An aerial photograph of a modern architectural complex, featuring a prominent curved building and several interconnected rectangular structures, surrounded by landscaped grounds and parking areas. The image is split into a yellow-tinted left half and a grayscale right half.

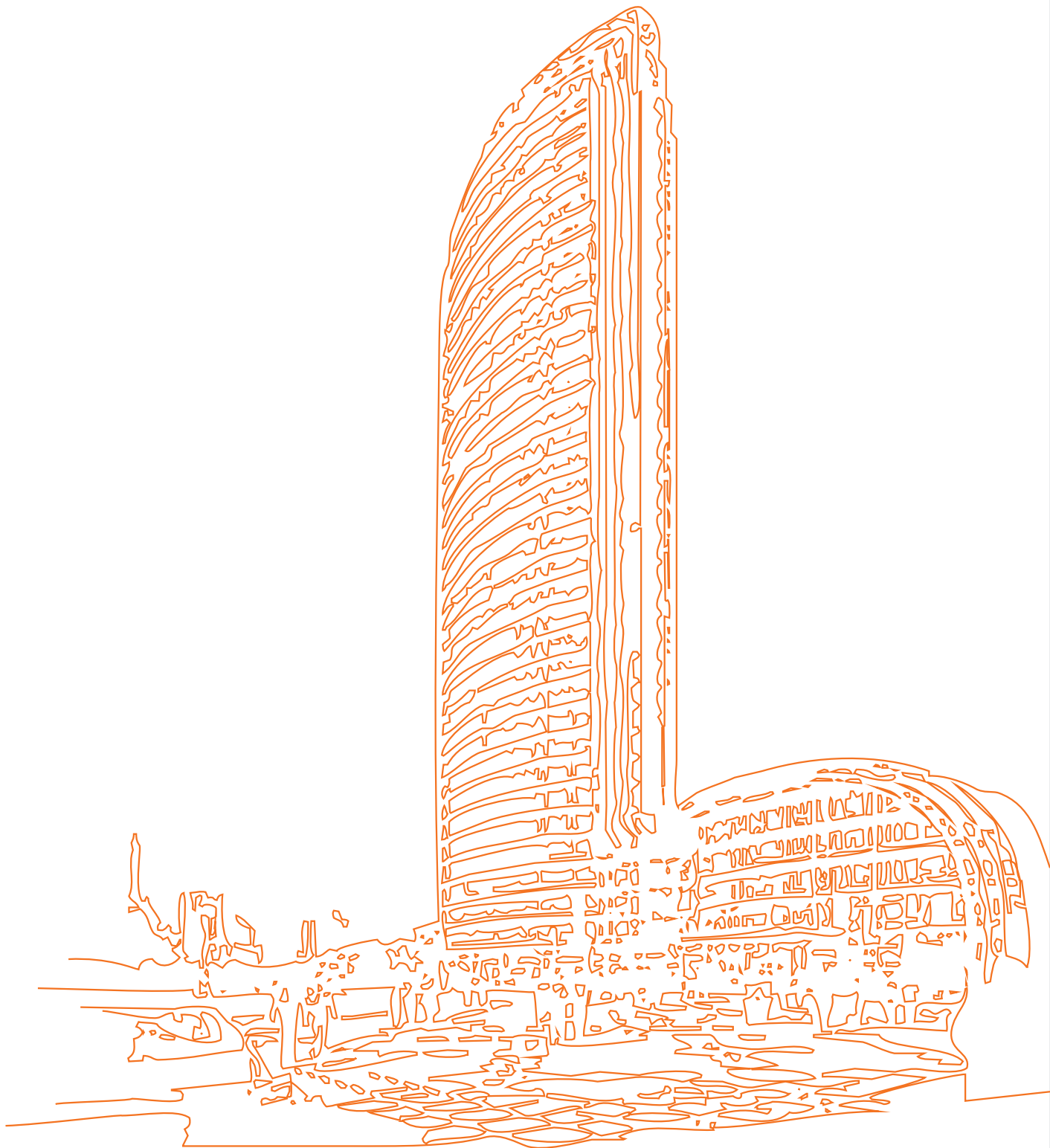
AN5116-06B/AN5516-06/AN5516-04 Optical Line Terminal Equipment Command Line Reference

[Version: A/1]

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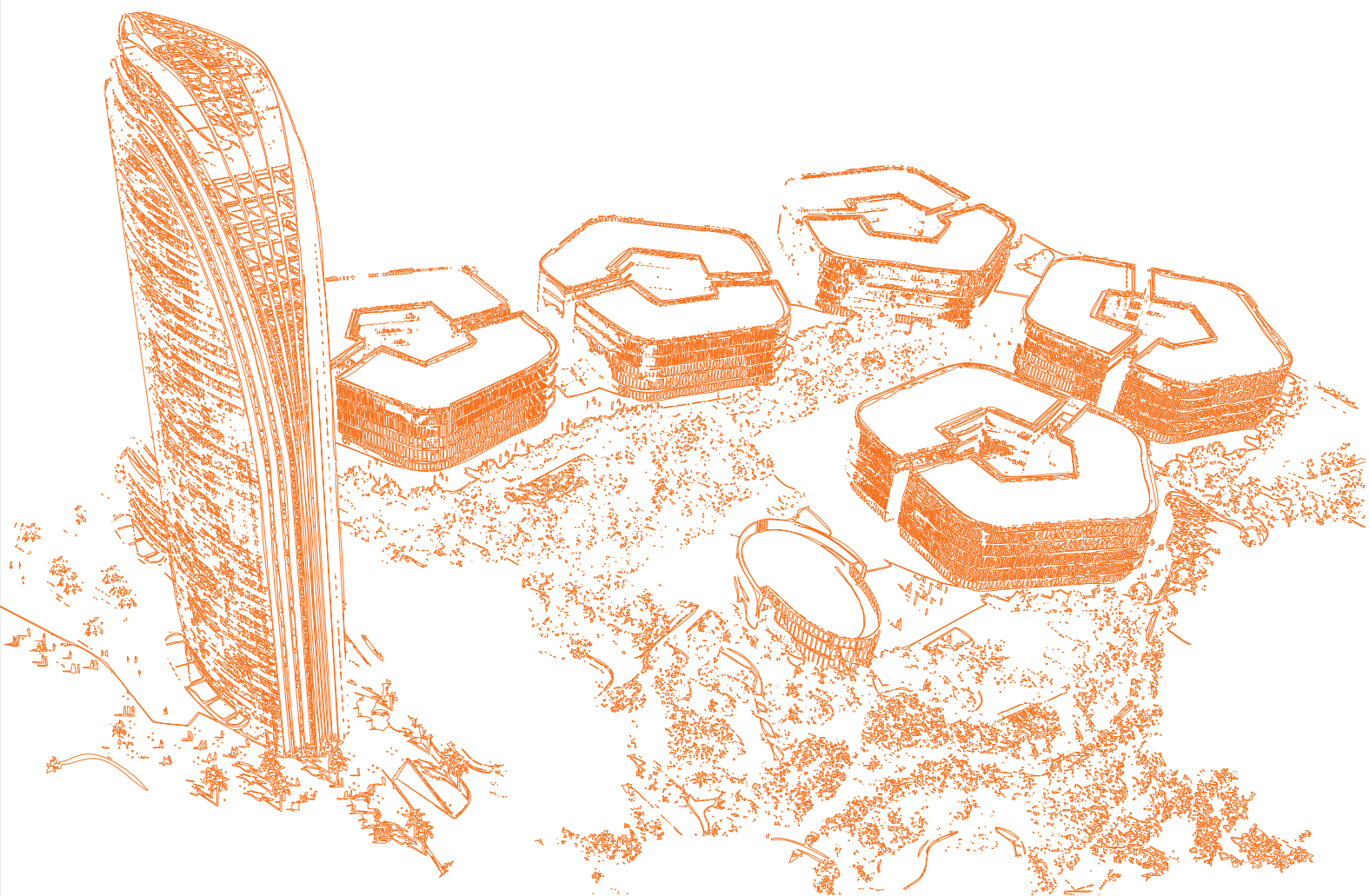


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Optical Line Terminal Equipment

Command Line Reference

Version: A/1

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FiberHome Telecommunication Technologies Co., Ltd.

August 2016

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1 Documentation Guide

Document Orientation

The manual *Command Line Reference* mainly introduces the common commands supported by the AN5116-06B/AN5516-06/AN5516-04, including the functions, formats, parameters, examples, and results of the commands.

Intended Readers

- ◆ Commissioning engineers
- ◆ Maintenance engineers

Version Information

Version	Version Information
A/1	Initial Version. This manual applies to command lines of Version 2016 Q1 and OLT equipment of Version 4.0 or above, covering command lines related to PON and MSAN.

Precautions

This manual applies to OLT series of products, including AN5116-06B, AN5516-06 and AN5516-04. You need to pay attention to the difference in subrack structure of the three equipment types when you configure the services using command lines. Enter the correct parameter value based on the cards and slots actually used.

The main differences are described as follows:

Item	AN5116-06B	AN5516-06	AN5516-04
Core switch card	Applicable cards: HSWA / HSWB / HSWD; located in Slots 9 and 10.	Applicable cards: HSWA / HSWB; located in Slots 9 and 10.	Applicable cards: HSUB / HSUC; located in Slot 5.
Uplink card	Independent uplink cards located in Slots 19 and 20 provide the uplink interfaces.		A switch uplink card located in Slot 5 provides the uplink interfaces.
Slots for service cards	Slots 1 to 8, 11 to 18	Slots 11 to 16	Slots 1 to 2

2

General Introduction to Command Line System

This chapter introduces the authorization control, operation methods, and directory list of the command line system.

- ☒ Authority Control
- ☒ Syntax
- ☒ Intelligent Match
- ☒ Function Key
- ☒ Directory List

2.1 Authority Control

The AN5116-06B/AN5516-06/AN5516-04 uses a hierarchical command line management system, which is easy to comprehend and operate. Users logging in the command line network management system are classified into common users and administrators according to the access authorization they have obtained. Both types of users can modify their passwords, which are mutually independent.

- ◆ The command prompt User> indicates that the system is currently in the common user mode. In this mode, users can only query system information.
- ◆ The command prompt Admin# indicates that the system is currently in the administrator mode. In this mode, users can perform various system configurations for the equipment.

2.2 Syntax

The following introduces the command formats and argument types.

2.2.1 Command Format

The commands consist of a command name followed by an argument field.

A complete command comprises command name(s) and argument(s). A valid command may contain one or more command names and argument fields. An argument field consists of two parts: the flag and the argument. For an argument with a flag, enter the flag first, and then the argument; for an argument without flag, enter the argument only.

2.2.2 Argument Type

- ◆ Range of value

When the content in < > are two figures connected by a hyphen, the value of the argument ranges between the two figures. For instance, <1-255> indicates that users can enter any integer that is no less than 1 and no more than 255. For example, 20 is a legal argument.

◆ IP address

When the content in < > is in the format of A.B.C.D., the argument is an IP address. For example, 192.168.8.80 is a valid IP address.

◆ Slot list / E1 link list / port list

- ▶ When the content in < > is e1list, the argument is an E1 link list. Enter the sequence numbers of E1 links to form the E1 link list.
- ▶ When the content in < > is slotlist, the argument is a slot list. Enter the sequence numbers of slots to form the slot list.
- ▶ When the content in < > is portlist, the argument is a port list. Enter "the sequence number of the slot for the card on which the port is located: the sequence number of the port" to form the port list.

All the aforesaid three lists can be expressed in the following three ways:

- ▶ Separate the values with a comma (","). For example, "1, 2, 3" indicates the cards in Slots 1, 2 and 3 or the 1st, 2nd and 3rd E1 links; "1:1, 1:3, 1:5, 1:7" indicates Ports 1, 3, 5 and 7 of the card in Slot 1.
- ▶ Connect the values with a hyphen ("-") to indicate continuous cards, E1 links or ports. For example, "1-3" indicates the cards in Slots 1 to 3 or E1 links from the 1st to the 3rd one; "1:1-1:4" indicates Ports 1 to 4 of the card in slot 1.
- ▶ Combine the aforesaid two formats. For example, "1, 3-5" indicates the cards in the Slot 1 and Slot 3 to 5 or the 1st E1 link and the 3rd to the 5th E1 links; "1:1, 1:3-1:7" indicates Port 1 and Ports 3 to 7 of the card in Slot 1.

◆ Character string

When the content in < > is something other than the above, you need to enter a character string. For details, type a question mark ("?") in angle brackets to view the parameter description. For instance, <name> means that you need to enter a character string as the name of a certain object.

2.3 Intelligent Match

The following introduces the operation methods of the intelligent match.

2.3.1 Abbreviated Command

Abbreviated command syntax allows you to type only the first one or several letters of a command, as long as they are unique and distinguishable from the first several letters of other commands. Under this condition, the CLI network management system can identify the abbreviated command as well, and you can press the Enter key directly to execute the command.

Example 1: Show the current system time by entering an abbreviated command. The complete command is **show time**, and its abbreviated form is **show t**, as shown below.

```
Admin#show t
Now time is:
Current Date is 2016-04-01
Current Time is 09:24:55
System running time is 0 day 16:18:45
Admin#
```

If the abbreviated command entered is overlapped with an abbreviation of another command, the CLI network management system will fail to identify it and give a corresponding prompt.

Example 2: Try to access the directory beginning with **p** under the Admin directory. Because there are several directories beginning with **p**, the system will give the following prompt.

```
Admin#cd p
Ambiguous or incomplete dir <p>!
You can input "dir" to view the list of sub dir or
input "cd .." to go to father dir.
Command executes failed.
Admin#
```

2.3.2 Question Mark <?> Symbol

The CLI network management system offers function key help. Entering a question mark **?** after an incomplete command keyword will display the help information of all currently available commands.

Example 1: Type **s** after the prompt Admin\vlan#, and then enter **?**. All command words beginning with **s** will be displayed together with their meanings, as shown below:

```
Admin\vlan#s
set      Config system's setting.
show     Show running system information.
Admin\vlan#s
```

You can also press the space key and enter **?** after typing a keyword to view the next keyword and meaning of the complete command.

Example 2: Enter **show** after the prompt Admin\vlan#, press the Space key, and then enter **?**. All commands beginning with **show** under this directory will be displayed together with their meanings, as shown below.

```
Admin\vlan#show
history      Display the session command history.
port_vlan    show all vlan on port info.
service_vlan show service vlan.
Admin\vlan#show
```

In this example, three commands beginning with **show** exist under the directory Admin\vlan#.

2.3.3 The <Tab> Key

When users enter an abbreviated command (the first one or several letters of the command) and then press the <Tab> key, the CLI network management system will identify and complete the command. If identical abbreviations exist, all possible commands will be listed for users to choose.

2.4 Function Key

The following introduces the operation methods of function keys.

2.4.1 <Ctrl + P>

Using the <Ctrl + P> key combination, users can recall the most recent command. Pressing the keys for a second time will recall the second previous command.

2.4.2 The <↑> and <↓> Key

Pressing the <↑> key will recall the most recent command, and pressing the key again will recall the second previous command. When you have found the desired command, press the <Enter> key to execute the command.

You can also use the <↓> key to look downward for the desired command. Press the <Enter> key to execute the command when you have found the desired command.

2.5 Directory List

See Table 2-1 for the list of command line directories in the CLI network management system for the AN5116-06B/AN5516-06/AN5516-04.

Table 2-1 List of Command Line Directories



















Directory and Subdirectory		Prompt
Admin		Admin#
device	-	Admin\device#
	protect	Admin\device\protect#
	circuitid	Admin\device\circuitid#
card		Admin\card#
service		Admin\service#
onu	-	Admin\onu#
	ngn	Admin\onu\ngn#
	lan	Admin\onu\lan#
	maintenance	Admin\onu\maintenance#
maintenance	performance	Admin\maintenance\performance#
	alarm	Admin\maintenance\alarm#
	mirror	Admin\maintenance\mirror#
license		Admin\license#
qinq		Admin\qinq#
profile		Admin\profile#

Table 2-1 List of Command Line Directories (Continued)

Directory and Subdirectory		Prompt
protocol	-	Admin\protocol#
	ospf	Admin\protocol\ospf#
	lACP	Admin\protocol\lACP#
	stp	Admin\protocol\stp#
	ntp	Admin\protocol\ntp#
	dhcp	Admin\protocol\dhcp#
	erps	Admin\protocol\erps#
interface		Admin\interface#
aaa		Admin\aaa#
upgrade		Admin\upgrade#
vlan		Admin\vlan#

3 Admin Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin directory.

-  Configuring the IP Address for Out-of-Band Management
-  Viewing the IP Address for Out-of-Band Management
-  Viewing Card Software and Hardware Versions
-  Configuring the Host Name
-  Viewing the Host Name
-  Forcing Active-standby Switchover
-  Resetting
-  Saving the Configuration Data
-  Clearing the Configuration Data
-  Viewing the Configuration Data
-  Enabling Automatic Save of Configuration
-  Disabling Automatic Save of Configuration
-  Viewing Automatic Save Parameters
-  Enabling / Disabling Log
-  Configuring Log Save Interval
-  Configuring Automatic Upload of Log
-  Clearing Log
-  Viewing the Log Configuration

- ☒ Viewing the Log
- ☒ Configuring System Time
- ☒ Viewing System Time
- ☒ Viewing the CPU Usage and Memory Utilization Ratio
- ☒ Uploading the File via the FTP
- ☒ Configuring the Command Level
- ☒ Viewing the Command Level
- ☒ Authorizing a Card
- ☒ Deauthorizing a Card
- ☒ Authorizing a Card Based on the Actually Inserted Card Type
- ☒ Viewing the Card Authorization Status
- ☒ Viewing the Serial Number of the Core Switch Card
- ☒ Viewing the Serial Number of the Uplink Card or CIO Card
- ☒ Viewing Serial Numbers of All Cards
- ☒ Upgrading the Files of the Core Switch Card
- ☒ Upgrading the Standby Core Switch Card
- ☒ Upgrading the Patch or cpld File of the Standby Core Switch Card

3.1 Configuring the IP Address for Out-of-Band Management

Command Function

You can use this command to configure the IP address for out-of-band management of the equipment.

Command Format

```
set debugip <A.B.C.D> mask <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
debugip <A.B.C.D>	The IP address for out-of-band management of the equipment.	Mandatory
mask <A.B.C.D>	The subnet mask of the equipment to be configured.	Mandatory

Command Example

Set the IP address for out-of-band management of the equipment to 10.92.20.11 and the subnet mask to 255.255.0.0.

```
Admin#set debugip 10.92.20.11 mask 255.255.0.0
Admin#
```

3.2 Viewing the IP Address for Out-of-Band Management

Command Function

You can use this command to view the IP address for out-of-band management of the equipment.

Command Format

```
show debugip
```

Parameter Description

None

Command Example

View the IP address for out-of-band management of the equipment.

```
Admin#show debugip
debugip 10.92.20.11
mask 255.255.0.0
Admin#
```

Result Description

Parameter	Description
debugip	The IP address for out-of-band management.
mask	The subnet mask.

3.3 Viewing Card Software and Hardware Versions

Command Function

You can use this command to view the software and hardware versions of the card.

Command Format

```
show version
```

Parameter Description

None

Command Example

View the software and hardware versions of the card.

```
Admin#show version
-----
system device version is:V104R000
CARD          NAME          HARDVER          SOFEVER
  1           ----          ----          ----
  2          EC4B  WKE2.119.318R1A          RP0700
  3           ----          ----          ----
  4           ----          ----          ----
```



```

5          ----          ----          ----
6          ----          ----          ----
7          ----          ----          ----
8          ----          ----          ----
9          HSWA   WKE2.115.334R1A          RP1000
10         ----          ----          ----
11         ----          ----          ----
12         ----          ----          ----
13         ----          ----          ----
14         ----          ----          ----
15         ----          ----          ----
16         ----          ----          ----
17         ----          ----          ----
18         ----          ----          ----
19         HU1A   WKE2.170.846R3A          RP0200
20         ----          ----          ----
Admin#

```

Result Description

Parameter	Description
system device version	The device version number.
CARD	The slot number.
NAME	The abbreviated name of the card.
HARDVER	The hardware version of the card.
SOFEVER	The software version of the card.

3.4 Configuring the Host Name

Command Function

You can use this command to configure the name of the host. When the configuration is completed, the former command prompt will be changed into the new host name.

Command Format

```
hostname <hostname>
```


Parameter Description

Parameter	Description	Attribute
hostname <hostname>	The host name.	Mandatory

Command Example

Set the host name to Fiberhome.

```
Admin#hostname Fiberhome
Host name is set to:Fiberhome
Fiberhome#
```

3.5 Viewing the Host Name

Command Function

You can use this command to view the host name.

Command Format

```
show hostname
```

Parameter Description

None

Command Example

View the host name.

```
Fiberhome#show hostname
hostname:Fiberhome
Fiberhome#
```


3.6 Forcing Active-standby Switchover

Command Function

You can use this command to perform forced switch between the active and standby core switch cards. Generally, the command of forced switch between the active and standby core switch cards is executed when you are going to replace the active core switch card or upgrade the software of the active core switch card.



Note:

Before executing this command, you should first conduct the **save** command to save the configuration.

Command Format

```
force switch
```

Parameter Description

None

Command Example

Perform forced switch between the active and standby core switch cards.

```
Admin#force switch  
Admin#
```

3.7 Resetting

Command Function

You can use this command to reset a certain card or the entire system.



Caution:

This command will result in service interruption. Be cautious when executing this command.

Command Format

```
reboot { [ <slotno> | system | backup ] } * 1
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number of the card to be reset.	Optional
system	Reset the entire system.	Optional
backup	Reset the standby core switch card.	Optional
Note 1: If no parameter is entered, the entire system will be reset by default.		

Command Example

Reset the entire system.

```
Admin#reboot
Are you sure to reboot the whole system? [ Y/N]
Invalid input! Please input yes or no.[ Y/N]
Y
Admin#
```

3.8 Saving the Configuration Data

Command Function

You can use this command to save current configuration data to Flash, so that the data will not be lost in case of rebooting or power shutdown.

Command Format

```
save
```

Parameter Description

None

Command Example

Save the current configuration data to Flash.

```
Admin#save
```



```
Trying save configuration to flash, please wait .....
save config success
Admin#
```

3.9 Clearing the Configuration Data

Command Function

You can use this command to clear the configuration data saved in Flash.



Caution:

This command will result in system restart. Be cautious when executing this command.

Command Format

```
erase{[ startup-config] } *1
```

Parameter Description

Parameter	Description	Attribute
{[startup-config] } *1	All configuration.	Optional
Note 1: If no parameter is entered, all configuration except the management IP will be cleared by default.		

Command Example

Clear all configuration except the management IP.

```
Admin#erase
Are you sure want to erase startup-config? This needs seconds of time to reboot
system! [Y/N]y
Successfully erase all configuration from flash.
Admin#
```

3.10 Viewing the Configuration Data

Command Function

You can use this command to view configuration data saved in Flash.

Command Format

```
show startup-config { module <name> } *1
```

Parameter Description

Parameter	Description	Attribute
module <name>	The module name.	Optional
Note 1: If no parameter is entered, all configuration will be displayed by default.		

Command Example

View all configuration.

```
Admin#show startup-config
!WOS system config file-----
!system name:ngpon olt
cli debug off
hostname admin
terminal length 30
set auto_save enable period 1440 active_time hour 1 min 0
.....
!End-----
!@@@save time:2016-03-10 18:09:41
!version:RP1000
!complianceTime:Mar  7 2016 04:11:57
Admin#
```

3.11 Enabling Automatic Save of Configuration

Command Function

You can use this command to enable the automatic save function for configuration and configure the time parameters.

Command Format

```
set auto_save enable period <period> { active_time hour <0-23> min <0-59> } *1
```


Parameter Description

Parameter	Description	Attribute
period<period>	The save period. The value can be set to 360, 480, 720 or 1440; unit: minute.	Mandatory
active_time hour<0-23> min<0-59>	The first activation time.	Optional
Note 1: If the first activation time is not entered, it is 01:00 a.m. by default.		

Command Example

Enable the automatic save function for configuration, set the save period to one day (1440 minutes) and set the first activation time to 01:00 a.m.

```
Admin#set auto_save enable period 1440
Admin#
```

3.12 Disabling Automatic Save of Configuration

Command Function

You can use this command to disable the automatic save function for configuration.

Command Format

```
set auto_save disable
```

Parameter Description

None

Command Example

Disable the automatic save function for configuration.

```
Admin#set auto_save disable
Admin#
```


3.13 Viewing Automatic Save Parameters

Command Function

You can use this command to view the time parameters of the automatic save function.

Command Format

```
show auto_save
```

Parameter Description

None

Command Example

View the time parameters of the automatic save function.

```
Admin#show auto_save
Auto Save : enable
frequency : every 1440 min
active time: 1:0 min

Admin#
```

Result Description

Parameter	Description
Auto Save	Whether the automatic save function for configuration is enabled.
frequency	The save period (frequency).
active time	The first activation time.

3.14 Enabling / Disabling Log

Command Function

You can use this command to enable the log function.

Command Format

```
set log[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	Enable / disable the log function. ◆ enable: Enable the log function. ◆ disable: Disable the log function.	Mandatory

Command Example

Enable the log function.

```
Admin#set log enable
system log : enable
Admin#
```

3.15 Configuring Log Save Interval

Command Function

You can use this command to configure the save interval for the log.

Command Format

```
set log save_interval <20-65535>
```

Parameter Description

Parameter	Description	Attribute
save_interval <20-65535>	The save interval. The value range is from 20 to 65535; unit: minute.	Mandatory

Command Example

Set the save interval to one day (1440 minutes).

```
Admin#set log save_interval 1440
Admin#
```


3.16 Configuring Automatic Upload of Log

Command Function

You can use this command to configure automatic upload of log to the FTP server.

Command Format

```
set log auto_upload[ enable|disable] { <A.B.C.D> <username> <password>
interval <interval>} *1
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	You can use this command to enable / disable automatic upload of log to the FTP server. ◆ enable: Enable the automatic upload of log to the FTP server. ◆ disable: Disable the automatic upload of log to the FTP server.	Mandatory
<A.B.C.D>	The IP address of the FTP server.	Optional
<username>	The username of the FTP server.	Optional
<password>	The password of the FTP server.	Optional
interval <interval>	The automatic upload interval of log; unit: minute.	Optional

Command Example

Enable automatic upload of log to the FTP server. Set the IP address of the FTP server to 10.10.10.1, username to 1, password to 1, and the interval to one day (1440 minutes).

```
Admin#set log auto_upload enable 10.10.10.1 1 1 interval 1440
Admin#
```

3.17 Clearing Log

Command Function

You can use this command to clear the log saved in Flash.

Command Format

```
clear system log
```

Parameter Description

None

Command Example

Clear the log saved in Flash.

```
Admin#clear system log
Admin#
```

3.18 Viewing the Log Configuration

Command Function

You can use this command to view the log related configuration parameters.

Command Format

```
show syslog info
```

Parameter Description

None

Command Example

Display the log related configuration parameters.

```
Admin#show syslog info
***** show system log info *****
system log : enable
system log save interval 1440(min)
auto upload : enable
host ip : 10.10.10.1
username : 1
password : 1
upload interval(min) : 1440
Admin#
```


Result Description

Parameter	Description
system log	Enable / disable the log function.
system log save interval	The save interval of log.
auto upload	Enable / disable automatic upload of log to the FTP server.
host ip	The IP address of the FTP server.
username	The username of the FTP server.
password	The password of the FTP server.
upload interval (min)	The automatic upload interval of log.

3.19 Viewing the Log

Command Function

You can use this command to view the log information.

Command Format

```
show log {[ flash]} *1 {[ reverse]} *1
```

Parameter Description

Parameter	Description	Attribute
flash	Check the log in the FLASH.	Optional
reverse	check from the log in reverse order.	Optional

Command Example

View the log information.

```
Admin#show log
@@|2016-01-17 11:05:23|M9|admin|[ S348][ T:14812998]
[M9][ PL] console|set log auto_upload enable 10.10.10.1 1 1 interval 1440|0|
@@|2016-01-17 11:05:06|M9|admin|[ S347][ T:14812015]
[M9][ PL] console|set log auto_upload enable 10.10.10.1 1 1 interval 43200|0|
@@|2016-01-17 11:04:11|M9|admin|[ S346][ T:14808715]
[M9][ PL] console|set log save_interval 1440|0|
@@|2016-01-17 11:03:17|M9|admin|[ S345][ T:14805442]
[M9][ PL] console|set log enable|0|
Admin#
```


3.20 Configuring System Time

Command Function

You can use this command to configure the system time.

Command format

```
set time <2012-2100> <1-12> <1-31> <HH:MM:SS>
```

Parameter Description

Parameter	Description	Attribute
<2012-2100>	Year	Mandatory
<1-12>	Month	Mandatory
<1-31>	Day	Mandatory
<HH:MM:SS>	<ul style="list-style-type: none"> ◆ HH: hour ◆ MM: minute ◆ SS: second 	Mandatory

Command Example

Set the system time to 00:00:00 January 1st 2016.

```
Admin#set time 2016 1 1 00:00:00
Admin#
```

3.21 Viewing System Time

Command Function

You can use this command to view the system time.

Command Format

```
show time
```

Parameter Description

None

Command Example

View the system time.

```
Admin#show time
Now time is:
Current Date is 2016-03-11
Current Time is 11:16:16
System running time is 2 day 20:45:17
Admin#
```

Result Description

Parameter	Description
Current Date	The current date.
Current Time	The current time.
System running time	The system running time.

3.22 Viewing the CPU Usage and Memory Utilization Ratio

Command Function

You can use this command to view the CPU usage and memory utilization ratio.

Command Format

```
show usage
```

Parameter Description

None

Command Example

View the CPU usage and memory utilization ratio.

```
Admin#show usage
cpu usage:  4. 0 (%)
memory usage: 86.66 (%)
Admin#
```


Result Description

Parameter	Description
cpu usage	The CPU utilization ratio.
memory usage	The memory utilization ratio.

3.23 Uploading the File via the FTP

Command Function

You can use this command to upload the file to the server via the FTP.

Command Format

```
upload ftp[ system|config|showrun|igmplog|syslog|ver_file|patch] <A.B.C.D> <username> <password> <filename>
```

Parameter Description

Parameter	Description	Attribute
system	The system file.	Optional
config	The configuration file in Flash.	Optional
showrun	The configuration file being run.	Optional
igmplog	The multicast log file.	Optional
syslog	The system log file.	Optional
ver_file	The version file.	Optional
patch	The patch file.	Optional
<A.B.C.D>	The IP address of the FTP server.	Mandatory
<username>	The username of the FTP server.	Mandatory
<password>	The password of the FTP server.	Mandatory
<filename>	The filename.	Mandatory

Command Example

Export the configuration file from Flash to the FTP server configured with the IP address 10.10.10.1. The username of the server is 1, password is 1, and the filename is config.txt.

```
Admin#upload ftp config 10.10.10.1 1 1 config.txt
```



```
Trying upload file to ftp server, please wait...
```

```
Finished.
```

```
You've successfully upload config file.
```

```
Admin#
```

3.24 Configuring the Command Level

Command Function

You can use this command to configure the command level.

Command Format

```
set cmd <cmd_name> auth_level <0-15>
```

Parameter Description

Parameter	Description	Attribute
cmd <cmd_name>	The command name.	Mandatory
auth_level <0-15>	The command level. The value can be set to 0, 1, 14 or 15. <ul style="list-style-type: none">◆ 0: guest level; only query commands can be used.◆ 1: operator level; query commands and service configuration related commands can be used.◆ 14: manager level; all commands except new login user creation / user level modification can be used.◆ 15: admin level; all commands are available.	Mandatory

Command Example

Set the level of the query command for software and hardware version of the card to 15.

```
Admin#set cmd show_all_card_version_cmd auth_level 15
```

```
Admin#
```

3.25 Viewing the Command Level

Command Function

You can use this command to view the command level.

