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# **FiberHome Element Management System**

## **Northbound Interface (TL1)**

### **User Manual**

**Version: A**

**Code: MN000004255**

**FiberHome Telecommunication Technologies Co., Ltd.**

**May 2019**



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# Preface

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## Related Documentation

Document	Description
<i>e-Fim ANM2000 Broadband Access Network Management System Product Description (Based on Windows)</i>	Introduces the functions, application scenarios and technical specifications of the e-Fim ANM2000 Broadband Access Network Management System (Based on Windows).
<i>e-Fim ANM2000 Broadband Access Network Management System Installation Guide (Based on Windows)</i>	Introduces how to install the e-Fim ANM2000 Broadband Access Network Management System (Based on Windows).
<i>e-Fim ANM2000 Broadband Access Network Management System Maintenance Guide (Based on Windows)</i>	Introduces routine maintenance items, specific maintenance methods, common failures and troubleshooting methods for the e-Fim ANM2000 Broadband Access Network Management System (Based on Windows). Discusses handling methods for common alarms of relevant equipment.
<i>e-Fim ANM2000 Broadband Access Network Management System Operation Guide (Based on Windows)</i>	Introduces how to operate the e-Fim ANM2000 Broadband Access Network Management System (Based on Windows).
<i>e-Fim ANM2000 Broadband Access Network Management System Active/Standby System Installation Guide (Based on Windows)</i>	Introduces how to install the active/standby systems of e-Fim ANM2000 Broadband Access Network Management System (Based on Windows).
<i>UNM2000 Network Convergence Management System Product Description</i>	Introduces the functions, application scenarios and technical specifications of the UNM2000 Network Convergence Management System.
<i>UNM2000 Network Convergence Management System Installation Guide (Based on Windows)</i>	Introduces how to install the UNM2000 Network Convergence Management System (Based on Windows).
<i>UNM2000 Network Convergence Management System Installation Guide (Based on SUSELinux)</i>	Introduces how to install the UNM2000 Network Convergence Management System (Based on SUSELinux).

Document	Description
<i>UNM2000 Network Convergence Management System Operation Guide</i>	Introduces the operation guidelines of the UNM2000 Network Convergence Management System.
<i>FiberHome Element Management System Northbound Interface (TL1) Operation Manual</i>	Introduces various commands and examples used by the TL1 northbound interface of the FiberHome Element Management System.



## Version

Version	Description
A	Initial version.

## Intended Readers

This manual is intended for the following readers:

- ◆ Commissioning engineers
- ◆ Operation and maintenance engineers
- ◆ Application developers








# Conventions

The conventions include terminology conventions and symbol conventions.

## Terminology Conventions

Terminology	Convention
ANM2000	FiberHome e-Fim ANM2000 Broadband Access Network Management System
UNM2000	FiberHome UNM2000 Network Convergence Management System

## Symbol Conventions

Symbol	Convention	Description
	Note	Important features or operation guide.
	Caution	Possible injury to persons or systems, or cause traffic interruption or loss.
	Warning	May cause severe bodily injuries.
	Jump	Jumps to another step.
	Cascading menu	Connects multi-level menu options.
	Bidirectional service	The service signal is bidirectional.
	Unidirectional service	The service signal is unidirectional.

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# 1

## TL1 Northbound Interface Overview

---

The following introduces the position of the TL1 northbound interface in the network, its used protocols, supported functions, adopted security mechanism as well as performance specifications.

- ☒ TL1 Interface Introduction
- ☒ Network Diagram
- ☒ Protocols Used
- ☒ Management Function
- ☒ Security Mechanism
- ☒ Performance Specifications

## **1.1 TL1 Interface Introduction**

The TL1 northbound interface is used for connecting the Element Management System (EMS) and the Operation Support System (OSS) / Network Management System (NMS).

The TL1 northbound interface enables the OSS or NMS to implement the provisioning and maintenance of the EPON/GEPON FTTX broadband, IPTV and VoIP services.

## **1.2 Network Diagram**

The position of the TL1 northbound interface in the network is as shown in Figure 1-1.

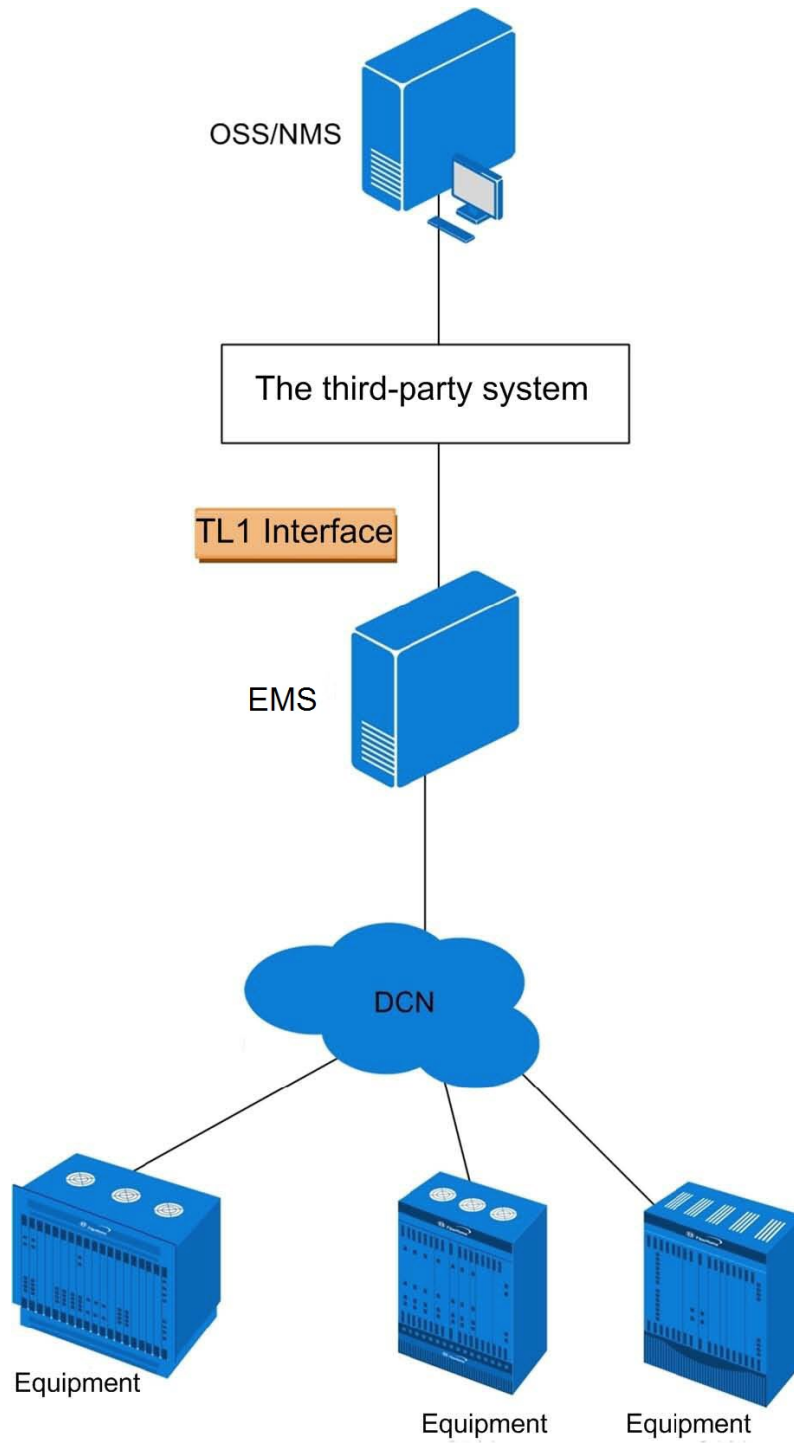


Figure 1-1 Network Diagram

In the network diagram, each node functions as follows:

- ◆ OSS / NMS: Indicates the Operation Support System / Network Management System. It sends TL1 commands to the EMS to perform service provisioning and failure query operations.
- ◆ Third-party system: It is deployed between the OSS / NMS and the EMS, parsing the OSS / NMS system command into the standard TL1 format and sending it to the EMS; meanwhile, it parses the result returned from the EMS and presents it to OSS / NMS.
- ◆ TL1 northbound interface: It processes the TL commands already parsed by the third-party system, and performs operations on the EMS and returns the result.
- ◆ EMS: Indicates the FiberHome Element Management System, providing the TL1 interface to be used by the upper-level system.
- ◆ Equipment: Indicates other sets of equipment in the network, managed by the EMS.

## 1.3 Protocols Used

The FiberHome EMS can establish the TCP connection with the upper-level system to achieve connection and communication.

It offers the following default ports for the upper-level system to use: 3333 (alarm management), 3334(service provisioning), 3335 (integrated testing), 3336 (resource query) and 3337 (service provisioning / integrated testing / resource query).

After the login to OSS / NMS using the configured username and password, the operations relevant to the TL1 northbound interface can be performed.

The protocols used by the TL1 northbound interface is as shown in Figure 1-2.

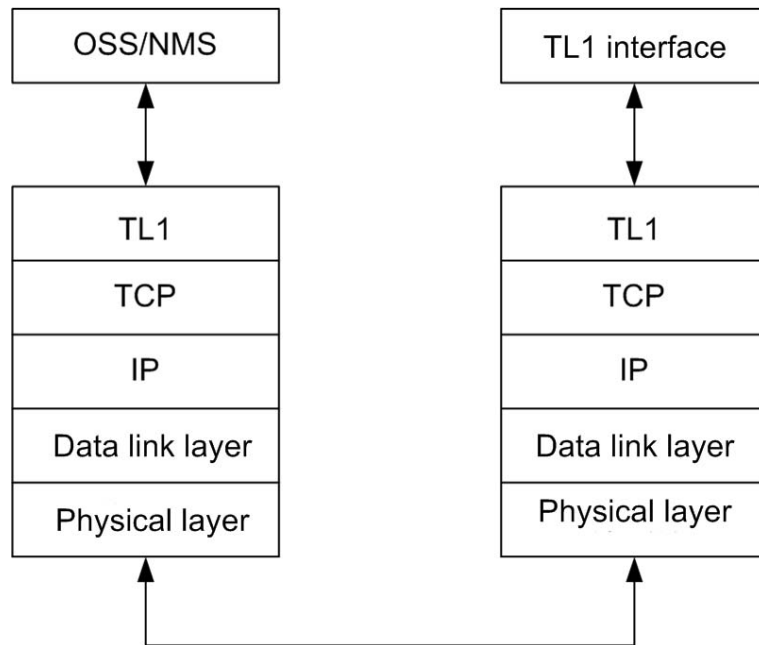


Figure 1-2 Protocols Used

- ◆ OSS / NMS: Operation Support System / Network Management System.
- ◆ TCP/IP: Transmission Control Protocol / Internet Protocol.

## 1.4 Management Function

The TL1 northbound interface supports the following functions:

- ◆ Service provisioning: Supports the provisioning of the broadband, voice and multicast services in the FTTB / FTTH scenario.
- ◆ Integrated testing: Supports querying the running status of the equipment, and the status of the PON, XDSL and POTS ports as well as troubleshooting.
- ◆ Alarm management: Supports subscribing to, querying and filtering alarms so as to monitor the running status of the EMS.
- ◆ Resource query: Supports querying the equipment physical resource and service configurations as well as the resource change notification report.

## 1.5 Security Mechanism

The TL1 northbound interface adopts the security mechanism of the FiberHome EMS. To implement this security mechanism, it is required to configure an account for the TL1 northbound interface on the EMS and then log in using this account. The FiberHome EMS accepts a maximum of 32 concurrent TCP connections.

The security mechanism adopted by the TL1 northbound interface includes the following functions:

- ◆ Login authentication: When connecting to the TL1 northbound interface, the TCP client needs to send the LOGIN command to login. Only after the successful login can the subsequent commands of the TCP connection be accepted by the system. The LOGIN username and password are exclusively allocated by the FiberHome EMS to the TL1 northbound interface.
- ◆ Automatic disconnection: If the TCP connection has no communication within 10 minutes, the system will initiatively disconnect it.

## 1.6 Performance Specifications

Table 1-1 describes the performance specifications of the TL1 northbound interface.

Table 1-1 Performance Specifications of the TL1 Northbound Interface

Performance Item	Specification
Maximum quantity of concurrent TCP connections	32
Service provisioning interface	<ul style="list-style-type: none"><li>◆ Each connection supports more than two service provisioning / deletion work orders per minute.</li><li>◆ Each connection supports more than four service suspension / recovery / modification work orders per minute.</li></ul>
Integrated testing interface	<ul style="list-style-type: none"><li>◆ The result is returned within one minute for the internal line test, external line test, SELT, DELT and incoming / outgoing call emulation tests.</li><li>◆ The result for a query command is returned within five seconds.</li></ul>

Table 1-1 Performance Specifications of the TL1 Northbound Interface (Continued)

Performance Item	Specification
Integrated alarm interface	<ul style="list-style-type: none"><li>◆ The alarm delay is less than 10 seconds in normal running status and is less than 30 seconds in case of alarm storm.</li><li>◆ The maximum delay for synchronizing 1000 alarm data entries is 10 minutes.</li><li>◆ The alarm throughput is more than 20 entries per second.</li></ul>
Integrated query interface	<ul style="list-style-type: none"><li>◆ The query time is less than 5 seconds when the number of queried records is smaller than 500, and less than 10 seconds when the number of queried records is greater than 500.</li><li>◆ Full export of configuration data is up to 10000 ports per minute.</li></ul>

## 2 TL1 Northbound Interface Installation

---

The following introduces how to install and run the TL1 northbound interface on Windows operating system.

- ☒ Installing the TL1 Northbound Interface
- ☒ Starting / Stopping the TL1 Northbound Interface Service



## 2.1 Installing the TL1 Northbound Interface

Run the FiberHome EMS installation file on Windows operating system and select the required TL1 service when proceeding to the step for selecting the installation components. For more information, refer to the *Installation Guide* of the corresponding EMS.

## 2.2 Starting / Stopping the TL1 Northbound Interface Service

The following introduces how to start / stop the TL1 northbound interface service.

1. In the **Running** window, enter **Services.msc** to open the service list.
2. Start / stop the TL1 northbound interface service.
  - ▶ The ANM2000 TL1 interface services are AEMS-TL1Server(alarm), AEMS-UDIServer, AEMS-TL1Server(resource), AEMS-TL1Server(services) and AEMS-TL1Server(test).
  - ▶ The UNM2000 TL1 interface services are unmextendeventservice, unmextendmoduleserver, unmnbi\_tl1\_ctc\_alarm\_main, unmnbi\_tl1\_ctc\_main and unmnbi\_tl1\_fh\_main.

# 3 Command Format

---

The following introduces the command format and response message format of the TL1 northbound interface.

- ☒ Format Overview
- ☒ Command Format
- ☒ Acknowledgment Message Format
- ☒ Response Message Format
- ☒ Resource Change Notification Format
- ☒ Definition of Returned Error Codes

## 3.1 Format Overview

The following introduces the command format, response format and annotation symbols.

### Command Format

The command format indicates the format of the command entered. When executing commands, the matching patterns are as follows:

- ◆ Executing an operation command: Adopts exact matching for all character strings.
- ◆ Executing a query command: Adopts fuzzy query for optional parameters with data type being character string and adopts exact matching for required parameters with data type being character string.



#### Note:

If the filter condition entered matches multiple records instead of one record, the TL1 northbound interface returns all the matching records as a list.

### Response Format

Response format indicates the format of the message returned after a command is executed.

### Annotation Symbols

For the description of annotation symbols, see Table 3-1.

Table 3-1 Annotation Symbols

Annotation Symbol	Description
< >	Encapsulates an identifier. For example, <int-num> indicates any integer.
[ ]	Encapsulates an optional symbol or message body.
" "	Encapsulates an English letter. For example, <b>a</b> indicates the English letter "a" instead of a variable identifier.

Table 3-1 Annotation Symbols (Continued)

Annotation Symbol	Description
( )	Encapsulates a group of required symbols or message body.
*	A suffix, indicating the current symbol or symbol group occurs 0 times or several times.
+	A suffix, indicating the current symbol or symbol group occurs 1 times or several times.
^	A blank space
cr	A carriage return
lf	A line feed
	Separates multiple options, among which only one option can be selected. For example, a b c indicates selecting a, b or c.
::=	Separates two parts in a syntax rule. For example, <TESTit> ::= (0 1 ~ 9) indicates the value of <TESTit> is a number among 0-9 (including 0 and 9).

## 3.2 Command Format

The following introduces the command format and parameters of the TL1 northbound interface.

### Command Format

```

<command_code>:<staging_blocks>:<payload_blocks>;
<command code>::=<verb>[-<modifier>[-<modifier>]]
Staging Parameter Block::=[<target identifier>]:<access identifier(s)>:
<ctag>:

```

## Parameters

Parameter	Description
command_code	<p>Command code, indicating the operation to be performed. The format is as follows:</p> <pre>&lt;verb&gt;[-&lt;modifier&gt;[-&lt;modifier&gt;]]</pre> <ul style="list-style-type: none"> <li>◆ verb: required parameter, identifying the name of the command. Normally, it is a simple verb or an abbreviation describing an action.</li> <li>◆ modifier: command modifier. "verb" can be followed by two optional modifiers, separated from each other by -.</li> </ul>
staging_blocks	<p>Task identifier block. The format is as follows:</p> <pre>[&lt;target identifier&gt;]:&lt;access identifier(s)&gt;:&lt;ctag&gt;</pre> <ul style="list-style-type: none"> <li>◆ target identifier: not used at present.</li> <li>◆ access identifier: location information, indicating the specific object on which the command is executed.</li> <li>◆ ctag (correlation tag): command tag, used for matching the input command and output command; its value in the response message should be the same as that in the input message.</li> </ul>
payload_blocks	<p>Pass parameter block, which can be null. The format is as follows:</p> <pre>datablock1,datablock2</pre> <p>The format of each parameter block (datablock) is Parameter Name=Parameter Value, and a comma is used to separate two parameter blocks.</p>

## 3.3 Acknowledgment Message Format

The acknowledgment message format is shown as follows:

```
acknowledgment_code ctag<
acknowledgment_code:
IP:In Progress
NA:No acknowledgment
RL:Repeat Later system busy
```

The acknowledgment message response time generally cannot be longer than 2 seconds; otherwise, a transmission error or equipment failure is suspected. Besides, not all commands require acknowledgment messages. The command that can be quickly responded will be returned the response message, such as the set command and stop command.

## 3.4 Response Message Format

There are two types of response messages:

- ◆ Operation command response messages
- ◆ Query command response messages

### Operation Command Response Message Format

```
<header><response_id>[<response_block>]<terminator>
header::=<cr><lf><lf>^^^<sid>^<year>-<month>-<day>^<hour>:<minute>:
<second>
response_id::=<cr><lf>M^^<ctag>^<completion code>
response_block::=( (<cr><lf>^^^<EN=error-code>^^^<ENDESC=error-
description>)
terminator::=<cr><lf>(;|>)
```

### Query Command Response Message Format

```
<header><response_id>[<response_block>]<terminator>
header::=<cr><lf><lf>^^^<sid>^<year>-<month>-<day>^<hour>:<minute>:
<second>
response_id::=<cr><lf>M^^<ctag>^<completion code>
response_block::=( (<cr><lf>^^^<EN=error-code>^^^<ENDESC=error-
description>) | (<cr><lf>^^^<quoted line>))
quoted line::=<total_blocks=total-count><cr><lf>^^^<block_number=block-
num><cr><lf>^^^<block_records=current-record-count><cr><lf><result>
result::=<cr><lf><title><cr><lf>(<->*)<cr><lf>(<attribs>((<values>)*))
(<->*)<cr><lf><cr><lf>
attribs::=<attrib>((<tab><attrib>)*<cr><lf>
values::=<value>((<tab><value>)*<cr><lf>
terminator::=<cr><lf>(;|>)
```

### Response Parameters

The following table describes the parameters in the command response result.

Parameter	Description
header	<p>Message header, the public part of all response messages and automatic reported messages, including equipment ID (sid), date and time. The format is as follows:</p> <pre>&lt;cr&gt;&lt;lf&gt;&lt;lf&gt;^^^&lt;sid&gt;^&lt;year&gt;-&lt;month&gt;-&lt;day&gt;^&lt;hour&gt;:&lt;minute&gt;:&lt;second&gt;</pre> <p>sid: manufacturer name abbreviation_network management server IP. The value is FH_IP.</p>
response_id	<p>Response ID. The format is as follows:</p> <pre>&lt;cr&gt;&lt;lf&gt;M^^&lt;ctag&gt;^&lt;completion code&gt;</pre> <ul style="list-style-type: none"> <li>◆ ctag (correlation tag): command tag, used for matching the input command and output command; its value in the response message should be the same as that in the input message.</li> <li>◆ completion code: response completion identifier. The value is as follows: <ul style="list-style-type: none"> <li>▶ COMPLD: Indicates that the command is executed correctly.</li> <li>▶ DELAY: Indicates that the command execution is delayed.</li> <li>▶ DENY: Indicates that the command execution fails.</li> <li>▶ PRTL: Indicates that the command is partially executed.</li> <li>▶ RTRV: Indicates that the results of the tested items are returned and other items are being tested.</li> </ul> </li> </ul>
response_block	<p>Response message body.</p> <ul style="list-style-type: none"> <li>◆ EN: error code.</li> <li>◆ ENDESC: error description.</li> <li>◆ quoted line: returned parameter. When the amount of queried data is very large, the TL1 northbound interface will send the queried data to the client through several small packets. total_blocks indicates the total number of data packets; block_number indicates the numbering of the current packet; block_records indicates the number of data entries contained in the current packet.</li> <li>◆ title: character string, indicating the title information of the result.</li> <li>◆ attrib: character string, indicating the attribute name.</li> <li>◆ value: character string, indicating the attribute value. If it is not supported, – will be returned.</li> </ul>
terminator	<p>Indicated by &gt; or ;</p> <ul style="list-style-type: none"> <li>◆ &gt;: Indicates that not all packets are sent and the next packet is waiting to be received.</li> <li>◆ ;;: Indicates that all packets are sent. There should be only one ; in the returned data.</li> </ul>

## 3.5 Resource Change Notification Format

The following introduces the resource change notification format and parameters of the TL1 northbound interface.

### Resource Change Notification Format

```
<header><auto id><alarm_body><terminator>  
header ::= <cr><lf><lf><sid>^<year>-<month>-<day><hour>:<minute>:<second>  
auto id ::= <cr><lf> <almcde><atag><verb><modifier1><modifier2>  
body ::= <cr><lf><attrib>=<value> ( (<tab><attrib>=<value>) *) <cr><lf>  
terminator ::= <cr><lf> (;|>)
```



## Resource Change Notification Parameters

Parameter	Description
header	<p>Message header, the public part of all response messages and automatic reported messages, including equipment ID (sid), date and time.</p> <p>sid: manufacturer name abbreviation_network management server IP. The value is as follows:</p> <ul style="list-style-type: none"> <li>◆ HW_IP</li> <li>◆ ZTE_IP</li> <li>◆ FH_IP</li> </ul>
Auto id	<p>Level and status of the automatic reported message, where:</p> <ul style="list-style-type: none"> <li>◆ almcde: alarm level. According to the severity of the reported message, the value will be one of the following levels: <ul style="list-style-type: none"> <li>▶ *C: critical alarm</li> <li>▶ **: major alarm</li> <li>▶ *: minor alarm</li> <li>▶ A: warning alarm</li> </ul> </li> <li>◆ atag: association tag generated by automatic reporting. It is assigned by the EMS and must be continuous and contained by all automatic reported messages. It enables the upper-layer network management system to associate the automatic reported message with the common cause that triggers the automatic reporting. It can also be used to check whether an error occurs upon receipt of the message by the upper-layer network management system. For resource change notification messages, almcde is A.</li> <li>◆ verb: REPT</li> <li>◆ Modifier1: RES</li> <li>◆ Modifier2: resource change type. The value is as follows: <ul style="list-style-type: none"> <li>▶ ADD/DEL/MOD_OLT: Indicates adding / deleting / modifying an OLT network element (NE).</li> <li>▶ ADD/DEL/MOD_ONU: Indicates adding / deleting / modifying an ONU NE.</li> <li>▶ ADD/DEL_SHELF: Indicates adding / deleting a shelf.</li> <li>▶ ADD/DEL_BOARD: Indicates adding / deleting a card.</li> </ul> </li> </ul>

## 3.6 Definition of Returned Error Codes

The error codes returned by the TL1 northbound interface are as shown in Table 3-2.

Table 3-2 Definition of Returned Error Codes

EN (error- code)	Error Type	ENDESC (error-description)
IRNE	INPUT	resource does not exist
IANE	INPUT	the alarm does not exist
IMP	INPUT	missing parameter
IIPF	INPUT	invalid parameter format
IIPE	INPUT	input parameter error
DDNS	DEVICE	device may not support this operation
DDOF	DEVICE	device operation failed
DDB	DEVICE	device is busy
SENS	SYSTEM	EMS may not support this operation
SEOF	SYSTEM	EMS operation failed
EEEH	EXCEPTION	EMS exception happens
TUB	TEST	user is busy
TUT	TEST	user is testing
TTMB	TEST	test module is busy

## 4 Session Control

---

The session control is used for managing the SOCKET connection between the access adaptation module and the FiberHome EMS, providing a secure layer to prevent against access by unauthorized users. It is recommended to modify the user ID and password periodically during running and maintaining of the EMS.

- ☒ Logging into the FiberHome EMS (LOGIN)
- ☒ Logging Out of the FiberHome EMS (LOGOUT)
- ☒ Handshake Command (SHAKEHAND)

## 4.1 Logging into the FiberHome EMS (LOGIN)

### Function Description

- ◆ To use the service provisioning interface of the TL1 northbound interface, establish the TCP connection with the FiberHome EMS through the port 3334.
- ◆ To use the integrated query interface, establish the TCP connection with the FiberHome EMS through the port 3336.
- ◆ To use the integrated testing interface, establish the TCP connection with the FiberHome EMS through the port 3335.
- ◆ To use the integrated alarm interface, establish the TCP connection with the FiberHome EMS through the port 3333.

When successfully establishing the TCP connection, log into the FiberHome EMS through the command. After login, send commands of the TL1 northbound interface to perform operations over the equipment.

### Command Format

```
LOGIN:::CTAG::UN=user-name,PWD=password;
```

### Input Parameter

Parameter Name	Data Type	Value Range	Description	Default Value
UN	OCTET STRING	Size (20)	User Name	-
PWD	OCTET STRING	Size (16)	Password	-

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

None

## Example

For example, after establishing the TCP connection with the server, enter the username **EMSUSER** and password **EMSPWD** to log into the FiberHome EMS.

### ◆ Command

```
LOGIN:::CATG::UN=EMSUSER,PWD=EMSPWD;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

# 4.2 Logging Out of the FiberHome EMS (LOGOUT)

## Function Description

Log out of the FiberHome EMS and disconnect the TCP connection with the TL1 northbound interface.

## Command Format

```
LOGOUT:::CTAG::;
```

## Input Parameter

None

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

For example, the current user logs out of the FiberHome EMS.

### ◆ Command

```
LOGOUT:::CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 4.3 Handshake Command (SHAKEHAND)

### Function Description

If the TCP connection has no communication within 10 minutes, the system will initiatively disconnect the TCP connection. However, sending the handshake command can keep it connected with no operations performed.

### Command Format

```
SHAKEHAND:::CTAG::;
```

### Input Parameter

None

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

None

## Example

For example, send the handshake command to the system.

### ◆ Command

```
SHAKEHAND:::CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

# 5 Service Commissioning Interface

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The following introduces the commands for the provisioning of the IPTV, broadband and VOIP services in the FTTx scenario.

- ☒ ONU Configuration (FTTH)
- ☒ Broadband / IPTV Services of a LAN Port
- ☒ Broadband / IPTV Services of an xDSL Port
- ☒ VoIP Service
- ☒ VLAN Service
- ☒ Configuring a Port Speed Rate Template
- ☒ Configuring the Bandwidth Profile
- ☒ Configuring a Flow Policy



## 5.1 ONU Configuration (FTTH)

The following introduces how to add, delete and configure an optical network unit (ONU) of the FTTH type.

### 5.1.1 Adding an ONU (ADD-ONU)

#### Function Description

This command is used for adding an ONU on the optical line terminal (OLT). During initial service provisioning, you can send this command to the PON port that has not been fully configured after configuring the OLT.

#### Command Format

```
ADD-ONU::OLTID=olt-name,PONID=ponport_location:CTAG::[AUTHTYPE=auth-
type],ONUID=onu-index[,PWD=onu password][,ONUNO=onu-no][,NAME=name][,
DESC=onu description],ONUTYPE=onu type[,BANDTYPE=BandWidthType];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
AUTHTYPE	OCTET STRING	MAC LOID LOIDONCEON PASSWORD PASSWORDONCEON	Authentication mode. The default value is <b>LOID</b> . In LOIDONCEON authentication mode, LOID and MAC will be bound.
ONUID	OCTET STRING	Size (64)	Authentication information. If AUTHTYPE is set to MAC, ONUID is MAC address. If AUTHTYPE is set to LOID, ONUID is LOID.
PWD	OCTET STRING	Size (128)	LOID password
ONUNO	INTEGER	-	ONU authorization number
NAME	OCTET STRING	Size (255)	ONU name
DESC	OCTET STRING	Size (255)	ONU description. Chinese characters should not be contained.

Parameter	Data Type	Value Range	Description
ONUTYPE	OCTET STRING	Size (32)	ONU type
BANDTYPE	OCTET STRING	1G/1G 10G/1G 10G/10G 2.5G/1.25G 10G/2.5G	Bandwidth type; set it according to the actual requirement.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Add an ONU for PON port 2 in slot 1 of the OLT whose IP address is 10.78.11.102. The information of the ONU is as follows: ONUID is Test00002; PWD is Password2; the ONU authorization number is 10; the ONU description is Test\_ONU2; the ONU authentication mode is LOID.

### ◆ Command issued

```
ADD-ONU::OLTID=10.78.11.102,PONID=NA-NA-1-2:CTAG::AUTHTYPE=LOID,
ONUID=Test00002,PWD=Password2,ONUNO=10,NAME=Test2,DESC=Test_ONU2,
ONUTYPE=AN5006-04,BANDTYPE=1G/1G;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

Example 2: Add an ONU for PON port 2 in slot 15 of the OLT whose IP address is 10.78.11.102. The information of the ONU is as follows: the MAC address is 54-4B-40-04-2C-1F; the ONU authentication mode is MAC.

### ◆ Command issued

```
ADD-ONU::OLTID=10.78.11.102,PONID=NA-NA-15-2:CTAG::AUTHTYPE=MAC,
ONUID=54-4B-40-04-2C-1F,ONUNO=11,NAME=Test3,DESC=Test_ONU3,
ONUTYPE=AN5006-04,BANDTYPE=1G/1G;
```

#### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

### Related Command

```
DEL-ONU
```

## 5.1.2 Configuring an ONU (CFG-ONU)

### Function Description

This command is used for modifying the ONU authentication mode and authentication ID information when replacing an ONU.

### Command Format

```
CFG-ONU::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,
ONUID=onu-index:CTAG::AUTHTYPE=auth-type[,AUTHINFO=onu-index];
```

### Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type ( <b>ONU_NAME, MAC, LOID, ONU_Number</b> )
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.

Parameter	Data Type	Value Range	Description
AUTHTYPE	OCTET STRING	MAC LOID LOIDONCEON PASSWORD	Authentication mode. The default value is <b>LOID</b> . In LOIDONCEON authentication mode, LOID and MAC will be bound.
AUTHINFO	OCTET STRING	Size (128)	LOID or MAC address of the ONU ◆ If <b>AUTHTYPE</b> is set to <b>MAC</b> , this parameter indicates the ONU's MAC address in the format of <b>XX-XXXX-XX-XX-XX</b> . ◆ If <b>AUTHTYPE</b> is set to <b>LOID</b> or <b>LOIDONCEON</b> , this parameter indicates LOID of the ONU.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the ONU connected to PON port 1 in slot 3 of the OLT with the ID 10.250.18.100. The information of the ONU is as follows: ONUID is Test0001; the authentication mode is LOID, which is test0002.

### ◆ Command issued

```
CFG-ONU::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=Test0001:CTAG::AUTHTYPE=LOID,AUTHINFO=test0002;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:51:24
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

```
ADD-ONU
DEL-ONU
```

### 5.1.3 Configuring the Bandwidth of an ONU (CFG-ONUBW)

#### Function Description

This command is used for configuring the uplink and downlink bandwidths of an ONU.

#### Prerequisite

Make sure the uplink and downlink bandwidth templates are configured in the EMS before using this command to configure the ONU uplink and downlink bandwidths.

#### Command Format

```
CFG-ONUBW::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index]:CTAG::UPBW=onu-up-bandwidth[,  
DOWNBW=onu-down-bandwidth];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
UPBW	OCTET STRING	Size (32)	Uplink DBA bandwidth template name
DOWNBW	OCTET STRING	Size (32)	Downlink bandwidth template name

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the uplink bandwidth template BW\_UP and the downlink bandwidth template BW\_DOWN for the ONU (ONUID being Test0001) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
CFG-ONUBW::OLTID=10.71.227.56,PONID=NA-NA-3-1,ONUIDTYPE=LOID,  
ONUID=Test0001:CTAG::UPBW=BW_UP,DOWNBW=BW_DOWN;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

```
ADD-ONU  
DEL-ONU
```

## 5.1.4 Deleting an ONU (DEL-ONU)



### Note:

Deleting an ONU will simultaneously delete the services that the ONU bears. To re-provision such services, add and configure them again.

---

## Function Description

This command is used for deleting the ONU authorized by the OLT.

## Command Format

```
DEL-ONU::OLTID=olt-name,PONID=ponport_location:CTAG::ONUIDTYPE=onuid-  
type,ONUID=onu-index;
```

## Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDTYPE	OCTET STRING	MAC LOID ONU_Number ONU_NAME	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Delete an ONU from PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is Test0001; its authentication mode is LOID.

### ◆ Command issued

```
DEL-ONU::OLTID=10.250.18.100,PONID=NA-NA-3-1:CTAG::ONUIDTYPE=LOID,  
ONUID=Test0001;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

Example 2: Delete an ONU from PON port 2 in slot 15 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: its MAC address is 54-4B-40-04-2C-1F; its authentication mode is MAC.

◆ **Command issued**

```
DEL-ONU::OLTID=10.250.18.100,PONID=NA-NA-15-2:CTAG::ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1F
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

```
ADD-ONU
```

## 5.1.5 Configuring the MAC Address Limit of an ONU LAN Port (CFG-LANPORTMACLIMIT)

### Function Description

This command is used for configuring the limit of MAC addresses for a LAN port of an ONU.

### Command Format

```
CFG-LANPORTMACLIMIT::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUUPORT=onu-port:CTAG::
COUNT=count_num;
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	MAC LOID ONU_Number ONU_NAME	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128)	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
COUNT	INTEGER	Size (0 to 65536)	Quantity limit of MAC addresses	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Set the quantity limit of MAC addresses to 14 on port 1 of the ONU with the ID FHTT030B3908. The ONU is connected to PON port 6 in slot 7 of the OLT with the IP address 10.190.40.156.

### ◆ Command issued

```
CFG-LANPORTMACLIMIT::OLTID=10.190.40.156,PONID=NA-NA-7-6,ONUIDTYPE=MAC,
ONUID=FHTT09378f08,ONUPORT=NA-NA-NA-1:CTAG::COUNT=14;
```

### ◆ Response message

```
FH_10.78.12.155 2019-03-16 11:25:31
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.1.6 Configuring a Wi-Fi Service (CFG-WIFISERVICE)

### Function Description

This command is used for configuring a Wi-Fi service for the ONU authorized by OLT. It is allowed to add SSID and configure it with different keys.

### Command Format

```
CFG-WIFISERVICE::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index]:CTAG::ENABLE=enable,
WILESSAREA=area,WILESSCHANNEL=channel,WILESSSTANDARD=standard,
WORKINGFREQUENCY=frequency,T-POWER=tpower,SSID=ssid,
SSIDENABLE=SSIDENABLE,SSIDNAME=name,SSIDVISIBALE=visible,AUTHMODE=mode,
ENCRYPTTYPE=type[,PRESHAREDKEY=key,UPDATEKEYINTERVAL=interval,
FREQUENCYBANDWIDTH=bandwidth][,RADIUSERVER=server,RADIUSPORT=port,
RADIUSKEY=key][,WEPENCRYPTIONLEVEL=level,WEPKEYINDEX=index,
WEPKEY1=key1,WEPKEY2=key2,WEPKEY3=key3,WEPKEY4=key4];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	-
ENABLE	OCTET STRING	enable disable	Enable or disable the function.	Optional
WILESSAREA	INTEGER	0 to 23	Wireless area. The value will be converted to the corresponding area name and displayed on the EMS GUI.	Optional
WILESSCHANNEL	INTEGER	0 to 13	Wireless channel number	Optional
WILESSSTANDARD	OCTET STRING	802.11b 802.11g 802.11b/g 802.11n 802.11bgn 802.11a 802.11an 802.11ac	Wireless standard	Optional

Parameter	Data Type	Value Range	Description	Remark
WORKINGFREQUENCY	OCTET STRING	2.4GHZ 5.8GHZ	<p>Working band</p> <ul style="list-style-type: none"> <li>◆ If you enter the working band parameter, the TL1 interface will find the service with the same working band as the specified one from the obtained one or two Wi-Fi service configuration entries, then modify and deliver it to the device. If no such service is found, it will not issue commands to the device and will display the error information.</li> <li>◆ If you do not enter the working band parameter, the northbound interface will return an error directly.</li> </ul>	Required
T-POWER	INTEGER	[20, 40, 60, 80, 100, 120, 140, 160, 180, 200]	Wi-Fi power control	Optional
SSID	INTEGER	1 to 4	SSID index, the keyword of the secondary table, used for locating a specific SSID entry.	(Optional) When other SSID parameters are set, this parameter is required as the index for searching for the SSID configuration to be modified.
SSIDENABLE	INTEGER	0, 1	<p>Enable or not</p> <ul style="list-style-type: none"> <li>◆ 0: disable</li> <li>◆ 1: enable</li> </ul>	Optional
SSIDNAME	OCTET STRING	Size (32)	SSID name	Optional

Parameter	Data Type	Value Range	Description	Remark
SSIDVISIBALE	INTEGER	0, 1	Indicates whether to hide SSID. ◆ 0: available ◆ 0: not available	Optional
AUTHMODE	OCTET STRING	OPEN SHARED WEPAUTO WPAPSK WPA WPA2PSK WPA2 WPA/WPA2 WPAPSK WPA2PSK	WLAN authentication mode	Optional
ENCRYPTTYPE	OCTET STRING	NONE, WEP, TKIP, AES, TKIPAES	WLAN encryption type	Optional
PRESHARED-KEY	OCTET STRING	STRING (64)	WPA pre-shared key	Optional
UPDATEKEYINTERVAL	INTEGER	[0, 4194303]	WPA key update interval Unit: s	Optional
FREQUENCY-BANDWIDTH	OCTET STRING	20/40MHZ 20MHZ 40MHZ 80MHZ	Frequency bandwidth	Optional
RADIUSSERVER	OCTET STRING	Size (128)	RADIUS server	Optional
RADIUSPORT	OCTET STRING	STRING (2)	RADIUS server port	Optional
RADIUSKEY	OCTET STRING	STRING (32)	RADIUS-KEY	Optional
WEPENCRYPTIONLEVEL	INTEGER	1: 40 bit 2: 104 bit	WEP key length	Optional
WEPKEYINDEX	INTEGER	[1, 4]	Key index	Optional
WEPKEY1	OCTET STRING	STRING (64)	WEP key 1	Optional
WEPKEY2	OCTET STRING	STRING (64)	WEP key 2	Optional
WEPKEY3	OCTET STRING	STRING (64)	WEP key 3	Optional
WEPKEY4	OCTET STRING	STRING (64)	WEP key 4	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the TKIP encryption mode for the ONU with the ID FHTT01E84310 connected to the PON port 1 in slot 7 of the OLT whose IP address is 10.171.0.22. The ONU is authenticated by physical ID.

### ◆ Command issued

```
CFG-WIFISERVICE::OLTID=10.171.0.22,PONID=NA-NA-7-1,ONUIDTYPE=MAC,
ONUID=FHTT01E84310:865815::ENABLE=enable,WILESSAREA=5,WILESSCHANNEL=5,
WILESSSTANDARD=802.11n,WORKINGFREQUENCY=2.4GHZ,T-POWER=140,SSID=2,
SSIDENABLE=0,SSIDNAME=brisa-81805,SSIDVISIBALE=1,AUTHMODE=WPAPSK,
ENCRYPTYPE=TKIP,PRESHAREDKEY=naotemsenha12,UPDATEKEYINTERVAL=3600,
FREQUENCYBANDWIDTH=20/40MHZ
```

### ◆ Response message

```
FH_10.78.20.120 2017-03-16 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

DEL-WIFISERVICE

## 5.1.7 Modifying a Wi-Fi Service (MODIFY-WIFISERVICE)

### Function Description

This command is used to modify the Wi-Fi service parameters, including the parameters in the primary table and secondary table.

### Command Format

```
MODIFY-WIFISERVICE::OLTID=olt-ip,PONID=pon-id,ONUIDTYPE=onuidtype,
ONUID=onuid:CTAG::ENABLE=enable,WILESSSTANDARD=standard,
WORKINGFREQUENCY=frequency,F-FREQUENCY-BANDWIDTH=bandwidth,
WILESSAREA=area,WILESSCHANNEL=channel,T-POWER=tpower,SSID=ssid,
SSIDENABLE=SSIDENABLE,SSIDNAME=name,SSID-VISIBALE=visibale,
AUTHMODE=mode,ENCRYPTYPE=type,PRESHAREDKEY=key;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPOINT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ENABLE	OCTET STRING	◆ enable ◆ disable	Enable or disable	Optional
WILESS-STANDARD	OCTET STRING	802.11b 802.11g 802.11b/g 802.11n 802.11bgn 802.11a 802.11an 802.11ac	Wireless standard	Optional

Parameter	Data Type	Value Range	Description	Remark
WORKING-FREQUENCY	OCTET STRING	2.4GHZ, 5.8GHZ	<p>Working band</p> <ul style="list-style-type: none"> <li>◆ After you enter the working band parameter, the TL1 interface will find the service with the same working band as the specified one from the obtained one or two Wi-Fi service configuration entries, then modify and deliver it to the device. If no such service is found, it will not issue commands to the device and will display the error information.</li> <li>◆ If you do not enter the working band parameter, the northbound interface will return an error directly.</li> </ul>	Required
FREQUENCYBANDWIDTH	OCTET STRING	20/40MHz, 20MHz, 40MHz, 80MHz	Frequency bandwidth	Optional
WILESSAREA	INTEGER	0 to 23	Wireless area. The value will be converted to the corresponding area name and displayed on the EMS GUI.	Optional
WILESSCHANNEL	INTEGER	0 to 13	Wireless channel number	Optional
T-POWER	INTEGER	20, 40, 60, 80, 100, 120, 140, 160, 180, 200	Wi-Fi power control	Optional



Parameter	Data Type	Value Range	Description	Remark
SSID	INTEGER	-	SSID index, the keyword of the secondary table, used for locating a specific SSID entry.	(Optional) When other SSID parameters are set, this parameter is required as the index for searching for the SSID configuration to be modified.
SSIDEN- ABLE	INTEGER	0, 1	Enable or disable ◆ 0: disable ◆ 1: enable	Optional
SSIDNAME	OCTET STRING	Size (32)	SSID name	Optional
SSID- VISIBALE	INTEGER	0, 1	Indicates whether to hide SSID. ◆ 0: available ◆ 1: not available	Optional
AUTH- MODE	OCTET STRING	OPEN, SHARED WEPAUTO, WPAPSK WPA, WPA2PSK WPA2, WPA/WPA2, WPAPSK/W- PA2PSK	WLAN authentication mode	Optional
ENCRYP- TYPE	OCTET STRING	NONE, WEP, TKIP, AES, TKIPAES	WLAN encryption type	Optional
PRESHAR- EDKEY	OCTET STRING	STRING (64)	WPA pre-shared key	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the frequency bandwidth of the ONU with the ID FH00000000000000000000000000000000, which is connected to PON port 1 in slot 4 on the OLT device with the IP address 10.190.42.3.

## ◆ Command issued

```
MODIFY-WIFISERVICE::OLTID=10.190.42.3,PONID=NA-NA-4-1,ONUIDTYPE=MAC,
ONUID=FHTT09378C68:CTAG::ENABLE=enable,WILESSAREA=5,WILESSCHANNEL=5,T-
POWER=140,SSID=3,SSIDENABLE=0,SSIDNAME=brisa-81808,SSID-VISIBALE=1,
AUTHMODE=WPAPSK,ENCRYPTYPE=TKIP,PRESHAREDKEY=naotemsenha1234,UPDATEKEY-
INTERVAL=3600,WILESSSTANDARD=802.11n,WORKINGFREQUENCY=2.4GHZ,
FREQUENCYBANDWIDTH=20/40MHZ;
```

## ◆ Response message

```
FH_10.170.163.1122017-02-1916:08:07
MCTAGCOMPLD
EN=0ENDESC=Noerror
;
```

## Related Command

CFG-WIFISERVICE

## 5.1.8 Deleting a Wi-Fi Service (DEL-WIFISERVICE)

## Function Description

This command is used for deleting an SSID entry under a working frequency band in the Wi-Fi service configuration.

## Command Format

```
DEL-WIFISERVICE::ONUIP=onu-name|OLTID=olt_name,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index:CTAG::
WORKINGFREQUENCY=workingfrequency,SSIDNO=ssidno;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address of the ONU	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	-
WorkingFrequency	OCTET STRING	2.4GHZ 5.8GHZ	Working frequency band, a key field for controlling the entry matching the primary table	Required
SSIDNO	INTEGER	0 to 4	SSID sequence number, the keyword of the secondary table, used for locating a specific SSID entry	Required <ul style="list-style-type: none"> <li>◆ The single-frequency ONU (working band being 2.4 GHz) does not support deleting the entry with the SSID being 1.</li> <li>◆ The dual-frequency ONU (working band being 2.4 GHz/5 GHz) does not support deleting any entry corresponding to an SSID.</li> </ul>

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete the entry with the SSID 2 in the working band 2.4 GHz from the WIFI service configurations of the ONU with the ID FHTT09378c68, which is connected to PON port 1 in slot 4 of the OLT device with the IP address 10.190.42.3.

### ◆ Command issued

```
DEL-WIFISERVICE::OLTID=10.190.42.3,PONID=NA-NA-4-1,ONUIDTYPE=MAC,  
ONUID=FHTT09378C68:CTAG::WORKINGFREQUENCY=2.4GHZ,SSIDNO=2;
```

### ◆ Response message

```
FH_10.170.163.1122019-02-1916:08:07  
MCTAGCOMPLD  
EN=0ENDESC=Noerror  
;
```

## Related Command

CFG-WIFISERVICE

## 5.1.9 Configuring a WAN Connection (SET-WANSERVICE)

### Function Description

This command is used for configuring WAN connections for the ONU authorized by OLT.

### Command Format

```
SET-WANSERVICE::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index]:CTAG::STATUS=status,MODE=mode,  
CONNTYPE=connecttype[,VLAN=vlan][,COS=cos][,QOS=qos][,NAT=nat][,  
IPMODE=ipmode][,WANIP=wanip][,WANMASK=mask][,WANGATEWAY=gateway][,
```

```

MASTERDNS=maskdns][,SLAVEDNS=slavedns][,IPSTACKMODE=ipstackmode][,
IP6SRCTYPE=ip6srctype][,IP6PREFIXSRCTYPE=ip6prefixsrctype][,
IP6ADDRESS=ip6address][,IP6GATEWAY=ip6gateway][,
IP6MASTERDNS=ip6masterdns][,IP6SLAVEDNS=ip6masterdns][,
IP6STATICPREFIX=ip6staticprefix][,PPPOEPROXY=proxy][,
PPPOEUSER=pppoeusername][,PPPOEPASSWD=pppoepassword][,
PPPOENAME=pppoeaname][,PPPOEAUTHMODE=pppoeauthmode][,
PPPOEMODE=pppoeomode][,PPPOEIDLETIME=pppoeidletime][,UPORT=uport][,
SSID=ssidno][,WANSVC=1][,VLANMODE=vlanmode][,TRANSSTATE=transstate][,
TRANSVALUE=transvalue][,TRANSCOS=transcos][,QINQSTATE=qinqstate][,
TPID=tpid][,SVLAN=svlan][,QINQCOS=qoscos][,DHCPREMOTEID=dhcpremoteid]
[,UPNP=0][,ACTIVATION=0][,GEMPORT=4];

```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTIFIER	OCTET STRING	MAC LOID ONU_Number ONU_NAME	ONU identifier type	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
STATUS	INTEGER	1 or 2	<ul style="list-style-type: none"> <li>◆ 1: configure</li> <li>◆ 2: delete</li> </ul>	Required

Parameter	Data Type	Value Range	Description	Remark
MODE	INTEGER	1-9, 100	WAN connection mode: ◆ 1: TR069 ◆ 2: INTERNET ◆ 3: TR069_INTERNET ◆ 4: multicast ◆ 5: VOIP ◆ 6: VOIP_INTERNET ◆ 7: IPTV ◆ 8: RADIUS ◆ 9: RADIUS_INTERNET ◆ 100: Other	Required
CONNTYPE	INTEGER	1 or 2	WAN connection type ◆ 1: bridge ◆ 2: route	Required
VLAN	INTEGER	1 to 4085	VLAN ID of the WAN connection	Optional
COS	INTEGER	1 to 7	802.1p priority of the WAN connection	(Optional) It is optional when the VLAN is delivered. If the VLAN is not delivered, this field will not be delivered independently.
QoS	INTEGER	1 or 2	Indicates whether to enable the QoS function for a WAN connection. ◆ 1: enable ◆ 2: disable	(Optional) Enabled by default
NAT	INTEGER	1 or 2	Indicates whether to enable the NAT. ◆ 1: enable ◆ 2: disable	(Optional) Enabled by default
IPMODE	INTEGER	1 to 3	IP address obtaining mode of a WAN connection ◆ 1: DHCP ◆ 2: STATIC ◆ 3: PPPOE	-
WANIP	OCTET STRING	Size (16)	Static IP address of a WAN connection, which should be valid.	-

Parameter	Data Type	Value Range	Description	Remark
WANMASK	OCTET STRING	Size (16)	Subnet mask of a WAN connection. It must be a valid IP address, in format of dotted decimal notation. It is valid only when IPMODE is set to STATIC.	-
WANGATEWAY	OCTET STRING	Size (16)	Default gateway of a WAN connection. It must be a valid IP address, in format of dotted decimal notation. It is valid only when IPMODE is set to STATIC.	-
MASTERDNS	OCTET STRING	Size (16)	Primary DNS of a WAN connection. It must be a valid IP address, in format of dotted decimal notation. It is valid only when IPMODE is set to STATIC.	-
SLAVEDNS	OCTET STRING	Size (16)	Secondary DNS of a WAN connection. It must be a valid IP address, in format of dotted decimal notation. It is valid only when IPMODE is set to STATIC.	-
IPSTACKMODE	INTEGER	0 to 2	Protocol stack type of a WAN connection 0: IPv4 1: IPv4&IPv6 2: IPv6	Optional
IP6SRCTYPE	INTEGER	0 or 1	Address source of the IPv6 0: DHCPV6 1: SLAAC	Optional
IP6ADDRESS	OCTET STRING	Size (64)	IPv6 address of a WAN connection	Optional
IP6GATEWAY	OCTET STRING	Size (64)	IPv6 default gateway of a WAN connection	Optional
IP6MASTERDNS	OCTET STRING	Size (64)	IPv6 primary DNS of a WAN connection	Optional
IP6SLAVEDNS	OCTET STRING	Size (64)	IPv6 secondary DNS of a WAN connection	Optional

Parameter	Data Type	Value Range	Description	Remark
IP6STATIC-PREFIX	OCTET STRING	Size (64)	IPv6 prefix pool of a WAN connection	Optional
PPPOEPROXY	INTEGER	1 or 2	Indicates whether to enable PPPoE proxy for a WAN connection. ◆ 1: enable ◆ 2: disable	Optional
PPPOEUSER	OCTET STRING	STRING (32)	Username of a PPPoE connection	Optional
PPPOE-PASSWD	OCTET STRING	STRING (32)	Password of a PPPoE connection	Optional
PPPOENAME	OCTET STRING	STRING (32)	PPPoE service name	Optional
PPPOEAUTH-MODE	INTEGER	0 to 3	Authentication mode of the PPPoE ◆ 0: Auto ◆ 1: CHAP ◆ 2: MS-CHAP ◆ 3: PAP	Optional
PPPOEMODE	INTEGER	1 to 3	PPPoE dial-up mode ◆ 1: auto connect ◆ 2: connect when have payload ◆ 3: connect manually	Optional
PPPOEIDLE-TIME	INTEGER	0 to 2000	PPPoE automatic offline time	Optional
UPOINT	INTEGER	1 to 5, 0	FE port. The values 1 to 5 correspond to LAN1, LAN2, LAN3, LAN4 and 10G LAN respectively. The value 0 indicates all LAN ports. Only one of the three parameters UPOINT, SSID and WANSVC can be configured.	Optional



Parameter	Data Type	Value Range	Description	Remark
SSID	INTEGER	1 to 8	SSID number. The values 1 to 8 correspond to SSID1 to SSID4 for 2.4G ports, and ssid1 to ssid4 for 5G ports respectively. Only one of the three parameters UPORT, SSID and WANSVC can be configured.	Optional
WANSVC	INTEGER	1	It is used in TR069 mode and its value is 1. Only one of the three parameters UPORT, SSID and WANSVC can be configured.	Optional
VLANMODE	INTEGER	1, 3	VLAN mode <ul style="list-style-type: none"> <li>◆ 1: tag</li> <li>◆ 3: transparent</li> </ul>	Optional <ul style="list-style-type: none"> <li>◆ The parameters TRANSSTATE, TRANSVALUE and TRANCOS are invalid in mode 1, and configurable in mode 3.</li> <li>◆ In tag mode, uplink untagged data packets are added with VLAN tags by the device while downlink data packets are untagged.</li> </ul>
TRANSSTATE	INTEGER	0 or 1	Translation status <ul style="list-style-type: none"> <li>◆ 0: disable</li> <li>◆ 1: enable</li> </ul>	Optional
TRANSVALUE	INTEGER	1 to 4085	VID after translation	Optional
TRANCOS	INTEGER	0 to 7	PON priority or COS	Optional
QINQSTATE	INTEGER	0 or 1	QinQ state <ul style="list-style-type: none"> <li>◆ 0: disable</li> <li>◆ 1: enable</li> </ul>	Optional
TPID	INTEGER	0-0xfffe	Tag protocol identifier	Optional

Parameter	Data Type	Value Range	Description	Remark
SVLAN	INTEGER	1 to 4085	SVLAN ID, which must be configured when QinQ is enabled.	Optional
QINQCOS	INTEGER	0 to 7	PON priority or COS	Optional
DHCPREMO-TEID	OCTET STRING	STRING (10)	It is valid when the address type of the DHCP remote identifier is DHCP; otherwise, it is invalid and null.	Optional
UPNP	INTEGER	0 or 1	0: disable 1: enable	Optional. The default value is <b>0</b> . It can be configured only when CONNTYPE is set to <b>2</b> (the WAN connection type is route) and NAT is <b>1</b> (the NAT is enabled). It is <b>0</b> for other situations.
ACTIVATION	INTEGER	0 or 1	0: activate 1: deactivate	Optional. The default value is <b>0</b> .
GEMPORT	INTEGER	1 to 4096	GEMPORT	Optional. The switch control input parameter is "Gemport" for the Thailand project and "GEMPORT" for other projects.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Bind a LAN port.

◆ Command issued

```
SET-WANSERVICE::OLTID=172.30.18.84,PONID=NA-NA-13-2,ONUIDTYPE=MAC,  
ONUID=FHTT10d62468:CTAG::STATUS=1,MODE=2,CONNTYPE=2,COS=1,VLAN=37,  
QOS=2,NAT=1,IPMODE=3,PPPOEPROXY=2,PPPOEUSER=test,PPPOEPASSWD=test,  
PPPOENAME=test,PPPOEMODE=1,QINQSTATE=1,SVLAN=2241,QINQCOS=1,UPORT=0;
```

◆ **Response message**

```
FH_10.78.20.1202019-06-1314:36:03  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

**Example 2: Deliver the multicast WAN.**

◆ **Command issued**

```
SET-WANSERVICE::OLTID=172.30.18.84,PONID=NA-NA-13-2,ONUIDTYPE=MAC,  
ONUID=FHTT10d62468:CTAG::STATUS=1,MODE=4,CONNTYPE=2,VLAN=3,COS=4,QOS=2,  
NAT=1,IPMODE=1,UPORT=0,WANSVC=1;
```

◆ **Response message**

```
FH_10.78.12.1552019-06-1318:47:53  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

**Example 3: Bind the Wi-Fi.**

◆ **Command issued**

```
SET-WANSERVICE::OLTID=172.30.18.84,PONID=NA-NA-13-2,ONUIDTYPE=MAC,  
ONUID=FHTT10d62468:CTAG::STATUS=1,MODE=2,CONNTYPE=2,COS=1,VLAN=37,  
QOS=2,NAT=1,IPMODE=3,PPPOEPROXY=2,PPPOEUSER=test,PPPOEPASSWD=test,  
PPPOENAME=test,PPPOEMODE=1,QINQSTATE=1,SVLAN=2241,QINQCOS=1,SSID=1;
```

◆ **Response message**

```
FH_10.78.12.1552019-06-1310:44:51  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

**Related Command**

None

## 5.1.10 Deleting a WAN Connection (SET-WANSERVICE)

### Function Description

This command is used for deleting WAN connections.

### Command Format

```
SET-WANSERVICE::(ONUIP=onuip|OLTID=olt_name,PONID=ponport_location,
ONUIDTYPE=idtype,ONUID=onu_index):CTAG::STATUS=status[,MODE=mode][,
CONNTYPE=conntype][,VLAN=vlan_id][,COS=cos_value][,UPORT=port_id][,
SSID=ssid];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name, or ID of the ONU having a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>rack - shelf - slot - PON port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
STATUS	INTEGER	1 or 2	<ul style="list-style-type: none"> <li>◆ 1: configure</li> <li>◆ 2: delete</li> </ul>	Required. Here it is used for deleting and therefore STATUS can only be set to 2.
MODE	INTEGER	<ul style="list-style-type: none"> <li>◆ 1: TR069</li> <li>◆ 2: INTEGER</li> <li>◆ 3: TR069_INTER-NET</li> <li>◆ 4: multicast</li> <li>◆ 5: VOIP</li> <li>◆ 6: VOIP_INTERNET</li> <li>◆ 7: IPTV</li> <li>◆ 8: RADIUS</li> <li>◆ 9: RADIUS_INTER-NET</li> <li>◆ 100: Other</li> </ul>	WAN connection mode	Optional
CONNTYPE	INTEGER	<ul style="list-style-type: none"> <li>◆ 1: bridge</li> <li>◆ 2: route</li> </ul>	WAN connection type	Optional
VLAN	INTEGER	-	VLAN ID of the WAN connection	Optional
COS	INTEGER	-	802.1p priority of the WAN connection	(Optional) It is optional when the VLAN is delivered. If the VLAN is not delivered, this field will not be delivered independently.

Parameter	Data Type	Value Range	Description	Remark
UPOINT	INTEGER	-	FE port. The values 1 to 5 correspond to LAN1, LAN2, LAN3, LAN4 and 10G LAN respectively.	(Optional) The UPOINT field is delivered together with MODE, CONNTYPE, VLAN and COS. It cannot be delivered independently. SSID and UPOINT are alternative. If this parameter is delivered, only the port bound with the service can be deleted (the service cannot be deleted). If this service has no bound port, an error is returned.
SSID	INTEGER	-	SSID number. The values 1 to 8 correspond to SSID1 to SSID4 for 2.4G ports, and ssid1 to ssid4 for 5G ports respectively.	(Optional) The SSID field is delivered together with MODE, CONNTYPE, VLAN and COS. It cannot be delivered independently. SSID and UPOINT are alternative. If this parameter is delivered, only the port bound with the service can be deleted (the service cannot be deleted). If this service has no bound port, an error is returned.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

### Example 1: Delete a port bound with a WAN connection service.

◆ **Command issued**

```
SET-WANSERVICE::OLTID=10.10.6.28,PONID=NA-NA-8-2,ONU_IDTYPE=ONU_NUMBER,  
ONU_ID=3:CTAG::STATUS=2,MODE=2,CONNTYPE=2,UPORT=1;
```

◆ **Response message**

```
FH_10.78.20.120 2019-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

### Example 2: Delete a connection service.

◆ **Command issued**

```
SET-WANSERVICE::OLTID=10.10.6.28,PONID=NA-NA-8-2,ONU_IDTYPE=ONU_NUMBER,  
ONU_ID=3:CTAG::STATUS=2,MODE=2,CONNTYPE=2;
```

◆ **Response message**

```
FH_10.78.20.120 2019-02-21 13:45:32  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

◆ **Command issued**

```
SET-WANSERVICE::OLTID=10.10.6.28,PONID=NA-NA-8-2,ONU_IDTYPE=ONU_NUMBER,  
ONU_ID=3:CTAG::STATUS=2,VLAN=102,COS=1,MODE=2,CONNTYPE=2;
```

◆ **Response message**

```
FH_10.78.20.120 2019-02-21 13:46:15  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

### Example 3: Delete all WAN connection services of an ONU.

◆ **Command issued**

```
ET-WANSERVICE::OLTID=10.10.6.28,PONID=NA-NA-8-2,STATUS=2,  
ONU_IDTYPE=ONU_NUMBER,ONU_ID=3:CTAG::;
```

◆ **Response message**

```
FH_10.78.20.120 2019-02-21 13:49:04
```

```

M CATG COMPLD
EN=0 ENDESC=No error
;

```

## Related Command

None

## 5.1.11 Configuring the Bandwidth Template of an ONU (CFG-ONUBWPROFILE)

### Function Description

This command is used to configure the bandwidth template and the GPON service bandwidth template of an ONU.

### Command Format

```

CFG-ONUBWPROFILE::OLTID=olt_name,PONID=ponport_location,ONUIDTYPE=id-
type,ONUID=onu_index:CTAG::BW=bandwidth,GPONSERVICEBW=gpon-service-bw;

```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter <b>NA</b> for the corresponding unspecified information.	-
ONU-ID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	-
ONU-ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	-



Parameter	Data Type	Value Range	Description	Remark
BW	OCTET STRING	Size (32)	Bandwidth template name	Set at least one of the two parameters.
GPONSER-VICEBW	OCTET STRING	Size (32)	Name of the GPON service bandwidth template.	

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the bandwidth template and the GPON service bandwidth template of the ONU with the ID 1, which is connected to PON port 5 in slot 4 on the OLT device with the IP address 10.171.0.16.

### ◆ Command issued

```
CFG-ONUBWPROFILE::OLTID=10.171.0.16,PONID=1-1-4-5,ONU_IDTYPE=ONU_NUMBER,
ONU_ID=1:CTAG::BW=1,GPONSERVICEBW=xldan;
```

### ◆ Response message

```
FH_10.78.20.1202011-02-2113:50:24
MCTAGCOMPLD
EN=0ENDESC=Noerror
;
```

## Related Command

UNBIND-ONUBWPROFILE

## 5.1.12 Unbinding the Bandwidth Template from an ONU (UNBIND-ONUBWPROFILE)

### Function Description

This command is used to unbind the bandwidth template and the GPON service bandwidth template from an ONU.

