-PRFL-SLKL2 lets the user edit a signaling link MTP layer 2 profile.

ENT-PRFL-SLKL2 lets the user add a signaling link MTP layer 2 profile.

RTRV-PRFL-SLKL2 lets the user retrieve a signaling link MTP layer 2 profile.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-PRFL-SLKL2:[TID]:<mtp2PrflId>:[CTAG];

ED-PRFL-SLKL2:[TID]:<mtp2PrflId>:[CTAG]::
    [MTP2T1=<mtp2T1>],[MTP2T2=<mtp2T2>],
    [MTP2T3=<mtp2T3>],[MTP2T5=<mtp2T5>],
    [MTP2T6=<mtp2T6>],[MTP2T7=<mtp2T7>],
    [MTP2PROVEMRGCY=<mtp2ProvEmrgcy>],
    [MTP2PROVNORMAL=<mtp2ProvNormal>],
    [MTP2AA=<mtp2AA>];

ENT-PRFL-SLKL2:[TID]:<mtp2PrflId>:[CTAG]::
    [MTP2T1=<mtp2T1>],[MTP2T2=<mtp2T2>],
    [MTP2T3=<mtp2T3>],[MTP2T5=<mtp2T5>],
    [MTP2T6=<mtp2T6>],[MTP2T7=<mtp2T7>],
    [MTP2PROVEMRGCY=<mtp2ProvEmrgcy>],
    [MTP2PROVNORMAL=<mtp2ProvNormal>],
    [MTP2AA=<mtp2AA>];

RTRV-PRFL-SLKL2:[TID]:[<mtp2PrflId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<mtp2PrflId>:MTP2T1=<mtp2T1>,MTP2T2=<mtp2T2>,
      MTP2T3=<mtp2T3>,MTP2T5=<mtp2T5>,MTP2T6=<mtp2T6>,
      MTP2T7=<mtp2T7>,MTP2PROVEMRGCY=<mtp2ProvEmrgcy>,
      MTP2PROVNORMAL=<mtp2ProvNormal>,MTP2AA=<mtp2AA>"
;
```

Parameters:

mtp2PrflId Identifies the AID as an MTP layer 2 profile. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, parameters for all MTP2 signaling link profiles configured in the system will be returned.

Type: Mtp2PrflId
Range: {1-128}
Default value: none

mtp2T1 Identifies the Timer T1 value (in seconds) for the MTP2 layer. This is the ALIGNMENT READY timer.

Type: integer
Range: {0-50}
Default value: 13

mtp2T2 Identifies the Timer T2 value (in seconds) for the MTP2 layer. This is the NOT ALIGNED timer.

Type: integer
Range: {0-150}
Default value: 11.5

mtp2T3 Identifies the Timer T3 value (in seconds) for the MTP2 layer. This is the ALIGNED timer.

Type: integer
Range: {0-15}
Default value: 11.5

mtp2T5 Identifies the Timer T5 value (in seconds) for the MTP2 layer. This is the SENDING SIB timer.

Type: integer
Range: {0-0.3}
Default value: 0.1

mtp2T6 Identifies the Timer T6 value (in seconds) for the MTP2 layer. This is the remote congestion timer.

Type: integer
Range: {0-6}
Default value: 3

mtp2T7 Identifies the Timer T7 value (in seconds) for the MTP2 layer. This is the excessive delay of acknowledgement timer.

Type: integer
Range: {0-2}
Default value: 0.5

mtp2ProvEmrgcy Identifies the emergency proving period timer value in seconds.

Type: integer
Range: {0-2}
Default value: 0.6

mtp2ProvNormal Identifies the normal proving period timer value in seconds.

Type: integer
Range: {0-10}
Default value: 2.3

mtp2AA Identifies the maximum number of alignment attempts allowed.

Type: integer
Range: {0-15}
Default value: 5

Input Examples:

```
DLT-PRFL-SLKL2::1;

ED-PRFL-SLKL2::1:::MTP2T1=13,MTP2T2=11.5,
   MTP2T3=11.5,MTP2T5=0.1,MTP2T6=3,MTP2T7=0.5,
   MTP2PROVEMRGCY=0.6,MTP2PROVNORMAL=2.3,MTP2AA=5;

ENT-PRFL-SLKL2::1:::MTP2T1=13,MTP2T2=11.5,
   MTP2T3=11.5,MTP2T5=0.1,MTP2T6=3,MTP2T7=0.5,
   MTP2PROVEMRGCY=0.6,MTP2PROVNORMAL=2.3,MTP2AA=5;

RTRV-PRFL-SLKL2::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:MTP2T1=13,MTP2T2=11.5,MTP2T3=11.5,MTP2T5=0.1,
      MTP2T6=3,MTP2T7=0.5,MTP2PROVEMRGCY=0.6,
      MTP2PROVNORMAL=2.3,MTP2AA=5"
;
```

Related Commands:

```
INIT-REG-SLKL2          RTRV-PM-SLKL2
```

DLT/ED/ENT/RTRV-PRFL-SLKL3

Commands:

DLT-PRFL-SLKL3: Delete Profile Signaling Link Layer 3

ED-PRFL-SLKL3: Edit Profile Signaling Link Layer 3

ENT-PRFL-SLKL3: Enter Profile Signaling Link Layer 3

RTRV-PRFL-SLKL3: Retrieve Profile Signaling Link Layer 3

Descriptions:

DLT-PRFL-SLKL3 lets the user delete a signaling link MTP layer 3 profile.

ED-PRFL-SLKL3 lets the user edit a signaling link MTP layer 3 profile.

ENT-PRFL-SLKL3 lets the user add a signaling link MTP layer 3 profile.

RTRV-PRFL-SLKL3 lets the user retrieve a signaling link MTP layer 3 profile.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-PRFL-SLKL3:[TID]:<mtp3PrflId>:[CTAG];

ED-PRFL-SLKL3:[TID]:<mtp3PrflId>:[CTAG]::
    [MTP3T1=<mtp3T1>],[MTP3T2=<mtp3T2>],
    [MTP3T3=<mtp3T3>],[MTP3T4=<mtp3T4>],
    [MTP3T5=<mtp3T5>],[MTP3T7=<mtp3T7>],
    [MTP3T12=<mtp3T12>],[MTP3T13=<mtp3T13>],
    [MTP3T14=<mtp3T14>],[MTP3T19=<mtp3T19>],
    [MTP3T17=<mtp3T17>],[MTP3T20=<mtp3T20>],
    [MTP3T21=<mtp3T21>],[MTP3ITUT22=<mtp3ITUT22>],
    [MTP3ITUT23=<mtp3ITUT23>],[MTP3TSTT1=<mtp3TstT1>],
    [MTP3TSTT2=<mtp3TstT2>],[MTP3T31=<mtp3T31>],
    [MTP3T33=<mtp3T33>],[MTP3T34=<mtp3T34>];
```

```
ENT-PRFL-SLKL3:[TID]:<mtp3PrflId>:[CTAG]::
   [MTP3T1=<mtp3T1>],[MTP3T2=<mtp3T2>],
   [MTP3T3=<mtp3T3>],[MTP3T4=<mtp3T4>],
   [MTP3T5=<mtp3T5>],[MTP3T7=<mtp3T7>],
   [MTP3T12=<mtp3T12>],[MTP3T13=<mtp3T13>],
   [MTP3T14=<mtp3T14>],[MTP3T19=<mtp3T19>],
   [MTP3T17=<mtp3T17>],[MTP3T20=<mtp3T20>],
   [MTP3T21=<mtp3T21>],[MTP3ITUT22=<mtp3ITUT22>],
   [MTP3ITUT23=<mtp3ITUT23>],[MTP3TSTT1=<mtp3TstT1>],
   [MTP3TSTT2=<mtp3TstT2>],[MTP3T31=<mtp3T31>],
   [MTP3T33=<mtp3T33>],[MTP3T34=<mtp3T34>];

RTRV-PRFL-SLKL3:[TID]:[<mtp3PrflId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<mtp3PrflId>:MTP3T1=<mtp3T1>,MTP3T2=<mtp3T2>,
      MTP3T3=<mtp3T3>,MTP3T4=<mtp3T4>,MTP3T5=<mtp3T5>,
      MTP3T7=<mtp3T7>,MTP3T12=<mtp3T12>,
      MTP3T13=<mtp3T13>,MTP3T14=<mtp3T14>,
      MTP3T19=<mtp3T19>,MTP3T17=<mtp3T17>,
      MTP3T20=<mtp3T20>,MTP3T21=<mtp3T21>,
      MTP3ITUT22=<mtp3ITUT22>,MTP3ITUT23=<mtp3ITUT23>,
      MTP3TSTT1=<mtp3TstT1>,MTP3TSTT2=<mtp3TstT2>,
      MTP3T31=<mtp3T31>,MTP3T33=<mtp3T33>,
      MTP3T34=<mtp3T34>"
;
```

Parameters:

mtp3PrflId Identifies the AID as an MTP layer 3 profile. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, parameters for all MTP3 signaling link profiles configured in the system will be returned.

Type: Mtp3PrflId
Range: {1-20}
Default value: none

mtp3T1 Identifies the Timer T1 value (in seconds) for the MTP3 layer. Timer T1 (for all variants) specifies the delay to avoid mis-sequencing on changeover.

Type: integer
Range: {0-150}
Default value: 0.8

mtp3T2 Identifies the Timer T2 value (in seconds) for the MTP3 layer. Timer T2 (for all variants) specifies the period to wait for changeover acknowledgement.

Type: integer
Range: {0-500}
Default value: 1.4

mtp3T3 Identifies the Timer T3 value (in seconds) for the MTP3 layer. Timer T3 (for all variants) specifies the delay to avoid mis-sequencing on changeback.

Type: integer
Range: {0-200}
Default value: 0.8

mtp3T4 Identifies the Timer T4 value (in seconds) for the MTP3 layer. Timer T4 (for all variants) specifies the period to wait for the first changeback acknowledgement.

Type: integer
Range: {0-200}
Default value: 0.8

mtp3T5 Identifies the Timer T5 value (in seconds) for the MTP3 layer. Timer T5 (for all variants) specifies the period to wait for the second changeback acknowledgement.

Type: integer
Range: {0-200}
Default value: 0.8

mtp3T7 Identifies the Timer T7 value (in seconds) for the MTP3 layer. Timer T7 (for all variants) specifies the period to wait for a link connection acknowledgement.

Type: integer
Range: {0-5}
Default value: 1

mtp3T12 Identifies the Timer T12 value (in seconds) for the MTP3 layer. Timer T12 (for all variants) specifies the period to wait for an uninhibit acknowledgement.

Type: integer
Range: {0-200}
Default value: 1

mtp3T13 Identifies the Timer T13 value (in seconds) for the MTP3 layer. Timer T13 (for all variants) specifies the period to wait for a force uninhibit message.

Type: integer
Range: {0-200}
Default value: 0.8

mtp3T14 Identifies the Timer T14 value (in seconds) for the MTP3 layer. Timer T14 (for all variants) specifies the period to wait for an inhibition acknowledgement.

Type: integer
Range: {0-5}
Default value: 2

mtp3T17 Identifies the Timer T17 value (in seconds) for the MTP3 layer. Timer T17 (for all variants) specifies the delay to avoid oscillation of initial alignment failure and link restart.

Type: integer
Range: {0-200}
Default value: 1.5

mtp3T19 Identifies the Timer T19 value (in seconds) for the MTP3 layer. Timer T19 (for the ANSI variant) specifies how long to attempt restoring a failed link.

Type: integer
Range: {480-600}
Default value: 480

mtp3T20 Identifies the Timer T20 value (in seconds) for the MTP3 layer. Timer T20 is the local inhibit test timer for the ANSI variant.

Type: integer
Range: {0-200}
Default value: 90

mtp3T21 Identifies the Timer T21 value (in seconds) for the MTP3 layer. Timer T21 is the remote inhibit test timer for the ANSI variant.

Type: integer
Range: {0-200}
Default value: 90

mtp3ITUT22 Identifies the Timer T22 value (in seconds) for the MTP3 layer. Timer T22 is the local inhibit test timer for variants ITU-1988 and ITU-1992.

Type: integer
Range: {0-600}
Default value: 180

mtp3ITUT23 Identifies the Timer T23 value (in seconds) for the MTP3 layer. Timer T23 is the remote inhibit test timer for variants ITU-1988 and ITU-1992.

Type: integer
Range: {0-600}
Default value: 180

mtp3TstT1 Identifies the Test Timer T1 value (in seconds) for the MTP3 layer. Test Timer T1 (for all variants) is the Signaling Link Test message Acknowledgement (SLTA) timer described in GR-246-CORE, chapter T1.111.7.

Type: integer
Range: {0-100}
Default value: 8

mtp3TstT2 Identifies the Test Timer T2 value (in seconds) for the MTP3 layer. Test Timer T2 (for all variants) is the periodic Signaling Link Test Message (SLTM) timer described in GR-246-CORE, chapter T1.111.7.

Type: integer
Range: {0-100}
Default value: 60

mtp3T31 Identifies the Timer T31 value (in seconds) for the MTP3 layer. Timer T31 is the false link congestion detection timer for the ANSI variant.

Type: integer
Range: {0-200}
Default value: 30

mtp3T33 Identifies the Timer T33 value (in seconds) for the MTP3 layer. Timer T33 is the probation timer for link oscillation for the ANSI variant.

Type: integer
Range: {0-600}
Default value: 100

mtp3T34 Identifies the Timer T34 value (in seconds) for the MTP3 layer. Timer T34 is the suspension timer for link oscillation for the ANSI variant.

Type: integer
Range: {0-200}
Default value: 10

Input Examples:

```
DLT-PRFL-SLKL3::1;

ED-PRFL-SLKL3::1:::MTP3T1=0.8,MTP3T2=1.4,MTP3T3=0.8,
   MTP3T4=0.8,MTP3T5=0.8,MTP3T7=1,MTP3T12=1,
   MTP3T13=0.8,MTP3T14=2,MTP3T17=1.5,MTP3T19=480,
   MTP3T20=90,MTP3T21=90,MTP3ITUT22=180,
   MTP3ITUT23=180,MTP3TSTT1=8,MTP3TSTT2=60,MTP3T31=30,
   MTP3T33=100,MTP3T34=10;

ENT-PRFL-SLKL3::1:::MTP3T1=0.8,MTP3T2=1.4,MTP3T3=0.8,
   MTP3T4=0.8,MTP3T5=0.8,MTP3T7=1,MTP3T12=1,
   MTP3T13=0.8,MTP3T14=2,MTP3T17=1.5,MTP3T19=480,
   MTP3T20=90,MTP3T21=90,MTP3ITUT22=180,
   MTP3ITUT23=180,MTP3TSTT1=8,MTP3TSTT2=60,MTP3T31=30,
   MTP3T33=100,MTP3T34=10;

RTRV-PRFL-SLKL3::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:MTP3T1=0.8,MTP3T2=1.4,MTP3T3=0.8,MTP3T4=0.8,
      MTP3T5=0.8,MTP3T7=1,MTP3T12=1,MTP3T13=0.8,
      MTP3T14=2,MTP3T17=1.5,MTPT19=480,MTP3T20=90,
      MTP3T21=90,MTP3ITUT22=180,MTP3ITUT23=180,
      MTP3TSTT1=8,MTP3TSTT2=60,MTP3T31=30,MTP3T33=100,
      MTP3T34=10"
;
```

Related Commands:

```
INIT-REG-SLKL3          RTRV-PM-SLKL3
```

DLT/ENT/RTRV-ROUTE-SS7

Commands:

DLT-ROUTE-SS7: Delete SS7 Route

ENT-ROUTE-SS7: Enter SS7 Route

RTRV-ROUTE-SS7: Retrieve SS7 Route

Descriptions:

DLT-ROUTE-SS7 lets the user delete an SS7 route.

ENT-ROUTE-SS7 lets the user establish an SS7 route. Use ENT-ROUTE-SS7 to establish the point code, the link set identity, and the link set priority. You can establish no more than four routes for each point code. ENT-ROUTE-SS7 will not work correctly unless the following commands have already been issued in the listed order: ENT-PRFL-SGPC, ENT-SG-PCOWN, ENT-SG-PC, and ENT-LSET.

RTRV-ROUTE-SS7 lets the user retrieve the link set priority associated with a link set in an SS7 route.

Category: Signaling **Security:** SA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-ROUTE-SS7:[TID]:<routeSs7>:[CTAG];

ENT-ROUTE-SS7:[TID]:<routeSs7>:[CTAG]::
   [LSETPRIORITY=<lsetPriority>];

RTRV-ROUTE-SS7:[TID]:[<routeSs7>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<routeSs7>:LSETPRIORITY=<lsetPriority>"
;
```

Parameters:

routeSs7 Identifies the AID as an SS7 route. The pattern is a combination of the destination point code and the link set connecting to it. You can establish no more than four routes for each point code. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, parameters for all SS7 routes configured in the system will be returned.

Type: RouteSs7Aid
Range: <pcId>-<lsetId>, where
pcId = {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes
DEF_ANSI = Default NANP point code
DEF_ITU = Default international point code
lsetId = {1-64}
Default value: none

lsetPriority Identifies the priority for the link set, with lower numbers indicating higher priority. Priorities must be assigned contiguously for a given point code; for example, for a single point code, you cannot have multiple link sets, some with priority “1” and the rest with priority “3”.

Type: enum
Range: {0-3}
Default value: 0

Input Examples:

```
DLT-ROUTE-SS7::3-4-5-16;

ENT-ROUTE-SS7::3-4-5-16:::LSETPRIORITY=0;

RTRV-ROUTE-SS7::3-4-5-16;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "3-4-5-16:LSETPRIORITY=0"
;
```

Related Commands:

```
INIT-REG-ROUTESS7          RTRV-PM-ROUTESS7
RTRV-STATUS-ROUTESS7
```

DLT/ED/ENT/RTRV-SG-M3UAASSOC

Commands:

DLT-SG-M3UAASSOC: Delete Signaling Gateway M3UA Association

ED-SG-M3UAASSOC: Edit Signaling Gateway M3UA Association

ENT-SG-M3UAASSOC: Enter Signaling Gateway M3UA Association

RTRV-SG-M3UAASSOC: Retrieve Signaling Gateway M3UA Association

Descriptions:

DLT-SG-M3UAASSOC lets the user delete an association between the signaling gateway function in the Lucent Network Gateway (NG) and an M3UA ASP (Application Server Process; i.e., a remote media gateway controller) node in a SIGTRAN network.

ED-SG-M3UAASSOC lets the user change the current state for an association between the signaling gateway function in the NG and an M3UA ASP node in a SIGTRAN network.

ENT-SG-M3UAASSOC lets the user establish an association between the signaling gateway function in the NG and an M3UA ASP node in a SIGTRAN network. Use ENT-SG-M3UAASSOC to define the SIGTRAN network, the IP address, the destination port, and the current state for the associated ASP.

RTRV-SG-M3UAASSOC lets the user retrieve the SIGTRAN network, the IP address, the destination port, and the current state for the associated ASP.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SG-M3UAASSOC:[TID]:<m3uaAssocId>:[CTAG];

ED-SG-M3UAASSOC:[TID]:<m3uaAssocId>:[CTAG]::<pst>;

ENT-SG-M3UAASSOC:[TID]:<m3uaAssocId>:[CTAG]::
   NETID=<netId>,IPADDR=<ipAddr>,[PORT=<port>]:
   [<pst>];

RTRV-SG-M3UAASSOC:[TID]:[<m3uaAssocId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<m3uaAssocId>:NETID=<netId>,IPADDR=<ipAddr>,
      PORT=<port>:<pst>"
;
```

Parameters:

m3uaAssocId Identifies the AID as an M3UA ASP (Application Server Process; i.e., a remote media gateway controller) node in a SIGTRAN network that is associated with the signaling gateway function in the NG. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, the system returns parameter values for all configured ASPs.

Type: integer
Range: {1-32}
Default value: none

netId Identifies the M3UA Signaling Transport (SIGTRAN) network.

Type: integer
Range: {1-4}
Default value: none

ipAddr Identifies the destination IP address for the specified ASP.

Type: integer
Range: {0-254}.{0-254}. {0-255}.{1-255}
Default value: none

port Identifies the destination port for the specified ASP.

Type: integer
Range: {1-65000}
Default value: 2095

pst Identifies the current state for the specified ASP.

Type: enum
Range: IS = In-service
OOS-AU = Out-Of-Service, Autonomous
OOS-MA = Out-Of-Service, Managed
Default value: none

Input Examples:

```
DLT-SG-M3UAASSOC::1;

ED-SG-M3UAASSOC::1:::IS;

ENT-SG-M3UAASSOC::1:::NETID=1,IPADDR=192.168.253.22,
   PORT=2095:IS;

RTRV-SG-M3UAASSOC::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:NETID=1,IPADDR=192.168.253.22,PORT=2095:IS"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-SG-M3UAASSOCMAP
DLT/ED/ENT/RTRV-SG-M3UANETTYPE
DLT/ENT/RTRV-SG-M3UAROUTE
```

DLT/ENT/RTRV-SG-M3UAASSOCMAP

Commands:

DLT-SG-M3UAASSOCMAP: Delete Signaling Gateway M3UA Association Map

ENT-SG-M3UAASSOCMAP: Enter Signaling Gateway M3UA Association Map

RTRV-SG-M3UAASSOCMAP: Retrieve Signaling Gateway M3UA Association Map

Descriptions:

DLT-SG-M3UAASSOCMAP lets the user delete the mapping of an association between the signaling gateway (SG) function in the Lucent Network Gateway (NG) and an M3UA ASP (Application Server Process; i.e., a remote media gateway controller) node in a SIGTRAN network to a routing context for the SG.

ENT-SG-M3UAASSOCMAP lets the user correlate an association between the signaling gateway function in the NG and an M3UA ASP node in a SIGTRAN network to a routing context for the SG. ENT-SG-M3UAASSOCMAP will not work unless ENT-SG-M3UAASSOC has already been issued.

RTRV-SG-M3UAASSOCMAP lets the user retrieve the current state of the signaling gateway routing context mapped to an association between the signaling gateway function in the NG and an M3UA ASP node in a SIGTRAN network.

Category: Signaling **Security:** SA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-SG-M3UAASSOCMAP:[TID]:<m3uaMapId>:[CTAG];
ENT-SG-M3UAASSOCMAP:[TID]:<m3uaMapId>:[CTAG];
RTRV-SG-M3UAASSOCMAP:[TID]:[<m3uaMapId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<m3uaMapId>:<pst>"
;
```

Parameters:

m3uaMapId Identifies the AID as the mapping of a signaling gateway routing context to an association between the signaling gateway function in the NG and an M3UA ASP node in a SIGTRAN network. The first part of the AID is the routing context and the second part is the NG-ASP association. The routing context represents a routing key in an SG; a routing key comprises one or more unique associations of an own point code with a destination point code. The NG-ASP association carries the traffic for the routing context. An ASP can support multiple routing keys and thus can map to multiple routing contexts. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, the system returns the current state for all configured routing contexts mapped to NG-ASP associations. A null value (in RTRV input) for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the system returns the current state for all configured routing contexts for the specified NG-ASP association.

Type: string
Range: <routeCtxt>[-<m3uaAssocId>], where
routeCtxt = {1-2048}
m3uaAssocId = {1-32}
Default value: none

pst Identifies (in RTRV output) the current state for the associated ASP.

Type: enum
Range: IS = In-service
OOS = Out-Of-Service
Default value: none

Input Examples:

```
DLT-SG-M3UAASSOCMAP::1-1;

ENT-SG-M3UAASSOCMAP::1-1;

RTRV-SG-M3UAASSOCMAP::1-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1-1:IS"
;
```

Related Commands:

DLT/ED/ENT/RTRV-SG-M3UAASSOC
DLT/ED/ENT/RTRV-SG-M3UANETTYPE
DLT/ENT/RTRV-SG-M3UAROUTE

DLT/ENT/RTRV-SG-M3UANETTYPE

Commands:

DLT-SG-M3UANETTYPE: Delete Signaling Gateway M3UA Network Type

ENT-SG-M3UANETTYPE: Enter Signaling Gateway M3UA Network Type

RTRV-SG-M3UANETTYPE: Retrieve Signaling Gateway M3UA Network Type

Descriptions:

DLT-SG-M3UANETTYPE lets the user delete an M3UA Signaling Transport (SIGTRAN) network for a specific protocol variant.

ENT-SG-M3UANETTYPE lets the user establish an M3UA SIGTRAN network for a specific protocol variant. Use ENT-SG-M3UANETTYPE to define the network appearance, the sub-service field variant, the number of bits used to identify destination point codes, and the link set priority.

RTRV-SG-M3UANETTYPE lets the user retrieve the specific protocol variant and other properties of an M3UA SIGTRAN network.

Category: Signaling **Security:** SA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-SG-M3UANETTYPE:[TID]:<netId>:[CTAG];

ENT-SG-M3UANETTYPE:[TID]:<netId>:[CTAG]::
   NETAPP=<netApp>,SSF=<ssf>,DPCLEN=<dpcLen>,
   SLSLEN=<slsLen>,M3UANETVARIANT=<m3uaNetVariant>;

RTRV-SG-M3UANETTYPE:[TID]:[<netId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<netId>:NETAPP=<netApp>,SSF=<ssf>,DPCLEN=<dpcLen>,
      SLSLEN=<slsLen>,M3UANETVARIANT=<m3uaNetVariant>"
;
```

Parameters:

netId Identifies the AID as an M3UA Signaling Transport (SIGTRAN) network. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, the system returns parameter values for all configured SIGTRAN networks.

Type: integer
Range: {1-4}
Default value: none

netApp Identifies the network appearance that uniquely distinguishes an M3UA SIGTRAN network between the signaling gateway and the media gateway controller.

Type: integer
Range: {1-65536}
Default value: none

ssf Identifies the sub-service field to be used.

Type: enum
Range: SSFINTL= international sub-service field
SSFNAT= national sub-service field
SSFRES = reserved sub-service field
SSFSPARE = spare sub-service field
Default value: none

dpcLen Identifies the number of bits used to represent destination point codes in the M3UA SIGTRAN network.

Type: enum
Range: 14BIT = 14 bits (for ITU networks)
24BIT = 24 bits (for ANSI networks)
Default value: none

slsLen Identifies the number of bits used to represent Signaling Link Selection for an SG network.

Type: enum
Range: 4BIT
5BIT
8BIT
Default value: none

m3uaNetVariant Identifies the M3UA protocol variant for the SIGTRAN network.

Type: enum
Range: ANSI
ITU1988
ITU1992
Default value: none

Input Examples:

```
DLT-SG-M3UANETTYPE::1;

ENT-SG-M3UANETTYPE::1:::NETAPP=1,SSF=SSFNAT,
   DPCLEN=24BIT,SLSLEN=4BIT,M3UANETVARIANT=ANSI;

RTRV-SG-M3UANETTYPE::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:NETAPP=1,SSF=SSFNAT,DPCLEN=14BIT,SLSLEN=4BIT,
      M3UANETVARIANT=ANSI"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-SG-M3UAASSOC
DLT/ED/ENT/RTRV-SG-M3UAASSOCMAP
DLT/ENT/RTRV-SG-M3UAROUTE
```

DLT/ENT/RTRV-SG-M3UAROUTE

Commands:

DLT-SG-M3UAROUTE: Delete Signaling Gateway M3UA Route

ENT-SG-M3UAROUTE: Enter Signaling Gateway M3UA Route

RTRV-SG-M3UAROUTE: Retrieve Signaling Gateway M3UA Route

Descriptions:

DLT-SG-M3UAROUTE lets the user delete an M3UA route between two point codes.

ENT-SG-M3UAROUTE lets the user establish an M3UA route between two point codes and associate it with a signaling gateway routing context. ENT-SG-M3UAROUTE will not work unless ENT-SG-M3UAASSOCMAP has already been issued.

RTRV-SG-M3UAROUTE lets the user retrieve the signaling gateway routing context for an M3UA route or the attributes for all configured M3UA routes in the systemetwork.

Category: Signaling **Security:** SA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-SG-M3UAROUTE:[TID]:<m3uaRouteId>:[CTAG];

ENT-SG-M3UAROUTE:[TID]:<m3uaRouteId>:[CTAG]::
   ROUTECTXT=<routeCtxt>;

RTRV-SG-M3UAROUTE:[TID]:[<m3uaRouteId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<m3uaRouteId>:<routeCtxt>"
;
```

Parameters:

m3uaRouteId Identifies the AID as an M3UA route with the association of an originating point code (OPC) with a destination point code (DPC). The OPC is received in a SS7 Protocol Data Unit (PDU) by the SG system, in which the OPC is regarded as a remote point code. The SG system defines the DPC as an own point code. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns information for all configured M3UA routes. A null value (in RTRV) for DPC is equivalent to "ALL"; that is, by leaving the field blank, the system returns information for all DPCs associated with the specified OPC.

Type: string
Range: OPC-{0-255}-{0-255}-{0-255}[-DPC-{0-255}-{0-255}-{0-255}] for NANP (national) point codes
OPC-{0-16383}[-DPC-{0-16383}] for international point codes
Default value: none

routeCtxt Identifies the signaling gateway routing context. The routing context represents a routing key in an SG; a routing key comprises one or more unique associations of an own point code with a destination point code.

Type: integer
Range: {1-2048}
Default value: none

Input Examples:

```
DLT-SG-M3UAROUTE::1-1;

ENT-SG-M3UAROUTE::1-1:::ROUTECTXT=1;

RTRV-SG-M3UAROUTE::1-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1-1:ROUTECTXT=1"
;
```

Related Commands:

DLT/ED/ENT/RTRV-SG-M3UAASSOC
DLT/ED/ENT/RTRV-SG-M3UANETTYPE
DLT/ENT/RTRV-SG-M3UAROUTE

DLT/ED/ENT/RTRV-SG-SLK

Commands:

DLT-SG-SLK: Delete Signaling Gateway Signaling Link

ED-SG-SLK: Edit Signaling Gateway Signaling Link

ENT-SG-SLK: Enter Signaling Gateway Signaling Link

RTRV-SG-SLK: Retrieve Signaling Gateway Signaling Link

Descriptions:

DLT-SG-SLK lets the user delete a signaling link on a signaling gateway.

ED-SG-SLK lets the user change the properties of a signaling link on a signaling gateway.

ENT-SG-SLK lets the user create a narrowband signaling link using T1s or E1s on a TDM IOM, or to create a broadband signaling link using an ATM Permanent Virtual Circuit (PVC) on an ATM IOM in either a Lucent Signaling Gateway (SG) or a Lucent Network Gateway (NG) with signaling gateway functionality. You can have up to four signaling links on any I/O module. Use ENT-SG-SLK to assign profiles for MTP3 to signaling links. The three congestionThreshold parameters define the onset thresholds for the three congestion levels. Each onset threshold (congestionThreshold) is the discard threshold for the immediately preceding congestion level; i.e., once the congestion level reaches n, MTP3 discards the congestion level n-1 messages. The abatement threshold for each congestion level is the average of the onset thresholds for the concerned congestion level and the immediately preceding congestion level; for example, the abatement threshold for congestion level 2 is the average of congestionThreshold1 and congestionThreshold2. ENT-SG-SLK will not work unless ENT-PRFL-SLKL3 and ENT-LSET have already been issued.

RTRV-SG-SLK lets the user retrieve parameters associated with a signaling link on a signaling gateway.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SG-SLK:[TID]:<ss7LnkId>:[CTAG];

ED-SG-SLK:[TID]:<ss7LnkId>:[CTAG]::
   [MTP3PRFLID=<mtp3PrflId>],[SLC=<slc>],
   [LNKPRIORITY=<lnkPriority>],[CONGLVL1=<congLvl1>],
   [CONGLVL2=<congLvl2>],[CONGLVL3=<congLvl3>],
   [RESETMTP3T31=<resetMtp3T31>];

ENT-SG-SLK:[TID]:<ss7LnkId>:[CTAG]::SIGTYPE=<sigType>,
   M2UAASSOCID=<m2uaAssocId>,M2UAIID=<m2uaIID>,
   LSETID=<lsetId>,MTP3PRFLID=<mtp3PrflId>,SLC=<slc>,
   [LNKPRIORITY=<lnkPriority>],[CONGLVL1=<congLvl1>],
   [CONGLVL2=<congLvl2>],[CONGLVL3=<congLvl3>],
   [RESETMTP3T31=<resetMtp3T31>];

RTRV-SG-SLK:[TID]:[<ss7LnkId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:SIGTYPE=<sigType>,
      M2UAASSOCID=<m2uaAssocId>,M2UAIID=<m2uaIID>,
      LSETID=<lsetId>,MTP3PRFLID=<mtp3PrflId>,
      SLC=<slc>,LNKPRIORITY=<lnkPriority>,
      CONGLVL1=<congLvl1>,CONGLVL2=<congLvl2>,
      CONGLVL3=<congLvl3>,
      RESETMTP3T31=<resetMtp3T31>"
;
```

Parameters:

ss7LnkId Identifies the AID as a signaling link. There can be no more than 16 signaling links in a link set. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, parameters for all signaling links configured in the system will be returned.

Type: Ss7LnkAid
Range: {1-64}
Default value: none

sigType Identifies the signaling type.

Type: enum
Range: BROADBAND
NARROWBAND
Default value: none

m2uaAssocId Identifies the M2UA association, terminating on an SG or MG, to which to send MTP2 messages. Only the value "0", indicating that M2UA is not used, is supported presently.

Type: integer
Range: {0-32}
Default value: none

m2uaIId Identifies an arbitrary index, unique for each signaling link, used to correlate traffic received from the M2UA server. This parameter is not used presently; enter any value.

Type: integer
Range: {1- 2147483647}
Default value: none

lsetId Identifies the link set.

Type: integer
Range: {1-64}
Default value: none

mtp3PrflId Identifies the MTP layer 3 profile.

Type: integer
Range: {1-128}
Default value: none

slc Identifies the link selection code, which represents a single link in a specific link set.

Type: integer
Range: {0-15}
Default value: none

lnkPriority Identifies the link priority level for the link within its link set, with lower numbers indicating higher priority. At least one link in a link set must have priority 0 to enable call routing over the link set. Multiple priorities within a link set must be contiguous.

Type: integer
Range: {0-3}
Default value: 0

congLvl1 Identifies the onset threshold for congestion level 1 in MTP3. It is not activated until the number of messages queued at MTP2 reaches 250.

Type: integer
Range: {1-65536}
Default value: 250

congLvl2 Identifies the onset threshold for congestion level 2 in MTP3. It is not activated until the number of messages queued at MTP2 reaches 250 and the number of messages queued at MTP3 reaches the value specified for *congestionThreshold1*.

Type: integer
Range: {1-65536}
Default value: 500

congLvl3 Identifies the onset threshold for congestion level 3 in MTP3. It is not activated until the number of messages queued at MTP2 reaches 250 and the number of messages queued at MTP3 reaches the value specified for *congestionThreshold2*.

Type: integer
Range: {1-65536}
Default value: 750

enableMtp3T31 Identifies whether congestion timer T31 is enabled for congestion level 1.

Type: BoolYN
Range: N = T31 not enabled
Y = T31 enabled
Default value: Y

resetMtp3T31 Identifies whether congestion timer T31 is reset when the congestion level increases.

Type: BoolYN
Range: N = T31 not reset
Y = T31 reset
Default value: N

Input Examples:

```
DLT-SG-SLK::1;

ED-SG-SLK::1:::MTP3PRFLID=1,SLC=1,LNKPRIORITY=0,
   CONGLVL1=250,CONGLVL2=500,CONGLVL3=750,
   ENABLEMTPT31=Y,RESETMTP3T31=N;

ENT-SG-SLK::1:::SIGTYPE=BROADBAND,M2UAASSOCID=0,
   M2UAIID=1,LSETID=1,MTP3PRFLID=1,SLC=0,LNKSPEED=64K,
   LNKPRIORITY=0,CONGLVL1=250,CONGLVL2=500,
   CONGLVL3=750,ENABLEMTPT31=Y,RESETMTP3T31=N;

RTRV-SG-SLK::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:SIGTYPE=BROADBAND,M2UAASSOCID=0,M2UAIID=1,
      LSETID=1,MTP3PRFLID=1,SLC=0,LNKSPEED=64K,
      LNKPRIORITY=0,CONGLVL1=250,CONGLVL2=500,
      CONGLVL3=750,ENABLEMTPT31=Y,RESETMTP3T31=N"
;
```

Related Commands:

DLT/ED/ENT/RTRV-SLK	ED-STATE-SLK
INIT-REG-SLK	RTRV-PM-SLK
RTRV-STATUS-SLK	

DLT/ED/ENT/RTRV-SLK

Commands:

DLT-SLK: Delete Signaling Link

ED-SLK: Edit Signaling Link

ENT-SLK: Enter Signaling Link

RTRV-SLK: Retrieve Signaling Link

Descriptions:

DLT-SLK lets the user delete a signaling link.

ED-SLK lets the user edit a signaling link. Use this command to assign profiles to signaling links.

ENT-SLK lets the user create a signaling link on a Lucent Network Gateway (NG) with signaling gateway functionality. You can have up to four signaling links on any I/O module. Use ENT-SLK to assign profiles to signaling links. The three *congestionThreshold* parameters define the onset thresholds for the three congestion levels. Each onset threshold (*congestionThreshold*) is the discard threshold for the immediately preceding congestion level; i.e., once the congestion level reaches *n*, MTP3 discards the congestion level *n-1* messages. The abatement threshold for each congestion level is the average of the onset thresholds for the concerned congestion level and the immediately preceding congestion level; for example, the abatement threshold for congestion level 2 is the average of *congestionThreshold1* and *congestionThreshold2*. ENT-SLK will not work correctly unless the following commands have already been issued: ENT-T1, ENT-PRFL-SLKL2, ENT-PRFL-SLKL3, and ENT-LSET.

RTRV-SLK lets the user retrieve parameters associated with a signaling link. Use RTRV-SLK to retrieve the link's location (slot/port/channel), MTP2 profile, link set identity, link selection code, MTP3 profile, speed, priority level, and congestion thresholds.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SLK:[TID]:<ss7LnkId>:[CTAG];

ED-SLK:[TID]:<ss7LnkId>:[CTAG]::L2PRFLID=<l2PrflId>;

ENT-SLK:[TID]:<ss7LnkId>:[CTAG]::SIGTYPE=<sigType>,
   M2UAASSOCID=<m2uaAssocId>,M2UAIID=<m2uaIId>,
   TERMID=<termId>,L2PRFLID=<l2PrflId>,
   [LNKSPEED=<lnkSpeed>];

RTRV-SLK:[TID]:[<ss7LnkId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:SIGTYPE=<sigType>,
      M2UAASSOCID=<m2uaAssocId>,M2UAIID=<m2uaIId>,
      TERMID=<termid>,L2PRFLID=<l2PrflId>,
      LNKSPEED=<lnkSpeed>"
;
```

Parameters:

ss7LnkId Identifies the AID as a signaling link. There can be no more than 16 signaling links in a link set. A null value (in RTRV input) is equivalent to "ALL"; that is, by leaving the field blank, parameters for all signaling links configured in the system will be returned.

Type: Ss7LnkAid
Range: {1-64}
Default value: none

sigType Identifies the type of signaling link.

Type: enum
Range: BROADBAND
NARROWBAND
Default value: none

m2uaAssocId Identifies the M2UA association, terminating on an SG or MG, to which to send MTP2 messages. Only the value “0”, indicating that M2UA is not used, is supported presently.

Type: integer
Range: {0-32}
Default value: none

m2uaIId Identifies an arbitrary index, unique for each signaling link, used to correlate traffic received from the M2UA server. This parameter is not used presently; enter any value.

Type: integer
Range: {1- 2147483647}
Default value: none

termId Identifies the termination for the signaling link, either as a fully-qualified DS0 when the value of *sigType* is "NARROWBAND", or as a virtual circuit channel (VCC) when the value of *sigType* is "BROADBAND".

Type: string
Range: up to 10 characters for *sigType* = BROADBAND
IOM-{1-17}-E1-{1-28}-T0-{1-31} for *sigType* = NARROWBAND
Default value: none

l2PrflId Identifies the MTP layer 2 profile, previously established with ENT-PRFL-SLKL2 for narrowband signaling, or with ENT-PRFL-HSLKL2 for broadband signaling.

Type: integer
Range: {1-128}
Default value: none

lnkSpeed Identifies the link speed when the value of *sigType* is "NARROWBAND".

Type: enum
Range: 56K
64K
Default value: 64K

Input Examples:

```
DLT-SLK::3;

ED-SLK::3:::LNKSPEED=64K;

ENT-SLK::3:::SIGTYPE=BROADBAND,M2UAASSOCID=0,
   M2UAIID=0,TERMID=sigpath,L2PRFLID=1,LNKSPEED=64K;

RTRV-SLK::3;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "3:SIGTYPE=BROADBAND,M2UAASSOCID=0,M2UAIID=0,
      TERMID=sigpath,L2PRFLID=1,LNKSPEED=64K"
;
```

Related Commands:

DLT/ED/ENT/RTRV-SG-SLK	ED-STATE-SGSLK
INIT-REG-SLK	RTRV-PM-SLK
RTRV-STATUS-SGSLK	

ED-STATE-LSET

Command:

ED-STATE-LSET: Edit State Link Set

Description:

ED-STATE-LSET lets the user change the state of a link set.

Category: Signaling **Security:** SA

Input Format:

```
ED-STATE-LSET:[TID]:<lsetId>:[CTAG]::<pst>;
```

Output Format: none

Parameters:

lsetId Identifies the link set.

Type: LsetAid
Range: {1-64}
Default value: none

pst Identifies the primary state of a signaling link.

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: none

Input Example:

```
ED-STATE-LSET::1:::IS;
```

Related Messages:

```
RTRV-STATUS-LSET
```

ED-STATE-SGSLK

Command:

ED-STATE-SGSLK: Edit State Signaling Gateway Signaling Link

Description:

ED-STATE-SGSLK lets the user change the state of a signaling link on a signaling gateway.

Category: Signaling **Security:** SA

Input Format:

```
ED-STATE-SGSLK:[TID]:<ss7LnkId>:[CTAG]::<pst>;
```

Output Format: none

Input Parameters:

ss7LnkId Identifies the signaling link on a signaling gateway.

Type: LsetAid
Range: {1-64}
Default value: none

pst Identifies the state of the signaling link.

Type: enum
Range: INH = Inhibited
IS = In service
OOS = Out of service
UNINH = Uninhibited
Default value: none

Input Example:

```
ED-STATE-SGSLK::1:::IS;
```

Related Messages:

RTRV-STATUS-SGSLK

INIT-REG-HSLK / RTRV-PM-HSLK

Commands:

INIT-REG-HSLK: Initialize Register High-Speed Link

RTRV-PM-HSLK: Retrieve Performance Monitors High-Speed Link

Descriptions:

INIT-REG-HSLK lets the user initialize one or more storage registers or event counters for signaling statistics gathered from the SSCOP and SSCF-NNI protocol layers for a high-speed signaling link.

RTRV-PM-HSLK lets the user retrieve current and historical performance data gathered from the SSCOP and SSCF-NNI protocol layers for a high-speed signaling link.

Category: VToA **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-HSLK:[TID]:<ss7LnkId>:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>],[<tmper>],
   [<mondat>],[<montm>];
```

```
RTRV-PM-HSLK:[TID]:<ss7LnkId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:<montype>,<monval>,[<vldty>],[<locn>],
      [<dirn>],[<tmper>],[<mondat>],[<montm>]"
;
```

Parameters:

ss7LnkId Identifies the AID as a high-speed signaling link.

Type: integer
Range: {1-64}
Default value: none

montype Identifies a type of monitored parameter for the high-speed signaling link.

Type: enum

Range: ALL = All monitored parameters

For the SSCOP protocol layer –

- RXBUFFERINUSECNTR = RX Buffer in-use counter
- RXBUFFERINUSEGAUGE = RX Buffer in-use gauge
- RXDISCARDEDPDUS = Number of incoming PDUs discarded
- RXERRORPDUS = Number of incoming PDUs with reception error
- RXPDUS[16] = Number of PDUs received (indexed by SSCOP PDU type field)
- TXBUFFERINUSECNTR = TX Buffer in-use counter
- TXBUFFERINUSEGAUGE = TX Buffer in-use gauge
- TXDISCARDEDPDUS = Number of outgoing PDUs discarded
- TXDISCARDEDSDUS = Number of outgoing SDUs discarded
- TXERRORPDUS = Number of outgoing PDUs with transmission error
- TXPDUS[16] = Number of PDUs transmitted (indexed by SSCOP PDU type field)
- VCI = Virtual channel identifier for the link
- VPI = Virtual path id for the link

For the SSCF-NNI protocol layer –

- ANSTX = Number of Alignment Not Successful PDUs transmitted
- EMRX = Number of Emergency PDUs received
- EMTX = Number of Emergency PDUs transmitted
- INSRX = Number of In-Service PDUs received
- INSTX = Number of In-Service PDUs transmitted
- IRX = Number of MTP3 frames received
- ITX = Number of MTP3 frames transmitted
- MITX = Number of Management Initiated PDUs transmitted
- NMRX = Number of Normal PDUs received
- NMTX = Number of Normal PDUs transmitted
- OOSRX = Number of Number of Out-of-Service PDUs received
- OOSTX = Number of Out-of-Service PDUs transmitted
- PETX = Number of Protocol Error PDUs transmitted
- PNSTX = Number of Proving Not Successful PDUs transmitted
- PORX = Number of Processor Outage PDUs received

Default value: ALL

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. This parameter is presently not supported; leave it blank.

Type: integer
Range: {0-4294967295} for all monitored parameters except "VCI" and "VPI", for which the range is {0-65535}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP". This parameter is presently not supported; leave it blank.

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it. This parameter is not supported presently; its value will be "NULL".

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: not applicable for output

locn Identifies the location of the storage counters to be initialized. This parameter is not supported presently; leave it blank.

Type: Location
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. This parameter is not supported presently; leave it blank.

Type: Direction
Range: BTH = Both directions
RCV = Receive direction only
TRMT = Transmit direction only
Default value: BTH

tmper Identifies the accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods. This parameter is not supported presently; leave it blank.

Type: TimePeriod
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: MonitoredDate
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: MonitoredTime
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-HSLK::1;
RTRV-PM-HSLK::1;
```

Output Example:

```
    lucent 2005-04-22 14:37:49
M   0 COMPLD
    "1:XBUFFERINUSECNTR,0,,,,,,"
    "1:RXBUFFERINUSEGAUGE,0,,,,,,"
    "1:RXDISCARDEDPDUS,0,,,,,,"
    "1:RXERRORPDUS,0,,,,,,"
    "1:RXPDUS[16] ,0,,,,,,"
    "1:TXBUFFERINUSECNTR,0,,,,,,"
    "1:TXBUFFERINUSEGAUGE,0,,,,,,"
    "1:TXDISCARDEDPDUS,0,,,,,,"
    "1:TXDISCARDEDSDUS,0,,,,,,"
    "1:TXERRORPDUS,0,,,,,,"
    "1:TXPDUS[16],0,,,,,,"
    "1:VCI,0,,,,,,"
    "1:VPI,0,,,,,,"
    "1:ANSTX,0,,,,,,"
    "1:EMRX,0,,,,,,"
    "1:EMTX,0,,,,,,"
    "1:INSRX,0,,,,,,"
    "1:INSTX,0,,,,,,"
    "1:IRX,0,,,,,,"
    "1:ITX,0,,,,,,"
    "1:MITX,0,,,,,,"
    "1:NMRX,0,,,,,,"
    "1:NMTX,0,,,,,,"
    "1:OOSRX,0,,,,,,"
    "1:OOSTX,0,,,,,,"
    "1:PETX,0,,,,,,"
    "1:PNSTX,0,,,,,,"
    "1:PORX,0,,,,,,"
;
```

Related Commands: none

INIT-REG-LSET / RTRV-PM-LSET

Commands:

INIT-REG-LSET: Initialize Register Link Set

RTRV-PM-LSET: Retrieve Performance Monitors Link Set

Descriptions:

INIT-REG-LSET lets the user clear the counters for statistics gathered from a link set.

RTRV-PM-LSET lets the user retrieve current and historical performance data gathered from a link set.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-LSET:[TID]:<lsetId>:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-LSET:[TID]:<lsetId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<lsetId>:<montype>,<monval>,<monlev>,<locn>,
      <dirn>"
;
```

Parameters:

lsetId Identifies the AID as a link set.

Type: LsetId
Range: {1-64}
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum
Range: ALL = All types
DURLSETUNAV = Duration in minutes of link set unavailability
LASTINITNA = Number of minutes since initialization of all counters for which there is no direction (neither RCV nor TRMT)
STARTLSETFAIL = Number of times the link set has failed since initialization of all counters
STOPLSETFAIL = Number of times the link set has become active (after failure) since initialization of all counters
Default value: ALL

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-LSET::1:::ALL;
```

```
RTRV-PM-LSET;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:STARTLSETFAIL,1,1-UP,NEND,ALL"
   "1:STOPLSETFAIL,2,1-UP,NEND,ALL"
   "1:LASTINITNA,101,1-UP,NEND,ALL"
   "1:DURLSETUNAV,7,1-UP,NEND,ALL"
;
```

Related Commands:

```
RTRV-STATUS-LSET
```

INIT-REG-MTP3 / RTRV-PM-MTP3

Commands:

INIT-REG-MTP3: Initialize Register MTP3

RTRV-PM-MTP3: Retrieve Performance Monitors MTP3

Descriptions:

INIT-REG-MTP3 lets the user clear the counters for statistics concerning MTP3 signaling links.

RTRV-PM-MTP3 lets the user retrieve current and historical performance data gathered from MTP3 signaling links.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-MTP3:[TID]:[<src>]:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-MTP3:[TID]:[<src>]:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<src>:<montype>,<monval>,<monlev>,<locn>,<dirn>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum
Range: ALL = All types
LASTINITNA = Number of minutes since initialization of all counters for which there is no direction (neither RCV nor TRMT)
LASTINITRCV = Number of minutes since initialization of all RCV (receive) counters
LASTINITTRMT = Number of minutes since initialization of all TRMT (transmit) counters
MSUDROPRTEERR = Number of message signaling units dropped due to a routing data error
MTPRESTARTS = Number of MTP3 restarts
TRARSTRTALLWRX = Number of traffic restart allowed messages received
TRARSTRTALLWTX = Number of traffic restart allowed messages transmitted
TRARSTRTWAITRX = Number of traffic restart waiting messages received
TRARSTRTWAITTX = Number of traffic restart waiting messages transmitted
USRUNAVRX = Number of user part unavailable messages received
USRUNAVTX = Number of user part unavailable messages transmitted
Default value: ALL

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-MTP3:::::ALL;

RTRV-PM-MTP3;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:USRUNAVTX,0,1-UP,NEND,ALL"
   "COM:TRARSTRTALLWTX,0,1-UP,NEND,ALL"
   "COM:TRARSTRTWAITTX,0,1-UP,NEND,ALL"
   "COM:LASTINITTRMT,16,1-UP,NEND,ALL"
   "COM:USRUNAVRX,0,1-UP,NEND,ALL"
   "COM:TRARSTRTALLWRX,0,1-UP,NEND,ALL"
   "COM:TRARSTRTWAITRX,0,1-UP,NEND,ALL"
   "COM:LASTINITRCV,16,1-UP,NEND,ALL"
   "COM:MSUDROPRTEERR,0,1-UP,NEND,ALL"
   "COM:MTPRESTARTS,0,1-UP,NEND,ALL"
   "COM:LASTINITNA,16,1-UP,NEND,ALL"
;
```

Related Commands: none

INIT-REG-ROUTESS7 / RTRV-PM-ROUTESS7

Commands:

INIT-REG-ROUTESS7: Initialize Register SS7 Route

RTRV-PM-ROUTESS7: Retrieve Performance Monitors SS7 Route

Descriptions:

INIT-REG-ROUTESS7 lets the user clear the counters for statistics concerning an SS7 route.