Command Format

```
show cmd <cmd_name> auth_level
```

Parameter Description

Parameter	Description	Attribute
cmd <cmd_name>	The command name.	Mandatory

Command Example

View the command level of “show version”.

```
Admin#show cmd show_all_card_version_cmd auth_level
Level CmdName CmdString
15 show_all_card_version_cmd show version
Admin#
```

Result Description

Parameter	Description
Level	The command level.
CmdName	The command name.
CmdString	The command format.

3.26 Authorizing a Card

Command Function

You can use this command to authorize a card.

Command Format

```
set card_auth slot <slotno> type <card_type>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the card.	Mandatory
type <card_type>	The type of the card to be authorized.	Mandatory

Command Example

Authorize the card in Slot 12 to GC4B.

```
Admin#set card_auth slot 12 type gc4b
Admin#
```

3.27 Deauthorizing a Card

Command Function

You can use this command to deauthorize a card.

Command Format

```
set card_unauth slot[ <slotno> | all]
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number of the card.	Optional
all	All the cards.	Optional

Command Example

Deauthorize the card in Slot 11.

```
Admin#set card_unauth slot 11
Admin#
```

3.28 Authorizing a Card Based on the Actually Inserted Card Type

Command Function

You can use this command to authorize a card based on the actually inserted card type in the subrack.

Command Format

```
set card_all_auth
```


Parameter Description

None

Command Example

Authorize all cards based on the actually inserted card types in the subrack.

```
Admin#set card_all_auth
Admin#
```

3.29 Viewing the Card Authorization Status

Command Function

You can use this command to view the card authorization status, including whether the card is inserted, the card type configured in the NMS and the card type detected by the NMS.

Command Format

```
showcard
```

Parameter Description

None

Command Example

View the authorization status of all cards.

```
Admin#showcard
-----AN5116-06B/AN5516-01-----
CARD   EXIST   CONFIG  DETECT  DETAIL
  1     ---   GC4B    ---    NO_MATCH
  2     YES   EC4B    EC4B    MATCH
  3     ---   ---     ---     ---
  4     ---   ---     ---     ---
  5     ---   ---     ---     ---
  6     ---   ---     ---     ---
  7     ---   ---     ---     ---
  8     ---   ---     ---     ---
  9     YES   HSWA    HSWA    MATCH/M
```



```

10      ---      HSWA      ---      ---
11      YES GC8B GC8B MATCH
12      YES GCOB GCOB MATCH
13      YES GC8B GC8B MATCH
14      YES EC4B EC4B MATCH
15      YES GCOB GCOB MATCH
16      ---      ---      ---      ---
17      ---      ---      ---      ---
18      ---      ---      ---      ---
19      YES      HU1A      HU1A      MATCH
20      ---      ---      ---      ---
21      YES      FAN      FAN      MATCH
22      YES      FAN      FAN      MATCH
23      YES      FAN      FAN      MATCH
24      ---      ---      ---      ---
25      YES      ---      PWR      NO_MATCH
801     ---      ---      ---      ---

```

Current temperature is 43 C.

Power 2 is ON.

FAN 1 speed is 1. FAN 2 speed is 1. FAN 3 speed is 1.

Admin#

Result Description

Parameter	Description
CARD	The slot number.
EXIST	Whether the card is inserted in the physical slot.
CONFIG	The card type configured in the NMS.
DETECT	The card type detected by the NMS.
DETAIL	Whether the card type configured in the NMS and the card type detected by the NMS are consistent.

3.30 Viewing the Serial Number of the Core Switch Card

Command Function

You can use this command to view the serial number of the core switch card.

Command Format

```
show card_serial
```

Parameter Description

None

Command Example

View the serial number of the core switch card.

```
Admin#show card_serial
serial_num: 123456789012
Admin#
```

Result Description

Parameter	Description
serial_num	The serial number of the core switch card. It is composed of 12 to 23 numbers or capital letters.

3.31 Viewing the Serial Number of the Uplink Card or CIO Card

Command Function

You can use this command to view the serial number of the uplink card or CIO card.

Command Format

```
show slot <slotno> card_serial
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card or CIO card.	Mandatory

Command Example

View the serial number of the uplink card in Slot 19.


```
Admin#show slot 19 card_serial
serial_num: 123456789034
Admin#
```

Result Description

Parameter	Description
serial_num	The serial number of the uplink card or CIO card. It is composed of 12 to 23 numbers or capital letters.

3.32 Viewing Serial Numbers of All Cards

Command Function

You can use this command to view the serial numbers of all cards.

Command Format

```
show all_card_serial
```

Parameter Description

None

Command Example

View the serial numbers of all cards.

```
Admin#show all_card_serial
SLOT      SERIAL_NUM
-----
1
2
3
4
5
6
7
8
9          123456789012
10
11
12
```



```

13
14
15
16
17
18
19      123456789034
20
Admin#

```

Result Description

Parameter	Description
SLOT	The slot number of the card.
SERIAL_NUM	The serial number of the card. It is composed of 12 to 23 numbers or capital letters.

3.33 Upgrading the Files of the Core Switch Card

Command Function

You can use this command to upgrade the files of the core switch card, including system file, configuration file, version file and patch file.

Command Format

```

download ftp[ system|config|script|ver_file|boot|patch|cpld]
<ftp_serv_ip> <username> <password> <filename>

```

Parameter Description

Parameter	Description	Attribute
[system config script ver_file boot patch cpld]	All types of files of the core switch card. ◆ system: The system file. ◆ config: The configuration file. ◆ script: The batch command line file. ◆ ver_file: The version file. ◆ boot: The system boot file. ◆ patch: The system patch file. ◆ cpld: The system cpld file.	Optional
<ftp_serv_ip>	The IP address of the FTP server.	Mandatory
<username>	The username of the FTP server.	Mandatory

Parameter	Description	Attribute
<password>	The password of the FTP server.	Mandatory
<filename>	The filename.	Mandatory

Command Example

Upgrade the system file of the core switch card. The IP address of the FTP server is 10.33.150.2, username is 1, and password is 1. The patch filename is hb_hsa_1000_tst.bin.

```
Admin#download ftp system 10.33.150.2 1 1 hb_hsa_1000_tst.bin
Finished.
```

```
You've successfully download new
Now you can type reboot command to reboot system.
Admin#
```

3.34 Upgrading the Standby Core Switch Card

Command Function

You can use this command to upgrade the system file of the standby core switch card.

Command Format

```
download ftp backup <ftp_serv_ip> <username> <password> <filename>
```

Parameter Description

Parameter	Description	Attribute
<ftp_serv_ip>	The IP address of the FTP server.	Mandatory
<username>	The username of the FTP server.	Mandatory
<password>	The password of the FTP server.	Mandatory
<filename>	The filename.	Mandatory

Command Example

Upgrade the system file of the standby core switch card. The IP address of the FTP server is 10.33.150.2, username is 1, and password is 1. The patch filename is hb_hsa_1000_tst.bin.

```
Admin#download ftp backup 10.33.150.2 1 1 hb_hsa_1000_tst.bin
This will need seconds of time, please wait...
```

```
Cli Backup upgrade successfully, should reboot to take effect!
Admin#
```

3.35 Upgrading the Patch or cpld File of the Standby Core Switch Card

Command Function

You can use this command to upgrade the patch or cpld file of the standby core switch card.

Command Format

```
download ftp backup[ patch|cpld] <ftp_serv_ip> <username> <password>
<filename>
```

Parameter Description

Parameter	Description	Attribute
[patch cpld]	<ul style="list-style-type: none"> ◆ patch: The patch file. ◆ cpld: The cpld file. 	Optional
<ftp_serv_ip>	The IP address of the FTP server.	Mandatory
<username>	The username of the FTP server.	Mandatory
<password>	The password of the FTP server.	Mandatory
<filename>	The filename.	Mandatory

Command Example

Upgrade the patch of the standby core switch card. The IP address of the FTP server is 10.33.150.2, username is 1, and password is 1. The patch filename is patch1015.bin.


```
Admin#download ftp backup patch 10.33.150.2 1 1 patch1015.bin
```

```
This will need seconds of time, please wait...
```



















```
Cli Backup upgrade successfully, should reboot to take effect!
```





















```
Admin#
```


4

admin\card Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\card directory.

-  Viewing Parameters of the Optical Module on a PON Port
-  Viewing the GPON Card's CPU Usage and Memory Utilization Ratio
-  Configuring PON Port FEC
-  Viewing PON Port FEC
-  Configuring PON Port Shutdown
-  Viewing PON Port Shutdown
-  Configuring PON Port Isolation
-  Viewing PON Port Isolation
-  Configuring the Key for the PON Port
-  Viewing the Key for the PON Port
-  Configuring Packet Suppression for the PON Port
-  Validating Packet Suppression for the PON Port
-  Viewing Packet Suppression for the PON Port
-  Viewing the MAC Address Table of a PON Port
-  Viewing the MAC Address of the XGPON Port
-  Viewing MAC Addresses of PON System
-  Viewing the System Time of the Line Card
-  Configuring Loop Delay for the PON Port

-  Validating Loop Delay for the PON Port
-  Viewing the Loop Delay Configuration for the PON Port
-  Configuring ONU Automatic Discovery
-  Viewing the Automatic Discovery Configuration for the ONU
-  Configuring the Constantly-Light-Emitting Detection Configuration for the Line Card
-  Viewing the Constantly-Light-Emitting Detection Configuration for the Line Card
-  Configuring the Working Mode for the EPON Port
-  Viewing the Working Mode for the EPON Port
-  Configuring the 1588 Switch of a PON Port
-  Validating the 1588 Switch of a PON Port
-  Viewing the 1588 Switch of a PON Port
-  Configuring the Optical Power Monitoring Switch of the PON Port
-  Viewing the Optical Power Monitoring Switch of a PON Port
-  Configuring the Descriptive Information for the Port
-  Viewing Descriptive Information About a Port
-  Configuring the PON Port's MAC Address Mapping Mode
-  Viewing the PON Port's MAC Address Mapping Mode
-  Viewing the Multicast Address Table of the Line Card
-  Configuring the PON Port Authentication Mode
-  Viewing the PON Port Authentication Mode

4.1 Viewing Parameters of the Optical Module on a PON Port

Command Function

You can use this command to view the parameters of the optical module on a PON port.

Command Format

```
show optic_module_para slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory

Command Example

View the parameters of the optical module of PON Port 16 in Slot 18.

```
Admin\card#show optic_module_para slot 18 pon 16
show optic_module_par slot 18 pon 16
----- PON OPTIC MODULE PAR INFO -----
NAME          VALUE          UNIT
-----
TYPE           : 20           (KM)
TEMPERATURE    : 33.14        ('C)
VOLTAGE        : 3.26         (V)
BIAS CURRENT   : 6.99         (mA)
SEND POWER     : 3.26         (Dbm)
ONU_NO  RECV_POWER , ITEM=2
1          -9.06         (Dbm)
3          -19.14        (Dbm)
Admin\card#
```


Result Description

Parameter	Description
TYPE	The optical module type.
TEMPERATURE	The temperature of the optical module.
VOLTAGE	The voltage of the optical module.
BIAS CURRENT	The bias current of the optical module.
SEND POWER	The Tx optical power of the optical module.
ONU_NO	The ONU authorization number of the PON port.
RECV_POWER	Rx Optical Power of the optical module.

4.2 Viewing the GPON Card's CPU Usage and Memory Utilization Ratio

Command Function

You can use this command to view the GPON card's CPU usage and memory utilization ratio.

Command Format

```
show cpu-usage slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the GPON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the CPU usage and memory utilization ratio of the GPON card in Slot 16.

```
Admin\card#show cpu-usage slot 16
----- OLT CPU & Memory Using -----
CPU   : 2.47%
Memory : 41.40%
Admin\card#
```


Result Description

Parameter	Description
CPU	The CPU utilization ratio.
Memory	The memory utilization ratio.

4.3 Configuring PON Port FEC

Command Function

You can use this command to configure the FEC switch for the uplink / downlink stream of the PON port.

Command Format

```
set fec slot <slotno> pon <ponno> upstream_fec[ enable|disable]
downstream_fec[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
upstream_fec[enable disable]	The FEC switch for the uplink stream. ◆ enable: Enable the switch. ◆ disable: Disable the switch.	Mandatory
downstream_fec [enable disable]	The FEC switch for the downlink stream. ◆ enable: Enable the switch. ◆ disable: Disable the switch.	Mandatory

Command Example

Enable the FEC switch for the uplink / downlink stream of PON Port 1 in Slot 1.

```
Admin\card#set fec slot 1 pon 1 upstream_fec enable downstream_fec enable
set pon fec cmd ok!
Admin\card#
```


4.4 Viewing PON Port FEC

Command Function

You can use this command to view the FEC switch for the uplink / downlink stream of the PON port.

Command Format

```
show pon_fec slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the FEC switch for the uplink / downlink stream of the PON port of the PON interface card in Slot 1.

```
Admin\card#show pon_fec slot 1
ITEM(16)          UP          DOWN
-----
1          ENABLE          ENABLE
2          DISABLE         DISABLE
3          DISABLE         DISABLE
4          DISABLE         DISABLE
5          DISABLE         DISABLE
6          DISABLE         DISABLE
7          DISABLE         DISABLE
8          DISABLE         DISABLE
9          DISABLE         DISABLE
10         DISABLE         DISABLE
11         DISABLE         DISABLE
12         DISABLE         DISABLE
13         DISABLE         DISABLE
14         DISABLE         DISABLE
15         DISABLE         DISABLE
16         DISABLE         DISABLE
Admin\card#
```


4.5 Configuring PON Port Shutdown

Command Function

You can use this command to configure the shutdown status of the PON port.

Command Format

```
set slot <slotno> pon <ponno> [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
[enable disable]	<ul style="list-style-type: none"> ◆ enable: Enable the PON port. ◆ disable: Disable the PON port. 	Mandatory

Command Example

Disable PON Port 1 in Slot 1.

```
Admin\card#set slot 1 pon 1 disable
set ok!
Admin\card#
```

4.6 Viewing PON Port Shutdown

Command Function

You can use this command to view the shutdown status of the PON port.

Command Format

```
show pon_onoff slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the shutdown status of the PON port of the PON interface card in Slot 1.

```
Admin\card#show pon_onoff slot 1
```

```
ITEM(16)          STATUS
-----
1             OFF
2             ON
3             ON
4             ON
5             ON
6             ON
7             ON
8             ON
9             ON
10            ON
11            ON
12            ON
13            ON
14            ON
15            ON
16            ON
Admin\card#
```

4.7 Configuring PON Port Isolation

Command Function

You can use this command to configure PON port isolation.

Command Format

```
set separate slot <slotno> status[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
status[enable disable]	The PON port isolation switch. ◆ enable: Enable the switch. ◆ disable: Disable the switch.	Mandatory

Command Example

Disable PON port isolation for the PON interface card in Slot 1.

```
Admin\card#set separate slot 1 status disable
set separate status ok!
Admin\card#
```

4.8 Viewing PON Port Isolation

Command Function

You can use this command to view the isolation status of the PON port.

Command Format

```
show pon_separate slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the isolation status of the PON port of the PON interface card in Slot 2.

```
Admin\card#show pon_separate slot 2
SLOT 2 is separate!
Admin\card#
```

4.9 Configuring the Key for the PON Port

Command Function

You can use this command to configure the key of the PON port.

Command Format

```
set secret slot <slotno> pon <ponno> interval <interval>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
interval <interval>	The update interval for the key of the PON port. The value should be equal to or larger than 10, or set to 0; unit: second.	Mandatory

Command Example

Set the update interval for the key of PON Port 1 of the PON interface card in Slot 1 to 100 seconds.

```
Admin\card#set secret slot 1 pon 1 interval 100
set secret update interval ok!
Admin\card#
```

4.10 Viewing the Key for the PON Port

Command Function

You can use this command to view the key for the PON port.

Command Format

```
show pon_secret slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the key for the PON port of the PON interface card in Slot 1.

```
Admin\card#show pon_secret slot 1
ITEM(16)          INTERVAL
1                100
2                 0
```



```

3      0
4      0
5      0
6      0
7      0
8      0
9      0
10     0
11     0
12     0
13     0
14     0
15     0
16     0

```

```
Admin\card#
```

Result Description

Parameter	Parameter Description
ITEM	The PON port number.
INTERVAL	The key interval of the PON port.

4.11 Configuring Packet Suppression for the PON Port

Command Function

You can use this command to configure the suppression function of broadcast / multicast / unknown packets of the PON port. This can avoid broadcast storm in the system, so as to improve the system performance.

Command Format

```
set packet_control slot <slotno> pon <ponno> { type[ broadcast|multicast|
unknown] status[ enable|disable] rate[ <1-262142>|default] } * 3
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
type[broadcast multicast unknown]	The packet type. ◆ broadcast: broadcast packets. ◆ multicast: multicast packets. ◆ unknown: unknown packets.	Mandatory
status[enable disable]	Enable or disable packet suppression. ◆ enable: Enable. ◆ disable: Disable.	Mandatory
rate[<1-262142> default]	Rate control. The number of the data packets that pass the PON port per second. The system discards the data packet which exceeds the rate control. The value ranges between 1 and 262142; the unit is packet/second; and the default value is 150.	Optional

Command Example

Enable broadcast packet suppression for PON Port 1 in Slot 1. The packet suppression rate is 100 packets per second.

```
Admin\card#set packet_control slot 1 pon 1 type broadcast status enable rate 100
command execute ok!
Admin\card#
```

4.12 Validating Packet Suppression for the PON Port

Command Function

You can use this command to validate the suppression function of broadcast / multicast / unknown packets of the PON port.

Command Format

```
apply packet_control slot <slotno> pon <ponno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory

Command Example

Validate the packet suppression function for PON Port 1 in Slot 1.

```
Admin\card#apply packet_control slot 1 pon 1
command execute ok!
Admin\card#
```

4.13 Viewing Packet Suppression for the PON Port

Command Function

You can use this command to view the suppression function of broadcast / multicast / unknown packets of the PON port.

Command Format

```
show pon packet_control slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory

Command Example

View the packet suppression function of PON port 1 in Slot 1.

```
Admin\card#show pon packet_control slot 1 pon 1
---- PON PACET CONTROL ----
      TYPE              STATUS   RATE, Item=3
```



```

-----
broadcast      enable  100
multicast      disable -1
unknown        enable  100
Admin\card#

```

Result Description

Parameter	Description
TYPE	The packet type.
STATUS	The packet suppression switch.
RATE	The packet suppression rate; unit: packet per second.

4.14 Viewing the MAC Address Table of a PON Port

Command Function

You can use this command to view the MAC address table of a PON port.

Command Format

```
show pon_mac slot <slotno> pon <ponno> { lookup <mac_address>} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
{ lookup <mac_address>} *1	The MAC address. The character string length is 12.	Optional

Command Example

View the MAC address table of PON Port 1 in Slot 1.

```

Admin\card#show pon_mac slot 1 pon 1
----- PON MAC ADDRESS, ITEM=1 -----
001 22:3E:44:55:66:11 Vid:4091 OnuId:1
Admin\card#

```


Result Description

Parameter	Description
ITEM	The entry quantity of the MAC address table of the PON port.
XX:XX:XX:XX:XX:XX	The MAC address of the PON port.
Vid	The VLAN ID of the MAC address table of the PON port.
OnuId	The ONU ID of the PON port.

4.15 Viewing the MAC Address of the XGPON Port

Command Function

You can use this command to view the MAC address table of the XGPON port.

Command Format

```
show xgpon_mac slot <slotno> pon <ponno> { lookup <mac_address> } *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the XGPON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The XGPON port number. The value ranges from 1 to 16.	Mandatory
{ lookup <mac_address> } *1	The MAC address. The character string length is 12.	Optional

Command Example

View the MAC address table of XGPON Port 1 in Slot 11.

```
Admin\card#show xgpon_mac slot 11 pon 1
----- PON MAC ADDRESS, ITEM=1 -----
001 22:00:33:44:55:11 Vid:4091 OnuId:1
Admin\card#
```

Result Description

Parameter	Description
ITEM	The entry quantity of the MAC address table of the XGPON port.
XX:XX:XX:XX:XX:XX	The MAC address of the XGPON port.

Parameter	Description
Vid	The VLAN ID of the MAC address table of the XGPON port.
OnuId	The ONU ID of the XGPON port.

4.16 Viewing MAC Addresses of PON System

Command Function

You can use this command to view MAC addresses of the PON system (including core switch card and PON port).

Command Format

```
show pon-mac[ all|mainboard]
```

Parameter Description

Parameter	Description	Attribute
all	View MAC addresses of all the objects (including the core switch card and PON port) in the OLT system.	Mandatory
mainboard	View the MAC address of the core switch card.	Mandatory

Command Example

View MAC addresses of all the objects in the OLT system.

```
Admin\card#show pon-mac all
```

```

----- OLT MAC LIST -----
SLOT   PORT   ONU      MAC          VLAN
-----
19      3      --      00:00:33:33:33:01  100
19      3      --      00:00:33:33:33:03  100
-----
TOTAL OLT MAC NUM: 2

```

```

----- PON MAC LIST -----
SLOT   PON    ONU      MAC          VLAN
-----
14      1      2      00:00:11:11:11:01  100
14      1      2      00:00:11:11:11:03  100
14      1      1      00:00:22:22:22:01  100

```



```

14      1      1      00:00:22:22:22:03  100
----- SLOT 14  PON 1 MAC ADDRESS, ITEM=4 -----
Admin\card#

```

4.17 Viewing the System Time of the Line Card

Command Function

You can use this command to view the system time of the line card.

Command Format

```
show card time slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the system time of the line card in Slot 1.

```

Admin\card#show card time slot 1
CARD 1 TIMESHOW
Sys Date: 2016-03-29 13:40:17
Run Time: 0days 2h 39m 11s
Admin\card#

```

Result Description

Parameter	Description
Sys Date	The system time.
Run Time	The running time.

4.18 Configuring Loop Delay for the PON Port

Command Function

You can use this command to configure loop delay for the PON port.

Command Format

```
set circuit_delay slot <slotno> { pon <ponno> delay <0-400> } * 8
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
delay <0-400>	The loop delay time. The value ranges from 0 to 400; unit: second.	Mandatory

Command Example

Set the loop delay time for PON Port 1 in Slot 1 to 10 seconds.

```
Admin\card#set circuit_delay slot 1 pon 1 delay 10
set linecard circuit delay ok!
Admin\card#
```

4.19 Validating Loop Delay for the PON Port

Command Function

You can use this command to validate loop delay for the PON port.

Command Format

```
apply circuit_delay slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

Validate loop delay of the PON port of the PON interface card in Slot 1.

```
Admin\card#apply circuit_delay slot 1
apply linecard upgrade circuit delay ok!
```


Admin\card#

4.20 Viewing the Loop Delay Configuration for the PON Port

Command Function

You can use this command to view the loop delay configuration for the PON port.

Command Format

```
show circuit_delay slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the loop delay of the PON port of the PON interface card in Slot 1.

```
Admin\card#show circuit_delay slot 1
PON 1, DELAY=10
PON 2, DELAY=0
PON 3, DELAY=0
PON 4, DELAY=0
PON 5, DELAY=0
PON 6, DELAY=0
PON 7, DELAY=0
PON 8, DELAY=0
PON 9, DELAY=0
PON 10, DELAY=0
PON 11, DELAY=0
PON 12, DELAY=0
PON 13, DELAY=0
PON 14, DELAY=0
PON 15, DELAY=0
PON 16, DELAY=0
Admin\card#
```


Result Description

Parameter	Description
PON	The PON port number.
DELAY	The loop delay; unit: second.

4.21 Configuring ONU Automatic Discovery

Command Function

You can use this command to configure the ONU automatic discovery. When an ONU is added, the OLT can obtain the ONU registration information automatically.

Command Format

```
set onu_auto_discover slot <slotno> status[ enable|disable] { aging_period
<aging_period>} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
status[enable disable]	Enable or disable the automatic discovery function of the ONU. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
aging_period <aging_period>	The aging time of automatic discovery for ONU. The system can periodically clear the registration buffer area occupied by the automatically discovered ONU based on the aging time, so that the new ONU registration will not be rejected because of registration buffer area overflow. The value should be equal to or larger than 120; unit: second. The default value is 120 seconds.	Mandatory

Command Example

Enable the automatic discovery function for the ONU of the PON interface card in Slot 1. Set the aging time of automatic discovery to 120 seconds.

```
Admin\card#set onu_auto_discover slot 1 status enable aging_period 120
set auto upgrade cfg ok!
Admin\card#
```


4.22 Viewing the Automatic Discovery Configuration for the ONU

Command Function

You can use this command to view the automatic discovery configuration of the ONU.

Command Format

```
show onu_auto_discover slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the automatic discovery configuration for the ONU of the PON interface card in Slot 1.

```
Admin\card#show onu_auto_discover slot 1
FLAG      = 1
PERIOD    = 120
Admin\card#
```

Result Description

Parameter	Description
FLAG	The enable status of the ONU automatic discovery. 1: enable; 0: disable.
PERIOD	The automatic discovery period of the ONU; unit: second.

4.23 Configuring the Constantly-Light-Emitting Detection Configuration for the Line Card

Command Function

You can use this command to configure the constantly-light-emitting detection for the line card. The OLT can ascertain whether any rouge ONU that constantly emits light exists connected to the PON port by periodically detecting optical signals during idle hours.

Command Format

```
set gep sl <slotno> detectswitch[ enable|disable] detecttimeintervals <5-3600> shutdowntype[ auto|manual]
```

Parameter Description

Parameter	Description	Attribute
sl <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
detectswitch [enable disable]	The constantly-light-emitting detection switch. ◆ enable: Enable the switch. ◆ disable: Disable the switch.	Mandatory
detecttimeinter- vals <5-3600>	The time interval for constantly-light-emitting detection. The value ranges from 5 to 3600; unit: second.	Mandatory
shutdowntype [auto manual]	Disable the constantly-light-emitting detection function automatically or manually. ◆ auto: Automatic. ◆ manual: Manual.	Mandatory

Command Example

Enable the constantly-light-emitting detection for the PON interface card in Slot 1.
Set the detection interval to 1 hour, and the disable type to auto.

```
Admin\card#set gep sl 1 detectswitch enable detecttimeintervals 3600 shutdowntype auto
set config of optical detect success.
Admin\card#
```


4.24 Viewing the Constantly-Light-Emitting Detection Configuration for the Line Card

Command Function

You can use this command to view the constantly-light-emitting detection configuration for the line card.

Command Format

```
show gep slot <slotno> OpticalDetect
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the constantly-light-emitting detection configuration of the PON interface card in Slot 1.

```
Admin\card#show gep slot 1 OpticalDetect
DetectSwitch : Enable
DetectTimeIntervals: 3600
shutdowntype : Autoshutdown
Admin\card#
```

Result Description

Parameter	Description
DetectSwitch	The constantly-light-emitting detection switch.
DetectTimeIntervals	The time interval for constantly-light-emitting detection. Unit: minute.
shutdowntype	Disable the constantly-light-emitting detection function automatically or manually.

4.25 Configuring the Working Mode for the EPON Port

Command Function

You can use this command to configure the working mode of the EPON port.

Command Format

```
set epon slot <slotno> pon <ponno> 2.5gmode[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the EPON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The EPON port number. The value ranges from 1 to 16.	Mandatory
2.5gmode[enable disable]	Whether to enable the 2.5G working mode. ◆ enable: Enable the working mode. ◆ disable: Disable the working mode.	Mandatory

Command Example

Enable the 2.5G working mode of EPON Port 1 of the EPON interface card in Slot 1.

```
Admin\card#set epon slot 1 pon 1 2.5gmode enable
Admin\card#
```

4.26 Viewing the Working Mode for the EPON Port

Command Function

You can use this command to view the working mode of the EPON port.

Command Format

```
show epon slot <slotno> pon <ponno> 2.5gmode
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the EPON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The EPON port number. The value ranges from 1 to 16.	Mandatory

Command Example

View the working mode of EPON Port 1 of the EPON interface card in Slot 1.

```
Admin\card#show epon slot 1 pon 1 2.5gmode
pon 2.5g port state : Enable
Admin\card#
```

Result Description

Parameter	Description
pon 2.5g port state	Whether to enable the 2.5G working mode.

4.27 Configuring the 1588 Switch of a PON Port

Command Function

You can use this command to configure the 1588 switch of a PON port.

Command Format

```
set 1588_enable slot <slotno> pon <ponno> switch[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
switch[enable disable]	Whether to enable the 1588 clock. ◆ enable: Enable the clock. ◆ disable: Disable the clock.	Mandatory

Command Example

Enable the 1588 clock of PON Port 1 of the PON interface card in Slot 1.

```
Admin\card#set 1588_enable slot 1 pon 1 switch enable
set ok!
Admin\card#
```

4.28 Validating the 1588 Switch of a PON Port

Command Function

You can use this command to validate the 1588 switch of the optical module on a PON port.

Command Format

```
apply 1588_enable slot <slotno> pon <ponlist>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponlist>	The number of the PON port. The value ranges from 1 to 16.	Mandatory

Command Example

Validate the 1588 clock configuration of PON Port 1 of the PON interface card in Slot 1.

```
Admin\card#apply 1588_enable slot 1 pon 1
set ok!
Admin\card#
```

4.29 Viewing the 1588 Switch of a PON Port

Command Function

You can use this command to view the 1588 switch of the optical module on a PON port.

Command Format

```
show pon 1588_enable slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the 1588 clock configuration of the PON interface card in Slot 1.

```
Admin\card#show pon 1588_enable slot 1
----- SLOT 1 1588 SWITCH -----
PON  1 enable
PON  2 disable
PON  3 disable
PON  4 disable
PON  5 disable
PON  6 disable
PON  7 disable
PON  8 disable
PON  9 disable
PON 10 disable
PON 11 disable
PON 12 disable
PON 13 disable
PON 14 disable
PON 15 disable
PON 16 disable
Admin\card#
```

4.30 Configuring the Optical Power Monitoring Switch of the PON Port

Command Function

You can use this command to configure the optical power monitoring switch of a PON port.

Command Format

```
set opticpower_scout slot <slotno> pon <ponno> onu[ <onuno> | null] status[ on |
off] { period} * 1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu[<onuno> null]	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
status[on off]	The optical power monitoring switch. ◆ on: Enable. ◆ off: Disable.	Mandatory
{ period} * 1	The time interval for optical power monitoring. The value ranges from 30 to 600 (unit: s). It is valid for the EPON interface card only.	Optional

Command Example

Enable the optical power monitoring switch of PON Port 1 of the PON interface card in Slot 1 and set the monitoring interval to 5 minutes (300 seconds).

```
Admin\card#set opticpower_scout slot 1 pon 1 onu null status on period 300
set_optic_power_scout_fun ok!
Admin\card#
```

4.31 Viewing the Optical Power Monitoring Switch of a PON Port

Command Function

You can use this command to view the optical power monitoring switch of a PON port.

Command Format

```
show opticpower_scout slot <slotno> pon <ponno> onu[ <onuno> | null]
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
onu[<onuno> null]	The ONU authorization number.	Mandatory

Command Example

View the optical power monitoring switch of PON Port 1 of the PON interface card in Slot 1.

```
Admin\card#show optipower_scout slot 1 pon 1 onu null
SLOT=1 PON=1 ONU=65535 STATUS=0 PERIOD=120
Admin\card#
```

Result Description

Parameter	Description
SLOT	The slot number of the PON interface card.
PON	The PON port number.
ONU	The ONU authorization number.
STATUS	The optical power monitoring switch of the PON port. 0: OFF; 1: ON.
PERIOD	The time interval for optical power monitoring; unit: s. It is valid for the EPON PON interface only.

4.32 Configuring the Descriptive Information for the Port

Command Function

You can use this command to configure the descriptive information about the port.

Command Format

```
set port_descp slot <slotno> port <portno> descp_info <descp_info>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number for the card. The value ranges from 1 to 18.	Mandatory
port <portno>	The port number. The value ranges from 1 to 16.	Mandatory
descp_info <descp_info>	The descriptive information for the port.	Mandatory

Command Example

Set the descriptive information about PON Port 1 of the PON interface card in Slot 1 to AN5516OLT-SLOT1-PON1.