### Command Format

```
UNBIND-ONUBWPROFILE::OLTID=olt_name,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter <b>NA</b> for the corresponding unspecified information.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

None

## Example

Unbind the bandwidth template and the GPON service bandwidth template from the ONU with the ID 1, which is connected to PON port 5 in slot 4 on the OLT with the IP address 10.171.0.16.

### ◆ Command issued

```
UNBIND-ONUBWPROFILE::OLTID=10.171.0.16,PONID=1-1-4-5,
ONUIDTYPE=ONU_NUMBER,ONUID=1:CTAG::;
```

### ◆ Response message

```
FH_10.78.20.1202011-02-2113:50:24
MCTAGCOMPLD
EN=0ENDESC=Noerror
;
```

## Related Command

CFG-ONUBWPROFILE

## 5.1.13 Configuring the Rate-control Bandwidth of a L3 Service (CFG-LT-BWPROFILE)

### Function Description

This command is used to configure the rate-control bandwidth of a L3 service.

### Command Format

```
CFG-LT-BWPROFILE::OLTID=olt_name,PONID=ponport_location,ONUIDTYPE=id-
type,ONUID=onu_index:CTAG::WANNAME=wan_name,WANINDEX=wan_index,
UPBWPROFILE=up_bwprofile,DOWNBWPROFILE=down_bwprofile;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter <b>NA</b> for the corresponding unspecified information.	Required

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	MAC LOID ONU_Number ONU_NAME	ONU identifier type (NAME, MAC, LOID, ONU_Number).	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
WANNAME	OCTET STRING	Size (64)	WAN connection name	Optional
WANINDEX	INTEGER	-	WAN connection index	Optional
UPBWPROFILE	OCTET STRING	Size (64)	Uplink bandwidth template	Required
DOWNBWPROFILE	OCTET STRING	Size (64)	Downlink bandwidth template	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Limit the L3 bandwidth rate.

### ◆ Command issued

```
CFG-LT-BWPROFILE::OLTID=172.30.18.84,PONID=NA-NA-13-2,ONUIDTYPE=MAC,
ONUID=FHTT10d62468:CTAG::WANNAME=1_INTERNET_R_VID_37,WANINDEX=1,
UPBWPROFILE=GPON_DN_60_UP_30M,DOWNBWPROFILE=GPON_DN_60_UP_30M;
```

### ◆ Response message

```
FH_10.170.162.232019-06-1115:34:18
M CATG COMPLD
EN=0 ENDESC=No error
;
```

Example 2: Limit the L3 multicast rate.

### ◆ Command issued

```
CFG-LT-BWPROFILE::OLTID=172.30.18.84,PONID=NA-NA-13-2,ONUIDTYPE=MAC,
ONUID=FHTT10d62468:CTAG::WANNAME=2_MULTICAST_R_VID_3,WANINDEX=2,
UPBWPROFILE=IPTV_DN_100_UP_2M,DOWNBWPROFILE=IPTV_DN_100_UP_2M;
```

#### ◆ Response message

```
FH_10.170.162.232019-06-1010:18:34
M CATG COMPLD
EN=0 ENDESC=No error
;
```

#### Related Command

None

## 5.1.14 Binding a Traffic Policy to an ONU Port (CFG-PORTBINDFLOWPOLICY)

#### Function Description

This command is used to bind a traffic policy to an ONU port.

#### Command Format

```
CFG-PORTBINDFLOWPOLICY::ONUIP=onu-name|OLTID=olt_name,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index, ONUPORT=onu-
port:CTAG::IngressPolicy=Ingress_Policy, EgressPolicy=Egress_Policy,
IngressRule=Ingress_Rule,EgressRule=Egress_Rule;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter <b>NA</b> for the corresponding unspecified information.	Required
ONUIDTYPE	OCTET STRING	MAC LOID ONU_Number ONU_NAME	ONU identifier type (NAME, MAC, LOID, ONU_Number).	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through rack - shelf - slot - port number. Enter <b>NA</b> for the corresponding unspecified information.	Required
IngressPolicy	OCTET STRING	Size (20)	Uplink traffic policy	Required
EgressPolicy	OCTET STRING	Size (20)	Downlink traffic policy	Required
IngressRule	OCTET STRING	Size (20)	Uplink rule	OLTv4.x version. Required.
EgressRule	OCTET STRING	Size (20)	Downlink rule	OLTv4.x version. Required.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure a traffic policy on PON port 1 in slot 16 on the OLT with the IP address 10.171.0.16.

◆ Command issued

```
CFG-PORTBINDFLOWPOLICY::OLTID=10.171.0.16,PONID=NA-NA-16-1,
ONUIDTYPE=MAC,ONUID=1111aaaa3333,ONUUPORT=NA-NA-NA-1:CTAG::
IngressPolicy=test,EgressPolicy=default1,IngressRule=de_rule_4,
EgressRule=de_rule_5;
```

#### ◆ Response message

```
FH_10.170.163.1122017-02-1515:55:52
M CATG COMPLD
EN=0 ENDESC=No error
;
```

### Related Command

None

## 5.1.15 Configuring the Trunk Port Link Aggregation (SET-UPLINKTRUNK)

### Function Description

This command is used to configure the Trunk port link aggregation.

### Prerequisite

You have configured the aggregation group in **Local Service Configuration** → **PON Service** → **Aggregation Mode Setting** in the EMS.

### Command Format

```
SET-UPLINKTRUNK::ONUIP|OLTID=olt_name:ctag::TRUNKNO=trunk_no,
MASTERPORT=NA-NA-12-2, MEMBERPORT=NA-NA-NA-NA;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUUP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
TRUNKNO	INTEGER	-	Trunk group serial number configured in <b>Aggregation Mode Setting</b>	Required
MASTERPORT	OCTET STRING	-	Main port number of the Trunk group	Required
MEMBERPORT	OCTET STRING	-	Member port number of the Trunk group	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the Trunk port link aggregation on the OLT with the IP address 10.171.0.22.

### ◆ Command issued

```
SET-UPLINKTRUNK::OLTID=10.171.0.22:ctag::TRUNKNO=2,MASTERPORT=NA-NA-19-2,MEMBERPORT=NA-NA-20-5;
```

### ◆ Response message

```
FH_10.170.163.1122017-02-1516:55:52
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None



## 5.1.16 Querying the Trunk Port Link Aggregation (LST-TRUNKINFO)

### Function Description

This command is used to query the Trunk port link aggregation.

### Command Format

```
LST-TRUNKINFO::ONUIP=onu_ip|OLTID=olt-name:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address

### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
TRUNKNO	INTEGER	1 to 16	Trunk group serial number, created in the aggregation mode setting page.
MASTERPORT	OCTET STRING	1 to 12 AN5220: For MCXA: 3: GE1 4: GE2 5: GE3 6: GE4 For MCXB: 1: XE1 2: XE2 3: GE1 4: GE2	Main port number of the Trunk group
MEMBERPORT	OCTET STRING	1 to 12 AN5220: For MCXA: 3: GE1 4: GE2 5: GE3 6: GE4 For MCXB: 1: XE1 2: XE2 3: GE1 4: GE2	Member port number of the TRUNK group

## Example

Query the TRUNK port link aggregation of the OLT with the IP address 10.171.0.22.

## ◆ Command issued

```
LST-TRUNKINFO::OLTID=10.171.0.22:ctag::;
```

## ◆ Response message

```
FH_127.0.0.12016-05-0910:50:27
MctagCOMPLD
total_blocks=1
block_number=1
block_records=2
LstOfTrunkInfo
-----
```

```
TRUNKMASTERPORTMEMBERPORT
```

```
11-1-19-21-1-19-3
```

```
21-1-20-11-1-20-2|1-1-20-3
```

```
-----
```

## Related Command

```
SET-UPLINKTRUNK
```

## 5.1.17 Configuring the Management VLAN of an ONU (CFG-MANAGEVLAN)

### Function Description

This command is used for configuring the management VLAN of an ONU.

### Command Format

```
CFG-MANAGEVLAN::OLTID=olt_name,PONID=ponport_location,ONUIDTYPE=idtype,  
ONUID=onu_index:CTAG::NAME=name,PORTNO=port_no,VLANMODE=vlan_mode,  
SVLAN=svlan_id,CVLAN=cvlan_id,IP=ip,MASK=mask,GATEWAY=gateway;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type	Required

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
NAME	OCTET STRING	Size (16) Numbers, letters and underscores. It cannot be null.	Management VLAN name, which must be unique.	Required
PORTNO	INTEGER	0 to 3	0: all ports 1: PON port 2: GE1 3: GE2	Optional
VLANMODE	OCTET STRING	0, 1	0: untag 1: tag	Required
SVLAN	INTEGER	1 to 4096	Management SVLAN	Required
CVLAN	INTEGER	1 to 4096	Management CVLAN	Required
IP	OCTET STRING	Size (16)	Management IP address of the ONU	Required
MASK	OCTET STRING	Size (16)	Mask	Required
GATEWAY	OCTET STRING	Size (16)	Gateway	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the management VLAN for the ONU with the ID 3 connected to PON port 4 in slot 4 of the OLT whose IP address is 10.171.0.41.

◆ Command issued

```
CFG-MANAGEVLAN::OLTID=10.171.0.41,PONID=NA-NA-4-4,ONUIDTYPE=ONU_NUMBER,
ONUID=3:CTAG::NAME=ttt,PORTNO=1,VLANMODE=0,SVLAN=1000,CVLAN=1000,
IP=10.171.0.167,MASK=255.255.255.0,GATEWAY=10.171.0.254;
```

#### ◆ Response message

```
FH_10.170.95.191 2019-09-300 18:36:23
M CTAG COMPLD
  EN=0 ENDESC=No error
;
```

### Related Command

```
LST-MANAGEVLAN
```

## 5.1.18 Querying the Management VLAN of an ONU (LST-MANAGEVLAN)

### Function Description

This command is used for querying the management VLAN of an ONU.

### Command Format

```
LST-MANAGEVLAN::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-
type,ONUID=onu-index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required

Parameter	Data Type	Value Range	Description	Remark
ONU_IDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type	Required
ONU_ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.
ONU_ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
MANAGEID	INTEGER	1 to 4	Management ID
SVLAN	INTEGER	1 to 4096	Management SVLAN
IP	OCTET STRING	Size (16)	Management IP address of an ONU
MASK	OCTET STRING	Size (16)	Mask
GATEWAY	OCTET STRING	Size (16)	Gateway

## Example

Query the management VLAN of the ONU with the ID 7 connected to PON port 2 in slot 3 of the OLT whose IP address is 10.171.0.22.

### ◆ Command issued

```
LST-MANAGEVLAN::OLTID=10.171.0.22,PONID=NA-NA-3-2,ONU_IDTYPE=ONU_NUMBER,
ONU_ID=7:CTAG::;
```

## ◆ Response message

```
FH_10.170.3.76 2018-04-10 16:52:01
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of onu manage vlan
```

```
-----
ONUID  MANAGEID  SVLAN      IP          MASK          GATEWAY
7       1          4000      10.171.0.223 255.255.0.0   10.171.0.254
-----
```

## Related Command

```
CFG-MANAGEVLAN
```

## 5.1.19 Activating an ONU (ACT-ONU)

## Function Description

This command is used for deactivating an ONU.

## Command Format

```
ACT-ONU::OLTID=olt_name,PONID=ponport_location,ONUIDTYPE=idtype,
ONUID=onu_index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Activate the ONU with the ID 3 connected to PON port 1 in slot 3 of the OLT whose IP address is 10.171.0.22.

### ◆ Command issued

```
ACT-ONU::OLTID=10.171.0.22,PONID=1-1-3-1,ONUIDTYPE=ONU_NUMBER,ONUID=3:
CTAG::;
```

### ◆ Response message

```
FH_10.170.3.76 2018-04-10 18:36:23
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

DEACT-ONU



## 5.1.20 Deactivating an ONU (DEACT-ONU)

### Function Description

This command is used for deactivating an ONU.

### Command Format

```
DEACT-ONU::OLTID=olt_name,PONID=ponport_location,ONUIDTYPE=idtype,
ONUID=onu_index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

None

## Example

Deactivate the ONU with the ID 3 connected to PON port 1 in slot 3 of the OLT whose IP address is 10.171.0.22.

### ◆ Command issued

```
DEACT-ONU::OLTID=10.171.0.22,PONID=1-1-3-1,ONUIDTYPE=ONU_NUMBER,
ONUID=3:CTAG::;
```

### ◆ Response message

```
FH_10.170.3.76 2018-04-10 18:55:13
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

ACT-ONU

## 5.1.21 Enabling / Disabling an ONU (SET-ONUSWITCH)

### Function Description

This command is used to enable / disable an ONU, controlling the service restoration / interruption on the ONU.

### Command Format

```
SET-ONUSWITCH::ONUIP=onu_ip,OLTID=olt_name,PONID=ponport_location,
ONUIDTYPE=idtype,ONUID=onu_index:CTAG::ONUSWITCH=1;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUSWITCH	INTEGER	Size (128)	ONU switch 1: enable 0: disable	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Enable the ONU with the ID 2 connected to PON port 1 in slot 3 of the OLT whose IP address is 10.171.0.16.

### ◆ Command issued

```
SET-ONUSWITCH::OLTID=10.171.0.16,PONID=NA-NA-3-1,ONUIDTYPE=ONU_NUMBER,
ONUID=2,ONUSWITCH=1:CTAG::;
```

### ◆ Response message

```
FH_10.170.3.76 2018-05-11 16:36:23
M CTAG COMPLD
EN=0 ENDESC=No error
```

;

## Related Command

ACT-ONU

DEACT-ONU

## 5.1.22 Resetting a Line Card (RST-BOARD)

### Function Description

This command is used for resetting a specified line card.

### Command Format

```
RST-BOARD::OLTID=olt_name,BOARDID=board_id:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
BOARDID	OCTET STRING	Size (128) Rack - shelf - slot number	Slot location information. Locate a slot through <b>rack - shelf - slot number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

None

### Example

Reset the line card in slot 1 of the OLT whose IP address is 10.190.40.216.

◆ Command issued

```
RST-BOARD::OLTID=10.190.40.216,BOARDID=NA-NA-1:CTAG::;
```

◆ **Response message**

```
FH_10.170.163.215 2018-05-11 14:26:23
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 5.1.23 Configuring the Traffic Policy Template Bound with a Port (ADD-PORTBINDFLOWPOLICY)

### Function Description

This command is used to configure the traffic policy template bound with a port.

### Command Format

```
ADD-PORTBINDFLOWPOLICY::ONUIP=onu_ip,OLTID=olt_name,
PONID=ponport_location,ONUIDTYPE=idtype,ONUID=onu_index:CTAG::
ONUPORT=onuport_no,INGRESSPOLICY=ingresspolicy,
EGRESSPOLICY=gegresspolicy,INGRESSRULE=ingressrule,
EGRESSRULE=egressrule;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required. It is optional for the MSAN public platform card.
INGRESSPOLICY	OCTET STRING	Size (128)	Uplink traffic policy ID	Required. Corresponds to the policy name in the specific traffic policy template.
EGRESSPOLICY	OCTET STRING	Size (128)	Downlink traffic policy ID	Required. Corresponds to the policy name in the specific traffic policy template.
INGRESSRULE	OCTET STRING	Size (128)	Uplink rule ID	Required. Corresponds to the name of the specific traffic classification rule.
EGRESSRULE	OCTET STRING	Size (128)	Downlink rule ID	Required. Corresponds to the name of the specific traffic classification rule.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Bind a traffic policy template and a traffic classification rule to PON port 2 in slot 1 of the OLT with the IP address 10.190.40.216.

### ◆ Command issued

```
ADD-PORTBINDFLOWPOLICY::OLTID=10.190.40.216,PONID=NA-NA-1-2:CTAG::  
INGRESSPOLICY=test3,EGRESSPOLICY=test4,INGRESSRULE=de_rule_7,  
EGRESSRULE=de_rule_8;
```

### ◆ Response message

```
FH_10.170.163.215 2018-05-11 14:44:16  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

MODIFY-PORTBINDFLOWPOLICY

## 5.1.24 Modifying the Traffic Policy Template Bound with a Port (MODIFY-PORTBINDFLOWPOLICY)

### Function Description

This command is used to modify the traffic policy template bound with a port.

### Command Format

```
MODIFY-PORTBINDFLOWPOLICY::ONUIP=onu_ip,OLTID=olt_name,  
PONID=ponport_location,ONUIDTYPE=idtype,ONUID=onu_index:CTAG::  
ONUPORT=onuport_no,INGRESSPOLICY=ingresspolicy,  
EGRESSPOLICY=egresspolicy,INGRESSRULE=ingressrule,  
EGRESSRULE=egressrule;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required. It is optional for the MSAN public platform card.
INGRESSPOLICY	OCTET STRING	Size (128)	Uplink traffic policy ID	Required. Corresponds to the policy name in the specific traffic policy template.
EGRESSPOLICY	OCTET STRING	Size (128)	Downlink traffic policy ID	Required. Corresponds to the policy name in the specific traffic policy template.



Parameter	Data Type	Value Range	Description	Remark
INGRESS-RULE	OCTET STRING	Size (128)	Uplink rule ID	Required. Corresponds to the name of the specific traffic classification rule.
EGRESSRULE	OCTET STRING	Size (128)	Downlink rule ID	Required. Corresponds to the name of the specific traffic classification rule.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the traffic policy template and the traffic classification rule bound to PON port 2 in slot 1 of the OLT with the IP address 10.190.40.216.

### ◆ Command issued

```
MODIFY-PORTBINDFLOWPOLICY::OLTID=10.190.40.216,PONID=NA-NA-1-2:CTAG::
INGRESSPOLICY=test3,EGRESSPOLICY=test4,INGRESSRULE=de_rule_7,
EGRESSRULE=de_rule_8;
```

### ◆ Response message

```
FH_10.170.163.215 2018-05-11 15:26:35
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

```
ADD-PORTBINDFLOWPOLICY
```

## 5.1.25 Binding an xDSL Spectrum Template (BIND-DSLSPROFILE)

### Function Description

This command is used to modify the xDSL spectrum template bound with a port.

### Command Format

```

BIND-DSLSPROFILE::ONUIP=onu-name|[OLTID=olt-name,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index],
ONUPORT=onu-port:CTAG::PROFILENAME=profile-name;

```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for MSAN
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for MSAN
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONU-PORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
PROFILE-NAME	STRING	Size (0 to -20)	Template name	-

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the xDSL spectrum template to ppp123 for PON port 1 in slot 2 of the OLT with the IP address 10.170.4.72.

### ◆ Command issued

```
BIND-DSLSPROFILE::OLTID=10.170.4.72,PONID=NA-NA-2-1:CTAG::
PROFILENAME=ppp123;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-7 16:36:23
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 5.1.26 Binding the MSAN/20/30 vDSL Service Template and 5220 xDSL Rate Template (BIND-XDSLSERVICEPROFILE)

### Function Description

This command is used to modify the vDSL service template / xDSL rate template bound with a port.

### Command Format

```
BIND-XDSLSERVICEPROFILE::ONUIP=onu-name| [OLTID=olt-name,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index],
ONUPORT=onu-port:CTAG::PROFILENAME=profile-name;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for MSAN
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for MSAN
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
PROFILE-NAME	STRING	Size (0 to -20)	Template name	-

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the xDSL rate template to "hhh" for PON port 2 in slot 2 of the OLT with the IP address 10.170.4.72.

### ◆ Command issued

```
BIND-XDSLSERVICEPROFILE::OLTID=10.170.4.72,PONID=NA-NA-2-2:CTAG::
PROFILENAME=hhh;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-07 20:47:13
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 5.1.27 Binding the VDSL Extended Function Template for the MSAN Public Platform (BIND-VDSLEXPROFILE)

### Function Description

This command is used to bind the VDSL extended function template with a port.

### Command Format

```
BIND-VDSLEXPROFILE::ONUIP=OLTID=olt-name,PONID=ponport_location:CTAG::  
PROFILENAME=profile-name;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for MSAN
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for MSAN
PROFILE-NAME	STRING	Size (0 to -20)	Name of the VDSL extended function template	-

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

None

### Example

Bind the VDSL extended function template "tt" to PON port 1 in slot 2 of the OLT with the IP address 10.171.0.31.

◆ Command issued

```
BIND-VDSLEXPROFILE::OLTID=10.171.0.31,PONID=NA-NA-2-1:CTAG::
PROFILENAME=tt;
```

#### ◆ Response message

```
FH_10.170.3.76 2018-08-08 15:49:03
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

#### Related Command

None

## 5.1.28 Configuring the Line ID for the MSAN Public Platform (CFG-LINEIDENTIFIER)

#### Function Description

This command is used to configure the line ID of the AN5220. It supports configuring the parameters related to the Option82 / PPPoE+ protocols.

#### Command Format

```
CFG-LINEIDENTIFIER::ONUIP=onu-name|OLTID=olt-name[,
PONID=ponport_location, ONUIDTYPE=onuid-type,ONUID=onu-index],
ONUPORT=onu-port:CTAG::OPTION82 ENABLE=enable,PPPOEENABLE=enable,
ACCESSNODEIDENTIFIER=IDENTIFIER,SUBOPTION=option,ACCESSTYPE=type,
IDTYPE=type,FORMATTYPE=type,USERDEFINEDFORMAT=format;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for MSAN

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for MSAN
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
OPTION82 ENABLE	INTEGER	1: enabled 0: disabled	Indicates whether to enable Option82 or not.	Required
PPPOE ENABLE	INTEGER	1: enabled 0: disabled	Indicates whether to enable PPPoE+ or not.	Required
ACCESSNO-DEIDENTIFIER	OCTET STRING	Size (50)	ID of the access node	Required
SUBOPTION	INTEGER	1: pppoe+ 2: dhcp-option82	Sub-option	Required
ACCESSTYPE	INTEGER	1: ATM 2: ETH	Access type	Required
IDTYPE	INTEGER	1: line ID (circuit-id) 2: remote ID (remote-id)	ID type	Required



Parameter	Data Type	Value Range	Description	Remark
FORMATTYPE	INTEGER	0: default 1: CTC 2: CNC 3: user-defined	Format type	Required
USERDEFI- NEDFORMAT	OCTET STRING	Size (256)	User-defined format	It is available when the format type is user-defined. The character string can be null.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

On PON port 1 in slot 2 of the OLT with the IP address 10.170.4.72, enable the Option82 and PPPoE+, set the sub-option of the line ID format to **dhcp-option82** and the access type to **ATM**, and define the line ID to **rackrack**.

### ◆ Command issued

```
CFG-LINEIDENTIFIER::OLTID=10.170.4.72,PONID=NA-NA-2-1:CTAG::
OPTION82ENABLE=enable,PPPOEENABLE=enable,
ACCESSNODEIDENTIFIER=IDENTIFIER,SUBOPTION=dhcp-option82,ACCESSTYPE=ATM,
IDTYPE=1,FORMATTYPE=3,USERDEFINEDFORMAT="rack"rack;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-13 15:19:03
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 5.1.29 Binding the PVC Template for the MSAN Public Platform (BIND-DSLPCVCPROFILE)

### Function Description

This command is used to bind the PVC template with a port.

### Command Format

```
BIND-DSLPCVCPROFILE::ONUIP=OLTID=olt-name,PONID=ponport_location:CTAG::  
PROFILENAME=profile-name;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for MSAN
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for MSAN
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONU-PORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
PROFILE-NAME	STRING	Size (0 to -20)	Name of the PVC template.	-

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Bind the PVC template **DEFPVC.PRF1** to PON port 1 in slot 2 of the OLT with the IP address 10.170.4.72.

### ◆ Command issued

```
BIND-DSLPCVCPROFILE::OLTID=10.170.4.72,PONID=NA-NA-2-1:CTAG::
PROFILENAME=DEFPVC.PRF1
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-07 10:09:03
M CTAG COMPLD
  EN=0 ENDESC=No error
;
```

## Related Command

None

### 5.1.30 Configuring the Subscriber Service ID (CFG-SUBSCRIBERNO)

#### Function Description

This command is used for configuring or modifying the subscriber service ID.

#### Command Format

◆ **ONU:**

```
CFG-SUBSCRIBERNO::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::
SUBSCRIBERNO=ID[,DESCRIPTION=userNO];
```

◆ **Service card of the MSAN public platform:**

```
CFG-SUBSCRIBERNO::OLTID=olt-name,PONID=ponport_location:CTAG::
SUBSCRIBERNO=ID[,DESCRIPTION=userNO];
```

◆ **MDU:**

```
CFG-SUBSCRIBERNO::ONUIP=ONU_IP,PONID=ponport_location:CTAG::
SUBSCRIBERNO=ID[,DESCRIPTION=userNO];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional for the MSAN public platform card
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for the MSAN public platform card
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for the MSAN public platform card
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONU-PORT-TYPE	OCTET STRING	Size (128)	LAN FXS	Required for an ONU that has no management IP address; optional for the MSAN public platform card. You can select the ONU port according to the port type.
ONU-PORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
SUBSCRIBERNO	OCTET STRING	Size (32)	Subscriber service ID	(Required) Unique in the entire network
DESCRIPTION	OCTET STRING	Size (32)	Service remarks	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Set the subscriber service ID to ASD on port 1 of the ONU with the ID 2, which is connected to PON port 8 in slot 12 of the OLT with the IP address 10.190.40.239.

◆ **Command issued**

```
CFG-SUBSCRIBERNO::OLTID=10.190.40.239,PONID=NA-NA-12-8,  
ONUIDTYPE=ONU_NUMBER,ONUID=2,ONUPORT=NA-NA-NA-1:CTAG::SUBSCRIBERNO=ASD;
```

◆ **Response message**

```
FH_127.0.0.1 2019-02-28 14:15:00 M CATG COMPLD EN=0 ENDESC=No error ;
```

**Example 2:** Set the subscriber service ID to QWER on port 8 in slot 1 of the ONU equipment AN5006-20 with the IP address 10.171.0.32.

◆ **Command issued**

```
CFG-SUBSCRIBERNO::ONUIP=10.171.0.32,ONUPORT=NA-NA-1-8:CTAG::  
SUBSCRIBERNO=QWER;
```

◆ **Response message**

```
FH_127.0.0.1 2019-02-28 14:16:12  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

**Related Command**

None

## **5.1.31 Modifying the ONU Name or Description (CFG-ONUNAMEANDDESC)**

**Function Description**

This command is used to modify the ONU name or description.

**Command Format**

```
CFG-ONUNAMEANDDESC::OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::[ONUNAME=name,]  
[ONUDESC=desc];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUNAME	OCTET STRING	Size (128)	ONU name	(Optional) ONU name after modification
ONUDESC	OCTET STRING	Size (128)	ONU description. Chinese characters should not be contained.	(Optional) ONU description after modification

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the name and description of the ONU under PON port 1 in slot 7 of the OLT equipment whose IP address is 10.171.0.31, altering the ONU name from **test123** to **test123456**, and altering the ONU description to **hello**.

## ◆ Command issued

```
CFG-ONUNAMEANDDESC::OLTID=10.171.0.31,PONID=NA-NA-7-1,ONUIDTYPE=LOID,
ONUID=test123:CTAG::ONUNAME=test123456,ONUDESC=hello;
```

## ◆ Response message

```
FH_10.170.3.76 2018-08-11 09:19:03
M CTAG COMPLD
    EN=0    ENDESC=No error
;
```

## Related Command

None

## 5.1.32 Authorizing Cards (CFG-CARD)

### Function Description

This command is used for authorizing cards.

### Command Format

```
CFG-CARD::ONUIP=onu-name|OLTID=olt-name,BOARDID=boardid:CTAG::
CARDTYPE=cardtype;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
BOARDID	OCTET STRING	Size (128) Rack-shelf-slot	Slot location information. Locate a slot through <b>rack-shelf-slot</b> . Enter <b>NA</b> if the corresponding information is not specified.	Required
CARDTYPE	OCTET STRING	Size (128)	Card type	Required



## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Authorize the EC4B card in slot 6 of the OLT equipment whose IP address is 10.190.40.11.

### ◆ Command issued

```
CFG-CARD::OLTID=10.190.40.11,BOARDID=NA-NA-6:CTAG::CARDTYPE=EC4B;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-11 09:19:03
```

```
M CTAG COMPLD
```

```
EN=0 ENDESC=No error
```

```
;
```

## Related Command

None

## 5.1.33 Binding an ONU Template (BIND-ONUPROFILE)

### Function Description

This command is used for binding an ONU template.

### Command Format

```
BIND-ONUPROFILE::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::ONUPROFILENAME=profilename;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>rack - shelf - slot - PON port number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Required
ONUIDTYPE	OCTET STRING	Size (32)	ONU type	Required
ONUID	OCTET STRING	Size (64)	Authentication information. If AUTHTYPE is set to MAC, ONUID is MAC address. If AUTHTYPE is set to LOID, ONUID is LOID.	Required
ONUPROFILENAME	OCTET STRING	Size (128)	Template name	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Bind the template **AAA** to the ONU with the ID FHTT03317f08, which is connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28.

### ◆ Command issued

```
BIND-ONUPROFILE::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::ONUPROFILENAME=AAA;
```

### ◆ Response message

```
FH_10.170.162.31 2018-08-30 11:04:20
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.1.34 Configuring Unknown Multicast Packet Flooding (CFG-MUF)

## Function Description

This command is used to configure or modify unknown multicast packet flooding.

## Command Format

```
CFG-MUF::OLTID=olt-name,VLANID=VLANID,VLANMODE=unknown-flood[,Rate Limit
=1000]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
VLANID	INTEGER	1 to 4085	VLAN ID	Required
VLANMODE	OCTET STRING	<ul style="list-style-type: none"> <li>◆ unknown-flood</li> <li>◆ unknown-drop</li> </ul>	unknown-flood: flooding of unknown multicast packets unknown-drop: dropping unknown multicast packets	Required
RATELIMIT	INTEGER	0 to 1000000	Rate limit; 0 indicates no rate limit.	(Optional) The default value is 100. Unit: Kbps

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure or modify flooding of unknown multicast packets for the OLT equipment whose IP address is 10.171.0.29.



### Note:

If no flooding is configured for VLAN 1234, you can use the command to add one; if flooding has been configured, you can use the command to modify the configuration.

---

#### ◆ Command issued

```
CFG-MUF::OLTID=10.171.0.29,VLANID=1234,VLANMODE=unknown-flood,  
RATELIMIT=1000:CTAG::;
```

#### ◆ Response message

```
FH_10.170.3.76 2018-08-11 09:19:03  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

LST-MUF

## 5.1.35 Querying Unknown Multicast Packet Flooding (LST-MUF)

### Function Description

This command is used to query the result of unknown multicast packet flooding.

### Command Format

```
LST-MUF::OLTID=olt-name[,VLANID=VLAN ID]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
VLANID	INTEGER	1 to 4085	VLAN ID	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
VLANID	INTEGER	1 to 4085	VLAN ID
VLANMODE	OCTET STRING	<ul style="list-style-type: none"> <li>◆ unknown-flood</li> <li>◆ unknown-drop</li> </ul>	unknown-flood: flooding of unknown multicast packets unknown-drop: dropping unknown multicast packets
RATELIMIT	INTEGER	0 to 1000000	Rate limit; 0 indicates no rate limit.

## Example

Query all the configured unknown multicast packet flooding for the OLT equipment whose IP address is 10.171.0.29.

### ◆ Command issued

```
LST-MUF::OLTID=10.171.0.29:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.1 2019-04-03 15:52:01
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
Multicast unknown flood/drop Info:
```

```
-----
OLTID      VLANIDVLANMODE      RATELIMIT
10.171.0.29 1234unknown-flood1000
-----
```

## Related Command

CFG-MUF

## 5.1.36 Configuring the QinQ Rate Limit for an ONU (CFG-QINQLIMIT)

## Function Description

This command is used for configuring the QinQ rate limit for an ONU.

## Command Format

```
CFG-QINQLIMIT::ONUIP=onu-name|OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,[CVLAN=cvlan],[SVLAN=svlan],
[UV=uv][,BW=bandwidth name]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
QINQNAME	OCTET STRING	Size (16)	Name of the QinQ domain bound with the ONU	Optional ◆ If QINQNAME, CVLAN, SVLAN and UV are not entered, this command will configure the same rate limit for all the services of the ONU. ◆ If QINQNAME is not entered, and at least one among CVLAN, SVLAN and UV is entered, this command will query the QinQ domain name and the corresponding service sequence number by the VLAN ID, and configure a specified QinQ rate limit for the current ONU.
CVLAN	INTEGER	0 to 4095	CVLAN	
UV	INTEGER	0 to 4095	User-side service VLAN	
SVLAN	INTEGER	0 to 4095	Outer VLAN	
BW	OCTET STRING	Size (128)	Bandwidth profile name	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure a rate limit for the ONU with the ID FHTT033466f8 connected to PON port 2 in slot 12 of the OLT equipment whose IP address is 10.171.0.106 via the **test** bandwidth profile.

### ◆ Command issued

```
CFG-QINQLIMIT::OLTID=10.171.0.106,PONID=NA-NA-12-2,ONUIDTYPE=MAC,
ONUID=FHTT033466f8,BW=test:CTAG::;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-01 08:14:43
M CTAG COMPLD
  EN=0 ENDESC=No error
;
```

## Related Command

```
MODIFY-QINQLIMIT
LST-QINQLIMIT
```

## 5.1.37 Modifying the QinQ Rate Limit for an ONU (MODIFY-QINQLIMIT)

### Function Description

This command is used for modifying the QinQ rate limit of an ONU.

### Command Format

```
MODIFY-QINQLIMIT::ONUIP=onu-name|OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,[CVLAN=cvlan],[SVLAN=svlan],
[UV=uv][,BW=bandwidth name]:CTAG::;
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
CVLAN	INTEGER	0 to 4095	CVLAN	(Optional) Configure at least one among CVLAN, SVLAN and UV.
UV	INTEGER	0 to 4095	User-side service VLAN	
SVLAN	INTEGER	0 to 4095	Outer VLAN	
BW	OCTET STRING	Size (128)	Bandwidth profile name	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

For the ONU with the ID FHTT033466f8 connected to PON port 2 in slot 12 of the OLT equipment whose IP address is 10.171.0.106, query the QinQ domain name and service sequence number based on the CVLAN ID 1000, and modify the service rate limit via the **test** bandwidth profile.

### ◆ Command issued

```
MODIFY-QINQLIMIT::OLTID=10.171.0.106,PONID=NA-NA-12-2,ONUIDTYPE=MAC,
ONUID=FHTT033466f8,CVLAN=1000,BW=test:CTAG::;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-02 10:22:03
M CTAG COMPLD
    EN=0    ENDESC=No error
;
```

## Related Command

None

## 5.1.38 Querying the QinQ Rate Limit for an ONU (LST-QINQLIMIT)

### Function Description

This command is used for querying the QinQ rate limit for an ONU.

### Command Format

```
LST-QINQLIMIT::ONUIP=onu-name|OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack-shelf-slot- PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
QINQNAME	OCTET STRING	Size (16)	Name of the QinQ domain bound with the ONU	-
CVLAN	INTEGER	0 to 4095	CVLAN	(Optional) Configure at least one among CVLAN, SVLAN and UV.
UV	INTEGER	0 to 4095	User-side service VLAN	(Optional) Configure at least one among CVLAN, SVLAN and UV.
SVLAN	INTEGER	0 to 4095	Outer VLAN	(Optional) Configure at least one among CVLAN, SVLAN and UV.
UMINBW	INTEGER	0 to 10000000	Minimum uplink bandwidth	(Optional) The default value is 1000000. Unit: Kbps

Parameter	Data Type	Value Range	Description	Remark
UMAXBW	INTEGER	0 to 10000000	Maximum uplink bandwidth	(Optional) The default value is 1000000. Unit: Kbps
UBURSTBW	INTEGER	0 to 10000000	Uplink burst bandwidth	(Optional) The default value is 1000000. Unit: Kbps
DMINBW	INTEGER	0 to 10000000	Minimum downlink bandwidth	(Optional) The default value is 1000000. Unit: Kbps
DMAXBW	INTEGER	0 to 10000000	Maximum downlink bandwidth	(Optional) The default value is 1000000. Unit: Kbps
DBURSTBW	INTEGER	0 to 10000000	Downlink burst bandwidth	(Optional) The default value is 1000000. Unit: Kbps

## Example

Query the QinQ rate limit configured for the ONU with the ID FHTT033466f8 connected to PON port 1 in slot 3 of the OLT whose IP address is 10.171.0.16.

### ◆ Command issued

```
LST-QINQLIMIT::OLTID=10.171.0.16,PONID=NA-NA-3-1,ONUIDTYPE=ONU_NUMBER,
ONUID=2:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.1 2019-03-03 15:52:01
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of onu QinQ limit info:
```

```
-----
QINQNAME  CVLAN    UV  SVLAN  UMINBW    UMAXBW    UBURSTBW    DMINBW
DMAXBW    DBURSTBW
test      80      --  50    1000    10001    12000    1000000    1002  1000000
-----
```

## Related Command

CFG-QINQLIMIT

MODIFY-QINQLIMIT

## 5.1.39 Configuring the MDU Port Description (CFG-ONUपोर्टDESCRIPTION)

### Function Description

Modify / delete the port description of the AN5006-20/30.

### Command Format

```
CFG-ONUपोर्टDESCRIPTION::ONUIP=onu-name|OLTID=olt_name,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index,
ONUपोर्ट=onuport[,DESCRIPTION=description]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
DESCRIPTION	OCTET STRING	Size (128)	Port description	(Optional) It can also be empty.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Set the description of port 2 in slot 2 of the ONU whose IP address is 10.190.47.236 to "hello123".

### ◆ Command issued

```
CFG-ONUPORTDESCRIPTION::ONUIP=10.190.47.236,ONUPORT=NA-NA-1-2,  
DESCRIPTION=hello123:CTAG::;
```

### ◆ Response message

```
FH_10.170.159.1082019-10-1517:07:14  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

```
LST-ONUPORTDESCRIPTION
```

## 5.1.40 Querying Description of an MDU Port (LST-ONUPORTDESCRIPTION)

### Function Description

This command is used to query the description of a specific port on the AN5006-20 / AN5006-30.

### Command Format

```
LST-ONUPORTDESCRIPTION::ONUIP=onu-name|OLTID=olt_name,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index,
ONUPORT=onuport:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address



Parameter	Data Type	Value Range	Description	Remark
ONUIDENTTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
DESCRIPTION	OCTET STRING	Size (128)	Port description	Required. It can also be empty.

## Example

Query the description of port 2 in slot 1 on the ONU whose IP address is 10.190.47.236.

### ◆ Command issued

```
LST-ONUPORTDESCRIPTION::ONUIP=10.190.47.236,ONUPORT=NA-NA-1-2:CTAG::;
```

### ◆ Response message

```
FH_10.170.159.1082019-10-1517:10:17
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of port description info
```

```
-----
ONUIP  OLTID  PONID  ONUID  ONUPORT  DESCRIPTION
0.190.47.236-- ----1-1-1-2hello123
-----
```

## Related Command

CFG-ONUPORTDESCRIPTION

## 5.1.41 Configuring ONU Port Isolation (CFG-PORTISOLATION)

## Function Description

This command is used for enabling or disabling ONU port isolation.

## Command Format

```
CFG-PORTISOLATION::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,ENABLE=0,index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ENABLE	INTEGER	0, 1	0: disable 1: enable	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Disable port isolation for ONU 1 connected to PON port 1 in slot 8 of the OLT equipment whose IP address is 10.171.0.39.

### ◆ Command issued

```
CFG-PORTISOLATION::OLTID=10.171.0.39,PONID=NA-NA-8-1,
ONUIDTYPE=ONU_NUMBER,ONUID=1,ENABLE=0:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.12019-03-2810:28:36
MCTAGCOMPLD
EN=0ENDESC=Noerror
```

Example 2: Enable port isolation for ONU 1 connected to PON port 1 in slot 8 of the OLT equipment whose IP address is 10.171.0.39.

### ◆ Command issued

```
CFG-PORTISOLATION::OLTID=10.171.0.39,PONID=NA-NA-8-1,
ONUIDTYPE=ONU_NUMBER,ONUID=1,ENABLE=1:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.12019-03-2810:36:41
MCTAGCOMPLD
EN=0ENDESC=Noerror
;
```

## Related Command

None

## 5.1.42 Configuring a Service at a CATV Port (CFG-CATVPORT)

### Function Description

This command is used for configuring a service at an ONU's CATV port.

### Command Format

```
CFG-CATVPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ENABLE	OCTET STRING	Y N	Indicates whether to activate a port. When delivered, the set value is converted into the integer 1 or 0 by default. The default value is <b>Y</b> .	Required
OUTPUTOFFSET	INT	-127 to 127	The default value is <b>0</b> .	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure a service at the CATV port of ONU 4 connected to PON port 1 in slot 4 of the OLT equipment whose IP address is 10.190.5.217, setting the output level adjustment value to -20.

### ◆ Command issued

```
CFG-CATVPORT::OLTID=10.190.5.217,PONID=NA-NA-4-1,ONU_IDTYPE=ONU_NUMBER,
ONU_ID=4:CTAG::ENABLE=Y,OUTPUTOFFSET=-20;
```

### ◆ Response message

```
FH_127.0.0.12019-03-0610:40:41
MCTAGCOMPLD
EN=0ENDESC=Noerror
;
```

## Related Command

None

### 5.1.43 Querying Service Configuration of a CATV Port (LST-CATVPORT)

#### Function Description

This command is used for querying the information about a service configured for an ONU's CATV port.

#### Command Format

```
LST-CATVPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

#### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ENABLE	OCTET STRING	Y N	Indicates whether to activate a port. When delivered, the setting is converted into the integer 1 or 0 by default. The default value is <b>Y</b> .	Required
OUTPUT OFFSET	INT	-127 to 127	-	Required

## Example

Query the information about the service configured for the CATV port of ONU 4 connected to PON port 1 in slot 4 of the OLT whose IP address is 10.190.5.217.

## ◆ Command issued

```
LST-CATVPORT::OLTID=10.190.5.217,PONID=NA-NA-4-1,ONUIDTYPE=ONU_NUMBER,
ONUID=4:CTAG::;
```

## ◆ Response message

```
FH_127.0.0.12019-03-0614:10:24
MCTAGCOMPLD
```

```
total_blocks=1
block_number=1
block_records=1

list of CATV PORT info:
-----
ENABLE  OUTPUTOFFSET
Y      -20
-----
```

#### Related Command

None

### 5.1.44 Enabling / Disabling the WPS (CFG-WPS)

#### Function Description

This command is used for enabling or disabling the WPS function.

#### Command Format

```
CFG-WPS::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,
ONUID=onu-index:CTAG::2.4GEnable=0[,5GEnable=1];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_ NAME, MAC, LOID or ONU_ NUMBER.	Required



Parameter	Data Type	Value Range	Description	Remark
2.4GEnable	INTEGER	0: disable 1: enable	Enables or disables 2.4G.	Required
5GEnable	INTEGER	0: disable 1: enable	Enables or disables 5G.	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Disable the WPS function for the ONU with the MAC address 000000000007 connected to PON port 1 in slot 6 of the OLT equipment whose IP address is 10.171.0.34.

### ◆ Command issued

```
CFG-WPS::OLTID=10.171.0.34,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUWID=000000000007:CTAG::2.4GEnable=0[,5GEnable=0];
```

### ◆ Response message

```
FH_127.0.0.12019-03-2710:40:41
MCTAGCOMPLD
EN=0ENDESC=Noerror
;
```

## Related Command

None

## 5.1.45 Querying the WPS Status (LST-WPS)

### Function Description

This command is used for querying the WPS status.

## Command Format

```
LST-WPS::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,  
ONUID=onu-index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.

Parameter	Data Type	Value Range	Description
2.4GEnable	INTEGER	0: disable 1: enable	Enables or disables 2.4G.
5GEnable	INTEGER	0: disable 1: enable	Enables or disables 5G.

## Example

Query the WPS status of the ONU with the MAC address 000000000007 connected to PON port 1 in slot 6 of the OLT equipment whose IP address is 10.171.0.34.

### ◆ Command issued

```
LST-WPS::OLTID=10.171.0.34,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=000000000007:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.12019-03-2809:59:55
```

```
MCTAGCOMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of wps info:
```

```
-----
OLTID  PONID  ONUIDTYPE  ONUID  2.4GEnable  5GEnable
10.171.0.34  1-1-6-1  MAC  000000000007  0      0
-----
```

## Related Command

None

## 5.1.46 Port Forwarding (CFG-PORTFORWARDING)

### Function Description

This command is used for configuring the ONU port forwarding.

### Command Format

```
CFG-PORTFORWARDING::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::WANNAME=wan-name,
```

PUBLICPORTSTART=start public port, PUBLICPORTEND=end public port, IP=ip address, PRIVATEPORTSTART=start private port, PRIVATEPORTEND=end public port, PROTOCOLTYPE=3, ENABLE=0;

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUIDENT	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
WANNAME	OCTETSTRING	Size (64)	Name of the WAN connection	Required
PUBLICPORT-START	INTEGER	1 to 65535	Start public port number	Required The end public port number is greater than or equal to the start public port number.
PUBLICPORT-END	INTEGER	1 to 65535	End public port number	Required The end public port number is greater than or equal to the start public port number.
IP	OCTETSTRING	Size (32)	IP address General IP address format	Required An IPv4 address is supported only, and no mask is required.

Parameter	Data Type	Value Range	Description	Remark
PRIVATEPORT-START	INTEGER	1 to 65535	Start private port number	Required The end private port number is greater than or equal to the start private port number.
PRIVATEPORT-END	INTEGER	1 to 65535	End private port number	Required The end private port number is greater than or equal to the start private port number.
PROTOCOL-TYPE	INTEGER	1: TCP 2: UDP 3: ALL	Protocol	Optional
ENABLE	INTEGER	0: disable 1: enable	Switch	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure port forwarding parameters for ONU 1 connected to PON port 3 in slot 8 of the OLT equipment whose IP address is 10.171.0.39.

### ◆ Command issued

```
CFG-PORTFORWARDING::OLTID=10.171.0.39,PONID=NA-NA-8-3,
ONU_IDTYPE=ONU_NUMBER,ONU_ID=1:CTAG::WANNNAME=123,PUBLICPORTSTART=1,
PUBLICPORTEND=10,IP=10.10.10.10,PRIVATEPORTSTART=2,PRIVATEPORTEND=5,
PROTOCOLTYPE=3,ENABLE=0;
```

### ◆ Response message

```
FH_127.0.0.12019-04-0219:10:36
MCTAGCOMPLD
EN=0ENDESC=Noerror
```

## Related Command

None

## 5.1.47 Querying the Port Forwarding Status (LST-PORTFORWARDING)

### Function Description

This command is used for querying the port forwarding status.

### Command Format

```
LST-PORTFORWARDING::OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_ NAME, MAC, LOID or ONU_ NUMBER.	Required

### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.
WANNAME	OCTETSTRING	Size (64)	Name of the WAN connection
PUBLICPORT-START	INTEGER	1 to 65535	Start public port number
PUBLICPORT-END	INTEGER	1 to 65535	End public port number
IP	OCTETSTRING	Size (32)	IP address in the general format
PRIVATEPORT-START	INTEGER	1 to 65535	Start private port number
PRIVATEPORT-END	INTEGER	1 to 65535	End private port number
PROTOCOL-TYPE	INTEGER	1: TCP 2: UDP 3: ALL	Protocol
ENABLE	INTEGER	0: disable 1: enable	Switch

## Example

None

## Related Command

None

## 5.1.48 Configuring the Local Management Interface of an ONU (CFG-ONULOCALMANAGEINTERFACE)

### Function Description

This command is used for configuring the local management interface of an ONU.

### Command Format

```
CFG-ONULOCALMANAGEINTERFACE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::CONFIGENABLE=0,CONSOLE=1,
TELNETUNI=0,WEBUNI=1,WEBSERVICEPORT=80,WEBANI=0,TELNETANI=0,WEBADMIN=0
[,ICMPANI=0,ICMPUNI=0,SSHANI=0,SSHUNI=0,SNMPANI=0,SNMPUNI=0,TFTPANI=0,
TFTPUNI=0,FTPANI=0,FTPUNI=0];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required



Parameter	Data Type	Value Range	Description	Remark
CONFIGEN- ABLE	INTEGER	0: disable 1: enable	Enable or disable the configuration.	Required ◆ When it is enabled, the global configuration of the ONU local management interface is omitted. ◆ When it is disabled, the global configuration of the ONU local management interface prevails.
CONSOLE	INTEGER	0: disable 1: enable	Serial port	Required
TELNETUNI	INTEGER	0: disable 1: enable	Telnet user side	Required
WEBUNI	INTEGER	0: disable 1: enable	Web user side	Required
WEBSERVI- CEPORT	INTEGER	1024-65535, 80, 0	Web service port	Required
WEBANI	INTEGER	0: disable 1: enable	Web network side	Required
TELNETANI	INTEGER	0: disable 1: enable	Telnet network side	Required
WEBADMIN	INTEGER	0: disable 1: enable	Web administrator account switch	Required
ICMPANI	INTEGER	0: disable 1: enable	ICMP network side	(Optional) Test requirement
ICMPUNI	INTEGER	0: disable 1: enable	ICMP user side	(Optional) Test requirement
SSHANI	INTEGER	0: disable 1: enable	SSH network side	(Optional) Test requirement
SSHUNI	INTEGER	0: disable 1: enable	SSH user side	(Optional) Test requirement
SNMPANI	INTEGER	0: disable 1: enable	SNMP network side	(Optional) Test requirement
SNMPUNI	INTEGER	0: disable 1: enable	SNMP user side	(Optional) Test requirement
TFTPANI	INTEGER	0: disable 1: enable	TFTP network side	(Optional) Test requirement
TFTPUNI	INTEGER	0: disable 1: enable	TFTP user side	(Optional) Test requirement

Parameter	Data Type	Value Range	Description	Remark
FTPANI	INTEGER	0: disable 1: enable	FTP network side	(Optional) Test requirement
FTPUNI	INTEGER	0: disable 1: enable	FTP user side	(Optional) Test requirement

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure a local management interface for ONU 1 connected to PON port 3 in slot 8 of the OLT equipment whose IP address is 10.171.0.39.

### ◆ Command issued

```
CFG-ONULOCALMANAGEINTERFACE::OLTID=10.171.0.39,PONID=NA-NA-8-3,  
ONUIDTYPE=ONU_NUMBER,ONUID=1:CTAG::CONFIGENABLE=0,CONSOLE=1,  
TELNETUNI=0,WEBUNI=1,WEBSERVICEPORT=11111,WEBANI=0,TELNETANI=0,  
WEBADMIN=0[,ICMPANI=0,ICMPUNI=0,SSHANI=0,SSHUNI=0,SNMPANI=0,SNMPUNI=1,  
TFTPANI=1,TFTPUNI=1,FTPANI=1,FTPUNI=1];
```

### ◆ Response message

```
FH_127.0.0.12019-04-0219:53:00  
MCTAGCOMPLD  
EN=0ENDESC=Noerror
```

## Related Command

None

## 5.1.49 Querying the Local Management Interface Configuration of an ONU (LST-ONULOCALMANAGEINTERFACE)

### Function Description

This command is used to query the local management interface configuration of an ONU.

### Command Format

```
LST-ONULOCALMANAGEINTERFACE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required

### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)
ONUIDENT	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.
CONFIGENABLE	INTEGER	0: disable 1: enable	Enable or disable the configuration.
CONSOLE	INTEGER	0: disable 1: enable	Serial port
TELNETUNI	INTEGER	0: disable 1: enable	Telnet user side
WEBUNI	INTEGER	0: disable 1: enable	Web user side
WEBSERVICE-PORT	INTEGER	0: disable 1: enable	Web service port
WEBANI	INTEGER	0: disable 1: enable	Web network side
TELNETANI	INTEGER	0: disable 1: enable	Telnet network side
WEBADMIN	INTEGER	0: disable 1: enable	Web administrator account switch
ICMPANI	INTEGER	0: disable 1: enable	ICMP network side
ICMPUNI	INTEGER	0: disable 1: enable	ICMP user side
SSHANI	INTEGER	0: disable 1: enable	SSH network side
SSHUNI	INTEGER	0: disable 1: enable	SSH user side
SNMPANI	INTEGER	0: disable 1: enable	SNMP network side

Parameter	Data Type	Value Range	Description
SNMPUNI	INTEGER	0: disable 1: enable	SNMP user side
TFTPANI	INTEGER	0: disable 1: enable	TFTP network side
TFTPUNI	INTEGER	0: disable 1: enable	TFTP user side
FTPANI	INTEGER	0: disable 1: enable	FTP network side
FTPUNI	INTEGER	0: disable 1: enable	FTP user side

## Example

Query the local management interface of ONU 1 connected to PON port 3 in slot 8 of the OLT equipment whose IP address is 10.171.0.39.

### ◆ Command issued

```
LST-ONULOCALMANAGEINTERFACE::OLTID=10.171.0.39,PONID=NA-NA-8-3,
ONUIDTYPE=ONU_NUMBER,ONU=1:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.1 2019-04-02 20:05:10
```

```
M CTAG COMPLD
```

```
total_blocks=1
block_number=1
block_records=1
```

```
list onu local manage interface Info:
```

```
-----
ONU|IP|OLTID|PONID|ONU|ID|CONFIG|ENABLE|CONSOLE|TELNET|UNI|WEB|UNI|WEB|
SERVICE|PORT|WEB|ANI|TELNET|ANI|WEB|ADMIN|ICMP|ANI|ICMP|UNI|SSH|ANI|SSH|
UNI|SNMP|ANI|SNMP|UNI|TFTP|ANI|TFTP|UNI|FTP|ANI|FTP|UNI|
--|10.171.0.39|1-1-8-3|1|0|1|0|1|1111|0|0|
-----
```

## Related Command

None

## 5.1.50 Activating the ONU Voice Automatically (AUTOACTIVE-ONUVOICE)

### Function Description

This command is used for activating the ONU voice automatically.

### Command Format

```
AUTOACTIVE-ONUVOICE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port:CTAG::
SVLAN=outer_vlan,CVLAN=inner_VLAN;
```

### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
SVLAN	INTEGER	0 to 4095	Outer VLAN of the voice service	Required
CVLAN	INTEGER	0 to 4095	Inner VLAN of the voice service	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the voice service for voice port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 5 of the OLT whose IP address is 10.171.0.16. The information of the ONU is as follows: ONUID is 54-4b-40-76-6c-28; the authentication mode is MAC.

### ◆ Command issued

```
AUTOACTIVE-ONUVOICE::OLTID=10.171.0.16,PONID=NA-NA-5-1,ONUIDTYPE=MAC,
ONUID=54-4b-40-76-6c-28,ONUPORT=NA-NA-NA-1:CTAG::SVLAN=3900,CVLAN=2500;
```

### ◆ Response message

```
FH_10.170.162.31 2018-05-30 09:42:53
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.1.51 Binding the Digitmap Template (BIND-DIGITMAPPROFILE)

### Function Description

This command is used for binding the digitmap with the ONU.

### Command Format

```
BIND-DIGITMAPPROFILE::OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index,DIGITMAPPROFILE=Digitmapname[,  
DIGITMAP=DigitMap]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>cabinet rack-shelf-slot-PON port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
DIGITMAPPROFILE	OCTET STRING	Size (128)	Digitmap template name	Required
DIGITMAP	OCTET STRING	Size (128)	Digitmap	Optional

### Response Format

It complies with the operation-command response format in [Response Message Format](#).



## Output Parameter

None

## Example

### ◆ Command issued

```
BIND-DIGITMAPPROFILE::OLTID=172.27.16.234,PONID=NA-NA-13-2,  
ONUIDTYPE=MAC,ONUID=FHTT913BD5B0:APROVF77E8C621D14::  
DIGITMAPPROFILE=centrex4;
```

### ◆ Response message

```
FH_10.170.162.31 2019-05-30 19:53:41  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

```
UNBIND-DIGITMAPPROFILE
```

## 5.1.52 Unbinding the Digitmap Template (UNBIND-DIGITMAPPROFILE)

### Function Description

This command is used for unbinding the digitmap from the ONU.

### Command Format

```
UNBIND-DIGITMAPPROFILE::OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index,DIGITMAPPROFILE=Digitmapname:  
CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>cabinet rack-shelf-slot-PON port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
DIGITMAPPROFILE	OCTET STRING	Size (128)	Digitmap template name	Required

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

### ◆ Command issued

```
UNBIND-DIGITMAPPROFILE::OLTID=172.26.48.106,PONID=NA-NA-1-6,
ONUIDTYPE=ONU_Number,ONUID=1:APROV335DE386F911::
DIGITMAPPROFILE=centrex4;
```

### ◆ Response message

```
FH_10.170.162.31 2019-05-31 09:41:52
M CTAG COMPLD
EN=0 ENDESC=No error
```

;

## Related Command

```
BIND-DIGITMAPPROFILE
```

## 5.2 Broadband / IPTV Services of a LAN Port

The following introduces how to configure the broadband and IPTV services of a LAN port.

### 5.2.1 Activating a LAN Port (ACT-LANPORT)

#### Function Description

This command is used for activating a LAN port of the ONU to enable it.

#### Command Format

```
ACT-LANPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

#### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Activate the LAN port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is Test0001; the authentication mode is LOID.

### ◆ Command issued

```
ACT-LANPORT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=Test0001,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

Example 2: Activate the LAN port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.20.

◆ **Command issued**

```
ACT-LANPORT::ONUIP=10.250.18.20,ONUPORT=NA-NA-4-1:CTAG::;
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 13:41:37
M CATG COMPLD
EN=0 ENDESC=No error
;
```

### Related Command

```
DACT-LANPORT
```

## 5.2.2 Deactivating a LAN Port (DACT-LANPORT)

### Function Description

This command is used for deactivating a LAN port of the ONU to disable it.

### Command Format

```
DACT-LANPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Deactivate LAN port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is Test0001; the authentication mode is LOID.

◆ **Command issued**

```
DACT-LANPORT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,  
ONUID=Test0001,ONUPORT=NA-NA-NA-1:CTAG::
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

Example 2: Deactivate the LAN port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.20.

◆ **Command issued**

```
DACT-LANPORT::ONUIP=10.250.18.20,ONUPORT=NA-NA-4-1:CTAG::;
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

```
ACT-LANPORT
```

## 5.2.3 Configuring a LAN Port (CFG-LANPORT)

### Function Description

This command is used for configuring the bandwidth, default VLAN and default priority of a LAN port.

### Prerequisite

Before using the command, ensure the bandwidth template is configured on the OLT.

## Command Format

```
CFG-LANPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUUPORT=onu-port:CTAG::[BW=band
width][,VLANMOD=mode][,PVID=vlan id][,PCOS=port qos];
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required. It can be a list of multiple ports, separated by vertical bars, for example, NA-NA-NA-0 NA-NA-NA-1. Entering multiple ports means that these ONU ports will be configured simultaneously.



Parameter	Data Type	Value Range	Description	Remark
BW	OCTET STRING	Size (128)	Port rate limiting template configured for the ONU data port	Optional
VLANMOD	OCTET STRING	<ul style="list-style-type: none"> <li>◆ Tag</li> <li>◆ Trunk</li> <li>◆ Transparent</li> <li>◆ Translation</li> </ul>	VLAN mode settings of the port: ◆ TAG (SFU or HGU scenario): used with the VLAN configuration command for the OLT PON port. ◆ TRUNK (SFU+HGU scenario): used with the VLAN configuration command for the OLT PON port. ◆ Transparent (SFU+HGU scenario): used with the VLAN configuration command for the OLT PON port. ◆ Translate (SFU+HGU scenario): used with the VLAN configuration command for the ONU LAN port.	Optional
PVID	INTEGER	-	Default VLAN of the port	Optional
PCOS	INTEGER	-	Default priority of the port	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Configure the bandwidth template BW\_UP, default VLAN102 and priority 1 for LAN port 2 of the ONU (having no management IP address) connected to PON port 2 in slot 15 of the OLT whose IP address is 10.78.11.102. The information of the ONU is as follows: ONUID is 54-4B-40-04-2C-1E; the authentication mode is MAC.

◆ Command issued

```
CFG-LANPORT::OLTID=10.78.11.102,PONID=NA-NA-15-2,ONUIDTYPE=MAC,  
ONUID=54-4B-40-04-2C-1E,ONUPORT=NA-NA-NA-2:CTAG::BW=BW_UP,VLANMOD=Tag,  
PVID=102,PCOS=1;
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

**Example 2:** Configure the bandwidth template BW\_2M for LAN port 1 in slot 1 of the ONU (having a management IP address) whose IP address is 10.250.18.20.

◆ **Command issued**

```
CFG-LANPORTBW::ONUIP=10.250.18.121,ONUPORT=NA-NA-1-1:CTAG::BW=BW_2M
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 13:41:37  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 5.2.4 Configuring the Bandwidth for a LAN Port (CFG-LANPORTBW)

### Function Description

This command is used for configuring the bandwidth for a LAN port.

### Prerequisite

Before using the command, ensure the bandwidth template is configured on the OLT.

### Command Format

```
CFG-LANPORTBW::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::  
[BW=bandwidth];
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUIDENT	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required. It can be a list of multiple ports, separated by vertical bars, for example, NA-NA-NA-0  NA-NA-NA-1. Entering multiple ports means that these ONU ports will be configured simultaneously.
BW	OCTET STRING	Size (128)	Name of the bandwidth template that sets the uplink / downlink bandwidth	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Bind the bandwidth template "rrr" to LAN port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 5 of the OLT whose IP address is 10.171.0.16. The information of the ONU is as follows: ONUID is 54-4b-40-76-6c-28; the authentication mode is MAC.

### ◆ Command issued

```
CFG-LANPORTBW::OLTID=10.171.0.16,PONID=NA-NA-5-1,ONUIDTYPE=MAC,
ONUID=54-4b-40-76-6c-28,ONUPORT=NA-NA-NA-1:CTAG::BW=rrr;
```

### ◆ Response message

```
FH_10.170.162.31 2018-05-29 13:30:32
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.2.5 Configuring the VLAN of a PON Port (ADD-PONVLAN)

## Function Description

This command is used for configuring the VLAN information for an OLT PON port.

## Command Format

```
ADD-PONVLAN::OLTID=olt-name, PONID=ponport_location, ONUIDTYPE=onuidtype,
ONUID=onu-index:CTAG::[SVLAN=outervlan,]CVLAN=Innervlan[,UV=uservlan][,
SCOS=outergos][,CCOS=innergos][,UCOS=ucos][,SERVICETYPE=servicetype][,
SVMODPROFILE=servicemodelprofile][,GEMPORT=0];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
SVLAN	INTEGER	0 to 4095	SVLAN	Optional, but required for the stacked VLAN service
CVLAN	INTEGER	0 to 4095	CVLAN	Required

Parameter	Data Type	Value Range	Description	Remark
UV	INTEGER	0 to 4095	User-side VLAN	(Optional) When UV is set to 0, the VLAN tag is processed in the same way as when UV is not configured.
SCOS	INTEGER	0 to 7	Outer priority	Optional
CCOS	INTEGER	0 to 7	Inner priority	(Optional) In case SCOS and CCOS are set to the same value, only CCOS is delivered.
UCOS	INTEGER	0 to 7	For the VEIP data service, configure the CCOS field.	(Optional) When the VEIP data service configuration is delivered in the command, this field corresponds to the <b>CCOS</b> field in the VEIP data service configuration.
SERVICE-TYPE	OCTET STRING	Size (128) ◆ NONE ◆ DATA ◆ IPTV ◆ MANAGE-MENT ◆ VOIP	Service type	(Optional) When the VEIP data service configuration is delivered in the command, this field corresponds to the service type field in the VEIP data service configuration.

Parameter	Data Type	Value Range	Description	Remark
SVCMOD- PROFILE	OCTET STRING	Size (20)	Service model profile name	Required only when the VEIP data service configuration is delivered in the command; optional in other scenarios. You need to select a service model profile (SERVICEPROFILE).
GEMPORT	INTEGER	0 to 4095	<p>When the service configuration of the VEIP port is issued via TL1, you need to ascertain whether to configure the new or old protocol for issuing VEIP data services based on the device capability.</p> <ul style="list-style-type: none"> <li>◆ When the old protocol is issued, the parameter "GEMPORT" needs not to be issued via TL1.</li> <li>◆ When the new protocol is issued, the value of "GEMPORT" (entered by the user) is issued via TL1. If the user does not enter a value for "GEMPORT", the default value is issued.</li> </ul>	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the VLAN information for port 1 of the ONU with the MAC address 54-4B-40-04-2C-1E connected to PON port 1 in slot 3 of the OLT equipment whose IP address is 10.250.18.100.

### ◆ Command issued

```
ADD-PONVLAN::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1E:CTAG::[SVLAN=4,]CVLAN=2[,UV=98][,GEMPORT=0];
```

### ◆ Response message

```
FH_10.170.162.31 2018-05-29 13:50:32
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.2.6 Deleting the VLAN of a PON Port (DEL-PONVLAN)

### Function Description

This command is used for deleting the VLAN information of an OLT PON port.