RTRV-PM-ROUTESS7 lets the user retrieve current and historical performance data gathered from an SS7 route.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-ROUTESS7:[TID]:<routeSs7>:[CTAG]::
   [<montype>],[<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-ROUTESS7:[TID]:<routeSs7>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<routeSs7>:<montype>,<monval>,<monlev>,<locn>,
      <dirn>"
;
```

Parameters:

routeSs7 Identifies the AID as an SS7 Route. The pattern is a combination of the destination point code and the link set connecting to it.

Type: RouteSs7Aid
Range: <PCAID>-<LSETAID>, where
PCAID = {0-255}-{0-255}-{0-255} and
LSETAID = {1-20}
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum
Range: ALL = All types
DURLSETDIVER = Duration in minutes that traffic on the link set is diverted on low priority route
LASTINITNA = Number of minutes since initialization of all counters for which there is no direction (neither RCV nor TRMT)
TRFDIVER = Number of times traffic on the link set has been diverted on low priority route
Default value: ALL

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-ROUTESS7::3-4-5-16:::ALL;

RTRV-PM-ROUTESS7::3-4-5-16;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "3-4-5-16:DURLSETDIVER,1,1-UP,NEND,ALL"
   "3-4-5-16:LASTINITNA,101,1-UP,NEND,ALL"
   "3-4-5-16:TRFDIVER,2,1-UP,NEND,ALL"
;
```

Related Commands: none

INIT-REG-SGM3UA / RTRV-PM-SGM3UA

Commands:

INIT-REG-SGM3UA: Initialize Register Signaling Gateway M3UA

RTRV-PM-SGM3UA: Retrieve Performance Monitors Signaling Gateway M3UA

Descriptions:

INIT-REG-SGM3UA lets the user clear the counters for M3UA statistics gathered from the signaling gateway function in the Lucent Network Gateway (NG).

RTRV-PM-SGM3UA lets the user retrieve current and historical M3UA performance data gathered from the signaling gateway function in the Lucent Network Gateway (NG).

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-SGM3UA:[TID]:[<m3uaAssocId>]:[CTAG]::
   [<montype>],[<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-SGM3UA:[TID]:[<m3uaAssocId>]:[CTAG]::
   [<montype>],[<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<m3uaAssocId>:<montype>,<monval>,[<monlev>],
      [<locn>],[<dirn>]"
;
```

Parameters:

m3uaAssocId Identifies the AID as an M3UA ASP (Application Server Process; that is, a remote media gateway controller) node in a SIGTRAN network that is associated with the signaling gateway function in the NG. You can designate a specific M3UA ASP (range = {1-32}} only when the value of *mgcType* in SG-SYS is "GEN". The value "COM" initializes or returns aggregate M3UA performance monitoring statistics for all configured M3UA ASPs.

Type: string
Range: {1-32}
COM
Default value: COM

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum
Range: ALL = All types
ERRORDNDATAQASPEND
ERRORDNDATAQCONG
ERRORDNDROPLOADSHFAIL
ERRORDNDROPMMHFAIL
ERRORDNDROPNONSAPAVAIL
ERRORDNDROPNOPSPAVAIL
ERRORDNDROPNOROUTE
ERRORDNDROPPCCONG
ERRORDNDROPPCUNAVAIL
ERRORUPDATAQASPEND
ERRORUPDATAQCONG
ERRORUPDROPLOADSHFAIL
ERRORUPDROPMMHFAIL
ERRORUPDROPNONSAPAVAIL
ERRORUPDROPNOPSPAVAIL
ERRORUPDROPNOROUTE
ERRORUPDROPPCCONG
ERRORUPDROPPCUNAVAIL
LIDATARXNPDUS
LIDATARXPDUBYTES
LIDATATXNPDUS
LIDATATXPDUBYTES
M3UARXASPAC
M3UARXASPACACK
M3UARXASPDN
M3UARXASPDNACK
M3UARXASPIA

M3UARXASPIAACK
M3UARXASPUP
M3UARXASPUPACK
M3UARXDATA
M3UARXDAUD
M3UARXDAVA
M3UARXDEREGREQ
M3UARXDEREGRSP
M3UARXDRST
M3UARXDUNA
M3UARXDUPU
M3UARXERR
M3UARXHBEAT
M3UARXHBEATACK
M3UARXNOTIFY
M3UARXREGREQ
M3UARXREGRSP
M3UARXSCON
M3UATXASPAC
M3UATXASPACACK
M3UATXASPDN
M3UATXASPDNACK
M3UATXASPIA
M3UATXASPIAACK
M3UATXASPUP
M3UATXASPUPACK
M3UATXDATA
M3UATXDAUD
M3UATXDAVA
M3UATXDEREGREQ
M3UATXDEREGRSP
M3UATXDRST
M3UATXDUNA
M3UATXDUPU
M3UATXERR
M3UATXHBEAT
M3UATXHBEATACK
M3UATXNOTIFY
M3UATXREGREQ
M3UATXREGRSP
M3UATXSCON
MTP3RXCONG
MTP3RXDATA
MTP3RXDRST
MTP3RXPAUSE
MTP3RXRESUME

MTP3RXRSTBEG
MTP3RXRSTEND
MTP3RXUPU
MTP3TXCONG
MTP3TXDATA
MTP3TXDRST
MTP3TXPAUSE
MTP3TXRESUME
MTP3TXRSTBEG
MTP3TXRSTEND
MTP3TXUPU
UIDATARXNPDUS
UIDATARXPDUBYTES
UIDATATXNPDUS
UIDATATXPDUBYTES

Default value: none

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies (in RTRV-PM inpur) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND – far end
NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-SGM3UA;

RTRV-PM-SGM3UA;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:MTP3TXDATA,0"
   "COM:MTP3TXPAUSE,0"
   "COM:MTP3TXRESUME,0"
   "COM:MTP3TXCONG,0"
   "COM:MTP3TXDRST,0"
   "COM:MTP3TXRSTBEG,0"
   "COM:MTP3TXRSTEND,0"
   "COM:MTP3TXUPU,0"
   "COM:MTP3RXDATA,0"
   "COM:MTP3RXPAUSE,0"
   "COM:MTP3RXRESUME,0"
   "COM:MTP3RXCONG,0"
   "COM:MTP3RXDRST,0"
   "COM:MTP3RXRSTBEG,0"
   "COM:MTP3RXRSTEND,0"
   "COM:MTP3RXUPU,0"
   "COM:M3UATXDATA,0"
   "COM:M3UATXDUNA,0"
   "COM:M3UATXDAVA,0"
   "COM:M3UATXDAUD,0"
   "COM:M3UATXSCON,0"
   "COM:M3UATXDUPU,0"
   "COM:M3UATXDRST,0"
   "COM:M3UATXREGREQ,0"
   "COM:M3UATXDEREGREQ,0"
   "COM:M3UATXREGRSP,0"
   "COM:M3UATXDEREGRSP,0"
   "COM:M3UATXASPUP,0"
```

```
"COM:M3UATXASPUPACK,0"
"COM:M3UATXASPDN,0"
"COM:M3UATXASPDNACK,0"
"COM:M3UATXASPAC,0"
"COM:M3UATXASPACACK,0"
"COM:M3UATXASPIA,0"
"COM:M3UATXASPIAACK,0"
"COM:M3UATXHBEAT,0"
"COM:M3UATXHBEATACK,0"
"COM:M3UATXERR,0"
"COM:M3UATXNOTIFY,0"
"COM:M3UARXDATA,0"
"COM:M3UARXDUNA,0"
"COM:M3UARXDAVA,0"
"COM:M3UARXDAUD,0"
"COM:M3UARXSCON,0"
"COM:M3UARXDUPU,0"
"COM:M3UARXDRST,0"
"COM:M3UARXREGREQ,0"
"COM:M3UARXDEREGREQ,0"
"COM:M3UARXREGRSP,0"
"COM:M3UARXDEREGRSP,0"
"COM:M3UARXASPUP,0"
"COM:M3UARXASPUPACK,0"
"COM:M3UARXASPDN,0"
"COM:M3UARXASPDNACK,0"
"COM:M3UARXASPAC,0"
"COM:M3UARXASPACACK,0"
"COM:M3UARXASPIA,0"
"COM:M3UARXASPIAACK,0"
"COM:M3UARXHBEAT,0,"
"COM:M3UARXHBEATACK,0"
"COM:M3UARXERR,0"
"COM:M3UARXNOTIFY,0"
"COM:LIDATATXNPDUS,0"
"COM:LIDATATXPDUBYTES,0"
"COM:LIDATARXNPDUS,0"
"COM:LIDATARXPDUBYTES,0"
"COM:UIDATATXNPDUS,0"
"COM:UIDATATXPDUBYTES,0"
"COM:UIDATARXNPDUS,0"
"COM:UIDATARXPDUBYTES,0"
"COM:ERRORDNDROPNOROUTE,0"
"COM:ERRORDNDROPPCUNAVAIL,0"
"COM:ERRORDNDROPPCCONG,0"
"COM:ERRORDNDROPNOPSPAVAIL,0"
"COM:ERRORDNDROPNONSAPAVAIL,0"
```

```
        "COM:ERRORDNDROPLOADSHFAIL,0"
        "COM:ERRORDNDROPMMHFAIL,0"
        "COM:ERRORDNDATAQCONG,0"
        "COM:ERRORDNDATAQASPEND,0"
        "COM:ERRORUPDROPNOROUTE,0"
        "COM:ERRORUPDROPPCUNAVAIL,0"
        "COM:ERRORUPDROPPCCONG,0"
        "COM:ERRORUPDROPNOPSPAVAIL,0"
        "COM:ERRORUPDROPNONSAPAVAIL,0"
        "COM:ERRORUPDROPLOADSHFAIL,0"
        "COM:ERRORUPDROPMMHFAIL,0"
        "COM:ERRORUPDATAQCONG,0"
        "COM:ERRORUPDATAQASPEND,0"
;
```

Related Commands: none

INIT-REG-SGPC / RTRV-PM-SGPC

Commands:

INIT-REG-SGPC: Initialize Register Signaling Gateway Point Code

RTRV-PM-SGPC: Retrieve Performance Monitors Signaling Gateway Point Code

Descriptions:

INIT-REG-SGPC lets the user clear the counters for statistics gathered from a destination point code for a signaling gateway.

RTRV-PM-SGPC lets the user retrieve current and historical performance data gathered from a destination point code for a signaling gateway.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-SGPC:[TID]:<ss7Pc>:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-SGPC:[TID]:<ss7Pc>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<ss7Pc>:<montype>,<monval>,<monlev>,<locn>,<dirn>"
;
```

Parameters:

ss7Pc Identifies the AID as a destination point code for a signaling gateway.

Type: Ss7PcAid
Range: {0-255}-{0-255}-{0-255}
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum
Range: ALL = All types
DURRTEUNAV = Duration in minutes of route unavailability
LASTINITNA = Number of minutes since initialization of all counters for which there is no direction (neither RCV nor TRMT)
LASTINITRCV = Number of minutes since initialization of all RCV (receive) counters
LASTINITTRMT = Number of minutes since initialization of all TRMT (transmit) counters
RTECONGTSTRX = Number of route set congestion test messages received
RTECONGTSTTX = Number of route set congestion test messages transmitted
RTETSTRX = Number of route set test messages received
RTETSTTX = Number of route set test messages transmitted
RTEUNAV = Number of times route became unavailable
SIFOCTPRTETX = Number of SIF (Service Information Field) octets transmitted per route
SIOOCTPRTETX = Number of SIO (Service Indicator Octet) octets transmitted per route
TXALLWRX = Number of transfer allowed messages received
TXALLWTX = Number of transfer allowed messages transmitted
TXPROHIBRX = Number of transfer prohibited messages received
TXPROHIBTX = Number of transfer prohibited messages transmitted
TXRESTRICTRX = Number of transfer restricted messages received
TXRESTRICTTX = Number of transfer restricted messages transmitted
Default value: ALL

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-SGPC::3-4-5:::ALL;
RTRV-PM-SGPC;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "001-001-001:RTETSTTX,0,1-UP,NEND,ALL"
   "001-001-001:RTECONGTSTTX,0,1-UP,NEND,ALL"
   "001-001-001:TXPROHIBTX,0,1-UP,NEND,ALL"
   "001-001-001:TXRESTRICTTX,0,1-UP,NEND,ALL"
   "001-001-001:TXALLWTX,0,1-UP,NEND,ALL"
   "001-001-001:SIFOCTPRTETX,0,1-UP,NEND,ALL"
   "001-001-001:SIOOCTPRTETX,0,1-UP,NEND,ALL"
   "001-001-001:LASTINITTRMT,33,1-UP,NEND,ALL"
   "001-001-001:RTETSTRX,0,1-UP,NEND,ALL"
   "001-001-001:RTECONGTSTRX,0,1-UP,NEND,ALL"
;
```

Related Commands: none

INIT-REG-SLK / RTRV-PM-SLK

Commands:

INIT-REG-SLK: Initialize Register Signaling Link

RTRV-PM-SLK: Retrieve Performance Monitors Signaling Link

Descriptions:

INIT-REG-SLK lets the user clear the counters for statistics gathered from a signaling link.

RTRV-PM-SLK lets the user retrieve current and historical performance data gathered from a signaling link. MTP Layer 3 packet traffic statistics are captured and stored based on the maximum value reached (High Water Mark or HWM) for 100 one-minute, 50 five-minute and 20 15-minute periods.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-SLK:[TID]:<ss7LnkId>:[CTAG]::<montype>,
   <monval>;
RTRV-PM-SLK:[TID]:<ss7LnkId>:[CTAG]::[<montype>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:<montype>,<monval>"
;
```

Parameters:

ss7LnkId Identifies the AID as a signaling link.

Type: Ss7LnkAid
Range: {1-40}
Default value: none

montype Identifies (in INIT-REG) the registers (for a type of monitored parameter) to initialize for the specified signaling link.

Type: enum
Range: HWM15MINCFG = Identifies whether maximum-value-reached (HWM) calculations for 15-minute periods are done. A value of "0" means "no" and a value of "1" means "yes".
HWM1MINCFG = Identifies whether maximum-value-reached (HWM) calculations for one-minute periods are done. A value of "0" means "no" and a value of "1" means "yes".
HWM5MINCFG = Identifies whether maximum-value-reached (HWM) calculations for five-minute periods are done. A value of "0" means "no" and a value of "1" means "yes".
Default value: none

montype Identifies (in RTRV-PM) the registers (for a type of monitored parameter) from which to retrieve performance data for the specified signaling link.

Type: enum
Range: HWM = All high water marks
HWM15MINCFG = Identifies whether HWM calculations for 15-minute periods are done. A value of "0" means "no" and a value of "1" means "yes".
HWM15MINLINKUTIL = HWM for link utilization reached in 20 15-minute periods (calculated as a percentage using total MSU octets received and transmitted)
HWM15MINLINKUTILAGE = The 15-minute period in which the HWM for link utilization occurred ("1" indicates the most recent period, "20" the least).
HWM15MINMSURX = Maximum number of message signal units received for 15-minute periods.
HWM15MINMSURXAGE = The 15-minute period in which the HWM for message signal units received occurred ("1" indicates the most recent period, "20" the least).
HWM15MINMSUTX = Maximum number of message signal units transmitted for 15-minute periods.
HWM15MINMSUTXAGE = The 15-minute period in which the HWM for message signal units transmitted occurred ("1" indicates the most recent period, "20" the least).
HWM15MINOCTRX = Maximum number of octets received for 15-minute periods.
HWM15MINOCTRXAGE = The 15-minute period in which the HWM for octets received occurred ("1" indicates the most recent period, "20" the least).

HWM15MINOCTTX = Maximum number of octets transmitted for 15-minute periods.

HWM15MINOCTTXAGE = The 15-minute period in which the HWM for octets transmitted occurred (“1” indicates the most recent period, “20” the least).

HWM1MINCFG = Identifies whether HWM calculations for one-minute periods are done. A value of “0” means “no” and a value of “1” means “yes”.

HWM1MINLINKUTIL = HWM for link utilization reached in 100 one-minute periods (calculated as a percentage using total MSU octets received and transmitted)

HWM1MINLINKUTILAGE = The one-minute period in which the HWM for link utilization occurred (“1” indicates the most recent period, “100” the least).

HWM1MINMSURX = Maximum number of message signal units received for one-minute periods.

HWM1MINMSURXAGE = The one-minute period in which the HWM for message signal units received occurred (“1” indicates the most recent period, “100” the least).

HWM1MINMSUTX = Maximum number of message signal units transmitted for one-minute periods.

HWM1MINMSUTXAGE = The one-minute period in which the HWM for message signal units transmitted occurred (“1” indicates the most recent period, “100” the least).

HWM1MINOCTRX = Maximum number of octets received for one-minute periods.

HWM1MINOCTRXAGE = The one-minute period in which the HWM for octets received occurred (“1” indicates the most recent period, “100” the least).

HWM1MINOCTTX = Maximum number of octets transmitted for one-minute periods.

HWM1MINOCTTXAGE = The one-minute period in which the HWM for octets transmitted occurred (“1” indicates the most recent period, “100” the least).

HWM5MINCFG = Identifies whether HWM calculations for five-minute periods are done. A value of “0” means “no” and a value of “1” means “yes”.

HWM5MINLINKUTIL = HWM for link utilization reached in 50 five-minute periods (calculated as a percentage using total MSU octets received and transmitted).

HWM5MINLINKUTILAGE = The five-minute period in which the HWM for link utilization occurred (“1” indicates the most recent period, “50” the least).

HWM5MINMSURX = Maximum number of message signal units received for five-minute periods.

HWM5MINMSURXAGE = The five-minute period in which the HWM for message signal units received occurred ("1" indicates the most recent period, "50" the least).
HWM5MINMSUTX = Maximum number of message signal units transmitted for five-minute periods.
HWM5MINMSUTXAGE = The five-minute period in which the HWM for message signal units transmitted occurred ("1" indicates the most recent period, "50" the least).
HWM5MINOCTRX = Maximum number of octets received for five-minute periods.
HWM5MINOCTRXAGE = The five-minute period in which the HWM for octets received occurred ("1" indicates the most recent period, "50" the least).
HWM5MINOCTTX = Maximum number of octets transmitted for five-minute periods.
HWM5MINOCTTXAGE = The five-minute period in which the HWM for octets transmitted occurred ("1" indicates the most recent period, "50" the least).

Default value: HWM

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized.

Type: enum
Range: {0,1}
Default value: none

Input Examples:

```
INIT-REG-SLK::1:::HWM15MIN,0;
RTRV-PM-SLK::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:HWM15MINCFG,0"
   "1:HWM1MINCFG,0"
   "1:HWM5MINCFG,0""
;
```

Related Commands: none

INIT-REG-SLKL2 / RTRV-PM-SLKL2

Commands:

INIT-REG-SLKL2: Initialize Register SLKL2

RTRV-PM-SLKL2: Retrieve Performance Monitors SLKL2

Descriptions:

INIT-REG-SLKL2 lets the user clear the counters for statistics gathered from a MTP2 signaling link.

RTRV-PM-SLKL2 lets the user retrieve current and historical performance data gathered from an MTP2 signaling link.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-SLKL2:[TID]:<ss7LnkId>:[CTAG]::<montype>,
   [<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-SLKL2:[TID]:<ss7LnkId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:<montype>,<monval>,<monlev>,<locn>,
      <dirn>"
;
```

Parameters:

ss7LnkId Identifies the AID as an MTP Layer 2 signaling link.

Type: Ss7LnkAid
Range: {1-40}
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum

Range: ALL = All types
DURLNKINSRV = Number of minutes the link has been in-service
DURLNKLOCCONG = Number of minutes the link has been locally congested
FISURX = Number of FISUs received on the link
FISUTX = Number of FISUs transmitted on the link
LASTINITNA = Number of minutes since initialization of all counters for which there is no direction (RCV or TRMT)
LASTINITRCV = Number of minutes since initialization of all RCV (receive) counters
LASTINITTRMT = Number of minutes since initialization of all TRMT (transmit) counters
LNKFAILABNRML = Number of times link has failed due to abnormal FIBR/BSNR
LNKFAILALIGN = Number of times link has failed due to inability to complete alignment procedure
LNKFAILCONG = Number of times link has failed due to excessive congestion
LNKFAILDLYACK = Number of times link has failed due to delay of acknowledgement messages
LNKFAILERR = Number of times link has failed due to excessive error rate
LNKFAILFORALL = Number of times link has failed for any reason
LSSURX = Number of LSSUs received on the link
LSSUTX = Number of LSSUs transmitted on the link
MSURX = Number of message signal units received on the link
MSUTX = Number of message signal units transmitted on the link
NEGACKRX = Number of times negative acknowledgment messages received on the link
OCTRETX = Number of octets retransmitted on the link
SIFSIOOCTRX = Number of SIF/SIO (Service Information Field / Service Indicator Octet) octets received on the link
SIFSIOOCTTX = Number of SIF/SIO (Service Information Field / Service Indicator Octet) octets transmitted on the link
SIGUNITRXERR = Number of signaling units received in error on the link

Default value: none

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-SLKL2::1:::ALL;
RTRV-PM-SLKL2::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:IFSIOOCTTX,1,1-UP,NEND,ALL"
   "1:OCTRETX,0,1-UP,NEND,ALL"
   "1:MSUTX,130,1-UP,NEND,ALL"
   "1:LSSUTX,3,1-UP,NEND,ALL"
   "1:FISUTX,130,1-UP,NEND,ALL"
   "1:LASTINITTRMT,71,1-UP,NEND,ALL"
   "1:SIGUNITRXERR,0,1-UP,NEND,ALL"
   "1:NEGACKRX,0,1-UP,NEND,ALL"
   "1:SIFSIOOCTRX,3,1-UP,NEND,ALL"
   "1:MSURX,129,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:LSSURX,7,1-UP,NEND,ALL"
   "1:FISURX,516,1-UP,NEND,ALL"
   "1:LASTINITTRCV,71,1-UP,NEND,ALL"
   "1:LNKFAILFORALL,0,1-UP,NEND,ALL"
   "1:LNKFAILABNRML,0,1-UP,NEND,ALL"
   "1:LNKFAILDLYACK,0,1-UP,NEND,ALL"
   "1:LNKFAILERR,0,1-UP,NEND,ALL"
   "1:LNKFAILCONG,0,1-UP,NEND,ALL"
   "1:LNKFAILALIGN,0,1-UP,NEND,ALL"
   "1:LASTINITNA,71,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:DURLNKINSRV,42,1-UP,NEND,ALL"
   "1:DURLNKLOCCONG,0,1-UP,NEND,ALL"
;
```

Related Commands: none

INIT-REG-SLKL3 / RTRV-PM-SLKL3

Commands:

INIT-REG-SLKL3: Initialize Register SLKL3

RTRV-PM-SLKL3: Retrieve Performance Monitors SLKL3

\Descriptions:

INIT-REG-SLKL3 lets the user clear the counters for statistics gathered from a MTP3 signaling link.

RTRV-PM-SLKL3 lets the user retrieve current and historical performance data gathered from an MTP3 signaling link.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-SLKL3:[TID]:<ss7LnkId>:[CTAG]::<montype>,
   [<monval>],[<locn>],[<dirn>];
```

```
RTRV-PM-SLKL3:[TID]:<ss7LnkId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:<montype>,<monval>,<monlev>,<locn>,
      <dirn>"
;
```

Parameters:

ss7LnkId Identifies the AID as an MTP 3 signaling link.

Type: Ss7LnkAid
Range: {1-40}
Default value: none

montype Identifies the registers (for a type of monitored parameter) to initialize or from which to retrieve performance data. "ALL" is the only valid input value.

Type: enum

Range: ALL = All types
CHNGBCKACKRX = Number of changeback acknowledgement messages received
CHNGBCKACKTX = Number of changeback acknowledgement messages transmitted
CHNGBCKRX = Number of changeback messages received
CHNGBCKTX = Number of changeback messages transmitted
CHNGOVERACKRX = Number of changeover acknowledgement messages received
CHNGOVERACKTX = Number of changeover acknowledgement messages transmitted
CHNGOVERRX = Number of changeover messages received
CHNGOVERTX = Number of changeover messages transmitted
DUROFLNKCONG = Duration of last link congestion in minutes
DUROFLNKUNAV = Duration of last link unavailability in minutes
EMERGCHNGOVERACKRX = Number of emergency changeover acknowledgement messages received
EMERGCHNGOVERACKTX = Number of emergency changeover acknowledgement messages transmitted
EMERGCHNGOVERRX = Number of emergency changeover messages received
EMERGCHNGOVERTX = Number of emergency changeover messages transmitted
INVPDURX = Number of invalid protocol data units (protocol messages) received
LASTINITNA = Number of minutes since initialization of all counters for which there is no direction (neither RCV nor TRMT)
LASTINITRCV = Number of minutes since initialization of all RCV (receive) counters
LASTINITTRMT = Number of minutes since initialization of all TRMT (transmit) counters
LNKCONACKRX = Number of link connection acknowledgement messages received
LNKCONACKTX = Number of link connection acknowledgement messages transmitted

LNKCONGATTHRSHLD0 = Number of links at congestion level 0
LNKCONGATTHRSHLD1 = Number of links at congestion level 1
LNKCONGATTHRSHLD2 = Number of links at congestion level 2
LNKCONGATTHRSHLD3 = Number of links at congestion level 3
LNKCONORDRX = Number of link connection order messages received
LNKCONORDTX = Number of link connection order messages transmitted
LNKFORCEUNINHRX = Number of link forced uninhibit messages received
LNKFORCEUNINHTX = Number of link forced uninhibit acknowledgement messages transmitted
LNKINHACKRX = Number of link inhibit acknowledgement messages received
LNKINHACKTX = Number of link inhibit acknowledgement messages transmitted
LNKINHDENYRX = Number of link inhibit denied messages received
LNKINHDENYTX = Number of link inhibit denied messages transmitted
LNKINHRX = Number of link inhibit messages received
LNKINHTX = Number of link inhibit messages transmitted
LNKLOCINHTSTRX = Number of link locally inhibited test messages received
LNKLOCINHTSTTX = Number of link locally inhibited test messages transmitted
LNKRMTINHTSTRX = Number of link remotely inhibited test messages received
LNKRMTINHTSTTX = Number of link remotely inhibited test messages transmitted
LNKTSTACKRX = Number of link test acknowledgement messages received
LNKTSTACKTX = Number of link test acknowledgement messages transmitted
LNKTSTRX = Number of link test messages received
LNKTSTTX = Number of link test messages transmitted
LNKUNINHACKRX = Number of link uninhibit acknowledgement messages received
LNKUNINHACKTX = Number of link uninhibit acknowledgement messages transmitted
LNKUNINHRX = Number of link uninhibit messages received

LNKUNINHTX = Number of link uninhibit messages transmitted
MSURX = Number of message signal units received on the link
MSUTX = Number of message signal units transmitted on the link
PRI0DROP = Number of messages with priority 0 dropped
PRI1DROP = Number of messages with priority 1 dropped
PRI2DROP = Number of messages with priority 2 dropped
PRI3DROP = Number of messages with priority 3 dropped
SIFOCTRX = Number of SIF (Service Information Field) octets received on the link
SIFOCTTX = Number of SIF (Service Information Field) octets transmitted on the link
SIOOCTRX = Number of SIO (Service Indicator Octet) octets received on the link
SIOOCTTX = Number of SIO (Service Indicator Octet) octets transmitted on the link
TXCONGDROP = Number of message signal units dropped due to link congestion
TXCTRLRX = Number of transfer controlled messages received
TXCTRLTX = Number of transfer controlled messages transmitted
TXMSGDROP = Number of transmit messages dropped

Default value: none

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* has been initialized. The value is in the form of numeric counts or rates. The value "0" is currently the only acceptable input value.

Type: integer
Range: {0 – 4294967295}
Default value: 0

monlev Identifies the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

locn Identifies the location of the storage counters to initialize or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: ALL = All directions
NA = Direction not applicable
RCV = Receive direction only
TRMT = Transmit direction only
Default value: ALL

Input Examples:

```
INIT-REG-SLKL3::1:::ALL;

RTRV-PM-SLKL3::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:CHNGOVERTX,0,1-UP,NEND,ALL"
   "1:CHNGOVERACKTX,0,1-UP,NEND,ALL"
   "1:CHNGBCKTX,0,1-UP,NEND,ALL"
   "1:CHNGBCKACKTX,0,1-UP,NEND,ALL"
   "1:EMERGCHNGOVERTX,0,1-UP,NEND,ALL"
   "1:EMERGCHNGOVERACKTX,0,1-UP,NEND,ALL"
   "1:LNKINHTX,0,1-UP,NEND,ALL"
   "1:LNKUNINHTX,0,1-UP,NEND,ALL"
   "1:LNKINHACKTX,0,1-UP,NEND,ALL"
   "1:LNKUNINHACKTX,0,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:LNKINHDENYTX,0,1-UP,NEND,ALL"
   "1:LNKFORCEUNINHTX,0,1-UP,NEND,ALL"
   "1:LNKLOCINHTSTTX,0,1-UP,NEND,ALL"
   "1:LNKRMTINHTSTTX,0,1-UP,NEND,ALL"
   "1:LNKCONORDTX,0,1-UP,NEND,ALL"
   "1:LNKCONACKTX,0,1-UP,NEND,ALL"
   "1:LNKTSTTX,76,1-UP,NEND,ALL"
   "1:LNKTSTACKTX,154,1-UP,NEND,ALL"
```

```
   "1:TXMSGDROP,0,1-UP,NEND,ALL"
   "1:TXCONGDROP,0,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:SIFOCTTX,4456,1-UP,NEND,ALL"
   "1:SIOOCTTX,230,1-UP,NEND,ALL"
   "1:MSUTX,230,1-UP,NEND,ALL"
   "1:LASTINITTRMT,74,1-UP,NEND,ALL"
   "1:CHNGOVERRX,0,1-UP,NEND,ALL"
   "1:CHNGOVERACKRX,0,1-UP,NEND,ALL"
   "1:CHNGBCKRX,0,1-UP,NEND,ALL"
   "1:CHNGBCKACKRX,0,1-UP,NEND,ALL"
   "1:EMERGCHNGOVERRX,0,1-UP,NEND,ALL"
   "1:EMERGCHNGOVERACKRX,0,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:LNKINHRX,0,1-UP,NEND,ALL"
   "1:LNKUNINHRX,0,1-UP,NEND,ALL"
   "1:LNKINHACKRX,0,1-UP,NEND,ALL"
   "1:LNKUNINHACKRX,0,1-UP,NEND,ALL"
   "1:LNKINHDENYRX,0,1-UP,NEND,ALL"
   "1:LNKFORCEUNINHRX,0,1-UP,NEND,ALL"
   "1:LNKLOCINHTSTRX,0,1-UP,NEND,ALL"
   "1:LNKRMTINHTSTRX,0,1-UP,NEND,ALL"
   "1:LNKCONORDRX,0,1-UP,NEND,ALL"
   "1:LNKCONACKRX,0,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:LNKTSTRX,154,1-UP,NEND,ALL"
   "1:LNKTSTACKRX,76,1-UP,NEND,ALL"
   "1:INVPDURX,0,1-UP,NEND,ALL"
   "1:SIFOCTRX,4456,1-UP,NEND,ALL"
   "1:SIOOCTRX,230,1-UP,NEND,ALL"
   "1:MSURX,230,1-UP,NEND,ALL"
   "1:LASTINITRCV,74,1-UP,NEND,ALL"
   "1:LNKCONGATTHRSHLD1,0,1-UP,NEND,ALL"
   "1:LNKCONGATTHRSHLD2,0,1-UP,NEND,ALL"
   "1:LNKCONGATTHRSHLD3,0,1-UP,NEND,ALL"

   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:PRI0DROP,0,1-UP,NEND,ALL"
   "1:PRI1DROP,0,1-UP,NEND,ALL"
   "1:PRI2DROP,0,1-UP,NEND,ALL"
```

```
        "1:PRI3DROP,0,1-UP,NEND,ALL"
        "1:LASTINITNA,74,1-UP,NEND,ALL"
        "1:DUROFLNKUNAV,0,1-UP,NEND,ALL"
        "1:DUROFLNKCONG,0,1-UP,NEND,ALL"
;
```

Related Commands: none

RTRV-STATUS-LSET

Command:

RTRV-STATUS-LSET: Retrieve Status Link Set

Description:

RTRV-STATUS-LSET lets the user retrieve information indicating the status of a link set.

Category: Signaling **Security:** View

Input Format:

```
RTRV-STATUS-LSET:[TID]:<LsetId>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<LsetId>:LSETSTARSLT=<lsetStaRslt>,
      SS7LSETSTANMBACTLNKS=<ss7LsetStaNmbActLnks>,
      SS7LSETSTASTATE=<ss7LsetStaState>"
;
```

Parameters:

LsetId Identifies the AID as a link set.

Type: LsetAid
Range: {1-64}
Default value: none

lsetStaRslt Identifies the result of MTP layer 3 test on the link set.

Type: enum
Range: FAILINGLYR3 = Failed
SUCCESS = Passed
Default value: none

ss7LsetStaNmbActLnks Identifies the total number of active links in the link set.

Type: integer
Range: {1-128}
Default value: none

ss7LsetStaState Identifies the current state of a link set.

Type: enum
Range: ACTIVE = Link set is active
INACTIVE = Link set is inactive
Default value: none

Input Example:

```
RTRV-STATUS-LSET::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "12:LSETSTARSLT=SUCCESS,SS7LSETSTANMBACTLNKS=2,
      SS7LSETSTASTATE=ACTIVE"
;
```

Related Commands:

```
ED-STATE-LSET
```

RTRV-STATUS-ROUTESS7

Command:

RTRV-STATUS-ROUTESS7: Retrieve Status Route SS7

Description:

RTRV-STATUS-ROUTESS7 lets the user retrieve information indicating the status of an SS7 route.

Category: Signaling **Security:** View

Input Format:

```
RTRV-STATUS-ROUTESS7:[TID]:<routeSs7Aid>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<routeSs7Aid>:ROUTESTARSLT=<routeStaRslt>,
      SS7ROUTESTASTATE=<ss7RouteStaState>"
;
```

Parameters:

routeSs7Aid Identifies the AID as an SS7 Route. The pattern is a combination of the destination point code and the link set connecting to it. A null value for the second part of the AID lets the user retrieve information for all link sets (and, thus, all SS7 routes) associated with a specific point code.

Type: RouteSs7Aid
Range: <pcId>-<lsetId>, where
pcId = {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes
lsetId = {1-64}
Default value: none

routeStaRslt Identifies the result of MTP layer 3 test on the SS7 route.

Type: enum
Range: FAILINGLYR3 = Failed
SUCCESS = Passed
Default value: none

ss7RouteStaState Identifies the current state of an SS7 route.

Type: enum
Range: ALLOWED = signaling route available
PROHIBITED = signaling route unavailable
RESTRICTED = signaling traffic towards a particular destination is being transferred with some difficulty via the signaling transfer point sending the concerned message
Default value: none

Input Example:

```
RTRV-STATUS-ROUTESS7::3-4-5-16;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "3-4-5-16:ROUTESTARSLT=SUCCESS,
      SS7ROUTESTASTATE=ALLOWED"
;
```

Related Commands:

DLT/ENT/RTRV-ROUTE-SS7

RTRV-STATUS-SGSLK

Command:

RTRV-STATUS-SGSLK: Retrieve Status Signaling Gateway Signaling Link

Description:

RTRV-STATUS-SGSLK lets the user retrieve information indicating the status of a signaling link on a signaling gateway.

Category: Signaling **Security:** View

Input Format:

```
RTRV-STATUS-SGSLK:[TID]:<ss7LnkId>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:SS7LNKSTARSLT=<ss7LnkStaRslt>,
      LOCALBUSY=<localBusy>,REMOTEBUSY=<remoteBusy>,
      SS7LNKSTASTATE=<ss7LnkStaState>,
      SS7LNKSTALOCBLKD=<ss7LnkStaLocBlkd>,
      SS7LNKSTAREMBLKD=<ss7LnkStaRemBlkd>,
      SS7LNKSTALOCINHBT=<ss7LnkStaLocInhbt>,
      SS7LNKSTARMTINHBT=<ss7LnkStaRmtInhbt>,
      SS7LNKSTAUNINHBT=<ss7LnkStaUninhbt>,
      SS7LNKSTACONG=<ss7LnkStaCong>,
      SS7LNKSTAEMRG=<ss7LnkStaEmrg>"
;
```

Parameters:

ss7LnkId Identifies the AID as a signaling link on a signaling gateway.

Type: Ss7LnkAid
Range: {1-64}
Default value: none

ss7LnkStaRslt Identifies the result of the status request operation.

Type: enum
Range: FAILCFGLYR2 = Status request failed: configuration not done at layer 2
FAILINVCFGLYR2 = Status request failed: invalid configuration at layer 2
FAILINVLNKLYR3 = Status request failed: invalid configuration at layer 3
SUCCESS = Status request successful
Default value: none

localBusy Identifies whether the signaling link is busy at the local end.

Type: enum
Range: BUSY
NOTBUSY
Default value: none

remoteBusy Identifies whether the signaling link is busy at the remote end.

Type: enum
Range: BUSY
NOTBUSY
Default value: none

ss7LnkStaState Identifies the current state of a signaling link at MTP layer 3.

Type: enum
Range: ACTIVE = Link is active
CON = Link is connecting
FAILED = Link has failed
INACTIVE = Link is inactive
SUSPEND = Link is suspended
WAITCON = Link is waiting to connect
Default value: none

ss7LnkStaLocBlkd Identifies whether the signaling link is blocked at the local end.

Type: BoolYN
Range: N = Link not blocked at local end
Y = Link blocked at local end
Default value: none

ss7LnkStaRemBlkd Identifies whether the signaling link is blocked at the remote end.

Type: BoolYN
Range: N = Link not blocked at remote end
Y = Link blocked at remote end
Default value: none

ss7LnkStaLocInhbt Identifies whether the signaling link is inhibited at the local end.

Type: BoolYN
Range: N = Link not inhibited at local end
Y = Link inhibited at local end
Default value: none

ss7LnkStaRmtInhbt Identifies whether the signaling link is inhibited at the remote end.

Type: BoolYN
Range: N = Link not inhibited at remote end
Y = Link inhibited at remote end
Default value: none

ss7LnkStaUninhbt Identifies whether the signaling link is uninhibited.

Type: BoolYN
Range: N = Link not uninhibited
Y = Link uninhibited
Default value: none

ss7LnkStaCong Identifies the priority assigned to a signaling link, depending on the congestion level. A value of "PRIORITY0" indicates that the signaling link is not congested.

Type: enum
Range: PRIORITY0
PRIORITY1
PRIORITY2
PRIORITY3
Default value: none

ss7LnkStaEmrg Specifies the signaling link's emergency alignment indication.

Type: BoolYN
Range: N = no emergency alignment indicated
Y = emergency alignment indicated
Default value: none

Input Example:

```
RTRV-STATUS-SGSLK::1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:SS7LNKSTARSLT=SUCCESS,LOCALBUSY=NOTBUSY,
      REMOTEBUSY=NOTBUSY,SS7LNKSTASTATE=ACTIVE,
      SS7LNKSTALOCBLKD=N,SS7LNKSTAREMBLKD=N,
      SS7LNKSTALOCINHBT=N,SS7LNKSTARMTINHBT=N,
      SS7LNKSTAUNINHBT=N,SS7LNKSTACONG=PRIORITY0,
      SS7LNKSTAEMRG=N"
;
```

Related Commands:

```
ED-STATE-SGSLK
```

RTRV-TH-SLK / SET-TH-SLK

Commands:

RTRV-TH-SLK: Retrieve Threshold Signaling Link

SET-TH-SLK: Set Threshold Signaling Link

Descriptions:

RTRV-TH-SLK lets the user retrieve the current threshold level of one or more monitored performance counts associated with a specific signaling link in the switch. The violation of these thresholds will trigger a condition. Provision thresholds with SET-TH.

SET-TH-SLK lets the user set the performance monitoring parameter threshold levels for a specific signaling link in the switch. This command cannot be used to turn off threshold crossing alerts; i.e., the threshold level may not be set to some "non-applicable" value. Retrieve thresholds with RTRV-TH. The switch sends a REPT ALM or REPT EVT message when thresholds are exceeded, depending on the notification code associated with the threshold condition. Threshold setting for multiple monitored parameters requires multiple invocations of this command – wildcarding is not permitted.

Category: Signaling **Security:** NSA for SET-TH, View for RTRV-TH

Category: Signaling

Security: View

Input Formats:

```
RTRV-TH-SLK:[TID]:<ss7LnkId>:[CTAG]::[<montype>];
SET-TH-SLK:[TID]:<ss7LnkId>:[CTAG]::<montype>,<thlev>;
```

Input Format:

```
RTRV-TH-SLK:[TID]:<ss7LnkId>:[CTAG]::[<montype>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<ss7LnkId>:<montype>,<thlev>"
;
```

Parameters:

ss7LnkId Identifies the AID as a signaling link.

Type: Ss7LnkAid
Range: {1-40}
Default value: none

montype Identifies the type of monitored parameter for which to set, or from which to retrieve, the current threshold level for the specified signaling link.

Type: enum
Range: ALL = All types
UTIL-HT = Alarm Threshold Level (link UTILization-High Threshold: the percentage of link utilization that, when exceeded, generates an alarm for the link)
UTIL-LT = Alarm Clear Level (link UTILization-Low Threshold: the percentage of link utilization that, when reached, clears any standing alarm for the link)
Default value: ALL

thlev Identifies the threshold level, as a percentage of link utilization, for the monitored parameter identified by *montype*.

Type: integer
Range: {0-100}
Default value: none

Input Examples:

```
RTRV-TH-SLK::1;
```

```
SET-TH-SLK::1:::UTIL-HT,90;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:UTIL-HT,90 "
   "1:UTIL-LT,80"
;
```

Related Commands:

```
INIT-REG-SLK              RTRV-PM-SLK
```

NOTES

ACT/CANC-USER

Commands:

ACT-USER: Activate User (Log in)

CANC-USER: Cancel User (Log out)

Descriptions:

ACT-USER lets the user initiate (log on) a session with the switch by entering a user name and password.

CANC-USER lets the user terminate (log off) a session with the switch.

Category: System **Security:** View for both commands

Input Formats:

```
ACT-USER:[TID]:<uid>:[CTAG]::<pid>;
CANC-USER:[TID]:[<uid>]:[CTAG];
```

Output Format: none

Parameters:

uid Identifies the user. The UID is the user ID or login name. The factory default is “lucent”.

Type: string
Range: 8 – 16 characters
Default value: None

pid Specifies the user's password, which must contain at least one number and one letter. The entered password displays as a series of asterisks. The factory default is “lucent”.

Type: string
Range: 8 – 16 characters
Default value: None

Input Examples:

```
ACT-USER::lucent:::******;
CANC-USER;
```

Related Commands: none

ALW/INH/RTRV-MSG-USER

Commands:

ALW-MSG-USER: Allow Message User

INH-MSG-USER: Inhibit Message User

RTRV-MSG-USER: Retrieve Message User

Descriptions:

ALW-MSG-USER lets the user resume receipt of inhibited automatic messages. Unreported alarms in existence at the time of restoration are transmitted with the REPT ALM message.

INH-MSG-USER allows a user to inhibit receipt of autonomous messages, but only for the user issuing the command. During the entire period of message inhibition, the switch continues to respond fully to RTRV-ALM and RTRV-COND commands. Restore receipt of autonomous messages with the ALW-MSG-USER command.

RTRV-MSG-USER instructs the switch to retrieve the status of automatic messaging for the user issuing the command.

Category: System **Security:** NSA for ALW and INH, View for RTRV

Input Formats:

```
ALW-MSG-USER:[TID]:<uid>:[CTAG]::[<ntfcncde>],
   [<condtype>],[<tmper>];
INH-MSG-USER:[TID]:<uid>:[CTAG];
RTRV-MSG-USER:[TID]:[<uid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<uid>:<status>"
;
```

Parameters:

uid Identifies the user. The UID is the user ID or login name. The factory default is “lucent”. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns the status of automatic messaging for all current users.

Type: string
Range: 8 – 16 characters
Default value: none (Factory default is “lucent”)

ntfcncde Identifies the condition notification code for which receipt of autonomous messages will be allowed. A null value is equivalent to "ALL"; that is, by leaving the field blank, receipt of autonomous messages will be allowed for all notification codes. This parameter is presently not supported; leave it blank.

Type: enum
Range: CL = Cleared. Never used in provisioning requests or returned in RTRVs - only active conditions are available through the RTRV-EVT/COND/ALM messages and by definition their notification codes are never CL/CLEAR.
CR = Critical
MJ = Major
MN = Minor
NA = Not Alarmed
Default value: none

condtype Indicates the condition type for an alarm or a reported event as defined in GR-833-CORE, Appendix C. A null value is equivalent to "ALL"; that is, by leaving the field blank, receipt of autonomous messages will be allowed for all condition types. This parameter is presently not supported; leave it blank.

Type: enum
Range: alphanumeric characters
Default value: none

tmper Identifies the period of time for which receipt of autonomous messages is allowed. A null value is equivalent to "ALL"; that is, by leaving the field blank, receipt of autonomous messages will be allowed until subsequently inhibited. This parameter is presently not supported; leave it blank.

Type: string
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: none

status Identifies (in RTRV output) whether messages are allowed or inhibited.

Type: enum
Range: ALW = Allowed
INH = Inhibited
Default value: none

Input Examples:

```
ALW-MSG-USER::lucent;

INH-MSG-USER::lucent;

RTRV-MSG-USER::lucent;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "lucent:ALW"
;
```

Related Commands: none

ALW/INH-TL1-CMD / RTRV-TL1-INH

Commands:

ALW-TL1-CMD: Allow TL1 Command

INH-TL1-CMD: Inhibit TL1 Command

RTRV-TL1-INH: Retrieve TL1 Inhibited

Descriptions:

ALW-TL1-CMD lets the user allow the execution of an inhibited TL1 command.

INH-TL1-CMD lets a user inhibit the execution of a TL1 command.

RTRV-TL1-INH lets the user retrieve the list of inhibited TL1 commands.

Category: System **Security:** ADMIN for ALW/INH, View for RTRV

Input Formats:

```
ALW-TL1-CMD:[TID]:<tl1cmd>:[CTAG];
INH-TL1-CMD:[TID]:<tl1cmd>:[CTAG];
RTRV-TL1-INH:[TID]:[<tl1cmd>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<tl1cmd>"
;
```

Parameters:

tl1cmd Identifies the AID (in ALW and INH) as the TL1 command for which execution is allowed or inhibited. Certain commands cannot be inhibited (e.g., ACT-USER, ALW-TL1-CMD, CANC-USER, etc.).

Type: string
Range: 1 – 32 alphanumeric characters
Default value: None

Input Examples:

```
ALW-TL1-CMD::TRC-CALL-EQPT;

INH-TL1-CMD::TRC-CALL-EQPT;

RTRV-TL1-INH;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "OPR-CVT"
   "TRC-CALL-EQPT"
;
```

Related Commands: none

DLT/ENT/RTRV-BACKUP-SYS

Commands:

DLT-BACKUP-SYS: Delete Backup System

ENT-BACKUP-SYS: Enter Backup System

RTRV-BACKUP-SYS: Retrieve Backup System

Descriptions:

DLT-BACKUP-SYS lets the user delete the destination host and directory for copying the configuration data for the switch, including the TimesTen database.

ENT-BACKUP-SYS lets the user establish a destination host and directory for copying the configuration data for the switch, including the TimesTen database in the switch, to another location in the network.

RTRV-BACKUP-SYS lets the user retrieve the destination host and directory, as well as the user's name and password, used for copying the configuration data for the switch, including the TimesTen database in the switch, to another location in the network.

Category: System **Security:** NSA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-BACKUP-SYS:[TID]:[<src>]:[CTAG];
ENT-BACKUP-SYS:[TID]:[<src>]:[CTAG]::<desthost>,
   <username>,<password>,<destdir>;
RTRV-BACKUP-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:<desthost>,<username>,<password>,<destdir>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

desthost Identifies the remote host, containing the destination directory identified by *destdir*, for backing up the switch configuration data.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

username Identifies a valid user name for the host identified by *desthost*.

Type: string
Range: alphanumeric characters
Default value: none

password Identifies a valid password for the host identified by *desthost*.

Type: string
Range: alphanumeric characters
Default value: none

destdir Identifies the destination directory for the switch configuration data. The value of *destdir* starts with a "/" unless the destination directory is within the current working directory.

Type: string
Range: ANSI characters
Default value: none

Input Examples:

```
DLT-BACKUP-SYS;

ENT-BACKUP-SYS:::::192.2.24.234,USERNAME,PASSWORD,
   DESTDIR;

RTRV-BACKUP-SYS;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "COM:192.2.24.234,USERNAME,PASSWORD,DESTDIR"
;
```

Related Commands:

```
EXEC-BACKUP-PLEXUS        RTRV-BKUPSCHED-EQPT
SCHED-BKUP-EQPT
```

ED-DAT

Command:

ED-DAT: Edit date and time

Description:

ED-DAT lets the user set the system date and/or time in the switch.

Category: System **Security:** SA

Input Format:

```
ED-DAT:[TID]::[CTAG]::[<date>],[<time>];
```

Output Format: none

Parameters:

date DATE is the current date in a format of: YY-MM-DD, where YY is the last two digits of the year, MM is the month of the year, and DD is the day of the month.

Type: enum
Range: {00-37}-{01-12}-{01-31}
Default value: not applicable

time TIME is the current time in a format of: HH-MM-SS, where HH is the hour in a 24-hour format, MM is the minute, and SS is the second.

Type: enum
Range: {00-23}-{00-59}-{00-59}
Default value: not applicable

Input Example:

```
ED-DAT:::::04-10-29,08-45-40;
```

Related Commands: none

ED/RTRV-SYS-TL1

Commands:

ED-SYS-TL1: Edit System TL1

RTRV-SYS-TL1: Retrieve System TL1

Descriptions:

ED-SYS-TL1 lets the user set the behavior of telnet connections; i.e., whether to send telnet control options and how to invoke the system prompt. The TL1 agent supports both line mode and character mode telnet connections. In character mode the telnet client sends one character at a time to the TL1 agent. In line mode the client (e.g., the serial TL1 Craft port on the rear of the switch) sends data to the TL1 agent a line at a time. The two parameters in ED-SYS-TL1 control the interface between telnet clients and the TL1 agent.

RTRV-SYS-TL1 instructs the switch to retrieve the settings for telnet connections.

Description: ED-SYS-TL1 lets the user set the behavior of telnet connections; i.e., whether to send telnet control options and how to invoke the system prompt. The TL1 agent supports both line mode and character mode telnet connections. In character mode the telnet client sends one character at a time to the TL1 agent. In line mode the client (e.g., the serial TL1 Craft port on the rear of the switch) sends data to the TL1 agent a line at a time. The two parameters in ED-SYS-TL1 control the interface between telnet clients and the TL1 agent.