```
Admin\card#set port_descp slot 1 port 1 descp_info AN5516OLT-SLOT1-PON1
set port descp info ok!
Admin\card#
```

4.33 Viewing Descriptive Information About a Port

Command Function

You can use this command to view descriptive information about a port.

Command Format

```
show port_descp slot <slotno> port <portlist>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the card. The value ranges from 1 to 18.	Mandatory
port <portlist>	The port number. The value ranges from 1 to 16.	Mandatory

Command Example

View descriptive information about PON Port 1 of the PON interface card in Slot 1.

```
Admin\card#show port_descp slot 1 port 1
Port 1:  AN5516OLT-SLOT1-PON1
Admin\card#
```


4.34 Configuring the PON Port's MAC Address Mapping Mode

Command Function

You can use this command to configure the mapping mode for the MAC address of the PON port.

Command Format

```
set pon_mapping_mode slot[ <slotlist> | all] mode[ mac | mac+vid]
```

Parameter Description

Parameter	Description	Attribute
slot[<slotlist> all]	<p>The slot number of the PON interface card.</p> <ul style="list-style-type: none"> ◆ slotlist: The slot number. The value ranges from 1 to 8, 11 to 18. ◆ all: All PON interface cards. 	Mandatory
mode[mac mac+vid]	<p>The MAC address mapping mode.</p> <ul style="list-style-type: none"> ◆ mac: The MAC mode. ◆ mac+vid: The MAC+VID mode. 	Mandatory

Command Example

Set the MAC address mapping mode of the PON port of the PON interface card in Slot 1 to the MAC+VID mode.

```
Admin\card#set pon_mapping_mode slot 1 mode mac+vid
set slot 01 ok!
Admin\card#
```

4.35 Viewing the PON Port's MAC Address Mapping Mode

Command Function

You can use this command to view the mapping mode for the MAC address of the PON port.

Command Format

```
show pon_mapping_mode slot[ <slotno> |all]
```

Parameter Description

Parameter	Description	Attribute
slot[<slotno> all]	The slot number of the PON interface card. <ul style="list-style-type: none">◆ slotno: The slot number. The value ranges from 1 to 8, 11 to 18.◆ all: All PON interface cards.	Mandatory

Command Example

View the MAC address mapping mode of the PON port of the PON interface card in Slot 1.

```
Admin\card#show pon_mapping_mode slot 1
SLOT: 1, PON MAC MAPPING MODE: mac+vid
Admin\card#
```

4.36 Viewing the Multicast Address Table of the Line Card

Command Function

You can use this command to view the line card's multicast address table.

Command Format

```
show igmp_addr_table slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the line card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the multicast address table of the line card in Slot 1.


```
Admin\card# show igmp_addr_table slot 1
the sum of igmp address table is 1
NO.  IP ADDR      PONNO      ONUNO
-----
1    226.2.2.17    1          1
Admin\card#
```

Result Description

Parameter	Description
the sum of igmp address table	The quantity of the multicast address entries.
NO.	The number of the multicast address entry.
IP ADDR	The multicast address.
PONNO	The PON port number.
ONUNO	The ONU authorization number.

4.37 Configuring the PON Port Authentication Mode

Command Function

You can use this command to configure the authentication mode of the PON port.

Command Format

```
set pon_auth slot <slotno> pon <ponno> mode[ phy_id|phy_id+psw|password|
loid+psw|phy_id/loid+psw|no_auth|loid|phy_id/loid|phy_id/psw]
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
mode[phy_id phy_id+psw password loid+psw phy_id/loid+psw no_auth loid phy_id/loid phy_id/psw]	<p>The authentication mode.</p> <ul style="list-style-type: none"> ◆ phy_id: Physical identifier authentication ◆ phy_id+psw: Physical identifier plus password authentication ◆ password: Password authentication ◆ loid+psw: Logical identifier authentication ◆ no_auth: Non-authentication ◆ loid: Logical identifier authentication (without password) ◆ phy_id/loid: Physical / logical identifier (without password) hybrid authentication ◆ phy_id+psw: Physical identifier / password hybrid authentication 	Mandatory

Command Example

Set the authentication mode of PON Port 1 of the PON interface card in Slot 1 to physical identifier authentication.

```
Admin\card#set pon_auth slot 1 pon 1 mode phy_id
Command execute success.
Admin\card#
```

4.38 Viewing the PON Port Authentication Mode

Command Function

You can use this command to view the authentication mode of the PON port.

Command Format

```
show pon_auth [ select | all ] { slot <slotno> pon <ponno> } * 1
```


Parameter Description

Parameter	Description	Attribute
[select all]	◆ select: A specified PON port. ◆ all: All PON ports.	Mandatory
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The number of the PON port. The value ranges from 1 to 16.	Mandatory

Command Example







View the authentication mode of PON Port 1 of the PON interface card in Slot 1.

```
Admin\card#show pon_auth select slot 1 pon 1  
slot 1 pon 1 ,auth mode is physical id.  
Admin\card#
```


5

admin\device Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\device directory.

-  Viewing Information About a Specific Uplink Port
-  Viewing Information About All Uplink Ports
-  Viewing the Card Temperature
-  Configuring Fan Control
-  Viewing Fan Control
-  Viewing Fan Status

5.1 Viewing Information About a Specific Uplink Port

Command Function

You can use this command to view information about a specific uplink port.

Command Format

```
show uplink slot <slotno> port <portno>
```

Parameter Description

Parameter	Description	Attribute
uplink slot <slotno>	The slot number of the uplink card.	Mandatory
port <portno>	The number of the uplink port. The value ranges from 1 to 6.	Mandatory

Command Example

View the uplink port information of Port 1 of the uplink card in Slot 19.

```
Admin\device# show uplink slot 19 port 1
Port info : 19:1
-----
port:<19:1> 's Configuration Information

Link state           : Down      Port state           : Enabled
AutoNegotiation      : On
Speed                : 10000
Duplex               : Full
Learning             : Enabled   FlowControl           : Off
Port VLAN ID         : 4088
PriEn                : Off       PriValue              : 0
interface mode       : SERDES
Jumbo Frame          : 2000
-----
Admin\device#
```

Result Description

Parameter	Description
Port info	The number of the uplink port.
Link state	The uplink port connection status.
Port state	Whether the uplink port is enabled.
AutoNegotiation	The auto-negotiation of the uplink port.
Speed	The rate of the uplink port.

Parameter	Description
Duplex	The duplex mode of the uplink port.
Learning	The address learning of the uplink port.
FlowControl	The flow control of the uplink port.
Port VLAN ID	The VLAN ID of the uplink port.
PriEn	The priority enable status of the uplink port.
PriValue	The priority value of the uplink port.
interface mode	The uplink port mode, including SerDes and SGMII.
Jumbo Frame	The maximum frame length of the uplink port.

5.2 Viewing Information About All Uplink Ports

Command Function

You can use this command to view information about all uplink ports.

Command Format

```
show uplink port all
```

Parameter Description

None

Command Example

View information about all uplink ports.


```
Admin\device# show uplink port all
```

```
-----
port:<19:1> 's Configuration Information
```

```
Link state           : Down      Port state           : Enabled
AutoNegotiation      : On
Speed                : 10000
Duplex               : Full
Learning             : Enabled   FlowControl           : Off
Port VLAN ID         : 4088
PriEn                : Off      PriValue              : 0
interface mode       : SERDES
Jumbo Frame          : 2000
-----
```

```
port:<19:2> 's Configuration Information
```

```
Link state           : Up        Port state           : Enabled
AutoNegotiation      : On
Speed                : 1000
Duplex               : Full
Learning             : Enabled   FlowControl           : Off
Port VLAN ID         : 4000
PriEn                : Off      PriValue              : 0
interface mode       : SERDES
Jumbo Frame          : 2000
-----
```

```
..... (omitted)
Admin\device#
```

Result Description

Parameter	Description
Link state	The uplink port connection status.
Port state	Whether the uplink port is enabled.
AutoNegotiation	The auto-negotiation of the uplink port.
Speed	The rate of the uplink port.
Duplex	The duplex mode of the uplink port.
Learning	The address learning of the uplink port.
FlowControl	The flow control of the uplink port.
Port VLAN ID	The VLAN ID of the uplink port.
PriEn	The priority enable status of the uplink port.
PriValue	The priority value of the uplink port.
interface mode	The uplink port mode, including SerDes and SGMII.
Jumbo Frame	The maximum frame length of the uplink port.

5.3 Viewing the Card Temperature

Command Function

You can use this command to view the card temperature.

Command Format

```
show card temperature
```

Parameter Description

None

Command Example

View the card temperature.

```
Admin\device#show card temperature  
the card <1> temperature is 44  
the card <9> temperature is 47  
the card <13> temperature is 65  
Admin\device#
```

5.4 Configuring Fan Control

Command Function

You can use this command to configure fan control.

Command Format

```
set fanspeed mode <0-1> speed <0-7> scheme <0-1>
```


Parameter Description

Parameter	Description	Attribute
mode <0-1>	The fan speed control. ◆ 0: Automatic speed control. ◆ 1: Manual speed control.	Mandatory
speed <0-7>	The fan speed choice in the manual control mode. The value ranges from 0 to 7.	Mandatory
scheme <0-1>	The automatic control scheme.	Mandatory

Command Example

Set the fan speed control mode to auto, the fan speed choice to 4, and the automatic speed control scheme to intelligent.

```
Admin\device#set fanspeed mode 0 speed 4 scheme 0
set fan work mode success!
Admin\device#
```

5.5 Viewing Fan Control

Command Function

You can use this command to view fan control.

Command Format

```
show fan_control_speed
```

Parameter Description

None

Command Example

View the fan control configuration.

```
Admin\device#show fan_control_speed
fan control mode: the intelligent auto control mode.
Admin\device#
```


5.6 Viewing Fan Status

Command Function

You can use this command to view the fan status.

Command Format

```
show fan_status fan <1-3>
```

Parameter Description

Parameter	Description	Attribute
fan <1-3>	The fan number.	Mandatory

Command Example

View the fan status.

```
Admin\device#show fan_status fan 1
FAN:1 speed_status:4, current temperature:47.
Admin\device#
```


















Result Description

Parameter	Description
FAN	The fan number.
speed_status	The fan speed choice.
current temperature	The current temperature of the fan.

6

admin\service Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\service directory.

-  Configuring a Static Route
-  Deleting a Static Route
-  Viewing Static Routes
-  Configuring the MAC Address Aging Time
-  Configuring a Management VLAN
-  Configuring the IPv4 Address of the Management VLAN
-  Configuring the IPv6 Address of the Management VLAN
-  Configuring the MTU Value of the Management VLAN
-  Deleting a Management VLAN
-  Viewing a Management VLAN
-  Enabling / Disabling Telnet
-  Viewing the Telnet Status
-  Forcing a User to Log off
-  Viewing the Currently Logged-in Users
-  Ping
-  Pinging the Line Card
-  Configuring the Network Management ACL
-  Viewing the Network Management ACL

- ☒ Configuring the Telnet ACL
- ☒ Viewing the Telnet ACL
- ☒ Telnet
- ☒ Accessing the Line Card Using Telnet
- ☒ Viewing the Line Card's Private IP
- ☒ Tracert
- ☒ Configuring the Tracert Type
- ☒ Configuring the Command Line Terminal Length
- ☒ Viewing the Command Line Terminal Length
- ☒ Configuring the Command Line Time-out Duration
- ☒ Viewing the Command Line Timeout Duration
- ☒ Configuring the Time Calibration Mode
- ☒ Viewing the Time Calibration Mode
- ☒ Configuring the SNMP Calibration Time
- ☒ Viewing the SNMP Calibration Time
- ☒ Configuring the SNMP Community
- ☒ Viewing the SNMP Community
- ☒ Configuring the SNMP Trap Receiver Address
- ☒ Deleting the SNMP Trap Receiver Address
- ☒ Configuring the SNMP Trap Port
- ☒ Viewing the SNMP Trap Receiver Address
- ☒ Configuring the SNMP Trap Message Format

- ☒ Viewing the SNMP Trap Message Format
- ☒ Enabling / Disabling the SNMP Trap Function
- ☒ Configuring System Content of SNMP
- ☒ Viewing System Content of SNMP
- ☒ Configuring System Location of SNMP
- ☒ Viewing System Location of SNMP

6.1 Configuring a Static Route

Command Function

You can use this command to configure the destination IP address, gateway address and subnet mask of a static route.

Command Format

```
add static route destination <A.B.C.D> gateway <A.B.C.D> mask <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
destination <A.B.C.D>	The destination IP address. It is usually in the format of network segment.	Mandatory
gateway <A.B.C.D>	The gateway address.	Mandatory
mask <A.B.C.D>	The subnet mask.	Mandatory

Command Example

Add a static route with the destination IP address 10.33.0.0, gateway address 10.190.40.1 and subnet mask 255.255.0.0.

```
Admin\service#add static route destination 10.33.0.0 gateway 10.190.40.1 mask  
255.255.0.0  
Admin\service#
```

6.2 Deleting a Static Route

Command Function

You can use this command to delete a static route.

Command Format

```
no static route destination <A.B.C.D> mask <A.B.C.D>
```


Parameter Description

Parameter	Description	Attribute
destination <A.B.C.D>	The destination IP address. It is usually in the format of network segment.	Mandatory
mask <A.B.C.D>	The subnet mask.	Mandatory

Command Example

Delete a static route with the destination IP address 10.33.0.0 and subnet mask 255.255.0.0.

```
Admin\service#no static route destination 10.33.0.0 mask 255.255.0.0
Admin\service#
```

6.3 Viewing Static Routes

Command Function

You can use this command to view static routes.

Command Format

```
show static_route
```

Parameter Description

None

Command Example

View static routes.

```
Admin\service#show static_route
id      dstIp      mask      gateIp
1       10.33.0.0  255.255.0.0  10.190.40.1
2       0.0.0.0    0.0.0.0      0.0.0.0
3       0.0.0.0    0.0.0.0      0.0.0.0
4       0.0.0.0    0.0.0.0      0.0.0.0
5       0.0.0.0    0.0.0.0      0.0.0.0
6       0.0.0.0    0.0.0.0      0.0.0.0
7       0.0.0.0    0.0.0.0      0.0.0.0
```



```

      8      0.0.0.0      0.0.0.0      0.0.0.0
      9      0.0.0.0      0.0.0.0      0.0.0.0
     10      0.0.0.0      0.0.0.0      0.0.0.0
     11      0.0.0.0      0.0.0.0      0.0.0.0
     12      0.0.0.0      0.0.0.0      0.0.0.0
     13      0.0.0.0      0.0.0.0      0.0.0.0
     14      0.0.0.0      0.0.0.0      0.0.0.0
     15      0.0.0.0      0.0.0.0      0.0.0.0
     16      0.0.0.0      0.0.0.0      0.0.0.0

```

```
Admin\service#
```

Result Description

Parameter	Description
id	The serial number of the static route.
dstIp	The destination IP address of the static route.
mask	The subnet mask of the static route.
gateIp	The gateway address of the static route.

6.4 Configuring the MAC Address Aging Time

Command Function

You can use this command to configure the aging time for the MAC address. The time begins when an MAC address is added to the address table. If the ports fail to receive the frames whose source address is the MAC address within the aging time, the MAC address will be deleted from the dynamic MAC address table.

Command Format

```
set fdb agingtime <0-300>
```

Parameter Description

Parameter	Description	Attribute
agingtime <0-300>	The aging time for the MAC address, ranging from 0 to 300; unit: second. 0 means no aging.	Mandatory

Command Example

Set the MAC address aging time to 60 seconds.


```
Admin\service#set fdb agingtime 60
Admin\service#
```

6.5 Configuring a Management VLAN

Command Function

You can use this command to configure a management VLAN, including the management VLAN name, ID, port number and Tag attribute.

Command Format

```
set manage vlan name <name> vid <1-4085> inputport <portlist> [ untagged |
tagged]
```

Parameter Description

Parameter	Description	Attribute
name <name>	The name of the management VLAN.	Mandatory
vid <1-4085>	The management VLAN ID. The value ranges from 1 to 4085.	Mandatory
inputport <portlist>	The port number of the management VLAN.	Mandatory
[untagged tagged]	The Tag property of the management VLAN. ◆ untagged: The untagged VLAN ID. ◆ tagged: The tagged VLAN ID.	Mandatory

Command Example

Configure a management VLAN. Set the name to test, VLAN ID to 1000, port to 19:1 and Tag attribute to Untagged.

```
Admin\service#set manage vlan name test vid 1000 inputport 19:1 untagged
Admin\service#
```

6.6 Configuring the IPv4 Address of the Management VLAN

Command Function

You can use this command to configure the IPv4 address of the management VLAN.

Command Format

```
set manage vlan name <name> ip <A.B.C.D/M> { <A.B.C.D> } * 1
```

Parameter Description

Parameter	Description	Attribute
name <name>	The name of the management VLAN.	Mandatory
ip <A.B.C.D/M>	The IPv4 address of the management VLAN. A.B.C.D is the IPv4 address and M is the subnet mask bit.	Mandatory
{ <A.B.C.D> } * 1	The gateway address of the management VLAN.	Mandatory

Command Example

For the management VLAN named test, set the IPv4 address to 10.10.10.10 and the subnet mask bit number to 24.

```
Admin\service#set manage vlan name test ip 10.10.10.10/24
Admin\service#
```

6.7 Configuring the IPv6 Address of the Management VLAN

Command Function

You can use this command to configure the IPv6 address of the management VLAN.

Command Format

```
set manage vlan name <name> ipv6 <ipaddr> mask <masklen>
```

Parameter Description

Parameter	Description	Attribute
name <name>	The name of the management VLAN.	Mandatory
ipv6 <ipaddr>	The IPv6 address of the management VLAN.	Mandatory
mask <masklen>	The subnet mask bit number of the management VLAN.	Mandatory

Command Example

For the management VLAN named test, set the IPv6 address to 1030::C9B4:FF12:48AA:1A2B and the subnet mask bit number to 64.

```
Admin\service#set manage vlan name test ipv6 1030::C9B4:FF12:48AA:1A2B mask 64
Admin\service#
```

6.8 Configuring the MTU Value of the Management VLAN

Command Function

You can use this command to configure the MTU value of the management VLAN.

Command Format

```
set manage vlan name <name> MTU <68-1500>
```

Parameter Description

Parameter	Description	Attribute
name <name>	The name of the management VLAN.	Mandatory
MTU <68-1500>	The maximum transmission unit, ranging from 68 to 1500.	Mandatory

Command Example

Set the MTU value for the management VLAN named test to 1024.

```
Admin\service#set manage vlan name test mtu 1024
Admin\service#
```

6.9 Deleting a Management VLAN

Command Function

You can use this command to delete a management VLAN.

Command Format

```
no manage_vlan <name>
```


Parameter Description

Parameter	Description	Attribute
manage_name <name>	The name of the management VLAN.	Mandatory

Command Example

Delete the management VLAN named test.

```
Admin\service#no manage_vlan test
Admin\service#
```

6.10 Viewing a Management VLAN

Command Function

You can use this command to view a management VLAN.

Command Format

```
show manage_vlan[ <1-4085>|all]
```

Parameter Description

Parameter	Description	Attribute
[<1-4085> all]	The management VLAN ID. all means all management VLAN IDs.	Mandatory

Command Example

View the management VLAN with VLAN ID 1000.

```
Admin\service#show manage_vlan 1000
manage_vlan: 1000, name: test
vlan 1000:
port(Tag|Utag) :
port 19:1[ U]
Device: sub Unit: 1000
Ethernet address: 34:bf:90:70:f5:b3
Total protocols:0
Inet: 10.10.10.10          mask: 255.255.255.0
Inet6: 1030::c9b4:ff12:48aa:1a2b          prefixlen: 64
```



```

RX packets: 0 TX packets: 11
RX bytes: 0 TX bytes: 932
Admin\service#

```

Result Description

Parameter	PDescription
manage vlan	The management VLAN ID.
name	The management VLAN name.
port (Tag Utag)	The port number and Tag mode of the management VLAN.
Inet	The management IP.
mask	The subnet mask.

6.11 Enabling / Disabling Telnet

Command Function

You can use this command to enable or disable Telnet. When Telnet is enabled, you can access the equipment using Telnet.

Command Format

```
service telnet[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
telnet[enable disable]	<ul style="list-style-type: none"> ◆ enable: Enable Telnet. ◆ disable: Disable Telnet. 	Mandatory

Command Example

Enable Telnet of the equipment.

```

Admin\service#service telnet enable
Admin\service#

```


6.12 Viewing the Telnet Status

Command Function

You can use this command to view the Telnet enable status.

Command Format

```
show services
```

Parameter Description

None

Command Example

View the Telnet enable status.

```
Admin\service#show services
Service telnet is up.
Admin\service#
```

6.13 Forcing a User to Log off

Command Function

You can use this command to force a user to log off.

Command Format

```
kill session <1-99>
```

Parameter Description

Parameter	Description	Attribute
session <1-99>	The user ID, which can be retrieved using the who command.	Mandatory

Command Example

Force the user with user ID 10 to log off.

```
Admin\service#kill session 10
```



```
Admin\service#
```

6.14 Viewing the Currently Logged-in Users

Command Function

You can use this command to view the currently logged-in users.

Command Format

```
who
```

Command Example

View the currently logged-in users.

```
Admin\service#who
SessionID. -UserName - UserLevel - LOCATION - MODE -
1          1          15          10.32.156.17  CONFIG
2          2          15          10.32.156.34  CONFIG(That's me.)
Total 2 sessions in current system.
Admin\service#
```

6.15 Ping

Command Function

You can Ping the IP address of a specific device.

Command Format

```
ping{[-t]}*1{[-count] <1-65535>}*1{[-size] <1-6400>}*1{[-waittime] <1-255>}*1{[-ttl] <1-255>}*1{[-pattern] <user_pattern>}*1<A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
{[-t]}*1	The Ping command is being executed until stopped manually.	Optional
{[-count] <1-65535>}*1	The number of Ping packets.	Optional
{[-size] <1-6400>}*1	The byte size of Ping packet.	Optional

Parameter	Description	Attribute
{[-waittime] <1-255>} *1	The waiting time for the Ping response delay.	Optional
{[-ttl] <1-255>} *1	The TTL time for the Ping.	Optional
{[-pattern] <user_pattern>} *1	The user data added to the Ping packet.	Optional
<A.B.C.D>	The destination IP address of the Ping packet.	Mandatory

Command Example

Ping the destination IP address 10.190.40.1.

```
Admin\service#ping 10.190.40.1
PING 10.190.40.1 : 56 data bytes.
Press Ctrl-c to Stop.
Reply from 10.190.40.1 : bytes=56: icmp_seq=0 ttl=64 time<10 ms
Reply from 10.190.40.1 : bytes=56: icmp_seq=1 ttl=64 time<10 ms
Reply from 10.190.40.1 : bytes=56: icmp_seq=2 ttl=64 time<10 ms
Reply from 10.190.40.1 : bytes=56: icmp_seq=3 ttl=64 time<10 ms
Reply from 10.190.40.1 : bytes=56: icmp_seq=4 ttl=64 time<10 ms
----10.190.40.1 PING Statistics----
5 packets transmitted, 5 packets received, 0% packet loss
round-trip(ms) min/avg/max = 0/0/0
Admin\service#
```

6.16 Pinging the Line Card

Command Function

You can use this command to ping a specific line card.

Command Format

```
ping slot {[ -t]} *1 {[ -count] <1-65535>} *1 {[ -size] <1-6400>} *1 {[ -waittime]
<1-255>} *1 {[ -ttl] <1-255>} *1 {[ -pattern] <user_pattern>} *1 <slotno>
```


Parameter Description

Parameter	Description	Attribute
{ [-t] } * 1	The Ping command is being executed until stopped manually.	Optional
{ [-count] <1-65535> } * 1	The number of Ping packets.	Optional
{ [-size] <1-6400> } * 1	The byte size of Ping packet.	Optional
{ [-waittime] <1-255> } * 1	The waiting time for the Ping response delay.	Optional
{ [-ttl] <1-255> } * 1	The TTL time for the Ping.	Optional
{ [-pattern] <user_pattern> } * 1	The user data added to the Ping packet.	Optional
<slotno>	The slot number of the line card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

Ping the line card in Slot 2.

```
Admin\service#ping slot 2
PING 10.25.100.2 : 56 data bytes.
Press Ctrl-c to Stop.
Reply from 10.25.100.2 : bytes=56: icmp_seq=0 ttl=64 time<10 ms
Reply from 10.25.100.2 : bytes=56: icmp_seq=1 ttl=64 time<10 ms
Reply from 10.25.100.2 : bytes=56: icmp_seq=2 ttl=64 time<10 ms
Reply from 10.25.100.2 : bytes=56: icmp_seq=3 ttl=64 time<10 ms
Reply from 10.25.100.2 : bytes=56: icmp_seq=4 ttl=64 time<10 ms
----10.25.100.2 PING Statistics----
5 packets transmitted, 5 packets received, 0% packet loss
round-trip(ms) min/avg/max = 0/0/0
Admin\service#
```


6.17 Configuring the Network Management ACL

Command Function

You can use this command to configure the address for the host or server that can access the equipment. After the ACL (Access Control List) is enabled, only the network management system on the designated server can access the equipment or only the designated host can Telnet to the equipment.

Command Format

```
set acl <1-20> {[ ip] <A.B.C.D>} *1 {[ mask] <A.B.C.D>} *1 {[ enable|disable]} *1
```

Parameter Description

Parameter	Description	Attribute
<1-20>	The number of ACL entries, ranging from 1 to 20.	Mandatory
{[ip] <A.B.C.D>} *1	The IP network segment.	Optional
{[mask] <A.B.C.D>} *1	The subnet mask.	Optional
{[enable disable]} *1	◆ enable: Enable the ACL. ◆ disable: Disable the ACL.	Optional

Command Example

Configure an ACL whose network segment IP address is 10.10.0.0 and mask address is 255.255.0.0.

```
Admin\service#set acl 1 ip 10.10.0.0 mask 255.255.0.0 enable
Admin\service#
```

6.18 Viewing the Network Management ACL

Command Function

You can use this command to view the network management ACL.

Command Format

```
show acl
```


Parameter Description

None

Command Example

View the network management ACL.

```
Admin\service#show acl
```

```

----- Access Control Label -----
No      IP                Mask                Status
1       10.10.0.0            255.255.0.0        enable
2       0.0.0.0              0.0.0.0            disable
3       0.0.0.0              0.0.0.0            disable
4       0.0.0.0              0.0.0.0            disable
5       0.0.0.0              0.0.0.0            disable
6       0.0.0.0              0.0.0.0            disable
7       0.0.0.0              0.0.0.0            disable
8       0.0.0.0              0.0.0.0            disable
9       0.0.0.0              0.0.0.0            disable
10      0.0.0.0              0.0.0.0            disable
11      0.0.0.0              0.0.0.0            disable
12      0.0.0.0              0.0.0.0            disable
13      0.0.0.0              0.0.0.0            disable
14      0.0.0.0              0.0.0.0            disable
15      0.0.0.0              0.0.0.0            disable
16      0.0.0.0              0.0.0.0            disable
17      0.0.0.0              0.0.0.0            disable
18      0.0.0.0              0.0.0.0            disable
19      0.0.0.0              0.0.0.0            disable
20      0.0.0.0              0.0.0.0            disable
Admin\service#

```

Result Description

Parameter	Description
No	The ACL number.
IP	The IP network segment.
Mask	The subnet mask.
Status	The ACL enable status.

6.19 Configuring the Telnet ACL

Command Function

You can use this command to configure the address of the host that can Telnet to the equipment. After this command is delivered, only the designated host can Telnet to the equipment. You can specify a range limit applied for this command. Unlike the previous command that configures the ACL parameters, this command restrains the external host or server from Telneting to the equipment but allows other communication such as Ping or SNMP.

Command Format

```
set telnet acl <1-20> {[ ip] <A.B.C.D>} *1 {[ mask] <A.B.C.D>} *1 {[ enable|  
disable]} *1
```

Parameter Description

Parameter	Description	Attribute
<1-20>	The number of Telnet ACL entries, ranging from 1 to 20.	Mandatory
{[ip] <A.B.C.D>} *1	The IP network segment.	Optional
{[mask] <A.B.C.D>} *1	The subnet mask.	Optional
{[enable disable]} *1	◆ enable: Enable Telnet ACL. ◆ disable: Disable Telnet ACL.	Optional

Command Example

Configure a Telnet ACL whose network segment IP address is 10.10.0.0 and mask address is 255.255.0.0.

```
Admin\service#set telnet acl 1 ip 10.10.0.0 mask 255.255.0.0 enable  
Admin\service#
```

6.20 Viewing the Telnet ACL

Command Function

You can use this command to view the Telnet ACL.

Command Format

```
show telnet acl
```

Parameter Description

None

Command Example

View the network management ACL.

```
Admin\service#show telnet acl
```

```
----- Telnet Access Control Label -----
```

No	IP	Mask	Status
1	10.10.0.0	255.255.0.0	enable
2	0.0.0.0	0.0.0.0	disable
3	0.0.0.0	0.0.0.0	disable
4	0.0.0.0	0.0.0.0	disable
5	0.0.0.0	0.0.0.0	disable
6	0.0.0.0	0.0.0.0	disable
7	0.0.0.0	0.0.0.0	disable
8	0.0.0.0	0.0.0.0	disable
9	0.0.0.0	0.0.0.0	disable
10	0.0.0.0	0.0.0.0	disable
11	0.0.0.0	0.0.0.0	disable
12	0.0.0.0	0.0.0.0	disable
13	0.0.0.0	0.0.0.0	disable
14	0.0.0.0	0.0.0.0	disable
15	0.0.0.0	0.0.0.0	disable
16	0.0.0.0	0.0.0.0	disable
17	0.0.0.0	0.0.0.0	disable
18	0.0.0.0	0.0.0.0	disable
19	0.0.0.0	0.0.0.0	disable
20	0.0.0.0	0.0.0.0	disable

```
Admin\service#
```

Result Description

Parameter	Description
No	The Telnet ACL number.
IP	The IP network segment.
Mask	The subnet mask.
Status	The Telnet ACL enable status.

6.21 Telnet

Command Function

You can use this command to access the object with the designated IP address using telnet.

Command Format

```
telnet <A.B.C.D> { <1-65535> } * 1
```

Parameter Description

Parameter	Description	Attribute
<A.B.C.D>	The IP address of the object using telnet.	Mandatory
{ <1-65535> } * 1	The port number of the object using telnet. The value ranges from 1 to 65535.	Optional

Command Example

Access the object with the IP address 10.171.0.37 using telnet.

```
Admin\service#telnet 10.171.0.37
Connected to 10.171.0.37.
Press Ctrl-Q or Ctrl-Y to force exit telnet.

Login:
Admin\service#
```

6.22 Accessing the Line Card Using Telnet

Command Function

You can use this command to access the line card using telnet.

Command Format

```
telnet slot <slotno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the line card. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

Access the line card in Slot 2 using telnet.

```
Admin\service#telnet slot 2
Connected to 10.25.100.3.
Press Ctrl-Q or Ctrl-Y to force exit telnet.

Login: gpon
Password: ****
User> en
Password: ****

Config#
Admin\service#
```

6.23 Viewing the Line Card's Private IP

Command Function

You can use this command to view the line card's private IP address.

Command Format

```
show privateip { <slotno> } *1
```

Parameter Description

Parameter	Description	Attribute
{ <slotno> } *1	The slot number of the line card. The value ranges from 1 to 8, 11 to 18. The default value means all line cards.	Optional

Command Example

View private IP addresses of all line cards.


```
Admin\service#show privateip
the card <2> ip is:10.25.100.2
the card <9> ip is:10.25.100.253
the card <10> ip is:10.25.100.254
Admin\service#
```

6.24 Tracert

Command Function

You can use this command to trace the routing from the equipment to the designated destination IP address.