### Command Format

```
DEL-PONVLAN::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-
type,ONUID=onu-index:CTAG::[,UV=user-vlan];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address



Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
UV	INTEGER	-	User-side VLAN	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete the VLAN information of port 1 of the ONU connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is 54-4B-40-04-2C-1E; the authentication mode is MAC.

### ◆ Command issued

```
DEL-PONVLAN::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1E:CTAG::[,UV=98];
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 15:57:17
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

ADD-PONVLAN

## 5.2.7 Configuring the VLAN of a LAN Port (CFG-LANPORTVLAN)

### Function Description

This command is used for configuring the VLAN information of a LAN port.

### Command Format

```
CFG-LANPORTVLAN::ONUIP=onu-name|OLTID=olt-name[, PONID=ponport_location,
ONUIDTYPE=onuid-type, ONUID=onu-index], ONUPORT=onu-port:CTAG::
[SVLAN=outer vlan], CVLAN=Inner vlan[, UV=user-vlan][, SCOS=outer qos][,
CCOS=inner qos];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	(Required) It can be a list of ports, separated by vertical bars, for example, <b>NA-NA-NA-0 NA-NA-NA-1</b> . Entering multiple ports means these ONU ports will be configured simultaneously.
SVLAN	INTEGER	-	SVLAN	Optional
CVLAN	INTEGER	-	CVLAN	Optional
UV	INTEGER	-	User-side VLAN	Optional
SCOS	INTEGER	-	Outer priority	Optional
CCOS	INTEGER	-	Inner priority	(Optional) In case SCOS and CCOS are set to the same value, only CCOS is delivered.
UPBW	OCTET STRING	Size (128)	Uplink bandwidth profile	Added and optional (Thailand TRUE)
DOWNBW	OCTET STRING	Size (128)	Downlink bandwidth profile	Added and optional (Thailand TRUE)
GEMPORT	INTEGER	1 to 4096	GEMPORT number	Added and optional (Thailand TRUE)

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

### ◆ Command issued

```
CFG-LANPORTVLAN::OLTID=172.16.84.58,PONID=NA-NA-5-6,ONUIDTYPE=MAC,
ONUID=FHTT107CED88,ONUPORT=NA-NA-NA-2:941965::CCOS=7,CVLAN=2008;
```

### ◆ Response message

```
FH_10.98.100.16 2014-06-12 15:45:15
```

```

M   CTAG COMPLD
    EN=0   ENDESC=No error
;

```

## Related Command

None

## 5.2.8 Deleting the VLAN of a LAN Port (DEL-LANPORTVLAN)

### Function Description

This command is used for deleting the VLAN information of an ONU LAN port.

### Command Format

```

DEL-LANPORTVLAN::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-
type,ONUID=onu-index,ONUPORT=onu-port:CTAG::[,UV=user-vlan];

```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required. It can be a list of multiple ports, separated by vertical bars, for example, NA-NA-NA-0  NA-NA-NA-1. Entering multiple ports means that these ONU ports will be configured simultaneously.
UV	INTEGER	-	User-side VLAN	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Delete the VLAN configuration of LAN port 1 of the ONU (that has no management IP) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is 54-4B-40-04-2C-1E; the authentication mode is MAC.

### ◆ Command issued

```
DEL-LANPORTVLAN::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1E,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-22 15:55:17
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

Example 2: Delete the VLAN configuration of PON port 10 in slot 4 of the ONU (having a management IP address) whose IP address is 10.78.11.115.

### ◆ Command issued

```
DEL-LANPORTVLAN::ONUIP=10.78.11.115,ONUPORT=NA-NA-4-10:CTAG::CVLAN=21,
CCOS=3;
```

## ◆ Response message

```

FH_10.78.20.120 2011-02-22 17:05:49
M CTAG COMPLD
  EN=0  ENDESC=No error
;

```

## Related Command

```
ADD-LANPORTVLAN
```

## 5.2.9 Configuring the IPTV Service of a LAN Port (CFG-LANIPTVPORT)

## Function Description

This command is used for configuring the IPTV service of a LAN port.

## Command Format

```

CFG-LANIPTVPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::
[FLMODE=iptv-fastleave-mode][,MAXGRP=Max-group-number];

```

## Supported Device

- ◆ OLT: AN5116-02, AN5116-06B.
- ◆ ONU: AN5006 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Optional
FLMODE	OCTET STRING	Enabled, Disabled	Enable / disable the quick leaving mode.	Optional; case-sensitive
MAXGRP	INTEGER	0 to 255	Maximum number of multicast programs that a port can join simultaneously.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Configure a multicast service with the fast leave mode being enabled and MAXGRP being 23 for LAN port 1 of the ONU (having no management IP address) with ONUID being 54-4B-40-04-2C-1E. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The ONU is authenticated by MAC address.

### ◆ Command issued

```
CFG-LANIPTVPORT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1E,ONUPORT=NA-NA-NA-1:CTAG::FLMODE=Enabled,
MAXGRP=23;
```

**◆ Response message**

```
FH_10.78.20.120 2011-02-22 09:17:13
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

Example 2: Configure a multicast service for LAN port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.20.

**◆ Command issued**

```
CFG-LANIPTVPORT::ONUIP=10.250.18.20,ONUPORT=NA-NA-4-1:CTAG::
FLMODE=Enabled,MAXGRP=32;
```

**◆ Response message**

```
FH_10.78.20.1202011-02-2209:17:13
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

**Related Command**

```
ADD-LANIPTVPORT
```

```
DEL-LANIPTVPORT
```

## **5.2.10 Adding a LAN Port into a Multicast VLAN (ADD-LANIPTVPORT)**

**Function Description**

This command is used for adding a LAN port into a multicast VLAN.

**Command Format**

```
ADD-LANIPTVPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::[UV=user
vlan][,MVLAN=mvlan][,UCOS=ucos][,MCOS=mcos][,SVCMODPROFILE=svc mod
profile][,GEMPORT=0];
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUIDENT	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	Locate a card port through <b>rack-shelf-slot-PON port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Optional
UV	INTEGER	0 to 4085	User-side VLAN	Optional
MVLAN	INTEGER	1 to 4085	Associated multicast VLAN	Required. Specified multicast VLAN for service provisioning
UCOS	INTEGER	0 to 7	UVLAN priority	Optional
MCOS	INTEGER	0 to 7	MVLAN priority	Optional

Parameter	Data Type	Value Range	Description	Remark
SVCMOD-PROFILE	OCTET STRING	Size (20)	Service model profile name	Optional
GEMPORT	INTEGER	0 to 4095	<p>When the service configuration of the VEIP port is issued via TL1, you need to ascertain whether to configure the new or old protocol for issuing VEIP data services based on the device capability.</p> <ul style="list-style-type: none"> <li>◆ When the old protocol is issued, the parameter "GEMPORT" needs not to be issued via TL1.</li> <li>◆ When the new protocol is issued, the value of "GEMPORT" (entered by the user) is issued via TL1. If the user does not enter a value for "GEMPORT", the default value is issued.</li> </ul>	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Add port 2 of the ONU with the MAC address FHTT02CEE2B0 to the multicast VLAN. The ONU is connected to PON port 14 in slot 5 of the OLT whose IP address is 172.16.84.58.

### ◆ Command issued

```
ADD-LANIPTVPORT::OLTID=172.16.84.58,PONID=NA-NA-5-14,ONUIDTYPE=MAC,
ONUID=FHTT02CEE2B0,ONUPORT=NA-NA-NA-2:945860::MCOS=4,MVLAN=2008;
```

## ◆ Response message

```

FH_10.98.100.16 2019-06-13 15:45:15
M CTAG COMPLD
    EN=0    ENDESC=No error
;

```

## Related Command

None

## 5.2.11 Deleting a LAN Port from a Multicast VLAN (DEL-LANIPTVPORT)

## Function Description

This command is used for deleting a LAN port from a multicast VLAN.

## Command Format

```

DEL-LANIPTVPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::
[UV=uservlan][,MVLAN=mvlan];

```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
UV	INTEGER	0 to 4085	User-side VLAN	(Optional) It is required when the multicast service is accessed through a home gateway.
MVLAN	INTEGER	0 to 4085	Associated multicast VLAN	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete port 4 of the ONU with the MAC address FHTT92524528 from the multicast VLAN. The ONU is connected to PON port 5 in slot 5 of the OLT whose IP address is 172.25.81.18.

### ◆ Command issued

```
DEL-LANIPTVPORT::OLTID=172.25.81.18,PONID=NA-NA-5-5,ONUIDTYPE=MAC,
ONUID=FHTT92524528,ONUPORT=NA-NA-NA-4:APROV3A0ED6478A11::MVLAN=3860;
```

## ◆ Response message

```
FH_10.78.12.155 2018-09-16 09:31:05
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.2.12 Adding HG Management Channel Configuration (CFG-NONOMCIMPATHPATHCONFIG)

## Function Description

This command is used for configuring the management channel information of a LAN port.

## Command Format

```
CFG-NONOMCIMPATHPATHCONFIG::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::ChannelEnable=1[,
ManageCVlanId=9][,ManageCVlanCos=7];
```

## Supported Device

- ◆ OLT: AN5116 series, AN5516 series.
- ◆ ONU: AN5006 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER).	Required

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ChannelEnable	INTEGER	0, 1	0: disable; 1: enable	Required
ManageCVlanId	INTEGER	0 to 4095	CVLAN	Optional
ManageCVlanCos	INTEGER	0 to 7	CVLAN priority	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1, configure the management channel on the ONU with ID 1, which is in the PON port 2 in slot 4 on the OLT device with IP 10.78.200.200. The management channel is disabled.

### ◆ Command issued

```
CFG-NONOMCIMPATHTHCONFIG::OLTID=10.78.200.200,PONID=NA-NA-4-2,
ONUIDTYPE=ONU_NUMBER,ONUID=1:CTAG::ChannelEnable=0,ManageCVlanId=2,
ManageCVlanCos=3;
```

### ◆ Response message

```
FH_10.78.20.1202011-02-2114:55:17
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## 5.2.13 Adding a VEIP Data Service (CFG-VEIPSERVICE)

### Function Description

This command is used to configure a VEIP data service at a LAN port.

### Command Format

```
CFG-VEIPSERVICE::OLTID=olt-name,PONID=ponport_location,ONUIDENTYPE=onuid-
type,ONUID=onu-index,ONUPORT=onu-portid:CTAG::[ServiceId=1][,
CVLANID=cvlan-id][,CCOS=ccos][,TVLANID=tvlan][,TCOS=tcos][,
ServiceType=ServiceType][,UpAssuredRateLimit=xxx][,
DownAssuredRateLimit=xxx][,ServiceModelProfile=xxx][,GEMPORT=0];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ENABLE	OCTET STRING	Y N	Indicates whether to activate a port. When delivered, the setting is converted into the integer 1 or 0 by default. The default value is <b>Y</b> .	Required
OUTPUTOFF-SET	INT	-127 to 127	Default value: <b>0</b>	Optional
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	MAC LOID ONU_Number ONU_NAME	ONU identifier type (NAME, MAC, LOID or ONU_Number)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
Serviceld	INTEGER	1 to 16	Sequence number of the service under the port	Optional
CVLANID	INTEGER	-	CVLAN ID	(Optional) Corresponds to "CVLAN ID" in the VEIP data service configuration.
CCOS	INTEGER	-	CVLAN priority or COS	Optional
TVLANID	INTEGER	1 to 4085	TVLAN ID	Optional
TCOS	INTEGER	0 to 7	TCOS	Optional



Parameter	Data Type	Value Range	Description	Remark
ServiceType	OCTET STRING	NONE DATA IPTV MANAGEMENT VOIP	Service type	-
UpAssuredRateLimit	OCTET STRING	Size (20)	Uplink bandwidth profile name	Optional <ul style="list-style-type: none"> <li>◆ Corresponds to the uplink bandwidth profile in the VEIP data service configuration.</li> <li>◆ The profile ID is sent here and it will be converted to the profile name on the EMS GUI.</li> </ul>
DownAssuredRateLimit	OCTET STRING	Size (20)	Downlink bandwidth profile name	Optional <ul style="list-style-type: none"> <li>◆ Corresponds to the downlink bandwidth profile in the VEIP data service configuration.</li> <li>◆ The profile ID is sent here and it will be converted to the profile name on the EMS GUI.</li> </ul>

Parameter	Data Type	Value Range	Description	Remark
ServiceModel-Profile	OCTET STRING	Size (20)	Service model profile name	(Required) You need to bind the service model profile (SERVICEPROFILE).
GEMPORT	INTEGER	1 to 4095	<p>When the service configuration of the VEIP port is issued via TL1, you need to ascertain whether to configure the new or old protocol for issuing VEIP data services based on the device capability.</p> <ul style="list-style-type: none"> <li>◆ When the old protocol is issued, the parameter "GEMPORT" needs not to be issued via TL1.</li> <li>◆ When the new protocol is issued, the value of "GEMPORT" (entered by the user) is issued via TL1. If the user does not enter a value for "GEMPORT", the default value is issued.</li> </ul>	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the VEIP data service at port 1 of the ONU with the LOID "test123" connected to PON port 1 in slot 7 of the OLT equipment whose IP address is 10.171.0.31.

◆ Command issued

```
CFG-VEIPSERVICE::OLTID=10.171.0.31,PONID=NA-NA-7-1,ONUIDTYPE=LOID,
ONUID=test123,ONUPORT=NA-NA-NA-1:CTAG::ServiceId=1,CVLANID=500,CCOS=0,
UpAssuredRateLimit=111,DownAssuredRateLimit=222,
ServiceModelProfile=666,ServiceType=VOIP;
```

#### ◆ Response message

```
FH_10.98.100.16 2019-06-13 15:50:15
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

#### Related Command

None

## 5.2.14 Modifying a VEIP Data Service (DEL-VEIPSERVICE)

#### Function Description

This command is used to modify a VEIP data service at a LAN port.

#### Command Format

```
MODIFY-VEIPSERVICE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG,ONUPORT=onu-portid:CTAG::
[ServiceId=1][,CVLANID=cvlan-id][,CCOS=ccos][,TVLANID=tvlan][,
TCOS=tcos][,ServiceType=service-type][,UpAssuredRateLimit=xxx][,
DownAssuredRateLimit=xxx][,ServiceModelProfile=xxx][,GEMPORT=0];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has no management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for the OLT or the ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack-shelf-slot- PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ServiceId	INTEGER	-	Sequence number of the service under the port	Required
CVLANID	INTEGER	1 to 4085	CVLAN ID	Optional
UpAssuredRateLimit	OCTET STRING	Size (20)	Uplink bandwidth profile name	Optional
DownAssuredRateLimit	OCTET STRING	Size (20)	Downlink bandwidth profile name	Optional

Parameter	Data Type	Value Range	Description	Remark
ServiceType	OCTET STRING	NONE DATA IPTV MANAGEMENT VOIP	Service type	Optional
GEMPORT	INTEGER	1 to 4095	<p>When the service configuration of the VEIP port is issued via TL1, you need to ascertain whether to configure the new or old protocol for issuing VEIP data services based on the device capability.</p> <ul style="list-style-type: none"> <li>◆ When the old protocol is issued, the parameter "GEMPORT" needs not to be issued via TL1.</li> <li>◆ When the new protocol is issued, the value of "GEMPORT" (entered by the user) is issued via TL1. If the user does not enter a value for "GEMPORT", the default value is issued.</li> </ul>	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify parameters of the VEIP data service at port 1 of the ONU with the LOID "test123" connected to PON port 1 in slot 7 of the OLT equipment whose IP address is 10.171.0.31.

### ◆ Command issued

```
MODIFY-VEIPRATELIMIT::OLTID=10.171.0.31,PONID=NA-NA-7-1,ONUIDTYPE=LOID,  
ONUID=test123,ONUPORT=NA-NA-NA-1:CTAG::CVLANID=500,  
UpAssuredRateLimit=333,DownAssuredRateLimit=444,ServiceType=IPTV;
```

### ◆ Response message

```
FH_10.98.100.16 2019-06-13 15:51:15  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 5.2.15 Unbinding a VEIP Data Service (UNBIND-VEIPSERVICE)

### Function Description

This command is used to unbind a bandwidth template from a VEIP data service on a LAN port.

### Command Format

```
UNBIND-VEIPSERVICE::ONUIP=onu-ip|OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port:CTAG::  
ServiceId=service-id;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for the ONU or OLT that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ServiceId	INTEGER	1 to 16	Sequence number of a service on the port	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Unbind a bandwidth template from a VEIP data service of LAN port 1 on the ONU with the ID 1, which is connected to PON port 5 in slot 4 on the OLT device with the IP address 10.171.0.16.

### ◆ Command issued

```
UNBIND-VEIPSERVICE::OLTID=10.171.0.16,PONID=1-1-4-5,
ONUIDTYPE=ONU_NUMBER,ONUID=1,ONUPORT=NA-NA-NA-1:CTAG::ServiceId=1;
```

### ◆ Response message

```
FH_10.78.20.1202011-02-2114:55:17
M CTAG COMPLD
    EN=0    ENDESC=No error
;
```

## 5.2.16 Deleting a VEIP Data Service (DEL-VEIPSERVICE)

### Function Description

This command is used to delete a VEIP data service configuration of a LAN port.

### Command Format

```
DEL-VEIPSERVICE::ONUIP=onu-ip|OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port,
ServiceId=service-id:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required



Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ServiceId	INTEGER	1 to 16	Sequence number of the service under the port	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete the VEIP data service at port 1 of the ONU with the LOID "test123" connected to PON port 1 in slot 7 of the OLT equipment whose IP address is 10.171.0.31.

### ◆ Command issued

```
DEL-VEIPSERVICE::OLTID=10.171.0.31,PONID=NA-NA-7-1,ONUIDTYPE=LOID,
ONUID=test123,ONUPORT=NA-NA-NA-1:CTAG::ServiceId=1;
```

### ◆ Response message

```
FH_10.98.100.16 2019-06-13 15:55:15
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.2.17 Querying a VEIP Data Service (LST-VEIPSERVICE)

### Function Description

This command is used for querying a VEIP data service.

### Command Format

```
LST-VEIPSERVICE::ONUIP=onu-ip|OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUUPORT=onu-port:CTAG::  
[ServiceId=service-id];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_ NAME, MAC, LOID or ONU_ NUMBER.	Required
ONUUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ServiceId	INTEGER	1 to 16	Sequence number of the service under the port	Optional

### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
ServiceId	INTEGER	1 to 16	Sequence number of the service under the port	Optional
CVLANID	INTEGER	1 to 4085	Inner VLAN	Optional
CCOS	INTEGER	0 to 7	CVLAN priority or COS	Optional
TVLANID	INTEGER	1 to 4085	VLAN translation	Optional
TCOS	INTEGER	0 to 7	Translated VLAN priority or COS	Optional
UpAssuredRateLimit	OCTET STRING	Size (20)	Uplink bandwidth profile name	Optional
DownAssuredRateLimit	OCTET STRING	Size (20)	Downlink bandwidth profile name	Optional
ServiceModelProfile	OCTET STRING	Size (20)	Service model profile name	Required
ServiceType	OCTET STRING	NONE DATA IPTV MANAGEMENT VOIP	Service type	Optional
GEMPORT	INTEGER	0 to 4095	-	Optional

## Example

Query the VEIP data service at port 5 of the ONU with the MAC address FHTT92f44368 connected to PON port 9 in slot 12 of the OLT equipment whose IP address is 10.171.0.106.

## ◆ Command issued

```
LST-VEIPSERVICE::OLTID=10.171.0.106,PONID=NA-NA-12-9,ONUIDTYPE=MAC,
ONUID=FHTT92f44368,ONUPORT=NA-NA-12-5:CTAG::[ServiceId=service-id];
```

## ◆ Response message

```
FH_10.170.95.55 2019-10-09 12:16:51
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=0
```

List of Onu veip cfg Info

```
-----
```

```

ServiceIdCVLANID CCOSTVLANID TCOSUpAssuredRateLimit
DownAssuredRateLimitServiceModelProfile ServiceTypeGEMPORT
1          500          --          0   111  222  666   VOIP
-----

```

## Related Command

None

## 5.2.18 Configuring Parameters of a Service at an ONU's LAN Port (CFG-LANSERVICEPARAM)

### Function Description

This command is used to configure or modify the three parameters (i.e., auto-negotiation, flow rate and duplex) of a service at a LAN port when the OLT uses a core switch card with the version 4.0 or later.

### Command Format

```

CFG-LANSERVICEPARAM::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port:CTAG::
[AUNEGO=AUGEO,SPEED=speed,DUPLEX=duplex];

```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPOINT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
AUNEGO	INTEGER	0 or 1	The auto-negotiation field: ◆ 0: disable ◆ 1: enable	Optional
SPEED	INTEGER	0 to 3	0: 10M 1: 100M 2: 1000M 3: 10000M	Optional ◆ It is unavailable when auto-negotiation is enabled. The default setting for a GE port is 1000M, and that for an FE port is 100M. ◆ The default setting for a 10GE port is 10000M.
DUPLEX	INTEGER	0 or 1	0: half duplex 1: full duplex	(Optional) It is unavailable when auto-negotiation is enabled.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure parameters of the service at port 1 of ONU 1 connected to PON port 1 in slot 12 of the OLT equipment whose IP address is 10.171.0.106.

### ◆ Command issued

```
CFG-LANSERVICEPARAM::OLTID=10.171.0.106,PONID=NA-NA-12-1,  
ONUIDTYPE=ONU_NUMBER,ONUID=1,ONUPORT=NA-NA-NA-1:CTAG::AUNEGO=enable,  
SPEED=10M,DUPLEX=half;
```

### ◆ Response message

```
FH_10.168.20.45 2019-01-09 17:07:14  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 5.2.19 Querying Parameters of a Service at an ONU's LAN Port (LST-LANSERVICEPARAM)

### Function Description

This command is used to query the three parameters (i.e., auto-negotiation, flow rate and duplex) of a service at a LAN port when the OLT uses a core switch card with the version 4.0 or later.

### Command Format

```
LST-LANSERVICEPARAM::OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index[,ONUPORT=onu-port]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address	Required
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	This item is optional when the ONU-related field of the input parameter is null; otherwise, it is required.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack-shelf-slot-PON port number	PON port location information. Locate a port through the information <b>rack-shelf-slot-PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying an ONU connected to a PON port. The value can be ONU_NAME, MAC, LOID or ONU_NUMBER.

Parameter	Data Type	Value Range	Description
ONUPORT	OCTET STRING	Size (128) Rack-shelf-slot-port number	Locate a card port through the information <b>rack-shelf-slot-port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
AUNEGO	OCTET STRING	0 or 1	The auto-negotiation field: ◆ 0: disable ◆ 1: enable
SPEED	OCTET STRING	0 to 3	◆ 0: 10M ◆ 1: 100M ◆ 2: 1000M ◆ 3: 10000M
DUPLEX	OCTET STRING	0 or 1	0: half duplex 1: full duplex

## Example

Query parameters of the service at port 1 of ONU 1 connected to PON port 1 in slot 12 of the OLT equipment whose IP address is 10.171.0.106.

### ◆ Command issued

```
LST-LANSERVICEPARAM::OLTID=10.171.0.106,PONID=NA-NA-12-1,
ONUIDTYPE=ONU_NUMBER,ONUID=1,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.168.20.45 2019-01-09 17:13:03
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
Lan Port info
```

```
-----
OLTID   PONID   ONUID   ONUPORT  AUNEGO   SPEED   DUPLEX
10.171.0.106 1-1-12-1 1    NA-NA-NA-1 enable 100M   Half
-----
```

## Related Command

None



## 5.2.20 Setting the Port Loop Detection Status (SET-LOOPDETECT)

### Function Description

This command is used to set the port loop detection status.

### Command Format

```
SET-LOOPDETECT::OLTID=olt-name,PONID=ponport_location,ONUIDENTYPE=onuid-  
type,ONUID=onu-index,ONUPORT=onu-port:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required

Parameter	Data Type	Value Range	Description	Remark
STATUS	INTEGER	0: deactivate 1: activate	Indicates whether the loop detection is enabled.	Required
TIMEINTER-VAL	INTEGER	-	Time interval for loop detection (unit: second)	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Set the loop detection status for voice port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 5 of the OLT whose IP address is 10.171.0.16. The information of the ONU is as follows: ONUID is 54-4b-40-76-6c-28; the authentication mode is MAC.

### ◆ Command issued

```
AUTOACTIVE-ONUVOICE::OLTID=10.171.0.16,PONID=NA-NA-5-1,ONUIDTYPE=MAC,  
ONUID=54-4b-40-76-6c-28,ONUPORT=NA-NA-NA-1:CTAG::SVLAN=3900,CVLAN=2500;
```

### ◆ Response message

```
FH_10.170.162.31 2018-05-29 14:05:26  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 5.2.21 Querying the Loop Detection Result (LST-LOOPDETECT)

### Function Description

This command is used to query the ONU status data, i.e., the test status of the port loop detection.

### Command Format

```
LST-LOOPDETECT::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-  
type,ONUID=onu-index,ONUPORT=onu-port:CTAG::;
```

### Input Parameter

Name	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Optional

Name	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUPORT	OCTET STRING	Size (128)	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter NA if the corresponding information is not specified.
STATUS	OCTET STRING	ENABLE DISABLE	Indicates whether the loop detection is enabled.
TIMEINTERVAL	INTEGER	10 to 3600	Time interval for loop detection (unit: second)

## Related Command

None

# 5.3 Broadband / IPTV Services of an xDSL Port

The following introduces how to configure the broadband / IPTV services of an xDSL port.

### 5.3.1 Activating a DSL Port (ACT-DSLPORT)

#### Function Description

This command is used for activating a DSL port.

#### Command Format

```
ACT-DSLPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

#### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-15, AN5006-16, AN5006-20.

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Activate DSL port 1 in slot 3 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
ACT-DSLPORT::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-22 17:13:17
M CTAG COMPLD
  EN=0   ENDESC=No error
;
```

## Related Command

```
DACT-DSLPORT
```

## 5.3.2 Deactivating a DSL Port (DACT-DSLPORT)

### Function Description

This command is used for deactivating a DSL port.

### Command Format

```
DACT-DSLPORT::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-15, AN5006-16, AN5006-20.

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Deactivate DSL port 1 in slot 3 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
DACT-DSLPORT::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-22 17:14:19
```

```
M CTAG COMPLD
```

```
EN=0 ENDESC=No error
```

```
;
```

## Related Command

```
ACT-DSLPORT
```



### 5.3.3 Configuring the Bandwidth of a DSL Port (CFG-DSLPORTBW)

#### Function Description

This command is used for configuring the bandwidth of a DSL port.



#### Note:

Before using the command, ensure the ONU is bound with the DSL line template and the bandwidth template is correctly configured.

#### Command Format

```
CFG-DSLPORTBW::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::
BW=bandwidth;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONU-PORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Optional for the MSAN public platform card
BW	OCTET STRING	Size (32)	Name of the bandwidth template that sets the uplink / downlink bandwidth	Required

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the bandwidth of DSL port 2 of the ONU with MAC address being FHTT92f44368. The ONU is connection to PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
CFG-DSLPORTBW::OLTID=10.171.0.106,PONID=NA-NA-12-9,ONUIDTYPE=MAC,
ONUID=FHTT92f44368,ONUPORT=NA-NA-12-2:CTAG::BW=test1width;
```

### ◆ Response message

```
FH_10.170.95.55 2019-10-09 14:25:48
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

### 5.3.4 Configuring the VLAN of a DSL Port (CFG-DSLPORTVLAN)

#### Function Description

This command is used for configuring the VLAN information of a DSL port.

#### Command Format

```
CFG-DSLPORTVLAN::ONUIP=onu-name|OLTID=olt-name[, PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::[VPI=vpi]
[,VCI=vci][,SVLAN=outer vlan],CVLAN=Inner vlan[,UV=user-vlan][,
CVLANMODE=cvlanmode];
```



#### Note:

The CVLANMODE field should be supported when the Oman customized switch is turned on. When the switch is turned off, supporting the CVLANMODE field is not required.

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Optional for the MSAN public platform card
VPI	INTEGER	-	VPI	Optional
VCI	INTEGER	-	VCI	Optional
SVLAN	INTEGER	-	SVLAN	Optional
CVLAN	INTEGER	-	CVLAN	Required
UV	INTEGER	-	Customer VLAN	Optional
SERVICE-TAG	STRING	Size (128)	ServiceID (Malaysia)	Optional
CVLAN-MODE	STRING	1: TAG 2: translation 3: transparent	Oman customized requirement UNM2000 V2R7 1: tag; 2: translation 3: transparent	(Optional) The default value is 3.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Set the VLAN of DSL port 1 of the ONU whose IP address is 10.171.0.47 to 4050.

### ◆ Command issued

```
CFG-DSLPORTVLAN::ONUIP=10.171.0.47,ONUPORT=NA-NA-1-1:CTAG::CVLAN=4050;
```

## ◆ Response message

```

FH_10.170.95.55 2019-10-10 11:03:08
M CTAG COMPLD
  EN=0  ENDESC=No error
;

```

## Related Command

None

### 5.3.5 Deleting the VLAN of a DSL Port (DEL-DSLPORTVLAN)

## Function Description

This command is used for deleting the VLAN information of a DSL port.

## Command Format

```

DEL-DSLPORTVLAN::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::[VPI=vpi]
[,VCI=vci][,SVLAN=outer vlan],CVLAN=Inner vlan[,UV=user-vlan];

```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Optional for the MSAN public platform card
VPI	INTEGER	-	Vpi	Optional
VCI	INTEGER	-	Vci	Optional
UV	INTEGER	-	Customer VLAN.	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete the VLAN information of the DSL port 1 of the ONU whose IP address is 10.171.0.47.

### ◆ Command issued

```
DEL-DSLPORTVLAN::ONUIP=10.171.0.47,ONUPORT=NA-NA-1-1:CTAG::CVLAN=4050;
```

### ◆ Response message

```
FH_10.170.95.55 2019-10-10 11:04:24
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

### 5.3.6 Adding a Multicast User for a DSL Port (ADD-DSLIPVPORT)

#### Function Description

This command is used for adding a multicast user for a DSL port.

#### Command Format

```
ADD-DSLIPVPORT::ONUIP=onu-name|OLTID=olt-name[, PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::
[UV=uservlan][VPI=vpi][,VCI=vci][,MVLAN=mvlan];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address; optional for the MSAN public platform card
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address; optional for the MSAN public platform card

Parameter	Data Type	Value Range	Description	Remark
ONU-PORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required for an ONU that has no management IP address; optional for the MSAN public platform card
VPI	INTEGER	-	Vpi	Optional
VCI	INTEGER	-	Vci	Optional
UV	INTEGER	0 to 4085	Customer VLAN	Optional. It is required for the VDSL working in VDSL mode.
MVLAN	INTEGER	Size (32)	Associated multicast VLAN	Required. Specified multicast VLAN for service provisioning.
SERVICE-TAG	STRING	Size (128)	ServiceID (Malaysia)	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Add a multicast user for DSL port 3 of the ONU whose IP address is 10.190.47.236.

### ◆ Command issued

```
ADD-DSLIP-TVPORT::ONU-IP=10.190.47.236,ONU-PORT=NA-NA-6-3:CTAG::MVLAN=500;
```

### ◆ Response message

```
FH_10.170.95.55 2019-10-10 10:51:48
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```



## Related Command

None

### 5.3.7 Deleting a Multicast User of a DSL Port (DEL-DSL IPTVPORT)

## Function Description

This command is used for deleting the multicast service of a DSL port.

## Command Format

```
DEL-DSL IPTVPORT::ONUIP=onu-name|OLTID=olt-name[, PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::[VPI=vpi]
[,VCI=vci][UV=user vlan][,MVLAN=mvlan];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONU-PORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
VPI	INTEGER	-	Vpi	Optional. It is required for ADSL or VDSL working in ADSL mode.
VCI	INTEGER	-	Vci	Optional. It is required for the ADSL or the VDSL working in ADSL mode.
UV	INTEGER	0 to 4085	User-side VLAN	Optional. It is required for the VDSL working in VDSL mode.
MVLAN	INTEGER	Size (32)	Associated multicast VLAN	Optional (specified multicast VLAN for service provisioning)

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete the multicast service of DSL port 1 in slot 3 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
DEL-DSL IPTVPORT::ONU IP=10.250.18.121,ONU PORT=NA-NA-3-1:CTAG::VPI=0,
VCI=35,UV=100,MVLAN=88;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-22 18:17:31
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

ADD-DSL IPTVPORT

### 5.3.8 Configuring the DSL Port Parameters (CFG-DSL IPTVPORT)

## Function Description

This command is used for configuring the IPTV service of a DSL port.

## Command Format

```
CFG-DSL IPTVPORT::ONU IP=onu-name|OLTID=olt-name[, PONID=ponport_location,
ONU IDTYPE=onuid-type, ONU ID=onu-index], ONU PORT=onu-port:CTAG::[, UV=uv][,
FLMODE][, MAXGRP=Max-group-number];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONU IP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONU ID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONU ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONU-PORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
UV	INTEGER	-	Port signaling VLAN	Optional. Applicable to the MSAN card port parameter protocol. The default value is 0.
FLMODE	OCTET STRING	Size (32)	Fast leave mode: Enabled Disabled	Optional
MAXGRP	INTEGER	-	Maximum number of multicast programs that a port can join simultaneously.	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the IPTV service of DSL port 1 in slot 3 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
CFG-DSL IPTVPORT::ONUIP=10.250.18.121,ONU-PORT=NA-NA-3-1:CTAG::
FLMODE=Enabled,MAXGRP=20;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-22 18:17:31
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

```
DEL-DSLIP TVPORT
ADD-DSLIP TVPORT
```

## 5.3.9 Resetting the DSL Port (REST-DSLPORT)

### Function Description

This command is used to reset the DSL port.

### Command Format

```
REST-DSLPORT::OLTID=olt_name,PONID=ponport_locationREST-DSLPORT:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

None

### Example

Reset PON port 2 in slot 11 of the OLT whose IP address is 10.182.1.105.

◆ Command issued

```
REST-DSLPORT::OLTID=10.182.1.105,PONID=NA-NA-11-02:CTAG::;
```

## ◆ Response message

```
FH_10.170.110.27 2019-01-08 07:07:14
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 5.3.10 Modifying the DSL Line Template Bound with a Port (CHG-PORT-TEMPLATE)

## Function Description

This command is used to modify the DSL line template bound with a port.

## Command Format

```
CHG-PORT-TEMPLATE::ONUIP=onu-name| [OLTID=olt-name,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index],
ONUPORT=onu-port:CTAG::TEMPLATENAME=template-name;
```

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the DSL line template bound with the DSL port connected to PON port 1 in slot 7 of the OLT whose IP address is 10.190.47.236.

## ◆ Command issued

```
CHG-PORT-TEMPLATE::OLTID=10.190.47.236,PONID=NA-NA-7-1:CTAG::
TEMPLATENAME=adsl;
```

## ◆ Response message

```

FH_10.170.95.55 2019-10-10 11:12:41
M CTAG COMPLD
  EN=0  ENDESC=No error
;

```

### Related Command

None

## 5.4 VoIP Service

The following introduces how to activate / deactivate a VoIP port, and configure / delete the voice service of the VoIP port.

### 5.4.1 Activating a VoIP Port (ACT-VOIPPORT)

#### Function Description

The command is used for activating a VoIP port.

#### Command Format

```

ACT-VOIPPORT::ONUIP=onu-name|[OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;

```

#### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPOINT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Activate voice port 1 of the ONU (that has no management IP address) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is 54-4B-40-04-2C-1E; the authentication mode is MAC.

### ◆ Command issued

```
ACT-VOIPPORT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1E,ONUPOINT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message



```
FH_10.78.20.120 2011-02-21 18:09:11
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

Example 2: Activate POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
ACT-VOIPPORT::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

◆ **Response message**

```
FH_10.78.20.120 2011-02-21 19:01:47
M CATG COMPLD
  EN=0  ENDESC=No error
;
```

### Related Command

```
DACT-VOIPPORT
```

## 5.4.2 Deactivating a VoIP Port (DACT-VOIPPORT)

### Function Description

The command is used for deactivating a VoIP port.

### Command Format

```
DACT-VOIPPORT::ONUIP=onu-name| [OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index],ONUPORT=onu-port:CTAG::;
```

### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONU-PORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Deactivate voice port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is 54-4B-40-04-2C-1E; the authentication mode is MAC.

◆ Command issued

```
DACT-VOIPPORT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,  
ONUID=54-4B-40-04-2C-1E,ONUPORT=NA-NA-NA-1:CTAG::;
```

◆ Response message

```
FH_10.78.20.120 2011-02-21 18:11:12  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

Example 2: Deactivate POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ Command issued

```
DACT-VOIPPORT::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

◆ Response message

```
FH_10.78.20.120 2011-02-21 19:01:57  
M CATG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

```
ACT-VOIPPORT
```

## 5.4.3 Configuring the Voice Service of a VoIP Port (CFG-VOIPSERVICE)

### Function Description

The command is used for configuring the voice service of a VoIP port.

## Command Format

```
CFG-VOIPSERVICE::ONUIP=onu-name| [OLTID=olt-name, PONID=ponport_location,
ONUIDTYPE=onuid-type, ONUID=onu-index], ONUPORT=onu-port:CTAG::
[PHONENUMBER=phone number] [, PT=protocol type] [, SLVAN=voip outer vlan] [,
VOIPVLAN=voip inner vlan] [, SCOS=outer qos] [, CCOS=inner qos] [, EID=equipment
id] [TID=Terminal-ID] [SIPREGDM=sip register domain] [, SIPUSERNAME=sip user
name] [, SIPUSERPWD=sip user password] [MGCIP1=active bac ip] [, MGCIP2=standby
bac ip] [, IPMODE=ip mode] [, IP=ip address, IPMASK=ip mask, IPGATEWAY=ip
gateway] [, PPPOEUSER=pppoe user, PPPOEPWD=pppoe password],
VOICECODEC=voice;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

Parameter	Data Type	Value Range	Description	Remark
PHONE- NUM BER	OCTET STRING	Size (1 to 32)	Telephone number	Optional. It is required for the SIP protocol.
PT	OCTET STRING	Size (1 to 32)	Voice protocol type (H.248, SIP)	Required
EID	OCTET STRING	Size (1 to 64)	MG gateway domain name in the H248 configuration	Optional. It is required for the H248 protocol.
TID	OCTET STRING	Size (1 to 64)	H248 user terminal identifier	Optional. It is required for the H248 protocol.
SIPREGDM	OCTET STRING	Size (1 to 32)	SIP register server	Optional
SIPUSER- NAME	OCTET STRING	Size (1 to 32)	Username corresponding to the SIP user port	Optional. It is required for the SIP protocol.
SIPU- SERPWD	OCTET STRING	Size (1 to 32)	Password corresponding to the SIP user port	Optional. It is required for the SIP protocol.
SVLAN	INTEGER	-	Outer VLAN of the voice service	Optional. Indicates the outer VLAN of the stacked VLAN in the FTTH scenario.
VOIPVLAN	INTEGER	-	Inner VLAN of the voice service	Optional. It is required for the FTTH scenario.
IPMODE	OCTET STRING	Size (1 to 32)	IP obtaining mode: DHCP, PPPOE and STATIC	Optional
IP	OCTET STRING	Size (1 to 32)	IP address	Optional. It is required for static allocation.
IPMASK	OCTET STRING	Size (1 to 32)	IP address mask	Optional. It is required for static allocation.
IPGATE- WAY	OCTET STRING	Size (1 to 32)	Gateway address	Optional. It is required for static allocation.
PPPOEU- SER	OCTET STRING	Size (1 to 32)	PPPOE username	Optional. It is required when the PPPOE mode is applied.
PPPOEPW- D	OCTET STRING	Size (1 to 32)	PPPOE password	Optional. It is required when the PPPOE mode is applied.
SCOS	INTEGER	1 to 7	Outer service priority	Optional
CCOS	INTEGER	0 to 7	Inner service priority	Optional
MGCIP1	OCTET STRING	Size (32)	IP address of the active softswitch	Optional
MGCIP2	OCTET STRING	Size (32)	IP address of the standby softswitch	Optional

Parameter	Data Type	Value Range	Description	Remark
VOICECO-DEC	OCTET STRING	Size (128) G.711U, G.711A, G.723 and G.729	Speech encoding protocol	Optional (Brazil)
DTMFMO-DE	INTEGER	0 to 2	DTMF mode 0: transparent transmission 1: RFC2833	Optional (Chile)
USERIN-DEX	INTEGER	1 to 4294967294	-	Added and optional
SIPPRO-FILE	OCTET STRING	Size (30)	SIP server template name	Added and optional (Thailand)

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

### ◆ Command issued

```
CFG-VOIPSERVICE::OLTID=172.16.84.58,PONID=NA-NA-5-14,ONUIDTYPE=MAC,
ONUID=FHTT02CEE2B0,ONUPORT=NA-NA-NA-1:768350::PHONENUMBER=8821444681,
PT=SIP,SIPREGDM=brisanet.net,SIPUSERNAME=8821444681,
SIPUSERPWD=yrbdlxliimia,IPMODE=DHCP,CCOS=3,VOIPVLAN=2708,SIPPROXY-
SERVER=Voip;
```

### ◆ Response message

```
FH_10.98.100.16 2019-06-12 15:45:15
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.4.4 Deleting the Voice Service of a VoIP Port (DEL-VOIPSERVICE)

### Function Description

The command is used for deleting the voice service of a VoIP port.

### Command Format

```
DEL-VOIPSERVICE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuidtype,ONUID=onu-index,ONUPORT=onu-port:CTAG::;
```

### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required

### Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Delete the voice service of voice port 1 of the ONU (having no management IP address) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is 54-4B-40-04-2C-1E; the authentication mode is MAC.

### ◆ Command issued

```
DEL-VOIPSERVICE::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=MAC,
ONUID=54-4B-40-04-2C-1E,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-21 19:06:14
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

Example 2: Delete the voice service of POTS port 4 in slot 1 of the ONU (having a management IP address) whose IP address is 10.78.11.115.

### ◆ Command issued

```
DEL-VOIPSERVICE::ONUIP=10.78.11.115,ONUPORT=NA-NA-1-4:CTAG::PT=H.248,
VOIPVLAN=3111,CCOS=0,EID=AAA,TID=12365478;
```

### ◆ Response message

```
FH_10.78.20.120 2011-02-22 19:08:09
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

```
ACT-VOIPPORT
CFG-VOIPSERVICE
```



## 5.4.5 Configuring the NGN Uplink Interface (SET-NGN-UPLINK)

### Function Description

This command is used for configuring the NGN uplink interface parameters, including the uplink MGC and SIP server information.

### Command Format

The command format for the ANM2000 is as follows:

```
SET-NGN-UPLINK::OLTID=device-ID:CTAG::SVCNAME=servicename|
SVCVLAN=servicevlan,NGNPROTOCOL=ngn_protocol[,
MASTERDNS=master_dns_ipaddress][,SLAVEDNS=slave_dns_ipaddress][,
DHCP=dhcp],SIPREGSERVER=sip_registerar_server_ipaddress,
SIPREGPORT=sip_registerar_server_port,SIPPROSERVER=sip_proxy_server-
ipaddress,SIPPROPORT=sip_proxy_server_port,SIPEXP=sip_expires,
STATUS=enable;
```

The command format for the UNM2000 is as follows:

```
SET-NGN-UPLINK::OLTID=device-ID:CTAG::SVCNAME=servicename,
NGNPROTOCOL=ngn_protocol,[MGCIP1=mgcip1,MGCIP1PORT=mgcip1port][,
MGCIP2=mgcip2,MGCIP2PORT=mgcip2port][,MASTERDNS=master_dns_ipaddress][,
SLAVEDNS=slave_dns_ipaddress][,DHCP=dhcp][,
SIPREGSERVER=sip_registerar_server_ipaddress,
SIPREGPORT=sip_registerar_server_port,SIPPROSERVER=sip_proxy_server-
ipaddress,SIPPROPORT=sip_proxy_server_port,SIPEXP=sip_expires],
STATUS=status;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
SVCNAME	STRING	Size (0 to 30)	Signaling service name	Required
SVCVLAN	INTEGER	0 to 4085	When it is used, the EMS matches it from the existing local VLANs.	-
NGNPROTO-COL	INTEGER	0: MGCP 1: H.248 2: SIP	NGN uplink protocol	-

Parameter	Data Type	Value Range	Description	Remark
MASTERDNS	OCTET STRING	1 to 65535 (sample:lefefefe)	Active DNS server	-
SLAVEDNS	OCTET STRING	1 to 65535 (sample:lefefefe)	Standby DNS server	-
DHCP	INTEGER	0 or 1	A switch to enable DHCP	-
SIPREGSERVER	STRING	Size (0 to 64)	SIP register server address	-
SIPREGPORT	INTEGER	1 to 65535	SIP register server port	-
SIPPROSERVER	STRING	Size (0 to 64)	SIP proxy server address	-
SIPPROPORT	INTEGER	1 to 65535	SIP proxy server port	-
SIPEXP	INTEGER	1 to 4294967294	SIP protocol timeout	-
STATUS	INTEGER	1: create 2: delete	1: create 2: delete	-
MGCIP1	OCTET STRING	Size (64)	MGC1 IP address / standby SIP registrar server address	-
MGCIP1PORT	INTEGER	1024 to 65535	MGC1 port No. / standby SIP registrar server port No.	-
MGCIP2	OCTET STRING	Size (64)	MGC2 IP address / standby SIP proxy server address	-
MGCIP2PORT	INTEGER	1024 to 65535	MGC2 port No. / standby SIP proxy server port No.	-

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

For example, configure the NGN uplink interface parameters of the OLT whose IP address is 10.78.200.200 (The ONU has no management IP address).

◆ Command issued

```
SET-NGN-UPLINK::OLTID=10.78.200.200:CTAG::SVCNAME=xx,NGNPROTOCOL=2,
MGCIP1=1.1.1.5,MGCIP1PORT=5060,MGCIP2=5.3.6.2,MGCIP2PORT=5060,
MASTERDNS=1.1.1.1,SLAVEDNS=2.6.6.2,DHCP=1,SIPREGSERVER=2.2.2.2,
SIPREGPORT=2222,SIPPROSERVER=3.3.3.3,SIPPROPORT=5060,SIPEXP=3600,
STATUS=2;
```

◆ **Response message**

```
FH_10.78.12.155 2014-07-16 14:00:31
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

### Related Command

None

## 5.4.6 Modifying the Voice Code of a VOIP Port (MODIFY-ONUVOIPSERVICE)

### Function Description

This command is used to modify the voice code of a VOIP port voice service.

### Command Format

```
MODIFY-ONUVOIPSERVICE::ONUIP=onu-ip|OLTID=olt-name,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index,
ONUPORT=onu-port:CTAG::VOICECODEC=voice;
```

### Supported Device

- ◆ OLT: AN5116 series, AN5516 series.
- ◆ ONU: HG260, AN5506-04-F1.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
VOICECODEC	OCTET STRING	Size (128) G.711U G.711A G.723 G.729	Speech encoding protocol	(Optional) The default setting is G.711A. Enter the corresponding voice encoding protocol name directly to modify the setting.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example1: Modify the voice code of a voice service on voice port 1 of the ONU (having no management IP address) with the ID FHTT03317f00, which is connected to PON port 1 in slot 6 of the OLT with the IP address 110.190.47.223. The ONU authentication mode is MAC.

### ◆ Command issued

```
MODIFY-ONUVOIPSERVICE::OLTID=10.190.47.223,PONID=NA-NA-6-1,  
ONUIDENTYPE=MAC,ONUID=FHTT03317f00,ONUPORT=NA-NA-NA-1:CTAG::  
VOICECODEC=G.729;
```

### ◆ Response message

```
FH_10.170.162.232017-02-1514:34:14  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## 5.4.7 Modifying the CVLAN Configured for the ONU Voice VLAN

### Function Description

This command is used to modify the CVLAN configured for the ONU voice VLAN.

### Command Format

```
MODIFY-ONUVOICEVLAN::OLTID=olt_name,PONID=ponport_location,  
ONUIDENTYPE=id-type,ONUID=onu_index,CVLAN-cvlan:CTAG::;
```

## Input Parameter

Parameter (Recommended)	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
CVLAN	INTEGER	1 to 4085	ONU-side CVLAN	Required

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the CVLAN of the voice VLAN configuration of the ONU with MAC address being FHTT92f44368 to 100. The ONU is connected to PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
MODIFY-ONUVOICEVLAN::OLTID=10.171.0.106,PONID=NA-NA-12-9,ONUIDTYPE=MAC,
ONUID=FHTT92f44368,CVLAN=100:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.55 2019-10-09 16:45:22
M CTAG COMPLD
```

```
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.4.8 Modifying the ONU Voice Service Parameters (MODIFY-ONUVOICESERVICEPARAM)

### Function Description

This command is used to modify the ONU voice port service parameters.

### Command Format

```
MODIFY-ONUVOICESERVICEPARAM::ONUIP=onu-name|OLTID=olt-name[,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index],
ONUPORT=onu-port:CTAG::[VoiceCodeMode=voidcodemode][,FaxMode=faxmode][,
SlienceSwitch=slienceswitch][,EchoCancel=echocancel][,
InputGain=inputgain][,OutputGain=outputgain][,DTMFMode=dtmfmode];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
VoiceCode-Mode	OCTET STRING	G.711U, G.711A, G.723 and G.729	Speech encoding	Optional
FaxMode	OCTET STRING	Transparent, T.38	Fax mode	Optional
SlenceS-witch	OCTET STRING	enable disabled	Mute switch	Optional
EchoCancel	OCTET STRING	enable disabled	Echo suppression	Optional
InputGain (DB)	INTEGER	-	Output gain	Optional
OutputGain (DB)	INTEGER	-	Input gain	Optional
DTMFMode	OCTET STRING	Transparent, RFC2833	DTMF mode	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None



## Example

Modify the service parameters of voice port 1 of the ONU with MAC address being FHTT10988618. The ONU is connected to PON port 6 in slot 7 of the OLT whose IP address is 10.190.40.156.

### ◆ Command issued

```
MODIFY-ONUVOIPSERVICE::OLTID=10.190.40.156,PONID=NA-NA-7-6,
ONUIDTYPE=MAC,ONUID=FHTT10988618,ONUPORT=NA-NA-NA-1:CTAG::
VOICECODEC=G.711A;
```

### ◆ Response message

```
FH_10.98.100.16 2019-06-12 14:31:15
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.4.9 Modifying the Voice Service of a VoIP Port (MODIFY-VOIPSERVICE)

### Function Description

The command is used for configuring the voice service of a VoIP port (Oman customized requirement, UNM2000V2R7).

### Command Format

```
MODIFY-VOIPSERVICE::ONUIP=onu-name| [OLTID=olt-name,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index],
ONUPORT=onu-port:CTAG:: [PHONENUMBER=phone number] [, PT=protocol type] [,
SLVAN=voip outer vlan] [, VOIPVLAN=voip inner vlan] [, SCOS=outer qos] [,
CCOS=inner qos] [, EID=equipment id] [TID=Terminal-ID] [SIPREGDM=sip register
domain] [, SIPUSERNAME=sip user name] [, SIPUSERPWD=sip user password]
[MGCIP1=active bac ip] [, MGCIP2=standby bac ip] [, IPMODE=ip mode] [, IP=ip
address, IPMASK=ip mask, IPGATEWAY=ip gateway] [, PPPOEUSER=pppoe user,
PPPOEPWD=pppoe password], VOICECODEC=voice;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
PHONE-NUMBER	OCTET STRING	Size (1 to 32)	Telephone number	Optional. It is required for the SIP protocol.
PT	OCTET STRING	Size (1 to 32)	Voice protocol type (H.248, SIP)	Optional
EID	OCTET STRING	Size (1 to 64)	MG gateway domain name in the H248 configuration	Optional. It is required for the H248 protocol.
TID	OCTET STRING	Size (1 to 64)	H248 user terminal identifier	Optional. It is required for the H248 protocol.
SIPREGDM	OCTET STRING	Size (1 to 32)	SIP register server	Optional

Parameter	Data Type	Value Range	Description	Remark
SIPUSER-NAME	OCTET STRING	Size (1 to 32)	Username corresponding to the SIP user port	Optional. It is required for the SIP protocol.
SIPUSERPWD	OCTET STRING	Size (1 to 32)	Password corresponding to the SIP user port	Optional. It is required for the SIP protocol.
SVLAN	INTEGER	0 to 4095	Outer VLAN of the voice service	Optional. Indicates the outer VLAN of the stacked VLAN in the FTTH scenario.
VOIPVLAN	INTEGER	0 to 4095	Inner VLAN of the voice service	Optional. It is required for the FTTH scenario.
IPMODE	OCTET STRING	Size (1 to 32)	IP obtaining mode: DHCP, PPPOE, STATIC	Optional
IP	OCTET STRING	Size (1 to 32)	IP address	Optional. It is required for static allocation.
IPMASK	OCTET STRING	Size (1 to 32)	IP address mask	Optional. It is required for static allocation.
IPGATEWAY	OCTET STRING	Size (1 to 32)	Gateway address	Optional. It is required for static allocation.
PPPOEUSER	OCTET STRING	Size (1 to 32)	PPPOE username	Optional. It is required when the PPPOE mode is applied.
PPPOEPWD	OCTET STRING	Size (1 to 32)	PPPOE password	Optional. It is required when the PPPOE mode is applied.
SCOS	INTEGER	-	Outer service priority	Optional
CCOS	INTEGER	-	Inner service priority	Optional
MGCIP1	OCTET STRING	Size (32)	IP address of the active softswitch	Optional
MGCIP2	OCTET STRING	Size (32)	IP address of the standby softswitch	Optional
VOICECODEC	OCTET STRING	Size (128) G.711U, G.711A, G.723, G.729 and G.722	Speech encoding protocol	Optional (Brazil)
DTMFMODE	INTEGER	-	DTMF mode ◆ 0: transparent transmission ◆ 1: RFC2833	Optional (Chile)
USERINDEX	INTEGER	1 to 4294967294	-	Added and optional (Henan)
SIPPROFILE	OCTET STRING	Size (30)	SIP server template name	Added and optional (Thailand)

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the VoIP voice service on port 1 of the ONU with LOID being rliulogi1. The ONU is connected to PON port 1 in slot 6 of the OLT whose IP address is 10.171.0.28.

### ◆ Command issued

```
CFG-VOIPSERVICE::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=LOID,  
ONUID=rliulogi1,ONUPORT=NA-NA-NA-1:CTAG::PT=H.248,VOIPVLAN=3997,CCOS=0,  
EID=eid,TID=tid1,IPMODE=DHCP,MGCIP1=1.1.1.254;
```

### ◆ Response message

```
FH_10.98.100.16 2019-06-10 12:51:16  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 5.4.10 Configuring the SIP User Calling Configuration Template (CFG-SIPUSERCONFIGPROFILE)

### Function Description

This command is used to configure the SIP user calling configuration template bound with the voice port of the ONU.

## Command Format

```
CFG-SIPUSERCONFIGPROFILE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port:CTAG::
SIPUSERCONFIGPROFILE=SIP User Call Config Profile;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
SIPUSERCONFIGPROFILE	OCTET STRING	Size (128)	Name of the SIP user calling configuration template	Required. When it is empty, it indicates that no template is bound.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Bind the SIP user calling configuration template with port 1 of ONU 4 on PON port 1 in slot 13 of the OLT whose IP address is 10.190.40.44.

### ◆ Command issued

```
CFG-SIPUSERCONFIGPROFILE::OLTID=10.190.40.44,PONID=NA-NA-13-1,  
ONUIDTYPE=onuid-NUMBER,ONUID=4,ONUPORT=NA-NA-NA-1:CTAG::  
SIPUSERCONFIGPROFILE=Default;
```

### ◆ Response message

```
FH_10.98.100.16 2019-06-11 10:51:15  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 5.4.11 Querying the SIP User Calling Configuration Template (LST-SIPUSERCONFIGPROFILE)

### Function Description

This command is used for querying the SIP user calling configuration template bound with the voice port of the ONU.

### Command Format

```
LST-SIPUSERCONFIGPROFILE::OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuid-type,ONUID=onu-index[,ONUPORT=onu-port]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required
ONUIDENT	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.
SIPUSERCON-FIGPROFILE	OCTET STRING	Size (128)	Name of the SIP user calling configuration template

### Example

None

### Related Command

None

## 5.4.12 Configuring the Voice Port Hotline (CFG-VOIPHOTLINE)

### Function Description

This command is used for configuring the ONU voice port hotline.

### Command Format

```
CFG-VOIPHOTLINE::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port:CTAG::HOTLINETYPE=hot linetype[,HOTLINENUMBER=00ab,HOTLINEDELAYTIME=5];
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUIDENTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
HOTLINE-TYPE	INTEGER	The value range is 0 to 2. 0: disable hotline 1: immediate hotline 2: delay hotline	-	Required
HOTLINE-NUMBER	OCTET STRING	Size (128)	Hotline number Only supports 0 to 9, a (or A), b (or B), c (or C), d (or D), *, #. Other characters are illegal.	This parameter is decided by HOTLINETYPE. It is required for delayed hotline and immediate hotline.
HOTLINEDE-LAYTIME	INTEGER	0 to 255	-	This parameter is decided by HOTLINETYPE. It is required for delayed hotline.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Configure the voice port hotline mode to immediate hotline for PON port 1 in slot 13 of the OLT whose IP address is 10.190.40.44.

### ◆ Command issued

```
CFG-VOIPHOTLINE::OLTID=10.190.40.44,PONID=NA-NA-13-1,
ONUIDTYPE=ONU_NUMBER,ONUID=4,ONUPORT=NA-NA-NA-1:CTAG::HOTLINETYPE=1,
HOTLINENUMBER=00ab,HOTLINEDELAYTIME=5;
```

### ◆ Response message

```
FH_127.0.0.1 2019-03-27 14:48:34
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.4.13 Querying the Voice Port Hotline (LST-VOIPHOTLINE)

### Function Description

This command is used for querying the ONU voice port hotline.

### Command Format

```
LST-VOIPHOTLINE::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-
type,ONUID=onu-index[,ONUPORT=onu-port]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPOINT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
ONUPORT	OCTET STRING	Size (128)	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.
HOTLINE-TYPE	INTEGER	The value range is 0 to 2. 0: disable hotline 1: immediate hotline 2: delay hotline	-
HOTLINE-NUMBER	OCTET STRING	Size (128)	Hotline number Only supports 0 to 9, a (or A), b (or B), c (or C), d (or D), *, #. Other characters are illegal.
HOTLINE-DELAY-TIME	INTEGER	0 to 255	-

## Example

Query the hotline configuration of PON port 1 in slot 13 of the OLT whose IP address is 10.190.40.44.

## ◆ Command issued

```
LST-VOIPHOTLINE::OLTID=10.190.40.44,PONID=NA-NA-13-1,
ONUIDTYPE=ONU_NUMBER,ONUID=4,ONUPORT=NA-NA-NA-1:CTAG::;
```

## ◆ Response message

```
FH_127.0.0.1 2019-03-27 14:50:38
M CTAG COMPLD
total_blocks=1
```

```

block_number=1
block_records=1

Voice Port Hotline info
-----
OLTID          PONID    ONUID    ONUPORT    ONUIDTYPE
10.190.40.120  1-1-13-1  4        NA-NA-NA-1  MAC
-----
;

```

#### Related Command

None

## 5.4.14 ONU Port Calling Configurations (CFG-ONUPORTCALL)

#### Function Description

This command is used for configuring the ONU port calling.

#### Command Format

```

CFG-ONUPORTCALL::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-
type,ONUID=onu-index,ONUPORTCALL:CTAG::[CONFIGENABLE=0,
CALLCONFERENCE=0,CALLWAITING=0,REVERSEPOLARITY=1,PBXDIALING=0,
NUMBER=Number for PBX Dialing,SIPNAME=SIP Displayname];

```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONU-PORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.	Required
CONFIGENABLE	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-	Optional
CALLCONFERENCE	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-	Optional
CALLWAITING	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-	Optional
REVERSEPOLARITY	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-	Optional
PBXDIALING	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-	Optional

Parameter	Data Type	Value Range	Description	Remark
NUMBER	OCTET STRING	Size (8)	When <b>PBXDIALING</b> is <b>0</b> , <b>NUMBER</b> is invalid. The character string can only consist of one or more of the twelve characters <b>0 1 2 3 4 5 6 7 8 9 * #</b> . The character string using other characters is invalid and cannot be delivered in the configuration.	Optional
SIPNAME	OCTET STRING	Size (20)	-	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Enable the calling configuration, set PBX dialing number to 1234 and set SIP display name to CC for PON port 1 in slot 7 of the OLT whose IP address is 10.190.40.120.

### ◆ Command issued

```
CFG-ONUPTCALL::OLTID=10.190.40.120,PONID=NA-NA-7-1,ONUDDTYPE=MAC,
ONUDD=FHTT061a14a0,ONUPT=NA-NA-NA-1:CTAG::CONFIGENABLE=0,
CALLCONFERENCE=1,CALLWAITING=0,REVERSEPOLARITY=1,PBXDIALING=1,
NUMBER=1234,SIPNAME=CC;
```

### ◆ Response message

```
FH_127.0.0.1 2019-04-18 09:37:23
M CATG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 5.4.15 Querying the ONU Port Calling Configurations (LST-ONUPORTCALL)

### Function Description

This command is used for querying the ONU port calling configurations.