Category: System **Security:** NSA for ED, View for RTRV

Input Formats:

```
ED-SYS-TL1:[TID]:[<src>]:[CTAG]::
   [TLNTCNTRLOPT=<tlntcntrlopt>],
   [PROMPTMODE=<promptmode>];

RTRV-SYS-TL1:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<com>:TLNTCNTRLOPT=<tlntcntrlopt>,
      PROMPTMODE=<promptmode>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

com Identifies the AID (in RTRV output) as the switch.

Type: COM
Range: COM
Default value: COM

tlntcntrlopt Indicates whether to send telnet control options. When the value of the parameter is the factory default of "Y" (Yes), the TL1 agent sends two commands to a telnet client when the client establishes a connection with the TL1 agent. The first command puts the client into character mode. The second command tells the client that the TL1 agent will echo characters back to the client (Many telnet clients support a mode where user input is echoed locally from the keyboard to the console output.).

Type: BoolYN
Range: Y = send telnet control options
N = don't send telnet control options
Default value: not applicable

promptmode Indicates whether pressing the "Escape" key is required to invoke the telnet session system prompt. When the value of the parameter is the factory default of "Y" (Yes), the user must press the "Escape" key for the TL1 agent to go into prompt mode (in which the TL1 agent displays the Lucent prompt and echoes characters back to telnet clients). If the value of *promptmode* is "Y" and the user does not press the "Escape" key, then the prompt will not be displayed and characters will not be echoed to the client. When the value is "N" (No), the TL1 agent automatically enters local echo mode and displays the Lucent prompt when a connection is established with a telnet client.

Type: BoolYN
Range: Y = entering "Escape" required to invoke system prompt
N = prompt invoked automatically on connect
Default value: not applicable

Input Examples:

```
ED-SYS-TL1:::::TLNTCNTRLOPT=Y,PROMPTMODE=Y;
RTRV-SYS-TL1;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "COM:TLNTCNTRLOPT=Y,PROMPTMODE=Y"
;
```

Related Commands: none

INIT-SYS

Command:

INIT-SYS: Initialize System

Description:

INIT-SYS lets the user initialize the switch as a whole either to its TL1 interface default values or to the existing values in the TimesTen database. It also initializes general parameters like Date and Time. As a security feature, the TID (target identifier; i.e., the network name of the switch) is mandatory – use RTRV-HDR to obtain the name if unknown. The AID block is not included so that the command cannot be used to reset subsystems.

Category: System **Security:** ADMIN

Input Format:

```
INIT-SYS:<TID>::[CTAG]::<ph>;
```

Output Format: none

Parameters:

ph Identifies the degree of thoroughness of the system initialization.

Type: enum
Range: 10 = Normal shutdown and reboot
20 = Shutdown and halt (no reboot)
30 = Shutdown and clean persistent databases (factory default)
Default value: None

Input Example:

```
INIT-SYS:lucent::::10;
```

Related Commands: none

RTRV-BKUPSCHED-EQPT / SCHED-BKUP-EQPT

Commands:

RTRV-BKUPSCHED-EQPT: Retrieve Backup Schedule Equipment

SCHED-BKUP-EQPT: Schedule Backup Equipment

Descriptions:

RTRV-BKUPSCHED-EQPT lets the user retrieve the scheduling interval, starting date, and starting time for autonomous backups of the configuration data for the switch, including the TimesTen database in the switch, to another location in the network.

SCHED-BKUP-EQPT lets the user schedule autonomous backups of the configuration data for the switch, including the TimesTen database in the switch, to another location in the network. SCHED-BKUP-EQPT is dependent on ENT-BACKUP-SYS; that is, the user cannot schedule a backup unless the backup system is configured first.

Category: System **Security:** NSA for SCHED, View for RTRV

Input Formats:

```
RTRV-BKUPSCHED-EQPT:[TID]:[<src>]:[CTAG];
```

```
SCHED-BKUP-EQPT:[TID]:[<src>]:[CTAG]::::<invl>,
   <stadat>,<statm>,<tmout>;
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
 "<src>:<invl>,<stadat>,<statm>,<tmout>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

invl Identifies the interval; i.e., the frequency at which the backup runs. The format for interval is VAL-UN, where VAL is a numeric value and UN stands for a unit of time.

Type: ScheduleInterval
Range: {1-31}-DAY
{1-24}-HR
Default value: None

stadat Identifies the start date; i.e., the date to begin the scheduled backup. The format for *stadat* is MOY-DOM (month-of-year, day-of-month). Setting the month to "0" turns off backup scheduling so no scheduled backups will be performed.

Type: StartDate
Range: {0-12}-{1-31}
Default value: None

statm Identifies the start time; i.e., the time to begin the scheduled backup. The format for *statm* is H HOD-MOH (hour-of-day, minute-of-hour). Valid values are 0-24 and 0-59 respectively. Default is the current time of day.

Type: StartTime
Range: {0-23}-{0-59}
Default value: None

tmout Identifies the time out interval in minutes. The command execution terminates if the command has not executed within the *tmout* interval (due to a stalled FTP process).

Type: Tmout
Range: {1-120}
Default value: 30

Input Examples:

```
RTRV-BKUPSCHED-EQPT;

SCHED-BKUP-EQPT:::::::24-HR,10-29,22-30,30;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "COM:24-HR,10-29,22-30,30"
;
```

Related Commands:

DLT/ENT/RTRV-BACKUP-SYS EXEC-BACKUP-PLEXUS

RTRV-HDR

Command:

RTRV-HDR: Retrieve header

Description:

RTRV-HDR returns the current date, time, and TID of the switch. If you do not specify a TID then you can find out the TID in the response to RTRV-HDR. This is the most basic message.

Category: System **Security:** View

Input Format:

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

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
;
```

Parameters: none

Input Example:

```
RTRV-HDR;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
;
```

Related Commands: none

RTRV-NETYPE

Command:

RTRV-NETYPE: Retrieve Network Element Type

Description:

RTRV-NETYPE lets the user retrieve the vendor, model, network role, and software release for the switch.

Category: System **Security:** View

Input Format:

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

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<vendor>,<model>,<neType>,<swIssue>"
;
```

Parameters:

vendor Identifies the name of the equipment vendor.

Type: string
Range: up to 40 alphanumeric characters
Default value: none

model Identifies the name of the equipment model.

Type: string
Range: up to 40 alphanumeric characters
Default value: none

neType Identifies the equipment as a specific type of network element.

Type: enum
Range: ADM = Add drop multiplexer
ADTS = Automated digital timing system
APS = Automatic protection switching equipment
CS = Circuit switch
DCS = Digital cross-connect switch
DLC = Digital loop carrier system
EDSX = Electronic digital signal cross-connect
EM = Environment monitors
ISDN = Integrated services digital network switch
LBRV = Low bit rate voice terminal
LDS = Local digital switch
LTE = Line terminating equipment
MUX = Multiplexer
PS = Packet switch
REP = Repeater
SCP = Service control point
SS = Supervisory system
STP = Signal transfer point
TSG = Timing signal generator
Default value: none

swIssue Identifies the software release issue.

Type: string
Range: alphanumeric characters
Default value: none

Input Example:

```
RTRV-NETYPE;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "Lucent,Lucent Network Controller 3000,ISDN,5.0.1"
;
```

Related Commands: none

RTRV/SET-PMDAY

Commands:

RTRV-PMDAY: Retrieve Performance Monitoring Day

SET-PMDAY: Set Performance Monitoring Day

Descriptions:

RTRV-PMDAY allows retrieval of the start time for the daily performance monitoring data collection period for the switch. Use the SET-PMDAY command to set the current start time of the daily data collection.

SET-PMDAY allows the user to set the current start time of the daily performance monitoring data collection period for the switch. Use the RTRV-PMDAY command to retrieve the start time.

Category: System **Security:** NSA for SET, View for RTRV

Input Formats:

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

```
SET-PMDAY:[TID]::[CTAG]::<HourOfDay>;
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<HourOfDay>"
;
```

Parameters:

HourOfDay Identifies the start time of the daily data collection period.

Type: integer
Range: {0-23}
Default value: None

Input Examples:

```
RTRV-PMDAY;
```

```
SET-PMDAY::::0;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "0"
;
```

Related Commands: none

RTRV-SESSIONS

Command:

RTRV-SESSIONS: Retrieve Sessions

Description:

RTRV-SESSIONS lets the user retrieve the identification and associated parameters for currently connected users of the switch.

Category: System **Security:** View

Input Format:

```
RTRV-SESSIONS:[TID]:[<UID>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<UID>:SLOT=<slot>,PORT=<port>,
      IPADDRESS=<IpAddress>,IDLEMIN=<IdleMin>,
      CONNECTTIME=<connecttime>,HANDLE=<Handle>,
      INH=<Inh>"
;
```

Parameters:

UID Identifies the AID as a user. The UID is the user ID or login name. A null value is equivalent to "ALL"; that is, by leaving the field blank, all values configured in the system for the command will be returned.

Type: string
Range: 8 – 16 characters
Default value: none

slot Identifies whether the user is logged into the switch through the active or standby System Processor module.

Type: enum
Range: SP-{A-B}
Default value: none

port Identifies whether the user is connected to the switch through the Ethernet or a craft port.

Type: enum
Range: LAN = Ethernet port
SERIAL = Craft port
Default value: none

IpAddress Identifies the IP address for the port through which the user connects.

Type: string
Range: {0-255).{0-255).{0-255).{0-255)
Default value: none

IdleMin Identifies the time in minutes the connection has been idle.

Type: integer
Range: {0-32767}
Default value: none

connecttime Identifies the date and time the user connected to the system.

Type: string
Range: {Day MM DD YYYY} {HH.MM.DD}
Default value: none

Handle Identifies a TL1 session internally to the TL1 agent.

Type: integer
Range: {0-32767}
Default value: none

Inh Identifies whether the session is inhibited.

Type: BoolYN
Range: N = session is not inhibited
Y = session is inhibited
Default value: none

Input Example:

```
RTRV-SESSIONS;
```

Output Example:

```
   lucent 2005-01-28 14:37:49
M  0 COMPLD
   "lucent:SLOT=SP-B,PORT=LAN,IP=10.0.100.108,
      IDLEMIN=0,CONNECTTIME=Fri 05 14 2004 11.12.44,
      HANDLE=13,INH=Y"
;
```

Related Commands: none

SET-SID

Command:

SET-SID: Set System ID

Description:

SET-SID lets the user set the system identification code for the switch. Lucent recommends setting the value of the SID parameter to the CLLI code for the system.

Category: System **Security:** NSA

Input Format:

```
SET-SID:[TID]::[CTAG]::<sid>;
```

Output Format: none

Parameters:

sid Identifies the system identification code assigned to the switch. The value of SID may be any text string. The recommended value for this parameter is the CLLI code.

Type: string
Range: limited to 20 characters
Default value: none

Input Example:

```
SET-SID:::::CLLI_CODE;
```

Related Commands: none

NOTES

EXEC-BACKUP/RESTORE-PLEXUS

Commands:

EXEC-BACKUP-PLEXUS: Execute Backup Switch

EXEC-RESTORE-PLEXUS: Execute Restore Switch

Descriptions:

EXEC-BACKUP-PLEXUS allows the user to copy the configuration data for the switch, including the TimesTen database in the switch, to both another location in the network as well as locally to SP-A and SP-B. The command first copies the configuration data to a file in the *dbCurrent* directory. It then changes the working directory to *dbCurrent*, backs up the content of *dbCurrent* locally to a compressed tar file (the tar file name is the host's <TID>_<date>_<time>), sends the tar file to the specified destination host and directory (via ftp), and lastly saves the tar file to */localbackup* on SP-A and SP-B.

EXEC-RESTORE-PLEXUS allows the user to copy the configuration data for the switch, including the TimesTen database, to the switch either from another location in the network, or from SP-A and SP-B. The command first creates the directory */Lucent/backups* when restoring from another location in the network; it deletes the contents if the directory already exists. It then copies the backup configuration data tar file (via ftp for a remote source) from the specified source host and directory to */Lucent/backups*. The configuration data for the switch is restored at the next system initialization (re-boot). Note that the TID (target identifier; i.e., the network name of the switch) is mandatory – use RTRV-HDR to obtain the name if unknown.

Category: System **Security:** SW for both commands

Input Formats:

```
EXEC-BACKUP-PLEXUS:[TID]:[<src>]:[CTAG]::<desthost>,
   <username>,<password>,<destdir>,[<suppressoutput>],
   [<tmout>];
```

```
EXEC-RESTORE-PLEXUS:<TID>:[<src>]:[CTAG]::<srchost>,
   <username>,<password>,<srcpath>,[<suppressoutput>],
   [<tmout>];
```

Output Formats (both commands):

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

desthost Identifies (for BACKUP) the remote host, containing the destination directory identified by *destdir*, for backing up the switch configuration data .

Type: string
Range: ANSI characters
Default value: none

srchost Identifies (for RESTORE) the remote host (or the local host or IP address), containing the source file identified in *srcpath*, for retrieving the switch configuration data. Entering the value "0.0.0.0" designates the local host.

Type: string
Range: ANSI characters
Default value: none

username Identifies a valid user name for the host identified by *desthost*.

Type: string
Range: alphanumeric characters
Default value: none

password Identifies a valid password for the host identified by *desthost*.

Type: string
Range: alphanumeric characters
Default value: none

destdir Identifies (for BACKUP) the destination directory for the switch configuration data. The value of *destdir* must start with a "/" unless the destination directory is relative to (within) the current working directory (set with the EXEC-CD command).

Type: string
Range: ANSI characters
Default value: none

srcpath Identifies (for RESTORE) the path to the source file for the switch configuration data on the remote host specified by *srchost*.

Type: string
Range: ANSI characters
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

tmout Identifies the time out interval in minutes. The command execution terminates if the command has not executed within the *tmout* interval (due to a stalled FTP process).

Type: integer
Range: {1-120}
Default value: 30

text Identifies (in output) the shell commands as they execute, as well as any error messages.

Type: string
Range: ANSI characters
Default value: none

Input Examples:

```
EXEC-BACKUP-PLEXUS:::::remote_host,johnuser,*******,
   /remote_server/backup_dir;
```

(Restore from a remote host)

```
EXEC-RESTORE-PLEXUS:::::remote_host,johnuser,*******,
   /remote_server/backup_dir/backup_rel_date_time;
```

(Restore from the local host)

```
EXEC-RESTORE-PLEXUS:::::0.0.0.0,johnuser,*******,
   /localbackup;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   Shell command 1
   Shell command 2
      .
      .
      .
   Shell command n
;
```

Related Commands:

```
DLT/ENT/RTRV-BACKUP-SYS       RTRV-BKUPSCHED-EQPT
SCHED-BKUP-EQPT
```

EXEC-CAT

Command:

EXEC-CAT: Execute CAT

Description:

EXEC-CAT lets the user retrieve the contents of a file.

Category: System **Security:** View

Input Format:

```
EXEC-CAT:[TID]:[<src>]:[CTAG]::<file>,
   [<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

file Identifies a single file from which to retrieve text. The value of *file* must start with a "/" unless the file is relative to (within) the current working directory (set with the EXEC-CD command).

Type: string
Range: ANSI characters
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Identifies (in output) the shell commands as they execute, as well as any error messages.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-CAT:::::/tmp/shopping.txt;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   milk
   bread
   fruit
   cat food
;
```

Related Commands: none

EXEC-CD

Command:

EXEC-CD: Execute Current Directory

Description:

EXEC-CD lets the user, for the current session, set the working directory used for subsequent "EXEC" commands.

Category: System **Security:** View

Input Format:

```
EXEC-CD:[TID]:[<src>]:[CTAG]::[<dir>],
   [<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

dir Identifies the new current directory. This parameter defaults to the root directory, identified by a slash ("/"). The new current directory is a subdirectory of the old current directory if the value of *dir* does not start with "/".

Type: string
Range: ANSI characters
Default value: /

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

Input Example:

```
EXEC-CD:::::/tmp;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
;
```

Related Commands: none

EXEC-CP / EXEC-CP-FROMSTBY/TOSTBY

Commands:

EXEC-CP: Execute Copy

EXEC-CP-FROMSTBY: Execute Copy From Standby

EXEC-CP-TOSTBY: Execute Copy To Standby

Descriptions:

EXEC-CP lets the user copy and/or rename files or directories.

EXEC-CP-FROMSTBY lets the user copy files or directories from the standby processor to the active. If *source* represents a single file, *dest* can be a directory or a file (which allows renaming the file). If *source* represents a directory, *dest* must be a directory and the "-r" switch is mandatory.

EXEC-CP-TOSTBY lets the user copy files or directories from the active processor to the standby. If *source* represents a single file, *dest* can be a directory or a file (which allows renaming the file). If *source* represents a directory, *dest* must be a directory and the "-r" switch must be used.

Category: System **Security:** SW for all commands

Input Formats:

```
EXEC-CP:[TID]:[<src>]:[CTAG]::[<switches>],<source>,
   [<dest>],[<suppressoutput>];

EXEC-CP-FROMSTBY:[TID]:[<src>]:[CTAG]::[<switches>],
   <source>,[<dest>],[<suppressoutput>];

EXEC-CP-TOSTBY:[TID]:[<src>]:[CTAG]::[<switches>],
   <source>,<dest>,[<suppressoutput>];
```

Output Formats (all commands):

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

switches Identifies (for EXEX-CP) options affecting the copying process (can be one or more values separated by a space).

Type: string
Range: -p = Preserve (preserve file attributes if possible)
-r = copy recursively, non-directories as files
-v = Verbose (explain what is being done)
Default value: null

switches Identifies (for EXEX-CP-FROMSTBY/TOSTBY) options affecting the copying process (can be one or more values separated by a space).

Type: string
Range: -p = Preserve (preserve file attributes if possible)
-r = Copy recursively, non-directories as files
Default value: null

source Identifies a file specification to copy; by using wildcards (e.g., "*"), it can represent one or more files or directories. Wildcard characters cannot be used in EXEC-CP-TOSTBY. The value of *source* must start with a "/" unless the source file/directory is relative to (within) the current working directory (set with the EXEC-CD command).

Type: string
Range: ANSI characters
Default value: none

dest Identifies the destination file/directory for the copied file/directory. For EXEC-CP-TOSTBY, it identifies the destination file/directory on the standby processor for the copied file/directory. The value of *dest* must start with a "/" unless the destination file/directory is relative to (within) the current working directory (set with the EXEC-CD command). For EXEC-CP and EXEC-CP-FROMSTBY, *dest* defaults to the current working directory.

Type: string
Range: ANSI characters
Default value: null

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Identifies (in output) the shell commands as they execute, as well as any error messages.

Type: string
Range: ANSI characters
Default value: none

Input Examples:

```
EXEC-CP:::::-r,emf.log,emf.log2;

EXEC-CP-FROMSTBY:::::-r,/tmp/f*,/tmp/foo;

EXEC-CP-TOSTBY:::::-p,/tmp/myfiles.tar,/tmp/testdir;
```

Output Examples:

(For EXEC-CP)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/cp -r emf.log emf.log2
;
```

(For EXEC-CP-FROMSTBY)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   cd /tmp/foo; /bin/rcp –r 192.168.253.27:tmp/f* /tmp/foo
;
```

(For EXEC-CP-TOSTBY)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/rcp -p /tmp/myfiles.tar 192.168.253.26:/tmp/testdir
;
```

Related Commands: none

EXEC-FTP-GET/PUT

Commands:

EXEC-FTP-GET: Execute FTP Get

EXEC-FTP-PUT: Execute FTP Put

Descriptions:

EXEC-FTP-GET lets the user get a file from a remote host and copy it to a destination directory on the active processor via binary-mode file transfer protocol.

EXEC-FTP-PUT lets the user copy a local file to a destination directory on a remote host via binary-mode file transfer protocol.

Category: System **Security:** SW for both commands

Input Formats:

```
EXEC-FTP-GET:[TID]:[<src>]:[CTAG]::<srchost>,
   <username>,<password>,<srcfile>,[<destdir>],
   [<suppressoutput>],[<tmout>];
EXEC-FTP-PUT:[TID]:[<src>]:[CTAG]::<desthost>,
   <username>,<password>,<srcfile>,<destdir>,
   [<suppressoutput>],[<tmout>];
```

Output Formats (both commands):

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

srchost Identifies (in FTP-GET) the host for the source file identified by *srcfile*.

Type: string
Range: ANSI characters
Default value: none

desthost Identifies (in FTP-PUT) the remote host containing the destination directory identified by *destdir*.

Type: string
Range: ANSI characters
Default value: none

username Identifies a valid user name for the host identified by *srchost* or *desthost*.

Type: string
Range: alphanumeric characters
Default value: none

password Identifies a valid password for the host identified by *srchost* or *desthost*. The password will not display when entered.

Type: string
Range: alphanumeric characters
Default value: none

srcfile Identifies a file (or, by using wildcards, files) to get and copy, or to copy to the destination directory. The value of *srcfile* must start with a "/" unless the source file(s)/directory(ies) is relative to (within) the current working directory (set with the EXEC-CD command).

Type: string
Range: ANSI characters
Default value: none

destdir Identifies the destination directory for the copied file. The value of *destdir* must start with a "/" unless the destination directory is relative to (within) the current working directory (set with the EXEC-CD command). For FTP-GET, *destdir* defaults to the current working directory.

Type: string
Range: ANSI characters
Default value: null

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

tmout Identifies the time out interval in minutes. The command execution terminates if the command has not executed within the *tmout* interval (due to a stalled FTP process).

Type: integer
Range: {1-120}
Default value: 30

text Identifies (in output) the shell commands as they execute, as well as any error messages.

Type: string
Range: ANSI characters
Default value: none

Input Examples:

```
EXEC-FTP-GET:::::192.168.253.27,JOHNUSER,********,
   /tmp/myfiles.tar,/tmp;
EXEC-FTP-PUT:::::192.168.253.27,JOHNUSER,********,
   /tmp/myfiles.tar,/tmp;
```

Output Examples:

(For EXEC-FTP-GET)

Note: Ignore the warning in lines 12 and 13 of the following example; it is due to a bug in the LYNX operating system that generates it when getting multiple files.

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/ftp -inv
   Connected to 192.168.253.27.
   220 malt FTP server (Version 4.162 Mon Nov 10 9:50:37 PST 1988) ready.
   331 Password required for root.
   230 User root logged in.
   200 Type set to I.
   Local directory now /tmp
   250 CWD command successful.
   257 "/tmp" is current directory.
   WARNING! 536934952 bare linefeeds received in ASCII mode
   File may not have transferred correctly.
   local: myfiles.tar remote: myfiles.tar
   200 PORT command successful.
   150 Opening BINARY mode data connection for myfiles.tar (1264 bytes).
   226 Transfer complete.
   1264 bytes received in 0.023 seconds (53 Kbytes/s)
   221 Goodbye.
   /* EXEC-FTP-GET */
;
```

(For EXEC-FTP-PUT)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/ftp -inv
   Connected to 192.168.253.27.
   220 malt FTP server (Version 4.162 Mon Nov 10 9:50:37 PST 1988) ready.
   331 Password required for root.
   230 User root logged in.
   200 Type set to I.
   Local directory now /tmp
   250 CWD command successful.
   257 "/tmp" is current directory.
   local: myfiles.tar remote: myfiles.tar
   200 PORT command successful.
   150 Opening BINARY mode data connection for myfiles.tar.
   226 Transfer complete.
   1264 bytes sent in 0.02 seconds (62 Kbytes/s)
   221 Goodbye.
   /* EXEC-FTP-PUT */
;
```

Related Commands: none

EXEC-LS

Command:

EXEC-LS: Execute List

Description:

EXEC-LS lets the user list directory contents and file information.

Category: System **Security:** View

Input Format:

```
EXEC-LS:[TID]:[<src>]:[CTAG]::[<switches>],[<files>],
   [<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

switches Identifies options affecting the listing process (can be one or more values separated by a space).

Type: string
Range: -1 = One line of output is generated for each file. This option is assumed when standard output is not to a terminal.

-A = When listing directory contents, all files are included, including those whose names begin with "." but excluding "." and "..".

-C = ls will list as many files per output line as possible. This option is assumed when standard output is a terminal.

-F = ls appends markers to file names in the listing to indicate file type, as follows:

/ = Directory.
& = Named pipe (FIFO).
= = Socket (not implemented in LynxOS).
@ = Symbolic link.
* = Executable regular file.
| = IPC special file.

-L = For each argument or directory element which is a symbolic link, information about the file or directory referenced by the link (instead of the link itself) is used for printing, sorting, and / or marking the output.

-R = Each subdirectory encountered while scanning a directory is itself examined.

-T types = Only files whose type is one of those specified by types will be shown. The types list should be a string of one or more of -, b, c, d, f, l, p, r, s, i, I, and +, as described below.

-a = When listing directory contents, all files are printed, including files which begin with ".".

-c = The time value examined for printing (-l) and sorting (-u) will be the inode change time instead of the modification time.

-d = Instructs ls to give information about directory arguments themselves instead of listing the contents of the directories.

-f = Each argument is interpreted as a directory, and contents are listed in the order encountered (no sort is performed). The -f option disables -l, -t, -s, and -r, and enables -a.

-g = Group ID of each file is printed (only effective when -l is also given).

-i =The inode number of each file is printed.

-l = Extended information is given for each file, including file mode, number of links, owner, size in bytes, and time (usually modification time, but optionally access or inode change time). If a file is a special file, the major and minor numbers are given in place of file size. If a file is a symbolic link, then the target of the link is given after the file name.

-n = Restricts listing to files created on the current system date.

-q = Forces non-printable characters in file names to be printed as "?". This option is assumed when standard output is a terminal.

-r = Reverses sort order.

-s = Lists size of each file, in 512-byte blocks.

-t = Sorts by time rather than by name.

-u = Uses time of last access rather than modification time for printing (-l) and sorting (-t).

Default value: null

files Identifies the target directory or file for the command. The value of *files* must start with a "/" unless the target directory/file is relative to (within) the current working directory (set with the EXEC-CD command). *files* defaults to the current working directory and can contain wildcard characters (e.g., "*").

Type: string
Range: ANSI characters
Default value: null

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Identifies (in output) the directories and files within the present working directory.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-LS:::::,/TMP;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   cd /tmp; /bin/ls
   emf.log
   pmiFileList
   telnetlog
;
```

Related Commands: none

EXEC-MKDIR

Command:

EXEC-MKDIR: Execute Make Directory

Description:

EXEC-MKDIR lets the user create a new directory.

Category: System **Security:** SW

Input Format:

```
EXEC-MKDIR:[TID]:[<src>]:[CTAG]::<dir>,
   [<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

dir Identifies the new directory. The new directory is a subdirectory of the current working directory if the value of *dir* does not start with "/" or "../".

Type: string
Range: ANSI characters
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Echoes the entered command in output.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-MKDIR::::newdir;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   cd /; /bin/mkdir newdir
;
```

Related Commands: none

EXEC-MV

Command:

EXEC-MV: Execute Move

Description:

EXEC-MV lets the user move a single file or directory.

Category: System **Security:** SW

Input Format:

```
EXEC-MV:[TID]:[<src>]:[CTAG]::[<switches>],<source>,
   <dest>,[<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

switches Identifies options affecting the copying process (can be one or more values separated by a space).

Type: string
Range: -f = Force writing over existing files without prompting
Default value: null

source Identifies a single file/directory to move. The value of *source* must start with a "/" unless the source file/directory is relative to (within) the current working directory (set with the EXEC-CD command). *source* can contain wildcard characters (e.g., "*").

Type: string
Range: ANSI characters
Default value: none

dest Identifies the destination file/directory for the moved file/directory. The value of *dest* must start with a "/" unless the destination file/directory is relative to (within) the current working directory (set with the EXEC-CD command). If *dest* is a file, then the command changes the name (value) of *source* to that of *dest*. If *dest* is a directory, then the command moves the file/directory identified by *source* to *dest*.

Type: string
Range: ANSI characters
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Echoes the entered command in output.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-MV:::::-f,emf.log2,/TMP;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/mv -f emf.log2 /tmp/emf.log2
;
```

Related Commands: none

EXEC-NETSTAT

Command:

EXEC- NETSTAT: Execute Network Status

Description:

EXEC-NETSTAT lets the user check the status of Ethernet interfaces and routing tables. It symbolically displays the contents of various network-related data structures. There are a number of output formats, depending on the options for the information presented. The first form of the command displays a list of active sockets for each protocol. The second form presents the contents of one of the other network data structures according to the option selected. Using the third form, with a wait interval specified, netstat will continuously display the information regarding packet traffic on the configured network interfaces. The fourth form displays statistics about the named protocol.

Category: System **Security:** SW

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Input Format:

```
EXEC-NETSTAT:[TID]:[<spOrIom>]:[CTAG]::[<switches>],
   [<suppressoutput>];
```

Parameters:

spOrIom Identifies the AID as a module in the switch. A null value is equivalent to "ALL"; that is, by leaving the field blank, the status of Ethernet interfaces and routing tables for all system modules will be returned.

Type: SPorIOM
Range: IOM-{8,10}
SP-{A-B}
Default value: none

switches Identifies options affecting the listing process (can be one or more values separated by a space). This parameter is not supported presently; switches are ignored.

Type: string

Range: -A = With the default display, show the address of any protocol control blocks associated with sockets; used for debugging.

-a = With the default display, show the state of all sockets; normally sockets used by server processes are not shown.

-d = With either interface display (option -i or an interval, as described below), show the number of dropped packets

-f = Limit statistics or address control block reports to those of the specified address family (currently INET only).

-g = Show information related to multicast (group address) routing. By default, show the IP Multicast virtual-interface and routing tables. If the -s option is also present, show multicast routing statistics.

-I = Show information about the specified interface; used with a wait interval as described below.

-i = Show the state of interfaces which have been auto-configured (interfaces statically configured into a system, but not located at boot time are not shown). If the -a option is also present, multicast addresses currently in use are shown for each Ethernet interface and for each IP interface address. Multicast addresses are shown on separate lines following the interface address with which they are associated.

-N = Extract the name list from the specified system instead of the default /vmunix.

-n = Show network addresses as numbers (normally netstat interprets addresses and attempts to display them symbolically). This option may be used with any of the display formats.

-p = Show statistics about protocol, which is either a well-known name for a protocol or an alias for it. Some protocol names and aliases are listed in the file /etc/protocols. A null response typically means that there are no interesting numbers to report. The program will complain if protocol is unknown or if there is no statistics routine for it.

-r = Show the routing tables. When -s is also present, show routing statistics instead.

-s = Show per-protocol statistics. If this option is repeated, counters with a value of zero are suppressed.

-w = Show network interface statistics at intervals of wait seconds.

Default value: NULL

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Identifies the output for the command. The default display, for active sockets, shows the local and remote addresses, send and receive queue sizes (in bytes), protocol, and theinternal state of the protocol. Address formats are of the form "host.port" or "network.port" if a socket's address specifies a network but no specific host address. When known the host and network addresses are displayed symbolically according to the data bases /etc/hosts and /etc/networks, respectively. If a symbolic name for an address is unknown, or if the -n option is specified, the address is printed numerically, according to the address family. Unspecified, or "wildcard", addresses and ports appear as "*".

The interface display provides a table of cumulative statistics regarding packets transferred, errors, and collisions. The network addresses of the interface and the maximum transmission unit ("mtu") are also displayed.

The routing table display indicates the available routes and their status. Each route consists of a destination host or network and a gateway to use in forwarding packets. The flags field shows a collection of information about the route stored as binary choices.

Direct routes are created for each interface attached to the local host; the gateway field for such entries shows the address of the outgoing interface. The refcnt field gives the current number of active uses of the route. Connection oriented protocols normally hold on to a single route for the duration of a connection while connectionless protocols obtain a route while sending to the same destination. The use field provides a count of the number of packets sent using that route. The interface entry indicates the network interface utilized for the route.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-NETSTAT;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD

Internet:
Destination      Gateway            Flags     Refs     Use
Interface
default          10.7.0.1           UGS          4    66700  mgt0
10.7             link#12            UC           0        0  mgt0
10.7.0.1         0:d0:bc:f5:2:f8    UHL          1        0  mgt0
10.7.48.26       0:30:fa:0:2:94     UHL          1        4  lo0
10.7.48.27       0:30:fa:0:3:60     UHL          1     1049  mgt0
10.7.206.206     link#12            UHL          1   178613  mgt0
127.0.0.1        127.0.0.1          UH         105  9171348  lo0
192.168.251      link#15            UC           0        0  dbg0
192.168.252      192.168.252.26     U           16  4614526  sar0
192.168.253      link#13            UC           0        0  rep0
192.168.253.27   0:30:fa:0:3:61     UHL          7  2703922  rep0
;
```

Related Commands: none

EXEC-PWD

Command:

EXEC-PWD: Execute Present Working Directory

Description:

EXEC-PWD lets the user retrieve the path name of the current working directory. The user's current working directory is the default directory for other EXEC commands.

Category: System **Security:** View

Input Format:

```
EXEC-PWD:[TID]:[<src>]:[CTAG]::[<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<com>:<dir>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

com Identifies the AID (in output) as the switch.

Type: COM
Range: COM
Default value: COM

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

dir Identifies (in output) the path name for current working directory.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-PWD;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   COM:/tmp
;
```

Related Commands: none

EXEC-RM/RMDIR

Commands:

EXEC-RM: Execute Remove

EXEC-RMDIR: Execute Remove Directory

Descriptions:

EXEC-RM lets the user remove (delete) a single file or, by using wildcards, files

EXEC-RMDIR lets the user remove (delete) a single directory or, by using wildcards, directories.

Category: System **Security:** SW for both commands

Input Formats:

```
EXEC-RM:[TID]:[<src>]:[CTAG]::[<switches>],<file>,
   [<suppressoutput>];
EXEC-RMDIR:[TID]:[<src>]:[CTAG]::<dir>,
   [<suppressoutput>];
```

Output Formats (both commands):

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

switches Identifies (for EXEC-RM) options affecting the file removal process (can be one or more values separated by a space).

Type: string
Range: -f = Force removal of unwritable files without prompting
-r = Recursively remove a directory subtree
-v = Generates verbose output
Default value: null

file Identifies (for EXEC-RM) the file(s) to remove. The value of *file* must start with a "/" unless the source file/directory is relative to (within) the current working directory (set with the EXEC-CD command). *file* can contain wildcard characters (e.g., "*").

Type: string
Range: ANSI characters
Default value: none

dir Identifies (for EXEC-RMDIR) the directories to remove. The value of *dir* must start with a "/" unless the affected directory is relative to (within) the current working directory (set with the EXEC-CD command). *dir* can contain wildcard characters (e.g., "*").

Type: string
Range: ANSI characters
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Identifies (in output) the shell commands as they execute, as well as any error messages.

Type: string
Range: ANSI characters
Default value: none

Input Examples:

```
EXEC-RM:::::-f,emf.log2;
EXEC-RMDIR:::::/TMP;
```

Output Examples:

(For EXEC-RM)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/rm -f emf.log2
;
```

(For EXEC-RMDIR)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/rmdir tmp
;
```

Related Commands: none

EXEC-RUN-UPGRADE

Command:

EXEC-RUN-UPGRADE: Execute Run Upgrade

Description:

EXEC-RUN-UPGRADE lets the user run a script on an active or standby System Processor module to install the TimesTen database. Note that, as a security feature, the TID (target identifier; i.e., the network name of the switch) is mandatory – use RTRV-HDR to obtain the name if unknown.

Category: System **Security:** SW

Input Format:

```
EXEC-RUN-UPGRADE:<TID>:<sp>:[CTAG]::
   [<suppressoutput>];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

sp Identifies the AID as an active or standby System Processor module in the switch.

Type: SP
Range: SP-{A-B}
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Echoes the entered command in output.

Type: string
Range: ANSI characters
Default value: none

Input Example:

```
EXEC-RUN-UPGRADE:lucent:SP-A;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/rsh 192.168.253.26 "cd /Lucent/swCPU/CurrRel/
      system/scripts/;" ./uprev
   .sh -justinstall
;
```

Related Commands: none

EXEC-TAR-CREATE/EXTRACT/EXTRACTSTBY

Commands:

EXEC-TAR-CREATE: Execute Tar Create

EXEC-TAR-EXTRACT: Execute Tar Extract

EXEC-TAR-EXTRACTSTBY: Execute Tar Extract Standby

Descriptions:

EXEC-TAR-CREATE lets the user create an archive file (compressed tarfile).

EXEC-TAR-EXTRACT lets the user extract files from an archive file (compressed tarfile) into the current working directory.

EXEC-TAR-EXTRACTSTBY lets the user extract files from an archive file (tarfile) on the standby System Processor module into the current working directory.

Category: System **Security:** SW for all commands

Input Formats:

```
EXEC-TAR-CREATE:[TID]:[<src>]:[CTAG]::<tarfile>,
   <files>,[<suppressoutput>];
EXEC-TAR-EXTRACT:[TID]:[<src>]:[CTAG]::<tarfile>,
   [<suppressoutput>];
EXEC-TAR-EXTRACTSTBY:[TID]:[<src>]:[CTAG]::<tarfile>,
   <path>,[<suppressoutput>];
```

Output Formats (all commands):

```
   SID DATE TIME
M  CTAG COMPLD
   <text>
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

tarfile Identifies the complete file path to the tarfile to either create, or from which to extract files (the tarfile must be on the standby System Processor for EXEC-TAR-EXTRACTSTBY). The value of *tarfile* must start with a "/" unless the affected file/directory is relative to (within) the current working directory (set with the EXEC-CD command). *tarfile* cannot contain wildcard characters (e.g., "*").

Type: string
Range: ANSI characters
Default value: null

files Identifies (for EXEC-TAR-CREATE) the file or directory to archive. The value of *files* must start with a "/" unless the affected file/directory is relative to (within) the current working directory (set with the EXEC-CD command). *files* can contain wildcard characters (e.g., "*").

Type: string
Range: ANSI characters
Default value: none

path Identifies (for EXEC-TAR-EXTRACTSTBY) the directory on the standby System Processor module into which the files are extracted.

Type: string
Range: ANSI characters
Default value: none

suppressoutput Identifies whether to suppress the output for the command.

Type: BoolYN
Range: N = do not suppress output
Y = suppress output
Default value: N

text Echoes the entered command in output.

Type: string
Range: ANSI characters
Default value: none

Input Examples:

```
EXEC-TAR-CREATE:::::/tmp/myfiles.tar,file*;

EXEC-TAR-EXTRACT:::::/tmp/myfiles.tar;

EXEC-TAR-EXTRACTSTBY:::::/tmp/testdir/myfiles.tar,
   /tmp/newfiledir;
```

Output Examples:

(For EXEC-TAR-CREATE)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/tar -czvf /tmp/myfiles.tar file*
   file1
   file2
   file3
;
```

(For EXEC-TAR-EXTRACT)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/tar -xzvf /tmp/myfiles.tar
   file1
   file2
   file3
;
```

(For EXEC-TAR-EXTRACTSTBY)

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   /bin/tar -xzvf /tmp/testdir/myfiles.tar
   file1
   file2
   file3
;
```

Related Commands: none

ED/RTRV-CRS-T0

Commands:

ED-CRS-T0: Edit Cross Connect DS0 Facility

RTRV-CRS-T0: Retrieve Cross Connect DS0 Facility

Descriptions:

ED-CRS-T0 lets the user configure the T0 cross-connect for the test port. The command establishes the effected DS0 channel for both the IOM (specified in ED-TESTPORT) and the test port, and can specify the connection type and state. ED-CRS-T0 will not work unless you have already issued ED-TESTPORT. Setting the test port out of service with ED-TESTPORT deletes the configuration of the T0 cross-connect.

RTRV-CRS-T0 lets the user retrieve the configuration for cross connections in the switch. It applies to both "nailed-up" DS0s and cross connections to the test port. Specify either or both AIDs to return information about the "nailed-up" DS0 cross connections. Leave the AID block blank to return information about the test port cross connection.

Category: Diagnosis **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
ED-CRS-T0:[TID]:<t0From>,<t0To>:[CTAG]::[<crsBlk>]:
   [<specBlk>]:[<pst>];
```

```
RTRV-CRS-T0:[TID]:[<t0From>],[<t0To>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<t0From>,<t0To>:<pst>"
;
```

Parameters:

t0From Identifies the first AID in the AID block as a DS0 channel on an IOM which connects to another channel (the test port). A range of channels (in RTRV) is shown by the beginning and ending fully-specified (IOM + port + channel) channel numbers separated by two ampersands and a hyphen ("&&-").

Type: T0
Range: IOM-{1-17}-PORT-{1-28}-T0-{1-24}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}-T0-{1-24}
Default value: none

t0To Identifies the second AID in the AID block as the number of the DS0 channel on the test port.

Type: TestPortNum
Range: TP-{1-24}
Default value: none

crsBlk Identifies the type of connection to the cross-connect. This parameter is not supported presently; leave it blank.

Type: enum
Range: ONE-WAY = cross-connect allows transmission in one direction only
TWO-WAY = cross-connect allows transmission in both directions
Default value: none

specBlk Identifies the Specific Block, per Section 4 of Telcordia GR-199-CORE. This parameter is not supported presently; leave it blank.

Type: string
Range: alphanumeric characters
Default value: none

pst Identifies the primary state for the connection through the test port. Setting the state to OOS disables the connection for the channel. The factory default is "IS".

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: not applicable

Input Examples:

```
ED-CRS-T0::IOM-1-T3-2-PORT-3-T0-24,TP-1:::::IS;

RTRV-CRS-T0;
```

Output Examples:

```
 lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-2-PORT-3-T0-24,TP-1:IS"
;
```

Related Commands:

```
ED/RTRV-TESTPORT
```

ED/RTRV-TESTPORT

Commands:

ED-TESTPORT: Edit Testport

RTRV-TESTPORT: Retrieve Testport

Descriptions:

ED-TESTPORT configures the mode of operation for the test port, which provides a non-invasive method of connecting test equipment to diagnose system and network problems.

RTRV-TESTPORT lets the user retrieve the configuration information for the test port.

Category: Test **Security:** NSA for ED, View for RTRV

Input Formats:

```
ED-TESTPORT:[TID]:[<src>]:[CTAG]::<iom>,<tpmonitor>:
   [<pst>];
RTRV-TESTPORT:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:<iom>,<tpMonitor>:<pst>"
;
```

Parameters:

src Identifies the AID as the switch as a whole.

Type: COM
Range: COM
Default value: COM

iom Identifies the sole IOM to which the test equipment connects through the test port.

Type: enum
Range: IOM-{1-17}
Default value: none

tpmonitor Identifies the function of the test port.

Type: enum
Range: INSERT = test equipment transmits signals through the test port to the IOM
MONITOR = test equipment receives signals through the test port from the IOM
Default value: none

pst Identifies the primary state of the test port. Setting the state to OOS disables alarming for the test port and deletes the configuration of the T0 cross-connect established with ED-CRS-T0.

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: none

Input Examples:

```
ED-TESTPORT::COM:::IOM-1,MONITOR:IS;
RTRV-TESTPORT;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:IOM-1,MONITOR:IS"
;
```

Related Commands:

ED/RTRV-CRS-T0

STA/STP-DGN-IPPING

Commands:

STA-DGN-IPPING: Start Diagnostic IP Ping

STA-DGN-IPPING: Stop Diagnostic IP Ping

Descriptions:

STA-DGN-IPPING lets the user execute an Internet Control Message Protocol (ICMP) echo request (ping) command to determine network connectivity for either an SP or a network IOM.

STP-DGN-IPPING lets the user stop an in-process Internet Control Message Protocol (ICMP) echo request (ping) command.

Category: Diagnosis **Security:** NSA for both commands

Input Formats:

```
STA-DGN-IPPING:[TID]:<aid>:CTAG::[COUNT=<count>],
   [SIZE=<size>],[WAITTIME=<waittime>];

STP-DGN-IPPING:[TID]:<aid>:CTAG;
```

Output Format: none

Parameters:

aid Identifies the AID as either a network IOM or an SP, both with an associated address.

Type: string
Range: IOM-{8, 10}-ADDRESS, where
ADDRESS is either an IP address in dot format ({0-255}.{0-255}.{0-255}.{0-255}) or a fully-qualified domain (host) name
SP-{A, B}-ADDRESS, where
ADDRESS is either an IP address in dot format ({0-255}.{0-255}.{0-255}.{0-255}) or a fully-qualified domain (host) name
Default value: none

count Identifies the number of times to issue an echo request.

Type: integer
Range: {1-20}
Default value: 1

size Identifies the number of bytes in the echo request.

Type: integer
Range: {56-8192}
Default value: 56

waittime Identifies the interval, in seconds, between each echo request.

Type: integer
Range: {1-20}
Default value: 1

Input Examples:

```
STA-DGN-IPPING::IOM-10-192.2.24.234;
STP-DGN-IPPING::IOM-10-192.2.24.234;
```

Related Commands: none

STA/STP-DGN-IPTRACEROUTE

Commands:

STA-DGN-IPTRACEROUTE: Start Diagnostic IP Traceroute

STA-DGN-IPTRACEROUTE: Stop Diagnostic IP Traceroute

Descriptions:

STA-DGN-IPTRACEROUTE lets the user execute an Internet Control Message Protocol (ICMP) traceroute command to determine the number of hops taken in achieving network connectivity for either an SP or a network IOM.

STP-DGN-IPTRACEROUTE lets the user stop an in-process Internet Control Message Protocol (ICMP) traceroute command.

Category: Diagnosis **Security:** NSA for both commands

Input Formats:

```
STA-DGN-IPTRACEROUTE:[TID]:<aid>:CTAG::[SIZE=<size>],
   [MAXTTL=<maxttl>],[WAITTIME=<waittime>],
   [TOS=<tos>],[PORT=<port>];
```

```
STP-DGN-IPTRACEROUTE:[TID]:<aid>:CTAG;
```

Output Format: none

Parameters:

aid Identifies the AID as either a network IOM or an SP, both with an associated address.

Type: string
Range: IOM-{8, 10}-ADDRESS, where
ADDRESS is either an IP address in dot format ({0-255}.{0-255}.{0-255}.{0-255}) or a fully-qualified domain (host) name
SP-{A, B}-ADDRESS, where
ADDRESS is either an IP address in dot format ({0-255}.{0-255}.{0-255}.{0-255}) or a fully-qualified domain (host) name
Default value: none

size Identifies the number of bytes in the traceroute packet.

Type: integer
Range: {40-32767}
Default value: 40

maxttl Identifies the maximum time-to-live (number of hops) in the outgoing traceroute packet.

Type: integer
Range: {1-255}
Default value: 30

waittime Identifies the interval, in seconds, allowed between each hop before the command times out.

Type: integer
Range: {5-20}
Default value: 5

tos Identifies the type of service designated in the IP header for the traceroute packet.

Type: integer
Range: {0-255}
Default value: 0

port Identifies the UDP port for the traceroute packet.

Type: string
Range: {33434-33689}
Default value: NONE

Input Examples:

```
STA-DGN-IPTRACEROUTE::IOM-10-192.2.24.234;
STP-DGN-IPTRACEROUTE::IOM-10-192.2.24.234;
```

Related Commands: none

NOTES

DLT/ED/ENT/RTRV-SG-MGCASSOC

Commands:

DLT-SG-MGCASSOC: Delete Signaling Gateway Media Gateway Controller Association

ED-SG-MGCASSOC: Edit Signaling Gateway Media Gateway Controller Association

ENT-SG-MGCASSOC: Enter Signaling Gateway Media Gateway Controller Association

RTRV-SG-MGCASSOC: Retrieve Signaling Gateway Media Gateway Controller Association

Descriptions:

DLT-SG-MGCASSOC lets the user delete an association between a Lucent Network Controller (NC) and a Lucent Signaling Gateway (SG).

ED-SG-MGCASSOC lets the user change the primary state of an NC associated with an SG.

ENT-SG-MGCASSOC lets the user establish an association between an NC and an SG by defining the own point codes for the NC, it's SP-A IP address, the starting port number for the range of 512 ports used for Connection Control and Signaling (CCS) processes, and the NC's primary state.

RTRV-SG-MGCASSOC lets the user retrieve an NC's own point codes, SP-A IP address, starting port number for the range of 512 ports used for Connection Control and Signaling (CCS) processes, and state.

Category: Call Control **Platform:** Lucent Signaling Gateway

Security: SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SG-MGCASSOC:[TID]:<mgcId>:[CTAG];

ED-SG-MGCASSOC:[TID]:<mgcId>:[CTAG]::[<pst>];

ENT-SG-MGCASSOC:[TID]:<mgcId>:[CTAG]::
   OWNPCLST=<ownPcLst>,IPADDR=<ipAddr>,
   [STAPORTRANGE=<staPortRange>]:[<pst>];

RTRV-SG-MGCASSOC:[TID]:[<mgcId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<mgcId>:OWNPCLST=<ownPcLst>,IPADDR=<ipAddr>,
      STAPORTRANGE=<staPortRange>:<pst>"
;
```

Parameters:

mgcId Identifies the AID as an NC associated with an SG. Set the value of *mgcId* to the SID (System Identifier – from the header for TL1 messages) for the NC. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns information for all NCs associated with the SG.

Type: integer
Range: {1-32}
Default value: none

ownPcLst Identifies the own point codes for the NC. An NC can support up to four own point codes separated by ampersands (&).

Type: string
Range: <pcId>[&<pcId>[&<pcId>[&<pcId>]]], where
pcId = {0-255}-{0-255}-{0-255} for NANP (national) point codes, or
{0-16383} for international point codes
Default value: none

ipAddr Identifies the IP address for the SP-A Module in the NC. A value of "127.0.0.1" puts the module in loopback and is the only valid value for the Lucent Compact Switch (when the signaling gateway is in the same chassis as the media gateway controller).

Type: string
Range: {0-254}.{0-254}.{0-255}.{1-255}
Default value: none

staPortRange Identifies the starting port number for the range of 512 ports used for Connection Control and Signaling (CCS) processes.

Type: integer
Range: {1-65000}
Default value: value of *m3uaStaPortRange* in MGC-SYS, for which the default is 50000

pst Identifies the primary state of the NC.

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: none

Input Examples:

```
DLT-SG-MGCASSOC::1;

ED-SG-MGCASSOC::1:::IS;

ENT-SG-MGCASSOC::1:::OWNPCLIST=23-156-78&23-156-90,
   IPADDR=192.168.253.22,STAPORTRANGE=5000:IS;

RTRV-SG-MGCASSOC;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "1:OWNPCLIST=23-156-78&23-156-90,
      IPADDR=192.168.253.22,STAPORTRANGE=5000:IS"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-SG-PC

Commands:

DLT-SG-PC: Delete Signaling Gateway Point Code

ED-SG-PC: Edit Signaling Gateway Point Code

ENT-SG-PC: Enter Signaling Gateway Point Code

RTRV-SG-PC: Retrieve Signaling Gateway Point Code

Descriptions:

DLT-SG-PC lets the user delete an adjacent or remote point code for a signaling gateway. You cannot delete a point code without first deleting any association with the switch established with ENT-SG-ISUPPROXY.

ED-SG-PC lets the user change the attributes of an adjacent or remote point code for a signaling gateway.

ENT-SG-PC lets the user establish an adjacent or remote point code for a signaling gateway. ENT-SG-PC will not work unless ENT-SG-PCOWN and ENT-PRFL-PC have already been issued.

RTRV-SG-PC lets the user retrieve the attributes of an adjacent or remote point code for a signaling gateway.

Category: Signaling **Platform:** Lucent Signaling Gateway

Security: SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SG-PC:[TID]:<pcId>:[CTAG];

ED-SG-PC:[TID]:<pcId>:[CTAG]::[PCPRFLID=<pcPrflId>],
   [MTPVARIANT=<mtpVariant>],[PCSSF=<pcSsf>],
   [RSTREQ=<rstReq>],[MULTICONGLVL=<multiCongLvl>],
   [DMPRIORITY=<dmPriority>];

ENT-SG-PC:[TID]:<pcId>:[CTAG]::PCDIR=<pcDir>,
   PCPRFLID=<pcPrflId>,MTPVARIANT=<mtpVariant>,
   [PCSSF=<pcSsf>],[RSTREQ=<rstReq>],
   [MULTICONGLVL=<multiCongLvl>],
   [DMPRIORITY=<dmPriority>];

RTRV-SG-PC:[TID]:[<pcId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pcId>:PCDIR=<pcdir>,PCPRFLID=<pcPrflId>,
      MTPVARIANT=<mtpVariant>,PCSSF=<pcSsf>,
      RSTREQ=<rstReq>,MULTICONGLVL=<multiCongLvl>,
      DMPRIORITY=<dmPriority>"
;
```

Parameters:

pcId Identifies the AID as an adjacent or remote point code for a signaling gateway. Adjacent and remote point codes cannot be the same as own point codes (established via ENT-SG-PCOWN). A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns all adjacent and remote signaling gateway point codes.

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
DEF_ANSI = Default NANP point code
DEF_ITU = Default international point code
Default value: none

pcDir Identifies the type of point code. The value of *pcDir* cannot be “ADJ” when the value of *pcId* is “DEF_ANSI” or “DEF_ITU”.