Command Format

```
tracert <A.B.C.D> { <1-30> }
```

Parameter Description

Parameter	Description	Attribute
<A.B.C.D>	The destination IP address to be traced.	Mandatory
{ <1-30> }	The maximum tracing hop number.	Optional

Command Example

Trace the routing path from the equipment to the destination IP address 10.190.40.1.

```
Admin\service#tracert 10.190.40.1
Tracing route to 10.190.40.1 over a maximum of 10 hops

Press Ctrl-c to Stop.
 1    <1 ms    <1 ms    <1 ms    10.190.40.1

Trace complete.
Admin\service#
```

6.25 Configuring the Tracert Type

Command Function

You can use this command to configure the message type of the Tracert command.

Command Format

```
set tracert_type[ icmp|udp]
```

Parameter Description

Parameter	Description	Attribute
tracert_type [icmp udp]	The message type of the Tracert command. ◆ icmp: The ICMP message type. ◆ udp: The udp message type.	Mandatory

Command Example

Set the message type of the Tracert command to ICMP.

```
Admin\service#set tracert_type icmp
Admin\service#
```

6.26 Configuring the Command Line Terminal Length

Command Function

You can use this command to configure the number of rows displayed at the command line terminal.

Command Format

```
terminal length[ <10-512> |0]
```

Parameter Description

Parameter	Description	Attribute
length[<10-512> 0]	The number of rows displayed at the command line terminal. The value ranges from 10 to 512, or can be set to 0.	Mandatory

Command Example

Set the number of rows displayed at the command line terminal to 100.

```
Admin\service#terminal length 100
Admin\service#
```


6.27 Viewing the Command Line Terminal Length

Command Function

You can use this command to view the number of rows displayed at the command line terminal.

Command Format

```
show terminal length
```

Command Parameter

None

Command Example

View the number of rows displayed at the command line terminal.

```
Admin\service#show terminal length
terminal length: 100
current length: 102
Admin\service#
```

Result Description

Parameter	Description
terminal length	The number of rows at the command line terminal configured for the equipment. The length is taken as standard for the newly opened window.
current length	The number of rows at the command line terminal in the current window for the equipment.

6.28 Configuring the Command Line Time-out Duration

Command Function

You can use this command to configure the command line time-out duration.

Command Format

```
idle-timeout <value>
```

Parameter Description

Parameter	Description	Attribute
idle-timeout <value>	The command line time-out duration; unit: minute.	Mandatory

Command Example

Set the command line time-out duration to 15 minutes.

```
Admin\service#idle-timeout 15
Admin\service#
```

6.29 Viewing the Command Line Timeout Duration

Command Function

You can use this command to view the command line time-out duration.

Command Format

```
show idle-timeout
```

Parameter Description

None

Command Example

View the command line time-out duration.

```
Admin\service#show idle-timeout
Idle time out is set to 15 minutes.
Admin\service#
```


6.30 Configuring the Time Calibration Mode

Command Function

You can use this command to configure the time calibration mode of the equipment.

Command Format

```
set time_method[ ne|snmp|ntp|sntp|ptp] hour <time_zone> min <0-59>
```

Parameter Description

Parameter	Description	Attribute
time_method[ne snmp ntp sntp ptp]	The time calibration mode, including ne/snmp/ntp/sntp/ptp.	Mandatory
hour <time_zone>	The time calibration zone, including GMT-1/GMT-2/GMT-3/GMT-4/GMT-5/GMT-6/GMT-7/GMT-8/GMT-9/GMT-10/GMT-11/GMT-12/GMT+1/GMT+2/GMT+3/GMT+4/GMT+5/GMT+6/GMT+7/GMT+8/GMT+9/GMT+10/GMT+11/GMT+12/GMT+5:30.	Mandatory
min <0-59>	The calibration time in minute. The value ranges from 0 to 59; unit: minute.	Mandatory

Command Example

Set the time calibration mode of the equipment to SNMP and the calibration zone is 0 minute in Beijing time.

```
Admin\service#set time_method snmp hour GMT+8 min 0
set time method ok!
Admin\service#
```

6.31 Viewing the Time Calibration Mode

Command Function

You can use this command to view the time calibration mode of the equipment.

Command Format

```
show time_method
```


Parameter Description

None

Command Example

View the time calibration mode of the equipment.

```
Admin\service#show time_method
TIME METHOD=snmp.
GMT+8 Beijing Chongqing HongKong : 0
Admin\service#
```

6.32 Configuring the SNMP Calibration Time

Command Function

You can use this command to configure the SNMP calibration time of the equipment.

Command Format

```
set snmp_time_cfg interval <0-86400> servIp[ ipv4 | ipv6 | ipv4z | ipv6z | dns]
<servip>
```

Parameter Description

Parameter	Description	Attribute
interval <0-86400>	The automatic time calibration interval. The value ranges from 0 to 86400; unit: second.	Mandatory
servIp[ipv4 ipv6 ipv4z ipv6z dns]	The calibration IP type. Only IPv4 is supported temporarily.	Mandatory
<servip>	The IP address of the calibration server.	Mandatory

Command Example

Set the automatic time calibration interval of the SNMP to one hour (3600 seconds), time calibration IP type to IPv4, and IP address of the time calibration server to 10.10.10.10.

```
Admin\service#set snmp_time_cfg interval 3600 servIp ipv4 10.10.10.10
set ok!
```



```
Admin\service#
```

6.33 Viewing the SNMP Calibration Time

Command Function

You can use this command to view the SNMP calibration time of the equipment.

Command Format

```
show snmp_time_cfg
```

Parameter Description

None

Command Example

View the SNMP calibration time of the equipment.

```
Admin\service#show snmp_time_cfg
SNMP TIME CONFIG
INTERVAL=3600
Server IP : 10.10.10.10
Admin\service#
```

Result Description

Parameter	Description
INTERVAL	The automatic time calibration interval. Unit: minute.
Server IP	The IP address of the calibration server.

6.34 Configuring the SNMP Community

Command Function

You can use this command to configure the SNMP community of the equipment.

Command Format

```
set snmp community[ readonly|readwrite] <string>
```


Parameter Description

Parameter	Description	Attribute
[readonly readwrite]	The SNMP community authority. ◆ readonly: Read only. ◆ readwrite: Read and write.	Mandatory
<string>	The SNMP community name.	Mandatory

Command Example

Configure the SNMP community with read and write authority and set the community name to adsl.

```
Admin\service#set snmp community readwrite adsl
Admin\service#
```

6.35 Viewing the SNMP Community

Command Function

You can use this command to view the SNMP community of the equipment.

Command Format

```
show snmp community
```

Parameter Description

None

Command Example

View the SNMP community of the equipment.

```
Admin\service#show snmp community
Read-only Community String is :[ adsl]
Read-write Community String is :[ adsl]
Admin\service#
```


6.36 Configuring the SNMP Trap Receiver Address

Command Function

You can use this command to configure the SNMP Trap receiver address of the equipment.

Command Format

```
set snmp trapreceiver add <string> version[ v1|v2c] {[ community] <string>} *1  
{[ signaltrace_switch] [ enable|disable]} *1
```

Parameter Description

Parameter	Description	Attribute
<string>	The SNMP Trap receiver address.	Mandatory
version[v1 v2c]	The SNMP version, including v1 and v2c.	Mandatory
{[community] <string>} *1	The Trap community name.	Mandatory
{[signaltrace_ switch] [enable disable]} *1	The signal tracing switch. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Set the SNMP trap receiver address to 10.10.10.10, SNMP version to v2c, Trap community name to adsl and disable signaling tracing.

```
Admin\service#set snmp trapreceiver add 10.10.10.10 version v2c community adsl  
signaltrace_switch disable  
Admin\service#
```

6.37 Deleting the SNMP Trap Receiver Address

Command Function

You can use this command to delete the SNMP Trap receiver address of the equipment.

Command Format

```
set snmp trapreceiver delete <string>
```

Parameter Description

Parameter	Description	Attribute
<string>	The SNMP Trap receiver address.	Mandatory

Command Example

Delete the SNMP Trap receiver address 10.10.10.10.

```
Admin\service#set snmp trapreceiver delete 10.10.10.10
Admin\service#
```

6.38 Configuring the SNMP Trap Port

Command Function

You can use this command to configure the SNMP Trap port of the equipment.

Command Format

```
set snmp trapreceiver ip <string> port <0-65535>
```

Parameter Description

Parameter	Description	Attribute
ip <string>	The SNMP Trap receiver address.	Mandatory
port <0-65535>	The SNMP Trap port, ranging from 0 to 65535.	Mandatory

Command Example

Set the SNMP Trap port with the IP address 10.10.10.10 to 100.

```
Admin\service#set snmp trapreceiver ip 10.10.10.10 port 100
Admin\service#
```


6.39 Viewing the SNMP Trap Receiver Address

Command Function

You can use this command to view the SNMP Trap receiver address of the equipment.

Command Format

```
show snmp trapreceiver
```

Parameter Description

None

Command Example

View the SNMP Trap receiver address.

```
Admin\service#show snmp trapreceiver
Snmp agent trap is up.
IP address          Version Community  Port signalTraceSwitch
::ffff:10.170.2.40  v2c      public      162  disable
::ffff:10.170.4.43  v2c      public      162  disable
::ffff:10.170.110.15 v2c      adsl        162  enable
Total 3 trapreceiver IP address in system.
Admin\service#
```

Result Description

Parameter	Description
IP address	The SNMP Trap receiver address.
Version	The SNMP version number.
Community	The SNMP community name.
Port	The SNMP Trap port number.
signalTraceSwitch	The signal tracing switch.

6.40 Configuring the SNMP Trap Message Format

Command Function

You can use this command to configure the SNMP Trap message format of the equipment.

Command Format

```
set trap <string> Version [ privformat | stdformat ]
```

Parameter Description

Parameter	Description	Attribute
trap <string>	The SNMP Trap receiver address.	Mandatory
Version [privformat stdformat]	The SNMP Trap message format. ◆ privformat: the private format. ◆ stdformat: the standard format.	Mandatory

Command Example

Set the SNMP Trap message format with the IP address 10.10.10.10 to standard.

```
Admin\service#set trap 10.10.10.10 version stdformat
Admin\service#
```

6.41 Viewing the SNMP Trap Message Format

Command Function

You can use this command to view the SNMP Trap message format of the equipment.

Command Format

```
show trap version
```

Parameter Description

None

Command Example

View the SNMP Trap message format of the equipment.

```
Admin\service#show trap version  
set trap ::ffff:10.10.10.10 Version stdformat  
Admin\service#
```

Result Description

Parameter	Description
trap	The SNMP Trap receiver address.
Version	The SNMP Trap message format.

6.42 Enabling / Disabling the SNMP Trap Function

Command Function

You can use this command to enable / disable the SNMP Trap function.

Command Format

```
service snmp trap[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
snmp trap[enable disable]	The SNMP Trap function switch. ◆ enable: Enable the SNMP Trap function. ◆ disable: Disable the SNMP Trap function.	Mandatory

Command Example

Enable the SNMP Trap function.

```
Admin\service#service snmp trap enable  
Admin\service#
```


6.43 Configuring System Content of SNMP

Command Function

You can use this command to configure the system content of SNMP.

Command Format

```
set syscontact <contact>
```

Parameter Description

Parameter	Description	Attribute
syscontact <contact>	The system content of SNMP. It should include no more than 100 characters.	Mandatory

Command Example

Set the system content of SNMP to an5516.

```
Admin\service#set syscontact an5516
System contact is set to:
an5516
Admin\service#
```

6.44 Viewing System Content of SNMP

Command Function

You can use this command to view the system content of SNMP.

Command Format

```
show syscontact
```

Parameter Description

None

Command Example

View the system content of SNMP.


```
Admin\service#show syscontact
an5516
Admin\service#
```

6.45 Configuring System Location of SNMP

Command Function

You can use this command to configure the system location of SNMP.

Command Format

```
set syslocation <location>
```

Parameter Description

Parameter	Description	Attribute
syslocation <location>	The system location of SNMP. It should include no more than 100 characters.	Mandatory

Command Example

Set the system location of SNMP to wuhan.

```
Admin\service#set syslocation wuhan
System Location is set to:
wuhan
Admin\service#
```

6.46 Viewing System Location of SNMP

Command Function

You can use this command to view the system location of SNMP.

Command Format

```
show syslocation
```

Parameter Description

None

Command Example



















View the system location of SNMP.


















```
Admin\service#show syslocation  
wuhan  
Admin\service#
```


7

admin\onu Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\onu directory.

-  Viewing Optical Module Parameters of an EPON ONU
-  Viewing Optical Module Parameters of an ONU
-  Viewing ONU Version Information
-  Viewing ONU Version Information Saved in the Core Switch Card
-  Viewing the ONU Vendor Identifier and Equipment Code
-  Viewing the Last Logoff and Login Time for the ONU
-  Viewing the Online ONU Information
-  Viewing the MAC Address Table of the GPON ONU Port
-  Resetting an ONU PON Port
-  Configuring the Optical Power Monitoring Switch of an ONU
-  Configuring ONU MAC Address Aging Time
-  Viewing ONU MAC Address Aging Time
-  Configuring VLAN Mapping of an ONU
-  Deleting VLAN Mapping of an ONU
-  Validating VLAN Mapping of an ONU
-  Viewing VLAN Mapping of an ONU
-  Configuring VLAN Mapping of an ONU Port
-  Deleting VLAN Mapping of an ONU Port

-  Validating VLAN Mapping of an ONU Port
-  Viewing VLAN Mapping of an ONU Port
-  Configuring the ONU Rate Limiting Type
-  Viewing the ONU Rate Limiting Type
-  Viewing the Actual ONU Rate Limiting Type
-  Configuring the ONU Authentication Mode
-  Viewing the ONU Authentication Mode
-  Authorizing an ONU
-  Deauthorizing an ONU
-  Viewing the ONU Authorization Table
-  Viewing ONU Discovery Table
-  Viewing ONU Online Table
-  Configuring ONU Authorization Status
-  Configuring an ONU White List
-  Viewing an ONU White List
-  Configuring GPON ONU Service Bandwidth
-  Viewing the GPON Service Bandwidth Profile Configuration

7.1 Viewing Optical Module Parameters of an EPON ONU

Command Function

You can use this command to view the optical module parameters of an EPON ONU.

Command Format

```
show epon slot <slotno> pon <ponno> onu <onuno> optInfo
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the EPON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The EPON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory

Command Example

View the optical module parameters of ONU 1 connected to EPON Port 1 of the EPON interface card in Slot 1.

```
Admin\onu#show epon slot 1 pon 1 onu 1 optInfo
onu type : 20
onu temp : 5629:2
onu voltage : 330:2
onu current : 1490:2
onu tx power : 185:2
onu rx power : -1485:2
Admin\onu#
```

Result Description

Parameter	Description
onu type	The ONU type.
onu temp	The ONU temperature.
onu voltage	The ONU voltage.
onu current	The ONU current.

Parameter	Description
onu tx power	The Tx optical power of the ONU.
onu rx power	The Rx optical power of the ONU.

7.2 Viewing Optical Module Parameters of an ONU

Command Function

You can use this command to view the optical module parameters of an ONU.

Command Format

```
show optic_module slot <slotno> pon <ponno> onu <onuno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory

Command Example

View the optical module parameters of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show optic_module slot 1 pon 1 onu 1
----- ONU OPTIC MODULE PAR INFO 1.1.1-----
NAME          VALUE          UNIT
-----
TYPE           : 20           (KM)
TEMPERATURE    : 39.28        ('C)
VOLTAGE        : 3.28         (V)
BIAS CURRENT   : 11.82        (mA)
SEND POWER     : 2.76         (Dbm)
RECV POWER     : -6.45        (Dbm)
OLT RECV POWER : 0.00         (Dbm)
Admin\onu#
```


Result Description

Parameter	Description
TYPE	The ONU type.
TEMPERATURE	The ONU temperature.
VOLTAGE	The ONU voltage.
BIAS CURRENT	The bias current of the ONU.
SEND POWER	The Tx optical power of the ONU.
RECV POWER	The Rx optical power of the ONU.
OLT RECV POWER	The Rx optical power of the OLT.

7.3 Viewing ONU Version Information

Command Function

You can use this command to view the version information of an ONU.

Command Format

```
show onu_ver slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory

Command Example

View the version information about all ONUs connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show onu_ver slot 1 pon 1
----- ONU Version Info.  SLOT=1,PON=1,ITEM=2 -----
ONU_ID CONFIG_TYPE  REAL_TYPE  SOFT_VER  HARD_VER  CFG_VER
-----
01      5506-04-F1     5506-04-F1  RP2569    WKE2.134.285F2G
03      5506-04-B2     5506-04-B2  RP0100    WKE2.200.323R2A
Admin\onu#
```


Result Description

Parameter	Description
ONU_ID	The ONU authorization number.
CONFIG_TYPE	The ONU configuration type.
REAL_TYPE	The actual ONU type.
SOFT_VER	The ONU software version.
HARD_VER	The ONU hardware version.
CFG_VER	The configuration file version.

7.4 Viewing ONU Version Information Saved in the Core Switch Card

Command Function

You can use this command to view the version information about a specific ONU saved in the core switch card.

Command Format

```
show local_onu_ver slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory

Command Example

View the version information about all ONUs connected to PON Port 1 of the PON interface card in Slot 1, saved in the core switch card.

```
Admin\onu#show local_onu_ver slot 1 pon 1
----- ONU Version Info.  SLOT=1,PON=1,ITEM=2 -----
ONU_ID CONFIG_TYPE  REAL_TYPE  SOFT_VER  HARD_VER  CFG_VER
-----
01      5506-04-F1      5506-04-F1  RP2569    WKE2.134.285F2G
03      5506-04-B2      5506-04-B2  RP0100    WKE2.200.323R2A
```



```
Admin\onu#
```

Result Description

Parameter	Description
ONU_ID	The ONU authorization number.
CONFIG_TYPE	The ONU configuration type.
REAL_TYPE	The actual ONU type.
SOFT_VER	The ONU software version.
HARD_VER	The ONU hardware version.
CFG_VER	The configuration file version.

7.5 Viewing the ONU Vendor Identifier and Equipment Code

Command Function

You can use this command to view the ONU vendor identifier and equipment code.

Command Format

```
show onu_vendor_and_equipment_info slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory

Command Example

View the vendor identifiers and equipment codes of all ONUs connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show onu_vendor_and_equipment_info slot 1 pon 1
-- ONU Vendor ID and Equipment ID Info.SLOT=1,PON=1,ITEM=2 --
ONU_ID ONU_TYPE      VENDOR_ID EQUIPMENT_ID
-----
1      5506-04-F1     FHTT      AN5506-04-F1
```



```

3      5506-04-B2   FHTT      AN5506-04-B2
Admin\onu#

```

Result Description

Parameter	Description
ONU_ID	The ONU authorization number.
ONU_TYPE	The ONU type.
VENDOR_ID	The vendor identifier.
EQUIPMENT_ID	The equipment code.

7.6 Viewing the Last Logoff and Login Time for the ONU

Command Function

You can use this command to view the last logoff and login time for the ONU.

Command Format

```

show onu_last_on_and_off_time slot <slotno> pon[ <ponno> | null] onu
[ <onuno> | null]

```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon[<ponno> null]	The PON port number. The value can be set to 1 to 16 or null.	Mandatory
onu[<onuno> null]	The ONU authorization number. The value can be set to 1 to 128 or null.	Mandatory

Command Example

View the last logoff and login time for the ONU 1 under PON Port 1 of the PON interface card in Slot 1.

```

Admin\onu# show onu_last_on_and_off_time slot 1 pon 1 onu 1
SLOT PON ONU LAST_OFF_TIME LAST_ON_TIME
1 1 3 Last Off Time = 2015-12-25 09:45:18, Last On Time = 2015-12-25 09:45:43.
Admin\onu#

```


Result Description

Parameter	Description
SLOT	The slot number of the PON interface card.
PON	The PON port number.
ONU	The ONU authorization number.
Last Off Time	The last logoff time.
Last On Time	The last login time.

7.7 Viewing the Online ONU Information

Command Function

You can use this command to view the online ONU information.

Command Format

```
show online slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory

Command Example

View the online ONU information about PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show online slot 1 pon 1
ONLINE ONU TOTAL NUM = 4
ONUID  ONUTYPE      SN/MAC      PASSWORD  LOGICAL SN&PWD
-----
01     5506-04-F1      ftth10009999
02     5506-04-F1      ftth10019999
03     5506-04-F1      ftth10029999
04     5506-04-F1      ftth10039999
Admin\onu#
```


Result Description

Parameter	Description
ONU_ID	The ONU authorization number.
ONUTYPE	The ONU type.
SN/MAC	The SN/MAC address.
PASSWORD	The password.
LOGICAL SN&PWD	The logical SN and password.

7.8 Viewing the MAC Address Table of the GPON ONU Port

Command Function

You can use this command to view the MAC address table of the GPON ONU port.

Command Format

```
show mac_list slot <slotno> pon <ponno> onu <onuno> port <portno> { lookup
<mac_address>} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory
port <portno>	The ONU port number.	Mandatory
{ lookup <mac_address>} *1	The MAC address table.	Optional

Command Example

View the MAC address table of Port 1 of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show mac_list slot 1 pon 1 onu 1 port 1
SLOT=1 PON=1 ONU=1 PORT=1
-----MAC LIST, ITEM =1
```



```
1 544B900386C0 Vid:100
```

```
Admin\onu#
```

7.9 Resetting an ONU PON Port

Command Function

You can use this command to reset an ONU PON port.

Command Format

```
set pon_onoff slot <slotno> pon <ponno> onu <onuno> status[ on|off] { interval  
<off_time>} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory
status[on off]	The reset switch of the ONU PON port. ◆ on: Reset ◆ off: Not reset	Mandatory
{ interval <off_time>} *1	The PON port shutdown time. The value ranges from 1 to 65535; unit: second.	Optional

Command Example

Reset the PON port of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#set pon_onoff slot 1 pon 1 onu 1 status on interval 10  
Admin\onu#
```


7.10 Configuring the Optical Power Monitoring Switch of an ONU

Command Function

You can use this command to configure the optical power monitoring switch of an ONU.

Command Format

```
set opticpower_scout slot <slotno> pon <ponno> onu[ <onuno> | null] status[ on | off] { period <period> } * 1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu[<onuno> null]	The ONU authorization number.	Mandatory
status[on off]	The optical power monitoring switch of the ONU ◆ on: Enable the optical power monitoring switch. ◆ off: Disable the optical power monitoring switch.	Mandatory
{ period <period> } * 1	The time interval. The value ranges from 30 to 600; unit: second.	Optional

Command Example

Enable the optical power monitoring switch of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#set opticpower_scout slot 1 pon 1 onu 1 status on
Admin\onu#
```


7.11 Configuring ONU MAC Address Aging Time

Command Function

You can use this command to configure the ONU MAC address aging time.

Command Format

```
set aging_time slot <slotno> pon <ponno> onu <onuno> time <0-300>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory
time <0-300>	The MAC address aging time. The value ranges from 0 to 300; unit: second.	Mandatory

Command Example

Set the MAC address aging time of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1 to 60 seconds.

```
Admin\onu#set aging_time slot 1 pon 1 onu 1 time 60
Admin\onu#
```

7.12 Viewing ONU MAC Address Aging Time

Command Function

You can use this command to view the ONU MAC address aging time.

Command Format

```
show aging_time slot <slotno> pon <ponno> onu <onuno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory

Command Example

View the MAC address aging time of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show aging_time slot 1 pon 1 onu 1
ONU MAC ADDRESS AGING TIME = 60s
Admin\onu#
```

7.13 Configuring VLAN Mapping of an ONU

Command Function

You can use this command to configure the VLAN mapping function of an ONU.

Command Format

```
set vlan_mapping slot <slotno> pon <ponno> onu <onuno> domain_rule[ eth_type|
TLS] rule_id<rule_id> vlan_id<0-4085>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory
domain_rule[eth_type TLS]	The rule type, including Eth_type and TLS.	Mandatory
rule_id <rule_id>	The rule ID. The value range: Eth_type: 0x0-0xffff; TLS:1.	Mandatory
vlan_id <0-4085>	The VLAN ID. The value ranges from 0 to 4085.	Mandatory

Command Example

Set the VLAN mapping type of ONU 1 connected to PON Port 1 of the PON interface card in Slot 1 to Ethernet, the rule ID to 0x8100 and the VLAN ID to 100.

```
Admin\onu#set vlan_mapping slot 1 pon 1 onu 1 domain_rule eth_type rule_id 0x8100
vlan_id 100
set onu vlan mapping ok!
Admin\onu#
```

7.14 Deleting VLAN Mapping of an ONU

Command Function

You can use this command to delete VLAN mapping of an ONU.

Command Format

```
no vlan_mapping slot <slotno> pon <ponno> onu <onuno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory

Command Example

Delete the VLAN mapping of ONU 1 connected to ONU Port 1 of the PON interface card in Slot 1.

```
Admin\onu#no vlan_mapping slot 1 pon 1 onu 1
delete onu vlan mapping ok!
Admin\onu#
```


7.15 Validating VLAN Mapping of an ONU

Command Function

You can use this command to validate the VLAN mapping function of an ONU.

Command Format

```
apply vlan_mapping slot <slotno> pon <ponno> onu <onuno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory

Command Example

Validate the VLAN mapping function of ONU 1 connected to ONU Port 1 of the PON interface card in Slot 1.

```
Admin\onu#apply vlan_mapping slot 1 pon 1 onu 1
apply onu vlan mapping ok!
Admin\onu#
```

7.16 Viewing VLAN Mapping of an ONU

Command Function

You can use this command to view the VLAN mapping of an ONU.

Command Format

```
show vlan_mapping slot <slotno> pon <ponno> onu <onuno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number.	Mandatory

Command Example

View the VLAN mapping of ONU 1 connected to ONU Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show vlan_mapping slot 1 pon 1 onu 1
-----ONU VLAN MAPPING ITEM(1)-----
RULE DOMAIN : ETHERNET TYPE
NO.  DOMAIN VALUE  VLANID
---  -
      1           0x8100    100
Admin\onu#
```

Result Description

Parameter	Description
RULE DOMAIN	The VLAN mapping rule domain.
DOMAIN VALUE	The VLAN mapping rule domain value.
VLANID	The VLAN ID of the VLAN mapping.

7.17 Configuring VLAN Mapping of an ONU Port

Command Function

You can use this command to configure the VLAN mapping function of an ONU port.

Command Format

```
set onu_port_vlan_mapping_cfg port <portno> service_type[ data|iptv|voice]
vlan <1-4085>
```


Parameter Description

Parameter	Description	Attribute
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
service_type [data iptv voice]	The service type, including data service, IPTV service and voice service.	Mandatory
vlan <0-4085>	The VLAN ID. The value ranges from 0 to 4085.	Mandatory

Command Example

Configure the VLAN mapping function for ONU Port 1 globally. Set the service type to IPTV and the VLAN ID to 100.

```
Admin\onu#set onu_port_vlan_mapping_cfg port 1 service_type iptv vlan 100
Admin\onu#
```

7.18 Deleting VLAN Mapping of an ONU Port

Command Function

You can use this command to delete the VLAN mapping of an ONU port.

Command Format

```
no onu_port_vlan_mapping_cfg port <portno>
```

Parameter Description

Parameter	Description	Attribute
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory

Command Example

Delete the VLAN mapping of ONU Port 1 globally.

```
Admin\onu#no onu_port_vlan_mapping_cfg port 1
Admin\onu#
```


7.19 Validating VLAN Mapping of an ONU Port

Command Function

You can use this command to validate the VLAN mapping of an ONU port.

Command Format

```
apply onu_port_vlan_mapping_cfg
```

Parameter Description

None

Command Example

Validate VLAN mapping of an ONU port globally.

```
Admin\onu#apply onu_port_vlan_mapping_cfg  
Admin\onu#
```

7.20 Viewing VLAN Mapping of an ONU Port

Command Function

You can use this command to view the VLAN mapping of an ONU port.

Command Format

```
show onu_port_vlan_mapping_cfg port[ <portno> | all]
```

Parameter Description

Parameter	Description	Attribute
port[<portno> all]	The ONU port number. The value ranges from 1 to 24. all means all ONU ports.	Mandatory

Command Example

View the VLAN mapping of ONU Port 1 globally.

```
Admin\onu#show onu_port_vlan_mapping_cfg port 1
```



```

----- ONU VLAN MAPPING ITEM(1) -----
RULE DOMAIN : ETHERNET TYPE
NO. DOMAIN VALUE VLANID
---
1      0x8100      100
Admin\onu#

```

Result Description

Parameter	Description
RULE DOMAIN	The rule domain.
DOMAIN VALUE	The domain value.
VLANID	The VLAN ID.

7.21 Configuring the ONU Rate Limiting Type

Command Function

You can use this command to configure the ONU rate limiting type.

Command Format

```
set onu_speed_limit active_type[ pon|lan_port|stream]
```

Parameter Description

Parameter	Description	Attribute
active_type[pon lan_port stream]	The rate limiting validation type, including pon, lan_port and stream.	Mandatory

Command Example

Set the ONU rate limiting validation type to pon.

```

Admin\onu#set onu_speed_limit active_type pon
Admin\onu#

```


7.22 Viewing the ONU Rate Limiting Type

Command Function

You can use this command to view the ONU rate limiting type.

Command Format

```
show onu_speed_limit active_type
```

Parameter Description

None

Command Example

View the ONU rate limiting type.

```
Admin\onu#show onu_speed_limit active_type
onu speed limit active type: pon
Admin\onu#
```

7.23 Viewing the Actual ONU Rate Limiting Type

Command Function

You can use this command to view the actual ONU rate limiting type. This command is for the online GPON ONU only.

Command Format

```
show onu_speed_limit really_active_type slot <slotno> pon <ponno> onu
[ <onuno> | all]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu[<onuno> all]	The ONU authorization number. The value ranges from 1 to 128. all means all ONUs.	Mandatory

Command Example

View the actual rate limiting type of ONU 1 connected to ONU Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show onu_speed_limit really_active_type slot 1 pon 1 onu 1
slot  pon  onu : pon_limit, lan_limit, stream_limit! ITEMS:1!
-----
1      1      1:      disable      disable      disable
Admin\onu#
```

Result Description

Parameter	Description
slot	The slot number of the PON port.
pon	The PON port number.
onu	The ONU authorization number.
pon_limit	The rate limiting enable status of the PON port.
lan_limit	The rate limiting enable status of the LAN port.
stream_limit	The flow rate limiting enable status.

7.24 Configuring the ONU Authentication Mode

Command Function

You can use this command to configure the actual authentication mode for the ONU in the PON port hybrid authentication mode.

Command Format

```
set auth_type slot <slotno> pon <ponno> onulist <onulist> type[ mac|loid|
loidonceon|psw|pswonceon]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory

Parameter	Description	Attribute
<code>onulist <onulist></code>	The ONU authorization number. The value ranges from 1 to 128. You can also enter numbers and use dashes or commas, like 1-10 or 1, 3, 5, to select multiple numbers at a time. all means all ONUs connected to the PON port.	Mandatory
<code>type[mac loid loidonceon psw pswonceon]</code>	The ONU authentication mode.	Mandatory

Command Example

Set the authentication mode of the ONU with authorization No.1 connected to PON Port 1 of the PON interface card in Slot 1 to MAC address-based.

```
Admin\onu#set auth_type slot 1 pon 1 onulist 1 type mac
set onu authtype ok!
Admin\onu#
```

7.25 Viewing the ONU Authentication Mode

Command Function

You can use this command to view the actual authentication mode of the ONU connected to the PON port in the hybrid authentication mode.