### Command Format

```
LST-ONUPORTCALL::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-  
type,ONUID=onu-index[,ONU-PORT=onu-port]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address
ONU- ID- TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Required for an ONU that has no management IP address
ONU- ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONU- PORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Optional

### Response Format

It complies with the operation-command response format in [Response Message Format](#).



## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter NA instead.
CONFI-GENABLE	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-
CALLCONFERENCE	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-
CALLWAITING	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-
REVERSE-POLARITY	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-
PBXDIALING	INTEGER	The value range is 0 to 1. 0: disable 1: enable	-
NUMBER	OCTET STRING	Size (8)	When PBXDIALING is 0, NUMBER is invalid. The character string can only consist of one or more of the twelve characters <b>0 1 2 3 4 5 6 7 8 9 * #</b> . The character string using other characters is invalid and cannot be delivered in the configuration.
SIPNAME	OCTET STRING	Size (20)	-

## Example

Enable the calling configuration, set the PBX dialing number to 1234 and SIP display name to CC for PON port 1 in slot 7 of the OLT whose IP address is 10.190.40.120.

### ◆ Command issued

```
LST-ONUPORTCALL::OLTID=10.190.40.120,PONID=NA-NA-7-1,ONUIDTYPE=MAC,
ONUID=FHTT061a14a0,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.1 2019-04-18 09:43:00
```

```
M CATG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_record=1
```

```
ONU Port Call info
```

```
-----
OLTID   PONID   ONUID   ONUPORT   ONUIDTYPE   CONFIGNABLE
CALLCONFERENCE  CALLWAITING  REVERSEPOLARITY  PBXDIALING  NUMBER  SIPNAME
10.190.40.120  1-1-7-1   FHTT061a14a0   NA-NA-NA-1   MAC    0    1    0    1
-----
```

```
;
```

## Related Command

None

## 5.5 VLAN Service

The following introduces how to create and delete the VLAN service.

### 5.5.1 Creating a VLAN (ADD-VLAN)

#### Function Description

This command is used for creating a VLAN.

## Command Format

```
ADD-VLAN::ONUIP=onu-name|OLTID=olt-name:CTAG::VLAN=vlanid[,DESC=vlan-alias],VLANMODE=vlan-type[,PORTLIST=port-list][,MVLANFLAG=mvlan-flag][,MVLANPRI=mvlan-priority][,SERVICE=service];
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-20, AN5006-15.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	In FTTB / FTTN scenario, it is required to create a VLAN on the ONU.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	It is required to create a VLAN on the OLT.
VLAN	INTEGER	0 to 4094	VLANID	Required
DESC	OCTET STRING	Size (128)	VLAN alias	Optional
VLAN-MODE	OCTET STRING	SINGLE QINQ STACKING	VLAN attribute. SINGLE: Switches the outer VLAN tag or adds a VLAN tag to the untagged message in the uplink direction. STACKING: Switches the inner VLAN tag and adds the outer VLAN tag, or adds the outer and inner VLAN tags to the untagged message in the uplink direction. QINQ: Adds a VLAN tag to the message uplinked, mainly for the private line application.	Required
PORTLIST	OCTET STRING	NA-NA-NA-NA	A list of uplink ports that allow the packets with the specified VLAN ID to pass through	Optional. It can be a list of uplink ports, separated by vertical bars, for example, NA-0-19-0 NA-0-19-1 NA-0-20-0.

Parameter	Data Type	Value Range	Description	Remark
MVLAN-FLAG	INTEGER	-	Indicates whether it is a multicast VLAN or non-multicast VLAN.	Optional. The default value is 0. 0: Non-multicast VLAN 1: Multicast VLAN
MVLANPRI	INTEGER	-	Priority of the IGMP message	Optional Default value: 6
SERVICE	OCTET STRING	-	Service type of the VLAN	Optional HSI (Internet access) IPTV (unicast) VOIP (voice) Default value: HSI This parameter can contain the meaning of MVLANFLAG by adding a parameter value to indicate multicast or non-multicast.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Create a VLAN with VLAN ID being 101 and VLANMODE being STACKING for the OLT (the ONU has no management IP address) whose IP address is 10.78.200.200.

### ◆ Command issued

```
ADD-VLAN::OLTID=10.78.200.200:CTAG::VLAN=101,VLANMODE=STACKING,
PORTLIST=NA-NA-19-1;
```

### ◆ Response message

```
FH_10.98.100.16 2014-06-12 15:45:15
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

DEL-VLAN

## 5.5.2 Deleting a VLAN (DEL-VLAN)

### Function Description

This command is used for deleting a VLAN.

### Command Format

DEL-VLAN::ONUIP=onu-name|OLTID=olt-name:CTAG::VLAN=vlanid;

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
VLAN	INTEGER	-	VLANID	Required

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

None

### Example

Delete the VLAN with VLAN ID being 101 of the OLT (the ONU has no management IP address) whose IP address is 10.78.200.200.

#### ◆ Command issued

DEL-VLAN::OLTID=10.78.200.200:CTAG::VLAN=101;

## ◆ Response message

```
FH_10.98.100.16 2014-06-12 16:03:26
M CTAG COMPLD
  EN=0   ENDESC=No error
;
```

## Related Command

```
ADD-VLAN
```

## 5.6 Configuring a Port Speed Rate Template

The following introduces the PORTSPEEDLIMITPROFILE command and example for adding / deleting the port speed limit template.

### 5.6.1 Adding a Port Rate Limiting Template (ADD-PORTSPEEDLIMITPROFILE)

## Function Description

This command is used for adding a port rate limiting template.

## Command Format

```
ADD-PORTSPEEDLIMITPROFILE::ONUIP=onu-name|OLTID=olt-name:CTAG::
PROFILENAME=profile name, [USPOLICINGSTATUS=status,UMABW=uplink maximum
allowed bandwidth,UPCIR=UsPolicingCIR,USCBS=us cbs,USEBS=us ebs,
DSPOLICINGSTATUS=status,SDBW=servicedownlinkbandwidth,
DPCIR=DsPolicingCIR,DSPIR=ds pir];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PROFILENAME	OCTET STRING	Size (128)	Name of the port rate limiting template	Required
USPOLICING-STATUS	INTEGER	0 or 1	Uplink policing status 0: disable 1: enable	Optional
UMABW	INTEGER	0 to 1000000	Maximum service uplink bandwidth	Optional
UPCIR	INTEGER	0 to 1000000 The AN5006-20 / 30: 64 to 1000000	Assured uplink port rate	Optional
USCBS	INTEGER	0 to 4294967294	Uplink committed burst size	Optional
USEBS	INTEGER	0 to 4294967294	Uplink excess burst size	Optional
DSPOLICING-STATUS	INTEGER	0 or 1	Downlink policing status 0: disable 1: enable	Optional
SDBW	INTEGER	0 to 1000000	Service downlink bandwidth	Optional
DPCIR	INTEGER	0 to 1000000 The AN5006-20 / 30: 64 to 1000000	Assured downlink port rate	Optional
DSPIR	INTEGER	0 to 16777215	Downlink peak cell rate	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Add a rate limiting template named as hello for the ONU whose IP address is 10.171.0.38, and set the rate limiting parameters.

### ◆ Command issued

```
ADD-PORTSPEEDLIMITPROFILE::ONUIP=10.171.0.38:CTAG::PROFILENAME=hello,
USPOLICINGSTATUS=1,UPCIR=200,USCBS=111,USEBS=222,DSPOLICINGSTATUS=1,
DPCIR=400,DSPIR=444;
```

## ◆ Response message

```
FH_0.0.0.0 2010-11-04 11:45:19
M CTAG COMPLD
EN=0 ENDESC=No error
```

## Related Command

```
DEL-PORTSPEEDLIMITPROFILE
```

## 5.6.2 Deleting a Port Rate Limiting Template (DEL-PORTSPEEDLIMITPROFILE)

## Function Description

This command is used for deleting a port rate limiting template.

## Command Format

```
DEL-PORTSPEEDLIMITPROFILE::ONUIP=onu-name|OLTID=olt-name:CTAG::
PROFILENAME=profile name;
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-20, AN5006-30.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PROFILE-NAME	OCTET STRING	Size (128)	Name of the port rate limiting template	Required



## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Delete the rate limiting template hello on the ONU whose IP address is 10.171.0.38.

### ◆ Command issued

```
DEL-PORTSPEEDLIMITPROFILE::ONUIP=10.171.0.38:CTAG::PROFILENAME=hello;
```

### ◆ Response message

```
FH_0.0.0.0 2010-11-04 11:45:19
M CTAG COMPLD
EN=0 ENDESC=No error
```

## Related Command

```
ADD-PORTSPEEDLIMITPROFILE
```

# 5.7 Configuring the Bandwidth Profile

The following introduces the command and example for configuring the bandwidth template.

## 5.7.1 Adding a Bandwidth Template (ADD-BWPROFILE)

### Function Description

This command is used for adding a bandwidth template.

### Command Format

```
ADD-BWPROFILE::ONUIP=onu-name|OLTID=olt-name:CTAG::PROFILENAME=profile
name [,UPMGBW=Up MIN Guaranteed Bandwidth,UMABW=uplink maximum allowed
bandwidth, DMGBW=Down MIN Guaranteed Bandwidth,DMABW=Down MAX Allowed
Bandwidth, UFBW=Upstream Fixed Bandwidth];
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-20, AN5006-30.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PROFILE-NAME	OCTET STRING	Size (128)	Name of the bandwidth template	Required
UPMGBW	INTEGER	-	Minimum service uplink bandwidth	Optional
UMABW	INTEGER	-	Maximum service uplink bandwidth	Optional
DMGBW	INTEGER	-	Minimum service downlink bandwidth	Optional
DMABW	INTEGER	-	Maximum service downlink bandwidth	Optional
UFBW	INTEGER	-	Fixed service uplink bandwidth	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Add the bandwidth template for the OLT whose IP address is 10.171.0.33.

**◆ Command issued**

```
ADD-BWPROFILE::OLTID=10.171.0.33:CTAG::PROFILENAME=hello,UPMGBW=100,  
UMABW=11111,DMGBW=2222,DMABW=3333,UFBW=4444;
```

**◆ Response message**

```
FH_0.0.0.0 2010-11-04 11:45:19  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

**Related Command**

```
DEL-BWPROFILE
```

## **5.7.2 Deleting a Bandwidth Template (DEL-BWPROFILE)**

**Function Description**

This command is used for deleting a bandwidth template.

**Command Format**

```
DEL-BWPROFILE::ONUIP=onu-name|OLTID=olt-name:CTAG:: PROFILENAME=profile  
name;
```

**Supported Device**

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-20, AN5006-30.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PROFILE-NAME	OCTET STRING	Size (128)	Name of the bandwidth template	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Delete the bandwidth template on the OLT whose IP address is 10.171.0.33.

### ◆ Command issued

```
DEL-BWPROFILE::OLTID=10.171.0.33:CTAG::PROFILENAME=hello;
```

### ◆ Response message

```
FH_0.0.0.0 2015-11-04 11:45:19
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

ADD-BWPROFILE

### 5.7.3 Querying the Bandwidth Template (LST-BANDWIDTHPROFILE)

#### Function Description

This command is used for querying the bandwidth template.

#### Command Format

```
LST-BANDWIDTHPROFILE::ONU|OLTID=olt_name:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Optional / Required	Description
ONU P	OCTET STRING	Size (128)	Required	IP address or name of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	Required	OLT IP address or name

#### Response Format

It complies with the operation-command response format in [Response Message Format](#).

#### Output Parameter

Parameter	Data Type	Value Range	Description
PROFILENAME	OCTET STRING	Size(20)	Template Name
UPMINGUARAN-TEEDBANDWIDTH	INTEGER	0 to 10000000	Minimum assured uplink bandwidth (Kbps)
UPMAXALLOWED-BANDWIDTH	INTEGER	256 to 10000000	Maximum allowed uplink bandwidth (Kbps)
DOWNMINGUARAN-TEEDBANDWIDTH	INTEGER	0 to 10000000	Minimum assured downlink bandwidth (Kbps)

Parameter	Data Type	Value Range	Description
DOWNMAXALLO- WEDBANDWIDTH	INTEGER	256 to 10000000	Maximum allowed downlink bandwidth (Kbps)
UPSTREAMFIXED- BANDWIDTH	INTEGER	0 to 1000000	Fixed uplink bandwidth (Kbps)

## Example

Example 1: Query the bandwidth template of the ONU whose IP address is 10.171.0.16.

### ◆ Command issued

```
LST-BANDWIDTHPROFILE::ONUIP=10.171.0.16:CTAG::;
```

### ◆ Response message

```
;LST-BANDWIDTHPROFILE::ONUIP=10.171.0.16:CTAG::;
```

```

FH_127.0.0.1 2018-04-26 20:38:49
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=7

list of olt board width info

```

PROFILENAME	UPMINGUARANTEEDBANDWIDTH	UPMAXALLOWEDBANDWIDTH	DOWNMINGUA
RANTEEDBANDWIDTH	DOWNMAXALLOWEDBANDWIDTH	UPSTREAMFIXEDBANDWIDTH	
2	0	512	0
up22	0	10240	0
down22	0	102400	0
fsfds	0	10000000	0
hello	512	123456	0
aaa	5	10000000	0
bbb	0	10000000	0

Example 2: Query the bandwidth template of the OLT ( AN5116-06B) whose IP address is 10.171.0.16.

### ◆ Command issued

```
LST-BANDWIDTHPROFILE::OLTID=AN5116-01-10.171.0.16:CTAG::;
```

## ◆ Response message

```

EN=IIPF  ENDESC=invalid parameter format  EADD=invalid parameter format
;LST-BANDWIDTHPROFILE::OLTID=10.171.0.16:CTAG::;

FH_127.0.0.1 2018-04-26 20:40:43
M  CTAG_COMPLD
   total_blocks=1
   block_number=1
   block_records=7

list of olt board width info
-----
PROFILENAME  UPMINGUARANTEEDBANDWIDTH  DOWNMAXALLOWEDBANDWIDTH  UPMAXALLOWEDBANDWIDTH  DOWNMINGUA
RANTEEDBANDWIDTH  DOWNMAXALLOWEDBANDWIDTH  UPSTREAMFIXEDBANDWIDTH
2            0            512            0            10240            0
up22         0            10240           0            204800           0
down22       0            102400          0            204800           0
fsfds        0            10000000         0            10000000          0
hello        512         123456            0            1234            0
aaa          5            10000000         0            10000000          0
bbb          0            10000000         0            10000000          0
-----

```

## Related Command

None

## 5.7.4 Querying the GPON Service Bandwidth Template (LST-GPONSERBWPROFILE)

## Function Description

This command is used for querying the GPON service bandwidth template.

## Command Format

```
LST-GPONSERBWPROFILE::ONU|OLTID=olt_name:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Optional / Required	Description
ONU P	OCTET STRING	Size (128)	Required	IP address or name of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	Required	OLT IP address or name

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
PROFILE-NAME	OCTET STRING	Size(20)	Template Name
SERVICE-TYPE	INTEGER	1: IPTV 2: data 3: Voice 4: TDM 5: Integrated service 6: data2 7: data3 8: data4 9: COM service 10: data5 11: data6 12: data7 13: data8 14: Manage service	Service type
FIXEDBAND-WIDTH	INTEGER	Value range for GUI verification: 128-1024000 Kbps Value range for actual communication between the device and the UNM2000: 16-128000 Value range for Unicom test requirements: 0, 16-128000	Fixed bandwidth
ASSURED-BANDWIDTH	INTEGER	Value range for GUI verification: 0, 256-1024000 Kbps Value range for actual communication between the device and the UNM2000: 0, 32-128000	Assured bandwidth
MAXBAND-WIDTH	INTEGER	Value range for GUI verification: 128-1024000 Kbps Value range for actual communication between the device and the UNM2000: 16-128000	Maximum bandwidth

## Example

Example 1: Query the GPON service bandwidth template (one template) of the OLT whose IP address is 10.171.0.31.

◆ Command issued



```
LST-GPONSERVICEBANDWIDTHPROFILE::OLTID=10.171.0.31:CTAG::;
```

#### ◆ Response message

```
;LST-GPONSERVICEBANDWIDTHPROFILE::OLTID=10.171.0.31:CTAG::;

FH_127.0.0.1 2018-04-24 10:40:44
M CTAG_COMPLD
  total_blocks=1
  block_number=1
  block_records=1

Lst of GPON Bandwidth Profile
-----
OLTID  PONID  PROFILENAME  SERVICETYPE  FIXEDBANDWIDTH  ASSUREDBANDWIDTH
AXBANDWIDTH
10.171.0.31  --      11           6           128           0           512
-----
```

Example 2: Query GPON service bandwidth templates (multiple templates) of the OLT whose IP address is 10.171.0.31.

#### ◆ Command issued

```
LST-GPONSERVICEBANDWIDTHPROFILE::OLTID=10.171.0.31:CTAG::;
```

#### ◆ Response message

```
;LST-GPONSERVICEBANDWIDTHPROFILE::OLTID=10.171.0.31:CTAG::;

FH_127.0.0.1 2018-04-28 11:01:41
M CTAG_COMPLD
  total_blocks=1
  block_number=1
  block_records=4

Lst of GPON Bandwidth Profile
-----
OLTID  PONID  PROFILENAME  SERVICETYPE  FIXEDBANDWIDTH  ASSUREDBANDWIDTH  MAXBANDWIDTH
10.171.0.31  --      kk           3           128           0           512
10.171.0.31  --      rr           1           128           0           512
10.171.0.31  --      rr           3           128           0           512
10.171.0.31  --      pp           2           128           0           512
-----
;
```

#### Related Command

None

## 5.7.5 Querying the ONU Configurations (LST-ONUCONFIG)

#### Function Description

This command is used for querying the ONU configurations.

#### Command Format

```
LST-ONUCONFIG::OLTID=olt_name,PONID=ponport_location,ONUIDTYPE=id-
type,ONUID=onu_index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Optional
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID or ONU_NUMBER)	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	<b>Cabinet rack - shelf - slot - PON port number</b>
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
BANDWIDTH-PROFILENAME	OCTET STRING	Size (80)	Bandwidth template
GPONSERVICE-BANDWIDTH-PROFILENAME	OCTET STRING	Size (80)	GPON service bandwidth template

## Example

Query the configuration of PON port 1 in slot 5 of the OLT whose IP address is 10.171.0.31.

## ◆ Command issued

```
LST-CONFIG::OLTID=10.171.0.31, PONID=NA-NA-5-1, ONUTYPEID=MAC,
ONUID=333333333333:CTAG::;
```

## ◆ Response message

```
;LST-ONUCONFIG::OLTID=10.171.0.31,PONID=NA-NA-5-1,ONUIDTYPE=MAC,ONUID=333333333333:CTAG::;
;
FH_127.0.0.1 2018-04-24 10:52:19
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=1

Lst of ONU Profile
-----
OLTID  PONID  ONUID  BANDWIDTHPROFILENAME  GPONSERVICEBANDWIDTHPROFILENAME
10.171.0.31  1-1-5-1  333333333333  oo  11
-----
:
```

## Related Command

None

## 5.8 Configuring a Flow Policy

The following introduces the FLOWPOLICY command and example for adding / deleting a flow policy.

### 5.8.1 Adding a Traffic Policy (ADD-FLOWPOLICY)

#### Function Description

This command is used for adding a traffic policy.

#### Command Format

```
ADD-FLOWPOLICY::ONUIP=onu-name|OLTID=olt-name:CTAG::PROFILENAME=profile
name,RULENAME=rule name,PRECEDENCE=Precedence[,ACL=acl enable,RATELIMIT=
rate limit,CIR=cir,CBS=cbs,QUEUEENABLE=QueueEnable,QUEUEMAP=Queue
Mapped,COSREMARK=cos remark,COS=cos,DSCPremark=dscp remark,DSCP=dscp,
RTC=Remark traffic class,TC=Traffic class,REPORTENABLE=RePortEnable,
REPORTNO=port no,PMENABLE=PortMirrorEnable,MPORTNO=port no];
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PROFILE-NAME	OCTET STRING	Size (20)	Name of the traffic policy	Required
RULENAME	OCTET STRING	Size (128)	Name of the traffic classification rule	Required
PRECEDENCE	INTEGER	1 to 12	Policy priority	Required
ACL	INTEGER	0 or 1	Indicates whether to enable the ACL. 0: disable 1: enable	Optional

Parameter	Data Type	Value Range	Description	Remark
RATELIMIT	INTEGER	0 or 1	Indicates whether to enable rate control. 0: disable 1: enable	Optional
CIR	INTEGER	0 to 1000000	Assured rate	Optional
CBS	INTEGER	0 to 262144	Burst length	Optional
QUEUEEN- ABLE	INTEGER	0 or 1	Indicates whether to enable the queue mapping function. 0: disable 1: enable	Optional
QUEUEMAP	INTEGER	0 to 7	Mapping queue	Optional
COSRE- MARK	INTEGER	0 or 1	Indicates whether to enable the re-marking function. 0: disable 1: enable	Optional
COS	INTEGER	0 to 7	Priority label	Optional
DSCPRE- MARK	INTEGER	0 or 1	Indicates whether to enable the re-marking function. 0: disable 1: enable	Optional
DSCP	INTEGER	0 to 63	DSCP	Optional
RTC	INTEGER	0 or 1	Re-marking traffic class 0: disable 1: enable	Optional
TC	INTEGER	0 to 255	Communication classification	Optional
REPOR- TENABLE	INTEGER	0 or 1	Port re-direction 0: disable 1: enable	Optional
REPORTNO	INTEGER	1 to 101	Port number	Optional
PMENABLE	INTEGER	0 or 1	Port mirroring 0: disable 1: enable	Optional
MPORTNO	INTEGER	1 to 100	Port number	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Add a traffic policy named hello for the ONU whose IP address is 10.171.0.39.

### ◆ Command issued

```
ADD-FLOWPOLICY::ONUIP=10.171.0.39:CTAG::PROFILENAME=hello,
RULENAME=nimei,PRECEDENCE=2,ACL=1,RATELIMIT=1,CIR=1111,CBS=2222,
QUEUEENABLE=1,QUEUEMAP=1,COSREMARK=1,COS=2,DSCPremark=1,DSCP=3,RTC=1,
TC=4,REPORTENABLE=1,REPORTNO=5,PMENABLE=1,MPORTNO=6;
```

### ◆ Response message

```
FH_0.0.0.0 2015-11-04 11:45:19
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

```
DEL-FLOWPOLICY
ADD-PORTPVCFLOWPOLICY
```

## 5.8.2 Deleting a Traffic Policy (DEL-FLOWPOLICY)

### Function Description

This command is used for deleting a traffic policy.

### Command Format

```
DEL-FLOWPOLICY::ONUIP=onu-name|OLTID=olt-name:CTAG:: PROFILENAME=profile
name;
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006-20, AN5006-30.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PROFILE-NAME	OCTET STRING	Size (128)	Name of the traffic policy	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Delete the traffic policy hello on the ONU whose IP address is 10.171.0.39.

### ◆ Command issued

```
DEL-FLOWPOLICY::ONUIP=10.171.0.39:CTAG::PROFILENAME=hello;
```

### ◆ Response message

```
FH_0.0.0.0 2015-11-04 11:45:19
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

```
ADD-FLOWPOLICY
ADD-PORTPVCFLOWPOLICY
```

### 5.8.3 Adding a Port Traffic Policy (ADD-PORTPVCFLOWPOLICY)

#### Function Description

This command is used for adding a port traffic policy.

#### Command Format

```
ADD-PORTPVCFLOWPOLICY::ONUIP=| (OLTID=oltname,PONID=ponport_location,
ONUIDENTYPE=onuid-type,ONUIDENT=onu-index) [,ONUUPORT=onuport]:CTAG::PVCNO=0,
UPPOLICYID=ubrPcr_1024K,DOWNPOLICYID=ubrPcr_1024K;
```

#### Supported Device

ONU: AN5006-20, AN5006-30.

#### Input Parameter

Parameter	Data Type	Value Range	Description
ONUUP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUIDENTTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER).
ONUIDENT	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.



Parameter	Data Type	Value Range	Description
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate a port through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.
PVCNO	INTEGER	Size (128)	PVC index
UPPOLICYID	OCTET STRING	Size (128)	Uplink traffic policy ID. Enters the template name of the actual traffic policy.
DOWNPOLICYID	OCTET STRING	Size (128)	Downlink traffic policy ID. Enters the template name of the actual traffic policy.
UPRULEID	OCTET STRING	Size (128)	Uplink traffic classification rule ID. Enters the template name of the actual traffic classification rule.
DOWNRULEID	OCTET STRING	Size (128)	Downlink traffic classification rule ID. Enters the template name of the actual traffic classification rule.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Example

### Command issued

```
ADD-PORTPVCFLOWPOLICY::ONUIP=172.28.148.57,ONUPORT=1-1-1-1:CTAG::
PVCNO=1,UPPOLICYID=ubrPcr_1024K,DOWNPOLICYID=ubrPcr_1024K;
```

### Response message

None

## Related Command

```
ADD-FLOWPOLICY
DEL-FLOWPOLICY
```

## 5.8.4 Querying a Traffic Policy (LST-FLOWPOLICY)

### Function Description

This command is used for querying a traffic policy bound with the AN5006-20.

## Command Format

```
LST-FLOWPOLICY::OLTID=oltname:CTAG::;
```

## Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5006 series, AN5506 series, HG series.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
POLICY-NAME	OCTET STRING	Size (128)	Policy name	-
RULEID	OCTET STRING	Size (128)	Rule ID	-
CIR	INTEGER	0-0xffffffff	Assured rate	-

## Example

Query the traffic policy of the OLT whose IP address is 10.171.0.28. The ONU has no independent management IP address.

### ◆ Command issued

```
LST-FLOWPOLICY::OLTID=10.171.0.28:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 09:15:21
```

M CTAG COMPLD

total\_blocks=1  
block\_number=1  
block\_records=2  
list of flow policy

---

---

---

POLICYNAME RULEIDCIR

default de\_rule\_single 0

default1 de\_rule\_single 0

---

---

---










#### Related Command

None

## 6 Integrated Testing Interface

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The following introduces the testing commands for related resources of the PON line, voice service, xDSL port and LAN port.

-  The Ping Command
-  Querying the Equipment Information
-  Querying the PON Information
-  Querying the LAN Information
-  Querying the DSL Information
-  Querying the VLAN Information
-  Querying the IPTV Information
-  Querying the VoIP Information
-  Querying the Alarm Information

## 6.1 The Ping Command

The following introduces the PING command and the related example to use it.

### 6.1.1 Using PING on an ONU (PING)

#### Function Description

Pinging an IP address on an ONU can test the connectivity at IP layer between the ONU and the device corresponding to the IP address.

#### Command Format

```
PING::ONUIP=onu name|OLTID=OLT_name[,PONID=ponport_location,ONUIDTYPE
=id-type,ONUID=onu_index]:CTAG::IP=ip-address;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
IP	OCTET STRING	Size (20)	Destination IP address of the PING command	Required

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = List of PING Info

TxPkts RxPkts LostPkts LostPktRatio MinDelay MaxDelay AvgDelay

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
TxPkts	INTEGER	0 to 10	Number of sent packets	-
RxPkts	INTEGER	0 to 10	Number of received packets	-
LostPkts	INTEGER	0 to 10	Number of lost packets	-
LostPktRatio	INTEGER	0 to 100	Packet loss rate Unit: %	Number of lost packets / number of sent packets
MinDelay	INTEGER	0 to 2000	Minimum delay time Unit: ms	-
MaxDelay	INTEGER	0 to 2000	Maximum delay time Unit: ms	-
AvgDelay	INTEGER	0 to 2000	Mean delay Unit: ms	-

## Example

Example 1: Ping the IP address 10.250.18.100 on the ONU (having no management IP address) connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100. The information of the ONU is as follows: ONUID is Test0001; the authentication mode is LOID.

## ◆ Command issued

```
PING::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=Test0001:CTAG::IP=10.250.18.100;
```

## ◆ Response message

```
FH_10.250.18.133 2010-10-27 10:56:34
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
Ping from ONU
-----
TxPkts RxPkts LostPkts LostPktRatio MinDelay MaxDelay AvgDelay
4      4      0      0      1      1      1
-----
;
```

Example 2: Ping the IP address 10.250.18.100 on the ONU (having a management IP address) whose IP address is 10.250.18.20.

## ◆ Command issued

```
PING::ONUIP=10.250.18.121:CTAG::IP=10.250.18.100;
```

## ◆ Response message

```
FH_10.250.18.133 2010-11-02 09:42:08
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
Ping from ONU
-----
TxPkts RxPkts LostPkts LostPktRatio MinDelay MaxDelay AvgDelay
2      2      0      0      0      0      0
-----
;
```

## Related Command

None

## 6.2 Querying the Equipment Information

The following introduces the commands and examples for querying the equipment information.

## 6.2.1 Querying the NE Information (LST-DEVINFO)

### Function Description

This command is used to query the device model, software version, memory, CPU and temperature of the NE (OLT and ONU).

### Command Format

```
LST-DEVINFO::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport-location,  
ONUIDTYPE=id-type,ONUID=onu-index]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	-
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER)	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

### Response Format

It complies with the query-command response format in [Response Message Format](#).



Title= List of Device Info

name of attributes: DEVNAME DEVIP DT DEVER MEM CPU TEMPERATURE

## Output Parameter

Parameter	Data Type	Value Range	Description
DEVNAME	OCTET STRING	Size (128)	Device name
DEVIP	OCTET STRING	Size (128)	Device IP address
DT	OCTET STRING	Size (255)	Device model
DEVER	OCTET STRING	Size (255)	Software version
MEM	INTEGER	0 to 100	Memory usage Unit: %
CPU	INTEGER	0 to 100	CPU usage Unit: %
TEMPERATURE	INTEGER	-50 to 100	Temperature Unit: °C
TOPOLOC	OCTET STRING	Size (255)	Optional. It indicates the topology location of the device, which uses / to separate layer information and describes the information from the root node to the node where the device is located, such as <b>Root/shanghai/MA5600T</b> or <b>Root/shanghai/MA5600T/ODN-15-2</b> .

## Example

Query the information of the NE whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-DEVINFO::OLTID=10.250.18.100:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-01 10:09:57
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
List of Device Info
-----
DEVNAME DEVIP DT DEVER MEM CPU TEMPERATURE
```

```
1 10.250.18.100 AN5516_01 RP0121 68.98 5.57 30
```

-----

## Related Command

None

## 6.2.2 Querying the Card Information (LST-BRDINFO)

### Function Description

This command is used to query the type, status and version of the card.

### Command Format

```
LST-BRDINFO::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index][,BOARDID=board-name]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>cabinet rack - shelf - slot - PON port</b> . Enter <b>NA</b> if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD).	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD.	Optional
BOARDID	OCTET STRING	Size (128) Cabinet rack - shelf - slot	Card location information . Locating through <b>cabinet rack - shelf - slot number</b> . Enter <b>NA</b> if the corresponding information is not specified.	(Optional) If it is not set, all cards will be queried.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title= List of Device Info

BOARDID BSTAT BOARDTYPE BSERVICE PNUM SWVER HWVER MEM CPU

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
BOARDID	OCTET STRING	Size (128) Cabinet rack - shelf - slot	Locate the card connected with the ONU through <b>cabinet rack - shelf - slot number</b> . Enter <b>NA</b> if the corresponding information is not specified.	-
BSTAT	OCTET STRING	Normal Fault Offline	Card status	-
BOARD-TYPE	OCTET STRING	Size (128)	Card type	-

Parameter	Data Type	Value Range	Description	Remark
BSERVICE	OCTET STRING	Power ETH ADSL VDSL POTS E1 GPON EPON SCU Other	Card service type (such as ADSL2P and SHDSL)	-
PNUM	INTEGER	0 to 64	Number of ports	-
SWVER	OCTET STRING	Size (255)	Software version	-
HWVER	OCTET STRING	Size (255)	Hardware version	-
MEM	INTEGER	0 to 100	Memory usage Unit: %	-
CPU	INTEGER	0 to 100	CPU usage Unit: %	-

## Example

Query the card information of the NE whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-BRDINFO::OLTID=10.250.18.100,BOARDID=NA-NA-3:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 10:59:09
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
List of Board Info
-----
BOARDID  BSTAT  BOARDTYPE  BSERVICE  PNUM  SWVER  HWVER  MEM  CPU
NA-1-3  Normal  EC4B  EPON  4  RP0121  WKE2.119.318R2A  38.88  2.73
-----
;
```

## Related Command

None

## 6.2.3 Querying the Card Authorization Status (LST-BOARD-AUTHINFO)

## Function Description

This command is used to query the card authorization status based on the granularity of NE.

## Command Format

```
LST-BOARD-AUTHINFO::ONUIP=onu_name|OLTID=olt_name, [BOARDID=NA-NA-slotno]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
BOARDID	OCTET STRING	Size (128) Rack - shelf - slot number	Card location information. Locate a card through <b>rack - shelf - slot number</b> . Enter <b>NA</b> for the corresponding unspecified information.	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
BOARDID	OCTET STRING	Size (128) Rack - shelf - slot number	Card location information. Locate a card through <b>rack - shelf - slot number</b> . Enter <b>NA</b> for the corresponding unspecified information.	-
AUTHINFO	OCTET STRING	<ul style="list-style-type: none"> <li>◆ NAOMAL: normal authorization</li> <li>◆ NOTACCOR-DANCE: inconsistent authorization types</li> <li>◆ NOTAUTH: unauthorized</li> </ul>	Card authorization status	-

## Example

Configure the authorization status of a card on the ONU (having a management IP address) whose IP address is 10.171.0.16.

## ◆ Command issued

```
LST-BOARD-AUTHINFO::ONUIP=10.171.0.16:CTAG::;
```

## ◆ Response message

```
FH_10.170.162.31 2018-05-30 11:06:13
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

block\_records=24

list of board author info

---

---

---

ONU IP OLT ID BOARD ID AUTH INFO

-10.171.0.16 1-1-1 -  
-10.171.0.16 1-1-2 -  
-10.171.0.16 1-1-3 -  
-10.171.0.16 1-1-4 -  
-10.171.0.16 1-1-5 -  
-10.171.0.16 1-1-6 -  
-10.171.0.16 1-1-7 -  
-10.171.0.16 1-1-8 -  
-10.171.0.16 1-1-9 -  
-10.171.0.16 1-1-10 -  
-10.171.0.16 1-1-11 -  
-10.171.0.16 1-1-12 -  
-10.171.0.16 1-1-13 -  
-10.171.0.16 1-1-14 -  
-10.171.0.16 1-1-15 -  
-10.171.0.16 1-1-16 -  
-10.171.0.16 1-1-17 -  
-10.171.0.16 1-1-18 -  
-10.171.0.16 1-1-19 -  
-10.171.0.16 1-1-20 -  
-10.171.0.16 1-1-21 -  
-10.171.0.16 1-1-22 -  
-10.171.0.16 1-1-23 -

–10.171.0.16 1-1-801 –

---

---

---

#### Related Command

None

## 6.3 Querying the PON Information

The following introduces the commands and examples for querying the PON information.

### 6.3.1 Querying the PON Port Information (LST-PONINFO)

#### Function Description

This command is used for querying the status and configuration information of an OLT PON port.

#### Command Format

LST-PONINFO::OLTID=olt-name,PONID=pon\_name:CTAG::;

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	-



## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = List of olt pon port information
AdminState OperState
```

## Output Parameter

Parameter	Data Type	Value Range	Description
AdminState	OCTET STRING	UP DOWN	Management status
OperState	OCTET STRING	UP DOWN	Operating status

## Example

Query the status of PON port 1 in slot 3 of the NE whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-PONINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:02:13
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
List of olt pon port information
-----
AdminState      OperState
UP              UP
-----
```

## Related Command

None

## 6.3.2 Querying the Local PON Port Information (LST-PONPORTINFO)

### Function Description

This command is used for querying the local PON port information, including the PON port type, PON port rate, PON port running status and management status.

### Command Format

```
LST-PONPORTINFO::OLTID=olt-name[,PONID=pon_name]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Optional

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
PType	OCTET STRING	-	PON port type
PSpeed	OCTET STRING	-	PON port rate
AdminState	OCTET STRING	UP DOWN	Management status
OperState	OCTET STRING	UP DOWN	Operating status

## Example

Configure the information of the PON port on the OLT whose IP address is 10.171.0.16. The ONU has no independent management IP address.

### ◆ Command issued

```
LST-PONPORTINFO::OLTID=10.171.0.16:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-05-30 11:09:47
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=32

List of olt pon port information

```

_____
_____
_____

```

OLTID PONID PType PSpeed AdminState OperState

10.171.0.16 1-1-3-1 GPON\_OLT 2.5G UP DOWN

10.171.0.16 1-1-3-2 GPON\_OLT 2.5G UP DOWN

10.171.0.16 1-1-3-3 GPON\_OLT 2.5G UP DOWN

10.171.0.16 1-1-3-4 GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-5-1 EPON\_OLT 1.25GUP UP  
10.171.0.16 1-1-13-1GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-2GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-11 GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-12 GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-13 GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-14 GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-15 GPON\_OLT 2.5G UP DOWN  
10.171.0.16 1-1-13-16 GPON\_OLT 2.5G UP DOWN

---

---

---

#### Related Command

None

### 6.3.3 Querying the PON Link Statistics Information (LST-PONPERF)

#### Function Description

This command is used for querying the statistics information of the OLT PON port or ONU PON port, such as the number of sent / received packets, sent / received bytes as well as error frames.

#### Command Format

```
LST-PONPERF::ONUIP=onu-name| (OLTID=olt-name,PONID=ponport_location[,  
ONUIDTYPE=id-type,ONUID=onu-index]):CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for querying the OLT PON port or the ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of pon port performance

OutPkts InPkts OutOctets InOctets CRC UnderSizePkts OverSizePkts InErrors  
OutErrors InDiscards OutDiscards InUnicastPkts InMulticastPkts  
InBroadcastPkts OutUnicastPkts OutMulticastPkts OutBroadcastPkts

## Output Parameter

Parameter	Data Type	Value Range	Description
OutPkts	DOUBLE	0 - 1.85E19	Number of sent packets
InPkts	DOUBLE	0 - 1.85E19	Number of received packets

Parameter	Data Type	Value Range	Description
OutOctets	DOUBLE	0 - 1.85E19	Number of sent bytes
InOctets	DOUBLE	0 - 1.85E19	Number of received bytes
CRC	DOUBLE	0 - 1.85E19	Number of received CRC error packets
UnderSi-zePkts	DOUBLE	0 - 1.85E19	Number of received undersized packets
OverSi-zePkts	DOUBLE	0 - 1.85E19	Number of received oversized packets
InErrors	DOUBLE	0 - 1.85E19	Number of received error packets
OutErrors	DOUBLE	0 - 1.85E19	Number of unsent error packets
InDiscards	DOUBLE	0 - 1.85E19	Number of discarded received packets
OutDiscards	DOUBLE	0 - 1.85E19	Number of discarded sent packets
InUni-castPkts	DOUBLE	0 - 1.85E19	Number of received unicast packets
InMulti-castPkts	DOUBLE	0 - 1.85E19	Number of received multicast packets
InBroad-castPkts	DOUBLE	0 - 1.85E19	Number of received broadcast packets
OutUni-castPkts	DOUBLE	0 - 1.85E19	Number of sent unicast packets
OutMulti-castPkts	DOUBLE	0 - 1.85E19	Number of sent multicast packets
OutBroad-castPkts	DOUBLE	0 - 1.85E19	Number of sent broadcast packets
UpSpeed	DOUBLE	0 - 1.85E19	Uplink rate. This parameter only supports performance code 756 of GPON ONU and XGPON ONU (Thailand 3BB). Unit: Mbps
DownSpeed	DOUBLE	0 - 1.85E19	Downlink rate. This parameter only supports performance code 759 of GPON ONU and XGPON ONU (Thailand 3BB). Unit: Mbps
Curr15MinUPMax-Speed	FLOAT	0 - 1.85E19	Uplink peak rate of the current 15 minutes (Thailand TRUE)
Curr15MinDownMax-Speed	FLOAT	0 - 1.85E19	Downlink peak rate of the current 15 minutes (Thailand TRUE)

Parameter	Data Type	Value Range	Description
Curr15MinUPMaxProportion	FLOAT	0 - 1.85E19	Uplink peak bandwidth usage of the current 15 minutes (Thailand TRUE)
Curr15MinDownMaxProportion	FLOAT	0 - 1.85E19	Downlink peak bandwidth usage of the current 15 minutes (Thailand TRUE)
RealUPMaxSpeed	FLOAT	0 - 1.85E19	Real-time uplink peak rate (Thailand TRUE)
RealDownMaxSpeed	FLOAT	0 - 1.85E19	Real-time downlink peak rate (Thailand TRUE)
RealUPMaxProportion	FLOAT	0 - 1.85E19	Real-time uplink peak bandwidth usage (Thailand TRUE)
RealDownMaxProportion	FLOAT	0 - 1.85E19	Real-time downlink peak bandwidth usage (Thailand TRUE)

## Example

Example 1: Query the PON link status of the ONU (having no management IP address) with ONUID being aa\_bbb\_ccc\_111\_222. The ONU is connected to the PON port 1 in slot 3 of the NE whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-PONPERF::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:05:41
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of pon port performance
-----
OutPkts InPkts  OutOctets  InOctets  CRC    UnderSizePkts
OverSizePkts  InErrors  OutErrors  InDiscards
OutDiscards InUnicastPkts InMulticastPkts InBroadcastPkts OutUnicastPkts
OutMulticastPkts OutBroadcastPkts
2832   411    240431  29259   --     --         --     --     0
0      0      47      8       364    542    885    1405
-----
```

Example 2, query the PON link status of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
LST-PONPERF::ONUIP=10.250.18.121:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-02 09:48:20
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of pon port performance
-----
OutPkts InPkts OutOctets InOctets CRC UnderSizePkts OverSizePkts
InErrors OutErrors InDiscards
OutDiscards InUnicastPkts InMulticastPkts InBroadcastPkts
OutUnicastPkts OutMulticastPkts OutBroadcastPkts
4409 1385 450601 202533 -- -- -- --
0 0 0 1295 8 90 667 926 2816
-----
```

**Related Command**

None

## 6.3.4 Querying the ONU Configuration (LST-ONUCFG)

### Function Description

This command is used for querying the configuration information of an ONU on the OLT, including ONU status, optical fiber length and authentication information.

### Command Format

```
LST-ONUCFG::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=id-type,
ONUID=onu-index:CTAG::;
```



## Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of ONU info

AdminState OperState AUTH AUTHINFO Length UsFixedBw UsAssuredBw UsMaxBw  
DsMaxBw

## Output Parameter

Parameter	Data Type	Value Range	Description
Admin-State	OCTET STRING	UP DOWN	Management status
OperState	OCTET STRING	UP Power-Off LOS	Running status
AUTH-TYPE	OCTET STRING	MAC LOID LOIDONCEON	Authentication mode
AUTHIN-FO	OCTET STRING	Size (64)	Authentication information. If AUTHTYPE is set to MAC, AUTHINFO is MAC address. If AUTHTYPE is set to LOID, AUTHINFO is LOID.
Length	DOUBLE	0 to 100	Optical fiber length Unit: km

Parameter	Data Type	Value Range	Description
UsFix-edBw	INTEGER	0 to 40000	Fixed uplink bandwidth Unit: Mbps
UsAssuredBw	INTEGER	0 to 40000	Guaranteed uplink bandwidth Unit: Mbps
UsMaxBw	INTEGER	0 to 40000	Maximum uplink bandwidth Unit: Mbps
DsMaxBw	INTEGER	0 to 40000	Maximum downlink bandwidth Unit: Mbps
UPStream	OCTET STRING	Size (128)	Name of the GPON service bandwidth template Unit: Mbps
Down-Stream	OCTET STRING	Size (128)	Bandwidth template name

## Example

Query the configuration information of the ONU with ONUID being aa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-ONUCFG::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:03:08
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of ONU info
-----
AdminState  OperState  AUTH  AUTHINFO  Length
UsFixedBw   UsAssuredBw  UsMaxBw  DsMaxBw
UP   UP   LOID   aaa_bbb_ccc_111_222   0   0   0
1000   1000
-----
```

## Related Command

None

## 6.3.5 Querying the ONU Status (LST-ONUSTATE)

### Function Description

This command is used for querying the status or authentication information of a single ONU or all ONUs on the OLT PON port.

### Command Format

```
LST-ONUSTATE::OLTID=olt-name,PONID=ponport_location[,ONUIDTYPE=id-type,
ONUID=onu-index]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	-
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional. If it is not specified, the status of all ONUs on the OLT PON port will be queried.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional. If it is not specified, the status of all ONUs on the OLT PON port will be queried.

### Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = list of ONU state
ONUID AdminState OperState AUTH AUTHINFO ONUIP
```

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_ Number.
AdminState	OCTET STRING	UP DOWN	Management status
OperState	OCTET STRING	UP Power-Off LOS	Operating status
AUTH	OCTET STRING	MAC LOID	Authentication mode
AUTHINFO	OCTET STRING	Size (64)	Authentication information. If AUTH is set to MAC, AUTHINFO is MAC address. If AUTH is set to LOID, AUTHINFO is LOID.
ONUIP	OCTET STRING	-	ONU management IP
LASTOFF-TIME	OCTET STRING	-	ONU offline time
ACTIVES-TATE	OCTET STRING	Active Deactive	ONU activation status. Whether the field will be returned depends on the switch.
LASTDOWN-CAUSE	OCTET STRING	-	Offline cause. This parameter and LASTOFFTIME are alternative, depending on the switch.
LASTONTIME	OCTET STRING	Size (128)	The last online time of the ONU. The time format (Beijing time) is <b>YYYY-MM-DD HH-MM-SS</b> .

## Example

Query the status of the ONU with ONUID being aaa\_bbb. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-ONUSTATE::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:03:48
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
```

```
list of ONU state
-----
ONUOID AdminState OperStat AUTH AUTHINFO ONUIP LASTOFFTIME
5      UP          UP      LOID aaa_bbb  --      0000-00-00 00:00:00
-----
```

## Related Command

None

## 6.3.6 Querying the MAC Address Table of an ONU UNI Port (LST-PORTMACADDRESS)

### Function Description

This command is used for querying the MAC address table learned by an ONU UNI port. The MAC address format is **XX-XX-XX-XX-XX-XX**.

### Command Format

```
LST-PORTMACADDRESS::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location][,ONUIDTYPE=id-type,ONUOID=onu_index][,
PORTID=uniport_index][,VLAN=vlan_value]:CTAG::;
```

#### ◆ The ONU that has a management IP address

```
LST-PORTMACADDRESS::ONUIP=onu_name,PORTID=uniport_index[,
VLAN=vlan_value]:CTAG::;
```

#### ◆ The ONU that has no management IP address

```
LST-PORTMACADDRESS::OLTID=olt_name,PONID=ponport_location,
ONUIDTYPE=idtype,ONUOID=onu_index,PORTID=uniport_index[,
VLAN=vlan_value]:CTAG::;
```

### Input Parameter

Input Parameter	Data Type	Value Range	Description	Remark
ONUOID	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Input Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Required

## Response Format

It complies with the query-command response format in [Response Message Format](#).

```
Title = list of MAC Address
VLAN MAC
```

## Output Parameter

Parameter	Data Type	Value Range	Description
VLAN	INTEGER	0 to 4095	VLAN
MAC	OCTET STRING	Size (128)	MAC address format is <b>XX-XX-XX-XX-XX-XX</b> .

## Example

Example 1: Query the MAC address table of the UNI port of the ONU (having no management IP address) with ONUID being aa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-PORTMACADDRESS::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,PORTID=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:06:25
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of MAC Address
```

```
-----
VLAN    MAC
```

```
2114
-----
```

Example 2, query the MAC address table of the No. 1 port located in the No. 4 slot of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-PORTMACADDRESS::ONUIP=10.250.18.121,PORTID=NA-NA-4-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 09:45:19
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of MAC Address
```

```
-----
VLAN    MAC
```

```
2114
-----
```

## Related Command

None

### 6.3.7 Querying the DDM Information of Optical Modules (LST-OMDDM)

#### Function Description

This command is used for querying the DDM information of optical modules, including the ETH optical module, OLT PON optical module and ONU PON optical module.

#### Command Format

```
LST-OMDDM::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location][,
ONUIDTYPE=id-type,ONUID=onu-index][,PORTID=lanport_index][,
PEERFLAG=flag]:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	It is required for querying the OLT PON optical module or the ONU that has no management IP address.
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD.	Optional



Parameter	Data Type	Value Range	Description	Remark
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port number	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Optional. It is used for querying the OLT uplink port.
PEERFLAG	OCTET STRING	Size (128)	True, False.	Optional. It is used for returning the peer-end optical power information upon the query. The default value is False.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of MAC Address

ONUID RxPower RxPowerR TxPower TxPowerR CurrTxBias CurrTxBiasR Temperature

TemperatureR Voltage VoltageR PTxPower PRxPower

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	When the OLT optical module is queried, – will be returned. When the ONU optical module is queried, the ONU identifier will be returned. The value is ONU_Number.
RxPower	OCTET STRING	-40, 10	Rx optical power Unit: dB
RxPowerR	OCTET STRING	Normal High Low	Indicates whether the received optical power is normal.
TxPower	OCTET STRING	-40, 10	Tx optical power Unit: dB
TxPowerR	OCTET STRING	Normal High Low	Indicates whether the sent optical power is normal.
CurrTxBias	OCTET STRING	0, 131	Bias current Unit: mA.

Parameter	Data Type	Value Range	Description
CurrTx-BiasR	OCTET STRING	Normal High Low	Indicates whether the bias current is normal.
Temperature	OCTET STRING	-45, 90	Temperature Unit: °C
TemperatureR	OCTET STRING	Normal High Low	Indicates whether the temperature is normal.
Voltage	OCTET STRING	0, 6.55	Power supply voltage Unit: V
VoltageR	OCTET STRING	Normal High Low	Indicates whether the supply voltage is normal.
PTxPower	OCTET STRING	-40, 10	Tx optical power of the peer end. A dash – will be returned if no Tx optical signals are detected. Unit: dB
PRxPower	OCTET STRING	-40, 10	Rx optical power of the peer end. A dash – will be returned if no Rx optical signals are detected. (It requires correcting the calculation logic and displays Rx optical power of the remote ONU actually queried). Unit: dBm

## Example

Example 1, query the optical module information of the ONU (having no management IP address) with ONUID being aa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-OMDDM::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:05:05
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
List of Optical Power Info
```

```
-----
```

```

ONUOID  RxPower  RxPowerR  TxPower TxPowerR  CurrTxBias
CurrTxBiasR  Temperature  TemperatureR Voltage VoltageR
PTxPower  PRxPower
5      -9.76   Normal  1.76    Normal  15.80   Normal  62.37
Normal  3.40   Normal  --      --
-----

```

Example 2, query the optical module information of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ Command issued

```
LST-OMDDM::ONUIP=10.250.18.121:CTAG::;
```

◆ Response message

```

FH_10.250.18.133 2010-11-02 09:47:44
M  CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
List of Optical Power Info
-----
ONUOID  RxPower RxPowerR  TxPower TxPowerR  CurrTxBias
CurrTxBiasR  Temperature  TemperatureR Voltage VoltageR
PTxPower  PRxPower
2      -13.44   Normal  2.64    Normal  20.00   Normal  41.41
Normal  3.26   Normal  --      --
-----

```

## Related Command

None

## 6.3.8 Querying the Unregistered ONU of a PON Port (LST-UNREGONU)

### Function Description

This command is used for querying the status of the unregistered ONU of an OLT PON port.

### Command Format

◆ Query the information of unauthorized ONUs of the specified OLT:

```
LST-UNREGONU::OLTID=olt-name:CTAG::;
```

- ◆ Query the information of unregistered ONUs corresponding to the specified PON port:

```
LST-UNREGONU::OLTID=olt-name,PONID=pon_name:CTAG::;
```

- ◆ Query the information of the unauthorized ONUs with the specified MAC address under the OLT:

```
LST-UNREGONU::OLTID=olt-name,MAC=physicID:CTAG::;
```

- ◆ Query the information of unregistered ONUs with the specified MAC address under the specified PON port:

```
LST-UNREGONU::OLTID=olt-name,PONID=pon_name,MAC=physicID:CTAG::;
```

- ◆ Query the information of unregistered ONUs corresponding to the specified MAC address:

```
LST-UNREGONU::MAC=physicID:CTAG::;
```

- ◆ Query the information of unregistered ONUs in the entire network:

```
LST-UNREGONU:::CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Optional
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	It is required for querying the specified PON port. It can be empty for querying the specified OLT.
MAC	OCTET STRING	Size (12)	Physical address (GPON ONU is called physical SN.)	Optional. Queries the ONU information corresponding to the specified physicID in the list of unauthorized ONUs.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

```
Title = List of unreg onu information
```

```
MAC LOID PWD ERROR AUTHTIME DT
```

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
SLOTNO	int32	-	Slot number
PONNO	int32	-	PON port number
MAC	OCTET STRING	Size (128)	MAC address of an EPON ONU or SN of an GPON ONU
LOID	OCTET STRING	Size (64)	When the MAC authentication is adopted, a dash (–) will be returned.
PWD	OCTET STRING	Size (128)	LOID/GPON password. A dash – will be returned if there is no password.
ERROR	OCTET STRING	Size (128) Conflict	Conflict indicates an authentication information conflict.
AUTHTIME	OCTET STRING	Size (128)	(Optional) ONU authentication time; time format (Beijing time): <b>YYYY-MM-DD HH-MM-SS</b>
DT	OCTET STRING	Size (255)	(Optional) ONU model
SV	OCTET STRING	Size (16)	(Optional) ONU software version
HV	OCTET STRING	Size (16)	(Optional) ONU hardware version
UTIME	OCTET STRING	Time format	(Optional) ONU online time
VID	OCTET STRING	Size (4)	(Optional) Vendor
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.

## Example

Query the status information of the unregistered ONU (having no management IP address). The ONU is connected to the slot 7 - PON port 1 of the OLT whose IP address is 10.78.200.200.

◆ Command issued

```
LST-UNREGONU::OLTID=172.30.15.58,PONID=NA-NA-11-3:CTAG::;
```

#### ◆ Response message

```
FH_10.99.2.201 2019-06-12 16:29:21
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=0
```

List of Unreg Onu information

```
-----
MAC      LOID   PWD   ERROR  AUTHTIME    DT
-----
```

```
;
```

#### Related Command

None

## 6.3.9 Querying the Wi-Fi Service Information of an ONU (LST-WIFISERVICE)

#### Function Description

This command is used for querying the Wi-Fi service information of an ONU.

#### Command Format

```
LST-WIFISERVICE::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location]
[,ONUIDTYPE=id-type,ONUID=onu-index]:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = result of wifiservice
SSIDNO WFIENABLE WILESSAREA WILESSCHANNEL WILESSSTANDARD TPOWER SSIDNAME
SSIDENABLE SSIDVISIBALE AUTHMODE ENCRYPTYPE PRESAREDKEY UPDATEKEYINTERVAL
RADIUSSERVER RADIUSPORT RADIUSKEY WEPENCRYPTIONLEVEL WEPKEYINDEX WEPKEY1
WEPKEY2 WEPKEY3 WEPKEY4
```

## Output Parameter

Parameter	Data Type	Value Range	Description
SSIDNO	INTEGER	1 to 4	SSID index
WFIENABLE	OCTET STRING	Enable, Disable	Indicates whether to enable the Wi-Fi.
FREQBAND-WIDTH	OCTET STRING	20/40MHz, 20MHz, 40MHz, 80MHz	Frequency bandwidth
WILESSAREA	OCTET STRING	USA, EURO	Wi-Fi wireless area

Parameter	Data Type	Value Range	Description
WILESSCHANNEL	INTEGER	[0, 13] for WILESSAREA = 0 [1, 11] for WILESSAREA = 1	Wireless channel number
WILESSSTANDARD	OCTET STRING	802.11b, 802.11g, 802.11b/g, 802.11n, 802.11bgn	Wireless standard
TPOWER	INTEGER	[0, 20]	Launched power
SSIDNAME	OCTET STRING	Size (32)	SSID name
SSIDENABLE	OCTET STRING	Enable, Disable	Indicates whether to enable SSID. Enable indicates enabling SSID and Disable indicates disabling SSID.
SSIDVISIBALE	OCTET STRING	Available, Not-Available	Indicates whether to hide SSID.
AUTHMODE	OCTET STRING	OPEN, SHARED, WEPAUTO, WPAPSK, WPA, WPA2PSK, WPA2, WPA/WPA2 WPAPSK, WPA2PSK	WLAN authentication mode
ENCRYPTTYPE	OCTET STRING	NONE, WEP, TKIP, AES, TKIPAES	WLAN encryption type
PRESHARED-KEY	OCTET STRING	STRING (64)	WPA pre-shared key
UPDATEKEYINTERVAL	INTEGER	[0, 4194303]	WPA key update interval Unit: s
RADIUSSERVER	OCTET STRING	Size (128)	RADIUS server
RADIUSPORT	OCTET STRING	STRING (2)	RADIUS server port
RADIUSKEY	OCTET STRING	STRING (32)	RADIUS-KEY
WEPENCRYPTIONLEVEL	INTEGER	1: 40 bits 2: 104 bits	WEP key length
WEPKEYINDEX	INTEGER	[1, 4]	Key index
WEPKEY1	OCTET STRING	STRING (64)	WEP key 1
WEPKEY2	OCTET STRING	STRING (64)	WEP key 2
WEPKEY3	OCTET STRING	STRING (64)	WEP key 3
WEPKEY4	OCTET STRING	STRING (64)	WEP key 4



## Example

Query the Wi-Fi service information of the ONU (having no management IP address) with MAC being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

### ◆ Command issued

```
LST-WIFISERVICE::OLTID=10.78.191.100,PONID=NA-NA-18-4,ONUIDTYPE=MAC,
ONUID=FHTT01e821a0:CTAG::;
```

### ◆ Response message

```
FH_10.82.25.73 2017-02-24 16:20:25
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=4

result of wifiservice
-----
SSIDNO WIFIEENABLEFREQBANDWIDTH WILESSAREA WILESSCHANNEL
WILESSSTANDARD TPOWER SSIDNAME SSIDENABLE SSIDVISIBALE
AUTHMODE      ENCRYPTYPE
PRESHAREDKEY   UPDATEKEYINTERVAL
RADIUSSERVER RADIUSPORT RADIUSKEY WEPENCRYPTIONLEVEL
WEPKEYINDEX    WEPKEY1      WEPKEY2
WEPKEY3  WEPKEY4
1 Enable 20MHz/40MHz USA 5 802.11g 15 Bgolas Disable
  Not-Available WPA2PSK AES 1111111111 3600 -- -- --
  40 bit 1 -- -- -- --
2 Enable 20MHz/40MHz USA 5 802.11g 15 eeeeea Disable
  Available WPA2PSK AES ru83n55c 3600 -- -- -- 40 bit
  1 -- -- -- --
3 Enable 20MHz/40MHz USA 5 802.11g 15 ghhhhhh Disable Available
  OPEN AES -- 86400 -- -- -- 40 bit 1 -- -- -- --
4 Enable 20MHz/40MHz USA 5 802.11g 15 wwwwww Disable Available
  WPA2PSK AES ru83n55c 3600 -- -- -- 40 bit 1 -- -- -- --
-----
;
```

## Related Command

None

### 6.3.10 Querying the WAN Service Information of an ONU (LST-ONUWANSERVICECFG)

#### Function Description

This command is used for querying the WAN connection service information of an ONU.

#### Command Format

```
LST-ONUWANSERVICECFG::ONUIP=onu_name|OLTID=olt_name[,  
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index][,  
ONUPORT=port-id]:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID, ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128)	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	Optional. The LAN port range is from NA-NA-NA-1 to NA-NA-NA-4; the Wi-Fi port range is from NA-NA-NA-101 to NA-NA-NA-104.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

```
Title = List of Onu Wan service cfg
SVCNAME CONNMODE CONNTYPE VLANID VLANCOS NATFLAG IPOBTAINITYPE
STATICIPADDRESS STATICIPSUBNET STATICGATEWAY MASTERDNS SLAVEDNS
PPPOEPROXYFLAG PPPOEUSERNAME PPPOEPASSWD PPPOESVCNAME PPPOEMODE QOSFLAG
BINDPORTNO
```

## Output Parameter

Parameter	Data Type	Value Range	Description
SVCNAME	OCTET STRING	Size (128)	Name of the WAN connection
CONNMODE	INTEGER	1: TR069 2: INTERNET 3: TR069INTERNE 4: multicast 5: VOIP 6: VOIP_INTERNET 7: IPTV 8: RADIUS 9: RADIUS_INTERNET 100: Other	WAN connection mode
CONNTYPE	INTEGER	1: bridge 2: route	WAN connection type
VLANID	INTEGER	1 - 4085. It can be null.	VLAN ID of the WAN connection

Parameter	Data Type	Value Range	Description
VLANCOS	INTEGER	0 - 7. It can be null.	VLAN ID of the WAN connection
NATFLAG	INTEGER	1: enable 2: disable	Indicates whether to enable NAT for the WAN connection
IPOBTAINTYPE	INTEGER	1: DHCP 2: Static 3: PPPOE	IP obtaining mode of the WAN connection
STATICIPADDRESS	OCTET STRING	It is valid only when the address type is set to Static; otherwise, it is 0, which means invalid.	Static IP address of the WAN connection
STATICIPSUBNET	OCTET STRING	It is valid only when the address type is set to Static; otherwise, it is 0, which means invalid.	Subnet mask of the WAN connection
STATICGATEWAY	OCTET STRING	It is valid only when the address type is set to Static; otherwise, it is 0, which means invalid.	Default gateway of the WAN connection
MASTERDNS	OCTET STRING	It is valid only when the address type is set to Static; otherwise, it is 0, which means invalid.	Primary DNS of the WAN connection
SLAVEDNS	OCTET STRING	It is valid only when the address type is set to Static; otherwise, it is 0, which means invalid.	Secondary DNS of the WAN connection
IPSTACKMODE	INTEGER	0 to 2	Protocol stack type of the WAN connection 0: IPv4 1: IPv4&IPv6 2: IPv6
IP6SRCTYPE	INTEGER	0 to 1	Address source of the IPv6 0: DHCPV6 1: SLAAC
IP6PREFIXSRCTYPE	INTEGER	0 to 1	Prefix source of the IPv6 0: delegate 1: static
IP6ADDRESS	OCTET STRING	Size (64)	IPv6 address of the WAN connection

Parameter	Data Type	Value Range	Description
IP6GATEWAY	OCTET STRING	Size (64)	IPv6 default gateway of the WAN connection
IP6MASTERDNS	OCTET STRING	Size (64)	IPv6 primary DNS of the WAN connection
IP6SLAVEDNS	OCTET STRING	Size (64)	IPv6 secondary DNS of the WAN connection
IP6STATICPREFIX	OCTET STRING	Size (64)	IPv6 prefix pool of the WAN connection
PPPOEPROXYFLAG	INTEGER	1: enable 2: disable	Indicates whether to enable PPPoE Proxy for the WAN connection.
PPPOEUSERNAME	OCTET STRING	It is valid only when the address type is set to PPPoE; otherwise, it is null.	Username of the PPPoE connection
PPPOEPASSWD	OCTET STRING	It is valid only when the address type is set to PPPoE; otherwise, it is null.	Password of the PPPoE connection
PPPOESVCNAME	OCTET STRING	It is valid only when the address type is set to PPPoE; otherwise, it is null.	PPPoE service name
PPPOEAUTHMODE	INTEGER	Authentication mode of the PPPOE 0: Auto 1: CHAP 2: MS-CHAP 3: PAP	-
PPPOEMODE	INTEGER	It is valid only when the address type is set to PPPoE; otherwise, it is null. 1: Auto connect 2: Connect when traffic is deleted 3: Manually connect	PPPoE dial-up mode
PPPOEIDLETIME	INTEGER	0 to 2000	PPPoE automatic offline time
UPORT	INTEGER	1 to 5, 0	-
SSID	INTEGER	1 to 8	SSID number
WANSVC	INTEGER	1	-
VLANMODE	INTEGER	1, 3	VLAN mode 1: tag 3: transparent

Parameter	Data Type	Value Range	Description
TRANSSTATE	INTEGER	0 to 1	Translation status 1: enable 0: disable
TRANSVALUE	INTEGER	1 to 4085	VID after translation
TRANCOS	INTEGER	0 to 7	PON priority or COS
QINQSTATE	INTEGER	0 to 1	QinQ status 1: enable 0: disable
TPID	INTEGER	0-0xfffe	Tag protocol identifier
SVLAN	INTEGER	1 to 4085	-
QINQCOS	INTEGER	0 to 7	PON priority or COS
DHCP REMOTEID	OCTET STRING	STRING (10)	DHCP remote tag address
QOSFLAG	INTEGER	1: enable 2: disable	Indicates whether to enable the QoS function for the WAN connection.
BINDPORTNO	INTEGER	1 - 4 indicates LAN1 to LAN4; 101 - 104 indicates SSID1 to SSID4.	Binding LAN port
UPNP	INTEGER	0: disable 1: enable	UPNP switch

## Example

Query the WAN connection service information of the ONU (having no management IP address) with MAC address being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

### ◆ Command issued

```
LST-ONUWANSERVICECFG::OLTID=10.78.191.100,PONID=NA-NA-18-4,
ONUIDTYPE=MAC,ONUID=FHTT01e821a0:CTAG::;
```

### ◆ Response message

```
FH_10.82.25.73 2013-02-05 16:52:02
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=1
```

List of Onu Wan service cfg:

```
-----
SVCNAME CONNMODE CONNTYPE VLANID VLANCOS NATFLAG
```

```

IPOBTAINTYPE STATICIPADDRESS STATICIPSUBNET STATICGATEWAY
MASTERDNS SLAVEDNS PPPOEPROXYFLAG PPPOEUSERNAME
PPPOEPASSWD PPPOESVCNAME PPPOEMODE QOSFLAG BINDPORTNO
route_tr069_internet_vid_2 3 2 2 5 1 2 192.168.1.5
255.255.0.0 192.168.1.1 3.3.3.3 4.4.4.4 2
1234567890123456789012345678901
1234567890123456789012345678901 -- 1 1 1
-----
;

```

## Related Command

None

## 6.3.11 Restarting an ONU (RESET-ONU)

### Function Description

This command is used for restarting an ONU.

### Command Format

```

RESET-ONU::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index][,portid=port-id]:CTAG::
[RESETTYPE=resettype];

```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID or ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
PORTID	OCTET STRING	Size (128)	Locate a card through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information. For example, with <b>NA-NA-X-0</b> entered, the card to be restarted is located.	Optional. It is required for restarting a line card or the main control unit of the ONU that has a management IP address.
RESET-TYPE	INTEGER	0 or 1	The value is 0 or 1. 0 indicates restarting the entire system; 1 indicates restarting a line card or the main control unit.	Optional. If it is not specified, the entire system will be restarted.

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None



## Example

Example 1: Restart the ONU (having no management IP address) with MAC address being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

◆ **Command issued**

```
RESET-ONU::OLTID=10.78.191.100,PONID=NA-NA-18-4,ONUIDTYPE=MAC,  
ONUID=FHTT01e821a0:CTAG::;
```

◆ **Response message**

```
FH_10.82.25.73 2013-02-21 14:52:34  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

Example 2: Restart the ONU (having a management IP address) whose IP address is 10.78.191.119.