Type: enum
Range: ADJ = adjacent point code
REM = remote point code
Default value: none

pcPrflId Identifies the point code profile.

Type: enum
Range: {1-128}
Default value: none

mtpVariant Identifies the variant for MTP2 and MTP3. "ANSI" applies only to NANP (national) point codes; "ITU1988" and "ITU1992" apply only to international point codes.

Type: enum
Range: ANSI
ITU1988
ITU1992
Default value: none

pcSsf Identifies the sub-service field to be used.

Type: enum
Range: SSFINTL= international sub-service field
SSFNAT= national sub-service field
SSFRES = reserved sub-service field
SSFSPARE = spare sub-service field
Default value: SSFNAT

rstReq Identifies whether restart is required for the adjacent node. If this field is not 0, MTP Level 3 starts the MTP Level 3 restart procedure as soon as the first link becomes in-service.

Type: BoolYN
Range: Y = restart required
N = restart not required
Default value: N

multiCongLvl Identifies whether to enable multiple congestion level thresholds.

Type: BoolYN
Range: Y = enable multiple congestion level thresholds
N = do not enable multiple congestion level thresholds
Default value: Y

dmPriority Identifies whether to discard message priorities. This is usually true for national networks and false in international networks.

Type: BoolYN
Range: Y = discard message priorities
N = do not discard message priorities
Default value: Y

Input Examples:

```
DLT-SG-PC::24-177-39;

ED-SG-PC::24-177-39:::PCPRFLID=1,MTPVARIANT=ANSI,
   PCSSF=SSFNAT,RSTREQ=N,MULTICONGLVL=Y,DMPRIORITY=Y;

ENT-SG-PC::24-177-39:::PCDIR=ADJ,PCPRFLID=1,
   MTPVARIANT=ANSI,PCSSF=SSFNAT,RSTREQ=N,
   MULTICONGLVL=Y,DMPRIORITY=Y;

RTRV-SG-PC;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "24-177-39:PCDIR=ADJ,PCPRFLID=1,MTPVARIANT=ANSI,
      PCSSF=SSFNAT,RSTREQ=N,MULTICONGLVL=Y,
      DMPRIORITY=Y;
;
```

Related Commands:

DLT/ED/ENT/RTRV-SG-PCOWN

DLT/ED/ENT/RTRV-SG-PCOWN

Commands:

DLT-SG-PCOWN: Delete Signaling Gateway Own Point Code

ED-SG-PCOWN: Edit Signaling Gateway Own Point Code

ENT-SG-PCOWN: Enter Signaling Gateway Own Point Code

RTRV-SG-PCOWN: Retrieve Signaling Gateway Own Point Code

Descriptions:

DLT-SG-PCOWN lets the user delete an own point code for a Lucent Signaling Gateway (SG). You cannot delete the own point code without first deleting any association with a remote switch established with ENT-SG-ISUPPROXY.

ED-SG-PCOWN lets the user change an own point code for an SG.

ENT-SG-PCOWN lets the user establish an own point code for an SG. An SG can support up to eight own point codes.

RTRV-SG-PCOWN lets the user retrieve the own point code for an SG.

Category: Signaling **Platform:** Lucent Signaling Gateway

Security: SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SG-PCOWN:[TID]:<pcId>:[CTAG];

ED-SG-PCOWN:[TID]:<pcId>:[CTAG]::
    [MTPVARIANT=<mtpVariant>],[PCSSF=<pcSsf>],
    [SSFVALID=<ssfValid>],[MTP3RSTREQ=<mtp3RstReq>];

ENT-SG-PCOWN:[TID]:<pcId>:[CTAG]::
   MTPVARIANT=<mtpVariant>,[PCSSF=<pcSsf>],
    [SSFVALID=<ssfValid>],[MTP3RSTREQ=<mtp3RstReq>];

RTRV-SG-PCOWN:[TID]:[<pcId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pcId>"
;
```

Parameters:

pcId Identifies the AID as an own point code for the SG. Own point codes cannot be the same as adjacent or remote point codes (established via ENT-SG-PC). A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns all own point codes for the SG.

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
Default value: none

mtpVariant Identifies the variant for MTP2 and MTP3. "ANSI" applies only to NANP (national) point codes; "ITU1988" and "ITU1992" apply only to international point codes.

Type: enum
Range: ANSI
ITU1988
ITU1992
Default value: none

pcSsf Identifies the sub-service field to be used.

Type: enum
Range: SSFINTL= international sub-service field
SSFNAT= national sub-service field
SSFRES = reserved sub-service field
SSFSPARE = spare sub-service field
Default value: SSFNAT

ssfValid Identifies the sub-service field (SSF) validity in MTP level 3. If true, the SSF of any message received on a link by MTP Level 3 is checked against the SSF configured for that link.

Type: BoolYN
Range: Y = valid
N = not valid
Default value: Y

mtp3RstReq Identifies whether restart is required. If this field is not 0, MTP Level 3 starts the MTP Level 3 restart procedure as soon as the first link becomes in-service.

Type: BoolYN
Range: Y = restart required
N = restart not required
Default value: N

Input Examples:

```
DLT-SG-PCOWN::23-186-5;

ED-SG-PCOWN::23-186-5:::MTPVARIANT=ANSI,PCSSF=SSFNAT,
   SSFVALID=Y,MTP3RSTREQ=N;

ENT-SG-PCOWN::23-186-5:::MTPVARIANT=ANSI,PCSSF=SSFNAT,
   SSFVALID=Y,MTP3RSTREQ=N;

RTRV-SG-PCOWN;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "23-186-5:MTPVARIANT=ANSI,PCSSF=SSFNAT,SSFVALID=Y,
      MTP3RSTREQ=N"
;
```

Related Commands:

DLT/ED/ENT/RTRV-SG-PC

ED/RTRV-SG-SYS

Commands:

ED-SG-SYS: Edit Signaling Gateway System

RTRV-SG-SYS: Retrieve Signaling Gateway System

Descriptions:

ED-SG-SYS lets the user configure the MTP3 and M3UA-SCTP (Simple Control Transport Protocol) subsystems on the Lucent Signaling Gateway (SG) or on a Lucent Network Gateway (NG) with signaling gateway functionality.

RTRV-SG-SYS lets the user retrieve the attributes of the MTP3 and M3UA-SCTP (Simple Control Transport Protocol) subsystems on the SG.

Category: Signaling **Platform:** Lucent Signaling Gateway

Security: SA for ED, View for RTRV

Input Formats:

```
ED-SG-SYS:[TID]:[<src>]:[CTAG]::[MTP3T15=<mtp3T15>],
    [MTP3T16=<mtp3T16>],[MTP3ITUT20=<mtp3itut20>],
    [MTP3T22=<mtp3T22>],[MTP3T23=<mtp3T23>],
    [MTP3T26=<mtp3T26>],[HRTBTTMR=<hrtBtTmr>],
    [SEQCTRLTMR=<seqCtrlTmr>],
    [RTOINITIAL=<sctpRtoInitial>],
    [RTOMAX=<sctpRtoMax>],[INTERVALTM=<intervalTm>],
    [RTOMIN=<rtoMin>],[ASSOCRETXMAX=<assocReTxMax>],
    [QSIZE=<qSize>],[COOKIELIFE=<cookieLife>],
    [DPCFWD=<dpcFwd>],[MGCTYPE=<mgcType>];

RTRV-SG-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:MTP3T15=<mtp3T15>,MTP3T16=<mtp3T16>,
      MTP3ITUT20=<mtp3itut20>,MTP3T22=<mtp3T22>,
      MTP3T23=<mtp3T23>,MTP3T26=<mtp3T26>,
      HRTBTTMR=<hrtBtTmr>,SEQCTRLTMR=<seqCtrlTmr>,
      RTOINITIAL=<sctpRtoInitial>,RTOMAX=<sctpRtoMax>,
      INTERVALTM=<intervalTm>,RTOMIN=<rtoMin>,
      ASSOCRETXMAX=<assocReTxMax>,QSIZE=<qSize>,
      COOKIELIFE=<cookieLife>,DPCFWD=<dpcFwd>,
      MGCTYPE=<mgcType>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

mtp3T15 Identifies the Timer T15 value (in seconds) for the MTP3 layer. Timer T15 identifies the period to wait before starting the route set congestion test. The factory default is “3”.

Type: decinum
Range: {0-10}
Default value: not applicable

mtp3T16 Identifies the Timer T16 value (in seconds) for the MTP3 layer. Timer T16 identifies the period to wait between route set congestion status updates. The factory default is “1.4”.

Type: decinum
Range: {0-10}
Default value: not applicable

mtp3ItuT20 Identifies, in seconds, either the ITU1992 Timer T20 value or the ITU1988 Timer T21 value for the MTP3 layer. The factory default is “60”.

Type: decinum
Range: {0-100}
Default value: not applicable

mtp3T22 Identifies the Timer T22 value (in seconds) for the MTP3 layer. Timer T22 identifies the period after restart to wait for signaling links to become available before generating a link unavailable alarm message. The factory default is “40”.

Type: decinum
Range: {0-100}
Default value: not applicable

mtp3T23 Identifies the Timer T23 value (in seconds) for the MTP3 layer. Timer T23 identifies the period to wait after T22 to receive all traffic restart allowed messages. The factory default is “10”.

Type: decinum
Range: {0-100}
Default value: not applicable

mtp3T26 Identifies the Timer T26 value (in seconds) for the MTP3 layer. Timer T26 identifies the period to wait before repeating a traffic restart waiting message. The factory default is “13”.

Type: decinum
Range: {0-50}
Default value: not applicable

hrtBtTmr Identifies the duration, in seconds, of the heartbeat interval for M3UA. For non-zero values, M3UA sends out BEAT messages to remote servers with the selected period, and expects BEAT_ACK messages in return. Similarly, M3UA expects BEAT messages from remote clients and responds with BEAT_ACK messages. In both cases, successive incoming BEAT or BEAT_ACK messages should arrive within a minimum period of twice the timer value; otherwise, the remote peer is declared “down”. The value “0” disables heartbeat. The factory default is “0”.

Type: decinum
Range: {0-12}
Default value: not applicable

seqCtrlTmr Identifies the duration, in seconds, for the sequence control timer. M3UA distributes traffic by distributing signaling links across the multiple active Application Server Processes (ASPs) for an Application Server (AS). When an ASP becomes unavailable (due to an association going down, or because of a DUNA message received from the ASP), the gateway diverts traffic to other ASPs in the load-sharing manner, after holding the traffic for the time specified by *seqCtrlTmr* to avoid mis-sequencing. Similarly, this timer is used to divert the traffic back onto a ASP when the ASP becomes available again. The factory default is "0.8".

Type: decinum
Range: {0.5-1.2}
Default value: not applicable

sctpRtoInitial Identifies the initial value (in seconds) of the SCTP retransmission timer after recalculating RTO. This parameter is not used in a system in which the media gateway controller and the signaling gateway are integrated on a single chassis. The factory default is "3".

Type: decinum
Range: {3-10}
Default value: not applicable

sctpRtoMax Identifies the maximum value (in seconds) of the SCTP retransmission timer after recalculating RTO. This parameter is not used in a system in which the media gateway controller and the signaling gateway are integrated on a single chassis. Set the value of *sctpRtoMax* greater than the value of *sctpRtoInitial*. The factory default is "5".

Type: decinum
Range: {3-60}
Default value: not applicable

intervalTm Identifies the value (in seconds) of the SCTP interval timer for all heartbeat datagrams. This parameter is not used in a system in which the media gateway controller and the signaling gateway are integrated on a single chassis. The factory default is "5".

Type: decinum
Range: {0-1000}
Default value: not applicable

rtoMin Identifies the minimum value (in seconds) of the SCTP retransmission timer after recalculating RTO. This parameter is not used in a system in which the media gateway controller and the signaling gateway are integrated on a single chassis. Set the value of *sctpRtoMin* less than the value of *sctpRtoMax*. The factory default is "1".

Type: decinum
Range: {1-5}
Default value: not applicable

assocReTxMax Identifies the maximum number of consecutive heartbeat datagram retransmissions allowed for an association, after which an unresponsive endpoint is declared unreachable. The factory default is "10".

Type: integer
Range: {1-255}
Default value: not applicable

qSize Identifies the size in bytes of the congestion queue for M3UA at SCTP that is maintained for each association, after which subsequent messages are dropped. The factory default is "2000".

Type: integer
Range: {0-4000}
Default value: not applicable

cookieLife Identifies the base cookie lifetime in seconds. SCTP adds the current estimated RTT value to the base lifetime to set the cookie lifetime for the cookie in the INIT-ACK chunk. The factory default is "10".

Type: decinum
Range: {5-120}
Default value: not applicable

dpcFwd Identifies whether to enable DPC forwarding, which allows the "tandem/transfer" of SS7 messages received by, but not destined for the switch. The factory default is "N".

Type: BoolYN
Range: N = do not enable DPC forwarding
Y = enable DPC forwarding
Default value: not applicable

ngcType Identifies the type of media gateway controller with which the SG communicates. The factory default is "GEN".

Type: enum
Range: GEN = generic MGC
PLUS = Lucent Network Controller
Default value: not applicable

Input Examples:

```
ED-SG-SYS:::::MTP3T15=3,MTP3T16=1.4,MTP3ITUT20=60,
   MTP3T22=40,MTP3T23=10,MTP3T26=13,HRTBTTMR=1,
   SEQCTRLTMR=0.8,RTOINITIAL=3,RTOMAX=3,INTERVALTM=1,
   RTOMIN=1,ASSOCRETXMAX=10,QSIZE=0,COOKIELIFE=10,
   DPCFWD=N,MGCTYPE=GEN;

RTRV-SG-SYS;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:MTP3T15=3,MTP3T16=1.4,MTP3ITUT20=60,
      MTP3T22=40,MTP3T23=10,MTP3T26=13,HRTBTTMR=1,
      SEQCTRLTMR=0.8,RTOINITIAL=3,RTOMAX=3,
      INTERVALTM=1,RTOMIN=1,ASSOCRETXMAX=10,QSIZE=0,
      COOKIELIFE=10,DPCFWD=N,MGCTYPE=GEN"
;
```

Related Commands: none

ED/RTRV-T0

Commands:

ED-T0: Edit T0

RTRV-T0: Retrieve T0

Descriptions:

ED-T0 lets the user provision CAS trunks by changing the default behavior for DS0s on T1 or E1 ports in a Lucent Network Gateway (NG).

RTRV-T0 lets the user retrieve the attributes for a DS0 on a T1 or E1 port in an NG.

Category: Call Control **Platform:** Lucent Network Gateway

Security: SA for ED, View for RTRV

Input Formats:

```
ED-T0:[TID]:<t0Id>:[CTAG]::
   [MGCASPRFLID=<mgCasPrflId>],[COT=<cot>],
   [OWNER=<owner>]:[<pst>];
```

```
RTRV-T0:[TID]:<t0Id>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<t0Id>:MGCASPRFLID=<mgCasPrflId>,COT=<cot>,
      OWNER=<owner>:<pst>,[<sst>]"
;
```

Parameters:

t0Id Identifies the AID as a DS0 channel (or all channels on a single T1/E1 port or on all T1/E1 ports on a T3) on an IOM. Ranging is not supported.

Type: T0
Range: IOM-{1-17}-T3-{1-8}[-PORT-{1-28}[-T0-{1-24}]]
IOM-{1-17}-OC3-{1-3}[-STS1-{1-3}[-PORT-{1-28}[-T0-{1-24}]]]
IOM-{1-17}[-E1-{1-28}[-T0-{1-31}]]
Default value: None

mgCasPrflId Identifies the CAS profile for the channel. Set the value to the factory default of "NULL" when CAS is not used. The NG rejects CAS package requests when the value is "NULL".

Type: string
Range: {1-128}
Default value: not applicable

cot Identifies whether the switch port used for continuity testing on the switch is a two-wire or four-wire port. The type of port determines the type of Continuity Test (COT) tones to issue in response to a COT request. The factory default is "4WIRE".

Type: enum
Range: 2WIRE = two-wire port
4WIRE = four-wire port
Default value: not applicable

owner Identifies whether the NG or the media gateway controller manages the channel. Changing the value of *owner* from "MGC" to "MG" identifies the channel as a nailed-up cross-connect on the NG, and sends a service change notification to the MGC. From the MGC, you cannot add or modify a context with the subject channel when the value of *owner* is "MG". The factory default is "MGC".

Type: enum
Range: MG = media gateway (NG)
MGC = media gateway controller
Default value: not applicable

pst Identifies the primary state of the channel. Out-of service channels cannot be referenced by a context. Changing the state to "OOS" sends a service change notification to the MGC. The factory default is "IS".

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

pst Identifies (in RTRV output) the primary state, and primary state qualifier, for the channel.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous (faulted)
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: none

sst Identifies (in RTRV output) the secondary state for the channel when the value of *pst* is "OOS-AU".

Type: enum
Range: SGEO = Supporting Entity Outage (the T1 port containing the channel is out of service)
Default value: none

Input Examples:

```
ED-T0::IOM-1-T3-2-PORT-3-T0-24:::MGCASPRFLID=1,COT=4,
   OWNER=MGC:IS;

RTRV-T0::IOM-1-T3-2-PORT-3-T0-24;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-1-T3-2-PORT-3-T0-24:MGCASPRFLID=1,COT=4,
      OWNER=MGC:IS"
;
```

Related Commands: none

RTRV-STATUS-SGPC

Command:

RTRV-STATUS-SGPC: Retrieve Status Point Code

Description:

RTRV-STATUS-SGPC lets the user retrieve information indicating the status of a destination point code for a signaling gateway.

Category: Signaling **Platform:** Lucent Signaling Gateway

Security: View

Input Format:

```
RTRV-STATUS-SGPC:[TID]:[<pcId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pcId>:SGPCSTARSLT=<sgPcStaRslt>,
      SGPCSTANMBACTVLNKSETS=<sgPcStaNmbActvLnkSets>,
      SGPCSTAMTPSTATE=<sgPcStaMtpState>,
      SGPCSTACONG=<sgPcStaCong>,
      SGPCSTARSTFLG=<sgPcStaRstFlg>"
;
```

Parameters:

pcId Identifies the AID as an adjacent or remote point code for a signaling gateway.

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
Default value: none

sgPcStaRslt Identifies the result of MTP layer 3 test on the point code.

Type: enum
Range: FAILINGLYR3 = Failed
SUCCESS = Passed
Default value: none

sgPcStaNmbActvLnkSets Identifies the total number of active link sets in the point code.

Type: integer
Range: {1-20}
Default value: none

sgPcStaMtpState Identifies whether the point code is active.

Type: BoolYN
Range: Y = Point code is active
N = Point code is inactive
Default value: none

sgPcStaCong Identifies the priority assigned to a point code, depending on the congestion level. A value of "PRIORITY0" indicates that the point code is uncongested.

Type: enum
Range: PRIORITY0
PRIORITY1
PRIORITY2
PRIORITY3
Default value: none

sgPcStaRstFlg Specifies the signaling point restart indication.

Type: BoolYN
Range: N = signaling point not restarted
Y = signaling point restarted
Default value: none

Input Example:

```
RTRV-STATUS-SGPC::24-177-39;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "24-177-39:SGPCSTARSLT=SUCCESS,
      SGPCSTANMBACTVLNKSETS=2,SGPCSTAMTPSTATE=Y,
      SGPCSTACONG=PRIORITY0,SGPCSTARSTFLG=N"
;
```

Related Commands: None

NOTES

DLT/ENT/RTRV-SCCP-ROUTE

Commands:

DLT-SCCP-ROUTE: Delete SCCP Route

ENT-SCCP-ROUTE: Enter SCCP Route

RTRV-SCCP-ROUTE: Retrieve SCCP Route

Descriptions:

DLT-SCCP-ROUTE lets the user delete an SCCP (Signaling Connection Control Part) route to a remote point code.

ENT-SCCP-ROUTE lets the user establish an SCCP (Signaling Connection Control Part) route to an SCP or STP at a remote point code. ENT-SCCP-ROUTE is dependent on ENT-MGC-PC; that is, ENT-SCCP-ROUTE will not work unless ENT-MGC-PC has already been issued.

RTRV-SCCP-ROUTE lets the user retrieve the remote point code(s) to which an SCCP (Signaling Connection Control Part) route exists.

Category: Call Control **Security:** SA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-SCCP-ROUTE:[TID]:<pcId>:[CTAG];
ENT-SCCP-ROUTE:[TID]:<pcId>:[CTAG];
RTRV-SCCP-ROUTE:[TID]:[<pcId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pcId>"
;
```

Parameters:

pcId Identifies the remote point code for the route. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, all point codes configured in the system will be returned.

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
DEF_ANSI = Default NANP point code
DEF_ITU = Default international point code
Default value: none

Input Examples:

```
DLT-SCCP-ROUTE::35-222-123;

ENT-SCCP-ROUTE::35-222-123;

RTRV-SCCP-ROUTE;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "35-222-123"
   "35-223-181"
   "42-156-93"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-SCCP-SSN

Commands:

DLT-SCCP-SSN: Delete SCCP SSN

ED-SCCP-SSN: Edit SCCP SSN

ENT-SCCP-SSN: Enter SCCP SSN

RTRV-SCCP-SSN: Retrieve SCCP SSN

Descriptions:

DLT-SCCP-SSN lets the user delete an SCCP (Signaling Connection Control Part) route to an SSN (sub-system number) on a remote point code.

ED-SCCP-SSN lets the user change the parameters affecting an SCCP (Signaling Connection Control Part) route to an SSN (sub-system number) on a remote point code.

ENT-SCCP-SSN lets the user establish an SCCP (Signaling Connection Control Part) route to an SSN (sub-system number) on a remote point code. ENT-SCCP-SSN is dependent on ENT-MGC-PC and ENT-SCCP-ROUTE; that is, ENT-SCCP-SSN will not work unless ENT-MGC-PC and ENT-SCCP-ROUTE have already been issued.

RTRV-SCCP-SSN lets the user retrieve the remote point code(s) to which an SCCP (Signaling Connection Control Part) route to an SSN (sub-system number) exists.

Category: Call Control **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SCCP-SSN:[TID]:<sccpSsnAid>:[CTAG];

ED-SCCP-SSN:[TID]:<sccpSsnAid>:[CTAG]::
   STARTMODE=<startMode>;

ENT-SCCP-SSN:[TID]:<sccpSsnAid>:[CTAG]::
   [STARTMODE=<startMode>];

RTRV-SCCP-SSN:[TID]:[<sccpSsnAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<sccpSsnAid>:STARTMODE=<startMode>"
;
```

Parameters:

sccpSsnAid Identifies the AID as a combination of the remote point code that receives the query and the subsystem number of the providing service. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns all configured SCCP routes to SSNs.

Type: SccpSsnAid
Range: <pcId>-<ssn>, where
pcID = {0-255}-{0-255}-{0-255} for NANP (national) point codes
{0-16383} for international point codes
ssn = {1-255}
Default value: none

startMode Identifies the startup state of the route to the SSN.

Type: enum
Range: OFFLINE
ONLINE
Default value: ONLINE

Input Examples:

```
DLT-SCCP-SSN::35-222-123-18;
ED-SCCP-SSN::35-222-123-18:::STARTMODE=ONLINE;
ENT-SCCP-SSN::35-222-123-18:::STARTMODE=ONLINE;
RTRV-SCCP-SSN;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "35-222-123-18:STARTMODE=ONLINE"
;
```

Related Commands: none

DLT/ENT/RTRV-IUA-AS

Commands:

DLT-IUA-AS: Delete IUA Application Server

ENT-IUA-AS: Enter IUA Application Server

RTRV-IUA-AS: Retrieve IUA Application Server

Descriptions:

DLT-IUA-AS lets the user delete an AS (Application Server) from the IUA (ISDN User Adaptation) system in the switch. You must issue DLT-IUA-AS for each AS/ASP combination in the AS to delete the AS.

ENT-IUA-AS lets the user establish an AS (Application Server – a logical grouping of remote peer ASP nodes) in the IUA (ISDN User Adaptation) system in the switch. Issue this command for each ASP included in the AS. ENT-IUA-AS will not work unless ENT-IUA-ASP has already been issued.

RTRV-IUA-AS lets the user retrieve the priority currently assigned to an AS (Application Server – a logical grouping of remote peer ASP nodes) in the IUA (ISDN User Adaptation) system in the switch.

Category: Signaling **Security:** SA for DLT/ENT, View for RTRV

Input Formats:

```
DLT-IUA-AS:[TID]:<asidaspid>:[CTAG];

ENT-IUA-AS:[TID]:<asidaspid>:[CTAG]::
   PRIORITY=<priority>;

RTRV-IUA-AS:[TID]:[<asidaspid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<asidaspid>:PRIORITY=<priority>"
;
```

Parameters:

asidaspid Identifies the AID as an AS and an associated ASP (Application Server Process). The first part of the AID identifies the AS and the second part identifies the ASP. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, all AS/ASP combinations configured in the system and their assigned priorities will be returned. A null value (in RTRV) for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, all ASPs configured for the specified AS and their assigned priorities will be returned.

Type: AspAid
Range: {1-32}[-{1-32}]
Default value: none

priority Identifies the priority level for the ASP in fail-over and fail-back procedures within the AS. Lower priority numbers indicate higher priority. Lucent recommends non-contiguous priority levels so that new nodes can be inserted between existing nodes.

Type: integer
Range: {0-65535}
Default value: none

Input Examples:

```
DLT-IUA-AS::1-1;

ENT-IUA-AS::1-1:::PRIORITY=10;
ENT-IUA-AS::1-2:::PRIORITY=30;
ENT-IUA-AS::1-3:::PRIORITY=20;

RTRV-IUA-AS;
```

Output Example:

```
   lucent 2005-04-08 14:37:49
M  0 COMPLD
   "1-1:PRIORITY=10"
   "1-2:PRIORITY=30"
   "1-3:PRIORITY=20"
;
```

Related Commands: none

DLT/ENT/RTRV-IUA-ASP

Commands:

DLT-IUA-ASP: Delete IUA Application Server Process

ENT-IUA-ASP: Enter IUA Application Server Process

RTRV-IUA-ASP: Retrieve IUA Application Server Process

Descriptions:

DLT-IUA-ASP lets the user delete an ASP (Application Server Process; i.e., a remote media gateway controller) node in the IUA (ISDN User Adaptation) system in the switch. You must issue DLT-IUA-ASP for each IP address list in the ASP to delete the ASP.

ENT-IUA-ASP lets the user establish an ASP (Application Server Process; i.e., a remote media gateway controller) node in the IUA (ISDN User Adaptation) system in the switch. ENT-IUA-ASP will not work unless ENT-IUA-SYS and ENT-IUA-ENDPTASP have already been issued.

RTRV-IUA-ASP lets the user retrieve the description for an ASP (Application Server Process; i.e., a remote media gateway controller) in the IUA (ISDN User Adaptation) system in the switch.

Category: Signaling **Security:** SA for DLT/ENT, View for RTRV

Input Formats:

```
DLT-IUA-ASP:[TID]:<aspidiplistid>:[CTAG];

ENT-IUA-ASP:[TID]:<aspidiplistid>:[CTAG]::
   [DESC=<descr>];

RTRV-IUA-ASP:[TID]:[<aspidiplistid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<aspidiplistid>:DESC=<descr>"
;
```

Parameters:

aspidiplistid Identifies the AID as an ASP and its associated list of up to eight IP addresses. The first part of the AID identifies the ASP and the second part identifies the list of IP addresses. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, all Application Server Processes configured in the system and their assigned descriptions will be returned. A null value (in RTRV) for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, all IP address lists configured for the specified ASP and their assigned descriptions will be returned.

Type: AspAid
Range: {1-32}[-{1-65535}]
Default value: none

descr Identifies the description for the ASP.

Type: string
Range: up to 20 alphanumeric characters
Default value: NULL

Input Examples:

```
DLT-IUA-ASP::1-1;
ENT-IUA-ASP::1-1:::DESC=ASP1_MARLBOROUGHMASS;
ENT-IUA-ASP::1-2:::DESC=ASP2_MARLBOROUGHMASS;
RTRV-IUA-ASP;
```

Output Example:

```
   lucent 2005-04-08 14:37:49
M  0 COMPLD
   "1-1:DESC=ASP1_MARLBOROUGHMASS"
   "1-2:DESC=ASP2_MARLBOROUGHMASS"
;
```

Related Commands: none

DLT/ENT/RTRV-IUA-ENDPTASP

Commands:

DLT-IUA-ENDPTASP: Delete IUA Endpoint Application Server Process

ENT-IUA-ENDPTASP: Enter IUA Endpoint Application Server Process

RTRV-IUA-ENDPTASP: Retrieve IUA Endpoint Application Server Process

Descriptions:

DLT-IUA-ENDPTASP lets the user delete a list of remote IP addresses (endpoints) with their associated switch ports, for ASPs (Application Server Processes; i.e., remote media gateway controllers).

ENT-IUA-ENDPTASP lets the user establish a list of remote IP addresses (endpoints) with their associated switch ports, for ASPs (Application Server Processes; i.e., remote media gateway controllers). ENT-IUA-ASPENDPT will not work unless ENT-IUA-SYS has already been issued.

RTRV-IUA-ENDPTASP lets the user retrieve the lists of remote IP addresses (endpoints) with their associated switch ports, established for ASPs (Application Server Processes; i.e., remote media gateway controllers) in the IUA (ISDN User Adaptation) system in the switch.

Category: Signaling **Security:** SA for DLT/ENT, View for RTRV

Input Formats:

```
DLT-IUA-ENDPTASP:[TID]:<iplistid>:[CTAG];

ENT-IUA-ENDPTASP:[TID]:<iplistid>:[CTAG]::
   IPADDR1=<ipaddr1>,[PORT1=<port1>],
   [IPADDR2=<ipaddr2>],[PORT2=<port2>],
   [IPADDR3=<ipaddr3>],[PORT3=<port3>],
   [IPADDR4=<ipaddr4>],[PORT4=<port4>],
   [IPADDR5=<ipaddr5>],[PORT5=<port5>],
   [IPADDR6=<ipaddr6>],[PORT6=<port6>],
   [IPADDR7=<ipaddr7>],[PORT7=<port7>],
   [IPADDR8=<ipaddr8>],[PORT8=<port8>];

RTRV-IUA-ENDPTASP:[TID]:[<iplistid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iplistid>:IPADDR1=<ipaddr1>,PORT1=<port1>,
      IPADDR2=<ipaddr2>,PORT2=<port2>,
      IPADDR3=<ipaddr3>,PORT3=<port3>,
      IPADDR4=<ipaddr4>,PORT4=<port4>,
      IPADDR5=<ipaddr5>,PORT5=<port5>,
      IPADDR6=<ipaddr6>,PORT6=<port6>,
      IPADDR7=<ipaddr7>,PORT7=<port7>,
      IPADDR8=<ipaddr8>,PORT8=<port8>"
;
```

Parameters:

iplistid Identifies the AID as a list of IP addresses for remote peer machines. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the IP addresses and associated ports for all IP address lists configured in the system will be returned.

Type: integer
Range: {1-32767}
Default value: none

ipaddr1 Identifies the primary destination IP address for the remote ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

port1 Identifies the port on the switch for communication with the primary destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr2 Identifies the second destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port2 Identifies the port on the switch for communication with the second destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr3 Identifies the third destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port3 Identifies the port on the switch for communication with the third destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr4 Identifies the fourth destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port4 Identifies the port on the switch for communication with the fourth destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr5 Identifies the fifth destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port5 Identifies the port on the switch for communication with the fifth destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr6 Identifies the sixth destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port6 Identifies the port on the switch for communication with the sixth destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr7 Identifies the seventh destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port7 Identifies the port on the switch for communication with the seventh destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

ipaddr8 Identifies the eighth destination IP address for the ASP.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: NULL

port8 Identifies the port on the switch for communication with the eighth destination IP address.

Type: integer
Range: {1-65535}
Default value: 9900

Input Examples:

```
DLT-IUA-ENDPTASP::1;
ENT-IUA-ENDPTASP::1:::IPADDR1=192.13.66.23;
RTRV-IUA-ENDPTASP;
```

Output Example:

```
   lucent 2005-04-08 14:37:49
M  0 COMPLD
   "1:IPADDR1=192.13.66.23,PORT1=9900,IPADDR2=NULL,
      PORT2=9900,IPADDR3=NULL,PORT3=9900,IPADDR4=NULL,
      PORT4=9900,IPADDR5=NULL,PORT5=9900,IPADDR6=NULL,
      PORT6=9900,IPADDR7=NULL,PORT7=9900,IPADDR8=NULL,
      PORT8=9900"
;
```

Related Commands: none

DLT/ENT/RTRV-IUA-LNK

Commands:

DLT-IUA-LNK: Delete IUA Link

ENT-IUA-LNK: Enter IUA Link

RTRV-IUA-LNK: Retrieve IUA Link

Descriptions:

DLT-IUA-LNK lets the user delete an IUA Interface Identifier that associates the physical interface for signaling messages on the switch (i.e., the ISDN D-channel on a specific port) with an Application Server (containing one or more Application Server Processes).

ENT-IUA-LNK lets the user establish an IUA Interface Identifier to represent the association of the physical interface for signaling messages on the switch (i.e., the ISDN D-channel on a specific port) with an Application Server (containing one or more Application Server Processes). ENT-IUA-LNK will not work unless ENT-IUA-AS has already been issued.

RTRV-IUA-LNK lets the user retrieve the properties of an IUA Interface Identifier that represents the association of the physical interface for signaling messages on the switch (i.e., the ISDN D-channel on a specific port) with an Application Server (containing one or more Application Server Processes).

Category: Signaling **Security:** SA for DLT/ENT, View for RTRV

Input Formats:

```
DLT-IUA-LNK:[TID]:<iuaiid>:[CTAG];

ENT-IUA-LNK:[TID]:<iuaiid>:[CTAG]::ASID=<asid>,
   IOMPORT=<iomport>,[ISDNVARIANT=<isdnvariant>],
   [N200=<n200>],[N201=<n201>],[T200=<t200>],
   [T203=<t203>],[LNKTYPE=<lnktype>]:[<pst>];

RTRV-IUA-LNK:[TID]:[<iuaiid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iuaiid>:ASID=<asid>,IOMPORT=<iomport>,
      ISDNVARIANT=<isdnvariant>,N200=<n200>,
      N201=<n201>,T200=<t200>,T203=<t203>,
      LNKTYPE=<lnktype>:<pst>,<sst>"
;
```

Parameters:

iuaiid Identifies the AID, with a unique 32-bit integer, as an IUA Interface Identifier that represents the association of an ISDN interface on the switch with an Application Server. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns all associations of ISDN interfaces on the switch with Application Servers.

Type: IuaId
Range: {0 – 4,294,967,295}
Default value: none

asid Identifies the Application Server.

Type: integer
Range: {1-32}
Default value: none

iomport Identifies the port containing the ISDN D-channel.

Type: enum
Range: IOM-{1-17}-PORT-{1-28}
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

isdnvariant Identifies the ISDN variant for the switch at the remote end of the interface.

Type: enum
Range: ETSI = for international-variant switches (default for E1)
GENERIC = for generic switches
NI2 = for National ISDN 2-compliant generic switches; for example, DMS100, 4ESS, 5ESS (default for T1)
Default value: NI2

n200 Identifies the LAPD retransmission counter value.

Type: integer
Range: {0-1023}
Default value: 3

n201 Indicates the maximum frame length. Q.931 messages that do not fit into one LAPD frame are fragmented.

Type: integer
Range: {0-4095}
Default value: 260

t200 Identifies the LAPD T200 acknowledgement timer value (in increments of 0.1 second), which represents the maximum time allowed to receive an acknowledge message after transmission of a command frame.

Type: decinum
Range: {0.5-5}
Default value: 1

t203 Identifies the T203 idle link timer value (in increments of 10 seconds), which represents the maximum time allowed for periods of inactivity on a link during multiple frame operations. For D-channel backup, it relates to the time it takes to declare a D-channel as failed.

Type: decinum
Range: {10-300}
Default value: 30

lnktype Identifies the logical interface for the link; that is, whether the switch is represented in the network as an ISDN provider (a network switch or subscriber line terminator) or as an ISDN user.

Type: enum
Range: NETWORK = ISDN network side
USER = ISDN user side
Default value: NETWORK

pst Indicates the desired primary state of the interface.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service, implied OOS-MA (Out-Of-Service for Management)
Default value: IS

pst Identifies (in RTRV output) the primary state, and primary state qualifier, for the interface.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous (faulted)
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: none

sst Identifies (in RTRV output) the secondary state for the interface when the value of *pst* is "OOS-AU".

Type: enum
Range: SGEO = Supporting Entity Outage (the T1 port containing the link is out of service)
Default value: none

Input Examples:

```
DLT-IUA-LNK::1;

ENT-IUA-LNK::1:::ASID=1,PORT=IOM-1-T3-1-PORT-1,
   ISDNVARIANT=NI2,N200=3,N201=260,T200=1,T203=30,
   LNKTYPE=NETWORK:IS;

RTRV-IUA-LNK;
```

Output Example:

```
   lucent 2005-04-08 14:37:49
M  0 COMPLD
   "1:ASID=1,PORT=IOM-1-T3-1-PORT-1,ISDNVARIANT=NI2,
   N200=3,N201=260,T200=1,T203=30,LNKTYPE=NETWORK:IS"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-IUA-SYS

Commands:

DLT-IUA-SYS: Delete IUA System

ED-IUA-SYS: Edit IUA System

ENT-IUA-SYS: Enter IUA System

RTRV-IUA-SYS: Retrieve IUA System

Descriptions:

DLT-IUA-SYS lets the user delete the IUA (ISDN User Adaptation) system and free the resources allocated to the IUA layer. You must first delete all other IUA entities; i.e., AS, ASP, ASP endpoints, and interfaces.

ED-IUA-SYS lets the user change the properties of the IUA (ISDN User Adaptation) system in the switch.

ENT-IUA-SYS lets the user establish the properties of the IUA (ISDN User Adaptation) system in the switch. These properties include the local port used by SCTP (Simple Control Transport Protocol) for local SCTP endpoints, the initial, minimum, and maximum values for the SCTP retransmission timer, and the value for the SCTP heartbeat interval timer.

RTRV-IUA-SYS lets the user retrieve the properties of the IUA (ISDN User Adaptation) system in the switch.

Category: Signaling **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-IUA-SYS:[TID]:[<src>]:[CTAG];

ED-IUA-SYS:[TID]:[<src>]:[CTAG]::[IUAPORT=<iuaport>],
   [RTOINITIAL=<rtoinitial>],[RTOMIN=<rtomin>],
   [RTOMAX=<rtomax>],[INTERVALTM=<intervaltm>];

ENT-IUA-SYS:[TID]:[<src>]:[CTAG]::[IUAPORT=<iuaport>],
   [RTOINITIAL=<rtoinitial>],[RTOMIN=<rtomin>],
   [RTOMAX=<rtomax>],[INTERVALTM=<intervaltm>];

RTRV-IUA-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:IUAPORT=<iuaport>,RTOINITIAL=<rtoinitial>,
      RTOMIN=<rtomin>,RTOMAX=<rtomax>,
      INTERVALTM=<intervaltm>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

iuaPort Identifies the local port to be used by SCTP (Simple Control Transport Protocol) for local SCTP endpoints. This parameter is currently unused; leave it blank.

Type: integer
Range: {4000-65535}
Default value: 9900

rtoinitial Identifies the initial value of the Simple Control Transmission Protocol retransmission timer (in seconds).

Type: decinum
Range: {3-10}
Default value: 3

rtomin Identifies the minimum value of the Simple Control Transmission Protocol retransmission timer (in seconds).

Type: decinum
Range: {1-3}
Default value: 1

rtomax Identifies the maximum value of the Simple Control Transmission Protocol retransmission timer (in seconds).

Type: decinum
Range: {3-60}
Default value: 3

intervaltm Identifies the value of the Simple Control Transmission Protocol heartbeat interval timer (in seconds).

Type: decinum
Range: {1-1000}
Default value: 5

Input Examples:

```
DLT-IUA-SYS;

ED-IUA-SYS:::::IUAPORT=9900,RTOINITIAL=1,RTOMIN=1,
   RTOMAX=3,INTERVALTM=5;

ENT-IUA-SYS:::::IUAPORT=9900,RTOINITIAL=1,RTOMIN=1,
   RTOMAX=3,INTERVALTM=5;

RTRV-IUA-SYS;
```

Output Example:

```
   lucent 2004-07-30 14:37:49
M  0 COMPLD
   "COM:IUAPORT=9900,RTOINITIAL=1,RTOMIN=1,RTOMAX=3,
      INTERVALTM=5;
;
```

Related Commands: none

INIT-REG-LAPD / RTRV-PM-LAPD

Commands:

INIT-REG-LAPD: Initialize Register LAPD

RTRV-PM-ISDNMSG: Retrieve Performance Monitors LAPD

Descriptions:

INIT-REG-LAPD lets the user clear the counters for LAPD (Link Access Protocol – D channel) message statistics.

RTRV-PM-LAPD lets the user retrieve the number of times LAPD (Link Access Protocol – D channel) message types have been transmitted or received since the counters were last initialized.

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-LAPD:[TID]:<lapdAid>:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
RTRV-PM-LAPD:[TID]:<lapdAid>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<lapdAid>:<montype>,<monval>,[<vldty>],[<locn>],
      [<dirn>],[<tmper>],[<mondat>],[<montm>]"
;
```

Parameters:

lapdAid Identifies the AID as an LAPD interface and link.

Type: lapdAid
Range: IUA-IOM-{1-17}-PORT-{1-28}
IUA-IOM-{1-17}-STS1-{1-8}-PORT-{1-28}
IUA-IOM-{1-17}-T3-{1-8}-PORT-{1-28}
Default value: none

montype Identifies the type of monitored LAPD parameter.

Type: enum
Range: ALL = All types
DISCRX = Number of disconnect frames received
DISCTX = Number of disconnect frames transmitted
DMRX = Number of disconnect mode frames received
DMTX = Number of disconnect mode frames transmitted
FRMR = Number of frame reject errors
FRMRRX = Number of frame reject errors received
FRMRTX = Number of frame reject frames transmitted
INVRX = Number of invalid frames received
IRX = Number of information frames received
ITX = Number of information frames transmitted
REJRX = Number of reject frames received
REJTX = Number of reject frames transmitted
RNRRX = Number of receive not ready frames received
RNRTX = Number of receive not ready frames transmitted
RRRX = Number of receive ready frames received
RRTX = Number of receive ready frames transmitted
SABMERR = Number of set asynchronous balanced mode errors
SABMRX = Number of set asynchronous balanced mode frames received
SABMTX = Number of set asynch balanced mode frames transmitted
UARX = Number of unnumbered acknowledge frames received
UATX = Number of unnumbered acknowledge frames transmitted
UIRX = Number of unnumbered information frames received
UITX = Number of unnumbered information frames transmitted
XIDRX = Number of exchange ID frames received
XIDTX = Number of exchange ID frames transmitted
Default value: ALL

monnval Identifies the value to which the counters identified by montype are to be initialized or the measured value of the monitored parameter. The value is in the form of numeric counts or rates. The value is "0" if the value of *montype* is "ALL". This parameter is presently not supported; leave it blank.

Type: integer
Range: {0-2147483647}
Default value: 0

monlev Identifies (in RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (in RTRV-PM output) the validity of the monitored interval. This parameter is presently not supported; its value will always be "NULL".

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: NULL

locn Identifies the location of the storage counters to be initialized or from which to retrieve performance data. Currently only NEND is supported.

Type: enum
Range: NEND = near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is presently not supported; leave it blank.

Type: enum
Range: BTH = Both directions
RCV = Receive direction only
TRMT = Transmit direction only
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". This parameter is presently not supported; leave it blank.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: 15-MIN

mondat Identifies the monitored date. The value Identifies the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is presently not supported; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value Identifies the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is presently not supported; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-LAPD::IUA-IOM-1-T3-1-PORT-1;
RTRV-PM-LAPD::IUA-IOM-1-T3-1-PORT-1;
```

Output Example:

```
   lucent 2005-04-08 14:37:49
M  0 COMPLD
   "IUA-IOM-1-T3-1-PORT-1:ITX,187363"
   "IUA-IOM-1-T3-1-PORT-1:RRTX,140547"
   "IUA-IOM-1-T3-1-PORT-1:RNRTX,0"
   "IUA-IOM-1-T3-1-PORT-1:REJTX,23"
   "IUA-IOM-1-T3-1-PORT-1:SABMTX,2"
   "IUA-IOM-1-T3-1-PORT-1:DISCTX,0"
   "IUA-IOM-1-T3-1-PORT-1:UATX,1"
   "IUA-IOM-1-T3-1-PORT-1:DMTX,0"
   "IUA-IOM-1-T3-1-PORT-1:FRMRTX,0"
   "IUA-IOM-1-T3-1-PORT-1:XIDTX,0"
   "IUA-IOM-1-T3-1-PORT-1:UITX,0"
   "IUA-IOM-1-T3-1-PORT-1:IRX,140554"
   "IUA-IOM-1-T3-1-PORT-1:RRRX,187357"
   "IUA-IOM-1-T3-1-PORT-1:RNRRX,0"
   "IUA-IOM-1-T3-1-PORT-1:REJRX,6"
   "IUA-IOM-1-T3-1-PORT-1:SABMRX,1"
   "IUA-IOM-1-T3-1-PORT-1:DISCRX,0"
   "IUA-IOM-1-T3-1-PORT-1:UARX,1"
   "IUA-IOM-1-T3-1-PORT-1:DMRX,0"
   "IUA-IOM-1-T3-1-PORT-1:FRMRRX,0"
   "IUA-IOM-1-T3-1-PORT-1:XIDRX,0"
   "IUA-IOM-1-T3-1-PORT-1:UIRX,0"
   "IUA-IOM-1-T3-1-PORT-1:INVRX,0"
   "IUA-IOM-1-T3-1-PORT-1:SABMERR,0"
   "IUA-IOM-1-T3-1-PORT-1:FRMRERR,0"
;
```

Related Commands: none

INIT-REG-MGCMGIUA / RTRV-PM-MGCMGIUA

Commands:

INIT-REG-MGCMGIUA: Initialize Register Media Gateway Controller Media Gateway IUA

RTRV-PM-MGCMGIUA: Retrieve Performance Monitors Media Gateway Controller Media Gateway IUA

Descriptions:

INIT-REG-MGCMGIUA lets the user initialize one or more storage registers or event counters for the IUA protocol layer, or an individual IUA interface for the D-channel.

RTRV-PM-MGCMGIUA lets the user retrieve current and historical performance data for the IUA protocol layer, or an individual IUA interface for the D-channel. The data comprises:

- Statistics related to Q.921 management and data primitives transmitted and received by the IUA layer
- IUA management and data primitives transmitted to and received from remote nodes
- Data transmitted to and received from the remote nodes

Category: Signaling **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-MGCMGIUA:[TID]:<iuaId>:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

```
RTRV-PM-MGCMGIUA:[TID]:<iuaId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<iuaId>:<montype>,<monval>,[<vldty>],[<locn>],
      [<dirn>],[<tmper>],[<mondat>],[<montm>]"
;
```

Parameters:

iuaId Identifies the AID as either the IUA protocol layer, or an individual IUA interface (D-Channel). The first part of the AID specifies the media gateway, associated with the Lucent Network Controller, running IUA Connection Control and Signaling (CCS) processes. Set the value of first part of the AID to the SID (System Identifier – from the header for TL1 messages) for the media gateway. The optional second part of the AID specifies, with a unique 32-bit integer, an IUA Interface Identifier that represents an IUA interface for the D-channel. Specifying only the fist part of the AID retrieves performance data from, or initializes, the registers and counters for all IUA interfaces on the media gateway.

Type: string
Range: <mgName>[-<iid>], where
mgName is a string of up to 30 alphanumeric characters, and
iid = {0 – 4,294,967,295}
Default value: none

montype Identifies the type of monitored parameters to initialize or retrieve.

Type: enum
Range: ALL = All monitored parameters
LIRXNMBPDUS = Number of Protocol Data Units sent to the peer
LIRXPDUBYTES = Total byte count for the Protocol Data Units received from the peer
LITXNMBPDUS = Number of Protocol Data Units sent to the peer
LITXPDUBYTES = Total byte count for the Protocol Data Units sent to the peer
RXASPAC = Number of IUA ASP ACTIVE messages received from the peer
RXASPDN = Number of IUA ASP DOWN messages received from the peer
RXASPIA = Number of IUA ASP INACTIVE messages received from the peer
RXASPUP = Number of IUA ASP UP messages received from the peer
RXDATA = Number of IUA data messages received from the peer
RXERR = Number of IUA error messages received from the peer
RXHBEAT = Number of IUA heartbeat messages received from the peer

RXNOTIFY = Number of IUA NOTIFY messages received from the peer
RXQ921CON = Number of received Q.921 connect primitives
RXQ921DATA = Number of received Q.921 data primitives
RXQ921DISC = Number of received Q.921 disconnect primitives
RXQ921UDATA = Number of received Q.921 unit data primitives
RXTEIST = Number of IUA TEI STATUS messages received from the peer
TXASPAC = Number of IUA ASP ACTIVE messages sent to the peer
TXASPDN = Number of IUA ASP DOWN messages sent to the peer
TXASPIA = Number of IUA ASP INACTIVE messages sent to the peer
TXASPUP = Number of IUA ASP UP messages sent to the peer
TXDATA = Number of IUA data messages sent to the peer
TXERR = Number of IUA error messages sent to the peer
TXHBEAT = Number of IUA heartbeat messages sent to the peer
TXNOTIFY = Number of IUA NOTIFY messages sent to the peer
TXQ921CON = Number of transmitted Q.921 connect primitives
TXQ921DATA = Number of transmitted Q.921 data primitives
TXQ921DISC = Number of transmitted Q.921 disconnect primitives
TXQ921UDATA = Number of transmitted Q.921 unit data primitives
TXTEIST = Number of IUA TEI STATUS messages sent to the peer
UIRXNMBPDUS = Number of Protocol Data Units received from the peer
UIRXPDUBYTES = Total byte count for the Protocol Data Units received from the peer
UITXNMBPDUS = Number of Protocol Data Units sent to the peer
UITXPDUBYTES = Total byte count for the Protocol Data Units sent to the peer

Default value: ALL

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. This parameter is presently not supported; leave it blank.

Type: integer
Range: {0-2147483647}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it. This parameter is not supported presently; its value will be “NULL”.

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: not applicable for output

locn Identifies the location of the storage counters to be initialized. This parameter is presently not supported; leave it blank.

Type: Location
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. This parameter is presently not supported; leave it blank.

Type: Direction
Range: BTH = Both directions
RCV = Receive direction only
TRMT = Transmit direction only
Default value: BTH

tmper Identifies the accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods. This parameter is presently not supported; leave it blank.

Type: TimePeriod
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is presently not supported; leave it blank.

Type: MonitoredDate
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is presently not supported; leave it blank.