Command Format

```
show onu_authtype slot <slotno> pon <ponno> onu <onulist>
```

Parameter Description

Parameter	Description	Attribute
<code>slot <slotno></code>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
<code>pon <ponno></code>	The PON port number. The value ranges from 1 to 16.	Mandatory
<code>onulist <onulist></code>	The ONU authorization number. The value ranges from 1 to 128. You can also enter numbers and use dashes or commas, like 1-10 or 1, 3, 5, to select multiple numbers at a time. all means all ONUs connected to the PON port.	Mandatory

Command Example

View the authentication type of the ONU with authorization No.1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#show onu_authtype slot 1 pon 1 onu 1
AUTH TYPE STR : mac
Admin\onu#
```

7.26 Authorizing an ONU

Command Function

You can use this command to authorize an ONU when the PON port is set to the non-authentication mode. In other authentication modes, use the command of configuring the white list to authorize the ONU.

Command Format

```
set authorization slot <slotno> pon <ponno> type <typestr> onuid <onuno>
phy_id <phy_id_str> {[ password] [ <password> | null]} *1 {[ logic_sn]
<logic_sn_str> password [ <password> | null]} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
type <typestr>	The ONU type.	Mandatory
onuid <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
phy_id <phy_id_str>	The physical identifier. It is a 12-byte character string.	Mandatory
{[password] [<password> null]} *1	The physical password. The password is a character string composed of no more than 10 bytes or set to NULL.	Optional
[logic_sn] <logic_sn_str>	The logical identifier. The name is a character string composed of no more than 24 bytes.	Optional
password [<password> null]	The logical password. The password is a character string composed of no more than 12 bytes or set to NULL.	Optional

Command Example

Authorize an AN5506-04-b2g type ONU connected to PON Port 1 of the PON interface card in Slot 1. The authorization number is 1, the physical address is FHTT00030405, and the physical password is NULL.

```
Admin\onu#set authorization slot 1 pon 1 type 5506-04-b2g onuid 1 phy_id FHTT00030405
password null
set onu authcated cmd ok!
Admin\onu#
```

7.27 Deauthorizing an ONU

Command Function

You can use this command to deauthorize an ONU when the PON port is set to the non-authentication mode. In other authentication modes, use the command of deleting the white list to deauthorize the ONU.

Command Format

```
set unauthorization slot <slotno> pon <ponno> onu <onulist>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory

Command Example

Deauthorize the ONU with authorization No.1 connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#set unauthorization slot 1 pon 1 onu 1
set onu unauthcated ok!
Admin\onu#
```


7.28 Viewing the ONU Authorization Table

Command Function

You can use this command to view the ONU authorization table.

Command Format

```
show[ authorization|discovery] slot[ <slotno>|all] pon[ <ponno>|all]
```

Parameter Description

Parameter	Description	Attribute
[authorization discovery]	<ul style="list-style-type: none"> ◆ authorization: The ONU authorization table. ◆ discovery: The ONU discovery table. 	Mandatory
slot[<slotno> all]	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18. all means all PON interface cards.	Mandatory
pon[<ponno> all]	The PON port number. The value ranges from 1 to 16. all means all PON ports.	Mandatory

Command Example

View the authorization list of the ONUs connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu# show authorization slot 1 pon 1
----- ONU Auth Table, Total ITEM = 3798 -----
A: Authorized P: Preauthorized R: System Reserved
----- ONU Auth Table, SLOT = 1, PON = 1, ITEM = 2 -----
Slot Pon Onu Onutype      ST Lic OST PhyId          PhyPwd  LogicId  LogicPwd
-----
1    1    1    5506-04-F1 A  0   dn  FHTT041e7ca0
1    1    2    5506-04-F1 A  0   dn  FHTT06197828
Command execute success.
Admin\onu#
```

Result Description

Parameter	Description
Slot	The slot number of the PON interface card.
Pon	The PON port number.
Onu	The ONU authorization number.
Onutype	The ONU type.

Parameter	Description
ST	The authorization status. A means authorized, P means pre-authorized and R means reserved by the system.
Lic	The obtain flag of License. 0: not obtained; 1: obtained.
OST	The ONU online status. 0: off line; 1: online.
PhyId	The ONU physical identifier.
PhyPwd	The ONU physical password.
LogicId	The ONU logical identifier.
LogicPwd	The ONU logical password.

7.29 Viewing ONU Discovery Table

Command Function

You can use this command to view the ONU discovery table.

Command Format

```
show[ authorization|discovery] slot[ <slotno>|all] pon[ <ponno>|all]
```

Parameter Description

Parameter	Description	Attribute
[authorization discovery]	<ul style="list-style-type: none"> ◆ authorization: The ONU authorization table. ◆ discovery: The ONU discovery table. 	Mandatory
slot[<slotno> all]	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18. all means all PON interface cards.	Mandatory
pon[<ponno> all]	The PON port number. The value ranges from 1 to 16. all means all PON ports.	Mandatory

Command Example

View the discovery list of the ONUs connected to PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu# show discovery slot 1 pon 1
----- ONU Unauth Table , SLOT=1 PON=1 , ITEM=1---
NO TYPE          PHY_ID PWD      SN LOID,  SN PWD
-----
01 AN5506-04-B2G FHTT00030405  1234567890
Admin\onu#
```


Result Description

Parameter	Description
SLOT	The slot number of the PON interface card.
PON	The PON port number.
NO	The ONU number.
TYPE	The ONU type.
PHY_ID	The ONU physical identifier.
PWD	The ONU physical password.
SN LOID	The logical SN of the ONU.
SN PWD	The logical password of the ONU.

7.30 Viewing ONU Online Table

Command Function

You can use this command to view the ONU online table.

Command Format

```
show online slot <slotno> pon <ponno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory

Command Example

View the online ONU list of PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu# show online slot 1 pon 1
ONLINE ONU TOTAL NUM = 1
ONUID  ONUTYPE      SN          PASSWORD LOGICAL SN
-----
01      AN5506-04-B2G FHTT00030405
Admin\onu#
```


Result Description

Parameter	Description
ONUID	The ONU authorization number.
ONUTYPE	The ONU type.
SN	The ONU SN number.
PASSWORD	The ONU password.
LOGICAL SN	The logical SN of the ONU.

7.31 Configuring ONU Authorization Status

Command Function

You can use this command to configure the ONU authorization status.

Command Format

```
set authstatus slot <slotno> pon <ponno> onulist <onulist> status[ auth|  
preauth|reserved]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onulist <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
status[auth preauth reserved]	The ONU authorization status. ◆ auth: Authorized. ◆ preauth: Pre-authorized. ◆ reserved: Reserved.	Mandatory

Command Example

Set the authorization status of the ONU with authorization No. 1 connected to PON Port 1 of the PON interface card in Slot 1 to authorized.

```
Admin\onu#set authstatus slot 1 pon 1 onulist 1 status auth  
set onu authstatus cmd ok!  
Admin\onu#
```


7.32 Configuring an ONU White List

Command Function

You can use this command to configure an ONU white list.

Command Format

```
set whitelist {[ phy_addr] address <address> password[ <pwd_str> | null]} * 1
{[ password] password <pwd_str>} * 1 {[ logic_sn] sn <sn_str> password
[ <pswd_str> | null]} * 1 action[ add|delete|lock|unlock] { slot <slotno> pon
<ponno> onu <onuno> type <onutype>} * 1
```

Parameter Description

Parameter	Description	Attribute
[phy_addr] address <address>	The physical identifier. It is a 12-byte character string.	Optional
password[<pwd_str> null]	The physical password. The password is a character string composed of no more than 10 bytes or set to NULL.	Optional
{[password] password <pwd_str>} * 1	The password. The name is a character string composed of no more than 10 bytes.	Optional
[logic_sn] sn <sn_str>	The logical identifier. The name is a character string composed of no more than 24 bytes.	Optional
password[<pswd_str> null]	The logical password The password is a character string composed of no more than 12 bytes or set to NULL.	Optional
action[add delete lock unlock]	Action <ul style="list-style-type: none"> ◆ add: Add a white list. ◆ delete: Delete a white list. ◆ lock: Lock a white list. ◆ unlock: Unlock a white list. 	Mandatory
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
type <onutype>	The ONU type.	Mandatory

Command Example

Add the ONU AN5506-04-b2g with the physical address FHTT00030405 and physical password NULL to the white list of PON Port 1 of the PON interface card in Slot 1.

```
Admin\onu#set whitelist phy_addr address FHTT00030405 password null action add slot 1
pon 1 onu 1 type 5506-04-b2g
set onu whitelist ok!
Admin\onu#
```

7.33 Viewing an ONU White List

Command Function

You can use this command to view an ONU white list.

Command Format

```
show whitelist [ physn | password | logicsn ] { slot <slotno> pon <ponno> } * 1
```

Parameter Description

Parameter	Description	Attribute
whitelist [physn password logicsn]	White list. <ul style="list-style-type: none"> ◆ physn: Physical identifier white list. ◆ password: Password white list. ◆ logicsn: Logical identifier white list. 	Mandatory
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Optional
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Optional

Command Example

View the ONU physical identifier white list.

```
Admin\onu#show whitelist physn
----- Physical Address Whitelist, ITEM=1 ---
SLOT PON ONU TYPE    PHY_ID PWD
-----
1 1 1 AN5506-04-B2G  FHTT00030405
Admin\onu#
```


Result Description

Parameter	Description
SLOT	The slot number of the PON interface card.
PON	The PON port number.
ONU	The ONU number.
TYPE	The ONU type.
PHY_ID	The ONU physical identifier.
PWD	The ONU physical password.

7.34 Configuring GPON ONU Service Bandwidth

Command Function

You can use this command to configure the service bandwidth for the GPON ONU.

Command Format

```
set service_bandwidth slot <slotno> pon <ponno> onu <onuno> type <typestr>
fix <fixbw> assure <asrbw> max <maxbw>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
type <typestr>	<p>The service type.</p> <p>The value ranges from 1 to 9.</p> <ul style="list-style-type: none"> ◆ 1: IPTV service. ◆ 2: Bandwidth Internet service. ◆ 3: Voice service. ◆ 4: TDM service (the AN5506-06 supported only) ◆ 5: Integrated service ◆ 6: Bandwidth Internet 2 service. ◆ 7: Bandwidth Internet 3 service. ◆ 8: Bandwidth Internet 4 service. ◆ 9: Serial port service. 	Mandatory
fix <fixbw>	The fixed bandwidth. The value ranges between 0 and 256000; unit: KByte/s.	Mandatory

Parameter	Description	Attribute
assure <asrbw>	The assured bandwidth. The value ranges between 0 and 256000; unit: KByte/s.	Mandatory
max <maxbw>	The maximum bandwidth. The value ranges between 64 and 256000; unit: KByte/s.	Mandatory

Command Example

Configure the service bandwidth for the ONU connected to PON Port 1 of the PON interface card in Slot 1. Set the service type to bandwidth Internet and the fixed bandwidth to 100 KByte/s. Set the assured bandwidth to 200 KByte/s and the maximum bandwidth to 500 KByte/s.

```
Admin\onu#set service_bandwidth slot 1 pon l onu 1 type data fix 100 assure 200 max 500
set onu service (data) bandwidth ok!
Admin\onu#
```

7.35 Viewing the GPON Service Bandwidth Profile Configuration

Command Function

You can use this command to view a specified or all GPON service bandwidth profile configuration.

Command Format

```
show service_profile_v2 type bw id[ <prf_id> | all]
```

Parameter Description

Parameter	Description	Attribute
bw id[<prf_id> all]	The profile ID. ◆ <prf_id>: The ID of a specified profile. ◆ all: all profiles.	Mandatory

Command Example

View all GPON service bandwidth profile configuration.

```
Admin\onu#show service_profile_v2 type bw id all
```



```
prfId 2, item 1
ServType  FixBw  AsrBw  MaxBw (Unit:KB/s)
-----  -
data      16     0      64
Admin\onu#
```














Result Description

Parameter	Description
ServType	The service type.
FixBw	The fixed bandwidth.
AsrBw	The assured bandwidth.
MaxBw	The maximum bandwidth.

8

admin\onu\ngn Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\onu\ngn directory.

-  Configuring the Voice Uplink Interface
-  Deleting the Voice Uplink Interface
-  Viewing the Voice Uplink Interface
-  Configuring the Voice Uplink User
-  Configuring the Voice Uplink User Port
-  Deleting the Voice Uplink User Data
-  Viewing the Voice Uplink User Data
-  Viewing the Unbound Voice Uplink User
-  Configuring Voice Service Parameters for an ONU Port
-  Deleting Voice Service Parameters for an ONU Port
-  Viewing Voice Service Parameters for an ONU Port
-  Configuring Voice Media Stream
-  Viewing Voice Media Stream

8.1 Configuring the Voice Uplink Interface

Command Function

You can use this command to configure the voice uplink interface.

Command Format

```
set new_ngn_uplink_interface name <name> protocol_type [ mgcp|h.248|sip]
{[ mgc] <1-3> <addr> <0-65535>} *3 {[ keepalive] [ enable|disable|passive]} *1
{[ m_dns] [ ipv4|ipv6] <ipAddr>} *1 {[ s_dns] [ ipv4|ipv6] <ipAddr>} *1 {[ dhcp]
[ enable|disable]} *1 {[ sip_reg_addr] <addr>} *1 {[ sip_reg_port] <0-65535>} *1
{[ sip_proxy_addr] <addr>} *1 {[ sip_proxy_port] <0-65535>} *1 {[ sip_expires]
<0-4294967294>} *1
```

Parameter Description

Parameter	Description	Attribute
name <name>	The name of uplink interface of NGN voice service. Identify the VLAN name of the user NGN voice service on the OLT side. The VLAN name should be consistent with the name of the data configured in the local service VLAN. The underline, letters and numbers are valid.	Mandatory
protocol_type [mgcp h.248 sip]	The voice protocol type. ◆ mgcp: The MGCP protocol. ◆ h.248: The H.248 protocol. ◆ sip: The SIP protocol.	Mandatory
{[mgc] <1-3> <addr> <0-65535>} *3	<1-3>: The MGC serial number. The equipment supports up to three MGCs and the serial number ranges from 1 to 3. <addr>: The MGC address. The MGC address can be an IP address or domain name in the form of character strings. <0-65535>: The MGC port number of the MGCP protocol. The value range is from 0 to 65535. The default value is 2727.	Optional
{[keepalive] [enable disable passive]} *1	Heartbeat function. Tests whether the communication between MG and MGC is normal. When the function is enabled, the alarm information will be displayed on the network management system if the communication between the MG and the MGC is interrupted. ◆ enable: Enable active heartbeat. ◆ disable: Disable active function. ◆ passive: Passive heartbeat. The default setting is disable.	Optional

Parameter	Description	Attribute
{[m_dns] [ipv4 ipv6] <ipAddr>} *1	[m_dns]: The active DNS. [ipv4 ipv6]: The IP address type. <ipAddr>: The IP address of the active DNS. Either an IPv4 or IPv6 address is supported.	Optional
{[s_dns] [ipv4 ipv6] <ipAddr>} *1	[s_dns]: The standby DNS. [ipv4 ipv6]: The IP address type. <ipAddr>: The IP address of the standby DNS. Either an IPv4 or IPv6 address is supported.	Optional
{[dhcp] [enable disable]} *1	DHCP function. The DHCP is the dynamic host configuration protocol. After enabling the function, the ONU (IAD) automatically obtains the public network's dynamic IP address. The ONU (IAD) static IP address which is configured by other command is invalid. ◆ enable: Enable the DHCP. ◆ disable: Disable the DHCP. The default setting is disable.	Optional
{[sip_reg_addr] <addr>} *1	[sip_reg_addr]: The SIP registrar. <addr>: The IP address of the SIP registrar. The default value is null.	Optional
{[sip_reg_port] <0-65535>} *1	[sip_reg_port]: The port of the SIP registrar. <0-65535> : The port number of the SIP registrar, that is, the protocol port number of the MG registering to the SIP registrar. The value ranges from 0 to 65535, and the default value is 5060.	Optional
{[sip_proxy_addr] <addr>} *1	[sip_proxy_addr] : The SIP proxy server. <addr>: The IP address of the SIP proxy server. The default value is null.	Optional
{[sip_proxy_port] <0-65535>} *1	[sip_reg_port]: The port of the SIP proxy server. <0-65535>: The port number of the SIP proxy server. The value ranges from 0 to 65535. The default value is 5060.	Optional
{[sip_expires] <0-4294967294>} *1	[sip_expires]: The SIP register expiration time. <0-4294967294>: Time range. After this time has expired, the register is unsuccessful if the MG fails to receive the corresponding information from the SIP server. The value range is from 0 to 4 294 967 294 and the default value is 3600. The unit is second.	Optional

Command Example

Configure the voice service named ngn_wuhan1. Use the MGCP protocol. The active MGC serial number is 1 and the IP address is 192.168.1.100 and the protocol port number is 2727.


```
Admin\onu\ngn#set new_ngn_uplink_interface name ngn_wuhan1 protocol_type mgcp
mgc 1 192.168.1.100 2727
Admin\onu\ngn#
```

8.2 Deleting the Voice Uplink Interface

Command Function

You can use this command to delete the voice uplink interface.

Command Format

```
no ngn_uplink_interface name <name>
```

Parameter Description

Parameter	Parameter Description	Attribute
name <name>	The name of uplink interface of NGN voice service.	Mandatory

Command Example

Delete a voice uplink interface named ngn_wuhan1.

```
Admin\onu\ngn#no ngn_uplink_interface name ngn_wuhan1
Admin\onu\ngn#
```

8.3 Viewing the Voice Uplink Interface

Command Function

You can use this command to view the voice uplink interface.

Command Format

```
show ngn_uplink_interface { <name> } * 1
```

Parameter Description

Parameter	Parameter Description	Attribute
{ <name> } * 1	The name of uplink interface of NGN voice service. The default value indicates uplink interfaces for all voice services.	Optional

Command Example

View the NGN uplink port named ngn1.

```
Admin\onu\ngn#show ngn_uplink_interface ngn1
-----ngn interface information-----
the index of the ngn interface      :3
servicename                        :ngn
protocaltype                       :h.248
mgc1ip                             :192.168.1.101
mgc1port                           :2944
mgc2ip                             :
mgc2port                           :2944
mgc3ip                             :
mgc3port                           :2944
keepalive                          :disable
masterdns                          :255.255.255.255
slavedns                           :255.255.255.255
dhcp                               :disable
Admin\onu\ngn#
```

Result Description

Parameter	Parameter Description
the index of the ngn interface	The NGN interface index.
servicename	The NGN service name.
protocaltype	The NGN protocol type.
mgc1ip	The IP address of MGC1.
mgc1port	The port number of MGC1.
mgc2ip	The IP address of MGC2.
mgc2port	The port number of MGC2.
mgc3ip	The IP address of MGC3.
mgc3port	The port number of MGC3.
keepalive	Whether heartbeat is enabled.
masterdns	The address of the master DNS server.
slavedns	The address of the slave DNS server.
dhcp	Whether DHCP is enabled.

8.4 Configuring the Voice Uplink User

Command Function

You can use this command to configure the voice uplink user.

Command Format

```
set new_ngn_uplink_user servicename <name> {[ vid] <vid>} *1 {[ potsqinqstate]
[ enable|disable] svlanid <0-4085>} *1 {[ service_cos] <value>} *1
{[ customer_cos] <value>} *1 {[ ip_mode] [ static|pppoe|dhcp|pppoev6|dhcpv6]}
*1 {[ public_ip] [ ipv4|ipv6] <ipaddress/prefix>} *1 {[ public_gate] [ ipv4|
ipv6] <ipaddress>} *1 {[ pppoeuser] <name>} *1 {[ password] <pwd>} *1
{[ dhcp_option60] [ enable|disable]} *1 {[ dhcp_value] <value>} *1
{[ domainname] <name>} *1 {[ protocol_port] <1-65535>} *1 {[ user_index]
<value>} *1
```

Parameter Description

Parameter	Parameter Description	Attribute
servicename <name>	The service name identifies the VLAN name of the NGN voice service of the user on the OLT side. The VLAN name should be consistent with the name of the configured local service VLAN data. The underline, letters and numbers are valid.	Mandatory
{[vid] <vid>} *1	The signaling VLAN ID.	Optional
{[potsqinqstate] [enable disable] svlanid <0-4085>} *1	[potsqinqstate] [enable disable]: Enable or disable SVLAN. svlanid <0-4085>: The SVLAN ID value.	Optional
{[service_cos] <value>} *1	The outer cos value.	Optional
{[customer_cos] <value>} *1	The inner cos value.	Optional
{[ip_mode] [static pppoe dhcp pppoev6 dhcpv6]} *1	The IP mode configuration, including static, pppoe, dhcp, pppoev6 and dhcpv6.	Optional
{[public_ip] [ipv4 ipv6] <ipaddress/pre-fix>} *1	The IP address of the ONU public network. Either IPv4 or IPv6 is supported.	Optional

Parameter	Parameter Description	Attribute
{ [public_gate] [ipv4 ipv6] <ipaddress>*1	The gateway address of the ONU public network. Either IPv4 or IPv6 is supported.	Optional
{ [pppoeuser] <name>*1	The PPPoE username.	Optional
{ [password] <pwd>*1	The PPPoE password.	Optional
{ [dhcp_option60] [enable disable] } *1	Enable or disable DHCP Option60.	Optional
{ [dhcp_value] <value>*1	The DHCP value.	Optional
{ [domainname] <name>*1	The end point domain name.	Optional
{ [protocol_port] <1-65535>*1	The ONU protocol port number. The value ranges from 1 to 65535. The default value is 2944.	Optional
{ [user_index] <value>*1	The user index number.	Optional

Command Example

Configure the NGN uplink user equipment (ONU) level: Set the service name to data, VID to 200, inner and outer cos values to 0, IP mode to static, IP address of the public network to an IPv4 address (10.12.21.21/2), protocol port to 2427 and user index to 0.

```
Admin\onu\ngn#set new_ngn_uplink_user servicename data vid 200 service_cos 0
customer_cos 0 ip_mode static public_ip ipv4 10.12.21.21/2 protocol_port 2427 user_index
0
```

```
Admin\onu\ngn#
```

8.5 Configuring the Voice Uplink User Port

Command Function

You can use this command to configure the voice uplink user port.

Command Format

```
set ngn_uplink_user_port phone <value> {[ username] <name>} *1
{[ sip_user_name] <name>} *1 {[ sip_user_password] <password>} *1
{[ user_index] <value>} *1
```

Parameter Description

Parameter	Parameter Description	Attribute
phone <value>	The telephone number.	Mandatory
{[username] <name>} *1	When the MGCP or H.248 protocol is used, the end point username should be configured.	Optional
{[sip_user_name] <name>} *1	When the SIP protocol is used, the SIP protocol authentication username should be configured.	Optional
{[sip_user_ password] <password>} *1	When the SIP protocol is used, the SIP protocol authentication password should be configured.	Optional
{[user_index] <value>} *1	The user index number.	Optional

Command Example

Configure the NGN uplink port user level: Set the phone number to 1, end point username to a1 and user index to 0.

```
Admin\onu\ngn#set ngn_uplink_user_port phone 1 username a1 user_index 0
Admin\onu\ngn#
```

8.6 Deleting the Voice Uplink User Data

Command Function

You can use this command to delete the voice uplink user data.

Command Format

```
no ngn_uplink_user[ index|name] <value>
```


Parameter Description

Parameter	Description	Attribute
[index name] <value>	The uplink user index or name of the NGN voice service.	Mandatory

Command Example

Delete a voice uplink interface named data.

```
Admin\onu\ngn#no ngn_uplink_user name data
Admin\onu\ngn#
```

8.7 Viewing the Voice Uplink User Data

Command Function

You can use this command to view the voice uplink user data.

Command Format

```
show ngn_uplink_user phoneno <value>
```

Parameter Description

Parameter	Parameter Description	Attribute
phone <value>	The telephone number.	Mandatory

Command Example

View the information about the NGN uplink user whose phone number is 1111.

```
Admin\onu\ngn#show ngn_uplink_user phoneno 1111
-----ngn user information-----
the index of the ngn user      :0
servicename                    :ngn
telephoneno                    :1111
publicip                      :10.12.10.21
subnet                        :255.255.0.0
gateway                       :10.12.1.254
endpoint domain name          :
protocol portno                :2944
```



```

the endpoint user name      :
the sip user name           :
the sip password            :
Admin\onu\ngn#

```

Result Description

Parameter	Parameter Description
the index of the ngn user	The NGN user index.
servicename	The NGN service name.
telephoneno	The user's phone number.
publicip	The public network of the user.
subnet	The subnet mask.
gateway	The gateway.
endpoint domain name	The end point domain name.
protocol portno	The protocol port number.
the endpoint user name	The end point username.
the sip user name	The SIP username.
the sip password	The SIP password.

8.8 Viewing the Unbound Voice Uplink User

Command Function

You can use this command to view the unbound voice uplink user.

Command Format

```
show unbound ngn_uplink_user[ all |<index>]
```

Parameter Description

Parameter	Description	Attribute
[all <index>]	All unbound uplink users or specified unbound uplink users according to index.	Mandatory

Command Example

View all unbound voice uplink users.


```
Admin\onu\ngn#show unbound ngn_uplink_user all
!unbound ngn user config ----
0 ,    1 ,
the total unbound ngn user 2
Admin\onu\ngn#
```

8.9 Configuring Voice Service Parameters for an ONU Port

Command Function

You can use this command to configure the voice service parameters for an ONU port.

Command Format

```
set ngn_voice_service slot <slotno> pon <ponno> onu <onuno> pots <portno>
phonenum <num> {[ vid] <vid>} *1 {[ code_mode] [ G.711M|G.711A|G.723|G.729]} *1
{[ fax_mode] [ transparent|t.38]} *1 {[ slience] [ enable|disable]} *1
{[ echo_cancel] [ enable|disable]} *1 {[ input_gain] <num>} *1 {[ voice_value]
<value>} *1 {[ dtmf] [ transparent|rfc2833]} *1 {[ heartbeat] [ enable|disable]}
*1 {[ potsqingstate] [ enable|disable] svlanid <0-4085>} *1 {[ service_cos]
<value>} *1 {[ customer_cos] <value>} *1 {[ fax_control] [ passthrough|
softswitch|autovbd]} *1 {[ bill_type] [ 16kc|12kc|revpol|free]} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
pots <portno>	The POTS port number.	Mandatory
phonenum <num>	The phone number. The phone number should be selected from the configured NGN user entries and the phone number assigned to each port should not be repeated. The system verifies the other configuration information about the ONU voice according to the phone number.	Mandatory
{[vid] <vid>} *1	The VLAN ID value. It is the voice data uplink VLAN ID value of the port. It should be consistent with the VLAN ID value of the uplink interface of the NGN user configured for this port. Besides, the local service VLAN should have been configured.	Optional

Parameter	Description	Attribute
{ [code_mode] [G.711M G.711A G.723 G.729] } *1	Speech encoding mode. The compression encoding mode of the NGN service speech flow. Select it as required. G.711A by default	Optional
{ [fax_mode] [transparent t.38] } *1	Fax mode. transparent means the transparent mode, i.e., T.30 fax. Select the fax mode as needed. transparent is selected by default.	Optional
{ [silence] [enable disable] } *1	Mute compression. Mute compression packet is transmitted in case of no voice during conversation. ◆ enable: Enable the function. ◆ disable: Disable the function. This function is enabled by default.	Optional
{ [echo_cancel] [enable disable] } *1	Echo suppression. Cancel the echo when this function is enabled. ◆ enable: Enable the function. ◆ disable: Disable the function.	Optional
{ [input_gain] <num> } *1	Input gain. The value ranges between -32 and +32, and the unit is db.	Optional
{ [voice_value] <value> } *1	Output gain. The value ranges between -32 and +32, and the unit is db.	Optional
{ [dtmf] [transparent rfc2833] } *1	The DTMF mode means the transmission mode on the client side, such as button fax event. transparent is selected by default.	Optional
{ [heartbeat] [enable disable] } *1	Heartbeat function. ◆ enable: Enable the function. ◆ disable: Disable the function.	Optional
{ [potsqinqstate] [enable disable] }	Voice QinQ function enable switch. When the Voice QinQ function is enabled, the stacked VLAN mode can be configured. The Service VLAN VID value should be consistent with the configured service VLAN VID value.	Optional
{ svlanid<0-4085> } *1	The service VLAN ID.	Optional
{ [service_cos] <value> } *1	The SVLAN priority.	Optional
{ [customer_cos] <value> } *1	The CVLAN priority.	Optional

Parameter	Description	Attribute
{ [fax_control] [passthrough softswitch autovbd] } * 1	The fax control mode. ◆ passthrough: Voice path. ◆ softswitch: Softswitch. ◆ autovbd: Auto-negotiation.	Optional
{ [bill_type] [16kc 12kc revpol free] } * 1	The bill type.	Optional

Command Example

Configure parameters of POTS Port 1 of the ONU whose authorization number is 1, connected to PON Port 1 in Slot 1. Set the phone number to 11111111, VID to 3022, speech compression encoding mode to G.711A, fax mode to transparent transmission. Disable mute compression and disable echo compression. Set the input gain to 4, output gain to 0, and DTMF mode to transparent transmission.

```
Admin\onu\ngn#set ngn_voice_service slot 1 pon 1 onu 1 pots 1 phonenum 11111111 vid
3022 code_mode g.711a fax_mode transparent slience disable echo_cancel disable
input_gain 4 voice_value 0 dtmf transparent
Admin\onu\ngn#
```

8.10 Deleting Voice Service Parameters for an ONU Port

Command Function

You can use this command to delete the voice service parameters for the ONU port.

Command Format

```
no ngn_voice_service slot <slotno> pon <ponno> onu <onuno> pots <portno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
pots <portno>	The ONU port number.	Mandatory

Command Example

Delete the voice port configuration of ONU Port 1 whose authorization number is 1, connected to PON Port 1 in Slot 1.

```
Admin\onu\ngn#no ngn_voice_service slot 1 pon 1 onu 1 pots 1
Admin\onu\ngn#
```

8.11 Viewing Voice Service Parameters for an ONU Port

Command Function

You can use this command to view the voice service parameters for an ONU port.

Command Format

```
show ngn_voice_service slot <slotno> pon <ponno> onu <onuno> pots_config
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory

Command Example

View the voice service parameters for the ONU whose authorization number is 1, connected to PON Port 1 in Slot 1.

```
Admin\onu\ngn#show ngn_voice_service slot 1 pon 1 onu 1 pots_config
*****
port      :1          phonenum   : 11111111
vlan id   :3022        code mode  : G.711A
fax mode  :transparent  silenceSp : disable
echo cancel :disable    input gain : 4
output gain : 0         dtmf mode  : transparent
heartbeat :disable
potsqingstate: disable.
service cos: disable.
customer cos: disable.
```



```

bind type: 0.
bind adv profile id: 0.
fax control mode: PassThrough
port activation: ACTIVE.
rms state :disable
*****
port      :2          phonenum   : 0
vlan id   :0          code mode  : G.711A
fax mode  :transparent slienceSp : enable
echo cancel :enable    input gain : 0
output gain : 0        dtmf mode  : transparent
heartbeat :disable
potsqinqstate: disable.
service cos: disable.
customer cos: disable.
bind type: 0.
bind adv profile id: 0.
fax control mode: PassThrough.
port activation: ACTIVE.
rms state :disable
Admin\onu\ngn#

```

Result Description

Parameter	Description
port	The port number.
phonenum	The phone number.
vlan id	The voice service VLAN ID.
code mode	The encoding mode.
fax mode	The fax mode.
slienceSp	The mute compression switch.
echo cancel	The echo suppression switch.
input gain	Input gain.
output gain	Output gain.
dtmf mode	The DTMF mode.
heartbeat	Heartbeat.
potsqinqstate	The QinQ status.
service cos	The service COS.
customer cos	The user COS.
bind type	The binding type.
bind adv profile id	Bind the ADV profile ID.

Parameter	Description
fax control mode	The fax control mode.
port activation	The activation status of port.
rms state	The RMS status.

8.12 Configuring Voice Media Stream

Command Function

You can use this command to configure the voice media stream.

Command Format

```
set new_ngn_rtp_stream slot <slotno> pon <ponno> onu <onuno> servicename
<value> rtpcfg[ enable|disable] {[ svlan_tpid] <value> svlan_id <value>
svlan_cos <value>} *1 {[ cvlan_tpid] <value> cvlan_id <value> cvlan_cos
<value>} *1 {[ rtp_ip] [ ipv4|ipv6] <ipAddr/prefix> rtp_gateway[ ipv4|ipv6]
<ipAddr>} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
servicename <value>	The service name.	Mandatory
rtpcfg[enable disable]	The RTP configuration status. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
{[svlan_tpid] <value> svlan_id <value> svlan_cos <value>} *1	[svlan_tpid] <value>: the service TPID. svlan_id <value>: the service VLAN ID. svlan_cos <value>: the service Cos.	Optional

Parameter	Description	Attribute
{ [cvlan_tpid] <value> cvlan_id <value> cvlan_cos <value> } * 1	[cvlan_tpid] <value>: the user TPID. cvlan_id <value>: the user VLAN ID. cvlan_cos <value>: the user Cos.	Optional
{ [rtp_ip] [ipv4 ipv6] <ipAddr/prefix> rtp_gateway [ipv4 ipv6] <ipAddr> } * 1	[rtp_ip] [ipv4 ipv6] <ipAddr/prefix>: the RTP IP address. rtp_gateway [ipv4 ipv6] <ipAddr>: the RTP gateway.	Optional

Command Example

Configure the voice media stream of the ONU whose authorization number is 1 under PON Port 1 in Slot 1.

```
Admin\onu\ngn#set new_ngn_rtp_stream slot 1 pon 1 onu 1 servicename ngn rtpcfg
enable svlan_tpid 33024 svlan_id 600 svlan_cos 5 cvlan_tpid 33024 cvlan_id 600 cvlan_cos
5 rtp_ip ipv4 10.10.10.201 rtp_gateway ipv4 10.10.1.254
Admin\onu\ngn#
```

8.13 Viewing Voice Media Stream

Command Function

You can use this command to view the voice media stream.