◆ **Command issued**

```
RESET-ONU::OLTID=10.78.191.100,PONID=NA-NA-18-4,ONUIDTYPE=MAC,  
ONUID=FHTT01e821a0:CTAG::;
```

◆ **Response message**

```
FH_10.82.25.73 2013-02-21 14:52:34  
M CTAG COMPLD  
EN=0 ENDESC=No error  
;
```

## Related Command

None

## 6.3.12 Querying the IP Address / Range Allocated to a User by Wi-Fi (LST-USERDHCPSEVER)

### Function Description

This command is used for querying the IP address or range allocated to a user by Wi-Fi.

## Command Format

```
LST-USERDHCPSEVER::ONUIP=onu_name|OLTID=olt_name[,  
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = List of user DHCP server cfg:  
LANIP ENABLE DHCPSTART DHCPEND DHCPPRIDNS DHCPSECDNS DHCPGATEWAY
```

## Output Parameter

Parameter	Data Type	Value Range	Description
LANIP	OCTET STRING	Size (128)	The value (IP address) should be in the same network segment as the DHCPSTART and DHCPEND.
ENABLE	OCTET STRING	Size (128) Enable; Disable	Indicates whether to enable the configured IP address.
DHCPSTART	OCTET STRING	Size (128)	Start IP address of DHCP, which should be smaller than the end IP address of DHCP.
DHCPEND	OCTET STRING	Size (128)	End IP address of DHCP
DHCPPRIDNS	OCTET STRING	Size (128)	Active DNS server of DHCP
DHCPSECDNS	OCTET STRING	Size (128)	Standby DNS server of DHCP
DHCPGATEWAY	OCTET STRING	Size (128)	DHCP default gateway

## Example

Query the IP address or range allocated to a user by Wi-Fi of the ONU (having no management IP address) with MAC being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

### ◆ Command issued

```
LST-USERDHCPSEVER::OLTID=10.78.191.100,PONID=NA-NA-18-4,ONUIDTYPE=MAC,
ONUID=FHTT01e821a0:CTAG::;
```

### ◆ Response message

```
FH_10.82.25.73 2013-02-22 17:03:25
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
```

List of user DHCP server cfg:

```
-----
LANIP ENABLE DHCPSTART DHCPEND DHCPPRIDNS DHCPSECDNS DHCPGATEWAY
192.168.1.1Enable192.168.1.2 192.168.1.2530.0.0.0 0.0.0.0
192.168.1.1
-----
;
```

## Related Command

None

### 6.3.13 Modifying the IP Address / Range Allocated to a User by Wi-Fi (CFG-USERDHCPSEVER)

## Function Description

This command is used for modifying the IP address or range allocated to the user by Wi-Fi.

## Command Format

```
CFG-USERDHCPSEVER::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index]:CTAG::
LANIP=lan_ip,ENABLE=enable_value,DHCPPPOOLSTART=dhcp_start_value,
DHCPPPOOLEND=dhcp_end_value,DHCPPRIDNS=pri_dns,DHCPSECDNS=sec_dns,
DHCPGATEWAY=gateway_value,DHCPMASK=mask_value;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
LANIP	OCTET STRING	Size (128)	The value (IP address) should be in the same network segment as the DHCPPOOLSTART and DHCPPOOLEND.	Required
ENABLE	OCTET STRING	Size (128) true / false	Indicates whether to enable the configured IP address.	Required
DHCPPOOL-START	OCTET STRING	Size (128)	Start IP address of DHCP, which should be smaller than the end IP address of DHCP.	Required
DHCPPOOL-END	OCTET STRING	Size (128)	End IP address of DHCP	Required
DHCPPRDN-S	OCTET STRING	Size (128)	Active DNS server of DHCP	Required
DHCPSECD-NS	OCTET STRING	Size (128)	Standby DNS server of DHCP	Required
DHCPGATE-WAY	OCTET STRING	Size (128)	DHCP default gateway	Required
DHCPMASK	OCTET STRING	Size (128)	DHCP mask	Required

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the IP address or range allocated to a user by Wi-Fi of the ONU (having no management IP address) with MAC being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

### ◆ Command issued

```
CFG-USERDHCPSEVER::OLTID=10.78.191.100,PONID=NA-NA-18-4,ONUIDTYPE=MAC,
ONUID=FHTT01e821a0:CTAG::LANIP=10.78.11.6,ENABLE=true,
DHCPPPOOLSTART=10.78.11.3,DHCPPPOOLEND=10.78.11.9,DHCPPRIDNS=6.6.6.6,
DHCPSECDNS=5.5.5.5,DHCPGATEWAY=10.78.11.1,DHCPMASK=255.255.0.0;
```

### ◆ Response message

```
FH_10.82.25.73 2013-02-22 17:05:44
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 6.3.14 Querying the Web Interface Username and Password (LST-WEBADMINISTRATOR)

### Function Description

This command is used for querying the username and password of the web interface.

### Command Format

```
LST-WEBADMINISTRATOR::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address.	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID, ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER).	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

```
Title = List of web administrator cfg:
WEBUSERNAME WEBPASSWORD GROUP
```

## Output Parameter

Parameter	Data Type	Value Range	Description
WEBUSERNAME	OCTET STRING	Size (128)	Web username
WEBPASSWORD	OCTET STRING	Size (128)	Web password
GROUP	OCTET STRING	Size (128) Admin	Admin indicates the administrator.

## Example

For example, query the Web interface username and password of the ONU (having no management IP address) with MAC being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

### ◆ Command issued

```
LST-WEBADMINISTRATOR::OLTID=10.78.191.100,PONID=NA-NA-18-4,
ONUIDTYPE=MAC,ONUID=FHTT01e821a0:CTAG::;
```

### ◆ Response message

```
FH_10.82.25.73 2013-02-22 17:07:31
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
```

List of web administrator cfg:

```
-----
WEBUSERNAME WEBUSERNAME GROUP
admin admin Admin
-----
;
```

## Related Command

None

## 6.3.15 Modifying the Web Interface Username and Password (CFG-WEBADMINISTRATOR)

### Function Description

This command is used for modifying the username and password of the web interface.

### Command Format

```
CFG-WEBADMINISTRATOR::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index]:CTAG::
[WEBUSERNAME=user_name][,WEBPASSWORD=web_password];
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
WEBUSER-NAME	OCTET STRING	Size (128)	Web username, containing the alphanumeric characters and the symbols ., /, - or _.	(Optional) Default value: admin
WEBPASS-WORD	OCTET STRING	Size (128)	Web password, containing the alphanumeric characters and the symbols ., /, - or _.	(Optional) Default value: admin

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Modify the Web interface username and password of the ONU (having no management IP address) with MAC being FHTT01e821a0. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

### ◆ Command issued

```
CFG-WEBADMINISTRATOR::OLTID=10.78.191.100,PONID=NA-NA-18-4,
ONUIDTYPE=ONU_NUMBER,ONUID=1:CTAG::WEBUSERNAME=user_name,
WEBPASSWORD=web_password;
```

### ◆ Response message

```
FH_10.82.25.73 2013-02-22 17:07:42
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 6.3.16 Restoring an ONU to Factory Default Settings (RESTORE-DEFAULTCFG)

### Function Description

This command is used for restoring an ONU to factory default settings.

### Command Format

```
RESTORE-DEFAULTCFG::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index]:CTAG::;
```

### Supported Device

- ◆ OLT: AN5516 series, AN5116 series.
- ◆ ONU: AN5506-04-F1.

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Example 1: Restore the ONU (having no management IP address) with MAC address being FHTT01e821a0 to factory default settings. The ONU is connected to PON port 4 in slot 18 of the OLT whose IP address is 10.78.191.100.

◆ Command issued

```
RESTORE-DEFAULTCFG::OLTID=10.78.191.100,PONID=NA-NA-18-4,ONUIDTYPE=MAC,
ONUID=FHTT01e821a0:CTAG::;
```

◆ **Response message**

```
FH_10.82.25.73 2013-02-22 17:16:32
M CTAG COMPLD
EN=0 ENDESC=No error
;
```

## Related Command

None

## 6.3.17 Querying the Port Type (LST-PORTTYPE)

### Function Description

This command is used to query the type of ports on the line card.

### Command Format

```
LST-PORTTYPE::[ONUIP=onu-name] | [OLTID=olt-name[, PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index] [, BOARDID=BOARD_location]]:CTAG::;
```

◆ **Query the port types of the ONU that has a management IP address:**

```
LST-PORTTYPE::ONUIP=onu-name[, BOARDID=BOARD_location]:CTAG::;
```

◆ **Query all the port types of the ONU that does not have a management IP address:**

```
LST-PORTTYPE::OLTID=olt-name, PONID=ponport_location, ONUIDTYPE=onuid-
type, ONUID=onu-index:CTAG::;
```

◆ **Query the port types of all the OLT's slots or those of a specified slot:**

```
LST-PORTTYPE:: OLTID=olt-name[, BOARDID=BOARD_location]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name	OLT or the ONU that has no management IP address. Required.

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the <b>ONUID</b> , the <b>PONID</b> is optional.
ONUIDTYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
BOARDID	OCTET STRING	Size (128) Cabinet rack - shelf - slot	Locate the card through <b>rack - shelf - slot</b> . Enter NA if the corresponding information is not specified. To only specify the shelf number, enter <b>NA-NA-NA</b> .	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT. Query of the parameter returns an IP address.
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.
ONUID	OCTET STRING	Size (128)	When a single ONU is queried, the input parameter is returned.
PORTNUM	INTEGER	0 to 64	Port number
PORTTYPE	OCTET STRING	Size (128)	Card port type

## Example

Query the port type of PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
LST-PORTTYPE::OLTID=10.171.0.106,PONID=NA-NA-12-9,ONUIDTYPE=MAC,
ONUID=FHHT033466f8:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.552019-10-0911:58:48
```

```
MCTAGCOMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=6
```

```
listofallonuportinfo:
```

```
-----
OLTIDPONIDONUIDPORTNUMPORTTYPE
10.171.0.106NA-NA-12-9FHHT033466f81LAN
10.171.0.106NA-NA-12-9FHHT033466f82LAN
10.171.0.106NA-NA-12-9FHHT033466f83LAN
10.171.0.106NA-NA-12-9FHHT033466f84LAN
10.171.0.106NA-NA-12-9FHHT033466f81FXS
10.171.0.106NA-NA-12-9FHHT033466f82FXS
-----
```

```
;
```

## Related Command

None

## 6.3.18 Querying Information About an Optical Module at a PON Port (LST-OPTICALMODULEINFO)

### Function Description

This command is used to query the information about an optical module at a PON port.

### Command Format

```
LST-OPTICALMODULEINFO::OLTID=olt_name,PONID=ponport_location:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	STRING	Size (0 to 16)	IP address, name or ID of the OLT
PONID	STRING	slot-port	PON port location information. Locate a port through the information <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	STRING	Size (0 to 16)	IP address, name or ID of the OLT
PONID	STRING	slot-port	PON port location information. Locate a port through the information <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.
PONTECH- NICAL- STANDARD	STRING	Size (16)	PON technology system (the optical module's port type, including but not limited to EPON, GPON and XG-PON. For details, refer to the corresponding field in the optical module serial number information protocol.)
VENDOR- NAME	STRING	Size (16)	Vendor name
VEN- DORPN	STRING	Size (16)	Vendor model number
VEN- DORSN	STRING	Size (16)	Vendor serial number
ONLINES- TATUS	INTEGER	Size (1)	On-line status
OPTMODU- LETYPE	INTEGER	Size (2)	Optical module type (indicating the optical module type, e.g. CLASS B/C plus, contained in the optical module serial number information)
TEMPERA- TURE	FLOAT	Size (2)	Optical module temperature

Parameter	Data Type	Value Range	Description
VOLTAGE	FLOAT	Size (2)	Optical module voltage
BIASCURRENT	FLOAT	Size (2)	Bias current
TXPOWER	FLOAT	Size (2)	Tx optical power
DATECODE	STRING	Size (7)	Date of manufacture
VENDOR-REV	STRING	Size (16)	Version information

## Example

Query the optical module parameter information of the PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
LST-OPTICALMODULEINFO::OLTID=10.171.0.106,PONID=NA-NA-12-9:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.552019-10-0912:44:04
```

```
MCTAGCOMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
PonOpticalModuleSNInfo
```

```
-----
OLTIDPONIDPONTECHNICALSTANDARDVENDORNAMEVENDORPN
VENDORSNONLINESTATUSOPTMODULETYPETEMPERATURE VOLTAGE
BIASCURRENTTXPOWERDATECODE VENDORREV
10.171.0.1061-1-12-9--SUPERXONLTD. SOEB4366-PSGB
--2absent0.000.000.000.00
-----
;
```

## Related Command

None



## 6.3.19 Querying the Uplink Port MAC Address Table (LST-OLTUPLINKMAC)

### Function Description

This command is used to query the uplink port MAC addresses.

### Command Format

```
LST-OLTUPLINKMAC::OLTID=olt_name:CTAG::;
```

### Input Parameter

Parameter (Recommended)	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

Parameter (Recommended)	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Indicates the parameter entered by the user.
PORTID	OCTET STRING	Size (128)	Port number Uplink port, for example, 19: 1 A Trunk group, for example, trunk:X	-

Parameter (Recommended)	Data Type	Value Range	Description	Remark
PORTTYPE	OCTET STRING	GE electrical port (1000M electrical port) GE optical port (1000M optical port) 10GE optical port (10GM optical port)	Port type	The port type indicated in the uplink port attributes in Section 5.2.1 This field is null for a TRUNK group which has no actual port type.
MAC	OCTET STRING	Size (64)	MAC address format is <b>XX-XX-XX-XX-XX-XX</b> .	-
MACTYPE	INTEGER	Dynamic, Static	MAC type	The protocol applied to the device is to be updated.
VLANID	INTEGER	1 to 4096	VLAN ID	-

## Example

Query the MAC address table of the uplink port of the OLT whose IP address is 10.190.40.156.

### ◆ Command issued

```
LST-OLTUPLINKMAC::OLTID=10.190.40.156:CTAG::;
```

### ◆ Response message

```
;LST-OLTUPLINKMAC::OLTID=10.190.40.156:CTAG::;
```

```
FH_10.170.110.27 2018-01-25 01:20:04
M CTAG COMPLD
total_blocks=3
block_number=1
block_records=50
```

List of olt mac Info

OLTID	PORTID	PORTTYPE	MAC	MACTYPE	VLANID	
10.190.40.156	uplink: 19:3	1000M optical port	70-e2-84-09-32-08	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-50-56-90-dd-b0	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-50-56-90-ec-af	Dynamic	999	
10.190.40.156	uplink: 20:5	1000M optical port	00-10-94-00-d0-02	Dynamic	11	
10.190.40.156	uplink: 20:4	1000M optical port	00-1f-e2-10-e3-a5	Dynamic	1000	
10.190.40.156	uplink: 19:3	1000M optical port	3c-97-0e-30-9b-66	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	ac-1f-6b-4a-93-d6	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	6c-0b-84-a5-1c-e1	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-e0-4b-44-cb-cd	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-1f-d0-4d-ac-29	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-60-f3-22-e4-8c	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-0c-29-94-23-b4	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-0c-29-c4-6c-6b	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-39-39-84-76-22	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	00-32-43-22-03-04	Dynamic	999	
10.190.40.156	uplink: 19:3	1000M optical port	64-64-9b-88-f0-f7	Dynamic	999	

## Related Command

None

## 6.3.20 Querying the Uplink Multicast Statistics Information (LST-UPLINKMULTICASTINFO)

### Function Description

This command is used to query the uplink multicast statistics information.

### Command Format

LST-UPLINKMULTICASTINFO::OLTID=olt\_name,PONID=port\_id:CTAG::;

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID.	Required
PONID	OCTET STRING	Size (128)	The slot number and PON port number of the uplink card: <b>NA-NA-SlotNo</b>	If the parameter entered does not include the ONUID, the PONID is optional.

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID.
PORTID	OCTET STRING	Size (64)	The slot number and PON port number of the uplink card
PortStatus	OCTET STRING	online offline	Port status
OpticStatus	OCTET STRING	normal fail	Optical path status
DownMulti-castSpeed	FLOAT	-	Downlink multicast speed

## Example

Query the uplink multicast information of the OLT whose IP address is 10.171.0.31.

### ◆ Command issued

```
LST-UPLINKMULTICASTINFO::OLTID=10.171.0.31:CTAG::;
```

### ◆ Response message

OLTID	PONID	PortStatus	OpticStatus	DownMulticastspeed
10.171.0.31		1-1-19-1	offline normal	0.00
10.171.0.31		1-1-19-2	online normal	0.00
10.171.0.31		1-1-19-3	offline normal	0.00
10.171.0.31		1-1-19-4	offline normal	0.00
10.171.0.31		1-1-19-5	offline normal	0.00

## Related Command

None

## 6.3.21 Querying the Uplink Port Utilization (LST-UPLINKUTILIZATION)

### Function Description

This command is used to query the OLT uplink port utilization.

### Command Format

```
LST-UPLINKUTILIZATION::OLTID=olt-ip,PID=NA-NA-slot-port:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID.	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
UpCrcError	OCTET STRING	-	Count of uplink CRC-32 errors
DownCrcError	OCTET STRING	-	Count of downlink CRC-32 errors
RxPower	OCTET STRING	-40, 10	Rx optical power Unit: dB
TxPower	OCTET STRING	-40, 10	Tx optical power Unit: dB
UpBandwidthUtilization	OCTET STRING	-	Uplink bandwidth utilization
DownBandwidthUtilization	OCTET STRING	-	Downlink bandwidth utilization
CurrTxBias	OCTET STRING	0, 131	Bias current Unit: mA.

## Example

Query the usage of the uplink port located on PON port 1 in slot 20 of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-UPLINKUTILIZATION::OLTID=10.182.1.105,PONID=NA-NA-20-1:CTAG::;
```

### ◆ Response message

```
;LST-UPLINKUTILIZATION::DID=10.182.1.105,PID=20-1:CTAG::;

FH_10.170.110.27 2018-01-24 04:07:33
M CTAG_COMPLD
  total_blocks=1
  block_number=1
  block_records=1

list of uplink port utilization info
-----
UpCrError DownCrError RxPower TxPower UpBandwidthUtilization DownBandwidthUtilization CurrTxBias
0 0 0.00 0.00 0.00 0.00 0.00
-----
;■
```

## Related Command

None

## 6.3.22 Querying the Uplink Port Status (LST-UPLINKPORTSTATE)

### Function Description

This command is used to query the OLT uplink port status.

### Command Format

```
LST-UPLINKPORTSTATE::OLTID=olt_name,PONID=ponport_location:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
PortStatus	OCTET STRING	online offline	Online status

## Example

Query the status of the uplink port connected to PON port 1 in slot 19 of the OLT whose IP address is 10.171.0.31.

### ◆ Command issued

```
LST-UPLINKPORTSTATE::OLTID=10.171.0.31,PONID=NA-NA-19-1:CTAG::;
```

### ◆ Response message

```
;LST-UPLINKPORTSTATE::DID=10.171.0.31,PID=19-1:CTAG::;
FH_127.0.0.1 2018-04-18 15:29:04
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=1

list of uplink port status info
-----
OLTID  PONID  PortStatus
10.171.0.31  1-1-19-1  offline
-----
```

## Related Command

None

### 6.3.23 Querying the Uplink Port Information (LST-UPLINKPORTINFO)

#### Function Description

This command is used to query the uplink port information.

#### Command Format

```
LST-UPLINKPORTINFO::[ONUIP=onu-name] | [[OLTID=olt-name[,  
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index]][,  
BOARDID=BOARD_location]]:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME, MAC, LOID, ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional



Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
BOARDID	OCTET STRING	Size (128)	Cabinet rack - shelf - slot	Required. Locate the card through <b>rack - shelf - slot</b> . Enter <b>NA</b> if the corresponding information is not specified.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
UPLINK-PORT	OCTET STRING	Size (128)	-
ADMIN-STATE	OCTET STRING	disable enable	-
NEGOTIA-TION	OCTET STRING	disable enable	-
SPEED	OCTET STRING	Auto 10M 100M 1000M 10000M	-
DUPLEX	OCTET STRING	Full Half Auto Auto-Full Auto-Half	Working mode Full: full duplex Half: half duplex Auto: auto-negotiation Auto-Full: auto-negotiation - full duplex Auto-Half: auto-negotiation - half duplex

## Example

Query the information of the uplink port in slot 19 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
LST-UPLINKPORTINFO::OLTID=10.171.0.106,BOARDID=NA-NA-19:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.552019-10-0914:28:21
```

```
MCTAGCOMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=5
```

```
listofuplinkportinfo:
```

```
-----
```

```
UPLINKPORTADMINSTATENEGOTIATIONSPEEDDUPLEX
```

```
1-1-19-1EnableEnable1000Mfull
```

```
1-1-19-2EnableEnable1000Mfull
```

```
1-1-19-3EnableEnable1000Mfull
```

```
1-1-19-4EnableEnable1000Mfull
```

```
1-1-19-5EnableDisable1000Mfull
```

```
-----
```

```
;
```

## Related Command

None

## 6.3.24 Querying the Assured Bandwidth of a PON Port (LST-PONBW)

### Function Description

This command is used to query the remaining DBA bandwidth and the maximum assured bandwidth under a PON port of a GPON line card.

### Command Format

```
LST-PONBW::OLTID=olt-name,PONID=ponport_location:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
MAXGB	INTEGER	-	Maximum assured bandwidth
LFGBW	INTEGER	-	Remaining assured bandwidth

## Example

Query the remaining DBA bandwidth and maximum assured bandwidth of PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
LST-PONBW::OLTID=10.171.0.106,PONID=NA-NA-12-9:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.552019-10-0913:12:07
MCTAGCOMPLD
    total_blocks=1
    block_number=1
    block_records=1
listofPON BWinfo:
-----
OLTIDPONIDMAXGBLFGBW
10.171.0.106-- 120000119504
-----
;
```

#### Related Command

None

### 6.3.25 Querying the MAC Address of the Subscriber Under a PON Port (LST-PONMACADDRESS)

#### Function Description

This command is used to query the MAC address of the subscriber under a single PON port.

#### Command Format

```
LST-PONMACADDRESS::OLTID=olt_name,PONID=ponport_location:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	-
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	-

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
VLAN	INTEGER	0 to 4095	VLAN
MAC	OCTET STRING	Size (128)	MAC address in the format of XX-XXXX-XX-XX-XX
ONUID	INTEGER	0 to 128, 0xffff	ONU authorization number

## Example

Query the MAC address of the subscriber under PON port 8 in slot 17 of the OLT whose IP address is 10.190.41.70.

### ◆ Command issued

```
LST-PONMACADDRESS::OLTID=10.190.41.70,PONID=NA-NA-17-8:CTAG::;
```

### ◆ Response message

```
FH_127.0.0.1 2017-09-20 16:13:59
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=2
```

```
List of PON port MAC address
```

```
-----
OLTID          PONID          MAC          VLAN    ONUID
10.190.41.70   1-1-17-8       02-10-00-02-24-08   65535   1
10.190.41.70   1-1-17-8       02-10-18-01-24-01   65535   2
-----
```

```
;
```

## Related Command

None

## 6.3.26 Querying the CATV Rx Optical Power at the ONU Side (LST-CATVOPTPOWER)

## Function Description

This command is used to query the CATV Rx optical power at the ONU side.

## Command Format

```
LST-CATVOPTPOWER::ONUIP=onu-name|OLTID=olt_name,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for querying the OLT PON port or the ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONU- TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONU- ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	STRING	Size (0 to -16)	IP address, name or ID of the OLT
PONID	STRING	slot-port	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONU- TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_ NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER
ONU- ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_ NUMBER.
CATV- RX- POWER	FLOAT	Size (6)	CATV Rx optical power

## Example

Query the CATV Rx optical power of PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

◆ **Command issued**

```
LST-CATVOPTPOWER::OLTID=10.171.0.106,PONID=NA-NA-12-9,ONUIDTYPE=MAC,
ONUID=FHTT91fbe7c0:CTAG::;
```

◆ **Response message**

```
FH_10.170.95.552019-10-0914:31:10
MCTAGCOMPLD
    total_blocks=1
    block_number=1
    block_records=1
listofCATVRXopticalpowerinfo:
-----
OLTIDPONIDONUIDTYPE ONUIDCATVRXOPTPOWER
10.171.0.1061-1-12-9MACFHTT91fbe7c0-40.00
-----
;
```

**Related Command**

None

## **6.3.27 Querying the Relationship Between the NGN Uplink Data and Local VLAN (LST-NGNUPLINKANDVLAN)**

**Function Description**

This command is used to query the relationship between the NGN uplink data and local VLAN.

**Command Format**

```
LST-NGNUPLINKANDVLAN::[ONUIP=onu-name] | [ [OLTID=olt-name[,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index]] [,
BOARDID=BOARD_location]]:CTAG::;
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
SVCNAME	OCTET STRING	-	-
SVCVLAN	INTEGER	-	-
SIPPROSERVER	OCTET STRING	-	-

## Example

Query the relationship between the ONU NGN uplink data and local VLAN. The ONU (having no management IP address) is connected to PON port 1 in slot 5 of the OLT whose IP address is 10.171.0.16; the ONUID is 54-4b-40-76-6c-28; the authentication mode is MAC.

### ◆ Command issued

```
LST-NGNUPLINKANDVLAN::OLTID=10.171.0.16,PONID=NA-NA-5-1,ONUIDTYPE=MAC,
ONUID=54-4b-40-76-6c-28:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-02 21:03:11
```

M CTAG COMPLD

total\_blocks=2

block\_number=1

block\_records=50

list of ngn uplink and vlan info:

```
_____
_____
_____
```

OLTID SVCNAME SVCVLAN SIPPROSERVER

10.171.0.16 data\_shuju 10 0.0.0.0

10.171.0.16 data\_shuju 11 0.0.0.0

10.171.0.16 data\_shuju 12 0.0.0.0

10.171.0.16 data\_shuju 13 0.0.0.0

10.171.0.16 data\_shuju 10 6.6.6.6

```
10.171.0.16 data_shuju 11 6.6.6.6
10.171.0.16 data_shuju 12 6.6.6.6
10.171.0.16 data_shuju 13 6.6.6.6
10.171.0.16 data_shuju 14 6.6.6.6
10.171.0.16 data_shuju 15 6.6.6.6
10.171.0.16 data_shuju 16 6.6.6.6
10.171.0.16 data_shuju 17 6.6.6.6
10.171.0.16 data_shuju 18 6.6.6.6
```

---

---

---

Related Command

None

**6.3.28      Querying the Multicast Address Table (LST-IGMPADDRTAB)**

Function Description

This command is used to query the multicast address table.

Command Format

```
LST-IGMPADDRTAB:: [ONUIP=onu-name] | [ [OLTID=olt-name[,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index]] [,
BOARDID=BOARD_location]] :CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
GROUPADDR	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address
GROUPMEMBER-SLOT	INTEGER	-	-
GROUPMEMBER-PORT	INTEGER	-	-

## Example

Query the multicast address table of the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
LST-IGMPADDRTAB::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 09:06:08
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=0

list of IGMP Address table:

```
_____
_____
_____
```

GROUPADDR GROUPMEMBERSLOT GROUPMEMBERPORT

```
_____
_____
_____
```

## Related Command

None

## 6.3.29 Querying the ONU Private IP Address Assigned to a User (LST-ONUASSIGNUSERIP)

### Function Description

This command is used to query the private IP address assigned to a user by the ONU.

### Command Format

```
LST-ONUASSIGNUSERIP::ONUIP=onu-name|OLTID=olt-name[,  
PONID=ponport_location][,ONUIDTYPE=id-type,ONUID=onu-index]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONU-ID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID and ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONU-ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
IPADDRESS	OCTET STRING	Size (32)	IP address

## Example

Read the private IP address assigned to a user by the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
LST-ONUASSIGNUSERIP::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONU-ID-TYPE=MAC,
ONU-ID=FHTT03317f08:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 09:11:42
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

list of onu assign user ip

---



---



---

IPADDRESS

0.0.0.0

---



---



---

#### Related Command

None

### 6.3.30 Querying the MAC Address of an ONU (LST-ONUMACADDRESS)

#### Function Description

This command is used to query the list of MAC addresses of the device connected to an ONU (MAC address learning table). The query is at the ONU level. For the AN5006-20, the query can be at the NE level.

#### Command Format

LST-ONUMACADDRESS::ONUIP=onu\_name|OLTID=olt\_name, [PONID=NA-NA-slotno-ponno], ONUIDTYPE=onuidtype, ONUID=onuid, VLAN=vlan:CTAG::;

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name.	OLT or the ONU that has no management IP address. Required.



Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
VLAN	INTEGER	0 to 4095	VLAN number
MAC	OCTET STRING	Size (128)	MAC address format is <b>XX-XX-XX-XX-XX-XX</b> .
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.
WIFISIGNAL	INTEGER	0 to 200	WIFI signal intensity

## Example

Query the list of MAC addresses of the devices under the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by the MAC address.

◆ Command issued

```
LST-ONUMACADDRESS::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

◆ Response message

```
FH_10.170.162.31 2018-06-20 09:16:32
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

List of onu mac address

```
_____  
_____  
_____
```

VLAN MAC PORTID WIFISIGNAL

-1bc-98-89-31-7f-08NA-NA-NA-1 –

```
_____  
_____  
_____
```

## Related Command

None

## 6.3.31 Querying the QinQ Domain Bound with the PON Port (GET-PON-VLAN)

### Function Description

This command is used for querying the QinQ domain of the PON port.

## Command Format

```
GET-PON-VLAN::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-
type,ONUID=onu-index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for the OLT or the ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_NUMBER	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
SVLAN	INTEGER	0 to 4095	Outer VLAN of the voice service
CVLAN	INTEGER	0 to 4095	Inner VLAN of the voice service
UV	INTEGER	0 to 4095	User-side VLAN

## Example

Query the QinQ domain bound with the PON port of the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

## ◆ Command issued

```
GET-PON-VLAN::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

## ◆ Response message

```
FH_10.170.162.31 2018-06-20 09:42:26
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

List of pon vlan info

```
_____
_____
_____
```

OLTID PONID SVLAN CVLAN UV

10.171.0.28 1-1-6-1900 48 48

---



---



---

#### Related Command

None

### 6.3.32 Querying the ONU Status Data (LST-LOOPDETECT)

#### Function Description

This command is used to query the ONU status data, i.e., the test status of the port loop detection.

#### Command Format

LST-LOOPDETECT::OLTID=olt-name,PONID=ponport\_location,ONUIDTYPE=onuid-type,ONUID=onu-index,ONUPORT=onu-port:CTAG::;

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for the OLT or the ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUID-TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_NUMBER	Required for an ONU that has no management IP address

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through <b>rack - shelf - slot - port number</b> . Enter <b>NA</b> for the corresponding unspecified information.
STATUS	INTEGER	0: deactivate 1: activate	Indicates whether the loop detection is enabled.
TIMEINTER-VAL	INTEGER	10 to 3600	Time interval for loop detection (unit: second)

## Example

Query the port loop detection status of the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

◆ Command issued

```
LST-LOOPDETECT::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

◆ Response message

```
FH_10.170.162.31 2018-06-20 09:44:21
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=4

list of ONU loop detect:

```
_____
_____
_____
```

ONUPORT STATUS TIMEINTERVAL

1 ENABLE 20

2 ENABLE 20

3 ENABLE 20

4 ENABLE 20

```
_____
_____
_____
```

## Related Command

None

### 6.3.33 Querying the Port Description (LST-ONUपोर्टDESCRIPTION)

#### Function Description

This command is used for querying the port description.

#### Command Format

```
LST-ONUपोर्टDESCRIPTION::ONUIP=onu-name| (OLTID=olt-name[,  
PONID=ponport_location[,ONUIDTYPE=onuidtype,ONUID=onu-index]]) :CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Required for an ONU that has no management IP address



Parameter	Data Type	Value Range	Description	Remark
ONUID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID, ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.

Parameter	Data Type	Value Range	Description
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through the information <b>rack - shelf - slot - port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.
DESCRIPTION	OCTET STRING	Size (128)	Port description

## Example

Query the description information of port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.190.47.137.

### ◆ Command issued

```
LST-ONUPORTDESCRIPTION::ONUIP=10.190.47.137,ONUPORT=NA-NA-2-1:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 10:35:11
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

list of port description info

```

-----
-----
-----

```

ONUIP OLTID PONID ONUID ONUPORT DESCRIPTION

10.190.47.137 -- 1-1-2-1 test4TL1

```

-----
-----
-----

```

## Related Command

None

### 6.3.34 Querying the OLT Port Information (LST-OLTPORT)

#### Function Description

This command is used to query the information about the ports of all local-end line cards on the OLT.

#### Command Format

```
LST-OLTPORT::OLTID=olt-name:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required

#### Response Format

It complies with the query-command response format in [Response Message Format](#).

#### Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.
PORTNAME	OCTET STRING	Size (128)	Port Name
PORTTYPE	OCTET STRING	Size (128)	Port type ◆ PON_PORT ◆ POTS_PORT

## Example

Query the information about the ports of all local-end line cards on the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address.

◆ Command issued

```
LST-OLTPORT::OLTID=10.171.0.28:CTAG::;
```

◆ Response message

```
FH_10.170.162.31 2018-06-20 10:36:02
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=16

list of OLT local link board port info:

---

---

---

OLTID PORTID PORTNAME PORTTYPE

10.171.0.28 NA-NA-6-1 PON1 PON\_PORT

10.171.0.28 NA-NA-6-2 PON2 PON\_PORT

10.171.0.28 NA-NA-6-3 PON3 PON\_PORT

10.171.0.28 NA-NA-6-4 PON4 PON\_PORT

10.171.0.28 NA-NA-6-5 PON5 PON\_PORT

10.171.0.28 NA-NA-6-5 PON5 PON\_PORT

10.171.0.28 NA-NA-6-7 PON7 PON\_PORT

10.171.0.28 NA-NA-6-8 PON8 PON\_PORT

10.171.0.28 NA-NA-6-9 PON9 PON\_PORT

10.171.0.28 NA-NA-6-10 PON10 PON\_PORT

10.171.0.28 NA-NA-6-11 PON11 PON\_PORT

10.171.0.28 NA-NA-6-12 PON12 PON\_PORT

10.171.0.28 NA-NA-6-13 PON13 PON\_PORT

10.171.0.28 NA-NA-6-14 PON14 PON\_PORT

10.171.0.28 NA-NA-6-15 PON15 PON\_PORT

10.171.0.28 NA-NA-6-16 PON16 PON\_PORT

---



---



---

## Related Command

None

## 6.3.35 Querying the Port Information of All ONUs Under the OLT (LST-ONUPORT)

### Function Description

This command is used to query the port information of all the ONUs under the OLT.

### Command Format

```
LST-ONUPORT::ONUIP=onu-name| (OLTID=olt-name[, PONID=ponport_location[,
ONUIDTYPE=onuidtype, ONUID=onu-index]]) :CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME, MAC, LOID, ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.

Parameter	Data Type	Value Range	Description
ONUPORTTYPE	OCTET STRING	Size (128)	ONU port type
ONUNO	INTEGER	0 to 512	ONU authorization number
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the ONU port through <b>cabinet rack - shelf - slot - port number</b> . Enter <b>NA</b> if the corresponding information is not specified.

## Example

Query the port information of the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
LST-ONUPORT::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 10:38:36
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=6
```

```
list of all onu port info:
```

```
-----
OLTID    PONID ONUNO ONUPORT  ONUPORTTYPE
```

```
10.171.0.28 NA-NA-6-1 1 NA-NA-NA-1LAN
```

```
10.171.0.28 NA-NA-6-1 1 NA-NA-NA-2LAN
```

```
10.171.0.28 NA-NA-6-1 1 NA-NA-NA-3LAN
```

```
10.171.0.28 NA-NA-6-1 1 NA-NA-NA-4 LAN
```

```
10.171.0.28 NA-NA-6-1 1 NA-NA-NA-1FXS
```

```
10.171.0.28 NA-NA-6-1 1NA-NA-NA-2FXS
-----
```

## Related Command

None

### 6.3.36 Querying the ONU Information by ONU MAC / LOID (QUERY-ONUINFO)

#### Function Description

This command is used for querying ONU information by ONU MAC / LOID.

#### Command Format

```
QUERY-ONUINFO::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Optional
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Optional
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	Optional
ONUTYPE	OCTET STRING	Size (32)	ONU type	Optional
ONUID	OCTET STRING	Size (64)	Authentication information. ◆ If AUTHTYPE is set to MAC, ONUID is MAC address. ◆ If AUTHTYPE is set to LOID, ONUID is LOID.	Required

#### Response Format

It complies with the query command response format in [Response Message Format](#).



## Output Parameter

Parameter	Data Type	Value Range	Description
System	OCTET STRING	Size (128)	IP address of the ONU having a management IP address, or name of the OLT where the ONU is located
OnuName	OCTET STRING	Size (128)	ONU name
OnuType	OCTET STRING	Size (32)	ONU type
SlotNo	int32	-	Slot number
PonNo	int32	-	PON port number
OnuAuthNo	int32	-	ONU authentication ID
Mac	OCTET STRING	Size (128)	MAC address in the format of <b>XX-XX-XX-XX-XX</b> .
Pwd	OCTET STRING	Size (128)	LOID password
Loid	OCTET STRING	Size (64)	When the MAC authentication is adopted, a dash – will be returned.
SnPwd	OCTET STRING	-	SnPwd

## Example

Query the information of the ONU connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
QUERY-ONUINFO::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 10:41:23
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

list of onu info

```

_____
_____
_____

System OnuName OnuType SlotNo PonNo OnuAuthNo Mac Pwd Loid SnPwd
28NE[13172938]-SLOT[6]-PON[1]-AN5506-04-F1[1]AN5506-04-
F1611FHTT03317f08 -- _____
_____
_____
_____

```

#### Related Command

None

### 6.3.37 Querying the Template Bound with an ONU (LST-ONUBINDPROFILE)

#### Function Description

This command is used for querying the template bound with an ONU.

#### Command Format

```
LST-ONUBINDPROFILE::OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.	If input parameters exclude the ONUID, the PONID is optional.
ONUTYPE	OCTET STRING	Size (32)	ONU type	Optional
ONUID	OCTET STRING	Size (64)	Authentication information. ◆ If AUTHTYPE is set to MAC, ONUID is MAC address. ◆ If AUTHTYPE is set to LOID, ONUID is LOID.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through the information <b>rack - shelf - slot - PON port number</b> . If any part of the information is unavailable, enter <b>NA</b> instead.

Parameter	Data Type	Value Range	Description
ONUNO	INTEGER	0 to 512	ONU authorization number
ONUPROFILE-NAME	OCTET STRING	Size (128)	Template name

## Example

Query the template bound with the ONU with the ID FH05040404 connected to PON port 2 in slot 1 of the OLT with the IP address 10.171.0.29. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
LST-ONUBINDPROFILE::OLTID=10.171.0.29,PONID=NA-NA-1-2,ONUIDTYPE=MAC,
ONUID=FH05040404:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 11:50:31
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

Lst Of bind onu profile Info

---

---

---

ONUIP OLTID PONID ONUNO ONUPROFILENAME

-10.171.0.29 1-1-1-2 4 ZZZ

---

---

---

## Related Command

None

## 6.4 Querying the LAN Information

The following introduces the command and example for querying the LAN information.

### 6.4.1 Querying the LAN Port Information (LST-ONULANINFO)

#### Function Description

This command is used for querying the LAN port status and configuration of an ONU.

#### Command Format

```
LST-ONULANINFO::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=lanport_index:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of lanport info

AdminStatus OperStatus DUPLEX PVID VLANPRIORITY SPEED

## Output Parameter

Parameter	Data Type	Value Range	Description
AdminStatus	OCTET STRING	UP DOWN	Management status
OperStatus	-	UP DOWN	Operating status
DUPLEX	OCTET STRING	Full Half Auto Auto-Full Auto-Half	Working mode
PVID	OCTET STRING	Integer (1-4094)	VLAN ID. The default VLAN ID is adopted.

Parameter	Data Type	Value Range	Description
VLAN-PRIORITY	OCTET STRING	Integer (0-7)	VLAN priority. The default priority is adopted.
SPEED	INTEGER	Auto-negotiation 10M 100M 1000M Auto-10M Auto-100M Auto-1000M	Port rate

## Example

Example 1: Query the information of LAN port 1 of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-ONULANINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-01 10:37:58
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of lan port info
```

```
-----
AdminStatus  OperStatus  DUPLEX  PVID  VLANPRIORITY  SPEED
UP    DOWN    --    4088    0    --
-----
```

Example 2: Query the information of LAN port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-ONULANINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1:CTAG::;
```

### ◆ Response message

```
F FH_10.250.18.133 2010-11-02 10:33:09
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
list of lan port info
-----
AdminStatus  OperStatus  DUPLEX  PVID VLANPRIORITY  SPEED
UP   DOWN    Auto-Half  4088  0   Auto-10M
-----
```

#### Related Command

None

## 6.4.2 Querying the LAN Port Rate Control (LST-LANCAR)

#### Function Description

This command is used for querying the uplink and downlink rate control of an ONU LAN port.

#### Command Format

```
LST-LANCAR::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=lanport_index:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address



Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = list of LAN port rate-limit info
RateLimitUs RateLimitDs
```

## Output Parameter

Parameter	Data Type	Value Range	Description
RateLimitUs	INTEGER	0 to 1000000	Uplink rate limit (unit: kbps)
RateLimitDs	INTEGER	0 to 1000000	Downlink rate limit (unit: kbps)

## Example

Example 1: Query the rate control information of LAN port 1 of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-LANCAR::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-01 10:40:21
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of LAN port rate-limit info
```

```
-----
RateLimitUs      RateLimitDs
1024             2048
-----
```

Example 2: Query the rate control information of LAN port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-LANCAR::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 10:33:28
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of LAN port rate-limit info
```

```
-----
RateLimitUs      RateLimitDs
64               1024
-----
```

## Related Command

None

### 6.4.3 Querying the ETH Performance (LST-LANPERF)

#### Function Description

This command is used for querying the ETH performance information of an OLT uplink port or ONU LAN port.

#### Command Format

```
LST-LANPERF::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],PORTID=lanport_index:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Parameters	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Parameters	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
PORTID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	OLT uplink port or ONU LAN port

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = List of Ethernet performance

OutPkts InPkts OutOctets InOctets CRC UnderSizePkts OverSizePkts InErrors  
OutErrors InDiscards OutDiscards InUnicastPkts InMulticastPkts  
InBroadcastPkts OutUnicastPkts OutMulticastPkts OutBroadcastPkts  
StateChangeCounters

## Output Parameter

Parameter	Data Type	Value Range	Parameters
OutPkts	DOUBLE	0-1.85E19	Number of sent packets
InPkts	DOUBLE	0-1.85E19	Number of received packets
OutOctets	DOUBLE	0-1.85E19	Number of sent bytes
InOctets	DOUBLE	0-1.85E19	Number of received bytes
CRC	DOUBLE	0-1.85E19	Number of received CRC error packets
UnderSizePkts	DOUBLE	0-1.85E19	Number of received undersized packets
OverSizePkts	DOUBLE	0-1.85E19	Number of received oversized packets

Parameter	Data Type	Value Range	Parameters
InErrors	DOUBLE	0-1.85E19	Number of received error packets
OutErrors	DOUBLE	0-1.85E19	Number of unsent error packets
InDiscards	DOUBLE	0-1.85E19	Number of discarded received packets
OutDiscards	DOUBLE	0-1.85E19	Number of discarded sent packets
InUnicastPkts	DOUBLE	0-1.85E19	Number of received unicast packets
InMulticastPkts	DOUBLE	0-1.85E19	Number of received multicast packets
InBroadcastPkts	DOUBLE	0-1.85E19	Number of received broadcast packets
OutUnicastPkts	DOUBLE	0-1.85E19	Number of sent unicast packets
OutMulticastPkts	DOUBLE	0-1.85E19	Number of sent multicast packets
OutBroadcastPkts	DOUBLE	0-1.85E19	Number of sent broadcast packets
StateChangeCounters	INTEGER	0-4294967295	Number of port status changes

## Example

Example 1: Query the performance information of uplink port 1 in slot 29 of the OLT whose IP address is 10.250.18.102.

### ◆ Command issued

```
LST-LANPERF::OLTID=10.250.18.102,PORTID=NA-NA-29-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 11:01:43
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
List of Ethernet performance
-----
OutPkts InPkts OutOctets InOctets CRC UnderSizePkts
```

```

OverSizePkts InErrors OutErrors InDiscards
OutDiscards InUnicastPkts InMulticastPkts InBroadcastPkts
OutUnicastPkts OutMulticastPkts OutBroadcastPkts
StateChangeCounters
0 0 0 0 0 0 0 0 0 0
0 0 0 0 -- 0 0 0
-----

```

**Example 2:** Query the performance information of port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
LST-LANPERF::ONUIP=10.250.18.121,PORTID=NA-NA-4-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-02 09:44:54
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
List of Ethernet performance
```

```

-----
OutPkts InPkts OutOctets InOctets CRC UnderSizePkts
OverSizePkts InErrors OutErrors InDiscards
OutDiscards InUnicastPkts InMulticastPkts InBroadcastPkts
OutUnicastPkts OutMulticastPkts OutBroadcastPkts
StateChangeCounters
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0
-----

```

## Related Command

None

## 6.4.4 Conducting the Broadband Dial-up Emulation Test (TEST-PPPOESIMULATION)

### Function Description

The broadband dial-up emulation test is conducted on a LAN port or DSL port of the MDU, SFU or HGU (bridge) to simulates a user initiating the PPPoE dial-up so as to verify whether the user dial-up service connection can be normally established.

## Command Format

```
TEST-PPPOESIMULATION::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index],
ONUPORT=post_index:CTAG::ACTION=action-type,USERNAME=username,
PASSWORD=password[,VPI=vpi,VCI=vci][,UV=user_vlan][,AUTHMODE=authmode]
[timeout=timeout];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOI ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	-
ACTION	OCTET STRING	Start: Starts the test. Stop: Ends the test. Query: Queries the test.	Test Type	-
USERNAME	OCTET STRING	Size (1 to 64)	Username of the broadband dial-up account	-

Parameter	Data Type	Value Range	Description	Remark
PASSWORD	OCTET STRING	Size (1 to 16)	Password of the broadband dial-up account	-
VPI	INTEGER	0 to 255	VPI corresponding to the broadband access service of the DSL port	Optional
VCI	INTEGER	0 to 65535	VCI corresponding to the broadband access service of the DSL port	Optional
UV	INTEGER	1 to 4094	User-side VLAN	Optional. By default, it is not specified (simulating the UNTAG application).
AUTHMODE	OCTET STRING	AUTO CHAP PAP	Dial-up authentication mode	Optional. Default value: AUTO
TIMEOUT	INTEGER	0 to 300	Testing time duration. Unit: s.	Optional

## Response Format

The format of the response for starting the test is the same as the operation command response format in [Response Message Format](#). The format of the response for querying and ending the test is the same as the query command response format in [Response Message Format](#).

```
Title = result of pppoe simulation
State Conclusion FailReason
```



## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
State	OCTET STRING	In Progress: The test is ongoing. Testend: The test is ended.	Current status	This parameter is returned when the input parameter "Action" is "Stop" or "Query".
Conclusion	INTEGER	1 Success	Indicates the test succeeds.	These two parameters are returned when the input parameter "Action" is "Stop" or "Query". If testing status is "In Progress", the testing result returns –; if the test result is successful, the failure reason returns –.
		2 Failed	Indicates the test fails.	
FailReason	INTEGER	1 PADTimeout	PADI request timeout.	
		2 PADRTimeout	PADR request timeout.	
		3 LCPNegotiationFail	PPP establishing link failed.	
		4 WrongUsernameOrPassword	Username or password error.	
		5 CanNotGetIPAddress	Unable to obtain the IP address.	
		10 TestTimeout	Testing timeout.	
		12: Other	Other causes.	

## Example

Conduct an outgoing call emulation test on POTS port 1 of the ONU (has no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
TEST-PPPOESIMULATION::OLTID=10.171.0.16,PONID=NA-NA-1-1,ONUIDTYPE=MAC,
ONUID=FHTT03317368,ONUPORT=NA-NA-NA-1:CTAG::ACTION=Start,USERNAME=t,
PASSWORD=y;(Start testing)
TEST-PPPOESIMULATION::OLTID=10.171.0.16,PONID=NA-NA-1-1,ONUIDTYPE=MAC,
ONUID=FHTT03317368,ONUPORT=NA-NA-NA-1:CTAG::ACTION=Query,USERNAME=t,
PASSWORD=y;(query status)
```

### ◆ Response message

```
FH_10.170.4.2372015-12-2509:52:06
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

```
FH_10.98.100.16 2014-06-12 17:07:20
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1

result of PPPoESimulation
-----
State Conclusion FailReason
Test end --
-----
;
```

#### Related Command

None

## 6.5 Querying the DSL Information

The following introduces the command and example for querying the DSL information.

### 6.5.1 Querying the ADSL2+ Port Information (LST-ADSLINFO)

#### Function Description

This command is used for querying the status and configuration information of the ADSL port.

#### Command Format

```
LST-ADSLINFO::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=adslport_num:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of adsl port info

OPERSTATUS ADMINSTATUS TM LineType AturRateMode AtucRateMode TGTSNRMGND  
 MAXSNRMGND MINSNRMGND TGTSNRMGNUS MAXSNRMGNUS MINSNRMGNUS FASTMINRATEDS  
 FASTMAXRATEDS FASTMINRATEUS FASTMAXRATEUS INTVMINRATEDS INTVMAXRATEDS  
 INTVMINRATEUS INTVMAXRATEUS INTVDELAYDS INTVDELAYUS

## Output Parameter

Parameter	Data Type	Value Range	Description
OPERSTATUS	String	UP DOWN	Operating status
ADMINSTATUS	String	UP DOWN	Management status
TM	OCTET STRING	See the <a href="#">The List of Parameters</a> .	Actual transfer mode
LineType	OCTET STRING	Fast Interleaved	Line type
AturRateMode	OCTET STRING	Fixed: Indicates fixed rate. AutoAdaptAtStartup: Indicates automatically adapting on startup. AutoAdaptAtRun-ning: Indicates automatically adapting during running.	Atur rate adaptation mode
AtucRateMode	OCTET STRING	Fixed: Indicates fixed rate. AutoAdaptAtStartup: Indicates automatically adapting on startup. AutoAdaptAtRun-ning: Indicates automatically adapting during running.	Atuc rate adaptation mode
TGTSNRMGND	INTEGER	0 to 310	Downlink target noise tolerance Unit: 0.1 dB

Parameter	Data Type	Value Range	Description
MAXSNRMGND	INTEGER	0 to 310	Maximum downlink noise tolerance Unit: 0.1 dB
MINSNRMGND	INTEGER	0 to 310	Minimum downlink noise tolerance Unit: 0.1 dB
TGTSNRMGNUS	INTEGER	0 to 310	Uplink target noise tolerance Unit: 0.1 dB
MAXSNRMGNUS	INTEGER	0 to 310	Maximum uplink noise tolerance Unit: 0.1 dB
MINSNRMGNUS	INTEGER	0 to 310	Minimum uplink noise tolerance Unit: 0.1 dB
FASTMINRATEDS	INTEGER	32 to 32000	Minimum rate of the fast downlink channel. Unit: kbit/s
FASTMAXRATEDS	INTEGER	32 to 32000	Maximum rate of the fast downlink channel Unit: kbit/s
FASTMINRATEUS	INTEGER	32 to 32000	Minimum rate of the fast uplink channel Unit: kbit/s
FASTMAXRATEUS	INTEGER	32 to 32000	Maximum rate of the fast uplink channel Unit: kbit/s
INTVMINRATEDS	INTEGER	32 to 32000	Minimum rate of the interleaved downlink channel Unit: kbit/s
INTVMAXRATEDS	INTEGER	32 to 32000	Maximum rate of the interleaved downlink channel Unit: kbit/s
INTVMINRATEUS	INTEGER	32 to 32000	Minimum rate of the interleaved uplink channel Unit: kbit/s

Parameter	Data Type	Value Range	Description
INTVMAXRATEUS	INTEGER	32 to 32000	Maximum rate of the interleaved uplink channel Unit: kbit/s
INTVDELAYDS	INTEGER	0 to 255	Interleaved downlink delay Unit: ms
INTVDELAYUS	INTEGER	0 to 255	Interleaved uplink delay Unit: ms

## Example

Query the information of the No. 1 ADSL port located in the No. 3 slot of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-ADSLINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 13:54:42
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of adsl port info
-----
OPERSTATUS ADMINSTATUS  TM LineType AturRateMode
AtucRateMode TGTSNRMGND  MAXSNRMGND  MINSNRMGND
TGTSNRMGNUS  MAXSNRMGNUS  MINSNRMGNUS  FASTMINRATEDS
FASTMAXRATEDS FASTMINRATEUS FASTMAXRATEUS INTVMINRATEDS
INTVMAXRATEDS INTVMINRATEUS INTVMAXRATEUS INTVDELAYDS
INTVDELAYUS
DOWN DOWN 3 Interleaved AutoAdaptAtStartup
AutoAdaptAtStartup 6.00 31 0 6.00 31 0 0
100000 0 100000 0 100000 0 100000 16 16
-----
```

## Related Command

None

## 6.5.2 Querying the ADSL2+ Port Performance (LST-ADSLPERF)

### Function Description

This command is used for querying the ADSL link traffic and line real-time information. Before using the command, ensure the ONU is online and the ADSL port is enabled.