Type: MonitoredTime
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-MGCMGIUA::lucent;
RTRV-PM-MGCMGIUA::lucent;
```

Output Example:

```
   lucent 2005-04-08 14:37:49
M  0 COMPLD
   "lucent:TXQ921DATA,0"
   "lucent:TXQ921UDATA,0"
   "lucent:TXQ921CON,0"
   "lucent:TXQ921DISC,0"
   "lucent:RXQ921DATA,0"
   "lucent:RXQ921UDATA,0"
   "lucent:RXQ921CON,0"
   "lucent:RXQ921DISC,0"
   "lucent:TXDATA,0"
   "lucent:TXTEIST,0"
   "lucent:TXASPUP,0"
   "lucent:TXASPDN,0"
   "lucent:TXASPAC,0"
   "lucent:TXASPIA,0"
   "lucent:TXHBEAT,0"
   "lucent:TXERR,0"
   "lucent:TXNOTIFY,0"
   "lucent:RXDATA,0"
   "lucent:RXTEIST,0"
   "lucent:RXASPUP,0"
   "lucent:RXASPDN,0"
   "lucent:RXASPAC,0"
   "lucent:RXASPIA,0"
   "lucent:RXHBEAT,0"
   "lucent:RXERR,0"
   "lucent:RXNOTIFY,0"
   "lucent:UITXNMBPDUS,0"
   "lucent:UITXPDUBYTES,0"
   "lucent:UIRXNMBPDUS,0"
   "lucent:UIRXPDUBYTES,0"
   "lucent:LITXNMBPDUS,0"
   "lucent:LITXPDUBYTES,0"
   "lucent:LIRXNMBPDUS,0"
   "lucent:LIRXPDUBYTES,0"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-AUDIO-ANNC

Commands:

DLT-AUDIO-ANNC: Delete Audio Announcement

ED-AUDIO-ANNC: Edit Audio Announcement

ENT-AUDIO-ANNC: Enter Audio Announcement

RTRV-AUDIO-ANNC: Retrieve Audio Announcement

Descriptions:

DLT-AUDIO-ANNC lets the user delete an audio announcement.

ED-AUDIO-ANNC lets the user edit the parameters associated with an audio announcement.

ENT-AUDIO-ANNC lets the user establish an audio announcement.

RTRV-AUDIO-ANNC lets the user retrieve parameters associated with an audio announcement.

Category: Resource Provisioning **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-AUDIO-ANNC:[TID]:<AnnouncementId>:[CTAG];

ED-AUDIO-ANNC:[TID]:<AnnouncementId>:[CTAG]::
   [NAME=<Name>],[DESC=<Description>],
   [MSGLIST=<MsgList>],[RPTCNT=<RepeatCnt>];

ENT-AUDIO-ANNC:[TID]:<AnnouncementId>:[CTAG]::
   NAME=<Name>,DESC=<Description>,MSGLIST=<MsgList>,
   [RPTCNT=<RepeatCnt>];

RTRV-AUDIO-ANNC:[TID]:[<AnnouncementId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<AnnouncementId>:[NAME=<Name>],
      [DESCR=<Description>],[MSGLIST=<MsgList>],
      RPTCNT=<RepeatCnt>"
;
```

Parameters:

AnnouncementId Identifies the AID as an audio announcement. You cannot establish, change, or delete announcements 1-2999; they are already-configured standard announcements. Identifiers 3000-32766 are for user-supplied custom announcements. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, attributes for all audio announcements configured in the system will be returned.

Type: AnnouncementId
Range: {1-32766}
Default value: none

Name Identifies the name of the audio announcement.

Type: string
Range: up to 40 alphanumeric characters (including underscores "_")
Default value: none

Description Identifies the description of the audio announcement.

Type: string
Range: up to 80 alphanumeric characters (including underscores "_")
Default value: none

MsgList Identifies the messages comprising the announcement in play order. Messages are identified by instances of *AudioMsgAid*, as established by ENT-AUDIO-MSG, separated by dashes ("-").

Type: string
Range: up to 80 alphanumeric characters (including underscores "_")
Default value: none

RepeatCnt Identifies the number of times to repeat the audio announcement. A value of "0" indicates continuous repetition. This parameter is not supported presently; leave it blank

Type: integer
Range: {0-999}
Default value: 1

Input Examples:

```
DLT-AUDIO-ANNC::3001;

ED-AUDIO-ANNC::3001:::NAME=AUDIO1,DESC=AUDIOFILE1,
   MSGLIST=100-110;

ENT-AUDIO-ANNC::3001:::NAME=AUDIO1,DESC=AUDIOFILE1,
   MSGLIST=100-110;

RTRV-AUDIO-ANNC::3001;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "3001:NAME=AUDIO1,DESC=AUDIOFILE1,MSGLIST=100-110,
      RPTCNT=1"
;
```

Related Commands:

```
DLT/ED/ENT/RTRV-ANNC-MAP
DLT/ED/ENT/RTRV-AUDIO-MSG
```

DLT/ED/ENT/RTRV-AUDIO-MSG

Commands:

DLT-AUDIO-MSG: Delete Audio Message

ED-AUDIO-MSG: Edit Audio Message

ENT-AUDIO-MSG: Enter Audio Message

RTRV-AUDIO-MSG: Retrieve Audio Message

Descriptions:

DLT-AUDIO-MSG lets the user delete an audio message, provided the audio message is not used in an existing audio announcement

ED-AUDIO-MSG lets the user change the parameters associated with an audio message.

ENT-AUDIO-MSG lets the user establish an audio message.

RTRV-AUDIO-MSG lets the user retrieve parameters associated with an audio message.

Category: Resource Provisioning **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-AUDIO-MSG:[TID]:<AudioMsgAid>:[CTAG];

ED-AUDIO-MSG:[TID]:<AudioMsgAid>:[CTAG]::
   [NAME=<Name>],[DESC=<Description>],
   [FILE=<FilePath>];

ENT-AUDIO-MSG:[TID]:<AudioMsgAid>:[CTAG]::NAME=<Name>,
   DESC=<Description>,FILE=<FilePath>;

RTRV-AUDIO-MSG:[TID]:[<AudioMsgAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<AudioMsgAid>:[NAME=<Name>],[DESCR=<Description>],
      FILESIZE=<FileSize>"
;
```

Parameters:

AudioMsgAid Identifies the AID as an audio message. The first part of the AID is an integer representing the message identifier; the second part is an optional string representing the language variant of the message. You cannot establish, change, or delete audio messages 1-2999; they are already-configured standard messages. Identifiers 3000-63487 are for custom messages; message identifiers 63488-65535 are reserved for future use. A null value for the language variant defaults to the value of *DefVariant*, if any, specified in ED/RTRV-AUDIO-SYS. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, attributes for all audio messages configured in the system will be returned.

Type: AudioMsgAid
Range: {1-65535}[-<VARIANT>]
Default value: none

Name Identifies the name of the audio message.

Type: string
Range: up to 40 alphanumeric characters (excluding spaces, but including underscores "_")
Default value: none

Description Identifies the description of the audio message.

Type: string
Range: up to 80 alphanumeric characters (excluding spaces, but including underscores "_")
Default value: none

FilePath Identifies (in ED and ENT) the complete path to the file on an external FTP server that contains the audio data for the message.

Type: string
Range: up to 80 alphanumeric characters (excluding spaces, but including underscores "_")
Default value: none

FileSize Identifies (in RTRV output) the size of the audio message file in bytes. Although the range is given as {0-8,388,607}, there is currently a maximum of six MB (value = 6000000). 8000 bytes are approximately one second of audio.

Type: integer
Range: {0-8,388,607}
Default value: none

Input Examples:

```
DLT-AUDIO-MSG::3001;

ED-AUDIO-MSG::3001:::NAME=MSG1,DESC=This_is_a_test,
   FILE=/audioData/MSG1.wav;

ENT-AUDIO-MSG::3001:::NAME=MSG1,DESC=This_is_a_test,
   FILE=/audioData/MSG1.wav;

RTRV-AUDIO-MSG::3001;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "3001:NAME=MSG1,DESC=This_is_a_test,FILESIZE=12000"
;
```

Related Commands:

DLT/ED/ENT/RTRV-AUDIO-ANNC

ED/RTRV-AUDIO-SYS

Commands:

ED-AUDIO-SYS: Edit Audio System

RTRV-AUDIO-SYS: Retrieve Audio System

Descriptions:

ED-AUDIO-SYS lets the user change the parameters associated with the audio announcement/message system.

RTRV-AUDIO-SYS lets the user retrieve parameters associated with the audio announcement/message system.

Category: Resource Provisioning **Security:** NSA for ED, View for RTRV

Input Formats:

```
ED-AUDIO-SYS:[TID]:[<src>]:[CTAG]::
   [FTPIPADDR=<FtpIpAddr>],[USERNAME=<UserName>],
   [DISKLIMIT=<DiskLimit>],[DEFVARIANT=<DefVariant>],
   [ANNCPLAN=<anncPlan>]:[<Password>];

RTRV-AUDIO-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:FTPIPADDR=<FtpIpAddr>,USERNAME=<UserName>,
      DISKLIMIT=<DiskLimit>,DEFVARIANT=<DefVariant>,
      ANNCPLAN=<anncPlan>"
;
```

Parameters:

src Identifies the AID as the switch. The factory default is “COM”.

Type: COM
Range: COM
Default value: not applicable

FtpIpAddr Identifies, in dotted decimal notation, the IP address of the external FTP server containing the audio message files. The factory default for an invalid IP address is "0.0.0.0".

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: not applicable

UserName Identifies the FTP username used to log in to the FTP server containing the audio message files. The factory default is anonymous FTP login.

Type: string
Range: up to 63 alphanumeric characters (including underscores "_")
Default value: not applicable

DiskLimit Identifies the amount of disk space in kilobytes to allow for use by audio files. This parameter is reserved for future use and, as such, is fixed at its maximum (default) value of 32768.

Type: integer
Range: {0-32768}
Default value: not applicable

DefVariant Identifies the default language variant used when the language variant is not specified by *AudioMsgAid* in ED/ENT-AUDIO-MSG. The factory default is "default" (lower case).

Type: string
Range: up to 63 alphanumeric characters (including underscores "_")
Default value: not applicable

anncPlan Identifies the country where the switch is installed. The country of installation affects the voice encoding type used (a-law or mu-law) and the modification of certain tones based on in-country requirements (for example, the ring-back tone for Australia). The factory default is "US".

Type: enum
Range: AU = Australia
CA = Canada (not yet implemented)
MX = Mexico (not yet implemented)
US = United States
Default value: not applicable

Password Identifies the FTP password used to log in to the FTP server containing the audio message files. The entered password displays as a series of asterisks. There is no factory default.

Type: string
Range: up to 63 alphanumeric characters (including underscores "_")
Default value: not applicable

Input Examples:

```
ED-AUDIO-SYS:::::FTPIPADDR=10.0.0.9,USERNAME=LUCENT,
   DEFVARIANT=default,ANNCPLAN=US:********;

RTRV-AUDIO-SYS;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "COM:FTPIPADDR=10.0.0.9,USERNAME=LUCENT,
      DISKLIMIT=32786,DEFVARIANT=default,ANNCPLAN=US"
;
```

Related Commands: none

RTRV-AUDIO-VMSG

Command:

RTRV-AUDIO-VMSG: Retrieve Audio Variable Message

Description:

RTRV-AUDIO-VMSG lets the user retrieve the description of a variable audio message.

Category: Resource Provisioning **Security:** View

Input Format:

```
RTRV-AUDIO-VMSG:[TID]:[<vmsgname>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<vmsgname>:[DESC=<Descr>]"
;
```

Parameters:

vmsgname Identifies the AID as a variable audio message. A null value is equivalent to "ALL"; that is, by leaving the field blank, descriptions of all variable audio messages configured in the system will be returned.

Type: string
Range: up to 40 alphanumeric characters (including underscores "_")
Default value: none

descr Identifies the description of the variable audio message.

Type: string
Range: up to 80 alphanumeric characters (including underscores "_")
Default value: NULL

Input Example:

```
RTRV-AUDIO-VMSG::DISCON;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "DISCON:DESC=has been disconnected"
;
```

Related Commands: none

NOTES

DLT/ED/ENT/RTRV-MG-MGCASSOC

Commands:

DLT-MG-MGCASSOC: Delete Media Gateway Controller Association

ED-MG-MGCASSOC: Edit Media Gateway Controller Association

ENT-MG-MGCASSOC: Enter Media Gateway Controller Association

RTRV-MG-MGCASSOC: Retrieve Media Gateway Controller Association

Descriptions:

DLT-MG-MGCASSOC lets the user delete the association between a Lucent Network Gateway (NG) and a media gateway controller.

ED-MG-MGCASSOC lets the user change the attributes of an association between a Lucent Network Gateway (NG) and a media gateway controller.

ENT-MG-MGCASSOC lets the user establish an association between a Lucent Network Gateway (NG) and a media gateway controller. Use this command to define the media gateway controller's name, hierarchical position in a cluster of MGCs, and IP address, the UDP ports for MEGACO messages, the transport protocol used by the NG, how to encode MEGACO messages from the NG, values for various timers, the maximum waiting delay for the NG, and the state of the MGC.

RTRV-MG-MGCASSOC lets the user retrieve the attributes of an association between a Lucent Network Gateway (NG) and a media gateway controller.

Category: Call Control **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-MG-MGCASSOC:[TID]:<mgcName>:[CTAG];

ED-MG-MGCASSOC:[TID]:<mgcName>:[CTAG]::
    [IPADDR=<ipAddr>],[RXPORT=<rxPort>],
    [TXPORT=<txPort>],[TRANSPROT=<transProt>],
    [MGTOKEN=<mgToken>],[LONGTMR=<longTmr>],
    [MGCIDLETMR=<mgcIdleTmr>],[PENDTMOUT=<pendTmout>],
    [MAXWAITDELAY=<maxWaitDelay>]:[<pst>];
```

```
ENT-MG-MGCASSOC:[TID]:<mgcName>:[CTAG]::
   MGCTYPE=<mgcType>,IPADDR=<ipAddr>,
   [RXPORT=<rxPort>],[TXPORT=<txPort>],
   [TRANSPROT=<transProt>],[MGTOKEN=<mgToken>],
   [LONGTMR=<longTmr>],[MGCIDLETMR=<mgcIdleTmr>],
   [PENDTMOUT=<pendTmout>],
   [MAXWAITDELAY=<maxWaitDelay>]:[<pst>];

RTRV-MG-MGCASSOC:[TID]:[<mgcName>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<MgcName>:MGCTYPE=<mgcType>,IPADDR=<ipAddr>,
      RXPORT=<rxPort>,TXPORT=<txPort>],
      TRANSPROT=<transProt>,MGTOKEN=<mgToken>,
      LONGTMR=<longTmr>,MGCIDLETMR=<mgcIdleTmr>,
      PENDTMOUT=<pendTmout>,
      MAXWAITDELAY=<maxWaitDelay>:<pst>"
;
```

Parameters:

mgcName Identifies the AID as the media gateway controller associated with the NG. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the system returns information for all MGCs associated with the media gateway.

Type: string
Range: up to 64 ASCII characters
Default value: none

mgcType Identifies the type of media gateway controller; that is, the hierarchical position of the specified MGC in a cluster of MGCs.

Type: enum
Range: PRIMARY
SECONDARY
Default value: none

ipAddr Identifies the IP address for the subject media gateway controller.

Type: string
Range: {0-254}.{0-254}.{0-255}.{1-255}
Default value: none

rxPort Identifies the UDP port on the MGC that receives MEGACO messages from the NG. The MEGACO session terminates unless you reinitialize the NG after changing the UDP port.

Type: integer
Range: {2000-10000}
Default value: 2944

txPort Identifies the UDP port on the NG that transmits MEGACO messages to the MGC. The MEGACO session terminates unless you reinitialize the NG after changing the UDP port.

Type: integer
Range: {2000-10000}
Default value: 2944

transProt Identifies the transport protocol for communicating to the MGC.

Type: enum
Range: TCP = Transmission Control Protocol (currently unsupported)
UDP = User Datagram Protocol
Default value: UDP

mgToken Identifies the token format for (that is, how to encode) MEGACO messages generated by the NG.

Type: enum
Range: BINARY = ASN.1 MEGACO message encoding
LONG = Verbose ASCII text encoding per RFC-3015
SHORT = Compressed ASCII text encoding per RFC-3015
Default value: LONG

longTmr Identifies the maximum retransmission delay, in seconds, which specifies the amount of time the NG waits for the MGC to respond to a transaction request before retransmitting the request.

Type: decinum
Range: {0.5-10}
Default value: 2

mgcIdleTmr Identifies the MEGACO inactivity timer, in seconds. When a MEGACO transaction is not received from the MGC within this period, the NG issues a ServiceChange to the MGC to ensure MEGACO connectivity to the MGC.

Type: integer
Range: {0-3600}
Default value: 0

pendTmout Identifies the time, in seconds, the NG waits for a response before retrying a transaction when a pending response has been received.

Type: decinum
Range: {0.5-8}
Default value: 1

maxWaitDelay Identifies the maximum waiting delay for the NG, in seconds. To prevent a restart avalanche at the MGC, the MEGACO stack waits (for a random time less than the value of *maxWaitDelay*) when the MEGACO Manager sends the first Service Change (with Restart option), before sending the Service Change to the MGC.

Type: integer
Range: {0-120}
Default value: 1

pst Identifies (in ED and ENT) the primary state of the MGC. Calls are disconnected on transition from IS to OOS.

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: IS

pst Identifies (in RTRV output) the primary state and qualifier for the MGC.

Type: enum
Range: IS = In-service
OOS = Out-of-service
OOS-AU = Out-Of-Service, Autonomous
OOS-MA = Out-Of-Service, Managed
Default value: none

Input Examples:

```
DLT-MG-MGCASSOC::MGCPRI;

ED-MG-MGCASSOC::IPADDR=10.17.0.15,
   RXPORT=2944,TXPORT=2944,TRANSPROT=UDP,MGTOKEN=LONG,
   LONGTMR=8,MGCIDLETMR=0,PENDTMOUT=2,
   MAXWAITDELAY=60:IS;

ENT-MG-MGCASSOC::MGCPRI:::MGCTYPE=PRIMARY,
   IPADDR=10.17.0.15,RXPORT=2944,TXPORT=2944,
   TRANSPROT=UDP,MGTOKEN=LONG,LONGTMR=8,MGCIDLETMR=0,
   PENDTMOUT=2,MAXWAITDELAY=60:IS;

RTRV-MG-MGCASSOC;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "MGCPRI:MGCTYPE=PRIMARY,IPADDR=10.17.0.15,
      RXPORT=2944,TXPORT=2944,TRANSPROT=UDP,
      MGTOKEN=LONG,LONGTMR=8,MGCIDLETMR=0,PENDTMOUT=2,
      MAXWAITDELAY=60:IS"
;
```

Related Commands: none

ED/RTRV-MG-SYS

Commands:

ED-MG-SYS: Edit Media Gateway System

RTRV-MG-SYS: Retrieve Media Gateway System

Descriptions:

ED-MG-SYS lets the user change the primary state of the Lucent Network Gateway (NG) and whether to free all physical and ephemeral terminations.

RTRV-MG-SYS lets the user retrieve the state of the Lucent Network Gateway (NG) and whether to free all physical and ephemeral terminations.

Category: VoIP **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-MG-SYS:[TID]:[<src>]:[CTAG]::[RLSCALLS=<rlsCalls>]:
   [<pst>];
```

```
RTRV-MG-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:RLSCALLS=<rlsCalls>:<pst>,<sst>"
;
```

Parameters:

src Identifies the AID as the NG.

Type: COM
Range: COM
Default value: COM

rlsCalls Identifies the whether to free all physical and ephemeral terminations, thus moving them to the NULL context. The factory default is “N”.

Type: BoolYN
Range: N = do not free all physical and ephemeral terminations
Y = free all physical and ephemeral terminations
Default value: not applicable

pst Identifies the primary state of the NG. When transitioning to "OOS", the NG sends a ServiceChange Request with a SHUTDOWN method on the ROOT terminator to the MGC. When transitioning to "IS", a RESTART method is sent to the MGC. The factory default is "IS".

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: not applicable

sst Identifies (in RTRV output) the secondary state of the NG.

Type: enum
Range: ACT = Active
AINS = Automatic, In-service
FAF = Facilities Failure
FLT = Faulted
Default value: not applicable

Input Examples:

```
ED-MG-SYS:::::RLSCALLS=N:IS;

RTRV-MG-SYS;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:RLSCALLS=N:IS"
;
```

Related Commands: none

NOTES

ED/RTRV-PRFL-CODEC

Commands:

ED-PRFL-CODEC: Edit Profile CODEC

RTRV-PRFL-CODEC: Retrieve Profile CODEC

Descriptions:

ED-PRFL-CODEC lets the user edit CODEC properties for both ATM and IP transport. CODEC profiles supply default values when the media gateway controller sends an under-specified request (that is, one with blank fields) to the Lucent Network Gateway NG. The NG compares the incoming request to the configured profiles and provides data from a profile to complete the blank fields.

RTRV-PRFL-CODEC lets the user retrieve CODEC properties for both ATM and IP transport.

Category: VoIP / VToA **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-PRFL-CODEC:[TID]:<codecId>:[CTAG]::[PTIME=<pTime>],
   [VAD=<vad>],[BITRATE=<bitRate>];
```

```
RTRV-PRFL-CODEC:[TID]:[<codecId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<codecId>:PTIME=<pTime>,VAD=<vad>,
      BITRATE=<bitRate>"
;
```

Parameters:

codecId Identifies the AID as a CODEC for ATM or IP transport.

Type: enum
Range: AAL2AMR = ATM Adaptation Layer 2 Adaptive Multi-Rate
AAL2CCD = ATM Adaptation Layer 2 Clear Channel Data
IPG711A = IP G.711 for a-law PCM encoding (Europe)
IPG711U = IP G.711 for mu-law (μ-law) PCM encoding (North America)
IPG723 = IP G.723 encoding
IPG726 = IP G.726 encoding
IPG729 = IP G.729 encoding
IPCCD = IP Clear Channel Data
Default value: none

pTime Identifies the packet time in milliseconds; that is, the time over which data is accumulated before it is assembled into a packet. The factory default is "20" for all values of *codecId* except IPG723, for which the factory default is "30".

Type: enum
Range: for AAL2AMR = {20}
for AAL2CCD = {20}
for IPG711A = {10, 20, 30, 40}
for IPG711U = {10, 20, 30, 40}
for IPG723 = {30, 60}
for IPG726 = {10, 20, 30, 40}
for IPG729 = {10, 20, 30, 40}
for IPCCD = {20}
Default value: not applicable

vad Identifies whether to enable voice activity detection for triggering comfort noise generation (silence suppression). The factory default is "OFF" for all values of *codecId* except IPG723 and IPG729, for which the factory default is "ON".

Type: enum
Range: OFF
ON
Default value: not applicable

bitRate Identifies the bit rate in kilobits per second (Kbps). The factory default is 6.3 when *codecId* is set to IPG723; all other values of *codecId* have just one value for *bitRate*.

Type: enum
Range: for AAL2AMR = {VAR}
for AAL2CCD = {64}
for IPG711A = {64}
for IPG711U = {64}
for IPG723 = {5.3, 6.3}
for IPG726 = {32}
for IPG729 = {8}
for IPCCD = {64}
Default value: not applicable

Input Examples:

```
ED-PRFL-CODEC::IPG711U:::PTIME=20,VAD=OFF,BITRATE=64;

RTRV-PRFL-CODEC;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "AAL2AMR:PTIME=20,VAD=OFF,BITRATE=32"
   "AAL2CCD:PTIME=20,VAD=OFF,BITRATE=64"
   "IPG711A:PTIME=20,VAD=OFF,BITRATE=64"
   "IPG711U:PTIME=20,VAD=OFF,BITRATE=64"
   "IPG723:PTIME=30,VAD=ON,BITRATE=6.3"
   "IPG726:PTIME=20,VAD=OFF,BITRATE=32"
   "IPG729:PTIME=20,VAD=ON,BITRATE=8"
   "IPCCD:PTIME=20,VAD=OFF,BITRATE=64"
;
```

Related Commands: none

ED/RTRV-VOP-SYS

Commands:

ED-VOP-SYS: Edit Voice Over Packet System

RTRV-VOP-SYS: Retrieve Voice Over Packet System

Descriptions:

ED-VOP-SYS lets the user edit general system-wide parameters for the DSP resources in the Lucent Network Gateway (NG). Edits affect only new circuit setups after a VPS module has been removed and restored to service.

RTRV-VOP-SYS lets the user retrieve general system-wide parameters for the DSP resources in the switch.

Category: VoIP / VToA **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-VOP-SYS:[TID]:[<src>]:[CTAG]::[MGTYPE=<mgType>],
   [ECHOTAIL=<echoTail>],[ECDISABLE=<ecDisable>],
   [DEFAULTEC=<defaultEc>],[TDMCOMPAND=<tdmCompand>],
   [VADTHRESH=<vadThresh>],
   [SIDTXINTERVAL=<sidTxInterval>],[CNG=<cng>],
   [IDLEPATTERN=<idlePattern>],[DIFFSERV=<diffServ>],
   [XTALKPERIOD=<xtalkPeriod>],
   [XTALKTHRESH=<xtalkThresh>],
   [IPJITBUFPLMOD=<ipJitBufPlMod>],
   [IPJITBUFLOWTHRESH=<ipJitBufLowThresh>],
   [IPJITBUFHIGHTHRESH=<ipJitBufHighThresh>],
   [IPJITBUFRSPRT=<ipJitBufRspRt>],
   [IPJITBUFNOMINAL=<ipJitBufNominal>],
   [ATMJITBUFPLMOD=<atmJitBufPlMod>],
   [ATMJITBUFLOWTHRESH=<atmJitBufLowThresh>],
   [ATMJITBUFHIGHTHRESH=<atmJitBufHighThresh>],
   [ATMJITBUFRSPRT=<atmJitBufRspRt>],
   [ATMJITBUFNOMINAL=<atmJitBufNominal>];

RTRV-VOP-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:MGTYPE=<mgType>,ECHOTAIL=<echoTail>,
      ECDISABLE=<ecDisable>,DEFAULTEC=<defaultEc>,
      TDMCOMPAND=<tdmCompand>,VADTHRESH=<vadThresh>,
      SIDTXINTERVAL=<sidTxInterval>,CNG=<cng>,
      IDLEPATTERN=<idlePattern>,DIFFSERV=<diffServ>,
      XTALKPERIOD=<xtalkPeriod>,
      XTALKTHRESH=<xtalkThresh>,
      IPJITBUFPLMOD=<ipJitBufPlMod>,
      IPJITBUFLOWTHRESH=<ipJitBufLowThresh>,
      IPJITBUFHIGHTHRESH=<ipJitBufHighThresh>,
      IPJITBUFRSPRT=<ipJitBufRspRt>,
      IPJITBUFNOMINAL=<ipJitBufNominal>,
      ATMJITBUFPLMOD=<atmJitBufPlMod>,
      ATMJITBUFLOWTHRESH=<atmJitBufLowThresh>,
      ATMJITBUFHIGHTHRESH=<atmJitBufHighThresh>,
      ATMJITBUFRSPRT=<atmJitBufRspRt>,
      ATMJITBUFNOMINAL=<atmJitBufNominal>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

mgType Identifies the function of the NG, either UMTS that enables AMR/AAL2 (Adaptive Multi-Rate / ATM Adaptation Layer 2), or TDM to VoIP. The factory default is “TDMIP”.

Type: enum
Range: UMTS = Universal Mobile Telecommunications System
TDMIP = TDM to VoIP
Default value: not applicable

echoTail Identifies the number of milliseconds after a transmission during which echoes are cancelled (if *defaultEC* is set to “ON”). The factory default is “32”.

Type: enum
Range: {0, 8, 16, 32, 64, 128}
Default value: not applicable

ecDisable Identifies the echo canceller disable policy. The factory default is "G168".

Type: enum
Range: G164
G165
G168
NONE
Default value: not applicable

defaultEc Identifies whether to enable echo cancellation. The factory default is "OFF".

Type: enum
Range: OFF = echo cancellers are inactive for all TDM, VoIP, and VoATM terminations unless turned on by H.248
ON = echo cancellers are active for all TDM, VoIP, and VoATM terminations unless turned off by H.248
Default value: not applicable

tdmCompand Identifies the companding type; that is, the PCM encoding method used in the analog-to-digital network conversion when no value is specified in the call setup. The wide dynamic range of speech does not lend itself well to efficient linear digital encoding. A-law and Mu-law encoding effectively reduce the dynamic range of the signal, thereby increasing the coding efficiency and resulting in a signal-to-distortion ratio that is greater than that obtained by linear encoding for a given number of bits. The factory default is "MULAW".

Type: enum
Range: ALAW = a-law algorithm: A standard compression algorithm, used in digital communications systems of the European digital hierarchy to optimize the dynamic range of an analog signal for digitizing.
LINEAR = linear encoding
MULAW = mu-law (μ-law) algorithm: A standard compression algorithm, used in digital communications systems of the North American digital hierarchy to optimize the dynamic range of an analog signal for digitizing.
Default value: not applicable

vadThresh Identifies the voice activity detection threshold, which specifies lower and upper threshold settings used by the voice server modules when silence suppression is active on a VoIP call. The voice codec treats a maintained power level below the lower threshold as silence and triggers the generation of SID (Silence Insertion Descriptor) packets. The codec treats a maintained power level above the upper threshold as an active voice conversation and begins transmission of RTP VoIP packets. The generation of RTP versus SID packets when the power level fluctuates between the upper and lower thresholds is indeterminate. The factory default is "6".

Type: integer
Range: {1-10}, where:

Value	Upper (dB)	Lower (dB)
1	-27	-39
2	-30	-42
3	-33	-45
4	-36	-48
5	-39	-51
6	-42	-54
7	-45	-57
8	-48	-60
9	-51	-63
10	-54	-66

Default value: not applicable

sidTxInterval Identifies the frequency, in milliseconds, of SID packets generated in periods of silence during a conversation. The factory default is "100".

Type: integer
Range: {10-1000}, in 10-millisecond increments
Default value: not applicable

cng Identifies the level, in negative decibels, at which to generate comfort noise during periods of silence. The factory default is "60".

Type: integer
Range: {30-77}
Default value: not applicable

idlePattern Identifies the idle pattern generated (as a hex string) by the DSP when a clear channel data call is established over a VoIP circuit. When the jitter buffer under runs, the DSP generates the specified octet until the next RTP packet is received. In most situations, an HDLC protocol is transported over a clear channel VoIP RTP stream. If an underrun occurs, the transmission of an HDLC flag X.7e' should be generated to force HDLC realignment. The factory default is "7E".

Type: string
Range: {00-ff}
Default value: not applicable

diffServ Identifies the six-bit wide DSCP bit mask, representing differentiated services for RTP ports, that follows the two-bit wide CU bit mask (always zero – cannot be changed) to form the TOS (Type of Service) octet. The factory default is "000101".

Type: string
Range: six-digit string of "1"s and "0"s
Default value: not applicable

xtalkPeriod Identifies the number of consecutive RTP packets with no change in any remote parameter (SSRC, UDP_PORT, IP_ADDRESS) to qualify the current RTP stream as valid. The factory default is "200".

Type: integer
Range: {1-1000}
Default value: not applicable

xtalkThresh Identifies the number of packets with changes in the remote parameters (SSRC, UDP_PORT, IP_ADDRESS) required to generate an event indicating that IP XTALK may be present. The factory default is "100".

Type: integer
Range: {0-1000}
Default value: not applicable

ipJitBufPlMod Identifies the jitter buffer playout mode for VoIP. When the jitter buffer mode is set to "ADAPTIVE", the nominal jitter buffer for the circuit approaches the jitter buffer high threshold setting when there is large jitter variance (higher delay but good absorbance of jitter) and moves toward the low jitter buffer threshold when jitter is low (lower delay). The factory default is "FIXED".

Type: enum
Range: ADAPTIVE = proprietary voice buffer management
FIXED = fixed buffer management
Default value: not applicable

ipJitBufLowThresh Identifies the jitter buffer low threshold in milliseconds. This parameter applies only when the value of *ipJitBufPlMod* is "ADAPTIVE". The factory default is "10".

Type: integer
Range: {0-315}
Default value: not applicable

ipJitBufHighThresh Identifies the jitter buffer high threshold in milliseconds. This parameter applies only when the value of *ipJitBufPlMod* is "ADAPTIVE". The value of *ipJitBufHighThresh* must be greater than the value of *ipJitBufLowThresh*. The factory default is "16".

Type: integer
Range: {0-320}
Default value: not applicable

ipJitBufRspRt Identifies the jitter buffer response rate (time constant). The time constant determines the speed of adaptation with the following trade-off: a longer time constant slows adaptation but results in a more stable jitter buffer nominal threshold variable. A shorter time constant causes faster adaptation but at the same time may result in frequent changes in the jitter buffer nominal threshold variable. For jitters in bursts one can expect a better trade off by using a smaller time constant; for random jitter a longer time constant is more appropriate. The choice of optimal parameters is system dependent and should be selected based on the measure of jitter in the network. However, assuming random jitter and desire for small changes in delay over short instances, Lucent recommends setting the starting values of *ipJitBufNominal* and *ipJitBufLowThresh* to "10", *ipJitBufHighThresh* to "16", and *ipJitBufRspRt* to "100". The factory default is "100".

Type: integer
Range: {1-127}
Default value: not applicable

ipJitBufNominal Identifies the nominal jitter buffer size for transport over IP in milliseconds. The factory default is "10".

Type: integer
Range: {5-320}
Default value: not applicable

atmJitBufPlMod Identifies the jitter buffer playout mode for ATM (AAL1 or AAL2). When the jitter buffer mode is set to "ADAPTIVE", the nominal jitter buffer for the circuit approaches the jitter buffer high threshold setting when there is large jitter variance (higher delay but good absorbance of jitter) and moves toward the low jitter buffer threshold when jitter is low (lower delay). The factory default is "FIXED".

Type: enum
Range: ADAPTIVE = proprietary voice buffer management
FIXED = fixed buffer management
Default value: not applicable

atmJitBufLowThresh Identifies the jitter buffer low threshold in milliseconds. This parameter applies only when the value of *atmJitBufPlMod* is "ADAPTIVE". The factory default is "10".

Type: integer
Range: {0-315}
Default value: not applicable

atmJitBufHighThresh Identifies the jitter buffer high threshold in milliseconds. This parameter applies only when the value of *atmJitBufPlMod* is "ADAPTIVE". The value of *atmJitBufHighThresh* must be greater than the value of *atmJitBufLowThresh*. The factory default is "16".

Type: integer
Range: {0-320}
Default value: not applicable

atmJitBufRspRt Identifies the jitter buffer response rate (time constant). The time constant determines the speed of adaptation with the following trade-off: a longer time constant slows adaptation but results in a more stable jitter buffer nominal threshold variable. A shorter time constant causes faster adaptation but at the same time may result in frequent changes in the jitter buffer nominal threshold variable. For jitters in bursts one can expect a better trade off by using a smaller time constant; for random jitter a longer time constant is more appropriate. The choice of optimal parameters is system dependent and should be selected based on the measure of jitter in the network. However, assuming random jitter and desire for small changes in delay over short instances, Lucent recommends setting the starting values of *atmJitBufNominal* and *atmJitBufLowThresh* to "10", *atmJitBufHighThresh* to "16", and *atmJitBufRspRt* to "100". The factory default is "100".

Type: integer
Range: {1-127}
Default value: not applicable

atmJitBufNominal Identifies the nominal jitter buffer size for transport over ATM in milliseconds. The factory default is "10".

Type: integer
Range: {5-320}
Default value: not applicable

Input Examples:

```
ED-VOP-SYS::::MGTYPE=TDMIP,ECHOTAIL=32,
   ECDISABLE=G168,DEFAULTEC=OFF,TDMCOMPAND=MULAW,
   VADTHRESH=6,SIDTXINTERVAL=100,CNG=60,
   IDLEPATTERN=7E,DIFFSERV=000101,XTALKPERIOD=200,
   XTALKTHRESH=100,IPJITBUFPLMOD=ADAPTIVE,
   IPJITBUFLOWTHRESH=10,IPJITBUFHIGHTHRESH=16,
   IPJITBUFRSPRT=100,IPJITBUFNOMINAL=10,
   ATMJITBUFPLMOD=ADAPTIVE,ATMJITBUFLOWTHRESH=10,
   ATMJITBUFHIGHTHRESH=16,ATMJITBUFRSPRT=100,
   ATMJITBUFNOMINAL=10;

RTRV-VOP-SYS;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:MGTYPE=TDMIP,ECHOTAIL=32,ECDISABLE=G168,
      DEFAULTEC=OFF,TDMCOMPAND=MULAW,VADTHRESH=6,
      SIDTXINTERVAL=100,CNG=60,IDLEPATTERN=7E,
      DIFFSERV=000101,XTALKPERIOD=200,XTALKTHRESH=100,
      IPJITBUFPLMOD=ADAPTIVE,IPJITBUFLOWTHRESH=10,
      IPJITBUFHIGHTHRESH=16,IPJITBUFRSPRT=100,
      IPJITBUFNOMINAL=10,ATMJITBUFPLMOD=ADAPTIVE,
      ATMJITBUFLOWTHRESH=10,ATMJITBUFHIGHTHRESH=16,
      ATMJITBUFRSPRT=100,ATMJITBUFNOMINAL=10"
;
```

Related Commands: none

RTRV-PM-VPVOIP

Command:

RTRV-PM-VPVOIP: Retrieve Performance Monitors VPVOIP

Description:

RTRV-PM-VPVOIP lets the user retrieve current and historical performance data for a voice processor on a Voice over IP (VoIP) IOM.

Category: VoIP **Security:** View

Input Format:

```
RTRV-PM-VPVOIP:[TID]:<vpId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<vpId>:<montype>,<monval>,<vldty>,<locn>,<dirn>,
      <tmper>,<mondat>,<montm>"
;
```

Parameters:

vpId Identifies the AID as a voice processor on a VoIP IOM. A null value for the second field in the range is equivalent to "ALL"; that is, by leaving the field blank, the system returns information for all voice processors on the IOM specified by the first field in the range.

Type: vpId
Range: IOM-{1-17}[-VP-{1-8}]
Default value: none

montype Identifies the registers (for a type of monitored parameter) from which to retrieve performance data.

Type: enum
Range: ALL = All types
CINDROP = Number of incoming cells dropped
COUTDROP = Number of outgoing cells dropped
CR = Number of cells received
CT = Number of cells transmitted
CTDR = Number of control packets received
CTDT = Number of control packets transmitted
CTPRDROPINVALIDSIZE = Number of control packets dropped due to invalid size
CTPRDROPNONUDP = Number of control packets dropped due to not being UDP
CTPRDROPNORSRC = Number of control packets dropped due to lack of resources
HEC = Number of cells with header error count
IPR = Number of IP packets received
IPRBADHLEN = Number of IP packets received with bad header length
IPRBADIP = Number of IP packets received with bad IP address
IPRBADSUM = Number of IP packets received with bad checksum
IPRBADUDP = Number of IP packets received with bad UDP port
IPRVALID = Number of valid IP packets received
IPT = Number of IP packets transmitted
PR = Number of packets received
PT = Number of packets transmitted
UDPR = Number of UDP packets received
UDPT = Number of UDP packets transmitted
UNRECCELL = Number of unrecognized cells
Default value: ALL

monval Identifies (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates.

Type: integer
Range: {0-4294967295}
Default value: 0

monlev Indicates the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it. This parameter is not supported presently; its value will be "NULL".

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: not applicable for output

locn Identifies the location of the storage counters from which to retrieve performance data. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: BTH = Both directions
RCV = Receive direction only
TRMT = Transmit direction only
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". This parameter is not supported presently; leave it blank.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: 15-MIN

mondat Indicates the monitored date. The value indicates the beginning date for the performance-monitoring period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Indicates the monitored time. The value indicates the beginning time of day for the performance-monitoring period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Example:

```
RTRV-PM-VPVOIP::IOM-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-11-VP-3:CT,0,COMPL,,,,"
   "IOM-11-VP-3:CR,0,COMPL,,,,"
   "IOM-11-VP-3:HEC,0,COMPL,,,,"
   "IOM-11-VP-3:UNRECCELLS,0,COMPL,,,,"
   "IOM-11-VP-3:OUTDROP,0,COMPL,,,,"
   "IOM-11-VP-3:INDROP,0,COMPL,,,,"
   "IOM-11-VP-3:PT,0,COMPL,,,,"
   "IOM-11-VP-3:PR,0,COMPL,,,,"
   "IOM-11-VP-3:UDPT,0,COMPL,,,,"
   "IOM-11-VP-3:UDPR,0,COMPL,,,,"
   "IOM-11-VP-3:CTDT,0,COMPL,,,,"
   "IOM-11-VP-3:CTDR,0,COMPL,,,,"
   "IOM-11-VP-3:IPT,0,COMPL,,,,"
   "IOM-11-VP-3:IPR,0,COMPL,,,,"
   "IOM-11-VP-3:IPRVALID,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADSUM,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADHLEN,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADIP,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADUDP,0,COMPL,,,,"
   "IOM-11-VP-3:CTPDROPNORSRC,0,COMPL,,,,"
   "IOM-11-VP-3:CTPDROPINVALIDSIZE,0,COMPL,,,,"
   "IOM-11-VP-3:CTPDROPNONUDP,0,COMPL,,,,"
;
```

Related Commands: none

RTRV-STATUS-MG

Command:

RTRV-STATUS-MG: Retrieve Status Media Gateway

Description:

RTRV-STATUS-MG lets the user retrieve, for the switch configured as a media gateway, the number of active contexts, the number of TDM terminations available and used, the number of packet terminations used, and the number of resources available for various compression protocols and for TDM echo cancellation.

Category: VoIP **Security:** View

Input Format:

```
RTRV-STATUS-MG:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:NUMCONTEXTS=<numContexts>,
      NUMTDMTERMUSED=<numTdmTermUsed>,
      NUMTDMTERMAVAIL=<numTdmTermAvail>,
      NUMVOIPTERMUSED=<numVoipTermUsed>,
      VOIPTDMECAVAIL=<voipTdmEcAvail>,
      RESPRFL1=<resPrfl1>,RESPRFL2=<resPrfl2>,
      RESPRFL3=<resPrfl3>,RESPRFL4=<resPrfl4>,
      RESPRFL5=<resPrfl5>,RESPRFL6=<resPrfl6>,
      RESPRFL7=<resPrfl7>,
      NOECAVAILCURRENT=<noEcAvailCurrent>,
      NOECAVAILTOTAL=<noEcAvailTotal>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

numContexts Identifies the number of active contexts.

Type: integer
Range: {0-2147483648}
Default value: none

numTdmTermUsed Identifies the number of TDM terminations used.

Type: integer
Range: {0-2147483648}
Default value: none

numTdmTermAvail Identifies the number of TDM terminations available.

Type: integer
Range: {0-2147483648}
Default value: none

numVoipTermUsed Identifies the number of VoIP terminations used.

Type: integer
Range: {0-2147483648}
Default value: none

voipTdmEcAvail Identifies the number of resources available for TDM echo cancellation on a VoIP IOM.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl1 Identifies the number of resources available for G711/Clear Channel data calls.

Type: integer
Range: {0-128000}
Default value: none

resPrfl2 Identifies the number of resources available for G729 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl3 Identifies the number of resources available for G723 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl4 Identifies the number of resources available for G726 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl5 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl6 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl7 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

noEcAvailCurrent Identifies the number of requests for TDM echo cancellation that have failed due to resource unavailability since the last issuance of this command.

Type: integer
Range: {0-2147483648}
Default value: none

noEcAvailTotal Identifies the number of requests for TDM echo cancellation that have failed due to resource unavailability since the last switch reboot.

Type: integer
Range: {0-2147483648}
Default value: none

Input Example:

```
RTRV-STATUS-MG;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:NUMCONTEXTS=0,NUMTDMTERMUSED=0,
      NUMTDMTERMAVAIL=16368,NUMVOIPTERMUSED=0,
      VOIPTDMECAVAIL=65535,RESPRFL1=0,RESPRFL2=0,
      RESPRFL3=0,RESPRFL4=0,RESPRFL5=0,RESPRFL6=0,
      RESPRFL7=0,NOECAVAILCURRENT=0,NOECAVAILTOTAL=0"
;
```

Related Commands: none

RTRV-STATUS-VPS

Command:

RTRV-STATUS-VPS: Retrieve Status Voice Processor Server

Description:

RTRV-STATUS-VPS lets the user retrieve information for the Voice Processor Server (VPS) modules (including the protection module) in the switch configured as a media gateway. Note that when a VPS module fails over to the protection module, its call path state remains in service; that is, the switch continues to report calls on the failed VPS module as still being on the failed VPS module.

Category: VoIP **Security:** View

Input Format:

```
RTRV-STATUS-VPS:[TID]:[<iomAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iomAid>:TYPE=<type>,VPSSTATUS=<vpsStatus>,
      VOIPNETWORKCONN=<voipNetworkConn>,
      TDMECAVAIL=<tdmEcAvail>,RESPRFL1=<resPrfl1>,
      RESPRFL2=<resPrfl2>,RESPRFL3=<resPrfl3>,
      RESPRFL4=<resPrfl4>,RESPRFL5=<resPrfl5>,
      RESPRFL6=<resPrfl6>,RESPRFL7=<resPrfl7>"
;
```

Parameters:

iomAid Identifies the AID as an IOM slot containing a Voice Processor Server module. A null value is equivalent to "ALL"; that is, by leaving the field blank, information for all Voice Processor Server modules in the system will be returned.

Type: IomAid
Range: IOM-{1-17}
Default value: none

type Identifies the type of VPS module; that is, whether it supports VoIP or VoA calls.

Type: enum
Range: VOA = Voice over ATM (Asynchronous Transfer Mode)
VOIP = Voice over Internet Protocol
Default value: none

vpsStatus Identifies the current state of the Voice Processor Server module.

Type: enum
Range: FAILINGOVER = a brief state while the protection IOM is being initialized with the data about the failed IOM
IS = In-service
OOS = Out-of-service
PROTECTED = the state where the IOM is OOS and calls are handled by the protection IOM
TEST = VPS is under test
Default value: none

voipNetworkConn Identifies indicates whether the VPS module's connectivity to the network can support VOIP calls.

Type: enum
Range: IS = In-service
OOS = Out-of-service
Default value: none

tdmEcAvail Identifies the number of resources available for TDM echo cancellation on the VPS module.

Type: integer
Range: {0-65535}
Default value: none

resPrfl1 Identifies the number of resources available for G711/Clear Channel data calls.

Type: integer
Range: {0-128000}
Default value: none

resPrfl2 Identifies the number of resources available for G729 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl3 Identifies the number of resources available for G723 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl4 Identifies the number of resources available for G726 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl5 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl6 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl7 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

Input Example:

```
RTRV-STATUS-VPS::IOM-17;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-17:TYPE=VOIP,VPSSTATUS=IS,VOIPNETWORKCONN=OOS,
      TDMECAVAIL=65535,RESPRFL1=0,RESPRFL2=0,
      RESPRFL3=0,RESPRFL4=0,RESPRFL5=0,RESPRFL6=0,
      RESPRFL7=0"
;
```

Related Commands: none

ED/RTRV-PRFL-CODEC

Commands:

ED-PRFL-CODEC: Edit Profile CODEC

RTRV-PRFL-CODEC: Retrieve Profile CODEC

Descriptions:

ED-PRFL-CODEC lets the user edit CODEC properties for both ATM and IP transport. CODEC profiles supply default values when the media gateway controller sends an under-specified request (that is, one with blank fields) to the Lucent Network Gateway NG. The NG compares the incoming request to the configured profiles and provides data from a profile to complete the blank fields.

RTRV-PRFL-CODEC lets the user retrieve CODEC properties for both ATM and IP transport.