Command Format

```
show ngn_rtp_stream slot <slotno> pon <ponno> onu <onuno> stream_config
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory

Command Example

View the voice media stream of the ONU whose authorization number is 1, connectd to PON Port in Slot 1.

```
Admin\onu\ngn#show ngn_rtp_stream slot 1 pon 1 onu 1 stream_config
*****onu (16 1 1)*****
service name: ngn                      rtpenable:enable
svlantpid:33024          svlanid:600          svlancos:5
cvlantpid:33024          cvlanid:600          cvlancos:5
rtpip:10.10.10.201
rtpsubnet:255.255.0.0
rtpgateway:10.10.1.254
Admin\onu\ngn#
```
















Result Description

Parameter	Description
service name	The service name.
rtpenable	The RTP enable status.
svlantpid	The service TPID.
svlanid	The service VLAN ID.
svlancos	The service CoS.
cvlantpid	The user TPID.
cvlanid	The CVLAN ID.
cvlancos	The user CoS.
rtpip	The RTP IP address.
rtpsubnet	The RTP subnet mask.
rtpgateway	The RTP gateway.

9

admin\onu\lan Directory Command

- ☒ Configuring Loopback Test for the ONU Port
- ☒ Validating Loopback Test for an ONU Port
- ☒ Viewing Loopback Test for an ONU Port
- ☒ Binding the Bandwidth Profile to FE Port Service of the ONU
- ☒ Configuring the Quantity of Services for an ONU FE Port
- ☒ Enabling / Disabling VLAN Translation for an ONU FE Port
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- ☒ Configure the PVLAN for FE Port on the ONU
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-  Configuring Service Parameters of the ONU Port in a Batch Manner
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-  Configuring the WAN Connection Service
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-  Configuring the VEIP Management Channel of the ONU
-  Configuring the Management VLAN for ONU VEIP
-  Deleting the VEIP Management VLAN of the ONU
-  Applying the VEIP Management VLAN of the ONU
-  Viewing the VEIP Management VLAN of the ONU
-  Configuring the ONU VEIP Port
-  Viewing an ONU VEIP Port
-  Deleting an ONU VEIP Port

9.1 Configuring Loopback Test for the ONU Port

Command Function

You can use this command to configure the loopback test for the ONU port.

Command Format

```
set loop_detect slot <slotno> pon <ponno> onu <onuno> port <portno> status
[ disactivated|activated] { interval <10~3600>} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu[<onuno> null]	The ONU number. The value ranges from 1 to 128.	Mandatory
port <portno>	The port number. The value ranges from 1 to 24.	Mandatory
status[disactivated activated]	The status. The value ranges from 1 to 9. ◆ disactivated ◆ activated	Mandatory
interval <10~3600>	The time interval. The value ranges from 10 to 3600s.	Optional

Command Example

Configure the loopback function for Port 1 on ONU 1. The test interval is 10 minutes (600s). The ONU is connected to PON Port 1 of Slot 1.

```
Admin\onu\lan#set loop_detect slot 1 pon 1 onu 1 port 1 status activated interval 600
set onu port loop detect ok!
Admin\onu\lan#
```


9.2 Validating Loopback Test for an ONU Port

Command Function

You can use this command to validate the configured loopback test for an ONU port.

Command Format

```
apply loop_detect slot <slotno> pon <ponno> onu <onuno> port <portlist>
```

Parameter Description

Parameter	Parameter Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu[<onuno> null]	The ONU number. The value ranges from 1 to 128.	Mandatory
port <portlist>	The port number. The value ranges from 1 to 24.	Mandatory

Command Example

Validate the loopback test configuration for Port 1 of ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#apply loop_detect slot 1 pon 1 onu 1 port 1
apply onu port loop detect ok!
Admin\onu\lan#
```

9.3 Viewing Loopback Test for an ONU Port

Command Function

You can use this command to view loopback test configuration for an ONU port.

Command Format

```
show loop_detect slot <slotno> pon <ponno> onu <onuno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU number. The value ranges from 1 to 128.	Mandatory

Command Example

View loopback test configuration for an port of ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#show loop_detect slot 6 pon 2 onu 1
~~~~~ ONU PORT LOOP DETECT, 6.2.1 ,ITEM=4~~~~~
PORT      Status      Interval(s)
~~~~~
      1  activated      60
      2  activated      20
      3  activated      20
      4  activated      20
Admin\onu\lan#
```

Result Description

Parameter	Description
PORT	The ONU port number.
Status	The switch status.
Interval	The time interval.

9.4 Binding the Bandwidth Profile to FE Port Service of the ONU

Command Function

You can use this command to bind the uplink and downlink bandwidth profile to the FE port service for rate limiting.

Command Format

```
Set epon slot <slotno> pon <ponNo> onu <onuno> port <portno> service
<serviceno> up_bw_prf <upbwprfid> down_bw_prf <downbwprfid>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The number of the PON port. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU number. The value ranges from 1 to 128.	Mandatory
port <portno>	The port number. The value ranges from 1 to 24.	Mandatory
service <serviceno>	The service number. The value ranges from 0 to 10.	Mandatory
up_bw_prf <upbwprfid>	The uplink bandwidth profile ID The value ranges from 0 to 1024.	Mandatory
down_bw_prf <downbwprfid>	The downlink bandwidth profile ID The value ranges from 0 to 1024.	Mandatory

Command Example

Bind the uplink and downlink bandwidth profile whose ID is 1, to Service 1 for Port 1 of ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#set epon slot 3 pon 1 onu 1 port 1 service 1 up_bw_prf 1 down_bw_prf 1
Admin\onu\lan#
```

9.5 Configuring the Quantity of Services for an ONU FE Port

Command Function

You can use this command to configure the quantity of service entries of a designated ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <portno> service number
<serviceno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The number of the PON port. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
number <serviceno>	The service number. The value ranges from 1 to 10.	Mandatory

Command Example

Set the number of service entries for Port 1 of ONU 1 to 1. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 4 port 1 service number 1
Admin\onu\lan#
```

9.6 Enabling / Disabling VLAN Translation for an ONU FE Port

Command Function

You can use this command to enable or disable service translation for a designated ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <port> service
<serviceno> translate[ enable|disable] { <tcos> <tpid> <trans_vlanlist>} *1
```

Parameter Description

Parameter	Parameter Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The number of the PON port. The value ranges from 1 to 8.	Mandatory

Parameter	Parameter Description	Attribute
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number The value ranges from 1 to 24.	Mandatory
service <serviceno>	The service number. The value ranges from 1 to 10.	Mandatory
translate[enable disable]	The translation enable identifier. ◆ enable: Enable the function. ◆ disable: Disables the function.	Mandatory
{ <tcos><tpid><trans_vlanlist> } *1	◆ <tcos>: priority or CoS of the PON, ranging from 0 to 7, or 0xffff. ◆ <tpid>: the tag protocol identifier, ranging from 0 to 0xffff, or 0x8100. ◆ <trans_vlanlist t>: the VLAN ID, ranging from 1 to 4085, or 0xffff.	Optional

Command Example

Enable the translation function for Service 1 at Port 1 of ONU 4. Set the CoS of Service 1 to 4, the TPID to 33024, and the VLAN after translation to 100.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 1 service 1 translate enable 4 33024 100
Admin\onu\lan#
```

9.7 Enabling / Disabling QinQ for an ONU FE Port

Command Function

You can use this command to enable or disable QinQ for the service at a specified ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <port> service
<serviceno> qinq[ enable|disable] { <scos> <tpid> <profile> <service_nam>
<s_vlanlist> } *1
```


Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
service <serviceno>	The sequence number of services. The value ranges from 1 to 10.	Mandatory
qinq[enable disable]	The QinQ enable identifier. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
<scos>	The priority or CoS of the PON, ranging from 0 to 7, or 0xffff.	Optional
<tpid>	The tag protocol identifier. The value range: 0 to 0xffff, or 0x8100.	Optional
<profile>	The QinQ profile name.	Optional
<service_nam>	The service VLAN name.	Optional
<s_vlanlist>	The VLAN ID. The value range: 1 to 4085, or 0xffff.	Optional

Command Example

Enable QinQ for Service 1 at Port 1 of ONU 1. Set the CoS of Service 1 to 4, TPID to 33024, service VLAN name to yewu, SVLAN to 100, and QinQ profile name to qinq. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 service 1 qinq enable 4 33024 qinq
yewu 100
Admin\onu\lan#
```

9.8 Configuring CVLAN for an ONU FE Port

Command Function

You can use this command to configure the CVLAN for a designated ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <port> service
<serviceno> vlan_mode[ tag|transparent] <ccos> <tpid> <c_vlanlist>
```

Parameter Description

Parameter	Parameter Description	Attribute
slot <slotNo>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	The PON port number, ranging from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number, ranging from 1 to 128.	Mandatory
port <portno>	The ONU port number, ranging from 1 to 24.	Mandatory
service <serviceno>	The sequence number of the service. The value ranges from 1 to 10.	Mandatory
vlan_mode[tag transparent]	CVLAN Mode ◆ tag: tag mode. ◆ transparent: transparent mode.	Mandatory
<ccos>	The PON priority or CoS. The value range: 0 to 7, or 0xffff.	Optional
<tpid>	<tpid>: the tag protocol identifier. The value range: 0 to 0xffff, or 0x8100.	Optional
<c_vlanlist>	The VLAN ID. The value range: 1 to 4085, or 0xffff.	Optional

Command Example

Configure Service 1 at Port 1 of ONU 1: Set the CVLAN to 300, COS to 1, and TPID to 33024. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 service 1 vlan_mode tag 1 33024 300
Admin\onu\lan#
```

9.9 Configure the PVLAN for FE Port on the ONU

Command Function

You can use this command to set the service PVLAN for a designated ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <port> service
<serviceno> pvlan <pcos> <p_vlanlist>
```


Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	The PON port number, ranging from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number, ranging from 1 to 128.	Mandatory
port <portno>	The ONU port number, ranging from 1 to 24.	Mandatory
service <serviceno>	The sequence number of the service, ranging from 1 to 10.	Mandatory
<pcos>	Priority of PON or COS, ranging from 0 to 7.	Mandatory
<p_vlanlist>	The VLAN ID, ranging from 0 to 4085.	Mandatory

Command Example

Set the PVLAN of service 1 to 300 for Port 4 on ONU 1, and set COS to 1. The ONU is connected to PON Port 1 of Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 service 1 pvlan 1 300
Admin\onu\lan#
```

9.10 Configuring Service Type for an ONU FE Port

Command Function

You can use this command to configure the service type for a designated service at an ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <port> service
<serviceno> type[ multicast|unicast]
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory

Parameter	Description	Attribute
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
service <serviceno>	The sequence number of services. The value ranges from 1 to 10.	Mandatory
larp[enable disable]	The service type. ◆ Multicast: multicast service ◆ Unicast: unicast service	Mandatory

Command Example

Set the service type of Service 1 at Port 4 of ONU 1 to Multicast. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 service 1 type multicast
Admin\onu\lan#
```

9.11 Adding Services to a Designated ONU FE Port

Command Function

You can use this command to add services to a designated ONU FE Port.

Command Format

```
add gepon slot <slotNo> pon <ponNo> onu <onulist> port <portno>
service number <serviceno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the PON interface card. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
number <serviceno>	Number of services. Value range: 1 to 10. (i.e 10 services at maximum)	Mandatory

Command Example

Configure the ONU with authorization No. 4 under PON Port 1 in Slot 12. Add a service to Port 1. The number of the service is already 1 at the port, so you need to increase the number to 2.

```
Admin\onu\lan#add gepon slot 12 pon 1 onu 4 port 1 service number 2
Admin\onu\lan#
```

9.12 Enabling / Disabling the TLS for an ONU FE Port

Command Function

You can use this command to enable or disable the TLS for a designated service at an ONU port.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <port> service
<serviceno> tls[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
service <serviceno>	The sequence number of services. The value ranges from 1 to 10.	Mandatory
tls[enable disable]	The TLS setting. ◆ enable: Enable the TLS. ◆ disable: Disable the TLS.	Mandatory

Command Example

Enable the TLS for Service 1 at Port 4 of ONU 1. The ONU is connected to PON Port 1 in Slot 12.


```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 service 1 tls enable
Admin\onu\lan#
```

9.13 Viewing the TLS Status for an ONU FE Port

Command Function

You can use this command to view the TLS configuration of a specific service for an ONU port.

Command Format

```
show epon slot <slotNo> pon <ponNo> onu <onuNo> port <port> service
<serviceno> tls
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	PON port number. The value ranges from 1 to 8.	Mandatory
onu <onuNo>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
service <serviceno>	The sequence number of services. The value ranges from 1 to 10.	Mandatory

Command Example

View the TL1 enabling status of Service 1 at Port 1 of ONU 1. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#show epon slot 3 pon 1 onu 1 port 1 service 1 tls
the tls state is disable!
Admin\onu\lan#
```

9.14 Configuring Attribute for an ONU FE Port

Command Function

You can use this command to configure the attribute of a specific port of an ONU.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onulist> port <portno> {[ enable|
disable]} *1 {[ auto] [ enable|disable]} *1 {[ speed] [ 10M|100M|1000M]} *1
{[ duplex] [ full|half]} *1 {[ flowcontrol] [ enable|disable]} *1
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
{[enable disable]} *1	The port enable or disable configuration. ◆ enable: Enable the port. ◆ disable: Disable the port.	Mandatory
{[auto] [enable disable]} *1	Auto negotiation enable or disable configuration. ◆ enable: Enable the port. ◆ disable: Disable the port.	Mandatory
{[speed] [10M 100M 1000M]} *1	The rate configuration. ◆ 10M ◆ 100M ◆ 1000M	Mandatory
{[duplex] [full half]} *1	The duplex configuration. ◆ full: full duplex ◆ half: half duplex	Mandatory
{[flowcontrol] [enable disable]} *1	The flow control enable or disable configuration. ◆ enable: Enable the port. ◆ disable: Disable the port.	Mandatory

Command Example

View the port attribute of Port 4 of ONU 1: port enabled, port rate 10M, half duplex and flow control disabled. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 enable auto enable speed 10M duplex
half flowcontrol disable
```

```
Admin\onu\lan#
```


9.15 Configuring Service Differentiation for an ONU FE Port

Command Function

You can use this command to configure the service differentiation parameters for designated services of an FE port on the ONU.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onu> port <port> [ service] <serviceno>
{ [ up|down] [ da|sa|dip|sip|vid|sport|dport|iptype|eth_type|tos|priority|
daipv6pre|saipv6pre|ipver|ipv6tra|ipv6fl|ipv6nh] <value> <0-6> } * 8
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
[service] <serviceno>	The sequence number of services. The value ranges from 1 to 10.	Mandatory
{ [up down] [da sa dip sip vid sport dport iptype eth_type tos priority daipv6pre saipv6pre ipver ipv6tra ipv6fl ipv6nh] <value> <0-6> } * 8	The service differentiation parameters. [up down], differentiate the service type based on uplink or downlink services. [da sa dip sip vid sport dport iptype eth_type tos priority daipv6pre saipv6pre ipver ipv6tra ipv6fl ipv6nh] <value>, the service differentiation value. <0-6>, the operator.	Mandatory

Command Example

Configure the way to differentiate the service type of Service 1 for Port 4 on ONU 1. Set to differentiate the uplink service type based on VID (VID = 100). The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 service 1 up vid 100 0
Admin\onu\lan#
```


9.16 Configuring Multicast VLAN for an ONU FE Port

Command Function

You can use this command to configure the multicast VLAN for a specified FE port of the ONU.

Command Format

```
set epon slot <slotNo> pon <ponNo> onu <onuNo> port <portNo> cvid <cvid> ccos  
<cos> ctpid <ctpid> svid <svid> scos <cos> stpid <stpid>
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onuNo>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
cvid <cvid>	<cvid> means the inner vid. The value range: 1 to 4085, or 0xffff.	Mandatory
ccos <cos>	<cos> means the inner PON priority or COS. The value range: 0 to 7, or 0xffff.	Mandatory
ctpid <ctpid>	<tpid>: the inner tag protocol identifier. The value range: 0 to 0xffff, or 0x8100.	Mandatory
svid <svid>	<cvid> means the outer vid. The value range: 1 to 4085, or 0xffff.	Mandatory
scos <cos>	<cvid> means the outer vid. The value range: 1 to 4085, or 0xffff.	Mandatory
stpid <stpid>	<cvid> means the outer vid. The value range: 1 to 4085, or 0xffff.	Mandatory

Command Example

Configure the multicast for Port 4 of ONU 1. Set the inner VLAN to 100, inner COS to 1, TPID to 33024, outer VLAN to 100, outer CoS to 1, and TPID to 33024. The ONU is connected to PON Port 1 in Slot 12.


```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 cvid 100 ccoss 1 ctpid 33024 svid 200
scos 2 stpid 33024
Admin\onu\lan#
```

9.17 Viewing Multicast VLAN for an ONU FE Port

Command Function

You can use this command to view the multicast VLAN for a designated FE port of the ONU.

Command Format

```
show epon slot <slotNo> pon <ponNo> onu <onuNo> port <portNo> igmpvlan
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	PON port number. The value ranges from 1 to 8.	Mandatory
onu <onuNo>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory

Command Example

View the multicast CVLAN for Port 1 of ONU 1. The inner VLAN is 100, inner COS is 1, TPID is 33024, outer VLAN is 100, outer COS is 1, and TPID is 33024. The ONU is connected to PON Port 1 in Slot 3.

```
Admin\onu\lan#show epon slot 3 pon 1 onu 1 port 1 igmpvlan
cvid 100 ccoss 1 ctpid 33024 svid 200 scos 2 stpid 33024
Admin\onu\lan#
```


9.18 Configuring Downlink Port Rate Limiting for an ONU FE Port

Command Function

You can use this command to configure the port rate limiting parameters for a specified FE port of the ONU.

Command Format

```
set epon slot <slot_out> pon <pon_no> onu <onu_list> port <port_no> down_cir  
<downCIR> down_pir <downPIR> down_state <downstate>
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
down_cir <downCIR>	<downCIR>, the maximum downlink bandwidth. The value ranges from 0 to 0xffffffff.	Mandatory
down_pir <downPIR>	<downPIR>, the downlink peak cell rate. The value ranges from 0 to 0xffffffff.	Mandatory
down_state <downstate>	<downstate>, the downlink rate limiting enable status. ◆ 1: Enable downlink rate limiting. ◆ 0: Disable downlink rate limiting.	Mandatory

Command Example

Enable the downlink rate limiting function for Port 4 of ONU 1. Set the maximum downlink bandwidth for rate limiting of Port 4 to 3000, and the peak value to 30000. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 down_cir 30000 down_pir 3000  
down_state 1  
Admin\onu\lan#
```


9.19 Configuring Uplink Port Rate Limiting for an ONU FE Port

Command Function

You can use this command to configure the uplink port rate limiting parameters for a designated FE port on the ONU.

Command Format

```
set epon slot <slot_out> pon <pon_no> onu <onu_list> port <port_no> up_cir
<UPCIR> up_cbs <UPCBS> up_ebs <UPEBS> up_state <upstate>
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
up_cir <UPCIR>	The uplink maximum bandwidth. The value ranges from 0 to 0xffffffff.	Mandatory
up_cbs <UPCBS>	The uplink committed burst size. The value ranges from 0 to 0xffffffff.	Mandatory
up_ebs <UPEBS>	The uplink exceeded burst size. The value ranges from 0 to 0xffffffff.	Mandatory
up_state <upstate>	The uplink rate limiting enable status. ◆ 1: Enable the uplink rate limiting function. ◆ 0: Disable the uplink rate limiting function.	Mandatory

Command Example

Enable the uplink rate limiting function for Port 4 of ONU 1. Set the maximum uplink bandwidth for rate limiting of Port 4 to 5000, and other values to 0. The ONU is connected to PON Port 1 in Slot 12.

```
Admin\onu\lan#set epon slot 12 pon 1 onu 1 port 4 up_cir 5000 up_cbs 0 up_ebs 0
up_state 1
Admin\onu\lan#
```


9.20 Configuring the ONU Port Attributes in a Batch Manner

Command Function

You can use this command to configure the port attributes of the designated FE port on the ONU in a batch manner.

Command Format

```
set onu <slotno> <ponno> <onuno> port <portno> [ enable|disable] mac <limit>
profile portattr <prf_id> policing <prf_id>
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	The PON port number, ranging from 1 to 8.	Mandatory
onu <onulist>	The ONU authorization number, ranging from 1 to 128.	Mandatory
port <portno>	The ONU port number, ranging from 1 to 24.	Mandatory
[enable disable]	Enable or disable the port. ◆ Enable: Enable the port. ◆ Disable: Disable the port.	Mandatory
mac <limit>	Limit for the number of MAC addresses, ranging from 0 to 254.	Mandatory
portattr <prf_id>	The bound port attribute profile ID, ranging from 1 to 1024, or can be set to 0xffff.	Mandatory
policing <prf_id>	The bound port rate limiting profile ID, ranging from 1 to 1024, or can be set to 0xffff.	Mandatory

Command Example

Enable Port 4 of ONU 1. Set the limit for the number of MAC addresses of Port 4 to 5. Bind port attribute profile 1 and port rate limiting profile 2 to to Port 4. The ONU is connected to PON Port 1 of Slot 12.

```
Admin\onu\lan#set onu 12 1 1 port 4enable mac 5 profile portattr 1 policing 2
Admin\onu\lan#
```


9.21 Configuring Service Parameters of the ONU Port in a Batch Manner

Command Function

You can use this command to configure the services of the FE port on the ONU in a batch manner.

Command Format

```
set batchserv_bind <slotno> <ponno> <onulist> <portno> serv <serviceno> mode
<prf_id> svlan <prf_id> diff <prf_id> diff_up <prf_id>
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
pon <ponNo>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onulist>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
serv <serviceno>	The sequence number of services. The value ranges from 1 to 10.	Mandatory
mode <prf_id>	The bound service model profile ID. The value ranges from 0 to 1024, or can be set to 0xffff.	Mandatory
svlan <prf_id>	The bound SVLAN profile ID. The value ranges from 0 to 1024, or can be set to 0xffff.	Mandatory
diff <prf_id>	Bind the downlink traffic classification rule profile ID to FE port. The value ranges from 0 to 1024, or can be set to 0xffff.	Mandatory
diff_up <prf_id>	Bind the uplink traffic classification rule profile ID to FE port. The value ranges from 0 to 1024, or can be set to 0xffff.	Mandatory

Command Example

Bind service model profile ID to 1, SVLAN profile ID to 2, downlink traffic classification rule profile ID to 3, uplink traffic classification rule profile ID to 3 at Service 1 of Port 4 on ONU 1. The ONU is connected to PON Port 1 of Slot 12.

```
Admin\onu\lan#set batchserv_bind 12 1 1 4 serv 1 mode 1 svlan 2 diff 3 diff_up 3
Admin\onu\lan#
```


9.22 Viewing Service Configuration for an ONU FE Port

Command Function

You can use this command to view the service configuration for an ONU FE port.

Command Format

```
show onufe_service slot[ <slot> | all] pon[ <pon_no> | all] onu[ <onu_no> | all]
```

Parameter Description

Parameter	Description	Attribute
[<slot> all]	The slot number. <slot>, the value ranges from 1 to 8 or 11 to 18. all: all slots.	Mandatory
[<pon_no> all]	The PON port number. <pon_no>: The value ranges from 1 to 8. all: all PON ports.	Mandatory
[<onu_no> all]	The ONU authorization number. <onu_no>: The value ranges from 1 to 128. all: all ONUs.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory

Command Example

View the service configuration of the FE port on ONU 1. The CVLAN is 100, and the CVLAN mode is transparent transmission. The ONU is connected to PON Port 3 in Slot 1.

```
Admin\onu\lan#show onufe_service slot 3 pon 1 onu 1
```

```
NO.  SL/LI/ONU PORT ID TYPE  MODE CVID COS  TPID  TVID COS  TPID  SVID COS  TPID FVID COS
1    3 /1 /1   1    1  unica tran 100  null 33024 null null null  null null null null null
```

```
Admin\onu\lan#
```


9.23 Viewing Service Configuration for an ONU FE Port Based on VLAN

Command Function

You can use this command to view the service related configuration of an ONU FE port based on the configured VLAN.

Command Format

```
show onu_service by vlan <vlanid>
```

Parameter Description

Parameter	Description	Attribute
<vlanid>	<cvid>: The service vid, ranging from 1 to 4085.	Mandatory

Command Example

View the FE port related configuration with VLAN 100. There are two entries: One is the service at Port 2 of ONU 1 configured with CVLAN 100, unicast service type and transparent CVLAN mode. The ONU is connected to PON Port 1 in Slot 3. The other service is at Port 2 of ONU 1 configured with VLAN 100, unicast service type and transparent CVLAN mode. The ONU is connected to PON Port 1 in Slot 2.

```
Admin\onu\lan#show onu_service by vlan 100
```

```
----- FE PORT CONFIG -----
NO.  SL/LI/ONU PORT ID TYPE  MODE CVID COS  TPID  TVID COS  TPID  SVID COS  TPID FVID COS
1    2 /1 /1   2    1 unicast tran 100  2    33024 null null null null null null null null
2    3 /1 /1   1    1 unicast tran 100 null 33024 null null null null null null null null
```

```
Admin\onu\lan#
```

9.24 Configuring the WAN Connection Service

Command Function

You can use this command to configure the WAN connection service.

Command Format

```
set wancfg slot <slot_out> <pon_no> <onu_no> index <wan_index> mode[ tr069|
internet|tr069_internet|other|multi|voip|voip_internet|iptv|radius|
radius_internet|unicast_iptv|multicast_iptv] type[ bridge|route] <vid>
<cos> nat[ enable|disable] qos[ enable|disable] { vlanmode[ tag|transparent]
tvlan[ enable|disable] <tvid> <tcos>} *1 { qinq[ enable|disable] <stpid>
<svlan> <scos>} *1 dsp{ [ dhcp]} *1 { [ dhcp_remoteid] <dhcp_remoteid>} *1
{ [ static] ip<A.B.C.D> mask<A.B.C.D> gate<A.B.C.D> master<A.B.C.D> slave
<A.B.C.D>} *1 { [ pppoe] proxy[ enable|disable] <username> <password>
<servname> [ auto|payload]} *1 { [ active] [ enable|disable]} *1 { [ entries]
<bind_num>} *1 { [ fe1|fe2|fe3|fe4|ssid1|ssid2|ssid3|ssid4]} *8
```

Parameter Description

Parameter	Description	Attribute
<slot_out>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<pon_no>	The PON port number ranges from 1 to 16.	Mandatory
<onu_no>	The ONU number, ranging from 1 to 128.	Mandatory
<wan_index>	The WAN connection index. The value ranges from 1 to 8.	Mandatory
mode[tr069 internet tr069_internet other multi voip voip_internet iptv radius radius_internet unicast_iptv multicast_iptv]	The WAN connection mode	Mandatory
type[bridge route]	The WAN connection type. ◆ bridge ◆ route	Mandatory
<vid>	The VLAN ID of the WAN connection. The value ranges from 1 to 4085, or can be set to 0xffff (NULL).	Mandatory
<cos>	The 802.1p priority of the WAN connection, ranging from 0 to 7, or can be set to 0xffff (NULL).	Mandatory
nat[enable disable]	Enable or disable the NAT for the WAN connection. ◆ disable ◆ enable	Mandatory
qos[enable disable]	Enable or disable the QoS function for the WAN connection. ◆ disable ◆ enable	Mandatory
vlanmode[tag transparent]	The VLAN mode.	Mandatory

Parameter	Description	Attribute
tvlan[enable disable]	The translation state (enabled or disabled).	Mandatory
<tvid>	The VID after being translated. The value ranges from 1 to 4085, or can be set to 0xffff (NULL).	Mandatory
<tcos>	The priority of the PON. The value ranges from 0 to 7, or can be set to 0xffff (NULL).	Mandatory
qinq[enable disable]	The QinQ state (enabled or disabled).	Mandatory
<stpid>	The tag protocol identifier, ranging from 0 to 0xfffe.	Mandatory
<svlan>	The SVLAN ID. The value ranges from 1 to 4085, or can be set to 0xffff (NULL).	Mandatory
<scos>	The priority of the PON. The value ranges from 0 to 7, or can be set to 0xffff (NULL).	Mandatory
[dhcp]	Set whether it is in DHCP mode.	Mandatory
[dhcp_remoteid] <dhcp_remoteid>	The DHCP remote identifier should be a character string containing no more than 10 bytes.	Mandatory
[static]	Set whether it is in static mode.	Mandatory
ip <A.B.C.D>	The static IP address of the WAN connection.	Mandatory
mask <A.B.C.D>	The subnet mask of the WAN connection.	Mandatory
gate <A.B.C.D>	The default gateway of the WAN connection.	Mandatory
master <A.B.C.D>	The preferred DNS of WAN connection.	Mandatory
slave <A.B.C.D>	The standby DNS of WAN connection.	Mandatory
[pppoe]	Set whether it is in PPPOE mode.	Mandatory
proxy[enable disable]	Enable or disable the PPPOE proxy for the WAN connection.	Mandatory
<username>	The username of the PPPOE connection should contain no more than 32 characters.	Mandatory
<password>	The password of the PPPOE connection should contain no more than 32 characters.	Mandatory
<servname>	The name of the PPPOE service should contain no more than 32 characters.	Mandatory
[auto payload]	The PPPoE dialing mode. ◆ Auto-connect. ◆ Connect when there is some payload.	Mandatory
[active] [enable disable]	Enable or disable the QoS function for the WAN connection. ◆ disable ◆ enable	Mandatory

Parameter	Description	Attribute
[entries] <bind_num>	The number of SSID ports to be bound.	Mandatory
[fe1 fe2 fe3 fe4 ssid1 ssid2 ssid3 ssid4]	Bind the SSID port to the WAN connection.	Mandatory

Command Example

Configure the WAN connection service for ONU 1. Set the WAN connection index to 1, WAN connection mode to voip, WAN connection type to route, VLAN ID of WAN connection to 1, WAN connection 802.1p priority to 1. Enable the NAT function, disable the QoS function, and enable the DHCP function. Set the number of the SSID ports to be bound to 1, the to-be-bound SSID port to FE1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#set wancfg slot 1 1 1 index 1 mode voip type route 1 1 nat enable qos  
disable dsp dhcp entries 1 fe1  
Admin\onu\lan#
```

9.25 Validating the WAN Connection Service

Command Function

You can use this command to submit the WAN connection service configuration.