### Command Format

```
LST-ADSLPERF::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=adslport_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of adsl port performance

InOctets OutOctets SnrMgnDs SnrMgnUs AtnDs AtnUs OutputPwrDs OutputPwrUs

ChanTxRateDs ChanTxRateUs AttainableRateDs AttainableRateUs

## Output Parameter

Parameter	Data Type	Value Range	Description
InOctets	INTEGER	0 to 2147483647	Number of received bytes
OutOctets	INTEGER	0 to 2147483647	Number of sent bytes
SnrMgnDs	INTEGER	-640 to 640	Downlink noise tolerance Unit: 0.1 dB
SnrMgnUs	INTEGER	-640 to 640	Uplink noise tolerance Unit: 0.1 dB
AtnDs	INTEGER	0 to 630	Downlink power attenuation Unit: 0.1 dB
AtnUs	INTEGER	0 to 630	Uplink power attenuation Unit: 0.1 dB
OutputPwrDs	FLOAT	-310 to 310	Downlink output power Unit: 0.1 dBm



Parameter	Data Type	Value Range	Description
OutputPwrUs	FLOAT	-310 to 310	Uplink output power Unit: 0.1 dBm
ChanTxRateDs	INTEGER	32 to 32000	Tx rate of the downlink channel Unit: Kbit/s
ChanTxRateUs	INTEGER	32 to 32000	Tx rate of the uplink channel Unit: Kbit/s
AttainableRateDs	INTEGER	32 to 32000	Maximum attainable downlink rate Unit: Kbit/s
AttainableRateUs	INTEGER	32 to 32000	Maximum attainable uplink rate Unit: Kbit/s
UpMinTransmitRate	INTEGER	32 to 32000	Minimum uplink transmission rate Unit: Kbit/s
DownMinTransmitRate	INTEGER	32 to 32000	Minimum downlink transmission rate Unit: Kbit/s
UpMaxTransmitRate	INTEGER	64 to 1000000	Maximum uplink transmission rate (i.e. assured rate of the uplink port) Unit: Kbps
DownMax-TransmitRate	INTEGER	64 to 1000000	Maximum downlink transmission rate (i.e. assured rate of the downlink port) Unit: Kbps
LinkRetrain	-	Floating-point number (10B:0)	Count of local-end initialization failures Unit: times
DownSpeed	-	Floating-point number (10B:0)	Downlink real-time rate Unit: Mbps
UpSpeed	-	Floating-point number (10B:0)	Uplink real-time rate Unit: Mbps

## Example

Query the information of ADSL port 1 in slot 3 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-ADSLPERF::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

## ◆ Response message

```
FH_10.250.18.133 2010-11-02 13:54:51
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of adsl port performance
-----
InOctets  OutOctets  SnrMgnDs  SnrMgnUs  AtnDs
AtnUs OutputPwrDs  OutputPwrUs  ChanTxRateDs  ChanTxRateUs
AttainableRateDs  AttainableRateUs
0  1736  0  0  0  0  0  0  0  0  0  0
-----
```

## Related Command

None

### 6.5.3 Querying the ADSL2+ Port Statistics Information (LST-ADSLSTAT)

## Function Description

This command is used for querying the ADSL link quality information, including the initialization information, statistics information and channel statistics information over the current 15 minutes, the current day as well as the past day. Before using the command, ensure the ONU is online and the performance statistics switch is on.

## Command Format

```
LST-ADSLSTAT:: NUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=adslport_num:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of adsl statistics  
 AtucPerfCurr15MinTimeElapsed Curr15MinInits Curr15MinAtucEss  
 Curr15MinAtucLoss Curr15MinAtucSes AtucPerfCurr1DayTimeElapsed  
 Curr1DayInits Curr1DayAtucEss Curr1DayAtucLoss Curr1DayAtucSes  
 AtucPerfPrev1DayTimeElapsed Prev1DayInits Prev1DayAtucEss  
 Prev1DayAtucLoss Prev1DayAtucSes

## Output Parameter

Parameter	Data Type	Value Range	Description
AtucPerfCurr15MinTimeElapsed	INTEGER	0 to 900	Elapsed time of the current 15 minutes
Curr15MinInits	INTEGER	0 to 2147483647	Initialization times over the current 15 minutes
Curr15MinAtucEss	INTEGER	0 to 900	ATUC side errored seconds over the current 15 minutes
Curr15MinAtucLoss	INTEGER	0 to 900	ATUC side signal-loss seconds over the current 15 minutes
Curr15MinAtucSes	INTEGER	0 to 900	ATUC side severely errored seconds over the current 15 minutes
AtucPerfCurr1DayTimeElapsed	INTEGER	0 to 86400	Elapsed time of the current day
Curr1Day Inits	INTEGER	0 to 2147483647	Initialization times over the current day
Curr1Day AtucEss	INTEGER	0 to 86400	ATUC side errored seconds over the current day
Curr1Day AtucLoss	INTEGER	0 to 86400	ATUC side signal-loss seconds over the current day
Curr1Day AtucSes	INTEGER	0 to 86400	ATUC side severely errored seconds over the current day
AtucPerfPrev1DayTimeElapsed	INTEGER	0 to 86400	Elapsed time of the past day
Prev1Day Inits	INTEGER	0 to 2147483647	Initialization times over the past day
Prev1Day AtucEss	INTEGER	0 to 86400	ATUC side errored seconds over the past day

Parameter	Data Type	Value Range	Description
Prev1Day AtucLoss	INTEGER	0 to 86400	ATUC side signal-loss seconds over the past day
Prev1Day AtucSes	INTEGER	0 to 86400	ATUC side severely errored seconds over the past day

## Example

Query the performance statistics information over the current 15 minutes, the current day and the past day of the No. 1 ADSL port located in the No. 3 slot of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-ADSLSTAT::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 13:55:02
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of adsl statistics
-----
AtucPerfCurr15MinTimeElapsed  Curr15MinInits  Curr15MinAtucEss
Curr15MinAtucLoss  Curr15MinAtucSes
AtucPerfCurr1DayTimeElapsed  Curr1DayInits  Curr1DayAtucEss
    Curr1DayAtucLoss  Curr1DayAtucSes AtucPerfPrev1DayTimeElapsed
Prev1DayInits  Prev1DayAtucEss Prev1DayAtucLoss  Prev1DayAtucSes
444  0    0    0    0    10746  --    4.29497e+09
4.29497e+09  0    0    0    0    0    0
-----
```

## Related Command

None

## 6.5.4 Querying the VDSL2 Port Information (LST-VDSLINFO)

### Function Description

This command is used for querying the status and configuration information of the VDSL2 port.

### Command Format

```
LST-VDSLINFO::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=adslport_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of vdsl port info

ADMINSTATUS OPERSTATUS INPDS INPUS RateModeDs RateModeUs ChannelTMode

MAXRATEUS MINRATEUS MAXRATEDS MINRATEDS INTVDELAYUS INTVDELAYDS TGTSNRMGND

MAXSNRMGND MINSNRMGND TGTSNRMGNUS MAXSNRMGNUS MINSNRMGNUS

## Output Parameter

Parameter	Data Type	Value Range	Description
ADMINSTATUS	OCTET STRING	UP DOWN	Management status
OPERSTATUS	String	UP DOWN	Operating status
INPDS	OCTET STRING	0-16, 0.5	Downlink pulse noise protection; unit: symbol
INPUS	OCTET STRING	0-16, 0.5	Uplink pulse noise protection; unit: symbol

Parameter	Data Type	Value Range	Description
RateModeDs	OCTET STRING	Fixed: Indicates fixed rate. AutoAdaptAtStartup: Indicates automatic adaptation upon startup. AutoAdaptAtRunning: Indicates automatic adaptation during operation.	Downlink rate adaptation mode
RateModeUs	OCTET STRING	Fixed: Indicates fixed rate. AutoAdaptAtStartup: Indicates automatic adaptation upon startup. AutoAdaptAtRunning: Indicates automatic adaptation during operation.	Uplink rate adaptation mode
ChannelTMode	OCTET STRING	ATM PTM BOTH	Data channel mode of channel 1
MAXRATEUS	INTEGER	-	Maximum uplink rate of channel 1 (unit: kbps)
MINRATEUS	INTEGER	-	Minimum uplink rate of channel 1 (unit: kbps)
MAXRATEDS	INTEGER	-	Maximum downlink rate of channel 1 (unit: kbps)
MINRATEDS	INTEGER	-	Maximum downlink rate of channel 1 (unit: kbps)
INTVDELAYUS	INTEGER	0 to 63	Maximum uplink interleaved delay (unit: ms)
INTVDELAYDS	INTEGER	0 to 63	Maximum downlink interleaved delay (unit: ms)



Parameter	Data Type	Value Range	Description
TGTSNRMGND	INTEGER	0 to 310	Downlink target noise tolerance (unit: 0.1dB)
MAXSNRMGND	INTEGER	0 to 310	Maximum downlink noise tolerance (unit: 0.1dB)
MINSNRMGND	INTEGER	0 to 310	Minimum downlink noise tolerance (unit: 0.1dB)
TGTSNRMGNU	INTEGER	0 to 310	Uplink target noise tolerance (unit: 0.1dB)
MAXSNRMGNU	INTEGER	0 to 310	Maximum uplink noise tolerance (unit: 0.1dB)
MINSNRMGNU	INTEGER	0 to 310	Minimum uplink noise tolerance (unit: 0.1dB)

## Example

Query the information of VDSL port 1 in slot 1 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-VDSLINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-1-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 13:55:14
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of vdsl port info
-----
ADMINSTATUS  OPERSTATUS  INPDS  INPUS  RateModeDs
RateModeUs   ChannelTMode MAXRATEUS  MINRATEUS
MAXRATEDS    MINRATEDS    INTVDELAYUS INTVDELAYDS
TGTSNRMGND   MAXSNRMGND   MINSNRMGND TGTSNRMGNU
MAXSNRMGNU   MINSNRMGNU
DOWN  DOWN  0.00  0.00  AutoAdaptAtStartup
AutoAdaptAtStartup PTM 28000 64 128000 64 16
16  6.00 31.00 0.006.00 31.00 0.00
-----
```

## Related Command

None

## 6.5.5 Querying the VDSL2 Port Performance (LST-VDSLPERF)

### Function Description

This command is used for querying VDSL link traffic and line real-time information.

### Command Format

```
LST-VDSLPERF::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=vdslport_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of vdsl port performance

InOctets OutOctets SnrMgnDs SnrMgnUs AtnDs AtnUs OutputPwrDs OutputPwrUs

CH1ACTDATARATEDS CH1ACTDELAYDS CH1ACTDATARATEUS CH1ACTDELAYUS

## Output Parameter

Parameter	Data Type	Value Range	Description
InOctets	INTEGER	0 to 2147483647	Number of received bytes
OutOctets	INTEGER	0 to 2147483647	Number of sent bytes
SnrMgnDs	INTEGER	-640 to 630	Downlink noise tolerance Unit: 0.1 dB
SnrMgnUs	INTEGER	-640 to 630	Uplink noise tolerance Unit: 0.1 dB

Parameter	Data Type	Value Range	Description
AtnDs	INTEGER	0 to 1270	Downlink power attenuation Unit: 0.1 dB
AtnUs	INTEGER	0 to 1270	Uplink power attenuation Unit: 0.1 dB
OutputPwrDs	FLOAT	-310 to 310	Downlink output power Unit: 0.1 dBm
OutputPwrUs	FLOAT	-310 to 310	Uplink output power Unit: 0.1 dBm
CH1ACTDATAR- ATEDS	INTEGER	0 to 200000	Channel - downlink rate Unit: kbps
CH1ACTDE- LAYDS	INTEGER	0 to 200	Channel - downlink delay Unit: ms
CH1ACTDE- LAYDS	INTEGER	0 to 200000	Channel - uplink rate Unit: kbps
CH1ACTDE- LAYUS	INTEGER	0 to 200	Channel - uplink delay Unit: ms
ChanTxRateDs	INTEGER	32 to 32000	Tx rate of the downlink channel Unit: Kbit/s
ChanTxRateUs	INTEGER	32 to 32000	Tx rate of the uplink channel Unit: Kbit/s
AttainableRa- teDs	INTEGER	32 to 32000	Maximum attainable downlink rate Unit: Kbit/s
AttainableRa- teUs	INTEGER	32 to 32000	Maximum attainable uplink rate Unit: Kbit/s
UpMinTransmi- tRate	INTEGER	32 to 32000	Minimum uplink transmission rate
DownMinTrans- mitRate	INTEGER	32 to 32000	Minimum downlink transmission rate
UpMaxTransmi- tRate	INTEGER	64 to 1000000	Maximum uplink transmission rate (i.e. assured rate of the uplink port) Unit: Kbit/s

Parameter	Data Type	Value Range	Description
DownMaxTransmitRate	INTEGER	64 to 1000000	Maximum downlink transmission rate (i.e. assured rate of the downlink port) Unit: Kbit/s
LinkRetrain	INTEGER	Floating-point number (10B:0)	Count of local-end initialization failures Unit: times
DownSpeed	-	Floating-point number (10B:0)	Downlink real-time rate Unit: Mbit/s
UpSpeed	-	Floating-point number (10B:0)	Uplink real-time rate Unit: Mbit/s

## Example

Query the information of the No. 1 VDSL port located in the No. 1 slot of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-VDSLPERF::ONUIP=10.250.18.121,ONUPORT=NA-NA-1-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 13:55:22
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of vdsl port performance
-----
InOctets   OutOctets   SnrMgnDs   SnrMgnUs   AtnDs
AtnUs      OutputPwrDs OutputPwrUs CH1ACTDATARATEDS
CH1ACTDELAYDS CH1ACTDATARATEUS CH1ACTDELAYUS
0 1860 0.00 0.00 0 0 0 0 0 0
0 0
-----
```

## Related Command

None

## 6.5.6 Querying the VDSL2 Port Statistics Information (LST-VDSLSTAT)

### Function Description

This command is used for querying the VDSL link quality information, including the initialization information, statistics information and channel statistics information over the current 15 minutes, the current day and the past day.

### Command Format

```
LST-VDSLSTAT::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,  
ONUID=onu_index],ONUPORT=vdslport_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name, or ID of the ONU having a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID and ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = list of vdsl statistics
xdsl2PMLCurr15MTimeElapsed xdsl2PMLCurr15MLoss
xdsl2PMLCurrInit15MFullInits Curr15MinAtucEss xdsl2PMLCurr15MSes
xdsl2PMLCurrInit15MFailedFullInits xdsl2PMLCurr1DayTimeElapsed
xdsl2PMLCurrInit1DayFullInits xdsl2PMLCurr1DayEs xdsl2PMLCurr1DayLoss
xdsl2PMLCurr1DaySes xdsl2PMLCurrInit1DayFailedFullInits
xdsl2PMLHist1DMonitoredTime xdsl2PMLHistinit1DFullInits
xdsl2PMLHistinit1DFailedFullInits xdsl2PMLHist1DEs xdsl2PMLHist1DLoss
xdsl2PMLHist1DSes
```

## Output Parameter

Parameter	Data Type	Value Range	Description
xdsl2PMLCurr15MTimeElapsed	INTEGER	0 to 900	Elapsed time of the current 15 minutes
xdsl2PMLCurr15MLoss	INTEGER	0 to 900	Signal-loss seconds over the current 15 minutes
xdsl2PMLCurrInit15MFullInits	INTEGER	0 to 2147483647	Initialization times over the current 15 minutes

Parameter	Data Type	Value Range	Description
Curr15MinAtucEss	INTEGER	0 to 900	Errored seconds over the current 15 minutes
xdsl2PMLCurr15MSes	INTEGER	0 to 900	Severely errored seconds over the current 15 minutes
xdsl2PMLCurrInit15M-FailedFullInits	INTEGER	0 to 2147483647	Initialization failures over the current 15 minutes
xdsl2PMLCurr1DayTimeElapsed	INTEGER	0 to 86400	Elapsed time of the current day
xdsl2PMLCurrInit1Day-FullInits	INTEGER	0 to 2147483647	Initialization times over the current day
xdsl2PMLCurr1DayEs	INTEGER	0 to 86400	Errored seconds over the current day
xdsl2PMLCurr1Day-Loss	INTEGER	0 to 86400	Signal-loss seconds over the current day
xdsl2PMLCurr1Day-Ses	INTEGER	0 to 86400	Severely errored seconds over the current day
xdsl2PMLCurrInit1Day-FailedFullInits	INTEGER	0 to 2147483647	Initialization failures over the current day
xdsl2PMLHist1DMonitoredTime	INTEGER	0 to 86400	Elapsed time of the past day
xdsl2PMLHistinit1DFullInits	INTEGER	0 to 2147483647	Initialization times over the past day
xdsl2PMLHistinit1DFailedFullInits	INTEGER	0 to 2147483647	Initialization failures over the past day
xdsl2PMLHist1DEs	INTEGER	0 to 86400	Errored seconds over the past day
xdsl2PMLHist1DLoss	INTEGER	0 to 86400	Signal-loss seconds over the past day
xdsl2PMLHist1DSes	INTEGER	0 to 86400	Severely errored seconds over the past day

## Example

Query the performance statistics information over the current 15 minutes, the current day and the past day of VDSL port 1 in slot 1 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-VDSLSTAT::ONUIP=10.250.18.121,ONUPORT=NA-NA-1-1:CTAG::;
```



## ◆ Response message

```

FH_10.250.18.133 2010-11-02 13:55:30
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of vdsl statistics
-----
xdsl2PMLCurr15MTimeElapsed      xdsl2PMLCurr15MLoss
xdsl2PMLCurrInit15MFullInits    Curr15MinAtucEss
xdsl2PMLCurr15MSes              xdsl2PMLCurrInit15MFailedFullInits
xdsl2PMLCurr1DayTimeElapsed      xdsl2PMLCurrInit1DayFullInits
xdsl2PMLCurr1DayEs              xdsl2PMLCurr1DayLoss      xdsl2PMLCurr1DaySes
xdsl2PMLCurrInit1DayFailedFullInits  xdsl2PMLHist1DMonitoredTime
xdsl2PMLHistinit1DFullInits        xdsl2PMLHistinit1DFailedFullInits
xdsl2PMLHist1DEs                xdsl2PMLHist1DLoss      xdsl2PMLHist1DSes
463  0  0  0  0  0  10714  0  --  0
0    0  0  --  0  0  0      0
-----

```

## Related Command

None

## 6.5.7 Conducting the Single-ended Loop Test (SELT)

## Function Description

The command is used for conducting the single-ended loop test on the ADSL2+ / VDSL2 port.

## Command Format

```

SELT::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=dslport_num:CTAG::;

```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address.	-
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER).	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

Title = result of self test

LINE\_LENGTH LINE\_STATUS ATTAINABLE\_XTUC\_RATE ATTAINABLE\_XTUR\_RATE

## Output Parameter

Parameter	Data Type	Value Range	Description
LINE_LENGTH	OCTET STRING	-	Line length. Unit: m.
LINE_STATUS	String	Open Short	Status
ATTAINABLE_XTUC_RATE	Integer	-	Attainable downlink rate (kbps).
ATTAINABLE_XTUR_RATE	Integer	-	Attainable uplink rate (kbps).

## Example

For example, conduct the single-ended loop test on the No. 1 ADSL port located in the No. 3 slot of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
SELT::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 13:57:37
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
result of selt test
```

```
-----  
LINE_LENGTH  LINE_STATUS  ATTAINABLE_XTUC_RATE  ATTAINABLE_XTUR_RATE  
3910  Short  8260  1264  
-----
```

## Related Command

None

## 6.5.8 Conducting the Double-ended Loop Test (DELT)

### Function Description

The command is used for conducting the double-ended loop test on an ADSL2+ or a VDSL2 port.

### Command Format

```
DELT::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=dslport_num:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

Title = result of delt test

XTUC\_DELT\_SATN XTUR\_DELT\_SATN XTUC\_DELT\_SNRM XTUR\_DELT\_SNRM

## Output Parameter

Parameter	Data Type	Value Range	Description
XTUC_DELT_SATN	OCTET STRING	Size (128)	Uplink signal attenuation (dB)
XTUR_DELT_SATN	OCTET STRING	Size (128)	Downlink signal attenuation (dB)
XTUC_DELT_SNRM	OCTET STRING	Size (128)	Uplink signal-to-noise ratio margin (dB)
XTUR_DELT_SNRM	OCTET STRING	Size (128)	Downlink signal-to-noise ratio margin (dB)

## Example

Conduct a double-ended loop test on ADSL port 2 in slot 3 of the ONU whose IP address is 10.250.18.121.

### ◆ Command issued

```
DELT::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-2:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 14:03:01
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
result of delt test
-----
XTUC_DELT_SATN XTUR_DELT_SATN XTUC_DELT_SNRM XTUR_DELT_SNRM
0.00      0.00      0.00      0.00
-----
```

## Related Command

None

## 6.5.9 Querying the xDSL Port PVC Information (LST-PVCINFO)

### Function Description

This command is used for querying the PVC information of an ADSL port.

### Command Format

```
LST-PVCINFO::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=adslport_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID and ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of vdsl statistics

PVCOPERSTATUS PVCADMINSTATUS VPI VCI PVID VLANPRIORITY

## Output Parameter

Parameter	Data Type	Value Range	Description
PVCOPERSTATUS	OCTET STRING	UP DOWN	PVC running status.
PVCADMINSTATUS	OCTET STRING	UP DOWN	PVC management status.
VPI	INTEGER	-	VPI
VCI	INTEGER	-	VCI
PVID	INTEGER	-	VLAN ID
VLANPRIORITY	OCTET STRING	Integer (0-7)	VLAN default priority

## Example

Query the PVC information of ADSL port 1 in slot 3 of the ONU whose IP address is 10.250.18.121.

◆ Command issued



```
LST-PVCINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-1:CTAG::;
```

#### ◆ Response message

```
FH_10.250.18.133 2010-11-02 14:03:21
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=8
```

```
list of PVC info
```

```
-----
```

PVCOPESTATUS	PVCADMINSTATUS	VPI	VCI	PVID	VLANPRIORITY
UP	UP	8	35	4088	0
DOWN	DOWN	0	0	4088	0
DOWN	DOWN	0	0	4088	0
DOWN	DOWN	0	0	4088	0
DOWN	DOWN	0	0	4088	0
DOWN	DOWN	0	0	4088	0
DOWN	DOWN	0	0	4088	0
DOWN	DOWN	0	0	4088	0

```
-----
```

#### Related Command

None

## 6.5.10 Querying the Information of the Template Bound with SHDSL Ports (LST-SHDSLINFO)

#### Function Description

This command is used to query the SHDSL line template bound with SHDSL ports.

#### Command Format

```
LST-SHDSLINFO::ONUIP=onu-name|OLTID=olt_name,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index,ONUPORT=onuport:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is optional for the MSAN public platform card.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through cabinet rack-shelf-slot-port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The options include ONU_NAME, MAC, LOID and ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
Port Mode	INTEGER	EFM ATM TDM	Port mode
Code Type	INTEGER	PAM16(1) PAM32(2)	Encoding type of the line
Transmissionstandard	INTEGER	Annex A(0) Annex B(1)	Transmission standard of the line
Target SNR Margin Down	INTEGER	-10 to 21	Downlink target SNR margin
Insure SNR Margin Down	INTEGER	-10 to 21	Downlink assured SNR margin
Target SNR Margin Up	INTEGER	-10 to 21	Uplink target SNR margin
Insure SNR MarginUp	INTEGER	-10 to 21	Uplink assured SNR margin
Line Probe Enable	INTEGER	0: disable 1: Enable	Line detection switch

## Example

Query the information of the template bound with the SHDSL port. The SHDSL port is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.190.40.16.

### ◆ Command issued

```
LST-SHDSLINFO::OLTID=10.190.40.16,PONID=NA-NA-3-1:CTAG::;
```

### ◆ Response message

```
;LST-SHDSLINFO::OLTID=10.190.40.16,PONID=NA-NA-3-1:CTAG::;
FH_10.170.110.27 2018-01-24 08:52:50
M CTAG_COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of shdsl port info
-----
PortMode      CodeType      transmissionstandard  TargetSNRMarginDown  InsureSNRMarginDown  TargetSNRMarginUp
ATM          PAM32      Annex_B 6          3          6          3          Disable
```

## Related Command

None

## 6.5.11 Querying the DSL Port Line Identifier (LST-LINEIDENTIFIERSTATE)

### Function Description

This command is used to query the line identifier status.

### Command Format

```
LST-LINEIDENTIFIERSTATE::OLTID=olt_name:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

### Response Format

It complies with the query-command response format in [Response Message Format](#).

### Output Parameter

Parameter	Data Type	Value Range	Description
OPTION82	OCTET STRING	enable disable	Option82 switch
PPPOE+	OCTET STRING	enable disable	PPPoE+ switch

### Example

Query the line ID of the DSL port of the OLT device whose IP address is 10.182.1.105.

◆ Command issued

```
LST-LINEIDENTIFIERSTATE::OLTID=10.182.1.105:CTAG::;
```

## ◆ Response message

```

;LST-LINEIDENTIFIERSTATE::OLTID=10.182.1.105:CTAG::;

  FH_10.170.110.27 2018-01-24 05:29:52
M  CTAG_COMPLD
   total_blocks=1
   block_number=1
   block_records=1

  list of dsl line identifier status info
-----
OPTION82      PPPOE+
Disable Disable
-----
;

```

## Related Command

None

## 6.5.12 Querying the Uptime of the DSL Port (LST-DSLPORTUPTIME)

## Function Description

This command is used to query the uptime of the DSL port.

## Command Format

```
LST-DSLPORTUPTIME::ONU|OLTID=olt_name,PONID=ponport_location:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is optional for the MSAN public platform card.
OLTID	OCTET STRING	Size (128)	OLT IP address, name or ID	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
LASTDOWN-TIME	OCTET STRING	Size (128)	The last downtime, including the time and date For example, Sat May 11 17:24:21 MYT 2017
LASTUPTIME	OCTET STRING	Size (128)	The last uptime, including the time and date For example, Sat May 11 17:24:21 MYT 2017
UPTIME	OCTET STRING	Size (128)	The uptime; unit: second

## Example

Query the online duration of the DSL port connected to PON port 2 in slot 13 of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-DSLPORTUPTIME::OLTID=10.182.1.105,PONID=NA-NA-13-2:CTAG::;
```

### ◆ Response message

```
FH_10.170.163.118 2018-05-07 20:24:50
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of dsl port up time
```

```
-----
LASTUPTIME      LASTDOWNTIME    UPTIME
0000-00-00 00:00:00      0000-00-00 00:00:00    0
-----
```

```
;
```

## Related Command

None

## 6.5.13 Querying the Rate Control Template on the MSAN Public Platform (LST-BW)

### Function Description

This command is used to query the rate control template on the MSAN public platform.

### Command Format

```
LST-BW::OLTID=olt_name:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ProfileName	STRING	Size (20)	Template name
UsPolicCIR	INTEGER	64 to 1000000	Assured uplink port rate
DsPolicCIR	INTEGER	64 to 1000000	Assured downlink port rate

## Example

Query the rate control template information of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-BW::OLTID=10.190.40.216:CTAG::;
```

### ◆ Response message

```
FH_10.170.163.215 2018-05-11 11:40:54
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=3
```

```
list of rate-limit Profile
```

```
-----  
ProfileName  UsPolicCIR  DsPolicCIR  
PORTRATE.PRF      64      64  
PORTRATE.PRF1    512     5120  
porttest         64      64  
-----
```



;

## Related Command

None

## 6.5.14 Querying the Configuration Information of the Rate Control Template Bound with the DSL Ports of the MSAN Public Platform

## Function Description

This command is used to query the configuration information of the rate control template bound with the DSL ports of the MSAN public platform.

## Command Format

```
LST-DSLPORTBW::ONUIP=onu-name|OLTID=olt_name,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index,ONUPORT=onuport:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is optional for the MSAN public platform card.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Optional for the MSAN public platform card.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The options include ONU_NAME, MAC, LOID and ONU_NUMBER.	Optional for the MSAN public platform card.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional for the MSAN public platform card.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	MSAN card port / PON port location information. Locate a port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
RateLimitUs	INTEGER	64 to 1000000	Assured uplink port rate
RateLimitDs	INTEGER	64 to 1000000	Assured downlink port rate

## Example

Query the configuration of the rate control template bound with DSL port 1 in slot 1 of the ONU whose IP address is 10.171.0.131.

### ◆ Command issued

```
LST-DSLPORTBW::ONUIP=10.171.0.131,ONUPORT=NA-NA-1-1:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.552019-10-0916:07:19
```

```
MCTAGCOMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
listofrate-limitinfo
```

```
-----
```

```
OLTIDPONIDRateLimitUsRateLimitDs
```

```
-- ---- --
```

```
-----
```

```
;
```

## Related Command

None

## 6.5.15 Querying the Traffic Policy Template Bound with Ports (LST-PORTFLOWPOLICY)

### Function Description

This command is used to query the traffic policy template bound with ports.

### Command Format

```
LST-PORTFLOWPOLICY::OLTID=olt-name,PONID=NA-NA-slot-port:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is optional for the MSAN public platform card.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The options include ONU_NAME, MAC, LOID and ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	MSAN card port / PON port location information. Locate a port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
INGRESSPOLICY	OCTET STRING	Size (128)	Uplink traffic policy, required. Displays the name of the bound traffic policy template.
EGRESSPOLICY	OCTET STRING	Size (128)	Downlink traffic policy, required. Displays the name of the bound traffic policy template.
INGRESSRULE	OCTET STRING	Size (128)	Uplink rule, required. Displays the name of the bound rule template.
EGRESSRULE	OCTET STRING	Size (128)	Downlink rule, required. Displays the name of the bound rule template.

## Example

Query the traffic policy template information of PON port 1 in slot 1 of the OLT whose IP address is 190.40.216.

### ◆ Command issued

```
LST-PORTFLOWPOLICY::OLTID=10.190.40.216,PONID=NA-NA-1-1:CTAG::;
```

## ◆ Response message

```
FH_10.170.163.215 2018-05-11 14:47:11
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=3
```

```
list of flow-policy of port:
```

```
-----  
OLTID   PONID   INGRESSPOLICY  EGRESSPOLICY  INGRESSRULE  EGRESSRULE  
10.190.40.216  1-1-1-1 default1  default1      de_rule_4     de_rule_5  
10.190.40.216  1-1-1-1 default1  default1      de_rule_7     de_rule_8  
10.190.40.216  1-1-1-1 test1   test2    de_rule_4     de_rule_5  
-----
```

```
;
```

## Related Command

None

## 6.5.16 Querying the SHDSL Port Status (LST-SHDSLPORT)

## Function Description

This command is used to query the status of the SHDSL ports on the specified device.

## Command Format

```
LST-SHDSLPORT::ONUIP=onu_name|OLTID=olt-name,PONID=ponport_location:  
CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is optional for the MSAN public platform card.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
PortMode	INTEGER	EFM ATM TDM	Port mode
Portactivated-Status	INTEGER	1: NOT_CONFIG (idle; not configured) 2: CONFIG (idle; configured) 3: INIT (being initialized) 4: TRAINING 5: DATA	Activation status of the port
M-PairStatus	INTEGER	0: not bind 1: bind as master 2: bind as slaver	Binding status of the port

Parameter	Data Type	Value Range	Description
LinkSpeed	INTEGER	0 to 5696	Actual rate of the line Unit: Kbit/s
Transmission-standard	INTEGER	Annex A(0) Annex B(1)	Transmission standard of the line
Codetype	INTEGER	PAM16(1) PAM32(2)	Encoding type of the line
UpCurrAtn	INTEGER	-127 to 128	Attenuation of the uplink line Unit: dB
UpCurrSnrMgn	INTEGER	-127 to 128	Uplink signal-to-noise ratio margin (dB) Unit: dB
DnCurrAtn	INTEGER	-127 to 128	Attenuation of the downlink line Unit: dB
DnCurrSnrMgn	INTEGER	-127 to 128	Downlink signal-to-noise ratio margin (dB) Unit: dB

## Example

Query the status of PON port 3 in slot 2 of the OLT whose IP address is 10.171.0.29.

### ◆ Command issued

```
LST-SHDSLPORT::OLTID=10.171.0.29,PONID=NA-NA-2-3:CTAG::;
```

### ◆ Response message

```
FH_10.170.0.29 2018-05-11 14:47:11
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
SHDSL Port info:
```

```
-----
PortMode  Portactivatedstatus  M-PairStatus  LinkSpeed  Transmissionstandard
Codetype  UpCurrAtn  UpCurrSnrMgn  DnCurrAtn  DnCurrSnrMgn
TDM  1    0      0  --  PAM32  0      0    0    0
-----
```

```
;
```



## Related Command

None

## 6.5.17 Querying the ADSL Port Performance (LST-ADSLPERF-EX)

## Function Description

This command is used to query the ADSL port performance.

## Command Format

```
LST-ADSLPERF-EX::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=adslport_num:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPOINT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.
ONUPOINT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
InOctets	INTEGER	0 to 2147483647	Number of received bytes
OutOctets	INTEGER	0 to 2147483647	Number of sent bytes
SnrMgnDs	INTEGER	-640 to 640	Downlink noise tolerance Unit: 0.1 dB
SnrMgnUs	INTEGER	-640 to 640	Uplink noise tolerance Unit: 0.1 dB
AtndBs	INTEGER	0 to 630	Downlink power attenuation Unit: 0.1 dB

Parameter	Data Type	Value Range	Description
AtnUs	INTEGER	0 to 630	Uplink power attenuation Unit: 0.1 dB
OutputPwrDs	FLOAT	-310 to 310	Downlink output power Unit: 0.1 dBm
OutputPwrUs	FLOAT	-310 to 310	Uplink output power Unit: 0.1 dBm
ChanTxRateDs	INTEGER	32 to 32000	Tx rate of the downlink channel Unit: Kbit/s
ChanTxRateUs	INTEGER	32 to 32000	Tx rate of the uplink channel Unit: Kbit/s
AttainableRateDs	INTEGER	32 to 32000	Maximum attainable downlink rate Unit: Kbit/s
AttainableRateUs	INTEGER	32 to 32000	Maximum attainable uplink rate Unit: Kbit/s

## Example

Query the port status of PON port 1 in slot 14 of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-ADSLPERF::OLTID=10.182.1.105,PONID=114-1:CTAG::;
```

### ◆ Response message

```
;LST-ADSLPERF::OID=10.182.1.105,PID=14-1:CTAG::;
M  FH_10.170.110.27 2018-01-25 13:03:09
CTAG COMPLD
total_blocks=1
block_number=1
block_records=1
List of adsl port performance
-----
InOctets      OutOctets      SnrMgnDs      SnrMgnUs      AtnDs  AtnUs  OutputPwrDs  OutputPwrUs  ChanTxRateDs  ChanTxRateUs  AttainableRateDs  AttainableRateUs  UpMir
TransmitRate  DownTransmitRate  upMaxTransmitRate  downMaxTransmitRate  --      --      --      --      --      --      --      --      --
0            0            --      --      --      --      --      --      64      64      0
;
;
```

## Related Command

None

## 6.5.18 Querying the VDSL Port Performance (LST-VDSLPERF-EX)

### Function Description

This command is used to query the VDSL port performance.

### Command Format

```
LST-VDSLPERF-EX::ONUIP=onu_name|OLTID=olt_name[, PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=vdslport_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER).	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
InOctets	INTEGER	0 to 2147483647	Number of received bytes
OutOctets	INTEGER	0 to 2147483647	Number of sent bytes
SnrMgnDs	INTEGER	-640 to 630	Downlink noise tolerance Unit: 0.1 dB
SnrMgnUs	INTEGER	-640 to 630	Uplink noise tolerance Unit: 0.1 dB
AtnDs	INTEGER	0 to 1270	Downlink power attenuation Unit: 0.1 dB
AtnUs	INTEGER	0 to 1270	Uplink power attenuation Unit: 0.1 dB
OutputPwrDs	FLOAT	-310 to 310	Downlink output power Unit: 0.1 dBm
OutputPwrUs	FLOAT	-310 to 310	Uplink output power Unit: 0.1 dBm
CH1ACTDATARATEDS	INTEGER	0 to 200000	Channel - downlink rate Unit: kbps

Parameter	Data Type	Value Range	Description
CH1ACTDE-LAYDS	INTEGER	0 to 200	Channel - downlink delay Unit: ms
CH1ACTDE-LAYDS	INTEGER	0 to 200000	Channel - uplink rate Unit: kbps
CH1ACTDE-LAYUS	INTEGER	0 to 200	Channel - uplink delay Unit: ms

## Example

Query the port status of PON port 1 in slot 16 of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-VDSLPERF::OLTID=10.182.1.105,PONID=16-1:CTAG::;
```

### ◆ Response message

```
;LST-VDSLPERF::DID=10.182.1.105,PID=16-1:CTAG::;
FH_10.170.110.27 2018-01-25 12:58:45
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
list of vdsl port performance
-----
InOctets   OutOctets   SnnMgnDs   SnnMgnUs   ATnDs   ATnUs   OutputPwrDs   OutputPwrUs   ChanTxRateDs   ChanTxRateUs   AttainableRateDs   AttainableRateUs   upl
Transmitrate  DownlinkTransmitrate  upMaxTransmitrate  DownMaxTransmitrate  LinkRetrain
0           0           --           --           --           --           --           --           64           64           0
-----
```

## Related Command

None

# 6.6 Querying the VLAN Information

The following introduces the command and example for querying the VLAN information.

## 6.6.1 Querying the VLAN Forwarding (LST-VLANFWDINFO)

### Function Description

This command is used for querying the information of VLAN-based forwarded messages, including messages forwarded based on C VLAN and S+C VLAN.

## Command Format

```
LST-VLANFWDINFO::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport-location]
[,ONUIDTYPE=id-type,ONUID=onu-id],VLANID=svlan-id:CTAG::;
```

◆ Gather statistics of OLT VLAN forwarding information:

```
LST-VLANFWDINFO::OLTID=olt-name,VLANID=vlan-id:CTAG::;
```

◆ Gather statistics of ONU VLAN forwarding information (the ONU has a management IP address):

```
LST-VLANFWDINFO::ONUIP=onu-name,VLANID=vlan-id:CTAG::;
```

◆ Gather statistics of the ONU uplink VLAN tag forwarding on OLT (the ONU has no management IP address):

```
LST-VLANFWDINFO::OLTID=olt-name,PONID=ponport-location,
ONUIDTYPE=idtype,ONUID=onu-id,VLANID=svlan-id:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
VLANID	INTEGER	0 to 4095	-

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of VLAN forward info

FramesUs FramesDs OctetsUs OctetsDs DiscardsUs DiscardsDs

## Output Parameter

Parameter	Data Type	Value Range	Description
FramesUs	DOUBLE	0 to 2147483647	Number of uplink messages
FramesDs	DOUBLE	0 to 2147483647	Number of downlink messages
OctetsUs	DOUBLE	0 to 2147483647	Number of uplink bytes
OctetsDs	DOUBLE	0 to 2147483647	Number of downlink bytes
DiscardsUs	DOUBLE	0-1.85E19	(Optional) Number of discarded uplink message
DiscardsDs	DOUBLE	0-1.85E19	(Optional) Number of discarded downlink message

## Example

Example 1: Query the VLAN 321 forwarding information of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-VLANFWDINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,  
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1,VLANID=321:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-28 12:01:50  
M CTAG COMPLD  
total_blocks=1  
block_number=1  
block_records=1  
list of VLAN forward info
```



```

-----
FramesUs  FramesDs  OctetsUs  OctetsDs  DiscardsUs  DiscardsDs
0         0         0         0         0         0
-----

```

Example 2: Query the VLAN 1 forwarding information of PON port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
LST-VLANFWDINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1,VLANID=1:CTAG::;
```

◆ **Response message**

```

FH_10.250.18.133 2010-11-02 10:37:30
M  CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of VLAN forward info
-----
FramesUs  FramesDs  OctetsUs  OctetsDs  DiscardsUs  DiscardsDs
--        --        --        --        --        --
-----

```

## Related Command

None

## 6.6.2 Querying the Port VLAN of a Specified Device (LST-PORTSERVICEVLAN)

### Function Description

This command is used to query the port VLAN of a specified device.

### Command Format

```
LST-PORTSERVICEVLAN::OLTID=olt-name,PONID=ponport_location:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
SVLAN	INTEGER	0 to 4095	Outer VLAN of the voice service
CVLAN	INTEGER	0 to 4095	Inner VLAN of the voice service

Parameter	Data Type	Value Range	Description
VPI	INTEGER	0 to 4095	VPI corresponding to the broadband access service of the DSL port
VCI	INTEGER	32 to 65535	VCI corresponding to the broadband access service of the DSL port
UV	INTEGER	0 to 4095	User-side VLAN

## Example

Query the port VLAN of the ONU connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
LST-PORTSERVICEVLAN::OLTID=10.171.0.28,PONID=NA-NA-6-1:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 10:39:53
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
-----
ONU|IP|OLTID|PONID|ONU|ID|ONU|PORT SVLAN CVLAN|VPI|VCI|UV
```

```
--10.171.0.28|1-6-1 1|NA-NA-NA-190047|----47
```

```
-----
;
```

## Related Command

None

## 6.7 Querying the IPTV Information

The following introduces the command and example for querying the IPTV information.

## 6.7.1 Querying the Multicast Configuration (LST-IPTVCFG)

### Function Description

This command is used for querying the multicast configuration information.

### Command Format

```
LST-IPTVCFG::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index][,ONUPORT=port_index][,UV=user-vlan]:
CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = list of IPTV configuration
MVLAN VLANID VPI VCI
```

## Output Parameter

Parameter	Data Type	Value Range	Description
MVLAN	INTEGER	-	Multicast VLAN
VLANID	INTEGER	-	VLAN at user side. Optional (multicast service VLAN accessed through a home gateway).
VPI	INTEGER	-	VPI. Optional (DSL multicast service).
VCI	INTEGER	-	VCI. Optional (DSL multicast service).

## Example

Example 1: Query the multicast user information of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-IPTVCFG::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-28 11:58:45
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of IPTV configuration
```

```
-----
MVLAN  VLANID  VPI    VCI
321    123     --     --
-----
```

Example 2: Query the multicast user information of port 1 in slot 4 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-IPTVCFG::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 10:33:57
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of IPTV configuration
```

```
-----
MVLAN  VLANID  VPI    VCI
2525   --     --     --
-----
```

## Related Command

None

## 6.7.2 Querying the Multicast Mode, Multicast Version and Multicast VLAN (LST-IGMPINFO)

### Function Description

This command is used to query the multicast mode, multicast version and multicast VLAN.

### Command Format

```
LST-IGMPINFO::OLTID=olt_name:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required

### Response Format

It complies with the query-command response format in [Response Message Format](#).

### Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
igmpmode	OCTET STRING	(1) Controlled (2) Proxy-Proxy (3) Snooping (4) Proxy-Snooping (5) Disable (6) Active-Snooping	Multicast mode
igmpversion	OCTET STRING	(1) IGMP_V1/V2 (2) IGMP_V3 (3) MDL_V1 (4) MDL_V2	Multicast version
vlanid	INTEGER	0 to 4096	Multicast VLAN

## Example

Query the multicast mode, multicast version and multicast VLANID of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-IGMPINFO::OLTID=10.182.1.105:CTAG::;
```

### ◆ Response message

```
;LST-IGMPINFO::OLTID=10.182.1.105:CTAG::;
```

```
FH_10.170.110.27 2018-01-23 18:09:09
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
```

```
list of IGMP info
```

```
-----
OLTID  IgmpMode      IgmpVersion  VlanID
10.182.1.105  Proxy-Snooping  IGMP_V1/V2    3000
-----
```

```
;
```

## Related Command

None

## 6.7.3 Querying the Multicast Protocol Parameters (LST-IGMPPROTOPARAM)

### Function Description

This section introduces the command and example for querying the multicast protocol parameters for the AN5516/AN5116 series OLT V4.x devices.

### Command Format

```
LST-IGMPPROTOPARAM::OLTID=olt_name:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required



## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
RobustnessVariable	INTEGER	2 to 16	Robustness index
QueryResponseInterval	INTEGER	1 to 255	General query response interval Unit: s
LastMemberQueryInterval	INTEGER	1 to 255	Last group member query interval Unit: s
LastMemberQueryCount	INTEGER	1 to 16	Count of last group member queries
QueryInterval	INTEGER	11 to 255	General query interval Unit: s
GroupMembershipInterval	INTEGER	0 to 65534	Group membership interval Unit: s

## Example

Query the multicast protocol parameter of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-IGMPPROTOPARAM::OLTID=10.182.1.105:CTAG::;
```

### ◆ Response message

```
LST-IGMPPROTOPARAM::OLTID=10.182.1.105:CTAG::;
FH_10.170.110.27 2018-01-23 16:37:50
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=1

list of IGMP Protocol parameter
-----
OLTID RobustnessVariable QueryResponseInterval LastMemberQueryInterval LastMemberQueryCount QueryInterval GroupMembershipInterval
10.182.1.105 2 10 1 2 125 260
-----
```

## Related Command

None

## 6.7.4 Querying the Line Card Multicast Address Table (LST-BOARDIGMPADDRTABLE)

### Function Description

This command is used to query the multicast address table.

### Command Format

```
LST-BOARDIGMPADDRTABLE::OLTID=olt_name,BOARDID=board_id:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
BOARDID	OCTET STRING	Size (128)	Cabinet rack - shelf - slot	Required. Locate the card through rack - shelf - slot. Enter NA if the corresponding information is not specified.

### Response Format

It complies with the query-command response format in [Response Message Format](#).

### Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	STRING	Size (128)	IP address, name or ID of the OLT
PONID	STRING	NA-NA-SLOT-PON	PON port number
GroupIP	STRING	-	Group address

### Example

Query the multicast address table of the line card in slot 16 of the OLT whose IP address is 10.182.1.105.

◆ Command issued

```
LST-BOARDIGMPADDRTABLE::OLTID=10.182.0.105,BOARDID=NA-NA-15:CTAG::;
```

#### ◆ Response message

```
;LST-BOARDIGMPADDRTABLE::OLTID=10.182.1.105,BOARDID=NA-NA-16:CTAG::;
```

```
FH_10.170.110.27 2018-01-23 17:09:12
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=0
```

```
list of olt board IGMP address table
```

```
-----
OLTID  PONID  GroupIP
-----
```

#### Related Command

None

## 6.7.5 Querying the Multicast SSM IP Address Range (LST-IGMPSSMIPRANGE)

#### Function Description

This command is used to query the multicast SSM IP address range.

#### Command Format

```
LST-IGMPSSMIPRANGE::OLTID=olt_name:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required

#### Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	STRING	Size (128)	IP address, name or ID of the OLT
SSMIPRange	STRING	Size (128)	SSM IP address range

## Example

Query the multicast SSM IP address range of the OLT whose IP address is 10.182.1.105.

### ◆ Command issued

```
LST-IGMPSSMIPRANGE::OLTID=10.182.1.105:CTAG::;
```

### ◆ Response message

```
;LST-IGMPSSMIPRANGE::DID=10.182.1.105:CTAG::;
```

```
FH_10.170.110.27 2018-01-23 16:52:44
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
```

```
list of olt igmp ssm ip range
```

```
-----
OLTID   SSMIPRange
10.182.1.105  232.0.0.0/255.0.0.0
-----
```

```
;
```

## Related Command

None

## 6.7.6 Querying the Multicast Proxy IP Address (LST-IGMPProxyIP)

### Function Description

This command is used to query the multicast proxy IP address.

## Command Format

```
LST-IGMPProxyIP::OLTID=olt_name:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	STRING	Size (128)	IP address, name or ID of the OLT
IGMPProxyIP	STRING	Size (128)	Multicast proxy IP address

## Example

Query the multicast proxy IP address of the OLT whose IP address is 10.171.0.31.

### ◆ Command issued

```
LST-IGMPProxyIP::OLTID=10.171.0.31:CTAG::;
```

### ◆ Response message

```

FH_127.0.0.1 2018-04-18 15:47:32
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1

list of IGMP Proxy ip
-----
OLTID   IGMPProxyIP
10.171.0.31  10.25.14.57
-----
```

## Related Command

None

## 6.8 Querying the VoIP Information

The following introduces the command and example for querying the VoIP information.

### 6.8.1 Querying the Voice Quality Statistical Information (LST-VOIPINFO)

#### Function Description

This command is used to query the voice quality statistics based on voice subscribers.

#### Command Format

```
LST-VOIPINFO::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=pots_num:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If the parameter entered does not include the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONU_IDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER PASSWORD	ONU identifier type	Optional
ONU_ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID, ONU_NUMBER, or PASSWORD.	Optional
ONU_PORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

Title = list of voip info

tatTime TxPackets RxPackets MeanDelay MeanJitter FractionLoss

## Output Parameter

Parameter	Data Type	Value Range	Description
StatTime	OCTET STRING	Size (20)	Record generation time yyyy-mm-dd hh:mm:ss
TxPackets	INTEGER	0 to 4294967295	Number of transmitted packets
RxPackets	INTEGER	0 to 4294967295	Number of received packets
MeanDelay	INTEGER	0 to 65535	Mean delay
MeanJitter	INTEGER	0 to 65535	Mean jitter
FractionLoss	INTEGER	0 to 100	Packet loss rate Unit: %

## Example

Example 1: Query the quality statistics information of the No. 1 voice port of the ONU (having no management IP address) with ONUID being aa\_bbb\_ccc\_111\_222. The ONU is connected to the slot 3 - PON port 1 of the OLT whose IP address is 10.250.18.100.

◆ **Command issued**

```
LST-VOIPINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,  
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-10-27 14:45:28
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of voip info
```

```
-----  
StatTime TxPackets RxPackets MeanDelay
```

```
MeanJitter FractionLoss
```

```
-1008762211 0 0 1630209 0  
-----
```

Example 2, query the quality statistics information of the POTS 1 port located in the No. 2 slot of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
LST-VOIPINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-02 09:51:49
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of voip info
```

```
-----  
StatTime TxPackets RxPackets MeanDelay
```

```
MeanJitter FractionLoss
```

```
1970-01-01 00:00:00 0 0 0 0 0  
-----
```



## Related Command

None

## 6.8.2 Querying the MG Configuration (LST-MGCFG)

## Function Description

This command is used for querying the configuration information of an access gateway interface.

## Command Format

```
LST-MGCFG::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu-index][,MGID=mg-id]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
MGID	INTEGER	0 to 16	(Optional) MG identifier, used for uniquely identifying the MG module on the ONU	If it is not specified, the configurations of all MG modules in use will be returned.

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of MG port configuration

GID PT EID SIPREGDM SVLAN VOIPVLAN IPMODE IPADDRESS IPMASK IPGATEWAY

PPPOEUSER PPPOEPWD SCOS CCOS MGCIP1 MGCIP2 HEARTBEATMODE HEARTBEATCYCLE

HEARTBEATNUM

## Output Parameter

Parameter	Data Type	Value Range	Description
MGID	INTEGER	0 to 16	MG identifier, used for uniquely identifying the MG module on the ONU.
PT	OCTET STRING	Size (1 to 32)	Voice protocol type (H.248, SIP)

Parameter	Data Type	Value Range	Description
EID	OCTET STRING	Size (1 to 64)	MG gateway domain name in the H248 configuration
SIPREGDM	OCTET STRING	Size (1 to 64)	SIP register server
SVLAN	INTEGER	0 to 4095	Outer VLAN of the voice service
VOIPVLAN	INTEGER	0 to 4095	Inner VLAN of the voice service
IPMODE	OCTET STRING	Size (1 to 64)	IP obtaining mode: DHCP, PPPOE, STATIC
IPADDRESS	OCTET STRING	Size (1 to 64)	IP address
IPMASK	OCTET STRING	Size (1 to 64)	IP address mask
IPGATEWAY	OCTET STRING	Size (1 to 64)	Gateway address
PPPOEUSER	OCTET STRING	Size (1 to 64)	PPPOE username
PPPOEPWD	OCTET STRING	Size (1 to 64)	PPPOE password
SCOS	INTEGER	0 to 7	Outer service priority
CCOS	INTEGER	0 to 7	Inner service priority
MGCIP1	OCTET STRING	Size (32)	IP address of the active softswitch
MGCIP2	OCTET STRING	Size (32)	IP address of the standby softswitch
HEARTBEATMODE	OCTET STRING	Enabled Disable	Heartbeat mode
HEARTBEATCYCLE	Integer	0 to 65535	Heartbeat cycle Unit: s
HEARTBEATNUM	Integer	1 to 3	Number of detected heartbeats

## Example

Example 1: Query the MG configuration of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-MGCFG::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222:CTAG::;
```

**◆ Response message**

```
FH_10.250.18.133 2010-10-27 14:45:56
M  CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of MG port configuration
-----
MGID PT  EID  SIPREGDM  SVLAN  VOIPVLAN  IPMODE
IPADDRESS  IPMASK  IPGATEWAY  PPPOEUSER  PPPOEPWD
SCOS  CCOSMGCIPI  MGCIP2  HEARTBEATMODE  HEARTBEATCYCLE
HEARTBEATNUM
0   H.248  10.37.0.1  65535  1515  STATIC  10.37.0.1
255.255.255.0  10.37.0.254          65535  7
10.37.0.103 Enable  30  3
-----
```

**Example 2:** Query the MG configuration of the ONU (having a management IP address) whose IP address is 10.250.18.121.

**◆ Command issued**

```
LST-MGCFG::ONUIP=10.250.18.121:CTAG::;
```

**◆ Response message**

```
FH_10.250.18.133 2010-11-02 09:52:03
M  CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of MG port configuration
-----
MGID PT  EID  SIPREGDM  SVLAN  VOIPVLAN  IPMODE
IPADDRESS  IPMASK  IPGATEWAY  PPPOEUSER  PPPOEPWD
SCOS  CCOSMGCIPI  MGCIP2  HEARTBEATMODE  HEARTBEATCYCLE
HEARTBEATNUM
0   H.248  12345678  1515  STATIC  0.0.0.0
0.0.0.0 0.0.0.0  7   0   Enable  30  3
-----
```

**Related Command**

None

### 6.8.3 Querying the MG Interface Information (LST-MGINFO)

#### Function Description

This command is used for querying the running status of an access gateway interface.

#### Command Format

```
LST-MGINFO::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu-index][,MGID=mg-id]:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
MGID	INTEGER	0 to 16	(Optional) MG identifier, used for uniquely identifying the MG module on the ONU	If it is not specified, the configurations of all MG modules in use will be returned.

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of MG port info

MGID OperState

## Output Parameter

Parameter	Data Type	Value Range	Description
MGID	INTEGER	0 to 16	-
OperState	OCTET STRING	Registering UP Fault Deregistered Restarting Other	Registering. Registered successfully. IAD failure. Logout IAD restarting. Others

## Example

Example 1: Query the status of the MG module with MGID being 0 on the ONU (having no management IP address) whose ONUID is aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-MGINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,MGID=0:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 14:46:12
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of MG port info
```

```
-----
MGID      OperState
0          UP
-----
```

Example 2: Query the running status of the MG on the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-MGINFO::ONUIP=10.250.18.121:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 09:52:14
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of MG port info
```

```
-----
MGID      OperState
0          Fault
-----
```

## Related Command

None

## 6.8.4 Querying the Port Fax Parameter (LST-FAXINFO)

### Function Description

This command is used for querying the fax parameter of a POTS port.

### Command Format

```
LST-FAXINFO::ONUIP=onu_name|OLTID=olt_name[,PONID=ponport_location,  
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=pots_num:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional



Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
list of ONU pots info
FAXMODE CONTROLMODE
```

## Output Parameter

Parameter	Data Type	Value Range	Description
FAXMODE	String	T30 T38	Fax mode
CONTROLMODE	String	NONE SS AUTOVBD	Voice channel of the control mode Full control Auto-negotiation

## Example

Example 1: Query the fax parameter of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

◆ **Command issued**

```
LST-FAXINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,  
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-10-27 14:46:39
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of ONU pots info
```

```
-----
```

```
FAXMODE CONTROLMODE
```

```
T30 NONE
```

```
-----
```

**Example 2: Query the fax parameter of the ONU (having a management IP address) whose IP address is 10.250.18.121.**

◆ **Command issued**

```
LST-FAXINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-02 09:52:25
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of ONU pots info
```

```
-----
```

```
FAXMODE CONTROLMODE
```

```
T30 AUTOVBD
```

```
-----
```

**Related Command**

None

## **6.8.5 Querying the POTS Port Information (LST-POTSINFO)**

**Function Description**

This command is used for querying the POTS port information, including the line status, service status, impedance and gain.

## Command Format

```
LST-POTSINFO::onu_name|OLTID=olt_name[,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPORT=pots_num:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of VOIP pots info

LineState ServiceState EchoCancel ReversedPolarity RxGain TxGain PN TID

SIPUSERNAME SIPUSERPWD MGID

## Output Parameter

Parameter	Data Type	Value Range	Description
LineState	OCTET STRING	Registering Idle Off-hook Dialing Ringing Ringing-back Connecting Connected Releasing Register-failed Deactivated Other	Line status: Registering port. Port is idle. Off-hook. Dialing. Ringing. Ringing back. Connecting. Connected. Releasing the connection. Registering port failed. The port is not activated. Others.
ServiceState	OCTET STRING	EndLocal EndRemote EndAuto Normal	Service status: endLocal: The service is terminated by the local end due to the port disabled by the user. endRemote: The service is terminated by the far end due to the command sent by MGC. endAuto: The service is terminated automatically due to the MGC failure. normal: The service is normal.
EchoCancel	OCTET STRING	Enabled Disable	Echo suppression
ReversedPolarity	OCTET STRING	Enabled Disable	Polarity reversal signal
RxGain	Float	-20 to 20	Receive gain Unit: dB
TxGain	Float	-20 to 20	Send gain Unit: dB
PN	OCTET STRING	Size (1 to 32)	SIP telephone number
TID	OCTET STRING	Size (1 to 64)	H248 user terminal identifier
SIPUSERNAME	OCTET STRING	Size (1 to 32)	Username corresponding to the SIP user port

Parameter	Data Type	Value Range	Description
SIPUSERPWD	OCTET STRING	Size (1 to 32)	Password corresponding to the SIP user port
MGID	INTEGER	0 to 16	MG identifier, identifying the MG module being used by the user.

## Example

Example 1: Query the information of POTS port 1 of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-POTSINFO::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 14:47:14
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of pots info
```

```
-----
LineState ServiceState EchoCancel ReversedPolarity
RxGain TxGain PN TID SIPUSERNAME SIPUSERPWD
Idle Normal Enable Enable 0 0 a1
-----
```

Example 2: Query the information of POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
LST-POTSINFO::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 09:52:36
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of pots info
```

```

LineState  ServiceState  EchoCancel  ReversedPolarity
RxGain    TxGain    PN      TID    SIPUSERNAME    SIPUSERPWD
Register-failed EndAuto  Enable   Disable 0      0      --
-----

```

## Related Command

None

## 6.8.6 Conducting the External Line Test (MELT)

### Function Description

This command is used for testing the external line of a voice or DSL user to detect whether line errors occur.

### Command Format

```

MELT::ONUIP=onu_name|OLTID=olt_name[, PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu_index],ONUPOST=fttbpost_index:CTAG::;

```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	(Optional) Port of the voice service corresponding to the broadband

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of outside line test

onclusion ACAG ACBG ACAB DCAG DCBG DCAB RAG RBG RAB CapAG CapBG CapAB



## Output Parameter

Parameter	Data Type	Value Range	Description
Conclusion	INTEGER	0 to 100	Test result
ACAG	INTEGER	-	T568A-to-ground AC voltage Unit: mV
ACBG	INTEGER	-	T568B-to-ground AC voltage Unit: mV
ACAB	INTEGER	-	T568A / T568B AC voltage Unit: mV
DCAG	INTEGER	-	T568A-to-ground DC voltage Unit: mV
DCBG	INTEGER	-	T568B-to-ground DC voltage Unit: mV
DCAB	INTEGER	-	T568A/T568B DC voltage Unit: mV
RAG	INTEGER	-	T568A-to-ground resistance Unit: ohm
RBG	INTEGER	-	T568B-to-ground resistance Unit: ohm
RAB	INTEGER	-	T568A/T568B resistance Unit: ohm
CapAG	INTEGER	-	T568A-to-ground capacitance Unit: nF
CapBG	INTEGER	-	T568B-to-ground capacitance Unit: nF
CapAB	INTEGER	-	T568A/T568B capacitance Unit: nF

## Example

Example 1: Test the external line of POTS port 1 of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
MELT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,  
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 14:52:26  
M CTAG COMPLD  
    total_blocks=1  
    block_number=1  
    block_records=1  
list of outside line test  
-----  
Conclusion ACAG ACBG ACAB DCAG DCBG DCAB RAG  
RBG RAB CapAG CapBG CapAB  
22 15 15 21 477 485 14 >10M  
>10M >10M 1365005500 1365204625 2031075  
-----
```

Example 2: Test the external line of POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
MELT::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 09:53:59  
M CTAG COMPLD  
    total_blocks=1  
    block_number=1  
    block_records=1  
list of outside line test  
-----  
Conclusion ACAG ACBG ACAB DCAG DCBG DCAB RAG  
RBG RAB CapAG CapBG CapAB  
22 124 219 190 410 410  
58 >10M >10M >10M 1365300000 1365400000 2000000  
-----
```

## Related Command

None

## 6.8.7 Conducting the Internal Line Test (TEST-POTSCIRCUIT)

## Function Description

This command is used for testing the internal line of a voice or DSL user to detect whether line errors occur.

## Command Format

```
TEST-POTSCIRCUIT::ONUIP=onu_name|OLTID=olt_name[,  
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index],  
ONUPORT=fttbpost_index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	(Optional) Port of the voice service corresponding to the broadband

## Response Format

It complies with the query command response format in [Response Message Format](#).

Title = list of pots inside line test

LoopCurrent FeedV RingV FeedVValue RingVValue LoopCurrentValue

## Output Parameter

Parameter	Data Type	Value Range	Description
LoopCurrent	OCTET STRING	Normal Abnormal	Indicates whether the loop current is normal.
FeedV	OCTET STRING	Normal Abnormal	Indicates whether the feed voltage is normal.

Parameter	Data Type	Value Range	Description
RingV	OCTET STRING	Normal Abnormal	Indicates whether the ring voltage is normal.
FeedVValue	INTEGER	-	Feed voltage Unit: mV
RingVValue	INTEGER	-	Ring voltage Unit: mV
LoopCurrentValue	INTEGER	-	Loop current Unit: mA

## Example

Example 1: Test the internal line of POTS port 1 of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
TEST-POTSCIRCUIT::OLTID=10.250.18.100,PONID=NA-NA-3-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 14:52:52
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
list of pots inside line test
-----
LoopCurrent FeedV RingV FeedVValue RingVValue LoopCurrentValue
Normal Normal Normal 48444 58557 18
-----
```

Example 2: Test the internal line of POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
TEST-POTSCIRCUIT::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 09:55:02
M CTAG COMPLD
    total_blocks=1
```

```
block_number=1
block_records=1
list of pots inside line test
-----
LoopCurrent FeedV RingV FeedVValue RingVValue LoopCurrentValue
Normal Normal Abnormal 39278 64314 22
-----
```

## Related Command

None

## 6.8.8 Conducting the Incoming Call Emulation Test (TEST-CALLEESIMULATION)

### Function Description

This command is used for conducting the incoming call emulation test.

The incoming call emulation test simulates an incoming call during which a program acts as the called party and automatically completes all the operations that should be responded by the called party to the caller. The testing personnel will check whether the ringing of the called party can be heard so as to verify whether the called port is ringing and being called normally.

**Note:** If the system does not send the ending test command after a certain period of time since the sending of the starting test command, the test will be automatically ended.

### Command Format

```
TEST-CALLEESIMULATION::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index],
ONUPORT=pots_num:CTAG::ACTION=action-type[,TIMEOUT=timeout];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type (ONU_NAME, MAC, LOID and ONU_NUMBER)	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPOINT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

Parameter	Data Type	Value Range	Description	Remark
ACTION	OCTET STRING	Start: Starts the test. Stop: Ends the test. Query: Queries the test.	Test type	Returned status of the call upon query: 1. The port is idle. 2. Off-hook. 3. Ringing. 4. Call connected. 5. Busy tone. 6. On-hook. 7. Testing is ended.
TIMEOUT	INTEGER	60 to 300	Test time Unit: s	-

## Response Format

The format of the response for starting the test is the same as the operation command response format in [Response Message Format](#). The format of the response for querying and stopping the test is the same as the query command response format in [Response Message Format](#).

```
Title = result of callin simulation
STATE Conclusion FailReason
```

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
STATE	OCTET STRING	1: The port is idle. 2: Off-hook. 3: Ringing. 4: Connected. 5: On-hook. 6: Testing is ended.	Current status of the call	This parameter is returned when the input parameter "Action" is "Stop" or "Query".
Conclusion	INTEGER	1	Succeeded	These two parameters are returned when the input parameter "Action" is "Stop".
		2	Failed	
		3	The call connection is established, but the tester has not confirmed the call connection status.	
FailReason	INTEGER	1	No signaling interaction.	



Parameter	Data Type	Value Range	Description	Remark
		2	The called party hooks off, but SS does not respond to the off-hook signaling.	
		3	MG internal reason.	
		4	Others	

## Example

Example 1: Conduct an incoming call emulation test on POTS port 1 of the ONU (has no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
TEST-CALLEESIMULATION::OLTID=10.250.18.100,PONID=NA-NA-3-1,
ONUITYPE=LOID,ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::
ACTION=Start,TIMEOUT=60;
TEST-CALLEESIMULATION::OLTID=10.250.18.100,PONID=NA-NA-3-1,
ONUITYPE=LOID,ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::
ACTION=Stop,TIMEOUT=60;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 14:54:09
M CTAG COMPLD
  EN=0  ENDESC=No error
  FH_10.250.18.133 2010-10-27 14:55:42
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
result of callin simulation
-----
STATE  Conclusion  FailReason
6      2          1
-----
```

Example 2: Conduct an incoming call emulation test on POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
TEST-CALLEESIMULATION::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::  
ACTION=Start,TIMEOUT=60;  
TEST-CALLEESIMULATION::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::  
ACTION=Stop,TIMEOUT=60;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-02 15:11:04  
M CTAG COMPLD  
EN=0 ENDESC=No error  
FH_10.250.18.133 2010-11-02 15:11:22  
M CTAG COMPLD  
total_blocks=1  
block_number=1  
block_records=1  
result of callin simulation  
-----  
STATE Conclusion FailReason  
6 2 1  
-----
```

## Related Command

None

## 6.8.9 Conducting the Outgoing Call Emulation Test (TEST-CALLERSIMULATION)

### Function Description

This command is used for conducting the outgoing call emulation test.

The outgoing call emulation test simulates an outgoing call during which a program acts as the caller and automatically completes all the operations that should be performed by the caller. After the call is connected, the tester will check whether the ringing of the caller can be heard so as to verify whether the calling emulation port is ringing and calling normally.

**Note:**

If the system does not send the test ending command after a certain period of time since the sending of the test starting command, the test will be automatically ended.

**Command Format**

```
TEST-CALLERSIMULATION::ONUIP=onu_name|OLTID=olt_name[,
PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu_index],
ONUPORT=post_index:CTAG::ACTION=action-type,TEL=tel-number[,
TIMEOUT=timeout];
```

**Input Parameter**

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	-
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional
ACTION	OCTET STRING	Start: Starts the test. Stop: Ends the test. Query: Queries the test.	Test Type	-
TEL	OCTET STRING	Size (20)	The telephone number dialed for testing. It is entered when starting the test.	-
TIMEOUT	INTEGER	60 to 300	Test time Unit: s	-

## Response Format

The format of the response for starting the test is the same as the operation command response format in [Response Message Format](#). The format of the response for querying and stopping the test is the same as the query command response format in [Response Message Format](#).

Title = result of call out simulation

STATE DIALNUMBER TARGETNUMBER FAILED SIG Conclusion FailReason

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark
STATE	OCTET STRING	1: The port is idle. 2: Off-hook. 3: Dial tone. 4: Receiving (digit collection). 5: ReceiveEnd (digit collection completed). 6: Ringing back. 7: Connected. 8: Busy tone. 9: On-hook. 10: Testing is ended.	Current status of the call	This parameter is returned when the input parameter "Action" is "Stop" or "Query".
DIALNUMBER	OCTET STRING	Size (32)	Telephone number dialed for testing.	-
TARGETNUMBER	OCTET STRING	Size (32)	Telephone number reported to softswitch.	-
FAILED SIG	OCTET STRING	Size (128)	Specific error signaling returned when establishing the channel failed	-
Conclusion	INTEGER	1	Succeeded	These two parameters are returned when the input parameter "Action" is "Stop".
		2	Failed	
		3	The call connection is established, but the tester has not confirmed the call connection status.	
FailReason	INTEGER	1	The SS off-hook response signaling is not received.	
		2	The SS dial tone sending signaling is not received.	
		3	The dialed telephone number is not consistent with that reported to SS.	
		4	The ring back tone is not received.	

Parameter	Data Type	Value Range	Description	Remark
		5	The opposite end has not hooked off.	
		6	Establishing the channel failed.	
		7	SS does not respond to the on-hook signaling.	
		8	Others	

## Example

Example 1: Conduct an outgoing call emulation test on POTS port 1 of the ONU (has no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
TEST-CALLERSIMULATION::OLTID=10.250.18.100,PONID=NA-NA-3-1,
ONUIDTYPE=LOID,ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::
ACTION=Start,TEL=1110,TIMEOUT=60;
TEST-CALLERSIMULATION::OLTID=10.250.18.100,PONID=NA-NA-3-1,
ONUIDTYPE=LOID,ONUID=aaa_bbb_ccc_111_222,ONUPORT=NA-NA-NA-1:CTAG::
ACTION=Stop,TEL=1110,TIMEOUT=60;
```

### ◆ Response message

```
FH_10.250.18.133 2010-10-27 14:56:53
M CTAG COMPLD
  EN=0  ENDESC=No error
  FH_10.250.18.133 2010-10-27 14:57:02
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
result of call out simulation
-----
STATE DIALNUMBER  TARGETNUMBER  FAILED SIG
Conclusion FailReason
10 1110  port_register_failed    2    8
-----
```

Example 2: Conduct an outgoing call emulation test on POTS port 1 in slot 2 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

## ◆ Command issued

```
TEST-CALLERSIMULATION::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::
ACTION=Start,TEL=1110,TIMEOUT=60;
TEST-CALLERSIMULATION::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::
ACTION=Stop,TEL=1110,TIMEOUT=60;
```

## ◆ Response message

```
FH_10.250.18.133 2010-11-02 15:11:27
M CTAG COMPLD
  EN=0   ENDESC=No error
  FH_10.250.18.133 2010-11-02 15:11:40
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
result of call out simulation
-----
STATE DIALNUMBER TARGETNUMBER FAILED SIG
Conclusion FailReason
10 1110 no response from ss 2 1
-----
```

## Related Command

None

**6.8.10 AIS PPPoE Emulation Test (CFG-PPPOESIMULATION)**

## Function Description

The broadband dial-up emulation test is conducted on a LAN port or DSL port of the MDU, SFU or HGU (bridge) to simulate a user initiating the PPPoE dial-up so as to verify whether the user dial-up service connection can be normally established.

## Command Format

```
CFG-PPPOESIMULATION::ONUIP=onu-name|OLTID=olt-name[,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index]:CTAG::
PPPOESWITCH=pppoe-test-switch[,USERNAME=username][,PASSWORD=password][,
VPI=vpi][,VCI=vci][,CVLAN=cvlan][,AUTHMODE=pppoe-authmode][,CCOS=cvlan-
cos][,SVLAN=svlan][,SCOS=svlan-cos][,TIMEOUT=test-time][,
REDIALTIMES=re-dail-times];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	Required for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOI ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID or ONU_NUMBER	-
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address
PPPOESWITCH	OCTET STRING	enable disable	Emulation test switch, which determines whether the following parameters are valid	Required
USERNAME	OCTET STRING	Size (1 to 64)	Username of the broadband dial-up account	Required when the switch is turned on
PASSWORD	OCTET STRING	Size (1 to 16)	Password of the broadband dial-up account	Required when the switch is turned on
VPI	INTEGER	0 to 255	VPI corresponding to the broadband access service of the DSL port	Optional
VCI	INTEGER	0 to 65535	VCI corresponding to the broadband access service of the DSL port	Optional
CVLAN	INTEGER	0 to 4095	Inner VLAN of the voice service	Required
AUTHMODE	OCTET STRING	AUTO CHAP PAP	Dial-up authentication mode	Optional. Default value: AUTO



Parameter	Data Type	Value Range	Description	Remark
CCOS	INTEGER	0 to 7	Inner priority	Optional. In case the inner COS and outer COS are the same, only the inner COS is sent.
SVLAN	INTEGER	0 to 4095	Outer VLAN of the voice service	Optional
SCOS	INTEGER	0 to 7	Outer priority	Optional
TIMEOUT	INTEGER	0 to 300	Test time Unit: s	Optional
REDIALTIMES	INTEGER	-	Number of re-dialing times	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

None

## Example

Simulate a user initiating the PPPoE dial-up on the ONU with the ID FHTT03317e78, which is connected to PON port 6 in slot 7 of the OLT with the IP address 10.190.40.156. In this way, verify whether the user dial-up service connection can be normally established.