Category: VoIP / VToA **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-PRFL-CODEC:[TID]:<codecId>:[CTAG]::[PTIME=<pTime>],
   [VAD=<vad>],[BITRATE=<bitRate>];
```

```
RTRV-PRFL-CODEC:[TID]:[<codecId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<codecId>:PTIME=<pTime>,VAD=<vad>,
      BITRATE=<bitRate>"
;
```

Parameters:

codecId Identifies the AID as a CODEC for ATM or IP transport.

Type: enum
Range: AAL2AMR = ATM Adaptation Layer 2 Adaptive Multi-Rate
AAL2CCD = ATM Adaptation Layer 2 Clear Channel Data
IPG711A = IP G.711 for a-law PCM encoding (Europe)
IPG711U = IP G.711 for mu-law (μ-law) PCM encoding (North America)
IPG723 = IP G.723 encoding
IPG726 = IP G.726 encoding
IPG729 = IP G.729 encoding
IPCCD = IP Clear Channel Data
Default value: none

pTime Identifies the packet time in milliseconds; that is, the time over which data is accumulated before it is assembled into a packet. The factory default is "20" for all values of *codecId* except IPG723, for which the factory default is "30".

Type: enum
Range: for AAL2AMR = {20}
for AAL2CCD = {20}
for IPG711A = {10, 20, 30, 40}
for IPG711U = {10, 20, 30, 40}
for IPG723 = {30, 60}
for IPG726 = {10, 20, 30, 40}
for IPG729 = {10, 20, 30, 40}
for IPCCD = {20}
Default value: not applicable

vad Identifies whether to enable voice activity detection for triggering comfort noise generation (silence suppression). The factory default is "OFF" for all values of *codecId* except IPG723 and IPG729, for which the factory default is "ON".

Type: enum
Range: OFF
ON
Default value: not applicable

bitRate Identifies the bit rate in kilobits per second (Kbps). The factory default is 6.3 when *codecId* is set to IPG723; all other values of *codecId* have just one value for *bitRate*.

Type: enum
Range: for AAL2AMR = {VAR}
for AAL2CCD = {64}
for IPG711A = {64}
for IPG711U = {64}
for IPG723 = {5.3, 6.3}
for IPG726 = {32}
for IPG729 = {8}
for IPCCD = {64}
Default value: not applicable

Input Examples:

```
ED-PRFL-CODEC::IPG711U:::PTIME=20,VAD=OFF,BITRATE=64;

RTRV-PRFL-CODEC;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "AAL2AMR:PTIME=20,VAD=OFF,BITRATE=32"
   "AAL2CCD:PTIME=20,VAD=OFF,BITRATE=64"
   "IPG711A:PTIME=20,VAD=OFF,BITRATE=64"
   "IPG711U:PTIME=20,VAD=OFF,BITRATE=64"
   "IPG723:PTIME=30,VAD=ON,BITRATE=6.3"
   "IPG726:PTIME=20,VAD=OFF,BITRATE=32"
   "IPG729:PTIME=20,VAD=ON,BITRATE=8"
   "IPCCD:PTIME=20,VAD=OFF,BITRATE=64"
;
```

Related Commands: none

ED/RTRV-VOP-SYS

Commands:

ED-VOP-SYS: Edit Voice Over Packet System

RTRV-VOP-SYS: Retrieve Voice Over Packet System

Descriptions:

ED-VOP-SYS lets the user edit general system-wide parameters for the DSP resources in the Lucent Network Gateway (NG). Edits affect only new circuit setups after a VPS module has been removed and restored to service.

RTRV-VOP-SYS lets the user retrieve general system-wide parameters for the DSP resources in the switch.

Category: VoIP / VToA **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-VOP-SYS:[TID]:[<src>]:[CTAG]::[MGTYPE=<mgType>],
   [ECHOTAIL=<echoTail>],[ECDISABLE=<ecDisable>],
   [DEFAULTEC=<defaultEc>],[TDMCOMPAND=<tdmCompand>],
   [VADTHRESH=<vadThresh>],
   [SIDTXINTERVAL=<sidTxInterval>],[CNG=<cng>],
   [IDLEPATTERN=<idlePattern>],[DIFFSERV=<diffServ>],
   [XTALKPERIOD=<xtalkPeriod>],
   [XTALKTHRESH=<xtalkThresh>],
   [IPJITBUFPLMOD=<ipJitBufPlMod>],
   [IPJITBUFLOWTHRESH=<ipJitBufLowThresh>],
   [IPJITBUFHIGHTHRESH=<ipJitBufHighThresh>],
   [IPJITBUFRSPRT=<ipJitBufRspRt>],
   [IPJITBUFNOMINAL=<ipJitBufNominal>],
   [ATMJITBUFPLMOD=<atmJitBufPlMod>],
   [ATMJITBUFLOWTHRESH=<atmJitBufLowThresh>],
   [ATMJITBUFHIGHTHRESH=<atmJitBufHighThresh>],
   [ATMJITBUFRSPRT=<atmJitBufRspRt>],
   [ATMJITBUFNOMINAL=<atmJitBufNominal>];

RTRV-VOP-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:MGTYPE=<mgType>,ECHOTAIL=<echoTail>,
      ECDISABLE=<ecDisable>,DEFAULTEC=<defaultEc>,
      TDMCOMPAND=<tdmCompand>,VADTHRESH=<vadThresh>,
      SIDTXINTERVAL=<sidTxInterval>,CNG=<cng>,
      IDLEPATTERN=<idlePattern>,DIFFSERV=<diffServ>,
      XTALKPERIOD=<xtalkPeriod>,
      XTALKTHRESH=<xtalkThresh>,
      IPJITBUFPLMOD=<ipJitBufPlMod>,
      IPJITBUFLOWTHRESH=<ipJitBufLowThresh>,
      IPJITBUFHIGHTHRESH=<ipJitBufHighThresh>,
      IPJITBUFRSPRT=<ipJitBufRspRt>,
      IPJITBUFNOMINAL=<ipJitBufNominal>,
      ATMJITBUFPLMOD=<atmJitBufPlMod>,
      ATMJITBUFLOWTHRESH=<atmJitBufLowThresh>,
      ATMJITBUFHIGHTHRESH=<atmJitBufHighThresh>,
      ATMJITBUFRSPRT=<atmJitBufRspRt>,
      ATMJITBUFNOMINAL=<atmJitBufNominal>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

mgType Identifies the function of the NG, either UMTS that enables AMR/AAL2 (Adaptive Multi-Rate / ATM Adaptation Layer 2), or TDM to VoIP. The factory default is “TDMIP”.

Type: enum
Range: UMTS = Universal Mobile Telecommunications System
TDMIP = TDM to VoIP
Default value: not applicable

echoTail Identifies the number of milliseconds after a transmission during which echoes are cancelled (if *defaultEC* is set to “ON”). The factory default is “32”.

Type: enum
Range: {0, 8, 16, 32, 64, 128}
Default value: not applicable

ecDisable Identifies the echo canceller disable policy. The factory default is "G168".

Type: enum
Range: G164
G165
G168
NONE
Default value: not applicable

defaultEc Identifies whether to enable echo cancellation. The factory default is "OFF".

Type: enum
Range: OFF = echo cancellers are inactive for all TDM, VoIP, and VoATM terminations unless turned on by H.248
ON = echo cancellers are active for all TDM, VoIP, and VoATM terminations unless turned off by H.248
Default value: not applicable

tdmCompand Identifies the companding type; that is, the PCM encoding method used in the analog-to-digital network conversion when no value is specified in the call setup. The wide dynamic range of speech does not lend itself well to efficient linear digital encoding. A-law and Mu-law encoding effectively reduce the dynamic range of the signal, thereby increasing the coding efficiency and resulting in a signal-to-distortion ratio that is greater than that obtained by linear encoding for a given number of bits. The factory default is "MULAW".

Type: enum
Range: ALAW = a-law algorithm: A standard compression algorithm, used in digital communications systems of the European digital hierarchy to optimize the dynamic range of an analog signal for digitizing.
LINEAR = linear encoding
MULAW = mu-law (μ-law) algorithm: A standard compression algorithm, used in digital communications systems of the North American digital hierarchy to optimize the dynamic range of an analog signal for digitizing.
Default value: not applicable

vadThresh Identifies the voice activity detection threshold, which specifies lower and upper threshold settings used by the voice server modules when silence suppression is active on a VoIP call. The voice codec treats a maintained power level below the lower threshold as silence and triggers the generation of SID (Silence Insertion Descriptor) packets. The codec treats a maintained power level above the upper threshold as an active voice conversation and begins transmission of RTP VoIP packets. The generation of RTP versus SID packets when the power level fluctuates between the upper and lower thresholds is indeterminate. The factory default is "6".

Type: integer
Range: {1-10}, where:

Value	Upper (dB)	Lower (dB)
1	-27	-39
2	-30	-42
3	-33	-45
4	-36	-48
5	-39	-51
6	-42	-54
7	-45	-57
8	-48	-60
9	-51	-63
10	-54	-66

Default value: not applicable

sidTxInterval Identifies the frequency, in milliseconds, of SID packets generated in periods of silence during a conversation. The factory default is "100".

Type: integer
Range: {10-1000}, in 10-millisecond increments
Default value: not applicable

cng Identifies the level, in negative decibels, at which to generate comfort noise during periods of silence. The factory default is "60".

Type: integer
Range: {30-77}
Default value: not applicable

idlePattern Identifies the idle pattern generated (as a hex string) by the DSP when a clear channel data call is established over a VoIP circuit. When the jitter buffer under runs, the DSP generates the specified octet until the next RTP packet is received. In most situations, an HDLC protocol is transported over a clear channel VoIP RTP stream. If an underrun occurs, the transmission of an HDLC flag X.7e' should be generated to force HDLC realignment. The factory default is "7E".

Type: string
Range: {00-ff}
Default value: not applicable

diffServ Identifies the six-bit wide DSCP bit mask, representing differentiated services for RTP ports, that follows the two-bit wide CU bit mask (always zero – cannot be changed) to form the TOS (Type of Service) octet. The factory default is "000101".

Type: string
Range: six-digit string of "1"s and "0"s
Default value: not applicable

xtalkPeriod Identifies the number of consecutive RTP packets with no change in any remote parameter (SSRC, UDP_PORT, IP_ADDRESS) to qualify the current RTP stream as valid. The factory default is "200".

Type: integer
Range: {1-1000}
Default value: not applicable

xtalkThresh Identifies the number of packets with changes in the remote parameters (SSRC, UDP_PORT, IP_ADDRESS) required to generate an event indicating that IP XTALK may be present. The factory default is "100".

Type: integer
Range: {0-1000}
Default value: not applicable

ipJitBufPlMod Identifies the jitter buffer playout mode for VoIP. When the jitter buffer mode is set to "ADAPTIVE", the nominal jitter buffer for the circuit approaches the jitter buffer high threshold setting when there is large jitter variance (higher delay but good absorbance of jitter) and moves toward the low jitter buffer threshold when jitter is low (lower delay). The factory default is "FIXED".

Type: enum
Range: ADAPTIVE = proprietary voice buffer management
FIXED = fixed buffer management
Default value: not applicable

ipJitBufLowThresh Identifies the jitter buffer low threshold in milliseconds. This parameter applies only when the value of *ipJitBufPlMod* is "ADAPTIVE". The factory default is "10".

Type: integer
Range: {0-315}
Default value: not applicable

ipJitBufHighThresh Identifies the jitter buffer high threshold in milliseconds. This parameter applies only when the value of *ipJitBufPlMod* is "ADAPTIVE". The value of *ipJitBufHighThresh* must be greater than the value of *ipJitBufLowThresh*. The factory default is "16".

Type: integer
Range: {0-320}
Default value: not applicable

ipJitBufRspRt Identifies the jitter buffer response rate (time constant). The time constant determines the speed of adaptation with the following trade-off: a longer time constant slows adaptation but results in a more stable jitter buffer nominal threshold variable. A shorter time constant causes faster adaptation but at the same time may result in frequent changes in the jitter buffer nominal threshold variable. For jitters in bursts one can expect a better trade off by using a smaller time constant; for random jitter a longer time constant is more appropriate. The choice of optimal parameters is system dependent and should be selected based on the measure of jitter in the network. However, assuming random jitter and desire for small changes in delay over short instances, Lucent recommends setting the starting values of *ipJitBufNominal* and *ipJitBufLowThresh* to "10", *ipJitBufHighThresh* to "16", and *ipJitBufRspRt* to "100". The factory default is "100".

Type: integer
Range: {1-127}
Default value: not applicable

ipJitBufNominal Identifies the nominal jitter buffer size for transport over IP in milliseconds. The factory default is "10".

Type: integer
Range: {5-320}
Default value: not applicable

atmJitBufPlMod Identifies the jitter buffer playout mode for ATM (AAL1 or AAL2). When the jitter buffer mode is set to "ADAPTIVE", the nominal jitter buffer for the circuit approaches the jitter buffer high threshold setting when there is large jitter variance (higher delay but good absorbance of jitter) and moves toward the low jitter buffer threshold when jitter is low (lower delay). The factory default is "FIXED".

Type: enum
Range: ADAPTIVE = proprietary voice buffer management
FIXED = fixed buffer management
Default value: not applicable

atmJitBufLowThresh Identifies the jitter buffer low threshold in milliseconds. This parameter applies only when the value of *atmJitBufPlMod* is "ADAPTIVE". The factory default is "10".

Type: integer
Range: {0-315}
Default value: not applicable

atmJitBufHighThresh Identifies the jitter buffer high threshold in milliseconds. This parameter applies only when the value of *atmJitBufPlMod* is "ADAPTIVE". The value of *atmJitBufHighThresh* must be greater than the value of *atmJitBufLowThresh*. The factory default is "16".

Type: integer
Range: {0-320}
Default value: not applicable

atmJitBufRspRt Identifies the jitter buffer response rate (time constant). The time constant determines the speed of adaptation with the following trade-off: a longer time constant slows adaptation but results in a more stable jitter buffer nominal threshold variable. A shorter time constant causes faster adaptation but at the same time may result in frequent changes in the jitter buffer nominal threshold variable. For jitters in bursts one can expect a better trade off by using a smaller time constant; for random jitter a longer time constant is more appropriate. The choice of optimal parameters is system dependent and should be selected based on the measure of jitter in the network. However, assuming random jitter and desire for small changes in delay over short instances, Lucent recommends setting the starting values of *atmJitBufNominal* and *atmJitBufLowThresh* to "10", *atmJitBufHighThresh* to "16", and *atmJitBufRspRt* to "100". The factory default is "100".

Type: integer
Range: {1-127}
Default value: not applicable

atmJitBufNominal Identifies the nominal jitter buffer size for transport over ATM in milliseconds. The factory default is "10".

Type: integer
Range: {5-320}
Default value: not applicable

Input Examples:

```
ED-VOP-SYS::::MGTYPE=TDMIP,ECHOTAIL=32,
   ECDISABLE=G168,DEFAULTEC=OFF,TDMCOMPAND=MULAW,
   VADTHRESH=6,SIDTXINTERVAL=100,CNG=60,
   IDLEPATTERN=7E,DIFFSERV=000101,XTALKPERIOD=200,
   XTALKTHRESH=100,IPJITBUFPLMOD=ADAPTIVE,
   IPJITBUFLOWTHRESH=10,IPJITBUFHIGHTHRESH=16,
   IPJITBUFRSPRT=100,IPJITBUFNOMINAL=10,
   ATMJITBUFPLMOD=ADAPTIVE,ATMJITBUFLOWTHRESH=10,
   ATMJITBUFHIGHTHRESH=16,ATMJITBUFRSPRT=100,
   ATMJITBUFNOMINAL=10;

RTRV-VOP-SYS;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:MGTYPE=TDMIP,ECHOTAIL=32,ECDISABLE=G168,
      DEFAULTEC=OFF,TDMCOMPAND=MULAW,VADTHRESH=6,
      SIDTXINTERVAL=100,CNG=60,IDLEPATTERN=7E,
      DIFFSERV=000101,XTALKPERIOD=200,XTALKTHRESH=100,
      IPJITBUFPLMOD=ADAPTIVE,IPJITBUFLOWTHRESH=10,
      IPJITBUFHIGHTHRESH=16,IPJITBUFRSPRT=100,
      IPJITBUFNOMINAL=10,ATMJITBUFPLMOD=ADAPTIVE,
      ATMJITBUFLOWTHRESH=10,ATMJITBUFHIGHTHRESH=16,
      ATMJITBUFRSPRT=100,ATMJITBUFNOMINAL=10"
;
```

Related Commands: none

RTRV-PM-VPVOIP

Command:

RTRV-PM-VPVOIP: Retrieve Performance Monitors VPVOIP

Description:

RTRV-PM-VPVOIP lets the user retrieve current and historical performance data for a voice processor on a Voice over IP (VoIP) IOM.

Category: VoIP **Security:** View

Input Format:

```
RTRV-PM-VPVOIP:[TID]:<vpId>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<vpId>:<montype>,<monval>,<vldty>,<locn>,<dirn>,
      <tmper>,<mondat>,<montm>"
;
```

Parameters:

vpId Identifies the AID as a voice processor on a VoIP IOM. A null value for the second field in the range is equivalent to "ALL"; that is, by leaving the field blank, the system returns information for all voice processors on the IOM specified by the first field in the range.

Type: vpId
Range: IOM-{1-17}[-VP-{1-8}]
Default value: none

montype Identifies the registers (for a type of monitored parameter) from which to retrieve performance data.

Type: enum
Range: ALL = All types
CINDROP = Number of incoming cells dropped
COUTDROP = Number of outgoing cells dropped
CR = Number of cells received
CT = Number of cells transmitted
CTDR = Number of control packets received
CTDT = Number of control packets transmitted
CTPRDROPINVALIDSIZE = Number of control packets dropped due to invalid size
CTPRDROPNONUDP = Number of control packets dropped due to not being UDP
CTPRDROPNORSRC = Number of control packets dropped due to lack of resources
HEC = Number of cells with header error count
IPR = Number of IP packets received
IPRBADHLEN = Number of IP packets received with bad header length
IPRBADIP = Number of IP packets received with bad IP address
IPRBADSUM = Number of IP packets received with bad checksum
IPRBADUDP = Number of IP packets received with bad UDP port
IPRVALID = Number of valid IP packets received
IPT = Number of IP packets transmitted
PR = Number of packets received
PT = Number of packets transmitted
UDPR = Number of UDP packets received
UDPT = Number of UDP packets transmitted
UNRECCELL = Number of unrecognized cells
Default value: ALL

monval Identifies (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates.

Type: integer
Range: {0-4294967295}
Default value: 0

monlev Indicates the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it. This parameter is not supported presently; its value will be "NULL".

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: not applicable for output

locn Identifies the location of the storage counters from which to retrieve performance data. This parameter is not supported presently; leave it blank.

Type: enum
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters. This parameter is not supported presently; leave it blank.

Type: enum
Range: BTH = Both directions
RCV = Receive direction only
TRMT = Transmit direction only
Default value: BTH

tmper The accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". This parameter is not supported presently; leave it blank.

Type: enum
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: 15-MIN

mondat Indicates the monitored date. The value indicates the beginning date for the performance-monitoring period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: enum
Range: {1-12}-{1-31}
Default value: current date

montm Indicates the monitored time. The value indicates the beginning time of day for the performance-monitoring period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: enum
Range: {0-23}-{0-59}
Default value: current time

Input Example:

```
RTRV-PM-VPVOIP::IOM-1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-11-VP-3:CT,0,COMPL,,,,"
   "IOM-11-VP-3:CR,0,COMPL,,,,"
   "IOM-11-VP-3:HEC,0,COMPL,,,,"
   "IOM-11-VP-3:UNRECCELLS,0,COMPL,,,,"
   "IOM-11-VP-3:OUTDROP,0,COMPL,,,,"
   "IOM-11-VP-3:INDROP,0,COMPL,,,,"
   "IOM-11-VP-3:PT,0,COMPL,,,,"
   "IOM-11-VP-3:PR,0,COMPL,,,,"
   "IOM-11-VP-3:UDPT,0,COMPL,,,,"
   "IOM-11-VP-3:UDPR,0,COMPL,,,,"
   "IOM-11-VP-3:CTDT,0,COMPL,,,,"
   "IOM-11-VP-3:CTDR,0,COMPL,,,,"
   "IOM-11-VP-3:IPT,0,COMPL,,,,"
   "IOM-11-VP-3:IPR,0,COMPL,,,,"
   "IOM-11-VP-3:IPRVALID,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADSUM,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADHLEN,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADIP,0,COMPL,,,,"
   "IOM-11-VP-3:IPRBADUDP,0,COMPL,,,,"
   "IOM-11-VP-3:CTPDROPNORSRC,0,COMPL,,,,"
   "IOM-11-VP-3:CTPDROPINVALIDSIZE,0,COMPL,,,,"
   "IOM-11-VP-3:CTPDROPNONUDP,0,COMPL,,,,"
;
```

Related Commands: none

RTRV-STATUS-MG

Command:

RTRV-STATUS-MG: Retrieve Status Media Gateway

Description:

RTRV-STATUS-MG lets the user retrieve, for the switch configured as a media gateway, the number of active contexts, the number of TDM terminations available and used, the number of packet terminations used, and the number of resources available for various compression protocols and for TDM echo cancellation.

Category: VoIP **Security:** View

Input Format:

```
RTRV-STATUS-MG:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:NUMCONTEXTS=<numContexts>,
      NUMTDMTERMUSED=<numTdmTermUsed>,
      NUMTDMTERMAVAIL=<numTdmTermAvail>,
      NUMVOIPTERMUSED=<numVoipTermUsed>,
      VOIPTDMECAVAIL=<voipTdmEcAvail>,
      RESPRFL1=<resPrfl1>,RESPRFL2=<resPrfl2>,
      RESPRFL3=<resPrfl3>,RESPRFL4=<resPrfl4>,
      RESPRFL5=<resPrfl5>,RESPRFL6=<resPrfl6>,
      RESPRFL7=<resPrfl7>,
      NOECAVAILCURRENT=<noEcAvailCurrent>,
      NOECAVAILTOTAL=<noEcAvailTotal>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

numContexts Identifies the number of active contexts.

Type: integer
Range: {0-2147483648}
Default value: none

numTdmTermUsed Identifies the number of TDM terminations used.

Type: integer
Range: {0-2147483648}
Default value: none

numTdmTermAvail Identifies the number of TDM terminations available.

Type: integer
Range: {0-2147483648}
Default value: none

numVoipTermUsed Identifies the number of VoIP terminations used.

Type: integer
Range: {0-2147483648}
Default value: none

voipTdmEcAvail Identifies the number of resources available for TDM echo cancellation on a VoIP IOM.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl1 Identifies the number of resources available for G711/Clear Channel data calls.

Type: integer
Range: {0-128000}
Default value: none

resPrfl2 Identifies the number of resources available for G729 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl3 Identifies the number of resources available for G723 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl4 Identifies the number of resources available for G726 compression on a VoIP IOM.

Type: integer
Range: {0-128000}
Default value: none

resPrfl5 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl6 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

resPrfl7 Identifies the number of resources available for a yet undetermined codec profile. This parameter is reserved for future use.

Type: integer
Range: {0-2147483648}
Default value: none

noEcAvailCurrent Identifies the number of requests for TDM echo cancellation that have failed due to resource unavailability since the last issuance of this command.

Type: integer
Range: {0-2147483648}
Default value: none

noEcAvailTotal Identifies the number of requests for TDM echo cancellation that have failed due to resource unavailability since the last switch reboot.

Type: integer
Range: {0-2147483648}
Default value: none

Input Example:

```
RTRV-STATUS-MG;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:NUMCONTEXTS=0,NUMTDMTERMUSED=0,
      NUMTDMTERMAVAIL=16368,NUMVOIPTERMUSED=0,
      VOIPTDMECAVAIL=65535,RESPRFL1=0,RESPRFL2=0,
      RESPRFL3=0,RESPRFL4=0,RESPRFL5=0,RESPRFL6=0,
      RESPRFL7=0,NOECAVAILCURRENT=0,NOECAVAILTOTAL=0"
;
```

Related Commands: none

RTRV-STATUS-VPS

Command:

RTRV-STATUS-VPS: Retrieve Status Voice Processor Server

Description:

RTRV-STATUS-VPS lets the user retrieve information for the Voice Processor Server (VPS) modules (including the protection module) in the switch configured as a media gateway. Note that when a VPS module fails over to the protection module, its call path state remains in service; that is, the switch continues to report calls on the failed VPS module as still being on the failed VPS module.

Category: VoIP **Security:** View

Input Format:

```
RTRV-STATUS-VPS:[TID]:[<iomAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<iomAid>:TYPE=<type>,VPSSTATUS=<vpsStatus>,
      VOIPNETWORKCONN=<voipNetworkConn>,
      TDMECAVAIL=<tdmEcAvail>,RESPRFL1=<resPrfl1>,
      RESPRFL2=<resPrfl2>,RESPRFL3=<resPrfl3>,
      RESPRFL4=<resPrfl4>,RESPRFL5=<resPrfl5>,
      RESPRFL6=<resPrfl6>,RESPRFL7=<resPrfl7>"
;
```

Parameters:

iomAid Identifies the AID as an IOM slot containing a Voice Processor Server module. A null value is equivalent to "ALL"; that is, by leaving the field blank, information for all Voice Processor Server modules in the system will be returned.

Type: IomAid
Range: IOM-{1-17}
Default value: none

DLT/ED/ENT/RTRV-SNMP-ACCESS

Commands:

DLT-SNMP-ACCESS: Delete SNMP Access

ED-SNMP-ACCESS: Edit SNMP Access

ENT-SNMP-ACCESS: Enter SNMP Access

RTRV-SNMP-ACCESS: Retrieve SNMP Access

Descriptions:

DLT-SNMP-ACCESS lets the user delete an SNMP access group.

ED-SNMP-ACCESS lets the user change the views associated with an SNMP access group.

ENT-SNMP-ACCESS lets the user establish an SNMP access group and its associated views.

RTRV-SNMP-ACCESS lets the user retrieve the views associated with an SNMP access group.

Category: VoIP **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SNMP-ACCESS:[TID]:<SnmpAccessAid>:[CTAG];

ED-SNMP-ACCESS:[TID]:<SnmpAccessAid>:[CTAG]::
   [READVIEW=<ReadView>],[WRITEVIEW=<WriteView>],
   [NOTIFYVIEW=<NotifyView>];

ENT-SNMP-ACCESS:[TID]:<SnmpAccessAid>:[CTAG]::
   [READVIEW=<ReadView>],[WRITEVIEW=<WriteView>],
   [NOTIFYVIEW=<NotifyView>];

RTRV-SNMP-ACCESS:[TID]:[<SnmpAccessAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<SnmpAccessAid>:READVIEW=<ReadView>,
      WRITEVIEW=<WriteView>,NOTIFYVIEW=<NotifyView>"
;
```

Parameters:

SnmpAccessAid Identifies the AID as an SNMP access group. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, information for all SNMP access groups in the system will be returned.

Type: SnmpAccessAid
Range: <GROUPNAME>[-{SECLEVEL}[-{SECMODEL}]], where

GROUPNAME = up to 32 alphanumeric characters (including underscores "_") used to identify a set of views for access control

SECLEVEL = the minimum security level required by a message to access the group. Allowed values are:
- AUTHNOPRIV = authentication and no privacy (default)
- AUTHPRIV = authentication and privacy
- NOAUTHNOPRIV = no authentication, no privacy

SECMODEL = security model required for access to the group. Allowed values are:
- ANY = any security model
- SNMPV1 = SNMP version 1 security
- SNMPV2C = SNMP version 2c security
- USM = User-Based Security (default)

Default value: none

ReadView Identifies the name of the read view for read access. If no view exists with this name then no access is authorized. A null value indicates no access.

Type: string
Range: up to 32 alphanumeric characters (including underscores "_")
Default value: NULL

WriteView Identifies the name of the write view for write access. If no view exists with this name then no access is authorized. A null value indicates no access.

Type: string
Range: up to 32 alphanumeric characters (including underscores "_")
Default value: NULL

NotifyView Identifies the name of the notify view for notify access. If no view exists with this name then no access is authorized. A null value indicates no access.

Type: string
Range: up to 32 alphanumeric characters (including underscores "_")
Default value: NULL

Input Examples:

```
DLT-SNMP-ACCESS::LUCENT;

ED-SNMP-ACCESS::LUCENT:::READVIEW=READ_VIEW,
   WRITEVIEW=WRITE_VIEW,NOTIFYVIEW=NOTIFY_VIEW;

ENT-SNMP-ACCESS::LUCENT:::READVIEW=READ_VIEW,
   WRITEVIEW=WRITE_VIEW,NOTIFYVIEW=NOTIFY_VIEW;

RTRV-SNMP-ACCESS::LUCENT;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "LUCENT:READVIEW=READ_VIEW,WRITEVIEW=WRITE_VIEW,
      NOTIFYVIEW=NOTIFY_VIEW"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-SNMP-COMM

Commands:

DLT-SNMP-COMM: Delete SNMP COMM

ED-SNMP-COMM: Edit SNMP COMM

ENT-SNMP-COMM: Enter SNMP COMM

RTRV-SNMP-COMM: Retrieve SNMP COMM

Descriptions:

DLT-SNMP-COMM lets the user delete a community string for SNMP requests.

ED-SNMP-COMM lets the user change the parameters associated with a community string for SNMP requests.

ENT-SNMP-COMM lets the user establish a community string for SNMP requests.

RTRV-SNMP-COMM lets the user retrieve the parameters associated with a community string for SNMP requests

Category: VoIP **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SNMP-COMM:[TID]:<CommStr>:[CTAG];

ED-SNMP-COMM:[TID]:<CommStr>:[CTAG]::
   [IPADDR=<IpAddr>],[SUBNETMASK=<SubNetMask>],
   [ACCESSTYPE=<AccessType>];

ENT-SNMP-COMM:[TID]:<CommStr>:[CTAG]::
   [IPADDR=<IpAddr>],[SUBNETMASK=<SubNetMask>],
   [ACCESSTYPE=<AccessType>];

RTRV-SNMP-COMM:[TID]:[<CommStr>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<CommStr>:IPADDRESS=<IpAddress>,
      SUBNETMASK=<SubNetMask>,ACCESS=<AccessType>"
;
```

Parameters:

CommStr Identifies the AID as a community string. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, information for all community strings in the system will be returned.

Type: string
Range: up to 20 alphanumeric characters (including underscores "_")
Default value: none

IpAddress Identifies the IP address of the Network Management Station for the community string. Use 0.0.0.0 for any host.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: 0.0.0.0

SubNetMask Identifies the subnet mask of the Network Management Station for the community string. Use 0.0.0.0 for any host and 255.255.255.255 for a single host.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: 0.0.0.0 for any host, 255.255.255.255 for a single host

AccessType Identifies the access privilege level allowed. READONLY is the only access level currently used.

Type: enum
Range: READONLY
READWRITE
Default value: READONLY

Input Examples:

```
DLT-SNMP-COMM::COMMSTR1;

ED-SNMP-COMM::COMMSTRING1:::IPADDR=192.0.24.57,
   SUBNETMASK=255.255.255.255,ACCESSTYPE=READONLY;

ENT-SNMP-COMM::COMMSTRING1:::IPADDR=192.0.24.57,
   SUBNETMASK=255.255.255.255,ACCESSTYPE=READONLY;

RTRV-SNMP-COMM::COMMSTR1;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "COMMSTRING1:IPADDRESS=192.0.24.57,
      SUBNETMASK=255.255.255.255,ACCESS=READONLY"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-SNMP-TRAP

Commands:

DLT-SNMP-TRAP: Delete SNMP Trap

ED-SNMP-TRAP: Edit SNMP Trap

ENT-SNMP-TRAP: Enter SNMP Trap

RTRV-SNMP-TRAP: Retrieve SNMP Trap

Descriptions:

DLT-SNMP-TRAP lets the user delete an SNMP trap destination..

ED-SNMP-TRAP lets the user change the parameters for handling traps by the SNMP Agent.

ENT-SNMP-TRAP lets the user establish the parameters for handling traps by the SNMP Agent.

RTRV-SNMP-TRAP lets the user retrieve the parameters for handling traps by the SNMP Agent.

Category: VoIP **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SNMP-TRAP:[TID]:<IpAddr>:[CTAG];
```

```
ED-SNMP-TRAP:[TID]:<IpAddr>:[CTAG]::
    [COMMSTR=<CommStr>],[TRAPTYPE=<TrapType>],
    [ALLOWCRITICAL=<AllowCritical>],
    [ALLOWMAJOR=<AllowMajor>],
    [ALLOWMINOR=<AllowMinor>],
    [ALLOWEVENT=<AllowEvent>],[ALLOWT1=<AllowT1>],
    [ALLOWT3=<AllowT3>],[ALLOWSTS1=<AllowSTS1>],
    [ALLOWLINKUP=<AllowLinkUp>],
    [ALLOWLINKDOWN=<AllowLinkDown>],
    [ALLOWEQPT=<AllowEqpt>],[ALLOWOC=<AllowOC>],
    [ALLOWCOMM=<AllowComm>],[TRAPMODE=<TrapMode>];
```

```
ENT-SNMP-TRAP:[TID]:<IpAddr>:[CTAG]::
   [COMMSTR=<CommStr>],[TRAPTYPE=<TrapType>],
   [ALLOWCRITICAL=<AllowCritical>],
   [ALLOWMAJOR=<AllowMajor>],
   [ALLOWMINOR=<AllowMinor>],
   [ALLOWEVENT=<AllowEvent>],[ALLOWT1=<AllowT1>],
   [ALLOWT3=<AllowT3>],[ALLOWSTS1=<AllowSTS1>],
   [ALLOWLINKUP=<AllowLinkUp>],
   [ALLOWLINKDOWN=<AllowLinkDown>],
   [ALLOWEQPT=<AllowEqpt>],[ALLOWOC=<AllowOC>],
   [ALLOWCOMM=<AllowComm>],[TRAPMODE=<TrapMode>];

RTRV-SNMP-TRAP:[TID]:[<IpAddr>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<IpAddress>:[COMMSTR=<CommStr>],
      TRAPTYPE=<TrapType>,
      ALLOWCRITICAL=<AllowCritical>,
      ALLOWMAJOR=<AllowMajor>,ALLOWMINOR=<AllowMinor>,
      ALLOWEVENT=<AllowEvent>,ALLOWT1=<AllowT1>,
      ALLOWT3=<AllowT3>,ALLOWSTS1=<AllowSTS1>,
      ALLOWLINKUP=<AllowLinkUp>,
      ALLOWLINKDOWN=<AllowLinkDown>,
      ALLOWEQPT=<AllowEqpt>,ALLOWOC=<AllowOC>,
      ALLOWCOMM=<AllowComm>,TRAPMODE=<TrapMode>"
;
```

Parameters:

IpAddr Identifies the IP address of a Network Management Station to which traps can be sent. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, information for all Network Management Stations in the system will be returned.

Type: string
Range: {0-255}.{0-255}.{0-255}.{0-255}
Default value: none

CommStr Identifies the community string for traps sent to the Network Management Station identified by *IpAddress*.

Type: string
Range: up to 20 alphanumeric characters (including underscores "_")
Default value: TRAP

TrapType Identifies the type for traps sent to the Network Management Station identified by *IpAddress*.

Type: enum
Range: V1TRAP = send SNMPv1 trap
V2TRAP = send SNMPv2 trap
Default value: V1TRAP

AllowCritical Identifies whether the SNMP agent can send critical alarmed traps.

Type: BoolYN
Range: N = SNMP agent does not allow critical alarmed traps
Y = SNMP agent allows critical alarmed traps
Default value: Y

AllowMajor Identifies whether the SNMP agent can send major alarmed traps.

Type: BoolYN
Range: N = SNMP agent does not allow major alarmed traps
Y = SNMP agent allows major alarmed traps
Default value: Y

AllowMinor Identifies whether the SNMP agent can send minor alarmed traps.

Type: BoolYN
Range: N = SNMP agent does not allow minor alarmed traps
Y = SNMP agent allows minor alarmed traps
Default value: Y

AllowEvent Identifies whether the SNMP agent can send event traps.

Type: BoolYN
Range: N = SNMP agent does not allow event traps
Y = SNMP agent allows event traps
Default value: Y

AllowT1 Identifies whether the SNMP agent can send T1 traps.

Type: BoolYN
Range: N = SNMP agent does not allow T1 traps
Y = SNMP agent allows T1 traps
Default value: Y

AllowT3 Identifies whether the SNMP agent can send T3 traps.

Type: BoolYN
Range: N = SNMP agent does not allow T3 traps
Y = SNMP agent allows T3 traps
Default value: Y

AllowSTS1 Identifies whether the SNMP agent can send STS1 traps.

Type: BoolYN
Range: N = SNMP agent does not allow STS1 traps
Y = SNMP agent allows STS1 traps
Default value: Y

AllowLinkUp Identifies whether the SNMP agent can send traps when a link is "up".

Type: BoolYN
Range: N = SNMP agent does not allow "link is up" traps
Y = SNMP agent allows "link is up" traps
Default value: Y

AllowLinkDown Identifies whether the SNMP agent can send traps when a link is "down".

Type: BoolYN
Range: N = SNMP agent does not allow "link is down" traps
Y = SNMP agent allows "link is down" traps
Default value: Y

AllowEqpt Identifies whether the SNMP agent can send equipment traps.

Type: BoolYN
Range: N = SNMP agent does not allow equipment traps
Y = SNMP agent allows equipment traps
Default value: Y

AllowOC Identifies whether the SNMP agent can send OCn traps.

Type: BoolYN
Range: N = SNMP agent does not allow OCn traps
Y = SNMP agent allows OCn traps
Default value: Y

AllowComm Identifies whether the SNMP agent can send common traps; that is, all traps (signaling, billing, statistics, etc.) other than those in the previous parameters.

Type: BoolYN
Range: N = SNMP agent does not allow common traps
Y = SNMP agent allows common traps
Default value: Y

TrapMode Identifies whether to map all events into approximately 16 traps, or to have a one-to-one mapping between events and traps (i.e. each event maps to a trap with a unique OID).

Type: BoolYN
Range: GENERIC = map all events into approximately 16 traps
SPECIFIC = one-to-one mapping between events and traps
Default value: GENERIC

Input Examples:

```
DLT-SNMP-TRAP::192.0.24.57;

ED-SNMP-TRAP::192.0.24.57:::COMMSTR=TRAP,
   TRAPTYPE=V1TRAP,ALLOWCRITICAL=Y,ALLOWMAJOR=Y,
   ALLOWMINOR=Y,ALLOWEVENT=Y,ALLOWT1=Y,ALLOWT3=Y,
   ALLOWSTS1=Y,ALLOWLINKUP=Y,ALLOWLINKDOWN=Y,
   ALLOWEQPT=Y,ALLOWOC=Y,ALLOWCOMM=Y,TRAPMODE=GENERIC;

ENT-SNMP-TRAP::192.0.24.57:::COMMSTR=TRAP,
   TRAPTYPE=V1TRAP,ALLOWCRITICAL=Y,ALLOWMAJOR=Y,
   ALLOWMINOR=Y,ALLOWEVENT=Y,ALLOWT1=Y,ALLOWT3=Y,
   ALLOWSTS1=Y,ALLOWLINKUP=Y,ALLOWLINKDOWN=Y,
   ALLOWEQPT=Y,ALLOWOC=Y,ALLOWCOMM=Y,TRAPMODE=GENERIC;

RTRV-SNMP-TRAP::192.0.24.57;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "192.0.24.57:COMMSTR=TRAP,TRAPTYPE=V1TRAP,
      ALLOWCRITICAL=Y,ALLOWMAJOR=Y,ALLOWMINOR=N,
      ALLOWEVENT=Y,ALLOWT1=Y,ALLOWT3=Y,ALLOWSTS1=Y,
      ALLOWLINKUP=Y,ALLOWLINKDOWN=Y,ALLOWEQPT=Y,
      ALLOWOC=Y,ALLOWCOMM=Y,TRAPMODE=GENERIC"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-SNMP-USER

Commands:

DLT-SNMP-USER: Delete SNMP User

ED-SNMP-USER: Edit SNMP User

ENT-SNMP-USER: Enter SNMP User

RTRV-SNMP-USER: Retrieve SNMP User

Descriptions:

DLT-SNMP-USER lets the user delete an SNMPv3 user for SNMPv3 access.

ED-SNMP-USER lets the user change the group name, authentication password, and privacy password for an SNMPv3 user for SNMPv3 access.

ENT-SNMP-USER lets the user establish an SNMPv3 user for SNMPv3 access.

RTRV-SNMP-USER lets the user retrieve the authentication protocol, privacy protocol, and group name for an SNMPv3 user.

Category: VoIP **Security:** NSA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-SNMP-USER:[TID]:<UserName>:[CTAG];

ED-SNMP-USER:[TID]:<UserName>:[CTAG]::
   [GRPNAME=<GrpName>]:<AuthPasswd>],<PrivPasswd>];

ENT-SNMP-USER:[TID]:<UserName>:[CTAG]::
   AUTHTYPE=<AuthType>,PRIVTYPE=<PrivType>,
   GRPNAME=<GrpName>:[<AuthPasswd>],[<PrivPasswd>];

RTRV-SNMP-USER:[TID]:[<UserName>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<UserName>:AUTHTYPE=<AuthType>,
      PRIVTYPE=<PrivType>,GRPNAME=<GrpName>"
;
```

Parameters:

UserName Identifies the AID as an SNMPv3 user name. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, information for all SNMPv3 users in the system will be returned.

Type: string
Range: up to 32 alphanumeric characters (including underscores "_")
Default value: none

AuthType Identifies the authentication protocol for the user.

Type: enum
Range: MD5 = authentication protocol HMAC-MD5-96
NONE= no authentication
SHA = authentication protocol HMAC-SHA-96
Default value: none

PrivType Identifies the privacy protocol for the user. The value of *PrivType* must be "NONE" when the value of *SnmpAuth* is "NONE".

Type: enum
Range: DES = privacy protocol CBC-DES
NONE = no privacy
Default value: none

GrpName Identifies the name of the group that the user belongs to for access control. The group does not have to be created in order to assign the group name for a user but until the group is created the user effectively is not enabled to access any information in the SNMP entity (agent).

Type: string
Range: up to 32 alphanumeric characters (including underscores "_")
Default value: none

AuthPasswd Identifies the password used to generate the authentication key. The entered password displays as a series of asterisks.

Type: string
Range: 8 to 63 alphanumeric characters (including underscores "_")
Default value: none

PrivPasswd Identifies the password used to generate the privacy key. It cannot be the same value as the authentication password. The entered password displays as a series of asterisks.

Type: string
Range: 8 to 63 alphanumeric characters (including underscores "_")
Default value: none

Input Examples:

```
DLT-SNMP-USER::SNMPUSER1;

ED-SNMP-USER::SNMPUSER1:::GRPNAME=LUCENT:********,
   ********;

ENT-SNMP-USER::SNMPUSER1:::AUTHTYPE=NONE,
   PRIVTYPE=NONE,GRPNAME=LUCENT:********,********;

RTRV-SNMP-USER::SNMPUSER1;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "SNMPUSER1:AUTHTYPE=NONE,PRIVTYPE=NONE,
      GRPNAME=LUCENT"
;
```

Related Commands: none

DLT/ENT/RTRV-SNMP-VIEW

Commands:

DLT-SNMP-VIEW: Delete SNMP View

ENT-SNMP-VIEW: Enter SNMP View

RTRV-SNMP-VIEW: Retrieve SNMP View

Descriptions:

DLT-SNMP-VIEW lets the user delete a view associated with SNMP access groups.

ENT-SNMP-VIEW lets the user establish a view associated with SNMP access groups.

RTRV-SNMP-VIEW lets the user retrieve the view types and masks associated with SNMP access groups.

Category: VoIP **Security:** NSA for DLT and ENT, View for RTRV

Input Formats:

```
DLT-SNMP-VIEW:[TID]:<SnmpViewAid>:[CTAG];

ENT-SNMP-VIEW:[TID]:<SnmpViewAid>:[CTAG]::
   [VIEWTYPE=<ViewType>],[VIEWMASK=<ViewMask>];

RTRV-SNMP-VIEW:[TID]:[<SnmpViewAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<SnmpViewAid>:VIEWTYPE=<ViewType>,
      VIEWMASK=<ViewMask>"
;
```

Parameters:

SnmpViewAid Identifies the AID as an SNMP access group view. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, information for all SNMP access group views in the system will be returned. A null value for the second part of the AID (in DLT and RTRV) lets the user delete or retrieve the types and masks for an entire set of view trees.

Type: SnmpViewAid
Range: <VIEWNAME>[-<VIEWTREE>], where

VIEWNAME = up to 32 alphanumeric characters (including underscores "_") used to identify a set of view trees

VIEWTREE = up to 63 digits (0-9) and periods (".") that identify the view subtree in numerical dotted notation. For example, the object identifier (OID) for the Internet is "1.3.6.1".

Default value: none

ViewType Identifies whether the view is included in the MIB view.

Type: enum
Range: EXCLUDED = view is not included in the MIB view
INCLUDED = view is included in the MIB view
Default value: INCLUDED

ViewMask Identifies the view tree bit mask (an octet string of 0 to 16 octets) where each bit represents whether to wildcard the corresponding object sub-identifier in the view tree. If the bit value is "0" then the sub-identifier is wildcarded and any value matches. The viewmask is extended with "1"s to match the number of sub-identifiers in the view tree.

Type: string
Range: 0 to 16 octets (hex bytes)
NULL
Default value: NULL

Input Examples:

```
DLT-SNMP-VIEW::INTERNET-1.3.6.1;

ENT-SNMP-VIEW::INTERNET-1.3.6.1:VIEWTYPE=INCLUDED,
   VIEWMASK=NULL;

RTRV-SNMP-VIEW::INTERNET-1.3.6.1;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "INTERNET-1.3.6.1:VIEWTYPE=INCLUDED,VIEWMASK=NULL"
;
```

Related Commands: none

ED/RTRV-SNMP-SYS

Commands:

ED-SNMP-SYS: Edit SNMP System

RTRV-SNMP-SYS: Retrieve SNMP System

Descriptions:

ED-SNMP-SYS lets the user configure SNMP Agent parameters and Trap Rate Limiting.

RTRV-SNMP-SYS lets the user retrieve Trap Rate Limiting and SNMP Agent parameters.

Category: VoIP **Security:** NSA for ED, View for RTRV

Input Formats:

```
ED-SNMP-SYS:[TID]:[<src>]:[CTAG]::
   [TRAPLIMITCNT=<TrapLimitCnt>],
   [TRAPLIMITPERIOD=<TrapLimitPeriod>],
   [SNMPENB=<SnmpEnb>],[AUTHTRAPENB=<AuthTrapEnb>],
   [SYSNAME=<SysName>],[SYSCONTACT=<SysContact>];

RTRV-SNMP-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:TRAPLIMITCNT=<TrapLimitCnt>,
      TRAPLIMITPERIOD=<TrapLimitPeriod>,
      SNMPENB=<SnmpEnb>,AUTHTRAPENB=<AuthTrapEnb>,
      [SYSNAME=<SysName>],[SYSCONTACT=<SysContact>]"
;
```

Parameters:

src Identifies the AID as the switch media gateway.

Type: COM
Range: COM
Default value: COM

TrapLimitCnt Identifies the trap rate limit count – the maximum number of traps that can be sent by the SNMP agent during the time period defined by *TrapLimitPeriod*. Setting the value to "0" prevents the SNMP agent sending any traps. The factory default is 65535.

Type: integer
Range: {0-65535}
Default value: not applicable

TrapLimitPeriod Identifies the time period, in seconds, during which the SNMP agent can send traps. The factory default is 60 seconds.

Type: integer
Range: {0-65535}
Default value: not applicable

SnmpEnb Identifies whether the SNMP agent can process incoming messages and send traps. The factory default is "Y".

Type: BoolYN
Range: N = SNMP agent not enabled
Y = SNMP agent enabled
Default value: not applicable

AuthTrapEnb Identifies whether the SNMP agent can send "authentication failure" traps. The factory default is "Y".

Type: BoolYN
Range: N = SNMP agent not enabled to send "authentication failure" traps
Y = SNMP agent enabled to send "authentication failure" traps
Default value: not applicable

SysName Identifies the system name for the SNMP agent. The factory default is the fully qualified domain name.

Type: string
Range: up to 63 alphanumeric characters (including underscores "_")
Default value: not applicable

SysContact Identifies the name of the system administrator for the SNMP agent. The factory default is "NULL".

Type: string
Range: up to 63 alphanumeric characters (including underscores "_")
Default value: not applicable

Input Examples:

```
ED-SNMP-SYS::COM:::TRAPLIMITCNT=10,TRAPLIMITPERIOD=10,
   SNMPENB=Y,AUTHTRAPENB=Y,SYSNAME=LUCENT.LUCENT.COM,
   SYSCONTACT=JOHN_STAMAND;

RTRV-SNMP-SYS;
```

Output Example:

```
   lucent 2004-10-29 14:37:49
M  0 COMPLD
   "COM:TRAPLIMITCNT=65535,TRAPLIMITPERIOD=60,
      SNMPENB=Y,AUTHTRAPENB=Y,
      SYSNAME=LUCENT.LUCENT.COM,
      SYSCONTACT=JOHN_STAMAND"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-AAL2SIG-PATH

Commands:

DLT-AAL2SIG-PATH: Delete AAL2 Signaling Path

ED-AAL2SIG-PATH: Edit AAL2 Signaling Path

ENT-AAL2SIG-PATH: Enter AAL2 Signaling Path

RTRV-AAL2SIG-PATH: Retrieve AAL2 Signaling Path

Descriptions:

DLT-AAL2SIG-PATH lets the user delete an AAL2 (ATM Adaptation Layer 2) signaling path.

ED-AAL2SIG-PATH lets the user change the parameters associated with an AAL2 (ATM Adaptation Layer 2) signaling path.

ENT-AAL2SIG-PATH lets the user establish an AAL2 (ATM Adaptation Layer 2) signaling path between the Lucent Network Gateway (NG) and the Radio Network Controller (RNC) at a wireless base station. ENT-AAL2SIG-PATH will not work unless you have already issued ENT-SG-PC and ENT-VCC.

RTRV-AAL2SIG-PATH lets the user retrieve the parameters associated with an AAL2 (ATM Adaptation Layer 2) signaling path.

Category: VToA **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-AAL2SIG-PATH:[TID]:<pathAid>:[CTAG];

ED-AAL2SIG-PATH:[TID]:<pathAid>:[CTAG]::
   [OWNER=<owner>];

ENT-AAL2SIG-PATH:[TID]:<pathAid>:[CTAG]::VCC=<vcc>,
   [OWNER=<owner>];

RTRV-AAL2SIG-PATH:[TID]:[<pathAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<pathAid>:VCC=<vcc>,OWNER=<owner>:<pst>,[<sst>]"
;
```

Parameters:

pathAid Identifies the AID as an AAL2 signaling path. The first part of the AID identifies the destination point code (DPC) for the RNC, and the second part identifies the path. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns information on all configured AAL2 paths. A null value (in RTRV) for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the switch returns information on all configured AAL2 paths on the specified DPC.

Type: string
Range: <dpc>[-<pathId>], where:
dpc = {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes
pathId = {1-2147483647}
Default value: none

vcc Identifies the Virtual Circuit Channel for the AAL2 signaling path.

Type: string
Range: up to 10 characters
Default value: none

owner Identifies whether the NG owns the path.

Type: BoolYN
Range: N = RNC owns path
Y = NG owns path
Default value: N

pst Identifies (in RTRV output) the primary state of the AAL2 signaling path.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: IS

sst Identifies (in RTRV output) the secondary state of the AAL2 signaling path.

Type: enum
Range: BLKD = Blocked
SGEO = Supporting Entity Outage
Default value: none

Input Examples:

```
DLT-AAL2SIG-PATH::24-177-39-1;

ED-AAL2SIG-PATH::24-177-39-1:::OWNER=N;

ENT-AAL2SIG-PATH::24-177-39-1:::VCC=vcc4,OWNER=N;

RTRV-AAL2SIG-PATH;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "24-177-39-1:VCC=vcc4,OWNER=N:OOS-AU,SGEO"
;
```

Related Commands: none

DLT/ENT/RTRV-AAL2SIG-ROUTE

Commands:

DLT-AAL2SIG-ROUTE: Delete AAL2 Signaling Route

ENT-AAL2SIG-ROUTE: Enter AAL2 Signaling Route

RTRV-AAL2SIG-ROUTE: Retrieve AAL2 Signaling Route

Descriptions:

DLT-AAL2SIG-ROUTE lets the user delete an AAL2 (ATM Adaptation Layer 2) signaling route.

ENT-AAL2SIG-ROUTE lets the user establish an AAL2 (ATM Adaptation Layer 2) signaling route to the Radio Network Controller (RNC) at a wireless base station. ENT-AAL2SIG-ROUTE will not work unless you have already issued ENT-SG-PC.

RTRV-AAL2SIG-ROUTE lets the user retrieve the parameters associated with an AAL2 (ATM Adaptation Layer 2) signaling route.

Category: VToA **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-AAL2SIG-ROUTE:[TID]:<aal2SigRouteId>:[CTAG];
ENT-AAL2SIG-ROUTE:[TID]:<aal2SigRouteId>:[CTAG];
RTRV-AAL2SIG-ROUTE:[TID]:[<aal2SigRouteId>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<aal2SigRouteId>"
;
```

Parameters:

pathAid Identifies the AID as an AAL2 Signaling Route. The first part of the AID identifies the Network Service Access Point (NSAP) for the RNC, and the second part identifies the destination point code (DPC) for the RNC. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns information on all configured AAL2 routes. A null value (in RTRV) for the second part of the AID returns the DPC associated with the NSAP.

Type: string
Range: <nsap>[-<dpc>], where:

nsap = exactly 40 hexadecimal characters, in the format "xx.xxxx.xx.xxxxxx.xxxx.xxxx.xxxx.xxxxxxxxxxxx.xx", where "xx" represents a single octet

dpc = {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes

Default value: none

Input Examples:

```
DLT-AAL2SIG-ROUTE::bb.bbbb.bb.bbbbbb.bbbb.bbbb.bbbb.
   bbbbbbbbbbbb.b1-24-177-39-1;

ENT-AAL2SIG-ROUTE::bb.bbbb.bb.bbbbbb.bbbb.bbbb.bbbb.
   bbbbbbbbbbbb.b1-24-177-39-1;

RTRV-AAL2SIG-ROUTE;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "bb.bbbb.bb.bbbbbb.bbbb.bbbb.bbbb.bbbbbbbbbbbb.b1-
      24-177-39-1"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-PRFL-VCC

Commands:

DLT-PRFL-VCC: Delete Profile Virtual Circuit Channel

ED-PRFL-VCC: Edit Profile Virtual Circuit Channel

ENT-PRFL-VCC: Enter Profile Virtual Circuit Channel

RTRV-PRFL-VCC: Retrieve Profile Virtual Circuit Channel

Descriptions:

DLT-PRFL-VCC lets the user delete a VCC (Virtual Circuit Channel) profile.

ED-PRFL-VCC lets the user change the ATM traffic parameters associated with a VCC (Virtual Circuit Channel) profile.

ENT-PRFL-VCC lets the user establish a profile for a VCC (Virtual Circuit Channel) endpoint that terminates Voice over IP traffic. The profile parameters only have an effect after issuing the ENT-VCC-ENDPT command. You cannot delete the profile if it applies to a VCC endpoint.

RTRV-PRFL-VCC lets the user retrieve the ATM traffic parameters associated with a VCC (Virtual Circuit Channel) profile.

Category: VToA **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-PRFL-VCC:[TID]:<vccPrfl>:[CTAG];

ED-PRFL-VCC:[TID]:<vccPrfl>:[CTAG]::
   [ATMCLASS=<atmClass>],[SCR=<scr>],[PCR=<pcr>],
   [MBS=<mbs>],[CDV=<cdv>];

ENT-PRFL-VCC:[TID]:<vccPrfl>:[CTAG]::
   [ATMCLASS=<atmClass>],[SCR=<scr>],[PCR=<pcr>],
   [MBS=<mbs>],[CDV=<cdv>];

RTRV-PRFL-VCC:[TID]:[<vccPrfl>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<vccPrfl>:ATMCLASS=<atmClass>,SCR=<scr>,PCR=<pcr>,
      MBS=<mbs>,CDV=<cdv>"
;
```

Parameters:

vccPrfl Identifies the AID as a VCC profile. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns information for all configured VCC profiles.

Type: string
Range: up to 10 characters
Default value: none

atmClass Identifies the ATM service type.

Type: enum
Range: CBR = Constant Bit Rate
VBR = Variable Bit Rate
Default value: CBR

scr Identifies the Sustained Cell Rate.

Type: integer
Range: {2948-11792}
Default value: 11792

pcr Identifies the Peak Cell Rate.