Command Format

```
apply wancfg slot <slot_out> <pon_no> <onu_no>
```

Parameter Description

Parameter	Description	Attribute
<slot_out>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<pon_no>	The PON port number, ranging from 1 to 16.	Mandatory
<onu_no>	The ONU number, ranging from 1 to 128.	Mandatory

Command Example

Validate the WAN connection service configuration of ONU 1. The ONU is connected to PON Port 1 in Slot 1.


```
Admin\onu\lan#apply wancfg slot 1 1 1
```

```
Admin\onu\lan#
```

9.26 Viewing the WAN Connection Service

Command Function

You can use this command to view the WAN connection configuration of designated ONUs or all slots.

Command Format

```
show onu_service slot[ <slot> | all] pon[ <1-16> | all] onu[ <1-128> | all]
```

Parameter Description

Parameter	Description	Attribute
[<slot> all]	The slot number. <slot>, the value ranges from 1 to 8 or 11 to 18. all: all slots.	Mandatory
[<1-16> all]	The PON port number. <pon_no>: The value ranges from 1 to 16. all: all PON ports.	Mandatory
[<1-128> all]	The ONU authorization number. <onu_no>: The value ranges from 1 to 128. all: all ONUs.	Mandatory
port <portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory

Command Example

View the WAN connection configuration information of ONU 1. This ONU is configured with one entry of WAN connection service. The name of WAN connection is 1_TR069_R_VID_, the mode is tr069, the connection type is route, and DHCP-mode address is used. The ONU is connected to PON Port 16 of Slot 16.

```
Admin\onu\lan#show onu_service slot 16 pon 16 onu 1
```

```
----- WAN CONFIG -----
ID:1  NAME:1_TR069_R_VID_  MODE:tr069  TYPE:route  NAT:dis  QOS:dis
WV_M:tran  WV:null  COS:0  TV_M:dis  TV:null  COS:null  SV_M:dis  TPID:33024  SV:null  COS:null
ADDR_M:dhcp
WAN_BAND_PORT:null
```

```
Admin\onu\lan#
```


9.27 Configuring the ONU WiFi Service

Command Function

You can use this command to configure the ONU WiFi service parameters.

Command Format

```
set wifi_serv_cfg slot[ <1-8>|<11-18>] pon <1-16> onu <1-128> wifi[ enable|  
disable] district[ etsi|fcc|thailand|philippines|indonesia|brazil|india|  
armenia|malaysia|pakistan|russian|china|chile|usa|myanmar|ecuador|  
colombia|argentina|stlanka|iran|yemen|saudiarabia|kuwait|iraq] channel  
<0-13> {[ standard] [ 802.11b|802.11g|802.11b/g|802.11n|802.11bgn] } *1  
{ [ txpower] [ <0-40>|<65535>] } *1 { [ frequency] [ 2.4ghz|5.8ghz] } *1  
{ [ freq_bandwidth] [ 20mhz|40mhz|20mhz/40mhz] } *1
```

Parameter Description

Parameter	Description	Attribute
slot[<1-8> <11-18>]	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <1-16>	The PON port number, ranging from 1 to 16.	Mandatory
onu <1-128>	The ONU number, ranging from 1 to 128.	Mandatory
wifi[enable disable]	Enable the WiFi function. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Parameter	Description	Attribute
<code>district[etsi fcc thailand philippines indonesia brazil india armenia malaysia pakistan russian china chile usa myanmar ecuador colombia argentina srilanka iran yemen saudiarabia kuwait iraq</code>	<p>The wireless area. The wireless standard used for WiFi service. The default standard is etsi.</p> <ul style="list-style-type: none"> ◆ 0: Europe (ETSI). ◆ 1: North America (FCC). ◆ 2: Thailand. ◆ 3: Philippines. ◆ 4: Indonesia. ◆ 5: Brazil. ◆ 6: India. ◆ 7: Armenia. ◆ 8: Malaysia. ◆ 9: Pakistan. ◆ 10: Russian Federation. ◆ 11: China. ◆ 12: Chile. ◆ 13: United States. ◆ 14: Myanmar. ◆ 15: Ecuador. ◆ 16: Colombia. ◆ 17: Argentina. ◆ 18: Sri Lanka. ◆ 19: Islamic Republic of Iran. ◆ 20: Yemen. ◆ 21: Saudi Arabia. ◆ 22: Kuwait. ◆ 23: Iraq. 	Mandatory
<code>channel <0-13></code>	<p>The wireless channel number, that is, the wireless channel number occupied by the service.</p> <ul style="list-style-type: none"> ◆ When the wireless area is Europe, the value ranges from 0 to 13. ◆ When the wireless area is America, the value ranges from 0 to 11. <p>The default value is 0, which indicates the wireless channel number is selected automatically.</p>	Mandatory
<code>[standard] [802.11b 802.11g 802.11b/g 802.11n 802.11bgn]</code>	<p>The wireless standard. The default value is 802.11bgn.</p>	Mandatory

Parameter	Description	Attribute
[txpower] [<0-40> <65535>]	The transmitting power. The unit is dBm. ◆ 4:20%. ◆ 8:40%. ◆ 12:60%. ◆ 16:80%. ◆ 20:100%. ◆ 24:120%. ◆ 28:140%. ◆ 32:160%. ◆ 36:180%. ◆ 40:200%.	Mandatory
[frequency] [2.4ghz 5.8ghz]	The operating frequency.	Mandatory
[freq_bandwidth] [20mhz 40mhz 20mhz/40mhz]	The frequency bandwidth.	Mandatory

Command Example

Enable the WiFi function for ONU 2. Set the wireless area to Europe, channel number to 10, wireless standard to 802.11bgn, Tx power to 4dBm, frequency to 2.4G, and bandwidth to 20m. The ONU is connected to PON Port 1 in Slot 14.

```
Admin\onu\lan#set wifi_serv_cfg slot 14 pon 1 onu 2 wifi enable district etsi channel 10
standard 802.11bgn txpower 4 frequency 2.4ghz freq_bandwidth 20mhz
set hg wifi server config ok!
Admin\onu\lan#
```

9.28 Configuring the ONU WLAN Service

Command Function

You can use this command to configure the WLAN service for an ONU.

Command Format

```
set wifi_serv_wlan slot[ <1-8>|<11-18>] pon<1-16> onu<1-128> index<1-4>
ssid[ enable|disable] [ <ssid>|null] hide[ enable|disable] authmode[ open|
shared|wepauto|wpa_psk|wpa|wpa2psk|wpa2|wpa/wpa2|wpa_psk/wpa2psk|
wpa_psk/wpapsk2|waipsk|wai] encrypt_type[ none|wep|tkip|aes|tkipaes|wpi]
wpakey[ <wpakey>|null] interval<0-4194303> {[ radius_serv] [ unknown|ipv4|
ipv6|ipv4z|ipv6z|dns] <radius_serv> port<0-65535> pswd[ <pswd>|null]} *1
{[ wep_length] [ 40bit|104bit] key_index<1-4> wep_key[ <wep_key1>|null]
```



```
[ <wep_key2> | null] [ <wep_key3> | null] [ <wep_key4> | null] } *1
{ [ wapi_serv_addr] <A.B.C.D> <0-65535> } *1 { [ wifi_connect_num] <num> } *1
```

Parameter Description

Parameter	Description	Attribute
slot[<1-8> <11-18>]	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <1-16>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <1-128>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
index <1-4>	The SSID index. The value ranges from 1 to 4.	Mandatory
ssid[enable disable]	Enable the SSID function. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
[<ssid> null]	The service set identifier, the name of Wireless Local Area Network, is used to differentiate various networks. Only users who pass the identity verification can access the corresponding network. This prevents unauthorized operators from accessing the network. It should include no more than 32 characters.	Mandatory
hide[enable disable]	Whether to hide the SSID. If the SSID is hidden, the user's PC cannot find the SSID, but the user can connect the wireless network by configuring the SSID manually. ◆ enable: Hide. ◆ disable: Do not hide.	Mandatory
authmode[open shared wepauto wpa_psk wpa wpa2psk wpa2 wpa / wpa2 wpa_psk wpa2psk wpa_psk / wpapsk2 waipsk wai]	The WLAN authentication mode.	Mandatory
encrypt_type[none wep tkip aes tkipaes wpi]	The WLAN encryption type.	Mandatory
wpakey[<wpakey> null]	The pre-shared key of WPA encryption method. WPA is an upgrade version of WEP which reinforces key protection and 802.1X protocol. The value should be set to NULL or a character string containing no more than 64 bytes. Only when the authentication mode is WPAPSK or WPA2PSK is the field valid.	Mandatory

Parameter	Description	Attribute
interval <0-4194303>	The upgrade interval of the WPA pre-shared key. The value ranges from 0 to 4194303. The default value is 86400 (unit :s).	Mandatory
[radius_serv] [unknown ipv4 ipv6 ipv4z ipv6z dns]	The RADIUS server. The universal Internet address.	Mandatory
<radius_serv> port <0-65535>	The RADIUS server port. The value ranges from 0 to 65535. The default value is 0.	Mandatory
pswd [<pswd> null]	The RADIUS server password. The value should contain no more than 32 bytes.	Mandatory
[wep_length] [40bit 104bit]	The WEP key length. Only when the key mode is WEP is the field valid. The default value is 1. Applicable value: ◆ 1: 40 bit. ◆ 2: 104 bit.	Mandatory
key_index <1-4>	The key index. Only when the key mode is WEP is the field valid. The value ranges from 1 to 4. The default value is 1.	Mandatory
wep_key [<wep_key1> null] [<wep_key2> null] [<wep_key3> null] [<wep_key4> null]	The WEP key. The value should be set to NULL or a character string containing no more than 32 bytes. ◆ <wep_key1>: the first WEP key. ◆ <wep_key2>: the second WEP key. ◆ <wep_key3>: the third WEP key. ◆ <wep_key4>: the fourth WEP key.	Mandatory
[wapi_serv_addr] <A.B.C.D>	The IP address of the WAPI authentication server.	Mandatory
<0-65535>	The port of the WAPI authentication server, ranging from 0 to 65535.	Mandatory
[wifi_connect_num] <num>	The number of the WiFi connections, ranging from 0 to 32.	Mandatory

Command Example

Set the SSID index of the ONU 2 to 1, enable the SSID, set the SSID to 1 and hide the SSID. Set the WLAN authentication mode to OPEN, WLAN encryption type to NONE, pre-shared key of WPA encryption mode to NULL, WPA key upgrade interval to 86400. The ONU is connected to PON Port 1 in Slot 14.

```
Admin\onu\lan#set wifi_serv_wlan slot 14 pon 1 onu 2 index 1 ssid enable 1 hide enable
authmode open encrypt_type none wpakey null interval 86400
set hg wifi config ok!
Admin\onu\lan#
```


9.29 Viewing WiFi Configuration Parameters

Command Function

You can use this command to view the WiFi configuration parameters.

Command format

```
show wifi_serv slot[ <1-8> | <11-18>] pon <1-16> onu <1-128>
```

Parameter Description

Parameter	Description	Attribute
slot[<1-8> <11-18>]	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <1-16>	The PON port number ranges from 1 to 16.	Mandatory
onu <1-128>	The ONU number, ranging from 1 to 128.	Mandatory

Command Example

View the WiFi parameters of ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#show wifi_serv slot 1 pon 1 onu 1
Admin\onu\lan#
```

9.30 Validating Service Configuration for an ONU FE Port

Command Function

When the service configuration at an FE port is completed, use this command to validate the configuration by sending the packet of the service configuration at the specified ONU FE port to the line card.

Command Format

```
apply onu <slotno> <ponno> <onuno> vlan
```


Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. <slot>: The value ranges from 1 to 8, 11 to 18.	Mandatory
<ponno>	The PON port number. <pon_no>: The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. <onu_no>: The value ranges from 1 to 128.	Mandatory

Command Example

Transmit the package of service configuration for the ONU FE port to validate the configuration at FE Port 1 of ONU 1. The ONU is connected to PON Port 16 in Slot 16.

```
Admin\onu\lan#apply onu 16 16 1 vlan
Admin\onu\lan#
```

9.31 Configuring the VEIP Management Channel of the ONU

Command Function

You can use this command to configure the VEIP management channel of the ONU.

Command Format

```
setveip_mgr_parslot<slotno>pon<ponno>onu<onuno>veip_port<veip_port>-
port_type[ veip] mgr_channel[ enable|disable] { model[ tr069|snmp|voip_tr069]
item<item>} *1
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
<ponno>	The PIN port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
<veip_port>	The VEIP port number. The VEIP port number of the ONU. Each ONU has only one VEIP port currently, and the port number is set to 1.	Mandatory

Parameter	Description	Attribute
[enable disable]	Enable or disable the VEIP management channel. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
{ model[tr069 snmp] }	The VEIP management channel mode. ◆ tr069: the tr069 mode. ◆ snmp: the snmp mode. ◆ voip_tr069: the voip_tr069 mode.	Mandatory
<item>	The item mode.	Mandatory

Command Example

Enable the VEIP management channel for ONU1. The number of the VEIP management port is 1, the port type is vrip, the mode is tr069, and the item mode is 1.

```
Admin\onu\lan#set veip_mgr_par slot 1 pon 1 onu 1 veip_port 1 port_type veip
mgr_channel enable model tr069 item 1
Admin\onu\lan#
```

9.32 Configuring the Management VLAN for ONU VEIP

Command Function

You can use this command to configure the management VLAN for ONU VEIP.

Command Format

```
set veip_mgr_vlan slot <slotno> pon <ponno> onu <onuno> veip_port <veip_port>
mgr_id <mgr_id> {[ name] <mgr_name>} *1 {[ ip_type] [ static|dhcp]} *1
{[ ip_addr] [ ipv4|ipv6|ipv4z|ipv6z] <ip_addr> <0-32>} *1 {[ gateway] [ ipv4|
ipv6|ipv4z|ipv6z] <gateway> <0-32>} *1 {[ pri_dns] [ ipv4|ipv6|ipv4z|ipv6z]
<pri_dns> <0-32>} *1 {[ sec_dns] [ ipv4|ipv6|ipv4z|ipv6z] <sec_dns> <0-32>} *1
{[ protocol] [ tcp|udp]} *1 {[ port] <0-65535>} *1 {[ priority] <0-63>} *1
{[ tag_type] [ tag|untag]} *1 {[ svlan_label] <hexnum>} *1 {[ svlanid] [ <1-
4085>|null]} *1 {[ svlan_cos] [ <0-7>|null]} *1 {[ cvlan_label] <hexnum>} *1
{[ cvlanid] [ <1-4085>|null]} *1 {[ cvlan_cos] [ <0-7>|null]} *1
```


Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
<veip_port>	The VEIP port number. The VEIP port number of the ONU. Each ONU has only one VEIP port currently, and the port number is set to 1.	Mandatory
<mgr_id>	The management ID. The value is fixed and set to 1 currently.	Mandatory
[name] <mgr_name>	The name of the management VLAN. The name is a character string composed of no more than 16 bytes. The default value is manage.	Mandatory
[ip_type] [static dhcp]	The way to obtain IP address When the IP address is obtained in a static way, the four parameters including the static IP address, gateway, preferred DNS, and standby NDS are invalid. The default value is dhcp.	Mandatory
{[ip_addr] [ipv4 ipv6 ipv4z ipv6z] <ip_addr><0-32>} *1	The IP address. ipv4 ipv6 ipv4z ipv6z: the universal Internet address type. <ip_addr>: the IP address. <0-32>: the byte length of the InetAddress, ranging from 0 to 32. The default value is 0, indicating that the length of the InetAddress is 0. <ul style="list-style-type: none"> ◆ For IPv4, the value is set to 4. ◆ For IPv6, the value is set to 16. ◆ For IPv4z, the value is set to 8. ◆ For IPv6z, the value is set to 20. 	Mandatory
{[gateway] [ipv4 ipv6 ipv4z ipv6z] <gateway><0-32>} *1	The gateway. ipv4 ipv6 ipv4z ipv6z: the universal Internet address type. <ip_addr>: the IP address. <0-32>: the byte length of the InetAddress, ranging from 0 to 32. The default value is 0, indicating that the length of the InetAddress is 0. <ul style="list-style-type: none"> ◆ For IPv4, the value is set to 4. ◆ For IPv6, the value is set to 16. ◆ For IPv4z, the value is set to 8. ◆ For IPv6z, the value is set to 20. 	Mandatory

Parameter	Description	Attribute
<code>{ [pri_dns] [ipv4 ipv6 ipv4z ipv6z] <pri_dns><0-32> } * 1</code>	<p>The primary DNS ipv4 ipv6 ipv4z ipv6z: the universal INTERNET address type. <ip_addr>: the IP address.</p> <p><0-32>: The byte length of the InetAddress, ranging from 0 to 32. The default value is 0, indicating that the length of the InetAddress is 0.</p> <ul style="list-style-type: none"> ◆ For IPv4, the value is set to 4. ◆ For IPv6, the value is set to 16. ◆ For IPv4z, the value is set to 8. ◆ For IPv6z, the value is set to 20. 	Mandatory
<code>{ [sec_dns] [ipv4 ipv6 ipv4z ipv6z] <sec_dns><0-32> } * 1</code>	<p>The standby DNS ipv4 ipv6 ipv4z ipv6z: the universal INTERNET address type. <ip_addr>: the IP address.</p> <p><0-32>: The byte length of the InetAddress, ranging from 0 to 32. The default value is 0, indicating that the length of the InetAddress is 0.</p> <ul style="list-style-type: none"> ◆ For IPv4, the value is set to 4. ◆ For IPv6, the value is set to 16. ◆ For IPv4z, the value is set to 8. ◆ For IPv6z, the value is set to 20. 	Mandatory
<code>[protocol] [tcp udp]</code>	<p>The network protocol. The default value is UDP.</p> <ul style="list-style-type: none"> ◆ tcp: the transmission control protocol (TCP). ◆ udp: the universal datagram protocol (UDP). 	Mandatory
<code>[port] <0-65535></code>	The network port number. The value ranges from 0 to 65535.	Mandatory
<code>[priority] <0-63></code>	The priority. The value ranges from 0 to 63. The default value is 0.	Mandatory
<code>[tag_type] [tag untag]</code>	The TAG attribute. The default value is untag.	Mandatory
<code>[svlan_label] <hexnum></code>	The SVLAN protocol identifier. The value ranges from 1 to 65534, or can be set to 0xffff. The default value is 0x8100.	Mandatory
<code>[svlanid] [<1-4085> null]</code>	The SVLAN ID. <1-4085>: The value ranges from 1 to 4085. The default value is 0xffff. null: not configured.	Mandatory
<code>[svlan_cos] [<0-7> null]</code>	The SVLAN priority. The value ranges from 0 to 7, or can be set to 0xffff. The default value is 0xffff.	Mandatory
<code>[cvlan_label] <hexnum></code>	The CVLAN protocol identifier. The value ranges from 1 to 65534, or can be set to 0xffff. The default value is 0xffff.	Mandatory
<code>[cvlanid] [<1-4085> null]</code>	The CVLAN ID. The value ranges from 1 to 4085. The default value is 0xffff.	Mandatory
<code>[cvlan_cos] [<0-7> null]</code>	The CVLAN priority. The value ranges from 0 to 7, or can be set to 0xffff. The default value is 0xffff.	Mandatory

Command Example

Configure VEIP Port 1 of ONU 2. Set the management ID to 1, management VLAN name to test, IP obtaining method to static IP, IP address type to IPv4, IP address to 10.19.8.15, length of the InetAddress to 4, gateway IP address type to IPv4, IP address to 10.92.1.254, and length of the InetAddress to 4. The ONU is connected to PON Port 1 in Slot 14.

```
Admin\onu\lan#set veip_mgr_vlan slot 14 pon 1 onu 2 veip_port 1 mgr_id 1 name test
ip_type static ip_addr ipv4 10.19.8.15 4 gateway ipv4 10.92.1.254 4
set ONU port manage vlan ok!
Admin\onu\lan#
```

9.33 Deleting the VEIP Management VLAN of the ONU

Command Function

You can use this command to delete the VEIP management VLAN of the ONU.

Command Format

```
no veip_mgr_vlan slot <slotno> pon <ponno> onu <onuno> veip_port <veip_port>
mgr_id <mgr_id>
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
<veip_port>	The VEIP port number. The VEIP port number of the ONU. Each ONU has only one VEIP port currently, and the port number is set to 1.	Mandatory
<mgr_id>	The management ID. The value is fixed and set to 1 currently.	Mandatory

Command Example

Delete the VEIP management VLAN of ONU 2. The port of the VEIP is 1, and the management ID is 1. The ONU is connected to PON Port 1 in Slot 14.


```
Admin\onu\lan#no veip_mgr_vlan slot 14 pon 1 onu 2 veip_port 1 mgr_id 1
Admin\onu\lan#
```

9.34 Applying the VEIP Management VLAN of the ONU

Command Function

You can use this command to apply the VEIP management VLAN of the ONU.

Command Format

```
apply veip_mgr_vlan slot <slotno> pon <ponno> onu <onuno>
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
<ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory

Command Example

Apply the VEIP management VLAN of ONU2. The ONU is connected to PON Port 1 of Slot 14.

```
Admin\onu\lan#apply veip_mgr_vlan slot 14 pon 1 onu 2
apply onu veip manage ok!
Admin\onu\lan#
```

9.35 Viewing the VEIP Management VLAN of the ONU

Command Function

You can use this command to view the VEIP management VLAN of the ONU.

Command Format

```
show[ veip_mgr] slot <slotno> pon <ponno> onu <onuno>
```

Parameter Description

Parameter	Description	Attribute
[veip_mgr]	Set whether to display the VEIP parameters.	Mandatory
<slotno>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
<ponno>	The PON port number, ranging from 1 to 16.	Mandatory
<onuno>	The ONU number, ranging from 1 to 128.	Mandatory

Command Example

View the VEIP management VLAN of ONU2. The ONU is connected to PON Port 1 of Slot 14.

```
Admin\onu\lan#show veip_mgr slot 14 pon 1 onu 2
----- SLOT 14 PON 1 ONU 2 VEIP PORT 1-----
PORT TYPE : VEIP
MANAGE FLAG : enable
MANAGE MODEL : tr069
MANAGE ITEM : 1
ONU Manage ID =1
NAME : test
IP TYPE : static
STATIC IP : 10.19.8.15
STATIC MASK : 4
GATEWAY : 10.92.1.254
GATEWAY MASK : 4
PRIMARY DNS : unKnown
SECOND DNS : unKnown
PROTOCOL : udp
PORT : 65535
PRIORITY : 0
TAG : untag
SVLAN TPID =8100
SVLAN ID =65535
SVLAN COS =7
CVLAN TPID =ffff
CVLAN ID =65535
CVLAN COS =65535
Admin\onu\lan#
```


Result Description

Parameter	Description
PORT TYPE	The port type.
MANAGE FLAG	The identifier of enabling a non-OMCI management channel.
MANAGE MODEL	Management mode.
MANAGE ITEM	The number of the management VLAN entries.
ONU Manage ID	The management ID.
NAME	The name of the management VLAN.
IP TYPE IP	The way to obtain IP address
STATIC IP	The static IP address.
STATIC MASK	The static mask.
GATEWAY	The gateway.
GATEWAY MASK	The gateway mask.
PRIMARY DNS	The primary DNS.
PRIMARY DNS MASK	The primary DNS mask.
SECOND DNS	The standby DNS.
SECOND DNS MASK	The standby DNS mask.
PROTOCOL	The network protocol.
PORT	The network port number.
PRIORITY	The priority.
TAG TAG	The TAG attribute.
SVLAN TPID	The management SVLAN protocol identifier.
SVLAN ID	The management SVLAN.
SVLAN COS	The management SVLAN priority.
CVLAN TPID	The management CVLAN protocol identifier.
CVLAN ID	The management CVLAN.
CVLAN COS	The management CVLAN priority.

9.36 Configuring the ONU VEIP Port

Command Function

You can use this command to configure the ONU VEIP at an ONU port. The configuration parameters include uplink / downlink bandwidth, VLAN and ONU VEIP service flow rule, and the QinQ profile.

Command Format

```
set epon slot <slotno> pon <ponno> onu <onuno> port <portno> onuveip <ipno>
<ctpid> <cvid> <ccos> <ttpid> <tvid> <tcos> <stpid> <svid> <scos> <tls>
<servmode> <svlan> {[ qinq] <qinq> serdiff <servdiff>} *1 {[ up_bandwidth]
<upbandwidth> down_bandwidth <down_bandwidth>} *1 {[ servname]
<servlan_name>} *1
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
<portno>	The ONU port number. The value ranges from 1 to 24.	Mandatory
<ipno>	The ONU VEIP service sequence number. The value ranges from 1 to 16.	Mandatory
<ctpid>	The CVLAN tag protocol identifier. The value ranges from 1 to 65535.	Mandatory
<cvid>	The CVLAN ID. The value ranges from 1 to 4085.	Mandatory
<ccos>	The CVLAN CoS. The value can be set to 0 to 7 or 65535.	Mandatory
<ttpid>	The translation VLAN tag protocol identifier. The value ranges from 1 to 65535.	Mandatory
<tvid>	The translation VLAN ID. The value ranges from 1 to 4085.	Mandatory
<tcos>	The translation VLAN CoS. The value can be set to 0 to 7 or 65535.	Mandatory
<stpid>	The LAN tag protocol identifier.	Mandatory
<svid>	The SVLAN ID. The value ranges from 1 to 4085.	Mandatory
<scos>	The VLAN CoS. The value can be set to 0 to 7 or 65535.	Mandatory
<tls>	The TLS identifier. ◆ 0: non-TLS identifier ◆ 1: TLS identifier	Mandatory
<servmode>	The sequence number of the service profile.	Mandatory
<svlan>	The SVLAN ID. The value ranges from 1 to 4085.	Mandatory
[qinq] <qinq>	The QinQ profile name.	Mandatory
serdiff <servdiff>	The traffic classification profile name.	Mandatory
[up_bandwidth] <upbandwidth>	The uplink bandwidth.	Mandatory

Parameter	Description	Attribute
down_bandwidth <down_bandwidth>	The downlink bandwidth.	Mandatory
[servname] <servlan_name>	The name of the VLAN profile bound to the central office end.	Mandatory

Command Example

Configure the VEIP at Port 1 of ONU 7: Set the ONU VEIP service's sequence number to 2, CVLAN tag protocol identifier to 33024, CVLAN ID to 3, CVLAN COS to 7, the translation VLAN tag protocol identifier to 33024, the translation VLAN ID to 20, the translation VLAN COS to 0, the SVLAN tag protocol identifier to 33024, the SVLAN ID to 40, the SVLAN COS to 65535, the TLS identifier to 0, the service profile sequence number to 1, and the SVLAN ID to 7. The ONU is connected to PON Port 1 in Slot 14.

```
Admin\onu\lan#set epon slot 14 pon 1 onu 7 port 1 onuveip 2 33024 3 7 33024 20 0 33024
40 65535 0 1 7
```

```
Admin\onu\lan#
```

9.37 Viewing an ONU VEIP Port

Command Function

You can use this command to view the specific service of the ONU VEIP.

Command Format

```
show epon slot <slotno> pon <ponno> onu <onuno> onuveip servindex{ <servid>
* 1
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
<servid>	The service index. The value ranges from 1 to 16.	Mandatory

Command Example

View the service of the VEIP Port of ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#show epon slot 1 pon 1 onu 1 onuveip servindex 1
Admin\onu\lan#
```

9.38 Deleting an ONU VEIP Port

Command Function

You can use this command to delete the ONU VEIP of an ONU port.

Command Format

```
no epon slot <slotno> pon <ponno> onu <onuno> port <portno> onuveip <ipno>
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
<ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
<onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
<portno>	The ONU port number. ◆ <portNo>: The value ranges from 1 to 24. ◆ all: All ports.	Mandatory
<ipno>	The ONU VEIP service sequence number. The value ranges from 1 to 16.	Mandatory

Command Example

Delete the VEIP from Port 1 of ONU 7, the VEIP service sequence number is 2. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\onu\lan#no epon slot 14 pon 1 onu 7 port 1 onuveip 2
Admin\onu\lan#
```


10 admin\maintenance Directory Command

- ☒ Enabling / Disabling the Syslog Server
- ☒ Adding a Syslog Server
- ☒ Deleting a Syslog Server
- ☒ Configuring the Syslog Upload Level
- ☒ Viewing the Syslog Server Configuration
- ☒ Resetting ONUs in a Batch Manner
- ☒ Resetting the GPON ONU Port
- ☒ Viewing the MAC Address Table for a Slot

10.1 Enabling / Disabling the Syslog Server

Command Function

You can use this command to enable or disable the Syslog server.

Command Format

```
set syslog_server func[ enable|disable]
```

Parameter Description

Parameter	Parameter Description	Attribute
enable	Enable the Syslog server.	Mandatory
disable	Disable the Syslog server.	Mandatory

Command Example

Enable the Syslog server.

```
Admin\maintenance#set syslog_server func enable
Admin\maintenance#show syslog server
syslog server enable, index adress port
syslog upload level : low

Admin\maintenance#
```

10.2 Adding a Syslog Server

Command Function

You can use this command to add a Syslog server.

Command Format

```
set syslog_server <1-5> <A.B.C.D> { <100-65535> } *1
```


Parameter Description

Parameter	Description	Attribute
<1-5>	The numbers of Syslog servers 1 to 5.	Mandatory
<A.B.C.D>	The IP address of the Syslog server.	Mandatory
<100-65535>	The port number of the Syslog server.	Mandatory

Command Example

Configure a Syslog server. Set the serial number to 1 and the IP address to 10.10.1.1.

```
Admin\maintenance##set syslog_server 1 10.10.1.1
Admin\maintenance#set syslog 1 10.10.1.1
Admin\maintenance#show syslog server
syslog server enable, index address port
```

```
1 10.10.1.1 514
```

```
syslog upload level : low
```

```
Admin\maintenance#
```

10.3 Deleting a Syslog Server

Command Function

You can use this command to delete a Syslog server.

Command Format

```
delete syslog_server <1-5>
```

Parameter Description

Parameter	Description	Attribute
<1-5>	The serial number of the Syslog server, ranging from 1 to 5.	Mandatory

Command Example

Delete the first Syslog server configuration entry.


```
Admin\maintenance#delete syslog_server 1
Admin\maintenance#show syslog server
Admin\maintenance#set lacp enable
syslog server enable, index address port
syslog upload level : low
Admin\maintenance#
```

10.4 Configuring the Syslog Upload Level

Command Function

You can use this command to configure the Syslog upload level.

Command Format

```
set syslog upload level [ low|mid|high|none]
```

Parameter Description

Parameter	Description	Attribute
[low mid high none]	The upload level.	Mandatory

Command Example

Set the Syslog server upload level to high.

```
Admin\maintenance#set syslog upload level high
Admin\maintenance#show syslog server
syslog server enable, index address port
syslog upload level : high
Admin\maintenance#
```

10.5 Viewing the Syslog Server Configuration

Command Function

You can use this command to view the Syslog server configuration.

Command Format

```
show syslog server
```


Parameter Description

None

Command Example

View the Syslog server configuration: The server is enabled, the serial number is 1, IP address is 10.10.1.1 and the port is 514.

```
Admin\maintenance#show syslog server
syslog server enable, index adress port
1 10.10.1.1 514
syslog upload level : low
Admin\maintenance#
```

10.6 Resetting ONUs in a Batch Manner

Command Function

You can use this command to reset ONUs in a batch manner.

Command Format

```
reboot slot <slotno> pon <ponno> onulist <onulist>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onulist <onulist>	The ONU number. The value ranges from 1 to 128 and supports input of 1-18.	Mandatory

Command Example

Reset ONU 1 to ONU 10 that are connected to PON Port 1 of Slot 1.

```
Admin\maintenance#reboot slot 1 pon 1 onulist 1—10
Admin\maintenance#
```


10.7 Resetting the GPON ONU Port

Command Function

You can use this command to reset the GPON ONU port.