### ◆ Command issued

```
CFG-PPPOESIMULATION::OLTID=10.190.40.156,PONID=NA-NA-7-6,ONUIDTYPE=MAC,
ONUID=FHTT03317e78:CTAG::PPPOESWITCH=enable,USERNAME=hello,
PASSWORD=12345678;
```

### ◆ Response message

```
FH_10.170.3.76 2018-08-11 09:19:03
M CTAG COMPLD
  EN=0  ENDESC=No error
;
```

## Related Command

None

## 6.8.11 Querying the AIS PPPoE Emulation Test Result (CFG-PPPOESIMULATION)

### Function Description

This command is used for querying the AIS PPPoE emulation test result.

### Command Format

```
LST-PPPOESIMULATION::[ONUIP=onu-name] | [[OLTID=olt-name[,  
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index]][,  
BOARDID=BOARD_location]]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.

Parameter	Data Type	Value Range	Description	Remark
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_ NUMBER.	Optional

## Response Format

It complies with the operation command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT
PONID	OCTET STRING	Size (128)	Location information of the PON port. The format is rack- shelf-slot-port number. Enter NA for the corresponding unspecified information. For example, enter "NA-0-0-0" for port 0 in slot 0 of shelf 0.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU. The value is ONU_NAME, MAC, LOID, PASSWORD or ONU_NUMBER.
TestResult	OCTET STRING	-	-
StartTime	OCTET STRING	Size (20)	Start time of the test in the format of yyyy-mm-dd hh:mm: ss
EndTime	OCTET STRING	Size (20)	End time of the test in the format of yyyy-mm-dd hh:mm: ss

Parameter	Data Type	Value Range	Description
ServerIp	String	IP address	-
ClientIp	String	IP address	-
ClientPrimaryDNS	String	dns	-
ClientSecondaryDNS	String	dns	-
Username	OCTET STRING	Size (1 to 64)	Username of the broadband dial-up account
Password	OCTET STRING	Size (1 to 16)	Password of the broadband dial-up account
Svlan	INTEGER	0 to 4095	Outer VLAN
Scos	INTEGER	0 to 7	Outer service priority
Cvlan	INTEGER	0 to 4095	Inner VLAN
CCos	INTEGER	0 to 7	Inner service priority

## Example

Read the AIS PPPoE emulation test result of the ONU with the ID FHTT03317f08 connected to PON port 1 in slot 6 of the OLT with the IP address 10.171.0.28. The ONU has no independent management IP address, and is authenticated by MAC address.

### ◆ Command issued

```
LST-PPPOESIMULATION::OLTID=10.171.0.28,PONID=NA-NA-6-1,ONUIDTYPE=MAC,
ONUID=FHTT03317f08:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.31 2018-06-20 09:12:50
```

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=1

result of pppoe simulation

```
_____
_____
_____
```

OLTID	PONID	ONUID	TestResult	StartTime	EndTime	ServerIp	ClientIp	ClientPrimaryDNS	ClientSecondaryDNS	Username	Password	Svlan	Scos	Cvlan	CCos
10.171.0.28	–	FHTT03317f08	Succeed	0000-00-00	00:00:00	0000-00-00	00:00:00	–	–	–	–	–	0	–	0

---

---

---

#### Related Command

None

## 6.8.12 Querying the NGN Resource Status (LST-NGNRESOURCE)

### Function Description

This command is used to query the ONU NGN resource status.

### Command Format

```
LST-NGNRESOURCE::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUOID=onu-index]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
POTSNO	INTEGER	0 to 255	POTS number
TELEPHONENO	OCTET STRING	Size (128)	Telephone number

Parameter	Data Type	Value Range	Description
USERSTATUS	OCTET STRING	EP_STATUS_INACTIVE EP_STATUS_REGING EP_STATUS_IDLE EP_STATUS_OFF_HOOK EP_STATUS_DIALING EP_STATUS_RING EP_STATUS_RINGBACK EP_STATUS_CONNECTING EP_STATUS_CONNECTED EP_STATUS_ON_HOOK EP_STATUS_ DISCONNECTING EP_STATUS_BUSY EP_STATUS_REG_FAIL EP_STATUS_NOT_HANGUP	The port is not activated. The port is registering. The port is idle. The port is hooked off. The port is dialing. The port is ringing. The port is ringing back. The port is connecting. The port is connected. The port is hooked on. The port is not connected. The port is busy. Registration of the port failed. The user does not hook on for a long time.
TERMINATIONID	OCTET STRING	Size (20)	Termination point ID
RTPNAME	OCTET STRING	Size (16)	RTP resource name
RTPPORT	INTEGER	0 to 65535	RTP port number

## Example

### ◆ Command issued

```
LST-NGNRESOURCE::OLTID=172.30.15.58,PONID=NA-NA-11-5,ONUIDTYPE=MAC,
ONUID=FHTT11a2e6b0:CTAG::;
```

### ◆ Response message

```
FH_10.99.2.201 2019-06-17 11:46:26
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=2
```

```
NGN resource info
```

```
-----
POTSNO    TELEPHONENO  USERSTATUS  TERMINATIONID  RTPNAME    RTPPORT
1          0            EP_STATUS_IDLE  3432264646    --         0
2          0            EP_STATUS_INACTIVE  --           --         0
-----
```

## Related Command

None

## 6.9 Querying the Alarm Information

The following introduces the command and example for querying the alarm information.

### 6.9.1 Querying Alarms (QUERY-ALARM)

#### Function Description

The command is used for querying the recovered / unrecovered alarms of a specified NE.

#### Command Format

```
QUERY-ALARM::ONUIP=onu-name|OLTID=olt-name[,PONID=ponport_location][,  
ONUIDTYPE=id-type,ONUID=onu-index]:CTAG::[BEGINTIME=begin-time][,  
ENDTIME=end-time][,FAULTFLAG=flag];
```

◆ Query an ONU that has a management IP address:

```
QUERY-ALARM::ONUIP=onu-name:CTAG::[BEGINTIME=begin-time][,ENDTIME=end-  
time][,FAULTFLAG=flag];
```

◆ Query an ONU that has no management IP address:

```
QUERY-ALARM::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=id-type,  
ONUID=onu-index:CTAG::[BEGINTIME=begin-time][,ENDTIME=end-time][,  
FAULTFLAG=flag];
```

◆ Query an OLT PON port:

```
QUERY-ALARM::OLTID=olt-name,PONID=ponport_location:CTAG::  
[BEGINTIME=begin-time][,ENDTIME=end-time][,FAULTFLAG=flag];
```

◆ Query an OLT:

```
QUERY-ALARM::OLTID=olt-name:CTAG::[BEGINTIME=begin-time][,ENDTIME=end-  
time][,FAULTFLAG=flag];
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is required for querying an ONU that has a management IP address.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	It is required for querying an OLT or an ONU that has no management IP address.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
BEGIN-TIME	String	Size (32)	Format of start time (Beijing time) YYYY-MM-DD HH-MM-SS	Optional

Parameter	Data Type	Value Range	Description	Remark
ENDTIME	String	Size (32)	Format of end time (Beijing time) YYYY-MM-DD HH- MM-SS	Optional
FAULT- FLAG	STRING	Fault-Only ALL	Alarm status. Default value: Fault-Only. Fault-Only includes events and excludes recovered alarms.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

```
Title = list of alarm info  
SERIALID ALARMNAME DIP DNAME DTYPE POSITION SEVERITY FaultFlag HAPPENTIME  
RECOVERTIME ALARMTYPE AdditionalInfo EVENT_CODE PROBABLE_CAUSE_DESC  
PROBABEL_CAUSE_CODE PROPOSED_ADVISE
```

## Output Parameter

Parameter	Data Type	Value Range	Description
SERIALID	String	Size (0 to 100)	Alarm ID
ALARMNAME	String	Size (0 to 256)	Alarm name, corresponding to the alarm code parameter (EVENT_CODE)
DIP	String	IP address	NE IP address
DNAME	String	Size (0 to 100)	NE name
DTYPE	String	Size (0 to 100)	NE type

Parameter	Data Type	Value Range	Description
POSITION	String	RACK: rackid SHELF: shelfid SLOT: slotid PORT: portid ONUNUM: onunumber ONUNAME: onuname ONUPORTTYPE: onuporttype ONUPORT: onuportid EMUNUM: emunum	Position where the alarm occurs. RACK: rack SHELF: shelf SLOT: slot PORT: port number ONUNUM: ONU number ONUNAME: ONU name ONUPORTTYPE: ONU port type (LAN, E1, DSL, POTS and PON) ONUPORT: ONU port number EMUNUM: environment monitoring unit
SEVERITY	String	Critical Major Minor Warning	Alarm level
FaultFlag	String	Fault Recovery Event	Alarm status
HAPPENTIME	String	Size (0 to 32)	Alarm generation time. Format: YYYY-MM-DD HH:MM:SS.
RECOVERTIME	String	Size (0 to 32)	Alarm recovery time. Format: YYYY-MM-DD HH:MM:SS.
ALARMTYPE	String	communicationsAlarm qualityOfServiceAlarm processingErrorAlarm equipmentAlarm environmentalAlarm	Alarm type
AdditionalInfo	String	Size (0 to 256)	Additional information, describing additional information related to the alarm.
PROBABLE_CAUSE_DESC	String	Size (0 to 256)	Alarm cause

Parameter	Data Type	Value Range	Description
PROBABEL_ CAUSE_CODE	Integer	-	Alarm cause code
PROPOSED_ ADVISE	String	Size (0 to 512)	Handling advice

## Example

Example 1: Query alarm information of the ONU (having no management IP address) with ONUID being aaa\_bbb\_ccc\_111\_222. The ONU is connected to PON port 1 in slot 3 of the OLT whose IP address is 10.78.200.200.

### ◆ Command issued

```
QUERY-ALARM::OLTID=10.78.200.200,PONID=NA-NA-15-1,ONUIDTYPE=LOID,
ONUID=aaa_bbb_ccc_111_222:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-01 15:31:06
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=14
Alarm
-
SERIALID  ALARMNAME  DIP  DNAME  DTYPE  POSITION
SEVERITY   FaultFlag  HAPPENTIME  RECOVERTIME
ALARMTYPE  ADITIONALINFO          EVENT_CODE
PROBABLE_CAUSE_DESC
135      ONU_H248_BREAKOUT  10.250.18.100
AN5006-04  AN5006-04
RACK:NA, SHELF:NA, SLOT:3, PORT:1, ONUNUM:5, ONUNAME:AN5006-04
Critical  Faul2010-11-01 14:51:51  --  CommunicationAlarm
-- 320001  ONU_H248_BREAKOUT99  ONU_H248_BREAKOUT  10.250.18.100
AN5006-04  AN5006-04
```

Example 2: Query the alarm information of the ONU (having a management IP address) whose IP address is 10.250.18.121.

### ◆ Command issued

```
QUERY-ALARM::ONUIP=10.250.18.121:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-02 10:34:38
M CTAG COMPLD
```

```
total_blocks=2
block_number=2
block_records=3
Alarm
-
SERIALID ALARMNAME DIP  DNAME  DTYPE  POSITION
SEVERITY  FaultFlag  HAPPENTIME  RECOVERTIME
ALARMTYPE  ADDITIONALINFO  EVENT_CODE  PROBABLE_CAUSE_DESC
2  ONU_H248_BREAKOUT  10.250.18.121  system 2  AN5006-20
RACK:NA,SHELF:NA,SLOT:5,PORT:0  Critical  Recovery
2010-10-28 09:13:14  2010-11-01 09:48:13  CommunicationAlarm  --
320001  ONU_H248_BREAKOUT3  OLT card status anomaly 10.250.18.121
system 2  AN5006-20  RACK:NA,SHELF:NA,SLOT:4 Critical  Recovery
2010-11-01 11:06:42  2010-11-01 11:15:34  EquipmentAlarm  --
110003  OLT card status anomaly, including (running anomaly,
not activated, inconsistent of the card and configuration type)4
OLT card status anomaly 10.250.18.121  system 2  AN5006-20
RACK:NA,SHELF:NA,SLOT:4 Critical  Recovery  2010-11-01
15:11:06  2010-11-01 15:19:14  EquipmentAlarm  -- 110003
OLT card status anomaly, including (running anomaly, not activated,
inconsistent of the card and configuration type)-
```

## Related Command

None

# 7

## Integrated Query Interface

---

The following introduces the commands for physical resource query, service resource query, resource change notification and resource file export.

- ☒ Querying the Equipment Information
- ☒ Querying Service Resources
- ☒ Resource Change Notification
- ☒ Resource Data Full Export

## 7.1 Querying the Equipment Information

The following introduces the commands and examples for querying the equipment information.

### 7.1.1 Querying the OLT Information (LST-DEVICE)

#### Function Description

This command is used for querying the information of a specified set or all sets of OLT.

#### Command Format

```
LST-DEVICE:: [OLTID=olt-name] :CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT

#### Response Format

It complies with the query-command response format in [Response Message Format](#).

#### Output Parameter

Parameter	Data Type	Value Range	Description
DEVNAME	OCTET STRING	Size (128)	Device name
DEVIP	OCTET STRING	Size (128)	Device IP address
DT	OCTET STRING	Size (255)	Device model
DEVER	OCTET STRING	Size (255)	Software version
MEM	INTEGER	0 to 100	Memory usage Unit: %
CPU	INTEGER	0 to 100	CPU usage Unit: %
TEMPERATURE	INTEGER	-50 to 100	Temperature Unit: °C

Parameter	Data Type	Value Range	Description
TOPOLOC	OCTET STRING	Size (512)	The location information of the Topo node where the OLT resides, displayed after the interface query. If the topological location involves multiple layers, the information of each layer is separated by "/". For example, the physical topological tree /abassa/2323sd-faa/2122121sffgvafaaaa/10.144.78.163.
DSTAT	OCTET STRING	Connecting Disconnecting	NE communication status Connecting Disconnecting
ALIAS	OCTET STRING	Size (32)	Alias name

## Example

For example, query the information of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-DEVICE::OLTID=10.250.18.100:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 10:37:35
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
-----
DEVNAME  DEVIP   DT      DEVER
System 1   10.250.18.100  AN5516_01  RP0121
-----
```

## Related Command

```
LST-DEVINFO
```



## 7.1.2 Querying the ONU Information (LST-ONU)

### Function Description

This command is used for querying the information of a specified ONU or all ONUs connected to the OLT.

### Command Format

```
LST-ONU::ONUIP=onu-name| (OLTID=olt-name[,PONID=ponport_location[,
ONUIDTYPE=onuidtype,ONUID=onu-index]]) :CTAG::;
```

◆ Query all ONUs connected to the OLT:

```
LST-ONU::OLTID=olt-name:CTAG::;
```

◆ Query all ONUs connected to a specified PON port of the OLT:

```
LST-ONU::OLTID=olt-name,PONID=ponport_location:CTAG::;
```

◆ Query the information of the ONU that has a management IP address:

```
LST-ONU::ONUIP=onu-name:CTAG::;
```

◆ Query the information of the ONU that has no management IP address:

```
LST-ONU::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuid-type,
ONUID=onuindex:CTAG::;
```

◆ Query the information of a specified ONU in the entire network:

```
LST-ONU::ONUIDTYPE=onuid-type,ONUID=onuindex:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name.	OLT or the ONU that has no management IP address. Required.

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	Optional for an ONU that has no management IP address
ONUIDTYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD.	Optional for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD.	Optional for an ONU that has no management IP address

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address or name.
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.

Parameter	Data Type	Value Range	Description
ONUNO	INTEGER	0 to 512	ONU authorization number
NAME	OCTET STRING	Size (128)	ONU name
DESC	OCTET STRING	Size (128)	ONU description information.
ONUTYPE	OCTET STRING	Size (128)	ONU type
IP	OCTET STRING	Size (128)	The management IP address of the ONU.
AUTHTYPE	OCTET STRING	MAC LOID LOIDONCEON PASSWORD and PASSWORDONCEON are added.	Authentication mode. When no authentication mode is specified, a dash (–) will be returned.
MAC	OCTET STRING	Size (128)	The registered MAC information of the ONU.
LOID	OCTET STRING	Size (64)	When the MAC authentication is adopted, a dash (–) will be returned.
PWD	OCTET STRING	Size (128)	LOID password. If no password is specified, a dash (–) will be returned.
SWVER	OCTET STRING	Size (128)	Software Version
FTTXMODE	OCTET STRING	FTTB FTTH FTTC FTTO	FTTx networking mode
VendorID	OCTET STRING	Size (4)	Vendor ID
EquipmentID	OCTET STRING	Size (20)	ONU ID
TOPOLOC	OCTET STRING	Size (255)	Information of logical domain

## Example

Example 1, query the information of the ONU (having no management IP address) with ONUID being whdx04. The ONU is connected to the shelf 0 - slot 4 - PON port 1 of the OLT whose IP address is 10.250.18.102.

◆ Command issued

```
LST-ONU::OLTID=10.250.18.102,PONID=NA-NA-4-1,ONUIDTYPE=LOID,  
ONUID=whdx04:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-04 11:06:08  
M CTAG COMPLD  
    total_blocks=1  
    block_number=1  
    block_records=1  
  
-----  
OLTID  PONID  ONUNO  NAME    DESC    ONUTYPE IP    AUTH    MAC  
LOID   PWD    SWVER  
10.250.18.102  NA-1-4-1    2      AN5006-04    --  
AN5006-04    --  LOID  54-4b-40-0c-79-a8  whdx04  --  
R4.05.60.25  
  
-----
```

**Example 2, query the information of the ONU (having a management IP address)  
whose IP address is 10.250.18.121.**

◆ **Command issued**

```
LST-ONU::ONUIP=10.250.18.121:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-04 10:53:54  
M CTAG COMPLD  
    total_blocks=1  
    block_number=1  
    block_records=1  
  
-----  
OLTID  PONID  ONUNO  NAME    DESC    ONUTYPE IP    AUTH    MAC  
LOID   PWD    SWVER  
10.250.18.100  NA-1-1-1    2      AN5006-20    --  
AN5006-20    10.250.18.121  MAC    54-4b-17-00-00-80  
whdx2020    --    b230  
  
-----
```

## Related Command

```
LST-ONUCFG
```

### 7.1.3 Querying the ONU Hardware / Software Version (LST-ONUVERSION)

#### Function Description

This command is used for querying the ONU hardware / software version information.

#### Command Format

```
LST-ONUVERSION::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=id-type,ONUID=onu-index:CTAG::;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for the OLT or the ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	Optional for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
ONU- TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_ NUMBER	Optional for an ONU that has no management IP address
ONU- ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_ NUMBER.	Optional for an ONU that has no management IP address

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
ONU- ID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU on the PON port. The value is ONU_ Number.
SWVER	OCTET STRING	Size (128)	Software version
HWVER	OCTET STRING	Size (128)	Hardware version

## Example

Query the version information of the ONU (having no management IP address) with ONUID being 54-4B-70-03-FB-98. The ONU is connected to PON port 4 in slot 11 on shelf 0 of the OLT whose IP address is 10.78.200.200.

◆ Command issued

```
LST-ONUVERSION::OLTID=10.78.200.200,PONID=NA-NA-11-4,ONUIDTYPE=MAC,
ONUID=54-4B-70-03-FB-98:CTAG::;
```

#### ◆ Response message

```
FH_10.98.30.151 2014-07-07 14:32:20
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
```

```
list of ONU version:
```

```
-----
OLTID   PONID   ONUID   SWVER   HWVER
10.78.200.200 1-1-11-4 3 R3.07.05.64 WKE2.119.195R1B
-----
```

```
;
```

### Related Command

None

## 7.1.4 Querying the Shelf Information (LST-SHELF)

### Function Description

This command is used for querying the shelf information of a specified OLT, a specified ONU or all devices in the entire network.

### Command Format

```
LST-SHELF::[ONUIP=onu-name] | [OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index]]:CTAG::;
```

#### ◆ Query the shelf information of all devices in the entire network:

```
LST-SHELF:::CTAG::;
```

#### ◆ Query the shelf information of a specified OLT:

```
LST-SHELF::OLTID=olt-name:CTAG::;
```

#### ◆ Query the shelf information of an ONU that has a management IP address:

```
LST-SHELF::ONUIP=onu-name:CTAG::;
```

#### ◆ Query the shelf information of an ONU that has no management IP address:

```
LST-SHELF::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuidtype,  
ONUID=onu-index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for the OLT or the ONU that has no management IP address.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude <b>ONUID</b> , <b>PONID</b> is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).



## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	When a single ONU is queried, the input parameter will be returned (when all ONUs in the entire network are queried, the ONUIPs will be returned if they exist; otherwise, the OLTIDs, PONIDs or ONUIDs will be returned).
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT. When all devices in the entire network are queried, the IP addresses will be returned.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
ONUID	OCTET STRING	Size (128)	When a single ONU is queried, the input parameter will be returned; when all ONUs in the entire network are queried, the ONUIDs will be returned.
SHELFID	OCTET STRING	Size (128) Rack - shelf number	Locate a shelf through rack - shelf number. Enter NA for the corresponding unspecified information.
SHELF-TYPE	OCTET STRING	Size (128)	Shelf type

## Example

Example 1: Query the information of all shelves of the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-SHELF::OLTID=10.250.18.100:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 10:37:54
M CTAG COMPLD
  total_blocks=1
  block_number=1
```

```
block_records=1
-----
ONUUIP   OLTID   PONID   ONUID   SHELFID  SHELFTYPE
--       10.250.18.100   --       --       NA-1     AN5516-01
-----
```

**Example 2:** Query the information of all shelves of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
LST-SHELF::ONUUIP=10.250.18.121:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-04 10:54:02
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
-----
ONUUIP   OLTID   PONID   ONUID   SHELFID  SHELFTYPE
10.250.18.121 10.250.18.100   NA-1-1-1      NA-1     AN5006-20
-----
```

## Related Command

None

## 7.1.5 Querying the Card Information (LST-BOARD)

### Function Description

This command is used for querying the card information of a specified OLT or a specified ONU or all sets of equipment in the entire network.

### Command Format

```
LST-BOARD::[ONUUIP=onu-name] | [[OLTID=olt-name[, PONID=ponport_location,
ONUUIPTYPE=onuid-type, ONUID=onu-index]] [, BOARDID=BOARD_location]] :
CTAG::;
```

◆ **Query the card information of all devices in the entire network:**

```
LST-BOARD:::CTAG::;
```

◆ **Query the card information of a specified OLT:**

```
LST-BOARD::OLTID=olt-name[,BOARDID=BOARD_location]:CTAG::;
```

- ◆ Query the card information of the ONU that has a management IP address:

```
LST-BOARD::ONUIP=onu-name[,BOARDID=BOARD_location]:CTAG::;
```

- ◆ Query the card information of the ONU that has no management IP address:

```
LST-BOARD::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuidtype,  
ONUID=onu-index[,BOARDID=BOARD_location]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name	OLT or the ONU that has no management IP address. Required.
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the <b>ONUID</b> , the <b>PONID</b> is optional.
ONUIDTYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID, ONU_NUMBER or PASSWORD.	Optional
BOARDID	OCTET STRING	Size (128) Cabinet rack - shelf - slot	Locates the card through cabinet rack - shelf - slot. Enter NA if the corresponding information is not specified. To only specify the shelf number, enter it in format of NA-0-NA.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	When a single ONU is queried, the input parameter will be returned (when all ONUs are queried in the entire network, the ONUIP will be returned if the ONUIP exists; otherwise, the OLTID, PONID or ONUID will be returned).
OLTID	OCTET STRING	Size (128)	OLT IP address or name. When the device is queried in the entire network, the IP address will be returned.

Parameter	Data Type	Value Range	Description
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
ONUID	OCTET STRING	Size (128)	When a single ONU is queried, the input parameter will be returned; when all ONUs are queried in the entire network, the ONUNO will be returned.
BOARDID	OCTET STRING	Size (128) Cabinet rack - shelf - slot	Locates the card through cabinet rack - shelf - slot. Enter NA if the corresponding information is not specified. To only specify the shelf number, enter it in format of NA-0-NA.
BOARDTYPE	OCTET STRING	Size (128)	Card type
BSERVICE	OCTET STRING	-	Card service type
PNUM	INTEGER	0 to 64	Number of ports
SWVER	OCTET STRING	Size (255)	Software Version
HWVER	OCTET STRING	Size (255)	Hardware version
BOARDSN	OCTET STRING	Size (32)	Card serial number. You can set the switch to display or not display this information.
TOPOLOC	OCTET STRING	Size (255)	Information of logical domain
ESN	OCTET STRING	Size (255)	Electronic serial number of card

## Example

Example 1, query the information of a card on the OLT whose IP address is 10.250.18.100.

### ◆ Command issued

```
LST-BOARD::ONUIP=10.250.18.100:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 10:38:05
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=10
```

```

-----
ONUIP OLTID PONID ONUID BOARDID BOARDTYPE BSERVICE
PNUM SWVER HWVER
-- 10.250.18.100 -- -- NA-1-1 EC4B EPON 4
RP0121 WKE2.119.318R1A
-- 10.250.18.100 -- -- NA-1-2 EC4B EPON 4
RP0121 WKE2.119.318R2A
-- 10.250.18.100 -- --NA-1-3 EC4B EPON 4
RP0121 WKE2.119.318R2A
-- 10.250.18.100 -- -- NA-1-9 HSWA SCU 3
RP0121 WKE2.115.334R1A
-- 10.250.18.100 -- -- NA-1-18 PUBA Other 2
RP0107 WKE2.167.177R1A
-- 10.250.18.100 -- -- NA-1-19 HU1A Other 5
RP0103 WKE2.170.846R3A
-- 10.250.18.100 -- --NA-1-20 HU1A Other 5
RP0103 WKE2.170.846R3A
-- 10.250.18.100 -- -- NA-1-21 FAN Other 2
-- --
-- 10.250.18.100 -- -- NA-1-22 FAN Other 2
-- --
-- 10.250.18.100 -- -- NA-1-23 FAN Other 2
-- --
-----

```

**Example 2, query the information of a card connected with the ONU (having a management IP address) whose IP address is 10.250.18.121.**

◆ **Command issued**

```
LST-BOARD::ONUIP=10.250.18.121:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-04 10:54:12
```

```

M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=7

```

```

-----
ONUIP OLTID PONID ONUID BOARDID BOARDTYPE BSERVICE
PNUM SWVER HWVER
10.250.18.121 -- -- -- NA-1-1 VD24 VDSL 24
RP0105 WKE2.170.853R2A
10.250.18.121 -- -- -- NA-1-2 POTS64-20 POTS
64 RP0104 WKE2.170.815R2A
10.250.18.121 -- -- -- NA-1-3 AD32-20 ADSL 32

```

```

RP0106 WKE2.170.814R2C
10.250.18.121 -- -- -- NA-1-4 ETH ETH 16
RP0100 WKE2.170.813R2A
10.250.18.121 -- -- -- NA-1-5 MCU SCU 3
RP0106 WKE2.119.372R2A
10.250.18.121 -- -- -- NA-1-6 PWR Power 1
-- --
10.250.18.121 -- -- -- NA-1-7 FAN-1 Other 2
-- --
-----

```

## Related Command

LST-BRDINFO

## 7.1.6 Querying ONU Distance Values in a Batch Manner (LST-ONUDISTANCE)

### Function Description

This command is used to query the ONU distance values in a batch manner.

### Prerequisite

The PON traffic statistics is enabled in the EMS.

### Command Format

LST-ONUDISTANCE::OLTID=olt-name:CTAG::;

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for the OLT or the ONU that has no management IP address

### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT. When devices in the entire network are queried, the IP addresses will be returned.
ONUNO	INTEGER	0 to 512	ONU authorization number
NAME	OCTET STRING	Size (128)	ONU name
MAC	OCTET STRING	Size (128)	Registered MAC information of the ONU
LOID	OCTET STRING	Size (128)	When the MAC authentication is adopted, a dash – will be returned.
PWD	OCTET STRING	Size (128)	LOID password. If no password is specified, a dash – will be returned.
Length	DOUBLE	0 to 100	Optical fiber length (i.e. the ONU distance value) Unit: km

## Example

Example 1: Query the distance values of all ONUs connected to the OLT with the IP address 10.250.18.100.

### ◆ Command issued

```
LST-ONUDISTANCE::OLTID=10.190.42.3:CTAG::;
```

### ◆ Response message

```
FH_10.170.162.232017-02-1710:35:34
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=2
listofonudistance
-----
OLTIDPONIDONUNONAMEMACLOIDPWDLength
10.190.42.31-1-4-11-----0.000
10.190.42.31-1-14-13PON[1]-AN5506-07-A1[3]FHTT0002010f---0.000
-----
```



## Related Command

None

## 7.1.7 Querying Service Port Attributes (LST-SERVICIEPORTDATTR)

## Function Description

This command is used to query the service port attributes such as the unique identifier, mark, and description.

## Command Format

```
LST-SERVICIEPORTDATTR::ONUIP=onu-name| (OLTID=olt-name[,  
PONID=ponport_location[,ONUIDTYPE=onuidtype,ONUID=onu-index]]) :CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	-
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If the parameter entered does not include the <b>ONU</b> ID, the <b>PONID</b> is optional.

Parameter	Data Type	Value Range	Description	Remark
ONUID-TYPE	OCTET STRING	Size (128)	The options include ONU_NAME, MAC, LOID and ONU_NUMBER.	Required for an ONU that has no management IP address
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Required for an ONU that has no management IP address

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.

Parameter	Data Type	Value Range	Description
DESCRIPTION	OCTET STRING	Size (128)	Port description
SUBSCRIBERNO	OCTET STRING	Size (128)	Unique port identifier

### Example

Query the attributes of PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

#### ◆ Command issued

```
LST-SERVICIEPORTDATR::OLTID=10.171.0.106,PONID=NA-NA-12-9,
ONUIDTYPE=MAC,ONUID=FHTT917a1c80:CTAG::;
```

#### ◆ Response message

```
FH_10.170.95.55 2019-10-09 14:55:13
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of ONU Port Description info:
```

```
-----
ONUIP OLTID PONID ONUID ONUPORT DESCRIPTION SUBSCRIBERNO ONUPORTTYPE
-- 10.171.0.106 1-1-12-9 FHTT917a1c80 NA-NA-NA-1 33 1 LAN
-----
```

```
;
```

### Related Command

None

## 7.1.8 Querying the EMS System Information (LST-EMS-INFO)

### Function Description

This command is used to query the information about the EMS platform of the vendor.

## Command Format

LST-EMS-INFO:::CTAG::;

## Input Parameter

None

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
NAME	OCTET STRING	Size (32)	Name of the vendor's EMS; required.
SOFTWARE-INFO	OCTET STRING	Size (32)	Software version of the vendor's EMS; required.
INTERFACE	OCTET STRING	Size (32)	Version of the vendor's EMS northbound interface; required.
MANUADDRESS	OCTET STRING	Size (100)	Geographical location of the vendor's EMS; required.
MAXNE-COUNT	OCTET STRING	Size (255)	Maximum number of NEs supported by the vendor's EMS, corresponding to the <b>Maximum NE Number</b> in the License information of the EMS; required.
EMSTIME	OCTET STRING	Size (32)	EMS time in the format YYYY-MM-DD HH:MM:SS; required.

## Example

Query the information related to the EMS.

### ◆ Command issued

LST-EMS-INFO:::CTAG::;

## ◆ Response message

```
FH_10.170.95.55 2019-10-09 16:25:21
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
list of EMS info:
```

```
-----
```

```
NAME SOFTWAREINFO INTERFACE MANUADDRESS MAXNECOUNT EMSTIME
```

```
UNM2000 V1.0 R1Build13.08.01.06 V1.0R1 Build13.08.01.06 机房1 1000 2019-10-09 16:25:21
```

```
-----
```

```
;
```

## Related Command

None

## 7.1.9 Querying the POS Information (LST-POS)

## Function Description

This command is used to query the information about the POS resources between the OLT PON port and the ONU.

## Command Format

```
LST-POS::OLTID=olt-name[,PONID=ponport_location]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address or name.	Required
PONID	OCTET STRING	Size (128)	The location of the PON port. The format is Rack-Shelf-Slot-Port. Enter NA is no information is specified. For shelf 0 slot 0 port 0, enter "NA-0-0-0".	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
NAME	OCTET STRING	Size (63)	Name of the optical splitter
POSID	OCTET STRING	Size (63)	ID of the optical splitter It is displayed in the format <b>rack- shelf - slot - port number - No. of the port accommodating the optical splitter (starting from 0).</b>
RATION	OCTET STRING	1:2 1:4 1:8 1:16 1:32 1:64 1:128 1:256	Split ratio
LAYER	INTEGER	-	Layer where the optical splitter is located
TOPPOSID	OCTET STRING	Size (128)	Upper-layer POS identifier
TOPPO- SPORT	OCTET STRING	Size (128)	Upper-layer POS port

## Example

Query the POS resource information between the ONU and PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

## ◆ Command issued

```
LST-POS::OLTID=10.171.0.106,PONID=NA-NA-12-9:CTAG::;
```

## ◆ Response message

```
FH_10.170.95.552019-10-0916:27:21
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=0
```

```
listofPosInfo:
```

```
-----
```

```
NAMEPOSIDRATIONLAYERTOPPOSIDTOPPOSPORT
```

```
-----
```

```
;
```

## Related Command

None

## 7.1.10 Querying the Topology Information (LST-TOPOLINK)

## Function Description

This command is used to query the information about the topology connection between the OLT PON port and the ONU.

## Command Format

```
LST-TOPOLINK::OLTID=olt_name[,PONID=pon_location]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address or name.	Required
PONID	OCTET STRING	Size (128)	The location of the PON port. The format is Rack-Shelf-Slot-Port. Enter NA is no information is specified. For shelf 0 slot 0 port 0, enter "NA-0-0-0".	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
PONID	OCTET STRING	Size (128)	PON port location information (rack - PON port); required. The format is rack-shelf-slot-port. Enter NA if no information is specified. For shelf 0 slot 0 port 0, enter "NA-0-0-0".
NAME	OCTET STRING	Size (128)	Topology connection name

Parameter	Data Type	Value Range	Description
APOINT	OCTET STRING	Size (128)	Starting point of the topology connection ◆ PON port: PON/OLTIP:PON port (PON/10.1.1.2:NA-0-0-0) ◆ POS optical splitter: POS/OLTIP:POSID:POS port number (POS/10.1.1.2:0-0-2-1-1:3) ◆ ONU: ONU/OLTIP:PON port:ONUID (ONU/10.1.1.2:NA-0-0-0:1)
ZPOINT	OCTET STRING	Size (128)	Ending point of the topology connection ◆ PON port: PON/OLTIP:PON port (PON/10.1.1.2:NA-0-0-0) ◆ POS optical splitter: POS/OLTIP:POSID:POS port number (POS/10.1.1.2:0-0-2-1-1:3) ◆ ONU: ONU/OLTIP:PON port:ONUID (ONU/10.1.1.2:NA-0-0-0:1)

## Example

Query the topology connection information between the ONU and PON port 9 in slot 12 of the OLT whose IP address is 10.171.0.106.

### ◆ Command issued

```
LST-TOPOLINK::OLTID=10.171.0.106,PONID=NA-NA-12-9:CTAG::;
```

### ◆ Response message

```
FH_10.170.95.552019-10-0916:31:19
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=0
```

```
listofTopoInfo:
```

```
-----
PONIDNAMEAPOINTZPOINT
-----
```

```
;
```



## Related Command

None

## 7.1.11 Querying the Protection Group Information (LST-PSG)

## Function Description

This command is used to query the configuration information of the PON protection group on the OLT.

## Command Format

```
LST-PSG::OLTID=olt_name:CTAG::[PSGID=group-id];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	OLT IP address or name	Required
PSGID	OCTET STRING	Size (511)	Protection group ID	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description	Remark			
				Setting PON Port Protection Group	Dual-Uplink Protection	Setting PON Port Protection Group Mode	Working Status of PON Port Protection Group
PSGID	OCTET STRING	Size (511)	Protection group name	Group No.	Group SN.	-	-
TYPE	OCTET STRING	eth-nni-port xpon-uni-port	Protection group type	xpon-uni-port	eth-nni-port	-	-

Parameter	Data Type	Value Range	Description	Remark			
				Setting PON Port Protection Group	Dual-Uplink Protection	Setting PON Port Protection Group Mode	Working Status of PON Port Protection Group
REVERTIVE	OCTET STRING	revertive non-revertive	Protection group revert identifier revertive non-revertive	-	-	The active port is revertive by default.	-
STATUS	OCTET STRING	Idle Switched	Switching status of the protection group: Idle Switched Dynamic attribute, not required for synchronizing data of the entire network.	-	-	-	Compare the current protection group status with the initial configuration. If they are consistent, switching has not taken place; otherwise, switching has taken place. Ascertain through the switching event.
RESTOREWAIT-TIME	OCTET STRING	Size (128)	Wait-to-restore time for the protection group Unit: s "-1" indicates that the wait-to-restore time for the protection group is unknown.	-	-	Interval for automatic return	-

Parameter	Data Type	Value Range	Description	Remark			
				Setting PON Port Protection Group	Dual-Uplink Protection	Setting PON Port Protection Group Mode	Working Status of PON Port Protection Group
ALARM-TIME	OCTET STRING	Size (128)	Alarm lasting time for the protection group Unit: ms "-1" indicates that the alarm lasting time for the protection group is unknown.	-	-	Alarm lasting time for the protection group	-
WORK-MEMBER	OCTET STRING	Size (128)	Information of the protected termination point	Active port (the first slot number and PON port number)	Active port	-	-
PROTECT-MEMBER	OCTET STRING	Size (128)	Information of the protecting termination point	Standby port (the second slot number and PON port number)	Standby port	-	-

### Example

Query the configuration of the PON port protection group of the OLT whose IP address is 10.171.0.106.

Command issued

```
LST-PSG::OLTID=10.171.0.106:CTAG::;
```

Response message

```

FH_10.170.95.55 2019-10-09 16:33:52
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=0
list of Psk Info:
-----
PSGID TYPE REVERTIVE STATUS RESTOREWAITTIME ALARMTIME WORKMEMBER PROTECTMEMBER
-----
;

```

## Related Command

None

## 7.2 Querying Service Resources

The following introduces the command and example for querying service resources.

### 7.2.1 Querying the Media Gateway Information (LST-MG)

#### Function Description

This command is used for querying the media gateway information of a specified device.

#### Command Format

```

LST-MG::ONUIP=onu-name | (OLTID=olt-name, PONID=ponport_location,
ONUIDTYPE=idtype, ONUID=onu-index) :CTAG:: [GETSVLAN=TRUE];

```

#### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for an ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
GETSV-LAN	OCTET STRING	TRUE FALSE	-	(Optional) When this parameter is set to <b>TRUE</b> , the output parameter is <b>SVLAN</b> and <b>SCOS</b> .

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	The input parameter will be returned.
OLTID	OCTET STRING	Size (128)	The input parameter will be returned.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	The input parameter will be returned.

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	The input parameter will be returned.
MGID	INTEGER	0 to 16	MG identifier, used for uniquely identifying the MG module on the ONU.
PT	OCTET STRING	Size (32)	Voice protocol type (H.248, SIP)
EID	OCTET STRING	Size (64)	MG gateway domain name in the H248 configuration
SIPREGDM	OCTET STRING	Size (64)	SIP register server
VLAN	INTEGER	0 to 4095	Voice VLAN
PRI	INTEGER	0 to 7	Voice priority
IPMODE	OCTET STRING	Size (64)	IP obtaining mode: DHCP, PPPOE and STATIC
IPADDRESS	OCTET STRING	Size (64)	IP address
IPMASK	OCTET STRING	Size (64)	IP address mask
IPGATEWAY	OCTET STRING	Size (64)	Gateway address
MGCIP1	OCTET STRING	Size (64)	IP address of the active softswitch
MGCIP2	OCTET STRING	Size (64)	IP address of the standby softswitch
SVLAN	INTEGER	0 to 4095	(Optional) Outer VLAN of the voice service
SCOS	INTEGER	0 to 7	(Optional) Outer service priority

## Example

Example 1: Query the MG interface information of the ONU (having no management IP address) with ONUID being whdx04. The ONU is connected to PON port 1 in slot 4 on shelf 0 of the OLT whose IP address is 10.250.18.102.

### ◆ Command issued

```
LST-MG::OLTID=10.250.18.102,PONID=NA-NA-4-1,ONUIDTYPE=LOID,
ONUID=whdx04:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 11:06:36
M CTAG COMPLD
  total_blocks=1
  block_number=1
```

```

        block_records=1
-----
ONU|IP|OLTID|PONID|ONUID|MGID|PT|EID|SIPREGDM|
VLAN|PRI|IPMODE|IPADDRESS|IPMASK|IPGATEWAY|MGCIP1|
MGCIP2|
-- 10.250.18.102|NA-1-4-1|whdx04|0|H.248|a1|
1515|255|--|222.222.222.4|255.255.255.0|0.0.0.0|
222.222.222.222|
-----

```

**Example 2: Query the MG interface information of the ONU (having a management IP address) whose IP address is 10.250.18.121.**

◆ **Command issued**

```
LST-MG::ONUIP=10.250.18.121:CTAG::;
```

◆ **Response message**

```

FH_10.250.18.133 2010-11-04 10:54:21
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
-----
ONU|IP|OLTID|PONID|ONUID|MGID|PT|EID|SIPREGDM|
VLAN|PRI|IPMODE|IPADDRESS|IPMASK|IPGATEWAY|MGCIP1|
MGCIP2|
10.250.18.121|--|--|--|0|H.248|222.222.222.3|
-- 1515|7|STATIC|222.222.222.3|255.255.255.0|0.0.0.0|
222.222.222.222|
-----

```

## Related Command

```

LST-MGCFG
LST-MGINFO

```

## 7.2.2 Querying the Voice Port Information (LST-POTS)

### Function Description

This command is used for querying the voice port information of a specified device.

## Command Format

```
LST-POTS::ONUIP=onu-name| (OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuidtype,ONUID=onu-index) [,ONUPORT=onu-port]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUIDTYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_NUMBER	Optional



Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	The input parameter will be returned.
OLTID	OCTET STRING	Size (128)	The input parameter will be returned.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	The input parameter will be returned.
ONUID	OCTET STRING	Size (128)	The input parameter will be returned.
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.

Parameter	Data Type	Value Range	Description
MGID	INTEGER	0 to 16	MG identifier, used for uniquely identifying the MG module on the ONU.
TID	OCTET STRING	Size (1 to 64)	H248 user terminal identifier
PN	OCTET STRING	Size (1 to 32)	SIP telephone number
SIPUSERNAME	OCTET STRING	Size (1 to 32)	Username corresponding to the SIP user port
SIPUSERPWD	OCTET STRING	Size (1 to 32)	Password corresponding to the SIP user port
FAXMODE	String	T30 T38	Fax mode
CONTROLMODE	String	NONE SS AUTOVBD	Control mode

## Example

Example 1: Query the information of POTS port 1 of the ONU (having no management IP address) with ONUID being whdx04. The ONU is connected to PON port 1 in slot 4 on shelf 0 of the OLT whose IP address is 10.250.18.102.

### ◆ Command issued

```
LST-POTS::OLTID=10.250.18.102,PONID=NA-NA-4-1,ONUIDTYPE=LOID,
ONUID=whdx04,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 11:06:46
```

```
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
```

```
-----
ONUIP OLTID PONID ONUID  ONUPORT MGID  TID  PN
SIPUSERNAME SIPUSERPWD FAXMODE CONTROLMODE
-- 10.250.18.102 NA-1-4-1 whdx04 NA-NA-NA-1
0 a1 a1 T30 AUTOVBD
```

-----

**Example 2:** Query the information of POTS port 1 in slot 2 on shelf 0 of the ONU (having a management IP address) whose IP address is 10.250.18.121.

◆ **Command issued**

```
LST-POTS::ONUIP=10.250.18.121,ONUPORT=NA-NA-2-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-04 10:54:32
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
```

```
-----
ONUIP  OLTID  PONID  ONUID  ONUPORT  MGID  TID  PN
SIPUSERNAME  SIPUSERPWD  FAXMODE  CONTROLMODE
10.250.18.121  --  --  --  NA-NA-2-1  0
  --  --
```

## Related Command

```
LST-POTSINF
LST-POTSINFO
```

## 7.2.3 Querying the Multicast Service Information (LST-IPTV)

### Function Description

This command is used for querying the multicast service information of a specified device. If the query result is empty, an empty list will be returned.

### Command Format

```
LST-IPTV::ONUIP=onu-name| (OLTID=olt-name,PONID=ponport_location,
ONUIDTYPE=onuidtype,ONUID=onu-index) [,ONUPORT=onu-port]:CTAG::;
```

◆ **Query the multicast service information of the ONU that has a management IP address:**

```
LST-IPTV::ONUIP=onu-name[,ONUPORT=onu-port]:CTAG::;
```

◆ **Query the multicast service information of the ONU that has no management IP address:**

```
LST-IPTV:: (OLTID=olt-name, PONID=ponport_location, ONUIDTYPE=onuidtype,
ONUID=onu-index) [, ONUPORT=onu-port] :CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for an ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude <b>ONUID</b> , <b>PONID</b> is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID and ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	The input parameter will be returned.
OLTID	OCTET STRING	Size (128)	The input parameter will be returned.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	The input parameter will be returned.
ONUID	OCTET STRING	Size (128)	The input parameter will be returned.
ONUPORT	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
MVLAN	INTEGER	0 to 4095	Multicast VLAN
VPI	INTEGER	0 to 65535	VPI. Optional (DSL multicast service)
VCI	INTEGER	0 to 65535	VCI. Optional (DSL multicast service)
UV	INTEGER	0 to 4095	VLAN at user side. Optional (multicast service VLAN accessed through a home gateway)
FLMODE	OCTET STRING	Size (32)	Fast leave mode: Enabled Disabled
MAXGRP	INTEGER	0 to 255	Maximum number of multicast programs that a port can join simultaneously.

## Example

Example 1: Query the multicast service information of the ONU (having no management IP address) with ONUID being whdx04. The ONU is connected to PON port 1 in slot 4 on shelf 0 of the OLT whose IP address is 10.250.18.102.

### ◆ Command issued

```
LST-IPTV::OLTID=10.250.18.102,PONID=NA-NA-4-1,ONUIDTYPE=LOID,  
ONUID=whdx04,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 11:06:56
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
-----
ONUIP OLTID PONID ONUID ONUPORT MVLAN  VPI  VCI  UV
FLMODE  MAXGRP
-- 10.250.18.102 NA-1-4-1 whdx04 NA-NA-NA-1 432
-- -- 123 -- --
-----
```

**Example 2: Query the multicast service information of the ONU (having a management IP address) whose IP address is 10.250.18.121.**

◆ **Command issued**

```
LST-IPTV::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1:CTAG::;
```

◆ **Response message**

```
FH_10.250.18.133 2010-11-04 10:54:41
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1
-----
ONUIP OLTID PONID ONUID ONUPORT MVLAN  VPI  VCI  UV
FLMODE  MAXGRP
10.250.18.121 -- -- -- NA-NA-4-1 569 -- --
-- -- --
-----
```

## Related Command

```
LST-IPTVCFG
```

## 7.2.4 Querying the LAN Port Information (LST-LANPORT)

### Function Description

This command is used for querying the LAN port information of a specified OLT or ONU.

## Command Format

```
LST-LANPORT::ONUIP=onu-name| (OLTID=olt-name[,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index])[,PORTID=port_index]:CTAG::;
```

◆ Query the uplink port information of an OLT:

```
LST-LANPORT::OLTID=olt-name[,PORTID=port_index]:CTAG::;
```

◆ Query the LAN port information of an ONU that has a management IP address:

```
LST-LANPORT::ONUIP=onu-name[,PORTID=port_index]:CTAG::;
```

◆ Query the LAN port information of an ONU that has no management IP address:

```
LST-LANPORT::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=onuidtype,
ONUID=onu-index[,PORTID=port_index]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required for the OLT or the ONU that has no management IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If input parameters exclude the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional

Parameter	Data Type	Value Range	Description	Remark
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
PORTID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.	Optional

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUUP	OCTET STRING	Size (128)	The input parameter will be returned.
OLTID	OCTET STRING	Size (128)	The input parameter will be returned.
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	The input parameter will be returned.
ONUID	OCTET STRING	Size (128)	The input parameter will be returned.
PORTID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a port through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
ADMINSTATUS	OCTET STRING	1. UP 2. DOWN	Management status



Parameter	Data Type	Value Range	Description
DUPLEX	OCTET STRING	1. Full 2. Half 3. Auto 4. Auto-Full 5. Auto-Half	Working mode
SPEED	INTEGER	Auto 10M 100M 1000M Auto-10M Auto-100M Auto-1000M	Port rate
RateLimitUs	INTEGER	0 to 1000000	Uplink rate limit Unit: Kbps
RateLimitDs	INTEGER	0 to 1000000	Downlink rate limit Unit: Kbps

## Example

Example 1: Query the Ethernet port information of the ONU (having no management IP address) with ONUID being whdx04. The ONU is connected to PON port 1 in slot 4 on shelf 0 of the OLT whose IP address is 10.250.18.102.

### ◆ Command issued

```
LST-LANPORT::OLTID=10.250.18.102,PONID=NA-NA-4-1,ONUIDTYPE=LOID,
ONUID=whdx04,ONUPOINT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 11:07:05
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1

-----
ONUUIP  OLTID  PONID  ONUID  PORTID  ADMINSTATUS  DUPLEX  SPEED
RateLimitUs  RateLimitDs
--  10.250.18.102  NA-1-4-1  whdx04  NA-NA-NA-1  DOWN
Full 100M  --  --
-----
```

Example 2: Query the Ethernet port information of the ONU (having a management IP address) whose IP address is 10.250.18.121.

## ◆ Command issued

```
LST-LANPORT::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1:CTAG::;
```

## ◆ Response message

```
FH_10.250.18.133 2010-11-04 10:55:00
M CTAG COMPLD
    total_blocks=1
    block_number=1
    block_records=1

-----
ONUIP OLTID PONID  ONUID   PORTID ADMINSTATUS  DUPLEX  SPEED
RateLimitUs  RateLimitDs
10.250.18.121  --      --    --    NA-NA-4-1  --      --      --
--            --
-----
```

## Related Command

None

## 7.2.5 Querying the DSL Port Information (LST-DSLPORT)

### Function Description

This command is used for querying the DSL port information of a specified device.

### Command Format

```
LST-DSLPORT::ONUIP=onu-name[,ONUPORT=onu-port]:CTAG::;
LST-DSLPORT::OLTID=OLT_IP[,PONID=ponport_location]:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	Required for an ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name.	Required for the OLT or the ONU that has no management IP address

Parameter	Data Type	Value Range	Description	Remark
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	Size (128)	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	The input parameter will be returned.
OLTID	OCTET STRING	Size (128)	The input parameter will be returned.
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	The input parameter will be returned.

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	The input parameter will be returned.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through cabinet rack - shelf - slot - port number. NA is displayed if no information is located.
ADMINSTATUS	STRING	UP DOWN	Management status
PORTTYPE	STRING	ADSL VDSL SHDSL	Port type
PORTMODE	INTEGER	1: ATM 2: PTM	Port mode MSAN service card
STANDARD	INTEGER	-	DSL port standard
STANDARD-PROFILE	INTEGER	0x0001:8A 0x0002:8B 0x0004:8C 0x0008:8D 0x0010:12A 0x0020:12B 0x0040:17A 0x0080:30A 0x0100:35B 0xFFFF	-
USSNRMAR-GIN	Floating point type	-64.0, 63.0	Uplink signal-to-noise ratio margin (dB) Accuracy: 0.1
DSSNRMAR-GIN	Floating point type	-64.0, 63.0	Downlink signal-to-noise ratio margin (dB) Accuracy: 0.1
AGGLNAT-TENDS	INTEGER	0 to 127	Attenuation of the downlink line (dB)
AGGLNATTE-NUS	INTEGER	0 to 127	Attenuation of the uplink line (dB)
USATTAINABLEBITRATE	INTEGER	0 to 512000	Attainable uplink rate
DSATTAINABLEBITRATE	INTEGER	0 to 512000	Attainable downlink rate

Parameter	Data Type	Value Range	Description
USNETDATA-RATE	INTEGER	0 to 512000	Uplink payload rate
DSNETDATA-RATE	INTEGER	0 to 512000	Downlink payload rate

### Example

Query the information of the No. 2 DSL port located in the No. 3 slot of the ONU whose IP address is 10.250.18.121.

#### ◆ Command issued

```
LST-DSLPORT::ONUIP=10.250.18.121,ONUPORT=NA-NA-3-2:CTAG::;
```

#### ◆ Response message

```
FH_10.250.18.133 2010-11-04 10:54:50
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1

-----
ONUIP   OLTID   PONID   ONUID   ONUPORT ADMINSTATUS
10.250.18.121  --      --      --      NA-NA-3-2  --
-----
```

### Related Command

None

## 7.2.6 Querying the Port VLAN Information (LST-PORTVLAN)

### Function Description

This command is used for querying the port VLAN information of a specified ONU.

### Command Format

```
LST-PORTVLAN::ONUIP=onu-name| (OLTID=oltname, PONID=ponport_location,
ONUIDTYPE=onuid-type, ONUID=onu-index) [, ONUPORT=onuport] :CTAG::;
```

- ◆ Query the port VLAN information of the ONU that has a management IP address:

```
LST-PORTVLAN::ONUIP=onu-name[,ONUPORT=onu-port]:CTAG::;
```

- ◆ Query the port VLAN information of the ONU that has no management IP address:

```
LST-PORTVLAN::(OLTID=olt-name,PONID=ponport_location,  
ONUIDTYPE=onuidtype,ONUID=onu-index)[,ONUPORT=onu-port]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER).
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified. To only specify the shelf number, enter it in format of NA-0-NA-NA. To specify the card, enter it in format of NA-0-6-NA. To specify the port number, enter it in format of NA-0-6-5.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	The input parameter will be returned.
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through cabinet rack - shelf - slot - port number. NA is displayed if no information is located.
SVLAN	INTEGER	0 to 4095	SVLAN
CVLAN	INTEGER	0 to 4095	CVLAN
VPI	INTEGER	0 to 65535	VPI
VCI	INTEGER	0 to 65535	VCI
UV	INTEGER	0 to 4095	Customer VLAN.
SERVICETYPE	INTEGER	◆ 0: UNICAST ◆ 1: MULTICAST	Service type

## Example

Example 1: Query the VLAN information of the No. 1 port on the ONU (having no management IP address) with ONUID being whdx04. The ONU is connected to the shelf 0 - slot 4- PON port 1 of the OLT whose IP address is 10.250.18.102.

### ◆ Command issued

```
LST-PORTVLAN::OLTID=10.250.18.102,PONID=NA-NA-4-1,ONUIDTYPE=LOID,
ONUID=whdx04,ONUPORT=NA-NA-NA-1:CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 11:07:15
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=2
```

```
-----
ONUID  ONUPORT  SVLAN  CVLAN  VPI    VCI
UV
whdx04  NA-NA-NA-1  --    123   --     --
123
--    10.250.18.102  NA-1-4-1 whdx04  NA-NA-NA-1  --
```

-- -- -- --

-----

Example 2: Query the service port information of the LAN 1 port on the ONU (having a management IP address) whose IP address is 10.250.18.121. The ONU is connected to the shelf 0 - slot 4 - port 1 of the OLT.

◆ Command issued

```
LST-PORTVLAN::ONUIP=10.250.18.121,ONUPORT=NA-NA-4-1:CTAG::;
```

◆ Response message

```
FH_10.250.18.133 2010-11-04 10:55:10
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

-----

```
ONUID ONUPORT SVLAN CVLAN VPI VCI
```

```
UV
```

```
-- NA-NA-4-1 569 -- --
```

```
-- --
```

-----

## Related Command

None

## 7.2.7 Querying the VLAN Information (LST-VLAN)

### Function Description

This command is used for querying the VLAN information.

### Command Format

```
LST-VLAN::ONUIP=onu-name|OLTID=olt-name:CTAG::[VLAN=vlanid];
```



## Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT
VLAN	INTEGER	0 to 4094	VLANID

## Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	The input parameter will be returned.
OLTID	OCTET STRING	Size (128)	The input parameter will be returned.
VLAN	INTEGER	0 to 4094	VLAN ID
DESC	OCTET STRING	Size (128)	VLAN alias
VLANMODE	OCTET STRING	COMMON STACKING QINQ	VLAN attribute
PORTLIST	OCTET STRING	Rack - shelf - slot - port number	Port list
MVLANFLAG	INTEGER	-	Indicates whether it is a multicast VLAN or non-multicast VLAN.
MVLANPRI	INTEGER	0 to 7	Priority of the IGMP message
SERVICE	OCTET STRING	HSI (Internet access) IPTV (unicast) VOIP (voice)	Service type of the VLAN

## Example

Query the VLAN information of the OLT whose IP address is 10.78.200.200 (the ONU has no management IP address).

◆ Command issued

LST-VLAN::OLTID=10.78.200.200:CTAG::;

### ◆ Response message

FH\_10.98.12.1 2014-06-13 14:33:36

M CTAG COMPLD

total\_blocks=1

block\_number=1

block\_records=38

```
-----
ONUIP OLTIP VLAN DESC VLANMODE PORTLIST MULANFLAG MVLANPRI SERVICE
-- 10.78.200.200 2 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 3 -- -- -- 0 0 HSI
-- 10.78.200.200 50 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 122 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 224 -- -- 1-1-19-1 0 0 IPTV
-- 10.78.200.200 225 -- -- -- 0 0 IPTV
-- 10.78.200.200 226 -- -- -- 0 0 IPTV
-- 10.78.200.200 333 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 1111 -- -- 1-1-19-1 0 0 VOIP
-- 10.78.200.200 2006 -- -- 1-1-19-1 0 0 VOIP
-- 10.78.200.200 2008 -- -- 1-1-19-1 0 0 VOIP
-- 10.78.200.200 2222 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 2223 -- -- -- 0 0 HSI
-- 10.78.200.200 3333 -- -- 1-1-19-1 0 0 VOIP
-- 10.78.200.200 3334 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 3997 -- -- 1-1-19-1 0 0 VOIP
-- 10.78.200.200 3998 -- -- 1-1-19-1 0 0 --
-- 10.78.200.200 3999 -- -- -- 0 0 --
-- 10.78.200.200 4001 -- -- 1-1-19-1 0 0 HSI
-- 10.78.200.200 4002 -- -- -- 0 0 HSI
-- 10.78.200.200 4003 -- -- -- 0 0 HSI
-- 10.78.200.200 4004 -- -- -- 0 0 HSI
-- 10.78.200.200 4005 -- -- -- 0 0 HSI
-- 10.78.200.200 4006 -- -- -- 0 0 HSI
-- 10.78.200.200 4007 -- -- -- 0 0 HSI
-- 10.78.200.200 4008 -- -- -- 0 0 HSI
-- 10.78.200.200 4009 -- -- -- 0 0 HSI
-- 10.78.200.200 4010 -- -- -- 0 0 HSI
-- 10.78.200.200 4011 -- -- 1-1-19-1 0 0 IPTV
-- 10.78.200.200 4012 -- -- -- 0 0 IPTV
-- 10.78.200.200 4013 -- -- -- 0 0 IPTV
-- 10.78.200.200 4014 -- -- -- 0 0 IPTV
```

```
-- 10.78.200.200 4015 -- -- -- 0 0 IPTV
-- 10.78.200.200 4016 -- -- -- 0 0 IPTV
-- 10.78.200.200 4017 -- -- -- 0 0 IPTV
-- 10.78.200.200 4018 -- -- -- 0 0 IPTV
-- 10.78.200.200 4019 -- -- -- 0 0 IPTV
-- 10.78.200.200 4020 -- -- -- 0 0 IPTV
-----

;
-----
```

### Related Command

None

## 7.2.8 Querying the ONU Port Service Information (LST-ONUSERVICESTATUS)

### Function Description

This command is used to query whether a specified ONU is configured with broadband and voice services.

### Command Format

```
LST-ONUSERVICESTATUS::ONUIP=onu-name|OLTID=oltname,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address
OLTID	OCTET STRING	Size (128)	OLT IP address or name
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.

Parameter	Data Type	Value Range	Description
ONU_IDTYPE	OCTET STRING	Size (128)	ONU_NAME, MAC, LOID, ONU_NUMBER
ONU_ID	OCTET STRING	Size (128)	ONU identifier. The value is ONU_NAME, MAC, LOID or ONU_NUMBER. It is used for uniquely identifying the ONU connected to the PON port.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ONU_ID	OCTET STRING	Size (128)	The input parameter will be returned.
DATASERVICE	INTEGER	0 to 24	Number of broadband services
VOICESERVICE	INTEGER	0 to 24	Number of voice services

## Example

Query the port service information of the ONU (having no management IP address) with ONU\_ID being FHTT01e821a0. The ONU is connected to shelf 0 - slot 7 - PON port 4 of the OLT whose IP address is 10.78.200.200.

### ◆ Command issued

```
LST-ONUSERVICESTATUS::OLTID=10.78.200.200,PONID=NA-NA-7-4,
ONU_IDTYPE=MAC,ONU_ID=FHTT01e821a0:CTAG::;
```

### ◆ Response message

```
FH_10.78.12.155 2014-07-15 18:54:10
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=1
```

list of ONU service status:

```
-----
ONUID DATASERVICE VOICESERVICE
```

```
FHTT01e821a0 0 0
-----
```

```
;
```

### Related Command

None

## 7.2.9 Querying the VLAN Service Port (LST-SERVICEPORT)

### Function Description

This command is used for querying the VLAN service port.