Type: integer
Range: {2948-11792}
Default value: 11792

mbs Identifies the PVC maximum burst size (that is., the burst tolerance) in milliseconds.

Type: integer
Range: {1-1000}
Default value: 240

cdv Identifies the cell delay variation tolerance in milliseconds.

Type: integer
Range: {0-400}
Default value: 64

Input Examples:

```
DLT-PRFL-VCC::PROFILE1;

ED-PRFL-VCC::PROFILE1:::ATMCLASS=CBR,SCR=11792,
   PCR=11792,MBS=240,CDV=10000;

ENT-PRFL-VCC::PROFILE1:::ATMCLASS=CBR,SCR=11792,
   PCR=11792,MBS=240,CDV=10000;

RTRV-PRFL-VCC::PROFILE1;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "PROFILE1:ATMCLASS=CBR,SCR=11792,PCR=11792,MBS=240,
      CDV=64"
;
```

Related Commands: none

DLT/ENT/RTRV-VCC-DSP

Commands:

DLT-VCC-DSP: Delete Virtual Circuit Channel Digital Signal Processor

ENT-VCC-DSP: Enter Virtual Circuit Channel Digital Signal Processor

RTRV-VCC-DSP: Retrieve Virtual Circuit Channel Digital Signal Processor

Descriptions:

DLT-VCC-DSP lets the user delete a Digital Signal Processor (DSP) connection on a Voice Server Module (VSM) as the resource that terminates an AAL2 (ATM Adaptation Layer 2) Virtual Circuit Channel (VCC).

ENT-VCC-DSP lets the user establish a DSP connection on a Voice Server Module as the resource that terminates an AAL2 VCC. ENT-VCC-DSP will not work unless ENT-VCC-ENDPT has already been issued.

RTRV-VCC-DSP lets the user retrieve the identity of the resources that terminate AAL2 VCCs.

Category: VToA **Security:** SA for DLT/ENT, View for RTRV

Input Formats:

```
DLT-VCC-DSP:[TID]:<vccDspAid>:[CTAG];
ENT-VCC-DSP:[TID]:<vccDspAid>:[CTAG];
RTRV-VCC-DSP:[TID]:[<vccDspAid>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<vccDspAid>"
;
```

Parameters:

vccDspAid Identifies the AID as a DSP connection on a Voice Server Module that terminates an AAL2 VCC. The first part of the AID identifies the VCC, the second part identifies the VSM, the third part identifies the DSP, and the fourth part identifies the connection. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns all configured AAL2 VCC terminating resources. A null value (in RTRV) for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the switch returns all configured AAL2 VCC terminating resources on the specified VCC. A null value (in RTRV) for the third part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the switch returns all configured AAL2 VCC terminating resources on the specified VSM for the VCC. A null value (in RTRV) for the fourth part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the switch returns all configured AAL2 VCC terminating connections on the specified DSP on a VSM for the VCC.

Type: string
Range: <vcc>[-<vsmModule>[-<dsp>[-<cnxId>]]],
where:

vcc identifies the name of the applicable Virtual Circuit Channel with a string of up to 10 characters;

vsmModule (optional only in RTRV) identifies the Voice Server Module on which the VCC terminates. The range of values is IOM-{1-17}.

dsp (optional only in RTRV) identifies VSM Digital Signal Processor on which the VCC terminates with an integer from 1-8

cnxId identifies the connection on the VSM Digital Signal Processor on which the VCC terminates with an integer from 0-15.

Default value: none

Input Examples:

```
DLT-VCC-DSP::vcc4-IOM-13-1-1;

ENT-VCC-DSP::vcc4-IOM-13-1-1;

RTRV-VCC-DSP;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "vcc4-IOM-13-1-1"
   "vcc5-IOM-13-2-1"
;
```

Related Commands: none

DLT/ED/ENT/RTRV-VCC-ENDPT

Commands:

DLT-VCC-ENDPT: Delete Virtual Circuit Channel Endpoint

ED-VCC-ENDPT: Edit Virtual Circuit Channel Endpoint

ENT-VCC-ENDPT: Enter Virtual Circuit Channel Endpoint

RTRV-VCC-ENDPT: Retrieve Virtual Circuit Channel Endpoint

Descriptions:

DLT-VCC-ENDPT lets the user delete a VCC (Virtual Circuit Channel) endpoint.

ED-VCC-ENDPT lets the user change the parameters associated with a VCC (Virtual Circuit Channel) endpoint.

ENT-VCC-ENDPT lets the user establish an endpoint for a VCC (Virtual Circuit Channel) endpoint that terminates Voice over IP traffic. ENT-VCC-ENDPT will not work unless you have already issued ENT-PRFL-VCC.

RTRV-VCC-ENDPT lets the user retrieve the parameters associated with a VCC (Virtual Circuit Channel) endpoint.

Category: VToA **Security:** SA for DLT/ED/ENT, View for RTRV

Input Formats:

```
DLT-VCC-ENDPT:[TID]:<vcc>:[CTAG];

ED-VCC-ENDPT:[TID]:<vcc>:[CTAG]::[<pst>];

ENT-VCC-ENDPT:[TID]:<vcc>:[CTAG]::VCCPRFL=<vccPrfl>,
   INTFC=<intfc>,VPI=<vpi>,VCI=<vci>,
   [AALTYPE=<aalType>],[TERMSLOT=<termSlot>]:[<pst>];

RTRV-VCC-ENDPT:[TID]:[<vcc>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<vcc>:VCCPRFL=<vccPrfl>,INTFC=<intfc>,VPI=<vpi>,
      VCI=<vci>,AALTYPE=<aalType>,TERMSLOT=<termSlot>:
      <pst>,<sst>"
;
```

Parameters:

vcc Identifies the AID as a Virtual Circuit Channel. A null value (in RTRV) is equivalent to "ALL"; that is, by leaving the field blank, the switch returns information for all configured VCCs.

Type: string
Range: up to 10 characters
Default value: none

vccPrfl Identifies the VCC profile applicable to the endpoint.

Type: string
Range: up to 10 characters
Default value: none

intfc Identifies the optical carrier port on a specific IOM as the interface for the PVC endpoint.

Type: InterfaceId
Range: IOM-{1-17}-OC-{1-4}
Default value: none

vpi Specifies the external virtual path identifier used across the ATM network.

Type: integer
Range: {0-32}
Default value: none

vci Specifies the external virtual circuit identifier used across the ATM network.

Type: integer
Range: {32-4095}
Default value: none

aalType Identifies the AAL (Asynchronous Transfer Mode Adaptation Layer) applicable to the endpoint.

Type: enum
Range: AAL2 = ATM Adaptation Layer 2
AAL5 = ATM Adaptation Layer 5
Default value: AAL2

termSlot Identifies the terminating system processor (SP) module applicable to the endpoint.

Type: enum
Range: SP-A = System Processor A
SP-B = System Processor B
Default value: SP-A

pst Identifies the primary state of the AIN trigger; that is, whether the trigger is active.

Type: enum
Range: IS = In-Service
OOS = Out-Of-Service
OOS-AU = Out-Of-Service, Autonomous (RTRV output)
OOS-MA = Out-Of-Service, Managed (RTRV output)
Default value: IS

sst Identifies (in RTRV output) the secondary state of the VCC.

Type: enum
Range: FAF = Facilities Failure
SGEO = Supporting Entity Outage
Default value: none

Input Examples:

```
DLT-VCC-ENDPT::vcc4;

ED-VCC-ENDPT::vcc4:::VCCPRFL=profile1,
   INTFC=IOM-1-OC-1,VPI=0,VCI=204,AALTYPE=AAL2,
   TERMSLOT=SP-A:OOS;

ENT-VCC-ENDPT::vcc4:::VCCPRFL=profile1,
   INTFC=IOM-1-OC-1,VPI=0,VCI=204,AALTYPE=AAL2,
   TERMSLOT=SP-A:OOS;

RTRV-VCC-ENDPT;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "vcc4:VCCPRFL=profile1,INTFC=IOM-1-OC-1,VPI=0,
      VCI=204,AALTYPE=AAL2,TERMSLOT=SP-A:OOS-AU,SGEO"
   "vcc5:VCCPRFL=profile1,INTFC=IOM-3-OC-1,VPI=0,
      VCI=204,AALTYPE=AAL2,TERMSLOT=SP-A:OOS-AU,SGEO"
;
```

Related Commands: none

ED/RTRV-AAL2SIG-SYS

Commands:

ED-AAL2SIG-SYS: Edit AAL2 Signaling System

RTRV-AAL2SIG-SYS: Retrieve AAL2 Signaling System

Descriptions:

ED-AAL2SIG-SYS lets the user configure the AAL2 (ATM Adaptation Layer 2) signaling system in the Lucent Network Gateway (NG).

RTRV-AAL2SIG-SYS lets the user retrieve the attributes of the AAL2 (ATM Adaptation Layer 2) signaling system.

Category: VToA **Security:** SA for ED, View for RTRV

Input Formats:

```
ED-AAL2SIG-SYS:[TID]:[<src>]:[CTAG]::[NSAP=<nsap>],
   [RELSUBTMR=<relSubTmr>],[SUBRELTMR=<subRelTmr>],
   [ADDERQTMR=<addErqTmr>],[IUUPTMR=<iuupTmr>],
   [ERQTMR=<erqTmr>],[RELTMR=<relTmr>],
   [RESTMR=<resTmr>],[BLOTMR=<bloTmr>],
   [UBLTMR=<ublTmr>],[PATHBLKTHRESH=<pathBlkThresh>];
RTRV-AAL2SIG-SYS:[TID]:[<src>]:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "<src>:NSAP=<nsap>,RELSUBTMR=<relSubTmr>,
      SUBRELTMR=<subRelTmr>,ADDERQTMR=<addErqTmr>,
      IUUPTMR=<iuupTmr>,ERQTMR=<erqTmr>,
      RELTMR=<relTmr>,RESTMR=<resTmr>,BLOTMR=<bloTmr>,
      UBLTMR=<ublTmr>,PATHBLKTHRESH=<pathBlkThresh>"
;
```

Parameters:

src Identifies the AID as the switch.

Type: COM
Range: COM
Default value: COM

nsap Identifies the own Network Service Access Point for the NG, in the format "xx.xxxx.xx.xxxxxx.xxxx.xxxx.xxxx.xxxxxxxxxxxx.xx", where "xx" represents a single octet. The factory default resides in the firmware.

Type: string
Range: exactly 40 hexadecimal characters
Default value: not applicable

relSubTmr Identifies the value, in seconds, for the guard timer that starts on receipt of a Q2630 REL message, stops on receipt of an H.248 SUB message, and sends an H.248 SVC message on expiry. The factory default is "5".

Type: integer
Range: {0-30}
Default value: not applicable

subRelTmr Identifies the value, in seconds, for the guard timer that starts on receipt of an H.248 SUB message, stops on receipt of a Q2630 REL message, and sends a Q2630 REL message on expiry. The factory default is "15".

Type: integer
Range: {0-30}
Default value: not applicable

addErqTmr Identifies the value, in seconds, for the guard timer that starts on receipt of an H.248 ADD message, stops on receipt of a Q2630 ERQ message, and sends an H.248 SVC message on expiry. The factory default is "30".

Type: integer
Range: {8-60}
Default value: not applicable

iuupTmr Identifies the value, in seconds, for the guard timer that starts on receipt of a Q2630 ERQ message, stops on completion of IuUP initialization, and sends an H.248 SVC message on expiry. The factory default is "15".

Type: integer
Range: {1-30}
Default value: not applicable

erqTmr Identifies the Timer_ERQ (T1) value in seconds. On expiry, Timer_ERQ releases all resources and the connection, and sends a RES message. The factory default is "10".

Type: integer
Range: {5-30}
Default value: not applicable

relTmr Identifies the Timer_REL (T2) value in seconds. On expiry, Timer_REL releases all resources and the connection, and sends a RES message. The factory default is "10".

Type: integer
Range: {2-60}
Default value: not applicable

resTmr Identifies the Timer_RES (T3) value in seconds. On expiry, Timer_RES repeats the RES message, restarts Timer_RES, and, at first expiry, informs the nodal function. The factory default is "10".

Type: integer
Range: {2-60}
Default value: not applicable

bloTmr Identifies the Timer_BLO (T4) value in seconds. On expiry, Timer_BLO alerts the maintenance system and informs the nodal function. The factory default is "10".

Type: integer
Range: {2-60}
Default value: not applicable

ublTmr Identifies the Timer_UBL (T5) value in seconds. On expiry, Timer_UBL alerts the maintenance system and informs the nodal function. The factory default is "10".

Type: integer
Range: {2-60}
Default value: not applicable

pathBlkThresh Identifies the onset threshold for AAL2 signaling path blockage as a percentage of total path bandwidth. The AAL2 system sends an alarm when the percentage is exceeded and clears the alarm when the blockage percentage drops below the threshold. The factory default is "50".

Type: integer
Range: {0-100}
Default value: not applicable

Input Examples:

```
ED-AAL2SIG-SYS:::::NSAP=bb.bbbb.bb.bbbbbb.bbbb.bbbb.
      bbbb.bbbbbbbbbbbb.b1,RELSUBTMR=5,SUBRELTMR=15,
   ADDERQTMR=30,IUUPTMR=15,ERQTMR=10,RELTMR=10,
   RESTMR=10,BLOTMR=10,UBLTMR=10,PATHBLKTHRESH=50;

RTRV-AAL2SIG-SYS;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "COM:NSAP=bb.bbbb.bb.bbbbbb.bbbb.bbbb.bbbb.
         bbbbbbbbbbbb.b1,RELSUBTMR=5,SUBRELTMR=15,
      ADDERQTMR=30,IUUPTMR=15,ERQTMR=10,RELTMR=10,
      RESTMR=10,BLOTMR=10,UBLTMR=10,PATHBLKTHRESH=50"
;
```

Related Commands: none

INIT-AAL2SIG-CHAN

Command:

INIT-AAL2SIG-CHAN: Initialize AAL2 Signaling Channel

Description:

INIT-AAL2SIG-CHAN lets the user initialize an AAL2 (ATM Adaptation Layer 2) signaling channel.

Category: VToA **Security:** SA

Input Format:

```
INIT-AAL2SIG-CHAN:[TID]:<chanAid>:[CTAG];
```

Output Format: none

Parameters:

chanAid Identifies the AID as a Q2630 channel on an AAL2 signaling path to a Radio Network Controller (RNC) at a wireless base station. A null value for the third part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the switch initializes on all channels on the specified AAL2 signaling path.

Type: string
Range: <dpc>-<pathId>[-<chanId>], where:
dpc = {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes
pathId = {1-2147483647}
chanId = {8-255}
Default value: None

Input Example:

```
INIT-AAL2SIG-CHAN::24-177-39-1-8;
```

Related Commands: None

INIT-REG-AAL2SIGDPC / RTRV-PM-AAL2SIGDPC

Commands:

INIT-REG-AAL2SIGDPC: Initialize Register AAL2 Signaling DPC

RTRV-PM-AAL2SIGDPC: Retrieve Performance Monitors AAL2 Signaling DPC

Descriptions:

INIT-REG-AAL2SIGDPC lets the user initialize one or more storage registers or event counters for AAL2 (ATM Adaptation Layer 2) signaling statistics gathered from a destination point code (DPC) for a Radio Network Controller (RNC) at a wireless base station.

RTRV-PM-AAL2SIGDPC lets the user retrieve current and historical performance data for AAL2 (ATM Adaptation Layer 2) signaling statistics gathered from a destination point code for a Radio Network Controller (RNC) at a wireless base station.

Category: VToA **Security:** NSA for INIT-REG, View for RTRV-PM

Input Formats:

```
INIT-REG-AAL2SIGDPC:[TID]:<dpc>:[CTAG]::[<montype>],
   [<monval>],[<locn>],[<dirn>],[<tmper>],
   [<mondat>],[<montm>];
```

```
RTRV-PM-AAL2SIGDPC:[TID]:<dpc>:[CTAG]::[<montype>],
   [<monlev>],[<locn>],[<dirn>],[<tmper>],[<mondat>],
   [<montm>];
```

Output Format:

```
      SID DATE TIME
M  CTAG COMPLD
   "<dpc>:<montype>,<monval>,[<vldty>],[<locn>],
      [<dirn>],[<tmper>],[<mondat>],[<montm>]"
;
```

Parameters:

dpc Identifies the AID as a destination point code for an RNC at a wireless base station.

Type: string
Range: {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes
Default value: none

montype Identifies a type of monitored parameter for AAL2 signaling from an RNC at a wireless base station.

Type: enum
Range: ALL = All monitored parameters
CKTCOMPLD = Number of AAL2 channels established
CKTFAIL = Number of AAL2 channels that failed to establish
ECFMSGRX = Number of ECF messages received
ECFMSGTX = Number of ECF messages transmitted
ERQMSGRX = Number of ERQ messages received
ERQMSGTX = Number of ERQ messages transmitted
MSGRX = Number of messages received
MSGTX = Number of messages transmitted
RELMSGRX = Number of REL messages received
RELMSGTX = Number of REL messages transmitted
RLCMSGRX = Number of RLC messages received
RLCMSGTX = Number of RLC messages transmitted
Default value: ALL

monval Identifies the monitored value as either the value to which the register identified by *montype* is to be initialized (for INIT-REG), or (for RTRV-PM output) the measured value of the monitored parameter. The value is in the form of numeric counts or rates. This parameter is presently not supported; leave it blank.

Type: integer
Range: {0-2147483647}
Default value: 0

monlev Identifies (for RTRV-PM input) the discriminating level of the requested monitored parameter. A null value defaults to "1-UP".

Type: enum
Range: {0-255}-{UP,DOWN}
Default value: 1-UP

vldty Identifies (for RTRV-PM output) the validity of the monitored interval; that is, whether the information for the specified time period was accumulated over the entire time period or some portion of it. This parameter is not supported presently; its value will be "NULL".

Type: enum
Range: ADJ = Data manually adjusted or initialized
COMPL = Data accumulated over the entire time period
LONG = Data accumulated over greater than the entire time period
NA = Data not available
PRTL = Data accumulated over a portion of the time period
Default value: not applicable for output

locn Identifies the location of the storage counters to be initialized. This parameter is not supported presently; leave it blank.

Type: Location
Range: FEND = Far end
NEND = Near end
Default value: NEND

dirn Identifies the direction of the data stored in statistics counters relative to the switch. This parameter is not supported presently; leave it blank.

Type: Direction
Range: BTH = Both directions
RCV = Receive direction only
TRMT = Transmit direction only
Default value: BTH

tmper Identifies the accumulation period for performance counters. The only values currently allowed for *tmper* are "15-MIN" and "24-HR". A null value defaults to both applicable accumulation periods. This parameter is not supported presently; leave it blank.

Type: TimePeriod
Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)
Default value: both 15-MIN and 24-HR

mondat Identifies the monitored date. The value indicates the beginning date for the performance-monitoring or storage register period defined by *tmper*. The format is MM-DD. This parameter is not supported presently; leave it blank.

Type: MonitoredDate
Range: {1-12}-{1-31}
Default value: current date

montm Identifies the monitored time. The value indicates the beginning time of day for the performance-monitoring or storage register period defined by *tmper*. The format is HH-MM. This parameter is not supported presently; leave it blank.

Type: MonitoredTime
Range: {0-23}-{0-59}
Default value: current time

Input Examples:

```
INIT-REG-AAL2SIGDPC::24-177-39;
RTRV-PM-AAL2SIGDPC::24-177-39;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "24-177-39:MSGTX,0,,,,,,"
   "24-177-39:MSGRX,0,,,,,,"
   "24-177-39:ERQMSGTX,0,,,,,,"
   "24-177-39:ERQMSGRX,0,,,,,,"
   "24-177-39:ECFMSGTX,0,,,,,,"
   "24-177-39:ECFMSGRX,0,,,,,,"
   "24-177-39:RELMSGTX,0,,,,,,"
   "24-177-39:RELMSGRX,0,,,,,,"
   "24-177-39:RLCMSGTX,0,,,,,,"
   "24-177-39:RLCMSGRX,0,,,,,,"
   "24-177-39:CKTCOMPLD,0,,,,,,"
   "24-177-39:CKTFAIL,0,,,,,,"
;
```

Related Commands: none

RTRV-STATUS-AAL2SIGCHAN

Command:

RTRV-STATUS-AAL2SIGCHAN: Retrieve Status AAL2 Signaling Channel

Description:

RTRV-STATUS-AAL2SIGCHAN lets the user retrieve the primary and secondary states of a Q2630 channel on an AAL2 (ATM Adaptation Layer 2) signaling path.

Category: VToA **Security:** View

Input Format:

```
RTRV-STATUS-AAL2SIGCHAN:[TID]:<chanAid>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "chanAid::<pst>,[<sst>]"
;
```

Parameters:

chanAid Identifies the AID as a Q2630 channel on an AAL2 signaling path to a Radio Network Controller (RNC) at a wireless base station. A null value for the third part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the switch retrieves the state of all channels on the specified AAL2 signaling path.

Type: string
Range: <dpc>-<pathId>[-<chanId>], where:
dpc = {0-255}-{0-255}-{0-255} for NANP point codes
{0-16383} for international point codes
pathId = {1-2147483647}
chanId = {8-255}
Default value: none

pst Identifies (in output) the primary state of the AAL2 signaling channel.

Type: enum
Range: IS = In-Service
OOS-AU = Out-Of-Service, Autonomous
OOS-AUMA = Out-Of-Service, Autonomous and Managed
OOS-MA = Out-Of-Service, Managed
Default value: none

sst Identifies (in output) the secondary state of the AAL2 signaling channel.

Type: enum
Range: BLKD = Blocked
IDLE = Idle
INBUSY = Incoming Busy
OUTBUSY = Outgoing Busy
SGEO = Supporting Entity Outage
TRANS = Transient
Default value: none

Input Example:

```
RTRV-STATUS-AAL2SIGCHAN::24-177-39-1-8;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "24-177-39-1-8::OOS-AU,SGEO"
;
```

Related Commands: none

RTRV-STATUS-DSP

Command:

RTRV-STATUS-DSP: Retrieve Status Digital Signal Processor

Description:

RTRV-STATUS-DSP lets the user retrieve sustained cell rates for the six or eight Digital Signal Processors (DSPs) on a Voice Server Module (VSM).

Category: VToA **Security:** View

Input Format:

```
RTRV-STATUS-DSP:[TID]:<vsmModule>:[CTAG];
```

Output Format:

```
   SID DATE TIME
M  CTAG COMPLD
   "vsmModule:<dsp1>,<dsp2>,<dsp3>,<dsp4>,<dsp5>,
      <dsp6>,<dsp7>,<dsp8>"
;
```

Parameters:

vsmModule Identifies the AID as a Voice Server Module.

Type: string
Range: IOM-{1-17}
Default value: none

dsp1 Identifies (in output) the sustained cell rate for DSP 1.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp2 Identifies (in output) the sustained cell rate for DSP 2.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp3 Identifies (in output) the sustained cell rate for DSP 3.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp4 Identifies (in output) the sustained cell rate for DSP 4.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp5 Identifies (in output) the sustained cell rate for DSP 5.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp6 Identifies (in output) the sustained cell rate for DSP 6.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp7 Identifies (in output) the sustained cell rate for DSP 7.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

dsp8 Identifies (in output) the sustained cell rate for DSP 8.

Type: string
Range: ASCII characters, in the form
"FREE=x, TOTAL=y", where "x" is the number of free cells and "y" is the total number of cells
Default value: none

Input Example:

```
RTRV-STATUS-DSP::IOM-4;
```

Output Example:

```
   lucent 2005-04-22 14:37:49
M  0 COMPLD
   "IOM-4:FREE=0,T0TAL=11792,FREE=0,T0TAL=11792,
      FREE=0,T0TAL=11792,FREE=0,T0TAL=11792,
      FREE=0,T0TAL=11792,FREE=0,T0TAL=11792,
      FREE=0,T0TAL=11792,FREE=0,T0TAL=11792"
;
```

Related Commands: none

CANC

Message:

CANC: Cancel

Description:

CANC is an automatic message transmitted by the switch to an administrator when a session established by a user is terminated because of "timeout"; i.e., no messages were exchanged during a given interval.

Category: Automatic Messages **Security:** ADMIN

Input Format: none

Output Format:

```
   SID DATE TIME
A  ATAG CANC
   "<uid>"
;
```

Parameters:

uid Identifies the user. The UID is the user ID or login name.

Range: 8 – 16 characters

Output Example:

```
   telica 2004-10-29 14:37:49
A  1 CANC
   "JOHNUSER"
   /* CANC */
;
```

REPT ALM <ReptAid>

Message:

REPT ALM <ReptAid>: Report Alarm (ALL, COM, ENET, EQPT, STS1, T1, T3)

Description:

REPT ALM messages are generated automatically by the switch to report the onset or clearing of an alarm condition that requires immediate attention. Non-alarmed conditions are reported with REPT EVT. REPT ALM does not signal environmental alarms.

Category: Automatic Messages **Security:** View

Input Format: none

Output Format:

```
   SID DATE TIME
** ATAG REPT ALM <ReptAid>
   "<alm_id>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,
      <ocrtm>,[<locn>],[<dirn>],[<monval>],[<thlev>],
      [<tmper>]:[<conddescr>],[<aiddet>],[<obsdbhvr>],
      [<exptdbhvr>]:[<termination>],[<tblisltd>]"
;
```

Parameters:

ReptAid Identifies the type of entity within the switch from which to retrieve alarms.

Type: ReptAid
Range: ALL = Designates the switch and all entities within it
COM = Common – designates the switch as a discreet entity
ENET = Ethernet ports
EQPT = Equipment – designates major assemblies
STS1 = STS1 ports
T1 = T1 ports
T3 = T3 ports
Default value: none

alm_id Identifies the specific entity within the switch to which the message pertains.

Range: ASCII characters

ntfcncde The notification code of the event that caused the condition to be reported. This indicates the alarm level.

Range: CL = Cleared. Never used in provisioning requests or returned in RTRVs - only active conditions are available through the RTRV-EVT/COND/ALM messages and by definition their notification codes are never CL/CLEAR.
CR = Critical
MJ = Major
MN = Minor
NA = Not Alarmed

condtype Indicates the condition type for an alarm or a reported event.

Range: alphanumeric characters

srveff The effect on service caused by the alarm condition.

Range: SA = Service-affecting condition.
NSA = Non-service-affecting condition

ocrdat Date when the specific event or violation occurred.

Range: {1-12}-{1-31} = {month}-{day of month}

ocrtm Time when the specific event or violation occurred.

Range: {0-23}-{0-59}-{0-59} = {hour}-{minute}-{second}
{0-23}-{0-59} = {hour}-{minute}

locn Indicates the location of the storage registers or event counters where the specific event or violation occurred. A null value defaults to all applicable locations.

Range: FEND = Far end
NEND = Near end

dirn The direction relative to the IOM or port on an IOM in the switch to which the command pertains. A null value defaults to all applicable directions.

Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* is to be initialized. The value is in the form of numeric counts or rates. A null value indicates that there is no measured value associated with this trouble or event, or it is not accessible for remote reporting.

Range: {1-9999}

thlev Identifies the threshold level. *thlev* is reported if the alarm report has resulted from a degradation that has exceeded the defined or specified threshold level. A null value indicates that there is no threshold level associated with this event, or it is not accessible for remote reporting.

Range: {1-9999}

tmper The accumulation period for performance counters. A null value defaults to "not applicable".

Range: {1}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)

conddescr Describes the alarm condition. A null value in this parameter means there is no information to report.

Range: alphanumeric characters

aiddet Specifies additional details about the entity being managed. Identifies the supplementary equipment used to identify the location of the reported trouble. A null value in this parameter means there is no information to report.

Range: COM
ENTITYID

obsdbhvr Identifies the observed behavior that resulted in the reported trouble. A null value in this parameter means there is no information to report.

Range: alphanumeric characters

exptdbhvr Identifies the expected behavior whose deviation is described in *obsdbhbr*. A null value in this parameter means there is no information to report.

Range: alphanumeric characters

termination Indicates how the diagnostic routine terminated in the event of a failure. A null value in this parameter means there is no information to report.

Range: IMED = Procedure stopped testing a unit when failure was received, and proceeded to any remaining equipment units.

NORM = The diagnostic terminated normally. The switch completed the entire set of phases and iterations of the procedure regardless of failed phases.

tblisltd Identifies the type of event with an integer. A null value defaults to "not applicable".

Range: {1-9999}

Output Example:

```
   telica 2004-10-29 14:37:49
A  2 REPT ALM EQPT
   "IOM-7:CL,PRCDRERR,NSA,10-29,18-35-03:\"Module in
      Slot 7 present but not provisioned\":79"
;
```

REPT ALM SECU

Message:

REPT ALM SECU: Report Alarm Security

Description:

REPT ALM SECU messages are generated autonomously by the switch to report the onset or clearing of a security alarm condition that requires immediate attention. Non-alarmed conditions are reported with REPT EVT.

Category: Automatic Messages **Security:** View

Input Format: none

Output Format:

```
   SID DATE TIME
** ATAG REPT ALM SECU
   "<SecRepAid>:<ntfcncde>,<securityAlarmType>"
;
```

Parameters:

SecRepAid Identifies the entity to which the alarm pertains. For example, in the case of a buffer overflow, it identifies the security log (SECULOG). For a security alarm of type "INTRUSION", the AID is the CID where the intrusion occurred.

Range: alphanumeric characters

ntfcncde The notification code of the event that caused the condition to be reported. This indicates the alarm level.

Range: CL = Cleared. Never used in provisioning requests or returned in RTRVs - only active conditions are available through the RTRV-EVT/COND/ALM messages and by definition their notification codes are never CL/CLEAR.
CR = Critical
MJ = Major
MN = Minor
NA = Not Alarmed

securityAlarmType Identifies the type of security alarm.

Range: INTRUSION = Intrusion
LOGBUFR90 = Log buffer 90% full
LOGBUFROVFL = Log buffer overflow
TUIDAGE = Expired user ID

Output Example:

```
   telica 2004-10-29 14:37:49
** 1 REPT ALM SECU
   "SECULOG:NA,LOGBUFR90"
;
```

REPT BKUP

Message:

REPT BKUP: Report Backup

Description:

REPT BKUP messages are generated autonomously by the switch to report the completion (or non-completion) of a scheduled backup of the configuration data for the switch, including the TimesTen database. Use SCHED-BKUP-EQPT to schedule database backups; use RTRV-BKUPSCHED-EQPT to verify them.

Category: Automatic Messages **Security:** View

Input Format: none

Output Format:

```
   SID DATE TIME
** ATAG REPT BKUP
   "[<frommem>],[<fromdev>],[<tomem>],[<todev>]:
      [<memclass>],[<opt>]:[<status>]"
;
```

Parameters:

frommem Identifies the functional memory, file, or data area from which the data was to be copied.

Range: alphanumeric characters

fromdev Identifies the memory storage device in the switch from which the data was to be copied.

Range: alphanumeric characters

tomem Identifies the functional memory, file, or data area to which the data was to be copied.

Range: alphanumeric characters

todev Identifies the memory storage device in the switch to which the data was to be copied.

Range: alphanumeric characters

memclass Provides finer delimiting of the memory to be copied.

Range: alphanumeric characters

opt Identifies the option to be used for the copy.

Range: alphanumeric characters

status Identifies the pass/fail status of the scheduled backup operation. The switch returns an optional free-form text description of the failure when the value of *status* is "FAIL".

Range: PASS = Backup occurred as scheduled.
FAIL = Backup operation has failed.

Output Example:

```
   telica 2004-10-29 14:37:49
** 1 REPT BKUP
   "FROMMEM,,TOMEM::PASS"
;
```

REPT COND <ReptAid>

Message:

REPT COND <ReptAid>: Report Condition (ALL, COM, ENET, EQPT, STS1, T1, T3)

Description:

REPT COND provides a periodic report of standing conditions on the switch. The length of the interval between reports is determined by the value of the parameter *heartbeat* in the command ED-SYS-SECU. REPT-COND is generated when no activity occurs within the heartbeat timeframe. The schedule for these messages summarizes what already has been signaled by REPT EVT or by REPT ALM. It may not include threshold crossing conditions and may include conditions that are not reported at all in REPT ALM or REPT EVT messages. Unlike REPT ALM or REPT EVT, it supports multiple rows/conditions per message.

Category: Automatic Messages **Security:** View

Input Format: none

Output Format:

```
   SID DATE TIME
A  ATAG REPT COND <ReptAid>
   "[<cond_id>]:[<ntfcncde>],<condtype>,[<srveff>],
        [<ocrdat>],[<ocrtm>],[<locn>],[<dirn>],
        [<tmper>]"
;
```

Parameters:

AIDType Identifies the type of entity within the switch from which to report conditions.

Range: ALL = Designates the switch and all entities within it
COM = Common – designates the switch as a discreet entity
ENET = Ethernet ports
EQPT = Equipment – designates major assemblies
STS1 = STS1 ports
T1 = T1 ports
T3 = T3 ports

cond_id Identifies the specific entity within the switch to which the message pertains.

Range: ASCII characters

ntfcncde The notification code of the event that caused the condition to be reported. This indicates the alarm level. A null value defaults to "NA".

Range: CL = Cleared. Never used in provisioning requests or returned in RTRVs - only active conditions are available through the RTRV-EVT/COND/ALM messages and by definition their notification codes are never CL/CLEAR.
CR = Critical
MJ = Major
MN = Minor
NA = Not Alarmed

condtype Indicates the condition type for an alarm or a reported event.

Range: alphanumeric characters

srveff The effect on service caused by the alarm condition. A null value indicates that the effect on service is unknown or that the parameter is not used.

Range: SA = Service-affecting condition.
NSA = Non-service-affecting condition

ocrdat Date when the specific event or violation occurred. A null value defaults to the date in the message header.

Range: {1-12}-{1-31) = {month}-{day of month}

ocrtm Time when the specific event or violation occurred. A null value defaults to the time in the message header.

Range: {0-23}-{0-59}-{0-59} = {hour}-{minute}-{second}
{0-23}-{0-59} = {hour}-{minute}

locn Indicates the location of the storage registers or event counters to be initialized. A null defaults to either NEND or implies that there is no location associated with the response or automatic message.

Range: FEND = Far end
NEND = Near end

dirn The direction relative to the IOM or port on an IOM in the switch to which the command pertains. A null value defaults to "NA".

Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive

tmper The accumulation period for performance counters. A null value defaults to "15-MIN".

Range: {1-31}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)

Output Example:

```
   telica 2004-10-29 14:37:49
A  1 REPT COND
   "COM:MN,CONDTYPE,NSA,08-04,08-45-40,FEND,NA,15-MIN"
;
```

REPT DBCHG

Message:

REPT DBCHG: Report Database Change

Description:

REPT DBCHG messages are generated automatically by the switch to report database changes that have occurred as a result of commands entered to change equipment provisioning or configuration. Database changes include changes to the value of the TID or SID, the values of the keywords defined in the common block and specific block, the transition into and out of OOS-MA state, and RDLD (redlined) secondary state changes.

Category: Automatic Messages **Security:** View

Input Format: none

Output Format:

```
   SID DATE TIME
A  ATAG REPT DBCHG
   "<free-format text messages>"
;
```

Parameters: None – The response includes one line of data in double quotes, followed by a carriage return line feed, for each external update that has occurred. Within the quotes, the format resembles the block structure of input commands. In fact, the blocks defined here resemble an input command that would achieve a database change equivalent to the external update.

Output Example:

```
   telica 2004-10-29 14:37:49
A  1 REPT DBCHG
   "DATE=2003-10-29,TIME=10-44-46,USERID=telica,
      DBCHGSEQ=0:ent-eqpt::iom-7:BAA9UV0GAA,PRI,90,90,
      90,1.1.3.0.0.76:IS"
;
```

REPT EVT <ReptAid>

Message:

REPT EVT <ReptAid>: Report Event

Description:

REPT EVT <ReptAid> is generated by the switch to report the occurrence of non-alarmed events. An example is the crossing of a performance threshold.

Category: Automatic Messages **Security:** View

Input Format: none

Description: REPT EVT <ReptAid> is generated by the switch to report the occurrence of non-alarmed events. An example is the crossing of a performance threshold.

Output Format:

```
   SID DATE TIME
A  ATAG REPT EVT <ReptAid>
   "<evt_id>:<condtype>,[<condeff>],[<ocrdat>],
      [<ocrtm>],[<locn>],[<dirn>],[<monval>],
      [<thlev>],[<tmper>]:<desc>:[<tblisltd>]"
;
```

Parameters:

AIDType Identifies the type of entity within the switch from which to report conditions.

Range: ALL = Designates the switch and all entities within it
COM = Common – designates the switch as a discreet entity
ENET = Ethernet ports
EQPT = Equipment – designates major assemblies
STS1 = STS1 ports
T1 = T1 ports
T3 = T3 ports

evt_id Identifies the entity in the switch to which the message pertains. *evt_id* is the AID ALL and is optional. A null value is equivalent to "ALL" and avoids redundancy when the message code modifier is COM.

Range: ALL

condtype Indicates the condition type for an alarm or a reported event.

Range: alphanumeric characters

condeff Identifies the effect of the event on the condition of the switch. A null value defaults to “TC”.

Range: CL = A standing condition has cleared.
SC = A condition is active for an extended period of time.
TC = A condition does not change the basic condition of the switch for an extended period of time.

ocrdat Date when the specific event or violation occurred. A null value defaults to the date in the message header.

Range: {1-12}-{1-31) = {month}-{day of month}

ocrtm Date when the specific event or violation occurred. A null value defaults to the time in the message header.

Range: {0-23}-{0-59}-{0-59} = {hour}-{minute}-{second}
{0-23}-{0-59} = {hour}-{minute}

locn Indicates the location of the storage registers or event counters to be initialized. A null defaults to either NEND or implies that there is no location associated with the response or automatic message.

Range: FEND = Far end
NEND = Near end

dirn The direction relative to the IOM or port on an IOM in the switch to which the command pertains. A null value defaults to "NA".

Range: AZ = Transmit
BTH = Both directions
NA = Not applicable
RCV = Receive direction only
TDTC = Transmit direction toward customer
TDTN = Transmit direction toward network
TRMT = Transmit direction only
ZA = Receive

monval Monitored value is either the measured value of the monitored parameter, or the value to which the register identified by *montype* is to be initialized. The value is in the form of numeric counts or rates. A null value indicates that there is no measured value associated with this trouble or event, or it is not accessible for remote reporting.

Range: {1-9999}

thlev Identifies the threshold level. *thlev* is reported if the alarm report has resulted from a degradation that has exceeded the defined or specified threshold level. A null value indicates that there is no threshold level associated with this event, or it is not accessible for remote reporting.

Range: {1-9999}

tmper The accumulation period for performance counters. A null value defaults to "not applicable".

Range: {1-31}-DAY = Time interval is exactly one day
{1-24}-HR = Interval of one to 24 hours (one day)
{1-1440}-MIN = Interval of one to 1440 minutes (one day)

desc Describes the alarm condition.

Range: alphanumeric characters

tblisltd Identifies the type of event with an integer. A null value defaults to “not applicable”.

Range: {1-9999}

Output Example:

```
   telica 2004-10-29 14:37:49
A  5 REPT EVT EQPT
   "IOM-7:INIT-50,TC,10-29,10-46-25:\"Module in slot 7
      has been restored to service\":25"
;
```

REPT EVT SESSION

Message:

REPT EVT SESSION: Report Event SESSION

Description:

REPT EVT SESSION is generated by the switch to report (to the user) the occurrence of a non-alarmed event related to establishing a session with the switch (i.e., a login for the switch). The following events are included in this category:

- The user's password is about to expire, or has expired. The user receives additional information if the password has expired but the "grace period" during which the existing password can still be used has not expired. Upon receiving this message, the user must update the password with the command ED-PID.
- When a request is made to establish a session with the switch (i.e., when a logon is attempted), the switch transmits a warning, before access is granted, regarding unauthorized entry/use and possible consequences.

Category: Automatic Messages **Security:** View

Input Format: none

Output Format:

```
   SID DATE TIME
A  ATAG REPT EVT SESSION
   "<ne_id>:<exp>,[<pcn>],<warn>"
;
```

Parameters:

ne_id Identifies the switch with which a session is attempted.

Range: alphanumeric characters

exp Indicates whether the password is currently valid (i.e., no password update is currently required), has expired, or is about to expire (i.e., updating is required or imminent).

Range: N = password updating unnecessary
Y = password updating required immediately or soon

pcn Indicates the number of days still remaining during which the existing password is allowed. No further logon will be allowed if the user has not updated the password when this number becomes zero. A null value defaults to "7".

Range: {1-999}-DAY

warn Represents the free-format text warning, before access is granted, regarding unauthorized entry/use and possible consequences.

Range: alphanumeric characters

Output Example:

```
   telica 2004-10-29 14:37:49
*  0 REPT EVT SESSION
   "telica:N,,/* NOTICE: This us a private computer
      system.  Unauthorized access or use may lead to
      prosecution.  Last login: Thu Aug 03 2003
      13:07:26 */"

;
```

Access Identifiers

1. ALL....4
2. AlmqSessionId....10
3. AltDnAid....10
4. AnncId....10
5. AnnouncementId....10
6. AudioMsgAid....11
7. BiccTrkAid....11
8. BlockListAid....11
9. CALLINGAREAAID....12
10. CaptAid....12
11. CaptSysId....13
12. CarrierCode....13
13. CasIfId....13
14. CasPrflId....13
15. CcAid....13
16. CccListAid....14
17. CcNpa....14
18. CcNpaNxx....14
19. CcNpaNxxStart....14
20. cgpnRouteAid....15
21. ChanIdGrp....15
22. CicPrflId....15
23. cl4SubId....16
24. COM....16
25. Cpc....16
26. CrvAidGrp....17
27. DgtModPrflAid....17
28. DgtScrnAid....18
29. DialPlanAid....22
30. DialPlanTrigAid....23
31. DigitModDnAid....23
32. DigitModGenAid....25
33. DigitModParamAid....26
34. DigitModTnsAid....27
35. ENET....28
36. FAN....28
37. IfGrpDs1Id....28
38. IfGrpNum....28
39. IomAid....29
40. IOMODULE....29
41. IOMorENET....29
42. IOMorOC....29

43. IOMorSP 30
44. IOMorSPorSF 30
45. IOMorSTS1 30
46. IOMorT3 30
47. IOMorT3orPORT 31
48. IOMorT3orPORTorBITS 31
49. isdnBcStaChannelStateAid 32
50. IsdnChanAid 32
51. IsdnIfNum 32
52. IsdnLink 32
53. IsdnRtAid 33
54. lapdAid 33
55. LinkId 34
56. ListCodeAid 34
57. LsetAid 34
58. MgcpLineAid 34
59. Mtp2PrflId 35
60. Mtp3PrflId 35
61. NNPAAid 35
62. NpaNxx 35
63. OC 35
64. PcAid 36
65. PcPrflId 36
66. PORT 36
67. PORTorBITS 36
68. PvcId 37
69. PvcPrflId 37
70. RelCauseAid 37
71. RouteAddrAid 37
72. RouteN11Aid 38
73. RouteSchedAid 39
74. RouteSs7Aid 39
75. RtId 39
76. RtIntfcAid 40
77. RtpTermId 40
78. SccpSsnAid 40
79. ScpAnncMap 41
80. ScreenDigitsAid 41
81. ScreenListAid 42
82. ServiceId 42
83. SlhrId 44
84. SnmpAccessAid 44
85. SnmpViewAid 45
86. SP 45
87. SPorIOM 45
88. Ss7LnkAid 45

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The Access IDentification code (AID) directs an input command to its intended physical or data entity inside the NE. Equipment modules and facilities are typical examples of entities addressed by the access code.

1. ALL

Identifies the AID as all possible AIDs. This AID occurs only in autonomous messages returned by the switch.

AID	Patterns
AlmqSessionId	Up to eight hexadecimal characters
AltDnAid	<SUBSCRIBERID>-SUBSCRIBERID>
AnncId	{32767-65535}
AnnouncementId	{1-65535}
AudioMsgAid	{1-65535}-<VARIANT>
BiccTrkAid	{1-9999}-{0-16382}
BlockListAid	<BLOCKNAME>-<SCREENTYPE> [-<SCREENSTRING>]
CALLINGAREAAID	CALLINGAREASTRING-CENTERNAMESTRING
CaptAid	BICC CAS-IOM-{1-17}-PORT-{1-28} CAS-IOM-{1-17}-PORT-{1-28}-T0-{1-24} CAS-IOM-{1-17}-T3-{1-8}-PORT-{1-28} CAS-IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24} ISDNIF-{1-32767} LSET-{1-20}
CaptSysId	{1}
CarrierCode	{0-9999}
CasIfId	{1-2147483645}
CasPrflId	{1-128}
CcAid	{1-99999}
CccListAid	{1-32767}-{up to 21 digits}
CcNpa	{1-99999}-{200-999}
CcNpaNxx	{1-99999}-{200-999}-{200-999}
CcNpaNxxStart	{1-99999}-{1-99999}-{1-99999}-{0-9999}
cgpnRouteAid	<RTADDR>-{ROUTEIDENT}

ChanIdGrp	IfGrpNum[-T0]
CicPrflId	{1-128}
cl4SubId	<subscriberId>-<callType> <subscriberId>-<carrier>
COM	COM
Cpc	{0-255}
CrvAidGrp	<ifGrpNum>-<crv>-<subIfId>
DgtModPrflAid	<dgtModName>[-<dgtString>[-<key> [-<nai>[-<minLen>]]]]
DgtScrnAid	<dgtScrnLbl>[-<primKey> [-<primKeyValue>[-<secKeyValue> [-<terKeyValue]]]]
DialPlanAid	<dialPlanName>[-<nai>[-<digits> [-<minDgts>]]]
DialPlanTrigAid	<dialPlanName>-<ainTrigList>
DigitModDnAid	<dmLbl>[-<dnType>[-<nai>[-<digits> [-<minDgts]]]]
DigitModGenAid	<dmLbl>[-<genType>[-<nmbrType> [-<digits]]]
DigitModParamAid	<dmLbl>[-<primKey>[-<Value]]
DigitModTnsAid	<dmLbl>[-<TNS>[-<carrier> [-<callTypeCode>[-<prtcl]]]]
ENET	IOM-{8,10}-ENET-{1-4}
FAN	FAN
IfGrpDs1Id	{1-32767}-{1-28}
IfGrpNum	{1-32767}
IomAid	IOM-{1-17}
IOMODULE	IOM-{1-17}
IOMorENET	IOM-{8,10} IOM-{8,10}-ENET-{1-4}
IOMorOC	IOM-{8,10} IOM-{8,10}-OC12-{1-4} IOM-{8,10}-OC3-{1-4}
IOMorPORT	IOM-{1-17} IOM-{1-17}-PORT-{1-28} IOM-{1-17}-SST1-{1-8}-PORT-{1-28} IOM-{1-17}-T3-{1-8}-PORT-{1-28}
IOMorSP	IOM-{1-17} SP-{A-B}

IOMorSPorSF	IOM-{1-17} SF-{A-B} SP-{A-B}
IOMorSTS1	IOM-{1-17} IOM-{1-17}-STS1-{1-8}
IOMorT3	IOM-{1-17} IOM-{1-17}-T3-{1-8}
IOMorT3orPORT	IOM-{1-17} IOM-{1-17}-PORT-{1-28} IOM-{1-17}-STS1-{1-8} IOM-{1-17}-STS1-{1-8}-PORT-{1-28} IOM-{1-17}-T3-{1-8} IOM-{1-17}-T3-{1-8}-PORT-{1-28}
IOMorT3orPORTorBITS	IOM-{1-17} IOM-{1-17}-PORT-{1-28} IOM-{1-17}-STS1-{1-8} IOM-{1-17}-STS1-{1-8}-PORT-{1-28} IOM-{1-17}-T3-{1-8} IOM-{1-17}-T3-{1-8}-PORT-{1-28} TMG-{A,B}
IsdnBcStaChannelStateAid	{1-32767}-{1-32767}-{1-24}
IsdnChanAid	{1-32767}-{1-32767}-{1-24}
IsdnIfNum	{1-32767}
IsdnLink	{1-32767}-{1-32767}
IsdnRtAid	<RTNAME>-{0-32767}
lapdAid	GR303EOC-{1-32767}-{1-28} GR303TMC-{1-32767}-{1-32767} ISDN-{1-32767}-{1-32767} IUA-IOM-{1-17}-PORT-{1-28} IUA-IOM-{1-17}-STS1-{1-8}-PORT -{1-28} IUA-IOM-{1-17}-T3-{1-8}-PORT -{1-28}
LinkId	{1-32767}-{1-32767}
ListCodeAid	<LISTID>-{INDEX}
LsetAid	{1-20}
MgcpLineAid	<gatewayId>-<lineId>
Mtp2PrflId	{1-40}
Mtp3PrflId	{1-20}
NNPAAid	{1-99999}-{200-999}

NpaNxx	{200-999}-{200-999}
OC	IOM-{8,10}-OC12-{1-4} IOM-{8,10}-OC3-{1-4}
PcAid	{0-255}-{0-255}-{0-255}
PcPrflId	{1-128}
PORT	IOM-{1-17}-PORT-{1-28} IOM-{1-17}-STS1-{1-8}-PORT-{1-28} IOM-{1-17}-T3-{1-8}-PORT-{1-28}
PORTorBITS	IOM-{1-17}-PORT-{1-28} IOM-{1-17}-STS1-{1-8}-PORT-{1-28} IOM-{1-17}-T3-{1-8}-PORT-{1-28} TMG-{A,B}
PvcId	{1-4}
PvcPrflId	{2-8}
RelCauseAid	{0-32767}-PROTOCOLTYPE-CODINGTYPE
RouteAddrAid	<RTADDR>-{ROUTEIDENT}
RouteN11Aid	<N11STRING>-<DSTRING>
RouteSchedAid	<SCHEDNAMESTRING>-<PRFLNAMESTRING>
RouteSs7Aid	<PCAID>-<LSETAID>
RtId	<rtList>-<index>
RtIntfcAid	<RTNAME>-{0-32767}
RtpTermId	Alphanumeric characters in the form: Chassis/RTP/IOM{1-17}/ P{1025-65535}
SccpSsnAid	<PCAID>-{1-255}
ScpAnncMap	<ANNCMAPLBL>-{1-65535}
ScreenDigitsAid	<SUBCRIBERID>-<SCREENTYPE>-<SCREENSTRING>
ScreenListAid	{LISTID}-{STARTRANGE}

ServiceId	ACB ACR AIN_TOLLFREE AR AUTHCODE CFBL CFDA CFV CID CIDCW CIS CNAB CNAM CND CNDB COT CRDPCL CWC CWT GMSC_IS41 GMSC_MAP LNP MWC RAF RDAS SC1 SC2 TOLLFREE TWC VMS
SlhrId	{0-31}
SnmpAccessAid	<GROUPNAME>-{SECLEVEL}-{SECMODEL}
SnmpViewAid	<VIEWNAME>-<VIEWTREE>
SP	SP-{A-B}
SPorIOM	IOM-{8,10} SP-{A-B}
Ss7LnkAid	{1-40}
Ss7PcAid	{0-255}-{0-255}-{0-255}
Ss7TrkAid	{1-9999}-{0-16382}
STS1	IOM-{1-17}-STS1-{1-8}
SubIfAid	{IFNUM}-{SUBIF}

SubSpeedAid	<SUBCRIBERID>-{2-99}
T0	IOM-{1-17}-PORT-{1-28}-T0-{1-24} IOM-{1-17}-STS1-{1-8}-PORT-{1-28}-T0-{1-24} IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}
T3	IOM-{1-17}-T3-{1-8}
T3orPORT	IOM-{1-17}-STS1-{1-8} IOM-{1-17}-STS1-{1-8}-PORT-{1-28}-T0-{1-24} IOM-{1-17}-T3-{1-8} IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}
T3PORT	IOM-{1-17}-STS1-{1-8}-PORT-{1-28}-T0-{1-24} IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}
TdmTermId	Alphanumeric characters in the form: Chassis/TDM/IOM{1-17}/ T{1-8}/ P{1-28}/C{1-24}
TestPortNum	TP-{1-24}
TgnAid	{1-9999}
TgnSipId	{1-9999}-{1-16}
TransSchedAid	<transSched>-<prflName>
TrigEscListAID	<trigEscList>-<startRange>
TriggerAid	<ainTrigListName>-<index>
TrkAid	{1-9999}-{1-32767}
VMS	<msrId>-<smdiLnkId>
VoipPrfl	{1-65535}
VpId	IOM-{1-17}-VP-{1-8}
VpsId	IOM-{1-17}-VCC-{0-799}

2. AlmqSessionId

Identifies the AID as an alarm queuing session in the list of active alarm queuing sessions.