### Command Format

```
LST-SERVICEPORT::OLTID=olt-name:CTAG::[VLAN=cvlan,][SVLAN=svlan,]
[PORTTYPE=porttype];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT	Required
CVLAN	INTEGER	0 to 4095	Inner VLAN	Optional
SVLAN	INTEGER	0 to 4095	Outer VLAN	Optional
PORTTYPE	OCTET STRING	Size (128)	Port type FXS: voice user port LAN: data user port ALL: all user ports	(Optional) The default value is FXS.

### Response Format

It complies with the query command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address or name of the OLT
PONID	OCTET STRING	Size (128) Rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.
ONUID	INTEGER	0 to 512	ONU authorization number
ONUPORT	INTEGER	0 to 512	ONU port number
CVLAN	INTEGER	0 to 4095	Inner VLAN
SVLAN	INTEGER	0 to 4095	Outer VLAN. "-" is displayed for single-tagged VLAN configuration scenario.
PORTTYPE	OCTET STRING	Size (128)	Port type FXS: voice port LAN: data port

## Example

Query the information of the VLAN service port of the OLT with the IP address 172.29.215.4.

## ◆ Command issued

```
LST-SERVICEPORT::OLTID=172.29.215.4:CTAG::VLAN=3333;
```

## ◆ Response message

```
FH_172.29.215.4 2015-03-06 15:42:18
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=3

OLTID PONID ONUIDTYPE ONUNO PORTID VLANID PORTTYPE
172.29.215.4 1-1-1-7 MAC 1 1-1-1-1 3333 FXS
172.29.215.4 1-1-1-7 MAC 2 1-1-1-1 3333 FXS
172.29.215.4 1-1-1-7 MAC 3 1-1-1-2 3333 FXS
```

## Related Command

None

## 7.2.10 Querying the Traffic Policy (LST-PORTPVCFLOWPOLICY)

## Function Description

This command is used for querying the PORTPVCFLOWPOLICY information.

## Command Format

```
LST-PORTPVCFLOWPOLICY::ONUIP=| (OLTID=oltname,PONID=ponport_location,
ONUIDTYPE=onuid-type,ONUID=onu-index) [,ONUPORT=onuport]:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address.
OLTID	OCTET STRING	Size (128)	OLT IP address or name
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_NAME, MAC, LOID, ONU_NUMBER).
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.

Parameter	Data Type	Value Range	Description
ONUPORT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified. To only specify the shelf number, enter it in format of NA-0-NA-NA. To specify the card, enter it in format of NA-0-6-NA. To specify the port number, enter it in format of NA-0-6-5.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
PVCNO	OCTET STRING	Size (128)	PVC index
UPFLOWPOLICYID	OCTET STRING	Size (128)	Uplink traffic policy Displays the name of the bound traffic policy template.
DOWNFLOWPOLICYID	OCTET STRING	Size (128)	Downlink traffic policy Displays the name of the bound traffic policy template.
CIRUP	OCTET STRING	Size (128)	Uplink rule Displays the name of the bound rule template.
CIRDOWN	OCTET STRING	Size (128)	Downlink rule Displays the name of the bound rule template.



## Example

### ◆ Command issued

```
LST-PORTPVCFLOWPOLICY::ONUIP=172.28.148.58,ONUPORT=1-1-2-63:CTAG::;
```

### ◆ Response message

```
FH_10.62.165.42 2015-03-19 01:55:32
M CTAG COMPLD
total_blocks=1
block_number=1
block_records=8

list of port pvc flow policy
-----
PVCNO UPFLOWPOLICYID DOWNFLOWPOLICYID CIRUP CIRDOWN
0 ubrPcr_1024K ubrPcr_1024K 1024 1024
1 ubrPcr_1024K ubrPcr_1024K 1024 1024
2 -- -- -- --
3 -- -- -- --
4 -- -- -- --
5 -- -- -- --
6 -- -- -- --
7 -- -- -- --
-----
```

## Related Command

None

## 7.2.11 Querying the Template Information (RTRV-TEMPLATE-ALL)

### Function Description

This command is used for querying the template information of a device.

### Command Format

```
RTRV-TEMPLATE-ALL::ONUIP=onu-name|OLTID=olt-name:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address.
OLTID	OCTET STRING	Size (128)	OLT IP address or name

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
TEMPLATE-NAME	String	Size (0 to 20)	Template name
DOWNMAXBW	Integer	32, 32736	Maximum downlink rate Unit: Kbit/s
UPMAXBW	Integer	32, 8160	Maximum uplink rate Unit: Kbit/s
CHANNELMODE	Integer	0, 5	Line type 0: Non-AD card 1: no channel 2: fast channel 3: interleave channel 4: fast or interleave channel 5: fast and interleave channel

## Example

Query the template information of the ONU whose IP address is 172.28.148.58.

### ◆ Command issued

```
RTRV-TEMPLATE-ALL::ONUIP=172.28.148.58:CTAG::;
```

### ◆ Response message

```
FH_10.62.165.42 2015-03-19 01:58:44  
M CTAG COMPLD  
total_blocks=1  
block_number=1  
block_records=48
```

```

-----
TEMPLATENAME DOWNMAXBW UPMAXBW CHANNELMODE
NULL 0 0 0
P_03584_1024 3584 1024 0
P_05120_1280 5120 1280 0
P_05632_1024 5632 1024 0
P_07168_1280 7168 1280 0
P_07680_1536 7680 1536 0
P_100M_50M 102400 51200 0
P_1024_256 1024 256 0
P_1024_512 1024 512 0
P_10M_2M 10240 2048 0
.....
-----

```

### Related Command

None

## 7.2.12 Querying the Port Template Information (RTRV-TEMPLATE-PORT)

### Function Description

This command is used for querying the port template information of a specified device.

### Command Format

```

RTRV-TEMPLATE-PORT::ONUIP=onu-name| (OLTID=oltname,
PONID=ponport_location,ONUIDTYPE=onuid-type,ONUID=onu-index) [,
ONUPORT=onuport]:CTAG::;

```

### Input Parameter

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address.
OLTID	OCTET STRING	Size (128)	OLT IP address or name.

Parameter	Data Type	Value Range	Description
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locate a port through cabinet rack - shelf - slot - PON port number. Enter NA if the corresponding information is not specified.
ONUIDTYPE	OCTET STRING	Size (128)	ONU identifier type (ONU_ NAME, MAC, LOID, ONU_ NUMBER).
ONUID	OCTET STRING	Size (128)	ONU identifier. The value is ONU_NAME, MAC, LOID or ONU_NUMBER. It is used for uniquely identifying the ONU connected to the PON port.
ONUPOINT	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate a port through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified.
PORTID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - port	Locate the card through cabinet rack - shelf - slot - port number. Enter NA if the corresponding information is not specified. To only specify the shelf number, enter it in format of NA-0-NA-NA. To specify the card, enter it in format of NA-0-6-NA. To specify the port number, enter it in format of NA-0-6-5.

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
TEMPLATENAME	OCTET STRING	Size (128)	Template name
DOWNMAXBW	OCTET STRING	Size (128)	Maximum downlink bandwidth template

Parameter	Data Type	Value Range	Description
UPMAXBW	OCTET STRING	Size (128)	Maximum uplink bandwidth template
CHANNELMODE	OCTET STRING	Size (128)	Line type

## Example

### Command issued

```
RTRV-TEMPLATE-PORT::ONUIP=172.28.148.55,ONUPORT=1-1-2-4:CTAG::;
```

### Response message

```
FH_10.62.165.42 2015-03-19 02:00:52
```

```
M CTAG COMPLD
```

```
total_blocks=1
```

```
block_number=1
```

```
block_records=1
```

```
-----
```

```
TEMPLATENAME DOWNMAXBW UPMAXBW CHANNELMODE
```

```
P_03584_1024 3584 1024 0
```

```
-----
```

## Related Command

```
ADD-FLOWPOLICY
```

```
LST-POTSINFO
```

## 7.2.13 Querying Layer 3 Service Rate Control Configuration (LST-LT-BWPROFILE)

### Function Description

This command is used to query the rate control configuration for the Layer 3 service bound to the ONU.

### Command Format

```
LST-LT-BWPROFILE::OLTID=olt_name,PONID=ponport_location,  
ONUIDTYPE=idtype,ONUID=onu_index:CTAG::;
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	Required
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.	If the parameter entered does not include the ONUID, the PONID is optional.
ONUID-TYPE	OCTET STRING	MAC LOID ONU_NUMBER ONU_NAME	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	Optional
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port location information. Locate a port through rack - shelf - slot - PON port number. Enter NA for the corresponding unspecified information.

Parameter	Data Type	Value Range	Description
ONUID	OCTET STRING	Size (128)	ONU identifier. The value is ONU_NAME, MAC, LOID or ONU_NUMBER. It is used for uniquely identifying the ONU connected to the PON port.
WANINDEX	INTEGER	1 to 8	WAN connection index
WANNAME	OCTET STRING	Size (64)	WAN connection name
UPBWPROFILE	OCTET STRING	Size (64)	Uplink bandwidth template name
DOWN-BWPROFILE	OCTET STRING	Size (64)	Downlink bandwidth template name

### Example

Query the L3 service rate limiting configuration bound with PON port 1 in slot 7 of the OLT whose IP address is 10.190.40.120.

#### ◆ Command issued

```
LST-LT-BWPROFILE::OLTID=10.190.40.120,PONID=NA-NA-7-1,ONUIDTYPE=MAC,
ONUID=FHTT061a14a0:CTAG::;
```

#### ◆ Response message

```
;LST-LT-BWPROFILE::OLTID=10.190.40.120,PONID=NA-NA-7-1,ONUIDTYPE=MAC,ONUID=FHTT061a14a0:CTAG::;
```

```
FH_127.0.0.1 2019-04-12 14:18:51
M CTAG_COMPLD
total_blocks=1
block_number=1
block_records=1
```

Lst Of Three Bandwidth Profile

OLTID	PONID	ONUID	WANINDEX	WANNAME	UPBWPROFILE	DOWNBWPROFILE
10.190.40.120	1-1-7-1	FHTT061a14a0	1	1	1_INTERNET_R_VID_100	BW_50M BW_50M

```
;
```

### Related Command

None

## 7.3 Resource Change Notification

The following introduces the command and example for resource change notification.

### 7.3.1 Registering the Resource Change Notification (SUBSCRIBE)

#### Function Description

This command is used for registering the resource change notification after the TCP connection is successfully established. After the register successes, the FiberHome EMS will report the change notification of the physical resources (device, subracks, cards, etc.) to the OSS automatically.

#### Command Format

```
SUBSCRIBE:::CTAG::FLAG=flag;
```

#### Input Parameter

Parameter	Data Type	Value Range	Description
FLAG	OCTET STRING	RES	RES indicates registering the reporting of resource change notification.

#### Response Format

It complies with the response format in [Resource Change Notification Format](#).

#### Output Parameter

None

#### Example

For example, register the resource change notification for the current user.

◆ Command issued

```
SUBSCRIBE:::CTAG::FLAG=RES;
```

◆ Response message

```
FH_10.250.18.133 2010-11-04 11:45:19
M CTAG COMPLD
  EN=0  ENDESC=No error
```



## Related Command

UNSUBSCRIBE

### 7.3.2 Deregistering the Resource Change Notification (UNSUBSCRIBE)

#### Function Description

After deregistering the resource change notification successfully, the FiberHome EMS will not report the change notification of the physical resources (device, subracks, cards, etc.) to the OSS automatically.

#### Command Format

UNSUBSCRIBE::CTAG::FLAG=flag;

#### Input Parameter

Parameter	Data Type	Value Range	Description
FLAG	OCTET STRING	RES	RES indicates registering the reporting of resource change notification.

#### Response Format

It complies with the response format in [Resource Change Notification Format](#).

#### Output Parameter

None

#### Example

For example, deregister the resource change notification.

◆ Command issued

UNSUBSCRIBE::CTAG::FLAG=RES;

◆ Response message

FH\_10.250.18.133 2010-11-04 11:44:11

```
M   CTAG COMPLD
      EN=0   ENDESC=No error
```

## Related Command

```
SUBSCRIBE
```

## 7.3.3 Querying the Resource Change Notification (LST-RESNOTIFY)

### Function Description

This command is used for querying the resource change notification reported.

### Command Format

```
LST-RESNOTIFY:::CTAG::BEGINTIME=initial-time[,ENDTIME=last-time];
```

### Input Parameter

Parameter	Data Type	Value Range	Description	Remark
BEGINTIME	String	Size (32)	Start time in the format of YYYY-MM-DD HH-MM-SS (Beijing time).	Required
ENDTIME	String	Size (32)	End time in the format of YYYY-MM-DD HH-MM-SS (Beijing time).	Optional

### Response Format

It complies with the response format in [Resource Change Notification Format](#).

### Output Parameter

Parameter	Data Type	Value Range	Description
HAPPENTIME	OCTET STRING	Size (128)	Resource change time in the format of YYYY-MM-DD HH:MM:SS.
MARK	OCTET STRING	ADD DEL MOD	Resource change cause

Parameter	Data Type	Value Range	Description
OBJECT	OCTET STRING	OLT ONU SHELF BOARD	Resource object type
INFO	OCTET STRING	Size (512)	Resource change information. See the Resource Change Notification for the format of returned information.

## Example

Query the resource change notification information in a specified period of time.

### ◆ Command issued

```
LST-RESNOTIFY:::2::BEGINTIME=2010-12-30 07-34-00,ENDTIME=2010-12-30 10-00-00;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 11:44:22
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=12
list resource notify
-----
HAPPENTIME MARK OBJECT INFO
2010-11-01 11:15:18 ADD BOARD ONUIP=10.250.18.121
OLTID=0.0.0.0 PONID=-- ONUID=0 BOARDID=2-1-4
BOARDTYPE=ETH BSERVICE=ETH PNUM=16 SWVER=-- HWVER=--
2010-11-01 11:15:34 ADD BOARD ONUIP=10.250.18.121
OLTID=0.0.0.0 PONID=-- ONUID=0 BOARDID=2-1-801
BOARDTYPE=HCU-20 BSERVICE=-- PNUM=0 SWVER=-- HWVER=--
2010-11-01 11:22:36 ADD ONU OLTID=10.250.18.102
PONID=3-1-4-1 ONUNO=1 NAME=AN5006-10B DESC=-- ONUTYPE=AN5006-10B
IP=0.0.0.0 AUTH=LOID MAC=544b10406b60 LOID=whdx10b
PWD=-- SWVER=--
2010-11-01 11:22:36 ADD ONU OLTID=10.250.18.102
PONID=3-1-4-1 ONUNO=2 NAME=AN5006-04 DESC=-- ONUTYPE=AN5006-04
IP=0.0.0.0 AUTH=LOID MAC=544b400c79a8 LOID=whdx04
PWD=-- SWVER=--
-----
```

## Related Command

SUBSCRIBE

## 7.3.4 Resource Change Notification Interface

### Function Description

The resource change notification interface reports the notification messages upon adding / modifying / deleting a device, adding / deleting a shelf as well as adding / deleting a card.

### Command Format

None

### Input Parameter

None

### Response Format

It complies with the response format in [Resource Change Notification Format](#).

### Output Parameter

- ◆ OLT adding / modifying / deleting notification: The resource change notification will be reported only when the name of the OLT is changed.

Parameter	Data Type	Value Range	Description
DEVNAME	OCTET STRING	Size (128)	Device name
DEVIP	OCTET STRING	Size (128)	Device IP address
DT	OCTET STRING	Size (128)	Device model
DEVER	OCTET STRING	Size (128)	Software version

- ◆ ONU adding / modifying / deleting notification: The resource change notification will be reported only when the ONU name, description, authentication mode or authentication information is changed.

Parameter	Data Type	Value Range	Description
OLTID	OCTET STRING	Size (128)	OLT IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
ONUNO	INTEGER	Size (128)	ONU authorization number
NAME	OCTET STRING	Size (128)	ONU name
DESC	OCTET STRING	Size (128)	ONU description information
ONUTYPE	SWVER	OCTET STRING	ONU type
IP	OCTET STRING	Size (128)	Management IP address of the ONU
AUTH	OCTET STRING	MAC LOID HYBRID	Authentication mode. When no authentication mode is specified, a dash (–) will be returned.
MAC	OCTET STRING	Size (128)	The registered MAC information of the ONU.
LOID	OCTET STRING	Size (64)	When the MAC authentication is adopted, a dash (–) will be returned.
PWD	OCTET STRING	Size (128)	LOID password. If no password is specified, a dash (–) will be returned.
SWVER	OCTET STRING	Size (128)	Software version

- ◆ Shelf adding / deleting notification: The resource change notification will be reported only when a shelf is added or deleted.

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address of the ONU. When the ONU has no IP address, the OLTID, PONID and ONUID will be reported.
OLTID	OCTET STRING	Size (128)	OLT IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
ONUID	OCTET STRING	Size (128)	ONU authorization number

Parameter	Data Type	Value Range	Description
SHELFID	OCTET STRING	Size (128) Rack - shelf number	Locate a shelf through rack - shelf number. Enter NA for the corresponding unspecified information.
SHELFTYPE	OCTET STRING	Size (128)	Shelf type

- ◆ Card adding / deleting notification: The resource change notification will be reported only when a card is added or deleted.

Parameter	Data Type	Value Range	Description
ONUIP	OCTET STRING	Size (128)	IP address of the ONU. When the ONU has no IP address, the OLTID, PONID and ONUID will be reported.
OLTID	OCTET STRING	Size (128)	OLT IP address
PONID	OCTET STRING	Size (128) Rack - shelf - slot - port number	Locate a card through rack - shelf - slot - port number. Enter NA for the corresponding unspecified information.
ONUID	OCTET STRING	Size (128)	ONU authorization number
BOARDID	OCTET STRING	Size (128) Rack - shelf - slot	Locate a card through rack - shelf - slot. Enter NA for the corresponding unspecified information. To only specify the shelf number, enter NA-0-NA.
BOARDTYPE	OCTET STRING	Size (128)	Card type
BSERVICE	OCTET STRING	Power ETH ADSL VDSL POTS E1 GPON EPON Control (main control unit) Other	Card service type
PNUM	INTEGER	0 to 64	Number of ports

Parameter	Data Type	Value Range	Description
SWVER	OCTET STRING	Size (255)	Software version
HWVER	OCTET STRING	Size (255)	Hardware version

## Example

Example 1: When the device with the IP address being 10.78.11.102 is added, the corresponding resource change notification will be received.

◆ Command issued

None

◆ Response message

```
FH_10.98.11.77 2011-02-21 10:32:07
A 2 REPT RES ADD_OLT
DEVNAME=system 9 DEVIP=10.78.11.102 DT=AN5116-06B DEVER=--
```

Example 2: When the ONU with ONUID being 123 is added, the corresponding resource change notification will be received.

◆ Command issued

None

◆ Response message

```
FH_10.98.11.77 2011-02-21 10:35:42
A 9 REPT RES ADD_ONU
OLTID=10.78.11.118 PONID=4-1-14-1 ONUNO=6 NAME=PON[1]-AN5506-04B[6]
DESC=-- ONUTYPE=AN5506-04-B IP=0.0.0.0 AUTH=HYBRID MAC=-- LOID=123
PWD=-- SWVER=--
```

Example 3: When a shelf is added for the OLT with the IP address being 10.78.11.102, the corresponding resource change notification will be received.

◆ Command issued

None

◆ Response message

```
FH_10.98.11.77 2011-02-21 10:32:07
A 3 REPT RES ADD_SHELF
ONUIP=0.0.0.0 OLTID=10.78.11.102 PONID=-- ONUID=0 SHELFID=9-1
SHELFTYPE=AN5116-06B_NODE
```

Example 4: When a card is added in slot 9 of the OLT whose IP address is 10.78.11.102, the corresponding resource change notification will be received.

◆ Command issued

None

◆ Response message

```
FH_10.98.11.77 2011-02-21 10:27:17
A 1 REPT RES ADD_BOARD
ONUIP=0.0.0.0 OLTID=10.78.11.102 PONID=-- ONUID=-- BOARDID=
7-1-9 BOARDTYPE=HSPA BSERVICE=SCU PNUM=0 SWVER=-- HWVER=--
```

## Related Command

SUBSCRIBE

## 7.4 Resource Data Full Export

The following introduces the command and example for full export of resource data.

### 7.4.1 Resource Full Export Interface (DUMP-RESOURCEINFO)

#### Function Description

This command is used for exporting the device information and service configuration information in the entire network. The exported file is named in format of DUMP\_RES\_YYYY-MM-DD-HH-MM-SS.xml.

#### Command Format

```
DUMP-RESOURCEINFO:::CTAG:: [RESTYPE=resource-type];
```



## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
RESTYPE	OCTET STRING	PHY SRV ALL	Resource type PHY: device information SRV: service configurations ALL: all device and service configurations	Optional Default value: ALL

## Response Format

It complies with the response format in [Resource Change Notification](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
FILENAME	OCTET STRING	Size (128)	File name
RESULT	OCTET STRING	Success Failure	Export result

## Example

When the physical resources in the entire network are exported, the corresponding notification will be received, indicating the resource file is exported successfully.

### ◆ Command issued

```
DUMP-RESOURCEINFO:::CTAG::;
```

### ◆ Response message

```
FH_10.98.11.77 2010-11-21 09:48:21
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
dump resource info
```

```
-----
FILENAME
DUMP_RES_2010-11-21-09-48-21.xml
-----
```

## Related Command

SUBSCRIBE  
DUMP-RESOURCEINFO

## 7.4.2 Resource Full Export Notification

### Function Description

It indicates the message notifying the export result of the reported data files.

### Command Format

None

### Input Parameter

None

### Response Format

It complies with the response format in [Resource Change Notification](#).

### Output Parameter

Parameter	Data Type	Value Range	Description
FILENAME	OCTET STRING	Size (128)	File name.
RESULT	OCTET STRING	Success Failure	Export result.

### Example

For example, report the export result.

◆ Command issued

None

◆ Response message

```
FH_10.98.11.77 2010-11-21 09:48:58
A -- REPT RES DUMP_FILE
FILENAME=DUMP_RES_2010-11-21-09-48-21.xml RESULT=Success
```












## Related Command

DUMPRE-RESNOTIFY

# 8 Integrated Alarm Interface

---

This chapter introduces the commands related with the subscribed alarms, alarm filtering, alarm query, alarm confirmation, alarm clearing, alarm synchronization and performance data collection.

-  Subscribing to Alarms (SUBSCRIBE)
-  Enabling the Alarm Filter (ACT-ALARM-FILTER)
-  Disabling the Alarm Filter (DACT-ALARM-FILTER)
-  Modifying the Alarm Filter Configuration (CHG-ALARM-FILTER)
-  Viewing the Alarm Filter Configuration (LST-ALARM-FILTER)
-  Querying Alarms (LST-ALARM)
-  Confirming an Alarm (ACK-ALARM)
-  Canceling the Confirmation for an Alarm (UNACK-ALARM)
-  Clearing an Alarm (CLR-ALARM)
-  Synchronizing Historical Alarms (SYNC-HISALARM)
-  Collecting Historical Performance Data

## 8.1 Subscribing to Alarms (SUBSCRIBE)

### Function Description

This command is used for subscribing to alarms after the TCP connection is successfully established. After the subscription succeeds, the FiberHome EMS will receive alarms automatically and report them to the OSS in real time.

For supported alarms, see [The List of Alarms](#).

### Command Format

```
SUBSCRIBE:::CTAG::;
```

### Input Parameter

None

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

None

### Example

For example, subscribe to the alarm.

◆ Command issued

```
SUBSCRIBE:::CTAG::;
```

◆ Response message

```
FH_10.250.18.133 2010-11-04 09:50:30  
M CTAG COMPLD  
EN=0 ENDESC=No error
```

### Related Command

None

## 8.2 Enabling the Alarm Filter (ACT-ALARM-FILTER)

### Function Description

This command is used for enabling the alarm filter function.



#### Note:

To enable the alarm filter function, first execute the "CHG-ALARM-FILTER" command to configure the alarm filter conditions and then execute the "ACT-ALARM-FILTER" command to make the alarm filter conditions take effect.

---

### Command Format

```
ACT-ALARM-FILTER:::CTAG::;
```

### Input Parameter

None

### Response Format

It complies with the operation-command response format in [Response Message Format](#).

### Output Parameter

Success or failure.

### Example

For example, enable the alarm filter conditions.

#### ◆ Command issued

```
ACT-ALARM-FILTER:::CTAG::;
```

#### ◆ Response message

```
FH_10.250.18.133 2010-11-04 10:31:47  
M CTAG COMPLD
```

EN=0    ENDESC=No error

#### Related Command

DACT-ALARM-FILTER

## 8.3      Disabling the Alarm Filter (DACT-ALARM-FILTER)

#### Function Description

This command is used for disabling the alarm filter function.

#### Command Format

DACT-ALARM-FILTER:::CTAG::;

#### Input Parameter

None

#### Response Format

It complies with the operation-command response format in [Response Message Format](#).

#### Output Parameter

None

#### Example

For example, disable the alarm filter conditions.

◆ Command issued

DACT-ALARM-FILTER:::CTAG::;

◆ Response message

FH\_10.250.18.133 2010-11-04 09:50:38

M CTAG COMPLD

EN=0    ENDESC=No error

## Related Command

ACT-ALARM-FILTER

# 8.4 Modifying the Alarm Filter Configuration (CHG-ALARM-FILTER)

## Function Description

This command is used for modifying the alarm filter conditions and configure the alarms to be reported.



### Note:

After executing this command, it is required to execute the "ACT-ALARM-FILTER" command to make the alarm filter conditions take effect.

---

## Command Format

```
CHG-ALARM-FILTER:::CTAG:::[ALARMID=alarmcode] [,SEVERITY=alarm-severity];
```

## Input Parameter

Parameter	Data Type	Value Range	Description
SEVERITY	String	Critical Major Minor Warning	Alarm level. Multiple alarm levels can be configured and should be separated by vertical bars.
ALARMTYPE	OCTET STRING	communicationsAlarm processingErrorAlarm qualityOfServiceAlarm equipmentAlarm environmentalAlarm	Alarm Type
ALARMID	String	Size (0 to 1000)	Alarm ID. Multiple alarm IDs can be configured and should be separated by vertical bars.



## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Success or failure.

## Example

Modify the alarm filter conditions to only query and subscribe to the alarm whose ID is 310009.

### ◆ Command issued

```
CHG-ALARM-FILTER:::CTAG:: ALARMID=310009;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 09:50:47
M CTAG COMPLD
EN=0 ENDESC=No error
```

## Related Command

```
ACT-ALARM-FILTER
```

# 8.5 Viewing the Alarm Filter Configuration (LST-ALARM-FILTER)

## Function Description

This command is used for viewing the current alarm filter conditions.

## Command Format

```
LST-ALARM-FILTER:::CTAG::;
```

## Input Parameter

None

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
ENABLE	String	True false	Enable/Disable
ALARMTYPE	OCTET STRING	communicationsAlarm processingErrorAlarm qualityOfServiceAlarm equipmentAlarm environmentalAlarm	Alarm type
SEVERITY	String	Critical Major Minor Warning	Alarm level. Multiple alarm levels can be configured and should be separated by vertical bars.
ALARMCODE	String	Size (0 to 1000)	Alarm ID. Multiple alarm IDs can be configured and should be separated by vertical bars.

## Example

View the current alarm filter conditions.

### ◆ Command issued

```
LST-ALARM-FILTER::CTAG::;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 09:51:00
M CTAG COMPLD
  total_blocks=1
  block_number=1
  block_records=1
Alarm Filter
ENABLE SEVERITY ALARMCODE
false - 310009
```

## Related Command

CHG-ALARM-FILTER

# 8.6 Querying Alarms (LST-ALARM)

## Function Description

This command is used for querying the alarm information in the specified time of period (including the recovered or unrecovered alarms).

For supported alarms, see [The List of Alarms](#).

## Command Format

```
LST-ALARM::[ONUIP=onu-name]|([OLTID=olt-name][,PONID=ponport_location,
ONUIDTYPE=id-type,ONUID=onu-index]):CTAG::BEGINTIME=begin-time[,
ENDTIME=end-time][,FAULTFLAG=flag];
```

### ◆ Querying ONUs

#### ► The ONU that has a management IP address:

```
LST-ALARM::ONUIP=onu-name:CTAG::BEGINTIME=begin-time[,ENDTIME=end-time]
[,FAULTFLAG=flag];
```

#### ► The ONU that has no management IP address:

```
LST-ALARM::OLTID=olt-name,PONID=ponport_location,ONUIDTYPE=id-type,
ONUID=onu-index:CTAG::BEGINTIME=begin-time[,ENDTIME=end-time][,
FAULTFLAG=flag];
```

#### ► OLT PON Port

```
LST-ALARM::OLTID=olt-name,PONID=ponport_location:CTAG::BEGINTIME=begin-
time[,ENDTIME=end-time][,FAULTFLAG=flag];
```

### ◆ Query the OLT:

```
LST-ALARM::OLTID=olt-name:CTAG::BEGINTIME=begin-time[,ENDTIME=end-time]
[,FAULTFLAG=flag];
```

### ◆ Query all:

```
LST-ALARM:::CTAG::BEGINTIME=begin-time[,ENDTIME=end-time][,
FAULTFLAG=flag];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address, name or ID of the ONU that has a management IP address	It is required for querying the ONU that has no management IP address.
OLTID	OCTET STRING	Size (128)	IP address, name or ID of the OLT	It is required for querying the OLT or the ONU that has no management IP address.
PONID	OCTET STRING	Size (128) Cabinet rack - shelf - slot - PON port number	PON port information location. Locating through cabinet rack - shelf - slot - PON port number. NA is displayed if no information is located.	It is required for querying the ONU that has no management IP address.
ONUID-TYPE	OCTET STRING	ONU_NAME MAC LOID ONU_NUMBER	ONU identifier type: ONU_NAME, MAC, LOID, ONU_NUMBER	It is required for querying the ONU that has no management IP address.
ONUID	OCTET STRING	Size (128)	ONU identifier, used for uniquely identifying the ONU connected to the PON port. The value is ONU_NAME, MAC, LOID or ONU_NUMBER.	It is required for querying the ONU that has no management IP address.
BEGINTIME	String	Size (32)	The format of start time (Beijing time): YYYY-MM-DD HH-MM-SS.	Required

Parameter	Data Type	Value Range	Description	Remark
ENDTIME	String	Size (32)	The format of end time (Beijing time): YYYY-MM-DD HH-MM-SS.	Optional
FAULTFLAG	STRING	Fault-Only ALL	Alarm status. Default value is Fault-Only. Fault-Only contains events and does not contain recovered alarms.	Optional

## Response Format

It complies with the query-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
SERIALID	String	Size (0 to 100)	Alarm ID.
ALARMNAME	String	Size (0 to 256)	Alarm name, corresponding to the alarm code parameter (ALARMID).
DIP	String	IP address	NE IP address
DNAME	String	Size (0 to 100)	NE name
DTYPE	String	Size (0 to 100)	NE type
POSITION	String	RACK: rackid SHELF: shelfid SLOT: slotid PORT: portid ONUNUM: onunumber ONUNAME: onuname ONUPORTTYPE: onuporttype ONUPORT: onuportid EMUNUM: emunum	The position that triggers the alarm. RACK: rack SHELF: shelf SLOT: slot PORT: port number ONUNUM: ONU number ONUNAME: ONU name ONUPORTTYPE: ONU port type (LAN, E1, DSL, POTS and PON) ONUPORT: ONU port number EMUNUM: environment monitoring unit AUTHINFO: ONU authentication information (MAC or LOID)

Parameter	Data Type	Value Range	Description
SEVERITY	String	Critical Major Minor Warning	Alarm level
FaultFlag	String	Fault Recovery Event	Alarm status
HAPPENTIME	String	Size (0 to 32)	Alarm generation time. Format: YYYY-MM-DD HH:MM:SS.
RECOVER-TIME	String	Size (0 to 32)	Alarm recovery time. Format: YYYY-MM-DD HH:MM:SS.
ALARMTYPE	String	communicationsAlarm qualityOfServiceAlarm processingErrorAlarm equipmentAlarm environmentalAlarm	Alarm type
SERVICEAFFECT	OCTET STRING	SA_UNKNOWN SA_SERVICE_AFFECTING SA_NON_SERVICE_AFFECTING	Whether the alarm influences the service or not
AdditionalInfo	String	Size (0 to 256)	Additional information, describing additional information related to the alarm.
ALARMID	Integer	-	Alarm code, corresponding to the alarm name parameter (ALARMDESC).
PROBABLE_CAUSE_DESC	String	Size (0 to 256)	Alarm cause
probable-Cause	OCTET STRING	-	Possible cause of the alarm
PROBABEL_CAUSE_CODE	Integer	-	Alarm cause code
PROPOSED_ADVISE	String	Size (0 to 512)	Processing suggestion
TOPOLOC	-	-	Logical domain

## Example

Query all the alarms and events occurred after 2010-12-28 00:00:00 (only part of the response messages are listed here for reference).

### ◆ Command issued

```
LST-ALARM:::CTAG::BEGINTIME=2010-12-28 01-00-00,FAULTFLAG=ALL;
```

### ◆ Response message

```
FH_10.250.18.133 2010-11-04 09:51:13
M CTAG COMPLD
    total_blocks=2
    block_number=1
    block_records=3
Alarm
-
SERIALID  ALARMNAME  DIP  DNAME  DTYPE  POSITION
SEVERITY  FaultFlag  HAPPENTIME  RECOVERTIME
ALARMTYPE  ADITIONALINFO  EVENT_CODE
PROBABLE_CAUSE_DESC
135 ONU H.248 disconnection  10.250.18.100  system 1  AN5516_01
RACK:NA,SHELF:NA,SLOT:3,PORT:1,ONUNUM:5,ONUNAME:AN5006-04
Critical  Faul2010-11-01 14:51:51  --
CommunicationAlarm  --  320001  ONU H.248 disconnection
6 OLT PON port LOS 10.250.18.100  AN5006-04[1] system 1
RACK:NA,SHELF:NA,SLOT:3,PORT:1,ONUNUM:1,ONUNAME:AN5006-04[1]
Critical  Recovery  2010-10-28 15:02:17  2010-11-03
00:15:39  CommunicationAlarm  --  310004  (1)trunk optical fiber
disconnection
```

## Related Command

```
CHG-ALARM-FILTER
ACT-ALARM-FILTER
```

## 8.7 Confirming an Alarm (ACK-ALARM)

### Function Description

Confirming an alarm means the alarm is already processed or is to be processed. When an alarm is confirmed, it changes from the unconfirmed status into the confirmed status.

## Command Format

ACK-ALARM::SERIALID=SERIAL-ID:CTAG::;

## Input Parameter

Parameter	Data Type	Value Range	Description
SERIALID	String	Size (0 to 32)	Alarm ID, corresponding to the returned field SERIALID of the "LST-ALARM" command.

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Success or failure.

## Example

Confirm the alarm whose ID is 95.

◆ Command issued

ACK-ALARM::SERIALID=95:CTAG::;

◆ Response message

FH\_10.250.18.133 2010-11-04 09:50:30

M CTAG COMPLD

EN=0 ENDESC=No error

## Related Command

UNACK-ALARM



## 8.8 Canceling the Confirmation for an Alarm (UNACK-ALARM)

### Function Description

This command is used for canceling the confirmation operation performed on an alarm so as to re-focus on the alarm. After the cancellation, the alarm changes from the confirmed status to the unconfirmed status.

### Command Format

```
UNACK-ALARM::SERIALID=SERIAL-ID:CTAG::;
```

### Input Parameter

Parameter	Data Type	Value Range	Description
SERIALID	String	Size (0 to 32)	Alarm ID, corresponding to the returned field SERIALID of the "LST-ALARM" command.

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

Success or failure.

### Example

Cancel the confirmation performed on the alarm whose ID is 12429.

◆ Command issued

```
UNACK-ALARM::SERIALID=12429:CTAG::;
```

◆ Response message

```
FH_10.250.18.133 2010-11-04 09:50:30
```

```
M CTAG COMPLD
```

```
EN=0 ENDESC=No error
```

## Related Command

ACK-ALARM

## 8.9 Clearing an Alarm (CLR-ALARM)

### Function Description

This command is used to delete alarms manually when the alarms cannot be automatically cleared or they no longer exist on the NE.

### Prerequisite

Make sure the failure resulting in the alarm is eliminated before executing the command.

### Command Format

CLR-ALARM:: SERIALID =SERIAL-ID:CTAG::;

### Input Parameter

Parameter	Data Type	Value Range	Description
SERIALID	String	Size (0 to 32)	Alarm ID, corresponding to the returned field SERIALID of the "LST-ALARM" command.

### Response Format

It complies with the operation command response format in [Response Message Format](#).

### Output Parameter

Success or failure.

### Example

Clear the alarm whose ID is 107.

◆ Command issued

CLR-ALARM::SERIALID=107:CTAG::;

## ◆ Response message

```
FH_10.250.18.133 2010-11-04 09:53:29
M CTAG COMPLD
EN=0 ENDESC=No error
```

## Related Command

None

## 8.10 Synchronizing Historical Alarms (SYNC-HISALARM)

## Function Description

This command is used to synchronize the historical alarms with the EMS.



## Note:

The EMS generates the CSV file via the FTP file interface. To enhance the interface data transmission efficiency, the files are compressed in the zip or gzip format. The compressed files are not further divided into volumes. The name of the compressed file comprises the original file name plus the suffix name of the compressed file. Please refer to for detailed information.

---

## File Naming Rules

- ◆ Name of the original file: <reference model-<date and time[-P<ii>].xml or <reference model-<date and time[P<ii>].csv
- ◆ File command after being compressed: <Reference Model-<Date and Time [-P<ii>].xml.[tar/zip].[gz] or <Reference Model-<Date and Time[-P<ii>].csv.[tar/zip].[gz]

Example:

File Type	Original File Name	Packaged File Name	Compressed File Name
Historical alarm	CMCC-PON-FM-V1.0. 0-20140411-1602-P00. csv	CMCC-PON-FM-V1.0. 0-20140411-1602.csv. tar/zip	CMCC-PON-FM-V1.0. 0-20140411-1602.csv. tar/zip.gz

## Command Format

```
SYNC-HISALARM::[ONUIP=onu-name] | [OLTID=olt-name]:CTAG::BEGINTIME=begin-  
time[,ENDTIME=end-time][,EXCLUDEALARMID=exclude-alarm-id][,  
EXCLUDESEVERITY=exclude-severity];
```

## Input Parameter

Parameter	Data Type	Value Range	Description	Remark
ONUIP	OCTET STRING	Size (128)	IP address or name of the ONU that has a management IP address	C
OLTID	OCTET STRING	Size (128)	OLT IP address or name.	C
BEGINTIME	OCTET STRING	Size (32)	Format of start time (Beijing time) YYYY-MM-DD HH-MM-SS	M
ENDTIME	OCTET STRING	Size (32)	Format of end time (Beijing time) YYYY-MM-DD HH-MM-SS	O
EXCLUDEALARMID	OCTET STRING	Size (1000)	List of excluded alarm codes, which are separated by vertical bars between them	O
EXCLUDESEVERITY	OCTET STRING	Size (1000)	List of excluded alarm levels, which are separated by vertical bars between them	O

## Response Format

It complies with the operation-command response format in [Response Message Format](#).

## Output Parameter

Parameter	Data Type	Value Range	Description
SERIALID	OCTET STRING	Size (100)	Alarm ID.
ALARMNAME	OCTET STRING	Size (256)	Alarm name
DIP	OCTET STRING	IP address	NE IP address
DNAME	OCTET STRING	Size (100)	NE name
DTYPE	OCTET STRING	Size (100)	NE type
POSITION	OCTET STRING	RACK: rackid SHELF: shelfid SLOT: slotid PORT: portid ONUNUM: onunumber ONUNAME: onuname ONUPORTTYPE: onuporttype ONUPORT: onuportid EMUNUM: emunum AUTHINFO: authinfo	The position that triggers the alarm. RACK: rack SHELF: shelf SLOT: slot PORT: port number ONUNUM: ONU number ONUNAME: ONU name ONUPORTTYPE: ONU port type (LAN, E1, DSL, POTS and PON) ONUPORT: ONU port number EMUNUM: environment monitoring unit AUTHINFO: ONU authentication information (MAC or LOID)
SEVERITY	OCTET STRING	Critical Major Minor Warning	Alarm level. Multiple alarm levels can be configured, separated by vertical bars between them. Critical Major Minor Warning
FaultFlag	OCTET STRING	Fault Recovery Event	Alarm status Fault Recovery Event
HAPPENTIME	OCTET STRING	Size (32)	Alarm generation time. Format: YYYY-MM-DD HH:MM:SS.
RECOVER-TIME	OCTET STRING	Size (32)	Alarm recovery time. Format: YYYY-MM-DD HH:MM:SS.

Parameter	Data Type	Value Range	Description
ALARMTYPE	OCTET STRING	communicationsAlarm qualityOfServiceAlarm processingErrorAlarm equipmentAlarm environmentalAlarm	Alarm Type communicationsAlarm: communication quality alarm processingErrorAlarm: processing error alarm, i.e., alarm for software processing error or exception qualityOfServiceAlarm: service quality alarm, i.e., alarm for service status and network service quality equipmentAlarm: device alarm, i.e., alarm for NE hardware failure environmentalAlarm: environment alarm, i.e., alarm for the power system and equipment room environment (e.g. temperature, humidity and access control)
SERVICEAFFECT	OCTET STRING	SA_UNKNOWN SA_SERVICE_AFFECTING, SA_NON_SERVICE_AFFECTING	Whether the alarm influences the service or not
AdditionalInfo	OCTET STRING	Size (256)	Additional information, describing additional information related to the alarm.
ALARMID	INTEGER	-	Alarm code, corresponding to the alarm name parameter (ALARMDESC).
PROBABLE_CAUSE_DESC	OCTET STRING	Size (256)	Alarm cause
probableCause	INTEGER	-	Possible cause of the alarm
PROPOSED_ADVISE	OCTET STRING	Size (512)	Handling advise

Example

Related Command

None

## 8.11 Collecting Historical Performance Data

### Function Description

The EMS automatically generates performance data files every 15 minutes and saves them to the specified directory of the FTP / SFTP server. The NMS collects the performance data files in the aforesaid directory at regular intervals.



Note:

To enhance the interface data transmission efficiency, the files are compressed in the zip or gzip format. The compressed files are not further divided into volumes. The name of the compressed file comprises the original file name plus the suffix name of the compressed file. Please refer to for detailed information.

### File Naming Rules

- ◆ Name of the original file: <reference model-<date and time[-P<ii>].xml or <reference model-<date and time[P<ii>].csv
- ◆ Name of the compressed file: <reference model-<date and time[-P<ii>].xml.[tar/zip].[gz] or <reference model-<date and time[-P<ii>].csv.[tar/zip].[gz]

Example:

File Type	Original File Name	Packaged File Name	Compressed File Name
Performance History	CMCC-PON-PM-OLTPON-V1.0.0-20140411-1615-P00.csv CMCC-PON-PM-MIX-V1.0.0-20140411-1615-P00.csv	CMCC-PON-PM-OLTPON -V1.0.0-20140411-1615.csv. tar/zip	CMCC-PON-PM-OLTPON -V1.0.0-20140411-1615.csv. tar/zip.gz

## List of Collection Objects

No.	Object Name	Description
1	OLT	NE
2	SHELF	Shelf
3	CARD	Card
4	ONU	Optical network unit
5	DSLPORT	DSL port
6	TL	Topology connection
7	PG	Protection group
8	LANPORT	LAN port information
9	IPTV	Multicast service information
10	POTS	Voice port information
11	MG	Media gateway information
12	VLAN	VLAN Information
13	POS	Optical splitter

## Historical Performance Collection Indexes

Object	Performance Index
OLT ONU	Memory usage
	CPU usage
	Temperature
Card	Memory usage
	CPU usage
OLT PON port ONU PON port	Tx optical power
	Rx optical power
	Bias current
	Temperature
	Voltage
	Tx optical power at the opposite side
	Rx optical power at the opposite side
	Number of transmitted packets
	Number of received packets
	Number of transmitted bytes
	Number of received bytes
	Number of received oversized packets



Object	Performance Index
	Number of received undersized packets
	Number of received CRC error packets
	Number of discarded received packets
	Number of discarded sent packets
	Number of unsent error packets
	Number of received error packets
	Number of received unicast packets
	Number of received multicast packets
	Number of received broadcast packets
	Number of transmitted unicast packets
	Number of transmitted multicast packets
	Number of transmitted broadcast packets
OLT uplink port ONU LAN port	Number of transmitted packets
	Number of received packets
	Number of transmitted bytes
	Number of received bytes
	Number of received oversized packets
	Number of received undersized packets
	Number of received CRC error packets
	Number of discarded received packets
	Number of discarded sent packets
	Number of unsent error packets
	Number of received error packets
	Number of received unicast packets
	Number of received multicast packets
	Number of received broadcast packets
	Number of transmitted unicast packets
	Number of transmitted multicast packets
	Number of transmitted broadcast packets
ONU POTS port	Number of transmitted packets
	Number of received packets
	Mean delay
	Mean jitter
	Packet loss rate
ONU AD port	Number of received bytes

Object	Performance Index
	Number of transmitted bytes
	Downlink noise tolerance
	Uplink noise tolerance
	Downlink power attenuation
	Uplink power attenuation
	Downlink output power
	Uplink output power
	Tx rate of the downlink channel
	Tx rate of the uplink channel
	Maximum attainable downlink rate
	Maximum attainable uplink rate
ONU VD port	Number of received bytes
	Number of transmitted bytes
	Downlink noise tolerance
	Uplink noise tolerance
	Downlink power attenuation
	Uplink power attenuation
	Downlink output power
	Uplink output power
	Channel - downlink rate
	Channel - downlink delay
	Channel - uplink rate.
	Channel - uplink delay

## Related Command

None

## 9

## Common Error Codes

Error Code	Error Type	Meaning
IRNE	INPUT	The resource does not exist.
IRAE	INPUT	The resource already exists.
IRC (ONUID/ONUNO/NA- ME/PWD/SVLAN/CVLAN)	INPUT	Resource conflict. The specific conflicting items are shown in parenthesis.
IANE	INPUT	The alarm does not exist.
IMP	INPUT	The parameter is missing.
IIPF	INPUT	A parameter is in wrong format or not entered.
IIFE	INPUT	Parameter value error
DDNS	DEVICE	The operation is not supported by the device.
DDOF	DEVICE	Device operation failure
DDB	DEVICE	The device is busy.
SENS	SYSTEM	The operation is not supported by the EMS.
SEOF	SYSTEM	EMS operation failure, possibly because the user has not logged in.
EEEH	EXCEPTION	EMS exception
TUB	TEST	The user is busy.
TUT	TEST	The user is testing.
TTMB	TEST	The testing module is busy.

# 10 The List of Parameters

## ◆ Impedance parameter

Parameter Name	Data Type	Value	Description
Impedance	INTEGER	1	200+680   100nf: Bureau machine in China ()
		2	200+560   100nf: User machine in China
		3	600-ohm

## ◆ Outer line test conclusion parameter

Parameter Name	Data Type	Value	Description
Conclusion	INTEGER	0	Normal
		11	Abnormal AC voltage.
		12	Abnormal DC voltage.
		13	Abnormal loop current.
		14	Abnormal loop resistance.
		15	Abnormal insulation resistance.
		16	Abnormal capacitance.
		17	Abnormal impedance.
		21	Bad line insulation.
		22	Line breakage (including intra-office and extra-office line breakage).
		23	Mixed line (including intra-office and extra-office mixed line).
		24	Bad line ground.
		25	Line interfere.
		26	Electricity leakage.
		27	Not hooked on.

## ◆ Incoming / outgoing call emulation test conclusion parameter

Parameter Name	Data Type	Value	Description
Conclusion	INTEGER	1	Successful
		2	Failed.

Parameter Name	Data Type	Value	Description
		3	The call connection is established, but the testing personnel has not confirmed the call connection status.

◆ Incoming call emulation failure reason parameter

Parameter Name	Data Type	Value	Description
FailReason	INTEGER	1	No signaling interaction.
		2	The called party hooks off, but SS does not respond the off-hook signaling.
		3	MG internal reason.
		4	Others.

◆ Outgoing call emulation failure reason parameter

Parameter Name	Data Type	Value	Description
FailReason	INTEGER	1	The SS off-hook response signaling is not received.
		2	The SS dial tone sending signaling is not received.
		3	The dialed telephone number is not consistent with that reported to SS.
		4	The ring back tone is not received.
		5	The other party has not hooked off.
		6	Establishing the channel failed.
		7	SS has not responded the on-hook signaling.
		8	Others.

◆ DSL transfer mode parameter

Parameter Name	Data Type	Value	Description
FailReason	INTEGER	1	Regional Std. (ANSI T1.413)
		2	Regional Std. (ETSI DTS/TM06006)
		3	G.992.1 POTS non-overlapped
		4	G.992.1 POTS overlapped
		5	G.992.1 ISDN non-overlapped
		6	G.992.1 ISDN overlapped

Parameter Name	Data Type	Value	Description
		7	G.992.1 TCM-ISDN non-overlapped
		8	G.992.1 TCM-ISDN overlapped
		9	G.992.1 TCM-ISDN symmetric
		10	G.992.2 POTS non-overlapped
		11	G.992.2 POTS overlapped
		12	G.992.2 with TCM-ISDN non-overlapped
		13	G.992.2 with TCM-ISDN overlapped
		14	G.992.3 POTS non-overlapped
		15	G.992.3 POTS overlapped
		16	G.992.3 ISDN non-overlapped
		17	G.992.3 ISDN overlapped
		18	G.992.3 Annex I All-Digital non-overlapped
		19	G.992.3 Annex I All-Digital overlapped
		20	G.992.3 Annex J All-Digital non-overlapped
		21	G.992.3 Annex J All-Digital overlapped
		22	G.992.3 Annex L POTS non-overlapped, mode 1, wide U/S
		23	G.992.3 Annex L POTS non-overlapped, mode 2, narrow U/S
		24	G.992.3 Annex L POTS overlapped, mode 3, wide U/S
		25	G.992.3 Annex L POTS overlapped, mode 4, narrow U/S
		26	G.992.3 Annex M POTS non-overlapped
		27	G.992.3 Annex M POTS overlapped
		28	G.992.4 POTS non-overlapped
		29	G.992.4 POTS overlapped
		30	G.992.4 Annex I All-Digital non-overlapped
		31	G.992.4 Annex I All-Digital overlapped
		32	G.992.5 POTS non-overlapped
		33	G.992.5 POTS overlapped
		34	G.992.5 ISDN non-overlapped
		35	G.992.5 ISDN overlapped
		36	G.992.5 Annex I All-Digital non-overlapped
		37	G.992.5 Annex I All-Digital overlapped

Parameter Name	Data Type	Value	Description
		38	G.992.5 Annex J All-Digital non-overlapped
		39	G.992.5 Annex J All-Digital overlapped
		40	G.992.5 Annex M POTS non-overlapped
		41	G.992.5 Annex M POTS overlapped
		42	G.993.1
		43	G.993.2 Annex A POTS
		44	G.993.2 Annex A ISDN
		45	G.993.2 Annex B POTS
		46	G.993.2 Annex B ISDN
		47	G.993.2 Annex C POTS
		48	G.993.2 Annex C ISDN

# 11 The List of Alarms

The list of alarms reported by the integrated alarm system is as follows:

◆ Alarm definition list (OLT)

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Equipment event	Critical alarm	110001	OLT-START	The OLT is cold-started / hot-started.
Equipment alarm	Critical alarm	110002	OLT-BOARD-OFF-LINE	The OLT card is off-line.
Equipment alarm	Critical alarm	110003	OLT-BOARD-STATE-ABNORMAL	The OLT card status is abnormal, including abnormal running, the card not being activated, and card type being inconsistent with the configured type.
Equipment alarm	Major alarm	110004	ILEGAL_ONU_REGISTE	An invalid ONU tries to register.
Equipment alarm	Major alarm	110005	OLT-REMOTE-ONU-CONFIG-FAILURE	The OLT failed to send the configuration to the ONU.
Equipment alarm	Minor alarm	110006	CPU_USAGE_OVER_THRESHOLD	The CPU usage exceeds the preset threshold.
Equipment alarm	Critical alarm	110007	LASER_ALWAYS_ON	A certain ONU connected to the OLT constantly emits light.
Equipment alarm	Critical alarm	110008	ONU_Power_Fail	The OLT detects a certain connected ONU is powered off.
Equipment event	Major alarm	110009	BOARD_INVERSION_SUCCESSFUL	The active / standby switching occurs on the SCU and PON cards of the OLT.
Equipment event	Major alarm	110010	PORT_INVERSION_SUCCESSFUL	The active / standby switching occurs on the uplink and PON ports of the OLT.
Communication alarm	Critical alarm	310001	OLT_PON_Optical_Module_Fail	The optical module of the EPON OLT PON port fails.
Communication alarm	Critical alarm	310002	OLT_Uplink_Optical_Module_Fail	The optical module of the EPON OLT uplink port fails.



Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Communication alarm	Critical alarm	310003	NO_OPTICS_SIGNAL (uplink port)	The optical path between the Tx part of the EPON uplink OLT and the Rx part of the OLT uplink port fails.
Communication alarm	Critical alarm	310004	NO_OPTICS_SIGNAL (optical port)	(1) The trunk optical fiber is cut. (2) The splitter fails.
Communication alarm	Critical alarm	310005	ONU_OFF_LINE	The probable reasons include: (1) The optical path between the splitter and the ONU is abnormal. (2) The ONU works abnormally.
Communication alarm	Critical alarm	310006	OLT_OFF_Adminis	The EMS cannot communicate with the OLT.
Communication alarm	Major alarm	310007	RX_POWER_ALARM (for the optical module of the OLT uplink port)	The Rx optical power of the OLT uplink port exceeds the threshold. The probable reasons include: (1) The Ethernet optical module of the equipment uplinked with the OLT is abnormal. (2) The optical path between the equipment uplinked with the OLT and the OLT Rx end fails.
Communication alarm	Major alarm	310008	TX_POWER_ALARM (for the optical module of the OLT uplink port)	The Tx optical power of the OLT uplink port exceeds the threshold. The probable reasons include: (1) The optical module of the OLT uplink port works abnormally. (2) The OLT uplink card or port is abnormal.
Communication alarm	Major alarm	310009	RX_POWER_ALARM (for the OLT PON port)	The Rx optical power of the OLT PON port is abnormal. The probable reasons include: (1) The optical power exceeds the threshold. (2) The ONU PON optical module is abnormal.
Communication alarm	Major alarm	310010	TX_POWER_ALARM (for the OLT PON port)	The Tx optical power of the OLT PON port is abnormal. The probable reasons include: (1) The optical power exceeds the threshold. (2) The ONU PON optical module is abnormal.

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Communication alarm	Major alarm	310011	ONU_Uplink_Error-Frame_Too_Many	The optical path between the OLT and the ONU is abnormal. The probable reasons include: (1) The optical path between the OLT and the splitter is abnormal. (2) The optical path between the splitter and a certain ONU is abnormal. (3) The ONU PON module is abnormal.
Communication alarm	Warning alarm	310012	LACP_LINK_Failure	The LACP link fails.
Environment alarm	Critical alarm	210001	OLT_POWER_FAILURE	The OLT power supply card is abnormal.
Environment alarm	Critical alarm	210002	OLT_POWER_OFF_LINE	The OLT power supply card is off-line.
Environment alarm	Major alarm	210003	LOCAL_INPUT_POWER_FAILURE	The local subrack power input fails.
Environment alarm	Critical alarm	210004	TEMP_HIGH_ALARM (the core switch card)	The temperature of the core switch card is too high.
Environment alarm	Critical alarm	210005	TEMP_HIGH_ALARM (the OLT card)	The temperature of an OLT card is too high.
Environment alarm	Critical alarm	210006	TEMP_LOW_ALARM (the OLT card)	The temperature of an OLT card is too low.
Environment alarm	Major alarm	210007	AC Failure	The AC power supply fails.
Environment alarm	Major alarm	210008	Battery Failure	The circuit of the battery group fails.
Environment alarm	Major alarm	210009	LOADFUSE	The load fuse is blown.
Environment alarm	Major alarm	210010	Rectifier Module Failure	The rectifier module fails.
Environment alarm	Major alarm	210011	FANFAIL	The ONU fan is abnormal.
Environment alarm	Major alarm	210012	FAN_OFF_LINE	The OLT fan is off-line.
Environment alarm	Critical alarm	210013	TEMP_ALARM (the OLT optical module)	The OLT optical module works abnormally.
Environment alarm	Major alarm	210014	MEMORY_USAGE_OVER_THRESHOLD	The working load of the system is excessive.

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Environment alarm	Critical alarm	210015	Dry_CONTACT_Alarm	The external environment alarms, including the abnormality of the access control system, the power supply, the temperature, the humidity, etc.
QoS alarm	Major alarm	410001	ETH_STATISTICS_TRAFFIC_OVER_LIMIT	The number of traffic cross-threshold times of the statistics gathered based on the Ethernet.
QoS alarm	Major alarm	410002	ETH_STATISTICS_CONFLICT_OVER_LIMIT	The number of conflict cross-threshold times of the statistics gathered based on the Ethernet.
QoS alarm	Warning alarm	410003	ONU-OPTICAL-SIGNALDEGRADATION	The ONU optical channel generates errors.
QoS alarm	Major alarm	410004	ETH_CRC_ERROR_OVER_LIMIT	The number of CRC errors occurred on the OLT Ethernet port exceeds the threshold.

◆ Alarm definition list (FTTB ONU)

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Equipment alarm	Critical alarm	120000	ONU-BOARD-OFF-LINE	The card connected with the ONU is off-line.
Equipment alarm	Critical alarm	120001	ONU-BOARD-STATE-ABNORMAL	The status of the card connected with the ONU is abnormal, including abnormal running, the card not being activated, and card type being inconsistent with the configured type.
Equipment alarm	Major alarm	120002	ETH_PORT_LOOP	A loop is detected on the user port.
Equipment alarm	Major alarm	120003	DoS_ATTACK	A DoS attack is detected on the user port.
Equipment alarm	Minor alarm	120004	CPU_USAGE_OVER_THRESHOLD	The CPU usage exceeds the preset threshold.
Communication alarm	Critical alarm	320001	ONU_H248_BREAKOUT	The ONU H.248 link fails.
Communication alarm	Critical alarm	320002	ONU_MGCP_BREAKOUT	The ONU MGCP link fails.

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Communication alarm	Critical alarm	320003	ONU_SIP_BREAKOUT	The SIP link fails.
Communication alarm	Major alarm	320004	ENVIRONMENT_MONITOR_UNIT_COMMUNICATION_FAILURE	The connection between the external environment monitoring unit and the ONU is abnormal.
Communication alarm	Major alarm	320005	RX_POWER_ALARM (for the ONU PON port)	The Rx optical power of the ONU PON port is abnormal.
Communication alarm	Major alarm	320006	TX_POWER_ALARM (for the ONU PON port)	The Tx optical power of the ONU PON port is abnormal.
Communication alarm	Major alarm	320007	ONU_OFF_Adminis	The EMS cannot communicate with the ONU.
Environment alarm	Critical alarm	220001	AC Failure (ONU)	The AC power supply of the ONU fails.
Environment alarm	Critical alarm	220002	BATTERY_VOLTAGE_LOW (ONU)	The ONU backup battery runs out.
Environment alarm	Critical alarm	220003	TEMP_ALARM (ONU)	The ONU temperature is abnormal.
Environment alarm	Critical alarm	220004	FANFAIL (ONU)	The ONU fan is abnormal.
Environment alarm	Critical alarm	220005	TEMP_ALARM (ONU optical module)	The optical module temperature is abnormal.
Environment alarm	Critical alarm	220006	Dry_CONTACT_Alarm	The external environment alarms, including the abnormality of the access control system, the power supply, the temperature, the humidity, etc.

◆ Alarm definition list (EMS)

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Equipment alarm	Major alarm	130001	SERVER_EXCEPTION	The EMS internal process is abnormal.
Equipment alarm	Major alarm	130002	CPU_OVER_THRESHOLD	The CPU usage of the EMS network management server is too high.
Equipment alarm	Major alarm	130003	MEM_OVER_THRESHOLD	The memory usage of the EMS network management server is too high.
Equipment alarm	Major alarm	130004	HD_OVER_THRESHOLD	The hard disk usage of the EMS network management server is too high.

Alarm Type	Alarm Level	Alarm ID	Alarm Name	Alarm Reason
Equipment alarm	Major alarm	130005	DBSPACE_OVER_THRESHOLD	The database usage of the EMS server is too high.
Equipment alarm	Major alarm	130006	LIC_OVER_THRESHOLD	The EMS license agreement usage is too high.

# 12 Abbreviations

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BOSS	Business Operation Supporting System
CPE	Customer-premises Equipment
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
EMS	Element Management System
EPON	Ethernet Passive Optical Network
FTTB	Fiber to the Building
FTTC	Fiber to the Curb
FTTH	Fiber to the Home
FTTO	Fiber to the Office
FTTX	Fiber to the X
HGU	Home Gateway Unit
LAN	Local Area Network
MDU	Multi-Dwelling Unit
MTU	Multi-Tenant Unit
MSAN	Multiple Service Access Network
ITMS	Integrated Terminal Management System
IPTV	IP Television
OAM	Operation, Administration & Maintenance
OLT	Optical Line Terminal
ONT	Optical Network Terminal
ONU	Optical Network Unit
SBU	Single Business Unit
SFU	Single Family Unit
SNI	Service Network Interface
STB	Set Top Box
UNI	User Network Interface
VoIP	Voice over IP

# Product Documentation Customer Satisfaction Survey

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☐ 100% ☐ 80% ☐ 50% ☐ 0% ☐ Other (please specify) \_\_\_\_\_

4. Are you satisfied with the promptness with which we update the documentation?

☐ Satisfied ☐ Unsatisfied (your advice) \_\_\_\_\_

5. Which documentation form do you prefer?

☐ Print edition ☐ Electronic edition ☐ Other (please specify) \_\_\_\_\_

## Quality of the product documentation:

1. Is the information organized and presented clearly?

☐ Very ☐ Somewhat ☐ Not at all (your advice) \_\_\_\_\_

2. How do you like the language style of the documentation?

☐ Good ☐ Normal ☐ Poor (please specify) \_\_\_\_\_

3. Are any contents in the documentation inconsistent with the product?

\_\_\_\_\_

4. Is the information complete in the documentation?

☐ Yes

☐ No (Please specify) \_\_\_\_\_

5. Are the product working principles and the relevant technologies covered in the documentation sufficient for you to get known and use the product?

☐ Yes

☐ No (Please specify) \_\_\_\_\_

6. Can you successfully implement a task following the operation steps given in the documentation?

☐ Yes (Please give an example) \_\_\_\_\_

☐ No (Please specify the reason) \_\_\_\_\_

7. Which parts of the documentation are you satisfied with?

\_\_\_\_\_

8. Which parts of the documentation are you unsatisfied with?Why?

\_\_\_\_\_

9. What is your opinion on the Figures in the documentation?

☐ Beautiful ☐ Unbeautiful (your advice) \_\_\_\_\_

☐ Practical ☐ Unpractical (your advice) \_\_\_\_\_

10. What is your opinion on the layout of the documentation?

☐ Beautiful ☐ Unbeautiful (your advice) \_\_\_\_\_

11. Thinking of the documentations you have ever read offered by other companies, how would you compare our documentation to them?

Product documentations from other companies:\_\_\_\_\_

Satisfied (please specify) \_\_\_\_\_

Unsatisfied (please specify) \_\_\_\_\_

12. Additional comments about our documentation or suggestions on how we can improve:

\_\_\_\_\_

\_\_\_\_\_

Thank you for your assistance. Please fax or send the completed survey to us at the contact information included in the documentation. If you have any questions or concerns about this survey please email at [edit@fiberhome.com](mailto:edit@fiberhome.com)