Pattern	Description
Up to eight hexadecimal characters	Represents an IP address of a machine connecting to the alarm queue port

3. AltDnAid

Identifies the AID with a variable string indicating a subscriber and an alternate directory number associated with the subscriber.

Pattern	Description
<SUBSCRIBERID>-<SUBSCRIBERID>	Represents a subscriber and an alternate directory number with strings of exactly 10 digits

4. AnncId

Identifies the AID as an audio announcement residing on an external announcement server.

Pattern	Description
{32767-65535}	Represents an external audio announcement

5. AnnouncementId

Identifies the AID as an audio announcement.

Pattern	Description
{1-32766}	Represents an audio announcement

6. AudioMsgAid

Identifies the AID as an audio message. The first part of the AID is an integer representing the message identifier; the second part is an optional string representing the language variant of the message.

Pattern	Description
{1-65535}-{VARIANT}	Represents an audio message

7. BiccTrkAid

Identifies the AID as a unique trunk (or range of trunks) associated with a trunk group number. The first number in the range identifies the trunk group number and the second number identifies the trunk(s).

Pattern	Description
{1-9999}-{0-16382}	Represents a CIC

8. BlockListAid

Identifies the AID as a list containing strings of digits that a subscriber is blocked from calling.

Pattern	Description
<BLOCKNAME> -<SCREENTYPE> [-<SCREENSTRING>]	BLOCKNAME identifies the name of the list with a string of up to 21 characters representing the subscriber; *SCREENTYPE* identifies the type of screened number, with values of: • CUTTHRU = Casual calling carrier (any four-digit string specifying the cic on which calls are blocked – no default) • INTNATIONAL = Direct-dial international (any digit string up to 21 digits, but without 011 prefix) • NATIONAL = Any number in the NANP (*1* or any *NPA* or any *NPA-NXX* or any complete *NPA-NXX-xxxx* or any digit string up to 21 digits) • OPERATOR = Local or long-distance operator request (*0* or *00*)

	• OPINTRN = Operator-assisted international ("DEFAULT"– blocks all calls prefixed by *01*) • OPNAT = Operator-assisted national (*0* and *411*) SCREENSTRING identifies the digits to block with a string of up to 21 digits (shown parenthetically for each value of *SCREENTYPE*), or "DEFAULT".

9. CALLINGAREAAID

Identifies the AID as an association between a local calling area and a rate center. The first 30-character string in the range identifies the name of the calling area, and the second 30-character string identifies the name of the rate center.

Pattern	Description
CALLINGAREASTRING-CENTERNAMESTRING	Represents the name of a calling area and the name of a rate center with strings of 30 characters each

10. CaptAid

Identifies the AID as (a) capture session access line(s).

Pattern	Description
BICC	All BICC trunks
CAS-IOM-{1-17}-PORT-{1-28}	All CAS channels on a specific T1 port on a DS1 IOM
CAS-IOM-{1-17}-PORT-{1-28}-T0-{1-24}	A CAS channel on a specific T1 port on a DS1 IOM
CAS-IOM-{1-17}-T3-{1-8}-PORT-{1-28}	All CAS channels on a specific T1 port on a DS3 IOM
CAS-IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}	A CAS channel on a specific T1 port on a DS3 IOM
ISDNIF-{1-32767}	An ISDN interface
LSET-{1-20}	An SS7 link set

11. CaptSysId

Identifies the AID as a server that can receive protocol capture session records. The range is restricted to {1} as there currently can be only one such server.

Pattern	Description
{1}	Represents a protocol capture session server

12. CarrierCode

Identifies the AID as a specific carrier.

Pattern	Description
{0-9999}	Represents a specific carrier

13. CasIfId

Identifies the AID as a Channel-Associated Signaling (CAS) interface.

Pattern	Description
{1-2147483645}	Represents a CAS interface

14. CasPrflId

Identifies the AID as a Channel-Associated Signaling (CAS) profile.

Pattern	Description
{1-128}	Represents a CAS profile

15. CcAid

Identifies the AID as a country code.

Pattern	Description
{1-99999}	Represents a country code

16. CccListAid

Identifies the AID as a call content channel (CCC) associated with a specific list of call content channels. The first part of the AID is the numerical identifier for the CCC list and the second part is the CCC.

Pattern	Description
{1-32767}-{up to 21 digits}	Represents a CCC associated with a specific list of call content channels

17. CcNpa

Identifies the AID as an NPA in a country. A null value for the second number in the range is equivalent to all NPAs in the system.

Pattern	Description
{1-99999}-{200-999}	Represents a country code and an NPA

18. CcNpaNxx

Identifies the AID as a specific exchange (NXX) in an NPA in a country. A null value for the third number in the range is equivalent to all exchanges in the system.

Pattern	Description
{1-99999}-{200-999}-{200-999}	Represents a country code, an NPA, and an NXX

19. CcNpaNxxStart

Identifies the AID as the starting number for a block of pooled numbers. The first set of numbers in the range represents the country code, the second set represents the area code, the third represents the local exchange, and the fourth (which must be exactly four digits) represents the starting number for the block.

Pattern	Description
{1-99999}-{1-99999}-{1-99999}-{0-9999}	Represents a country code, an NPA, an NXX, and the starting number for a block of pooled numbers

20. cgpnRouteAid

Identifies the AID as a route address. The pattern is a combination of the route address (the telephone number of a calling party associated with a route name) and the nature of address indicator for the route (defined by the parameter *ROUTEIDENT*).

Pattern	Description
<RTADDR>-{ROUTEIDENT}	*RTADDR* is a string of 1-21 digits. *ROUTEIDENT* can be: • INTNATNUM = international number • NATNUM = national significant number • SUBSNUM = subscriber number • UNKNOWN = Nature of Address unknown

21. ChanIdGrp

Identifies the AID as a DS0 channel on a port within a GR303 interface group. The pattern is a combination of the interface group number, and the physical channel on a port of the I/O module belonging to the GR303 interface group. A null value for the second part of the AID is equivalent to "ALL"; that is, by leaving the field blank, the state will be changed (in ED) or returned (in RTRV) for all configured channels for the specified GR303 interface group.

Pattern	Description
IfGrpNum[-T0]	IfGrpNum = {1-32767} T0 = IOM-{1-17}-STS1-{1-8}-PORT-{1-28}-T0-{1-24} IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}

22. CicPrflId

Identifies the AID as a CIC profile.

Pattern	Description
{1-128}	Represents a CIC profile

23. cl4SubId

Identifies the AID as the association between a subscriber and a carrier or a call type.

Pattern	Description
<subscriberId> -<callType> or <subscriberId> -<carrier>	*subscriberId* identifies the subscriber with a string of exactly 10 digits *callType* identifies the call type for which the subscriber assignment parameters apply, with values of: DEFAULT = all call types (default value) INTERLATA INTERNATIONAL INTRALATA *carrier* identifies the carrier for which the subscriber assignment parameters apply as a string of 1-4 digits with a default of "DEFAULT"

24. COM

Identifies the AID as the switch as a whole.

Pattern	Description
COM	Represents the switch as a whole

25. Cpc

Identifies the AID as a calling party category (one of the IAM parameters).

Pattern	Description
{0-255}	Represents a calling party category

26. CrvAidGrp

Identifies the AID as a GR303 call reference value. The pattern is a combination of the interface group number, the call reference value, and the subscriber interface number.

Pattern	Description
<ifGrpNum>- <crv>- <subIfId>	ifGrpNum = {1-32767} crv = {1-2048} subIfId = {1-32767}access to the group

27. DgtModPrflAid

Identifies the AID as a profile that identifies how to modify the digits distinguishing routed calls.

Pattern	Description
<dgtModName> [-<dgtString> [-<key> [-<nai> [-<minLen>]]]]	*dgtModName* identifies the name of the profile with a string of up to eight alphanumeric characters *dgtString* (optional only in RTRV) identifies the digits (distinguishing the routed calls) to modify with a string of 1-21 digits (default = "DEFAULT") *key* identifies the digits (distinguishing the routed calls) to modify with a string of 1-21 digits (default = "DEFAULT") *nai* identifies the nature of address indicator applicable to the specified digit string, with a default of "UNKNOWN" and values of: • INTNATNUM = international number • NATNUM = national significant number • NATOPREQ = national (long-distance) operator request • NONUMCUTTHRU = no number provided, cut through to carrier • NONUMOPREQ = no number provided, operator request • SUBOPREQ = subscriber (local) operator request • SUBSNUM = subscriber number • UNKNOWN = unknown

	minLen identifies the minimum length of the specified digit string as an integer from 7 to 21 with a default of 7

28. DgtScrnAid

Identifies the AID as a digit screening method.

Pattern	Description
<dgtScrnLbl> [-<primKey> [-<primKeyValue> [-<secKeyValue> [-<terKeyValue]]]]	*dgtScrnLbl* identifies the name of the applicable screening table with a string of 1-10 alphanumeric characters; *primKey* (optional only in RTRV) identifies the primary key applicable to the specified screening table, with values of: • BGN = Bearer Group Number (interface type) • CALLTYPE = Type of call (Class 5) • CDPN = Called party number • CGPN = Calling party number • CHRGN = Charge number • CIP = Carrier Information Parameter (for ISUP only) • CPC = Calling Party Category • CSI = Carrier Selection Information • GAP = Generic Address Parameter • GENDGTS = Generic Digits • JIP = Jurisdiction Information Parameter (NPANXX) • LATA = Local Access & Transport Area • OLI = Originating Line Information • SUBSTATUS = Subscriber status (valid only when the value “SUB” is the first listed for the parameter *actnInfoAnlz* in TRANS-PLAN) • TNS = Transit Network Selection *primKeyValue* identifies the primary value applicable to the specified primary key parameter, with values of: BGN: • CASIF • DEFAULT • GR303

	• ISDNIF • MGCP • TGN CALLTYPE: • CUTTHRU • DEFAULT • DIR_ASSISTANCE • EMERGENCY • INTERLATA • INTERLATAOPREQ • INTNATNUM • INTNATOPREQ • INTRALATA • LOCALNUMBER • LOCALOPREQ • N11 • NATNUM • NONUMOPREQ • NOTPRSNT • TOLLFREE CDPN: • ABBREVPVT = abbreviated private • DEFAULT = matches all numbers • INTNATNUM = international number • INTNATOPREQ = international operator request • NATNUM = national significant number • NATOPREQ = national (long-distance) operator request • NONUMCUTTHRU = no number provided, cut through to carrier • NONUMOPREQ = no number provided, operator request • NOTPRSNT = matches calls without a CDPN • SUBOPREQ = subscriber (local) operator request • SUBSNUM = subscriber number • TESTLINE = test line test code • UNKNOWN = unknown (default value) CGPN: • ABBREVPVT = abbreviated private • DEFAULT = matches all numbers • NOTPRSNT = matches calls without a

	CGPN • NUNIINTNATNUM = non-unique international number • NUNINATNUM = non-unique national number • NUNISUBSNUM = non-unique subscriber number • TESTLINE = test line test code • UNIINTNATNUM = unique international number • UNINATNUM = unique national number • UNISUBSNUM = unique subscriber number CHRGN: • CDPNATNUM = ANI of the called party; national number • CDPSUBSNUM = ANI of the called party; subscriber number • CDPUNAVAIL = ANI of the called party; no number present • CGPNATNUM = ANI of the calling party; national number • CGPSUBSNUM = ANI of the calling party; subscriber number • DEFAULT = matches all numbers • NOTPRSNT = matches calls without a CHRGN • UNAVAIL = ANI not available or not provided CIP: 0-9999, DEFAULT, NOTPRSNT CPC: 00-FF (hexadecimal) , DEFAULT, NOTPRSNT CSI: • DEFAULT = matches all numbers • NOTPRESUB = not presubscribed and input by calling party • NOTPRSNT = matches calls without CSI • PRESUBDIAL = presubscribed and input by calling party • PRESUBNOTDIAL = presubscribed and not input by calling party • PRESUBUNKNOWN = presubscribed, input by calling party undetermined • UNKNOWN = no indication GAP: 0-255 (mandatory)

	GENDGTS: 0-31 (mandatory) JIP: 200000-999999, DEFAULT, NOTPRSNT LATA: 200-99999, DEFAULT, NOTPRSNT OLI: 00-FF (hexadecimal), DEFAULT, NOTPRSNT SUBSTATUS: • ACTIVE = In Service (subscriber is present in the CL4SUB table and active) • DEFAULT = matches all numbers • INACTIVE = Out Of Service (subscriber is present in the CL4SUB table and inactive) • NOTINDB = Not in database (subscriber is not in the CL4SUB table) • NOTPRSNT = matches calls without • SUBSTATUS TNS: 0-9999 (the carrier ID), DEFAULT, NOTPRSNT *secKeyValue* identifies the secondary value applicable to the specified primary key parameter, with values of: • BGN: 1-31 digits, DEFAULT • CALLTYPE: No secondary value • CDPN: 1-31 digits, DEFAULT (set *secKeyValue* to DEFAULT if *primKeyValue* is DEFAULT or NOTPRSNT) • CGPN: 1-31 digits, DEFAULT (set *secKeyValue* to DEFAULT if *primKeyValue* is DEFAULT or NOTPRSNT) • CHRGN: 1-31 digits, DEFAULT (set *secKeyValue* to DEFAULT if *primKeyValue* is DEFAULT or NOTPRSNT) • CIP: No secondary value • CPC: No secondary value • CSI: No secondary value • GAP: 1-31 digits, DEFAULT, NOTPRSNT • GENDGTS: 1-31 digits, DEFAULT, NOTPRSNT • JIP: No secondary value

	• LATA: No secondary value • OLI: No secondary value • SUBSTATUS: No secondary value • TNS: 0-199 (the CAS 0ZZ/1NX code or the ISUP circuit code), DEFAULT (set *secKeyValue* to DEFAULT if *primKeyValue* is DEFAULT or NOTPRSNT) *terKeyValue* identifies the tertiary value (representing the protocol type) applicable only when the value of *primKey* is TNS, with values of: • CAS • ISUP (default – set *terKeyValue* to ISUP if *secKeyValue* is DEFAULT)

29. DialPlanAid

Identifies the AID as a custom dial plan.

Pattern	Description
<dialPlanName> [-<nai> [-<digits> [-<minDgts>]]]	*dialPlanName* identifies the name of the custom dial plan with a string of up to 21 alphanumeric characters *nai* identifies the nature of address indicator applicable to the specified custom dial plan, with values of: • ABBREVPVT = abbreviated number in private dial plan • DEFAULT = any nature of address indicator • INTNATNUM = international number • INTNATOPREQ = international number, operator request • NATNUM = national significant number • NATOPREQ = national (long-distance) operator request • NONUMCUTTHRU = no number provided, cut through to carrier • NONUMOPREQ = no number provided, operator request • SUBOPREQ = subscriber (local) operator request • SUBSNUM = subscriber number

	• UNKNOWN = unknown (default value) *digits* identifies the leading digits of the number to be matched with a string of 1-31 digits (default = "DEFAULT"); *minDgts* identifies the minimum length of the specified digit string as an integer from four to six with a default of four.

30. DialPlanTrigAid

Identifies the AID as the association of a custom dial plan with an AIN trigger list.

Pattern	Description
<dialPlanName> -<ainTrigList>	*dialPlanName* identifies the name of the custom dial plan with a string of up to 21 alphanumeric characters *ainTrigList* identifies the AIN Trigger List applicable to the specified custom dial plan with a string of up to 20 characters. "CUSTOM_DIALPLAN" is the only trigger type allowed for entries in the specified AIN Trigger List.

31. DigitModDnAid

Identifies the AID as a digit modification object keyed for a DN.

Pattern	Description
<dmLbl> [-<dnType> [-<nai> [-<digits> [-<minDgts]]]]	*dmLbl* identifies the name of the applicable digit modification table with a string of 1-10 alphanumeric characters *dnType* (optional only in RTRV) identifies the primary key as the type of DN applicable to the specified digit modification table, with values of: • CDPN = Called party number • CGPN = Calling party number • CHRGN = Charge number *nai* identifies the nature of address indicator applicable to the specified type of DN, with a default of "DEFAULT" and values of:

	• ABBREVPVT = abbreviated private (only for CDPN and CGPN) • CDPNATNUM = ANI of the called party; national number (only for CHRGN) • CDPSUBSNUM = ANI of the called party; subscriber number (only for CHRGN) • CDPUNAVAIL = ANI of the called party; no number present (only for CHRGN) • CGPNATNUM = ANI of the calling party; national number (only for CHRGN) • CGPSUBSNUM = ANI of the calling party; subscriber number (only for CHRGN) • DEFAULT = matches all numbers • INTNATNUM = international number (only for CDPN) • INTNATOPREQ = international operator request (only for CDPN) • NATNUM = national significant number (only for CDPN) • NATOPREQ = national (long-distance) operator request (only for CDPN) • NONUMCUTTHRU = no number provided, cut through to carrier (only for CDPN) • NONUMOPREQ = no number provided, operator request (only for CDPN) • NOTPRSNT = matches calls without a CGPN, CDPN, or CHRGN • NUNIINTNATNUM = non-unique international number (only for CGPN) • NUNINATNUM = non-unique national number (only for CGPN) • NUNISUBSNUM = non-unique subscriber number (only for CGPN) • SUBOPREQ = subscriber (local) operator request (only for CDPN) • SUBSNUM = subscriber number (only for CDPN) • TESTLINE = test line test code (only for CGPN and CDPN) • UNAVAIL = ANI not available or not provided (only for CHRGN) • UNIINTNATNUM = unique international number (only for CGPN) • UNINATNUM = unique national number (only for CGPN)

	• UNISUBSNUM = unique subscriber number (only for CGPN) • UNKNOWN = unknown (only for CDPN); *digits* identifies the leading digits of the number to be matched as a string of up to 31 digits with a default of "DEFAULT" *minDgts* identifies the minimum allowable length of the incoming addressing digits as an integer from 0-30 with a default of 0.

32. DigitModGenAid

Identifies the AID as a digit modification object keyed for generic digits or generic address parameters.

Pattern	Description
<dmLbl> [-<genType> [-<nmbrType> [-<digits]]]	*dmLbl* identifies the name of the applicable digit modification table with a string of 1-10 alphanumeric characters *genType* (optional only in RTRV) identifies the primary key that applies to the specified digit modification table as either a generic address parameter or generic digits or a (user-defined) generic parameter, with values of: • GAP = Generic Address Parameter • GENDGTS = generic digits • GP = generic parameter *nmbrType* (optional only in RTRV) identifies the numeric value representing the type of generic digits or generic address parameters, with values of: • 0-255 for GAP • 0-31 for GENDGTS • 0-255 for GP *digits* identifies the leading digits of the number to be matched as a string of up to 31 digits with a default of "DEFAULT". When the value of *genType-nmbrType* is "GENDGTS-9", the value of *digits* is a string of either three or eight digits. When the value is three digits, the range is {000-127}. When the value is eight digits, the range for the first three digits is {000-127} and the range for the last five

	digits is {00000-16383}. When the value of *genType-nmbrType* is "GP-195", the value of *digits* is a string of eight digits.

33. DigitModParamAid

Identifies the AID as a digit screening method.

Pattern	Description
<dmLbl> [-<primKey> [-<Value]]	*dmLbl* identifies the name of the applicable digit modification table with a string of 1-10 alphanumeric characters *primKey* (optional only in RTRV) identifies the primary key applicable to the specified screening table as a type of call parameter, with values of: • CALLTYPE = Type of call (Class 5) • CIP = Carrier Information Parameter (for ISUP only) • CPC = Calling Party Category • CSI = Carrier Selection Information • JIP = Jurisdiction Information Parameter (NPANXX) • LATA = Local Access & Transport Area • OLI = Originating Line Information *Value* identifies the value applicable to the specified parameter, with values of: CALLTYPE: • CUTTHRU • DEFAULT • DIR_ASSISTANCE • EMERGENCY • INTERLATA • INTERLATAOPREQ • INTNATNUM • INTNATOPREQ • INTRALATA • LOCALNUMBER • LOCALOPREQ • N11 • NATNUM • NONUMOPREQ • NOTPRSNT

	• TOLLFREE CIP: 0-9999, DEFAULT, NOTPRSNT CPC: 00-FF (hexadecimal) , DEFAULT, NOTPRSNT CSI: • DEFAULT = matches all numbers • NOTPRESUB = not presubscribed and input by calling party • NOTPRSNT = matches calls without CSI • PRESUBDIAL = presubscribed and input by calling party • PRESUBNOTDIAL = presubscribed and not input by calling party • PRESUBUNKNOWN = presubscribed, input by calling party undetermined • UNKNOWN = no indication JIP: 200000-999999, DEFAULT, NOTPRSNT LATA: 200-99999, DEFAULT, NOTPRSNT OLI: 00-FF (hexadecimal), DEFAULT, NOTPRSNT

34. DigitModTnsAid

Identifies the AID as a digit modification object keyed for the transit network selection (TNS) parameter, which is the circuit code for ISUP calls, or the Carrier or 0ZZ codes for CAS Feature group D.

Pattern	Description
<dmLbl> [-<TNS> [-<carrier> [-<callTypeCode> [-<prtcl]]]]	*dmLbl* identifies the name of the applicable digit modification table with a string of 1-10 alphanumeric characters *TNS* (optional only in RTRV) identifies the primary key that applies to the specified digit modification table with "TNS" as the sole value *carrier* identifies the carrier code as a string of 1-4 digits, "NOTPRSNT", or the default value "DEFAULT" *callTypeCode* identifies the ISUP circuit code or the CAS 0ZZ or 1NX codes as a string of 1-3 digits with a default of "DEFAULT" (set *callTypeCode* to DEFAULT if *carrier* is

	DEFAULT or NOTPRSNT) *prtcl* identifies the incoming trunk group protocol with values of CAS or ISUP (the default value – set *prtcl* to ISUP if *callTypeCode* is DEFAULT)

35. ENET

Identifies the AID as an Ethernet port on an IOM in the switch.

Pattern	Description
IOM-{8,10}-ENET-{1-4}	Represents an Ethernet port on an IOM

36. FAN

Identifies the AID as the fan assembly in the switch.

Pattern	Description
FAN	Represents the fan assembly

37. IfGrpDs1Id

Identifies the AID as an association of a DS1 port with a GR303 interface group. The first part of the AID is the interface group number and the second part is the DS1 port number.

Pattern	Description
{1-32767}-{1-28}	Represents an association of a DS1 port with a GR303 interface group

38. IfGrpNum

Identifies the AID as a GR303 interface group.

Pattern	Description
{1-32767}	Represents a GR303 interface group

39. IomAid

Identifies the AID as an IOM slot that contains a Voice Processor Server module.

Pattern	Description
IOM-{1-17}	Represents an IOM slot that contains a Voice Processor Server module

40. IOMODULE

Identifies the AID as an I/O module (IOM) by slot number.

Pattern	Description
IOM-{1-17}	Represents an IOM slot number

41. IOMorENET

Identifies the AID either as an IOM (by slot number), or as an Ethernet port on an IOM (by slot number and port number).

Pattern	Description
IOM-{8,10}	Represents an IOM slot number
IOM-{8,10}-ENET-{1-4}	Represents an Ethernet port on an IOM

42. IOMorOC

Identifies the AID either as an IOM (by slot number), or as an OC port on an IOM (by slot number and port number).

Pattern	Description
IOM-{8,10}	Represents an IOM slot number
IOM-{8,10}-OC12-{1-4}	Represents an OC12 port on an IOM
IOM-{8,10}-OC3-{1-4}	Represents an OC3 port on an IOM

43. IOMorSP

Identifies the AID either as an IOM (by slot number) or as a System Processor (SP) module.

Pattern	Description
IOM-{1-17}	An IOM slot number
SP-{A-B}	SP slot number A or B (System Processor functionality)

44. IOMorSPorSF

Identifies the AID either as an IOM (by slot number), as an SW/FAB A or B module, or as a SP A or B module.

Pattern	Description
IOM-{1-17}	An IOM slot number
SF-{A-B}	SW/FAB slot number A or B
SP-{A-B}	SP slot number A or B (System Processor functionality)

45. IOMorSTS1

Identifies the AID either as an STS1 IOM (by slot number), or as an STS1 port on a DS3 IOM (by slot number and port number).

Pattern	Description
IOM-{1-17}	A DS3 IOM slot number
IOM-{1-17}- STS1-{1-8}	An STS1 port on a DS3 IOM

46. IOMorT3

Identifies the AID either as a DS3 IOM (by slot number), or as a T3 port on a DS3 IOM (by slot number and port number).

Pattern	Description
IOM-{1-17}	A DS3 IOM slot number
IOM-{1-17}-T3-{1-8}	A T3 port on a DS3 IOM

47. IOMorT3orPORT

Identifies the AID either as an IOM (by slot number), or as a port on an IOM (by slot number and port number).

Pattern	Description
IOM-{1-17}	An IOM slot number
IOM-{1-17}-PORT-{1-28}	A T1 port on a DS1 IOM
IOM-{1-17}-STS1-{1-8}	An STS1 port on a DS3 IOM
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}	A T1 port on an STS1 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}	A T3 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}	A T1 port on a T3 port on a DS3 IOM

48. IOMorT3orPORTorBITS

Identifies the AID either as an IOM (by slot number), a port on an IOM (by slot number and port number), or a timing port in the switch.

Pattern	Description
IOM-{1-17}	An IOM slot number
IOM-{1-17}-PORT-{1-28}	A T1 port on a DS1 IOM
IOM-{1-17}-STS1-{1-8}	An STS1 port on a DS3 IOM
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}	A T1 port on an STS1 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}	A T3 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}	A T1 port on a T3 port on a DS3 IOM
TMG-{A,B}	The BITS interface on rear Switch Fabric card A or B

49. isdnBcStaChannelStateAid

Identifies the AID as an ISDN B channel in the RTRV-STATUS-IDSNBCHAN command. The first range in the pattern represents the interface, the second range represents the link on the interface, and the third range represents the channel on the link.

Pattern	Description
{1-32767}-{1-32767}-{1-24}	Represents an ISDN B channel

50. IsdnChanAid

Identifies the AID as an ISDN B channel in the ED-STATE-IDSNBCHAN command. The first range in the pattern represents the interface, the second range represents the link on the interface, and the third range represents the channel on the link.

Pattern	Description
{1-32767}-{1-32767}-{1-24}	Represents an ISDN channel

51. IsdnIfNum

Identifies the AID as an ISDN interface.

Pattern	Description
{1-32767}	Represents an ISDN interface

52. IsdnLink

Identifies the AID as an ISDN link. The first number in the range identifies the interface; the second identifies the link.

Pattern	Description
{1-32767}-{1-32767}	Represents an ISDN link on an interface

53. IsdnRtAid

Identifies the AID as an ISDN route.

Pattern	Description
<RTNAME>-{0-32767}	Represents an ISDN route with a variable string, of up to 21 alphanumeric characters, indicating the route name (established in the AID *isdnRtId* in the command ENT-ROUTE-IDSNIF), and an associated priority range. The range establishes the order in which interfaces are to be accessed (with lower numbers indicating higher priority) when there is more than one interface. The value of the priority range is set to zero when there is only one interface.

54. lapdAid

Identifies the AID as an LAPD (Link Access Protocol – D channel) interface and link.

Pattern	Description
GR303EOC-{1-32767}-{1-28}	An Embedded Operations Channel on a GR303 interface
GR303TMC-{1-32767}-{1-32767}	A Timeslot Management Channel on a GR303 interface
ISDN-{1-32767}-{1-32767}	A link on an ISDN interface
IUA-IOM-{1-17}-PORT-{1-28}	A T1 port on a DS1 IOM containing the D-channel for ISDN User Adaptation (IUA) applications
IUA-IOM-{1-17}-STS1-{1-8} -PORT-{1-28}	A T1 port on an STS1 port on a DS3 IOM containing the D-channel for ISDN User (IUA) Adaptation applications
IUA-IOM-{1-17}-T3-{1-8} -PORT-{1-28}	A T1 port on a T3 port on a DS3 IOM containing the D-channel for ISDN User Adaptation (IUA) applications

55. LinkId

Identifies the AID as an ISDN link on an interface.

Pattern	Description
{1-32767}-{1-32767}	Represents an ISDN link with the first number identifying the interface and the second number identifying the link

56. ListCodeAid

Identifies the AID as an authorization code, a PIN code, or an authorization code with an associated PIN code in an authorization list.

Pattern	Description
<LISTID>-{INDEX}	Represents an authorization code, a PIN code, or an authorization code with an associated PIN code in an authorization list, where: *LISTID* identifies the name of the applicable authorization list with a string of up to 20 alphanumeric characters *INDEX* identifies a specific code in the authorization list with an integer of 1-500

57. LsetAid

Identifies the AID as a linkset.

Pattern	Description
{1-20}	Represents an SS7 link set

58. MgcpLineAid

Identifies the AID as a line (i.e., endpoint) in an MGCP gateway. The pattern is a combination of a gateway controlled under the Call Management Server (CMS) and the affected endpoint.

Pattern	Description
<gatewayId>-<lineId>	gatewayId = {1-100000} lineId = {1-65536}

59. Mtp2PrflId

Identifies the AID as an MTP layer 2 profile.

Pattern	Description
{1-40}	Represents an MTP layer 2 profile

60. Mtp3PrflId

Identifies the AID as an MTP layer 3 profile.

Pattern	Description
{1-20}	Represents an MTP layer 3 profile

61. NNPAAid

Identifies the AID as a homed NPA in a country. The first number in the range identifies a country code; the second identifies a homed NPA. A null value for the second number in the range is equivalent to all NPAs in the system.

Pattern	Description
{1-99999}-{200-999}	Represents a country code and an NPA

62. NpaNxx

Identifies the AID as a homed NXX (exchange) in a specific NPA hosted by the switch.

Pattern	Description
{200-999}-{200-999}	Represents the NPA with the first number and the NXX with the second number

63. OC

Identifies the AID as an OC port on an IOM in the switch.

Pattern	Description
IOM-{8,10}-OC12-{1-4}	Represents an OC12 port on an IOM
IOM-{8,10}-OC3-{1-4}	Represents an OC3 port on an IOM

64. PcAid

Identifies the AID as a point code.

Pattern	Description
{0-255}-{0-255}-{0-255}	Represents a point code

65. PcPrflId

Identifies the AID as a point code profile.

Pattern	Description
{1-128}	Represents a point code profile

66. PORT

Identifies the AID as a T1 port on an IOM by slot number and port number.

Pattern	Description
IOM-{1-17}-PORT-{1-28}	A T1 port on a DS1 IOM
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}	A T1 port on an STS1 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}	A T1 port on a DS3 IOM

67. PORTorBITS

Identifies the AID either as a port on an IOM (by slot number and port number), or as the BITS interface on a Switch Fabric rear card.

Pattern	Description
IOM-{1-17}-PORT-{1-28}	A T1 port on a DS1 IOM
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}	A T1 port on an STS1 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}	A T1 port on a DS3 IOM
TMG-{A,B}	The BITS interface on rear Switch Fabric card A or B

68. PvcId

Identifies the AID as a PVC endpoint.

Pattern	Description
{1-4}	Represents a PVC endpoint

69. PvcPrflId

Identifies the AID as a PVC profile. The switch is shipped with Profile #1 already established as a factory default; you cannot delete it.

Pattern	Description
{2-8}	Represents a PVC profile

70. RelCauseAid

Identifies the AID as a release cause associated with a specific protocol and type of coding.

Pattern	Description
{0-32767}-PROTOCOLTYPE-CODINGTYPE	{0-32767} identifies the release cause *PROTOCOLTYPE* = ISDN, ISUP, or CAS *CODINGTYPE* = ANSI or CCITT

71. RouteAddrAid

Identifies the AID as a route address. The pattern is a combination of the route address (a telephone number associated with a route name) and the nature of address indicator (defined by the parameter *ROUTEIDENT*).

Pattern	Description
<RTADDR>-{ROUTEIDENT}	*RTADDR* is a string of 1-21 digits or characters a-e (or the word "DEFAULT" when the route identifier applies to all route addresses). *ROUTEIDENT* can be: • INTNATNUM = international number • NATNUM = national significant

	number • NATOPREQ = national (long-distance) operator request • NONUMCUTTHRU = no number provided, cut through to carrier • NONUMOPREQ = no number provided, operator request • RELINCCITT = Release cause value intended for ISDN with CCITT coding standard • RELINNAT = Release cause value intended for ISDN with National Specific coding standard • RELISCCITTT = Release cause value intended for ISUP with CCITT coding standard • RELISNAT = Release cause value intended for ISUP with National Specific coding standard • SUBOPREQ = subscriber (local) operator request • SUBSNUM = subscriber number • TESTLINE = call is for testing purposes • UNKNOWN = Nature of Address unknown

72. RouteN11Aid

Identifies the AID as an N11 number (such as 411, 911) and an associated calling party number.

Pattern	Description
<N11STRING>-<DNSTRING>	*N11STRING* represents an N11 number with a digit between 2 and 9 followed by “11” *DNSTRING* represents the associated calling party number with either a number from one to ten digits or the word “DEFAULT”

73. RouteSchedAid

Identifies the AID as the name of the route schedule, and the name of the schedule profile applied to it.

Pattern	Description
<SCHEDNAMESTRING>- <PRFLNAMESTRING>	*SCHEDNAMESTRING* = up to 20 alphanumeric characters *PRFLNAMESTRING* = up to 20 alphanumeric characters, including "DEFAULT" (which must be entered prior to any user-defined schedule profile names).

74. RouteSs7Aid

Identifies the AID as an SS7 Route. The pattern is a combination of the adjacent destination point code and the link set connecting to it.

Pattern	Description
<PCAID>-<LSETAID>	Represents the destination point code (with pattern {0-255}-{0-255}-{0-255}) and the link set connecting to it (with pattern {1-20})

75. RtId

Identifies the AID as a route with a string of up to 20 characters indicating the name of a route list in which the route is listed, and an associated index.

Pattern	Description
<rtList>-<index>	*rtList* identifies the name of the applicable route list with a string of 1-20 characters *index* identifies the particular route in the applicable route list as an integer between zero and 32767.

76. RtIntfcAid

Identifies the AID as a route. The pattern is a combination of the route name (up to 20 characters) and an associated priority. The priority establishes the order in which interfaces are accessed (with lower numbers indicating higher priority) when there is more than one interface. The value of the priority range is set to zero when there is only one interface.

Pattern	Description
<RTNAME>-{0-32767}	Represents an SS7 route interface as the route name with an associated priority

77. RtpTermId

Identifies the AID as a packet termination on a MEGACO call.

Pattern	Description
Alphanumeric characters in the form: Chassis/RTP/IOM{1-17}/ P{1025-65535}	Represents a packet termination as a combination of the chassis name, RTP termination type, IOM, and numeric ID for a specific VoIP resource (port)

78. SccpSsnAid

Identifies the AID as a combination of the remote point code (with pattern {0-255}-{0-255}-{0-255}) that receives a query and the subsystem number of the providing service.

Pattern	Description
<PCAID>-{1-255}	Represents a remote point code and a subsystem number

79. ScpAnncMap

Identifies the AID as an announcement specified by an SCP. The first part of the AID is a string of up to 20 characters that labels the announcement mapping; the second part is an integer identifying the announcement specified by the SCP.

Pattern	Description
<ANNCMAPLBL>-{1-65535}	Represents an announcement specified by an SCP

80. ScreenDigitsAid

Identifies the AID with a variable string indicating the subscriber, the type of screened number, and the string of blocked digits.

Pattern	Description
<SUBCRIBERID>- <SCREENTYPE>- <SCREENSTRING>	SUBCRIBERID identifies the subscriber with a string of exactly 10 digits SCREENTYPE identifies the type of screened number and can be: • CUTTHRU = Casual calling carrier (*101xxxx*) • INTNATIONAL = Direct-dial international (*011*) • NATIONAL = Any number in the NANP (*1* or any *NPA* or any *NPA-NXX* or any complete *NPA-NXX-xxxx*) • OPERATOR = Local or long-distance operator request (*0* or *00*) • OPINTRN = Operator-assisted international (*01*) • OPNAT = Operator-assisted long-distance (*0*) • SUBSNUM = N11 calls (*x11*, except 911) SCREENSTRING identifies the digits to block with a string of up to 21 digits (shown parenthetically for each value of *SCREENTYPE*).

81. ScreenListAid

Identifies the AID as a list of calling or called party numbers associated with an interface. The first number in the range identifies the list, and the second identifies the first subscriber number on the list by NPA, NXX, and XXXX.

Pattern	Description
{LISTID}-{STARTRANGE}	Identifies a list with a number in the range {1-32767} and the first subscriber number on the list by NPA, NXX, and XXXX with exactly 10 digits.

82. ServiceId

Identifies the AID as a type of IN service.

Pattern	Description
<ServiceId>	*ServiceId* represents a type of IN service – services applicable to specific releases have those releases shown parenthetically after the value. Parentheses also enclose standard (factory default) activation and deactivation codes. Values can be: • ACB = Automatic Call Back (Activation Code = 66, Deactivation Code = 86) • ACR = Anonymous Call Rejection (Activation Code = 77, Deactivation Code = 87) • AIN_TOLLFREE = Advanced Intelligent Network tollfree – tollfree calls resolved in the INAP layer of SS7 (Activation Code = NULL, Deactivation Code = NULL) • AR = Automatic Recall (Activation Code = 69, Deactivation Code = 89) • AUTHCODE = Authorization Code required for outgoing calls (Activation Code = NULL, Deactivation Code = NULL) • CFBL = Call Forwarding on Busy Line (Activation Code = NULL, Deactivation Code = NULL) • CFDA = Call Forwarding on No Answer (Activation Code = NULL, Deactivation Code = NULL) • CFV = Call Forwarding Variable (Activation Code = 72, Deactivation Code = 73) • CID = Calling Identity Delivery (Activation Code =

	61, Deactivation Code = NULL) • CIDCW = Call ID on Call Waiting (Activation Code = NULL, Deactivation Code = NULL) • CIS = Calling Identity Suppression (Activation Code = NULL, Deactivation Code = NULL) • CNAB = Calling Name delivery Blocking (Activation Code = NULL, Deactivation Code = NULL) • CNAM = Caller Name display (Caller ID) (Activation Code = NULL, Deactivation Code = NULL) • CND = Calling Number Delivery (Activation Code = NULL, Deactivation Code = NULL) • CNDB = Calling Number Delivery Blocking (Activation Code = 67, Deactivation Code = NULL) • COT = Customer Originated Trace (Activation Code = 57, Deactivation Code = NULL) • CRDPCL = Code Restriction/Diversion Prohibited Code List – block originating calls to specified screen digits (Activation Code = NULL, Deactivation Code = NULL) • CWC = Cancel Call Waiting (Activation Code = 70, Deactivation Code = NULL) • CWT = Call Waiting (Activation Code = NULL, Deactivation Code = NULL) • GMSC_IS41 (3.8.2 & 3.8.3) = Gateway MSC, ANSI IS41 based (Activation Code = NULL, Deactivation Code = NULL) • GMSC_MAP (3.8.2 & 3.8.3) = Gateway MSC, GSM MAP based (Activation Code = NULL, Deactivation Code = NULL) • LNP = Local Number Portability • MWC = Multi-Way Calling – Call Transfer (Activation Code = NULL, Deactivation Code = NULL) • RAF = Remote Access to Features (Activation Code = NULL, Deactivation Code = NULL) • RDAS = Residence Distinctive Alerting Service (Activation Code = NULL, Deactivation Code = NULL) • SC1 = Speed-dialing with one-digit code (Activation Code = 74, Deactivation Code = NULL) • SC2 = Speed-dialing with two-digit code (Activation Code = 75, Deactivation Code = NULL)

	• TOLLFREE = Tollfree (Activation Code = NULL, Deactivation Code = NULL) • TWC = Three-Way Calling (Activation Code = NULL, Deactivation Code = NULL) • VMS = Voice Mail System (Activation Code = NULL, Deactivation Code = NULL)

83. SlhrId

Identifies the AID as a service logic host route to a Service Control Point.

Pattern	Description
{0-31}	Represents a service logic host route

84. SnmpAccessAid

Identifies the AID as an SNMP access group.

Pattern	Description
<GROUPNAME>-{SECLEVEL}-{SECMODEL}	GROUPNAME = up to 32 alphanumeric characters (including underscores "_") used to identify a set of views for access control SECLEVEL = the minimum security level required by a message to access the group. Allowed values are: AUTHNOPRIV = authentication and no privacy (default) AUTHPRIV = authentication and privacy NOAUTHNOPRIV = no authentication, no privacy SECMODEL = security model required for access to the group. Allowed values are: ANY = any security model SNMPV1 = SNMP version 1 security SNMPV2C = SNMP version 2c security USM = User-Based Security (default)

85. SnmpViewAid

Identifies the AID as an SNMP access group view.

Pattern	Description
<VIEWNAME>-<VIEWTREE>	VIEWNAME = up to 32 alphanumeric characters (including underscores "_") used to identify a set of view trees. VIEWTREE = up to 63 digits (0-9) and periods (".") that identify the view subtree in numerical dotted notation. For example, the object identifier (OID) for the Internet is "1.3.6.1".

86. SP

Identifies the AID as an active or standby System Processor module in the switch.

Pattern	Description
SP-{A-B}	Represents either SP-A or SP-B

87. SPorIOM

Identifies the AID either as an IOM (by slot number) or as a System Processor (SP) module.

Pattern	Description
IOM-{8,10}	An IOM slot number
SP-{A-B}	SP slot number A or B (System Processor functionality)

88. Ss7LnkAid

Identifies the AID as an SS7 signaling link.

Pattern	Description
{1-40}	Represents an SS7 link

89. Ss7PcAid

Identifies the AID as a destination point code.

Pattern	Description
{0-255}-{0-255}-{0-255}	Represents a point code

90. Ss7TrkAid

Identifies the AID as a unique trunk (or range of trunks) associated with a trunk group number. The first number in the range identifies the trunk group number and the second number identifies the trunk(s). A range of trunks is shown by the beginning and ending numbers separated by two ampersands and a hyphen ("&&-").

Pattern	Description
{1-9999}-{0-16382}	Represents a CIC in a trunk group

91. STS1

Identifies the AID as an STS1 port on an STS1 IOM in the switch.

Pattern	Description
IOM-{1-17}-STS1-{1-8}	Represents a port on an STS1 IOM

92. SubIfAid

Identifies the AID as a subscriber interface number and whether it is a CAS, GR303, ISDN, or MGCP interface.

Pattern	Description
{IFNUM}-<SUBIF>	Represents the subscriber interface, where IFNUM = {1-2147483647} for CAS, {1-32767} for GR303 or ISDN, {1-100000} for MGCP SUBIF = {CAS, GR303, ISDN, MGCP}

93. SubSpeedAid

Identifies the AID with a variable string indicating a subscriber with a string of exactly 10 digits, and an associated speed-dialing code.

Pattern	Description
<SUBCRIBERID>-{2-99}	Represents a subscriber ID and its associated speed-dialing code

94. T0

Identifies the AID as a DS0 channel on an IOM.

Pattern	Description
IOM-{1-17}-PORT-{1-28}-T0-{1-24}	A DS0 channel on a T1 port on a DS1 IOM
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}-T0-{1-24}	A DS0 channel on a T1 port on an STS1 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}-T0-{1-24}	A DS0 channel on a T1 port on a DS3 IOM

95. T3

Identifies the AID as a T3 port on a DS3 IOM in the switch.

Pattern	Description
IOM-{1-17}-T3-{1-8}	Represents a port on a DS3 IOM

96. T3orPORT

Identifies the AID as a port on a DS3 IOM (by slot and port numbers).

Pattern	Description
IOM-{1-17}-STS1-{1-8}	An STS1 port on a DS3 IOM
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}	A T1 port on an STS1 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}	A T3 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}	A T1 port on a T3 port on a DS3 IOM

97. T3PORT

Identifies the AID as a T1 port on a DS3 IOM (by slot and port numbers).

Pattern	Description
IOM-{1-17}-STS1-{1-8}-PORT-{1-28}	A T1 port on an STS1 port on a DS3 IOM
IOM-{1-17}-T3-{1-8}-PORT-{1-28}	A T1 port on a T3 port on a DS3 IOM

98. TdmTermId

Identifies the AID as a TDM termination on a MEGACO call.

Pattern	Description
Alphanumeric characters in the form: Chassis/TDM/IOM{1-17}/ T{1-8}/ P{1-28}/C{1-24}	Represents a TDM termination as a combination of the chassis name, TDM termination type, IOM, DS3 port, DS1 port, and Channel {1-24}

99. TestPortNum

Identifies the AID as a number of a DS0 channel on a test port.

Pattern	Description
TP-{1-24}	Represents a DS0 channel

100. TgnAid

Identifies the AID as a unique trunk group number.

Pattern	Description
{1-9999}	Represents a unique trunk group number

101. TgnSipId

Identifies the AID as a trunk group unique to a specific Session Access Node. The first part of the AID is the trunk group number and the second part is the Session Access Node.

Pattern	Description
{1-9999}-{1-16}	Represents a trunk group unique to a specific Session Access Node

102. TransSchedAid

Identifies the AID as a translation plan schedule that chooses translations based on the time of day.

Pattern	Description
<transSched> -<prflName>	*transSched* identifies the name of the translation plan schedule with a string of 1-10 alphanumeric characters (Translation plan schedules and translation plans cannot have the same names.) *prflName* (optional only in RTRV) identifies, with a string of 1-20 alphanumeric characters or the value “DEFAULT”, the name of the routing schedule profile, previously defined by PRFL-SCHED, that determines the times and dates to use the listed translation plan.

103. TrigEscListAID

Identifies the AID as an escape (exception) list for a particular trigger type.

Pattern	Description
<trigEscList> -<startRange>	*trigEscList* identifies the name of the trigger type escape list with a string of up to 10 alphanumeric characters; *startRange* identifies the first number in the range of DNs associated with the escape list with a string of exactly 10 digits.

104. TriggerAid

Identifies the AID as a list of AIN triggers.

Pattern	Description
<ainTrigListName> -<index>	*ainTrigListName* identifies the name of the list of AIN triggers with a string of up to 21 alphanumeric characters; *index* identifies the particular trigger associated with the list as an integer with range 1-255. Each trigger has a unique combination of *trigType* and *screenDgts*.

105. TrkAid

Identifies the AID as a unique trunk associated with a trunk group number.

Pattern	Description
{1-9999}-{1-32767}	Identifies the trunk group number and the trunk number

106. VMS

Identifies the AID as an SMDI (Simplified Message Desk Interface) data link between the switch and a Voice Mail System. The pattern is a combination of a generic Message Storage and Retrieval (MSR) system in a VMS and an SMDI data link between it and the switch. A value of "0" for *msrId* indicates that the link is a virtual VMS link.

Pattern	Description
<msrId>-<smdiLnkId>	msrId = {0-999} smdiLnkId = {1-8}

107. VoipPrfl

Identifies the AID as a VoIP call profile.

Pattern	Description
{1-65535}	Represents a VoIP call profile

108. VpId

Identifies the AID as a voice processor on a VoIP IOM. The pattern is a combination of the I/O Module and the voice processor.

Pattern	Description
IOM-{1-17}-VP-{1-8}	Represents a voice processor on a VoIP IOM

109. VpsId

Identifies the AID as a Virtual Circuit Connection (VCC).on a Voice Processor Server (VPS) module. The pattern is a combination of the VPS Module and the VCC.

Pattern	Description
IOM-{1-17}-VCC-{0-799}	Represents a VCC on a VPS Module

NOTES

Error Messages

Errors may be generated by any command or command response message. The format of an error message is as follows:

```
   sid date time
M  ctag DENY
   <errcde>
/* <errmsg> */
;
```

Error Code (errcde)	Error Type	Error Message (errmsg)
EATN	Equipage	Not Valid for Access Type
ENAC	Equipage	Not equipped with Alarm Cutoff
ENAD	Equipage	Not equipped with Audit capability
ENAR	Equipage	Not equipped with Automatic Reconfiguration
ENDG	Equipage	Not equipped with DiaGnostic capability
ENDS	Equipage	Not equipped with Duplex Switching
ENEA	Equipage	Not equipped with Error Analysis capability
ENEQ	Equipage	Not EQuipped
ENEX	Equipage	Not equipped with EXercise capability
ENFL	Equipage	Not equipped for Fault Locating
ENMD	Equipage	Not equipped with Memory Device
ENPM	Equipage	Not equipped for Performance Monitoring
ENPS	Equipage	Not equipped with Protection Switching
ENRI	Equipage	Not equipped for Retrieving specified Information
ENRS	Equipage	Not equipped for ReStoration
ENSA	Equipage	Not equipped for Scheduling Audit
ENSI	Equipage	Not equipped for Setting specified Information
ENSS	Equipage	Not equipped with Synchronization Switching
ICNV	Input	Command Not Valid
IDNV	Input	Data Not Valid
IDRG	Input	Data RanGe (range)
IIAC	Input	Invalid ACcess identifier
IICT	Input	Invalid Correlation Tag
IIFM	Input	Invalid data ForMat
IIPG	Input	Invalid Parameter Grouping
IISP	Input	Invalid Syntax or Punctuation
IITA	Input	Invalid TArget identifier
INUP	Input	Non-null Unimplemented Parameter
IPMS	Input	Parameter MiSsing
ISCH	Input	Syntax invalid CHaracter (new Jul95)
ISPC	Input	Syntax invalid PunCtuation (new Jul95)

Error Code (errcde)	Error Type	Error Message (errmsg)
PICC	Privilege	Invalid Command Code
PIMA	Privilege	Invalid Memory Address
PIMF	Privilege	Invalid Memory File
PLNA	Privilege	Login Not Active
SAAL	Status	Already ALlowed
SABT	Status	ABorTed
SAIN	Status	Already INhibited
SAIS	Status	Already In Service
SAMS	Status	Already in Maintenance State
SAOP	Status	Already OPerated
SAPR	Status	Already in Protection state
SARB	Status	All Resources Busy
SATF	Status	Automatic Test Failed
SCNA	Status	Command Not Abortable
SCNF	Status	Command Not Found
SDAS	Status	Diagnosis Already Started
SDFA	Status	Duplex unit FAiled
SDLD	Status	Duplex unit Locked
SDNA	Status	Duplex unit Not Available
SDNR	Status	Data Not Ready
SDNS	Status	Diagnosis Not Started yet
SFAS	Status	Fault locating Already Started
SFNS	Status	Fault locating Not Started yet
SLNS	Status	Log Not Started yet
SNOS	Status	Not currently Out of Service
SNPR	Status	Not in Protection state
SNRM	Status	system Not in Restoration Mode
SNSR	Status	No Switch Request outstanding
SNVS	Status	Not in Valid State
SPFA	Status	Protection unit FAiled
SPLD	Status	Protection unit Locked
SPNA	Status	Process Not Abortable
SPNF	Status	Process Not Found
SRCI	Status	Requested Command(s) Inhibited
SROF	Status	Requested Operation Failed
SRTO	Status	Reply Time-Out
SSRD	Status	Switch Request Denied
SSRE	Status	System Resources Exceeded
STAB	Status	Test ABorted
SWFA	Status	Working unit FAiled
SWLD	Status	Working unit Locked