Command Format

```
reboot feport slot <slotno> pon <ponno> onu <onuno> fe <fe_list>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu[<onuno> null]	The ONU number. The value ranges from 1 to 128.	Mandatory
fe <fe_list>	The port number. The value ranges from 1 to 24, or supports input of 1-2.	Mandatory

Command Example

Reset Port 1 and 2 of ONU 1 that is connected to PON Port 1 of Slot 1.

```
Admin\maintenance#reboot feport slot 1 pon 1 onu 1 fe 1—2
Admin\maintenance#
```

10.8 Viewing the MAC Address Table for a Slot

Command Function

You can use this command to view the MAC address table.

Command Format

```
show fdb slot <slotno>
```

Parameter Description








Parameter	Description	Attribute
slot <slotno>	The slot number. The value (01A) ranges from 1 to 8, 11 to 18. The value (04B) ranges from 1 to 2.	Mandatory

Command Example

View the MAC address table learned in Slot 1.

```
Admin\maintenance#show fdb slot 1  
fdb entry count = 1  
mac=00:0a:88:88:88:06 vlan=4089 port=6 Hit  
Admin\maintenance#
```


11 admin\maintenance\performance Directory Command

-  Enabling / Disabling the MIB Performance Collection Switch
-  Viewing MIB Performance Collection Switch Information
-  Viewing Performance Information About the Core Switch Card
-  Viewing Performance Information About a PON Port of GPON Line Card
-  Viewing the Performance Parameters of the GPON ONU Port
-  Viewing Performance Information About an ONU WIFI Port
-  Viewing Performance Parameters of Uplink Card Ports

11.1 Enabling / Disabling the MIB Performance Collection Switch

Command Function

You can use this command to configure the MIB performance collection switch.

Command Format

```
set mib performance switch[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
switch[enable disable]	The switch information. ◆ enable: Enable the switch. ◆ disable: Disable the switch.	Mandatory

Command Example

Enable the MIB performance collection switch.

```
Admin\maintenance\performance#set mib performance switch enable
set ok!
Admin\maintenance\performance#
```

11.2 Viewing MIB Performance Collection Switch Information

Command Function

You can use this command to view the MIB performance collection switch information.

Command Format

```
show mib performance switch
```

Parameter Description

None

Command Example

View the current MIB performance collection switch information.

```
Admin\maintenance\performance#show mib performance switch
mib performance switch is disable.
Admin\maintenance\performance#
```

11.3 Viewing Performance Information About the Core Switch Card

Command Function

You can use this command to view the performance information about the core switch card.

Command Format

```
show core_his_perform type[ 15m|24h|48h|real] index<0-16>
```

Parameter Description

Parameter	Description	Attribute
type[15m 24h 48h real]	The performance type. The value range: 15m 24h 48h real.	Mandatory
index<0-16>	The index number. The value ranges from 0 to 16. <ul style="list-style-type: none">◆ When the performance type is set to 15m, the index value ranges from 0 to 16.◆ When the performance type is set to 24h, the index value ranges from 0 to 2.◆ When the performance type is set to 48h, the index value ranges from 0 to 1.◆ When the performance type is set to real, the index value (ranging from 0 to 16) is invalid.	Mandatory

Command Example

View the current performance of the core switch card.

```
Admin\maintenance\performance#show core_his_perform type 15m index 0
type 15m index 1
From 2016-03-15 11:00:00 To 2016-03-15 11:14:59
```



```

-----
cpu              = 3.88
memory          =89.08
temperature     =46.63 'C
Admin\maintenance\performance#

```

Result Description

Parameter	Parameter Description
cpu	The CPU utilization ratio.
memory	The memory utilization ratio.
temperature	The temperature.

11.4 Viewing Performance Information About a PON Port of GPON Line Card

Command Function

You can use this command to view the performance information about a PON port of a GPON line card.

Command Format

```

show pon_performance slot <slotno> pon <ponlist> type[ 15m|24h|48h|real]
index<0-16>

```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponlist>	The PON port number. The value ranges from 1 to 16 or can be set to all. You can type 1, 2, 3, or 1-16, or all.	Mandatory

Parameter	Description	Attribute
type[15m 24h 48h real]	Performance type The type can be 15m, 24h, 48h or real.	Mandatory
index<0-16>	<p>The index number. The value ranges from 0 to 16.</p> <ul style="list-style-type: none"> ◆ When the performance type is set to 15m, the index value ranges from 0 to 16. ◆ When the performance type is set to 24h, the index value ranges from 0 to 2. ◆ When the performance type is set to 48h, the index value ranges from 0 to 1. ◆ When the performance type is set to real, the index value (ranging from 0 to 16) is invalid. 	Mandatory

Command Example

View the current performance of PON Port 16 in Slot 18.

```
Admin\maintenance\performance#show pon_performance slot 17 pon 1 type real index
0
```

```
----- SLOT 17 -----
```

```
From 2015-12-25 13:45:33 To 0000-00-00 00:00:00 PON =1
```

```
-----
```

```

UPOctetsTransferred    =260414
UPTotalFrame           =1631
UPUnicastFrames        =1481
UPBroadcastFrames      =150
UPMulticastFrames      =0
UPCRC_32Errors         =0
UPUndersizeFrames      =0
UPOversizeFrames       =0
UPCollisions           =0
UP64OctetFrames        =0
UP65_127OctetFrames    =1365
UP128_255OctetFrames   =0
UP256_511OctetFrames   =262
UP512_1023OctetFrames  =3
UP1024_1518OctetFrames =1
UP1519OctetFrames      =0
UPFramesDropped        =83
UPFramesSpeed          =0.00 Mb/s
DownOctetsTransferred  =1067323
DownTotalFrame         =9425
DownUnicastFrames      =1754
DownBroadcastFrames    =2685
```



```

DownMulticastFrames      =4986
DownCRC_32Errors         =0
DownUndersizeFrames      =0
DownOversizeFrames       =0
DownCollisions           =0
Down64OctetFrames        =4908
Down65_127OctetFrames    =3950
Down128_255OctetFrames   =71
Down256_511OctetFrames   =487
Down512_1023OctetFrames  =8
Down1024_1518OctetFrames =1
Down1519OctetFrames      =0
DownFramesDropped        =0
DownFramesSpeed          =0.00 Mb/s
----- PON OPTIC MODULE PAR INFO -----
NAME          VALUE      UNIT
-----
TYPE          : 20        (KM)
TEMPERATURE   : 33.58     ('C)
VOLTAGE       : 3.26      (V)
BIAS CURRENT  : 7.03      (mA)
SEND POWER    : 3.26      (Dbm)
UPMaxOctets   =235
DownMaxOctets =407
UPMinOctets   =8
DownMinOctets =85
UPMaxSpeed    =0.00 Mb/s
DownMaxSpeed  =0.00 Mb/s
UPMinSpeed    =0.00 Mb/s
DownMinSpeed  =0.00 Mb/s
UPErrorBIP    =0
UPBIPErrorRatio =0.00
Admin\maintenance\performance#

```

Result Description

Parameter	Description
UPOctetsTransferred	The total uplink bytes.
UPTotalFrame	The total uplink frames.
UPUnicastFrames	The number of uplink unicast packets.
UPBroadcastFrames	The number of uplink broadcast packets.
UPMulticastFrames	The number of uplink multicast packets.

Parameter	Description
UPCRC_32Errors	The number of uplink CRC errors.
UPUndersizeFrames	The number of uplink undersized packets.
UPOversizeFrames	The number of uplink oversized packets.
UPCollisions	The number of uplink collision packets.
UP64OctetFrames	The number of uplink packets whose lengths are less than 64 bytes.
UP65_127OctetFrames	The number of uplink packets whose lengths are from 65 to 127 bytes.
UP128_255OctetFrames	The number of uplink packets whose lengths are from 128 to 255 bytes.
UP256_511OctetFrames	The number of uplink packets whose lengths are from 256 to 511 bytes.
UP512_1023OctetFrames	The number of uplink packets whose lengths are from 512 to 1023 bytes.
UP1024_1518OctetFrames	The number of uplink packets whose lengths are from 1024 to 1518 bytes.
UP1519OctetFrames	The number of uplink packets whose lengths are larger than 1519 bytes.
UPFramesDropped	The number of dropped uplink packets.
UPFramesSpeed	The uplink rate.
DownOctetsTransferred	The total downlink bytes.
DownTotalFrame	The total downlink frames.
DownUnicastFrames	The number of downlink unicast packets.
DownBroadcastFrames	The number of downlink broadcast packets.
DownMulticastFrames	The number of downlink multicast packets.
DownCRC_32Errors	The number of downlink CRC errors.
DownUndersizeFrames	The number of downlink undersized packets.
DownOversizeFrames	The number of downlink oversized packets.
DownCollisions	The number of downlink collision packets.
Down64OctetFrames	The number of downlink packets whose lengths are less than 64 bytes.
Down65_127OctetFrames	The number of downlink packets whose lengths are from 65 to 127 bytes.
Down128_255OctetFrames	The number of downlink packets whose lengths are from 128 to 255 bytes.
Down256_511OctetFrames	The number of downlink packets whose lengths are from 256 to 511 bytes.

Parameter	Description
Down512_1023OctetFrames	The number of downlink packets whose lengths are from 512 to 1023 bytes.
Down1024_1518OctetFrames	The number of downlink packets whose lengths are from 1024 to 1518 bytes.
Down1519OctetFrames	The number of downlink packets whose lengths are larger than 1519 bytes.
DownFramesDropped	The number of dropped downlink packets.
DownFramesSpeed	The downlink rate.
TYPE	The optical module type.
TEMPERATURE	The temperature of the optical module.
VOLTAGE	The voltage.
BIAS CURRENT	The bias current.
SEND POWER	The Tx optical power.
UPMaxOctets	The uplink maximum bytes.
DownMaxOctets	The downlink maximum bytes.
UPMinOctets	The uplink minimum bytes.
DownMinOctets	The downlink minimum bytes.
UPMaxSpeed	The uplink peak rate.
DownMaxSpeed	The downlink peak rate.
UPMinSpeed	The uplink peak rate.
DownMinSpeed	The downlink peak rate.
UPErrorBIP	The uplink frame BIP error count.
UPBIPErrorRatio	The uplink frame BIP error ratio.

11.5 Viewing the Performance Parameters of the GPON ONU Port

Command Function

You can use this command to view the performance parameters of the GPON ONU port.

Command Format

```
show onu_performance slot <slotno> pon <ponno> onu <onuno> port <portlist>
type[ 15m|24h|48h|real] index <0-16>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
port <portlist>	The ONU port number. The value ranges from 1 to 24 or can be set to all.	Mandatory
type[15m 24h 48h real]	The performance type. The type can be 15m, 24h, 48h or real.	Mandatory
index <0-16>	<p>The index number. The value ranges from 0 to 16.</p> <ul style="list-style-type: none"> ◆ The index value ranges from 0 to 16 when the performance type is 15m. ◆ The index value ranges from 0 to 2 when the performance type is 24h. ◆ The index value ranges from 0 to 1 when the performance type is 48h. ◆ The index value is invalid (it can be any value ranging from 0 to 16) when the performance type is real. 	Mandatory

Command Example

View the real time performance parameters of Port 1 for ONU 128 that is connected to PON Port 16 of Slot 18.

```
Admin\maintenance\performance#show onu_performance
slot 18 pon 16 onu 128 port 1 type real] index 0
show onu_performance slot 17 pon 1 onu 3 port 1 type real index
----- SLOT 17 PON 1 ONU 3 -----
From 2015-12-25 13:59:56 To 0000-00-00 00:00:00 PORT =1
-----
UPOctetsTransferred    =485851058596
UPTotalFrame           =12284984792
UPUnicastFrames        =12284982592
UPBroadcastFrames      =10
UPMulticastFrames      =187
UPCRC_32Errors         =0
UPUndersizeFrames      =0
UPOversizeFrames       =0
UPCollisions           =0
UP64OctetFrames        =187
```



```

UP65_127OctetFrames    =4294967306
UP128_255OctetFrames   =3695048000
UP256_511OctetFrames   =0
UP512_1023OctetFrames  =0
UP1024_1518OctetFrames=0
UP1519OctetFrames      =0
UPFramesDropped        =0
UPFramesSpeed           =0.00 Mb/s
DownOctetsTransferred   =2383696
DownTotalFrame          =25769840706
DownUnicastFrames       =25769803776
DownBroadcastFrames     =2013
DownMulticastFrames     =34917
DownCRC_32Errors        =0
DownUndersizeFrames     =0
DownOversizeFrames     =0
DownCollisions          =0
Down64OctetFrames       =0
Down65_127OctetFrames   =0
Down128_255OctetFrames  =0
Down256_511OctetFrames  =0
Down512_1023OctetFrames =0
Down1024_1518OctetFrames=0
Down1519OctetFrames     =0
DownFramesDropped       =0
DownFramesSpeed         =0.00 Mb/s
UPMaxOctets             =0
DownMaxOctets           =0
UPMinOctets             =0
DownMinOctets           =0
UPMaxSpeed              =0.00 Mb/s
DownMaxSpeed            =0.00 Mb/s
UPMinSpeed              =0.00 Mb/s
DownMinSpeed            =0.00 Mb/s

```

Admin\maintenance\performance#

Result Description

Parameter	Description
UPOctetsTransferred	The number of bytes for uplink transmission.
UPTotalFrame	The number of frames for uplink transmission.
UPUnicastFrames	The number of unicast packets for uplink transmission.

Parameter	Description
UPBroadcastFrames	The number of broadcast packets for uplink transmission.
UPMulticastFrames	The number of multicast packets for uplink transmission.
UPCRC_32Errors	The number of CRC errors for uplink transmission.
UPUndersizeFrames	The number of undersized packets for uplink transmission.
UPOversizeFrames	The number of oversized packets for uplink transmission.
UPCollisions	The number of collision packets for uplink transmission.
UP64OctetFrames	The number of packets whose size is smaller than 64 bytes for uplink transmission.
UP65_127OctetFrames	The number of packets whose size is between 65 and 127 bytes for uplink transmission.
UP128_255OctetFrames	The number of packets whose size is between 128 and 255 bytes for uplink transmission.
UP256_511OctetFrames	The number of packets whose size is between 256 and 511 bytes for uplink transmission.
UP512_1023OctetFrames	The number of packets whose size is between 512 and 1023 bytes for uplink transmission.
UP1024_1518OctetFrames	The number of packets whose size is between 1024 and 1518 bytes for uplink transmission.
UP1519OctetFrames	The number of packets whose size is bigger than 1519 bytes for uplink transmission.
UPFramesDropped	The number of packets dropped for uplink transmission.
UPFramesSpeed	The uplink transmission rate.
DownOctetsTransferred	The number of bytes for downlink transmission.
DownTotalFrame	The number of frames for downlink transmission.
DownUnicastFrames	The number of unicast packets for downlink transmission.
DownBroadcastFrames	The number of broadcast packets for downlink transmission.
DownMulticastFrames	The number of multicast packets for downlink transmission.
DownCRC_32Errors	The number of CRC errors for downlink transmission.
DownUndersizeFrames	The number of undersized packets for downlink transmission.
DownOversizeFrames	The number of oversized packets for downlink transmission.
DownCollisions	The number of collision packets for downlink transmission.
Down64OctetFrames	The number of packets whose size is smaller than 64 bytes for downlink transmission.
Down65_127OctetFrames	The number of packets whose size is between 65 and 127 bytes for downlink transmission.
Down128_255OctetFrames	The number of packets whose size is between 128 and 255 bytes for downlink transmission.

Parameter	Description
Down256_511OctetFrames	The number of packets whose size is between 256 and 511 bytes for downlink transmission.
Down512_1023OctetFrames	The number of packets whose size is between 512 and 1023 bytes for downlink transmission.
Down1024_1518OctetFrames	The number of packets whose size is between 1024 and 1518 bytes for downlink transmission.
Down1519OctetFrames	The number of packets whose size is bigger than 1519 bytes for downlink transmission.
DownFramesDropped	The number of packets dropped for downlink transmission.
DownFramesSpeed	The downlink transmission rate.
TYPE	The optical module type.
TEMPERATURE	The temperature of the optical module.
VOLTAGE	The voltage.
BIAS CURRENT	The bias current.
SEND POWER	The Tx optical power.
UPMaxOctets	The maximum bytes for uplink transmission.
DownMaxOctets	The maximum bytes for downlink transmission.
UPMinOctets	The minimum bytes for uplink transmission.
DownMinOctets	The minimum bytes for downlink transmission.
UPMaxSpeed	The peak rate of uplink transmission.
DownMaxSpeed	The peak rate of downlink transmission.
UPMinSpeed	The minimum rate of uplink transmission.
DownMinSpeed	The minimum rate of downlink transmission.
UPErrorBIP	The number of uplink BIP error frames.
UPBIPErrorRatio	The error ratio of uplink BIP frames.

11.6 Viewing Performance Information About an ONU WIFI Port

Command Function

You can use this command to view the performance information about an ONU WIFI port.

Command Format

```
show onu_wifiPerf slot <slotno> pon <ponno> onu <onuno> show onu_wifiPerf
slot <slotno> pon <ponno> onu <onuno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory
pon <ponno>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <onuno>	The ONU authorization number. The value ranges from 1 to 128.	Mandatory
wifiport <portlist>	The WiFi port. The value ranges from 1 to 4.	Mandatory
type [15m 24h 48h real]	The performance type. The type can be 15m, 24h, 48h or real.	Mandatory
index <0-16>	<p>The index number. The value ranges from 0 to 16.</p> <ul style="list-style-type: none"> ◆ When the performance type is set to 15m, the index value ranges from 0 to 16. ◆ When the performance type is set to 24h, the index value ranges from 0 to 2. ◆ The index value ranges from 0 to 1 when the performance type is 48h. ◆ When the performance type is set to real, the index value (ranging from 0 to 16) is invalid. 	Mandatory

Command Example

View the real-time performance information about Port 1 of ONU 1 connected to PON Port 1 in Slot 17.

```
Admin\maintenance\performance#show onu_wifiperf slot 17 pon 1 onu 1 wifiport 1type 15m index 1
```

```
slot 17 pon 1 onu 1 wifiport 1 type real index 0
----- SLOT 17 PON 1 ONU 1 -----
From 2015-12-25 14:01:46 To 2015-12-25 14:01:46
----- wifi Perf: PORT 257, Performance Item 24 -----
-----
DownFragmentFrames =      0
DownMulicastFrames =      0
TransmittedFailedFrame =      0
TransmittedRetryFrame =      0
TransmittedMultipleRetryFrame =      0
DuplicateReceivedFrame =      0
```



```

RTS SuccessReceivedFrame =      0
RTS FailureReceivedFrame =      0
ACK FailureReceivedFrame =      0
UP FragmentFrames =          0
UP MulticastPkts =            0
FCS ErrorReceivedFrame =      0
DownTotalFrames =            0
WEP UndecryptableReceivedFrame = 0
Admin\maintenance\performance#

```

11.7 Viewing Performance Parameters of Uplink Card Ports

Command Function

You can use this command to view performance parameters of the uplink card ports.

Command Format

```

show uplink_his_perform slot <slotno> port <portno> type[ 15m|24h|48h|real]
index<0-16>

```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value is 19 or 20.	Mandatory
port <portno>	The PON port number. The value ranges from 1 to 6.	Mandatory
type[15m 24h 48h real]	The performance type. The type can be 15m, 24h, 48h or real.	Mandatory
index<0-16>	<p>The index number. The value ranges from 0 to 16.</p> <ul style="list-style-type: none"> ◆ The index value ranges from 0 to 16 when the performance type is 15m. ◆ The index value ranges from 0 to 2 when the performance type is 24h. ◆ The index value ranges from 0 to 1 when the performance type is 48h. ◆ The index value is invalid (it can be any value ranging from 0 to 16) when the performance type is real. 	Mandatory

Command Example

View real-time performance parameters of PON Port 6 of Slot 19.

```
Admin\maintenance\performance#show uplink_his_perform
slot 19 port 6 type real index 0
From 2016-03-15 13:54:29 To 0000-00-00 00:00:00
slot=19 portNo=6 cardType=415 mapPort=22
-----
ByteReceived      =0
FramesReceived    =0
TotalUnicastFramesReceived=0
BroadcastFramesReceived  =0
MulticastFramesReceived  =0
ByteSent          =0
FramesSent        =0
OutUnicastFrames  =0
OutBroadcastFrames=0
OutMulticastFrames=0
Frames64Received  =0
Frames65_127Received  =0
Frames128_255Received  =0
Frames256_511Received  =0
Frames512_1023Received  =0
Frames1024_1518Received=0
Frames64Sent      =0
Frames65_127Sent  =0
Frames128_255Sent  =0
Frames256_511Sent  =0
Frames512_1023Sent  =0
Frames1024_1518Sent=0
InDiscards        =0
InErrors           =0
InUndersize        =0
InOversize         =0
InPause           =0
OutDiscards        =0
OutErrors          =0
OutUndersize       =0
OutOversize        =0
OutPause           =0
CRCError          =0
Fragments         =0
Jabber            =0
```



```

Collision          =0
VlanByteReceived   =0
SpeedSent          = 0.00 Mb/s
ReceivedSpeed      = 0.00 Mb/s
VlanReceivedSpeed  = 0.00 Mb/s
DroppedPktsRate    = 0.00%
UPCRCErrors        =0
UPMaxOctets        =0
DownMaxOctets      =0
UPMinOctets        =0
DownMinOctets      =0
UPMaxSpeed         = 0.00 Mb/s
DownMaxSpeed       = 0.00 Mb/s
UPMinSpeed         = 0.00 Mb/s
DownMinSpeed       = 0.00 Mb/s
OptModuleType      =0 KM
Temperature        = 0.00 'C
Voltage            = 0.00 V
BiasCurrent        = 0.00 mA
TxPower            = 0.00 dBm
RxPower            = 0.00 dBm
UPMulticastSpeed   = 0.00 fps
DownMulticastSpeed = 0.00 fps
UPUnicastSpeedFps  = 0.00 fps
DownUnicastSpeedFps = 0.00 fps
UPBroadcastSpeed   = 0.00 fps
DownBroadcastSpeed = 0.00 fps
upPropotion        = 0.00 %
downPropotion      = 0.00 %
DownMulticastOctets =0
DownMulticastSpeedKbps = 0.00 Kb/s

```

Admin\maintenance\performance#















Result Description

Parameter	Description
ByteReceived	The received bytes.
FramesReceived	The number of received packets.
TotalUnicastFramesReceived	The received unicast packets.
BroadcastFramesReceived	The received broadcast packets.
MulticastFramesReceived	The received multicast packets.
ByteSent	The transmitted bytes.

Parameter	Description
FramesSent	The number of transmitted packets.
OutUnicastFrames	The transmitted unicast packets.
OutBroadcastFrames	The transmitted broadcast packets.
OutMulticastFrames	The transmitted multicast packets.
Frames64Received	The count of received 64-byte frame length packets.
Frames65_127Received	The count of received 65- to 127-byte frame length packets.
Frames128_255Received	The count of received 128- to 255-byte frame length packets.
Frames256_511Received	The count of received 256- to 511-byte frame length packets.
Frames512_1023Received	The count of received 512- to 1023-byte frame length packets.
Frames1024_1518Received	The count of received 1024- to 1518-byte frame length packets.
Frames64Sent	The count of transmitted 64-byte frame length packets.
Frames65_127Sent	The count of transmitted 65- to 127-byte frame length packets.
Frames128_255Sent	The count of transmitted 128- to 255-byte frame length packets.
Frames256_511Sent	The count of transmitted 256- to 511-byte frame length packets.
Frames512_1023Sent	The count of transmitted 512- to 1023-byte frame length packets.
Frames1024_1518Sent	The count of transmitted 1024- to 1518-byte frame length packets.
InDiscards	The discarded packets.
InErrors	The errored packets.
InUndersize	The packet size is less than 64 bytes.
InOversize	The packet size is larger than 1518 bytes.
InPause	Flow control.
OutDiscards	The discarded packets.
OutErrors	The errored packets.
OutUndersize	The packet size is less than 64 bytes.
OutOversize	The packet size is larger than 1518 bytes.
OutPause	Flow control.
CRCErrors	The CRC errored packets.
Fragments	Fragment.
Jabber	Jabber.
Collision	Collision.
VlanByteReceived	The downlink VLAN performance statistics.
SpeedSent	The uplink rate.
ReceivedSpeed	The downlink rate.
VlanReceivedSpeed	The VLAN downlink rate.

Parameter	Description
DroppedPktsRate	The packet loss rate.
UPCRCErrors	The uplink CRC error count.
UPMaxOctets	The maximum bytes for uplink transmission.
DownMaxOctets	The maximum bytes for downlink transmission.
UPMinOctets	The minimum bytes for uplink transmission.
DownMinOctets	The minimum bytes for downlink transmission.
UPMaxSpeed	The maximum rate of uplink transmission.
DownMaxSpeed	The maximum rate of downlink transmission.
UPMinSpeed	The minimum rate of uplink transmission.
DownMinSpeed	The minimum rate of downlink transmission.
OptModuleType	The optical module type.
Temperature	The temperature of the optical module.
Voltage	The voltage.
BiasCurrent	The current.
TxPower	The transmitting optical power.
RxPower	The receiving optical power.
UPMulticastSpeed	The uplink broadcast speed (unit:fps)
DownMulticastSpeed	The downlink broadcast speed (unit:fps)
UPUnicastSpeedFps	The uplink unicast speed (unit:fps)
DownUnicastSpeedFps	The downlink unicast speed (unit:fps)
UPBroadcastSpeed	The uplink broadcast speed (unit: pps)
DownBroadcastSpeed	The downlink broadcast speed (unit: pps)
upPropotion	The uplink bandwidth utilization ratio.
downPropotion	The downlink bandwidth utilization ratio.

12 admin\maintenance\alarm Directory Command

-  Configuring the Alarm Threshold for System Temperature
-  Viewing the Alarm Threshold for System Temperature
-  Configuring the Alarm Thresholds for the OLT Optical Module
-  Viewing the Alarm Thresholds for the OLT Optical Module
-  Configuring the Alarm Thresholds for the ONU Optical Module
-  Viewing the Alarm Thresholds for the ONU Optical Module
-  Configuring the Alarm Threshold for the Card's CPU / Memory Utilization Ratio
-  Viewing the Alarm Threshold for the Card's CPU / Memory Utilization Ratio
-  Configuring the Alarm Thresholds for the Optical Module
-  Viewing the Alarm Thresholds for the Optical Module
-  Viewing the Current Alarms
-  Viewing the Current Events
-  Viewing the Current Events in Reverse Order
-  Viewing the Alarm History

12.1 Configuring the Alarm Threshold for System Temperature

Command Function

You can use this command to set the alarm threshold value for the system temperature.

Command Format

```
set threshold temperature <30-85>
```

Parameter Description

Parameter	Description	Attribute
temperature <30-85>	Temperature. The parameter value ranges between 30 and 85, and the unit is degree centigrade.	Mandatory

Command Example

Set the alarm threshold value for the system temperature to 85°C.

```
Admin\maintenance\alarm#set threshold temperature 85
Admin\maintenance\alarm#
```

12.2 Viewing the Alarm Threshold for System Temperature

Command Function

You can use this command to view the threshold values for the system.

Command Format

```
show threshold
```

Parameter Description

None

Command Example

View the current alarm threshold value for the system temperature.

```
Admin\maintenance\alarm#show threshold

system temprature_threshold is 85.
cpu_usage_threshold:  0. 0(%)
memory_usage_threshold:  0. 0(%)
Admin\maintenance\alarm#
```

Parameter Description

Parameter	Description
System temprature_threshold	The alarm threshold value for the system temperature.
cpu_usage_threshold	The CPU utilization ratio threshold value for the system.
memory_usage_threshold	The memory utilization ratio threshold value for the system.

12.3 Configuring the Alarm Thresholds for the OLT Optical Module

Command Function

You can use this command to set the alarm thresholds for the OLT optical module, including the thresholds for temperature, voltage, bias current, Tx optical power and Rx optical power.

Command Format

```
set olt optthresh <max_temp> <min_temp> <max_voltage> <min_voltage>
<max_current> <min_current> <max_txpower> <min_txpower> <max_rxpower>
<min_rxpower>
```

Parameter Description

Parameter	Description	Attribute
<max_temp>	The alarm threshold for the maximum temperature The value ranges from -4000 to 10000.	Mandatory
<min_temp>	The alarm threshold for the minimum temperature The value ranges from -4000 to 10000.	Mandatory

Parameter	Description	Attribute
<max_voltage>	The alarm threshold for the maximum voltage The value ranges from 300 to 360.	Mandatory
<min_voltage>	The alarm threshold for the minimum voltage The value ranges from 300 to 360.	Mandatory
<max_current>	The alarm threshold for the maximum bias current The value ranges from 0 to 1000.	Mandatory
<min_current>	The alarm threshold for the minimum bias current The value ranges from 0 to 1000.	Mandatory
<max_txpower>	The alarm threshold for the maximum Tx optical power The value ranges from -400 to 1000.	Mandatory
<min_txpower>	The alarm threshold for the minimum Tx optical power The value ranges from -400 to 1000.	Mandatory
<max_rxpower>	The alarm threshold for the maximum Rx optical power The value ranges from -3200 to -100.	Mandatory
<min_rxpower>	The alarm threshold for the minimum Rx optical power The value ranges from -3200 to -100.	Mandatory

Command Example

Set the alarm thresholds for the system as follows: the maximum temperature threshold to 10000, the minimum temperature threshold to -4000, the maximum voltage threshold to 360, the minimum voltage threshold to 300, the maximum bias current threshold to 1000, the minimum bias current threshold to 0, the maximum Tx optical power threshold to 800, the minimum Tx optical power threshold to 0, the maximum Rx optical power threshold to -500, and the minimum Rx optical power threshold to -3200.

```
Admin\maintenance\alarm#set olt optthresh 10000 -4000 360 300 1000 0 800 0 -500 -3200
Admin\maintenance\alarm#
```

12.4 Viewing the Alarm Thresholds for the OLT Optical Module

Command Function

You can use this command to view the alarm thresholds for the OLT optical module.

Command Format

```
show olt optthresh
```

Parameter Description

None

Command Example

View the alarm thresholds for the OLT optical module.

```
Admin\maintenance\alarm#show olt optthresh
oltoptthresh value : 10000,-4000,360,300,1000,0,800,0,-500,-3200
Admin\maintenance\alarm#
```

Result Description

Parameter	Description
oltoptthresh value	The temperature threshold value for the optical module.

12.5 Configuring the Alarm Thresholds for the ONU Optical Module

Command Function

You can use this command to configure the alarm thresholds for the ONU optical module.

Command Format

```
set onu optthresh <max_temp> <min_temp> <max_voltage> <min_voltage>
<max_current> <min_current> <max_txpower> <min_txpower> <max_rxpower>
<min_rxpower>
```

Parameter Description

Parameter	Description	Attribute
<max_temp>	The alarm threshold for the maximum temperature The value ranges from -4000 to 10000.	Mandatory
<min_temp>	The alarm threshold for the minimum temperature The value ranges from -4000 to 10000.	Mandatory

Parameter	Description	Attribute
<max_voltage>	The alarm threshold for the maximum voltage The value ranges from 300 to 360.	Mandatory
<min_voltage>	The alarm threshold for the minimum voltage The value ranges from 300 to 360.	Mandatory
<max_current>	The alarm threshold for maximum bias current The value ranges from 0 to 1000.	Mandatory
<min_current>	The alarm threshold for the minimum bias current The value ranges from 0 to 1000.	Mandatory
<max_txpower>	The alarm threshold for the maximum Tx optical power The value ranges from -400 to 1000.	Mandatory
<min_txpower>	The alarm threshold for the minimum Tx optical power The value ranges from -400 to 1000.	Mandatory
<max_rxpower>	The alarm threshold for the maximum Rx optical power The value ranges from -2800 to -100.	Mandatory
<min_rxpower>	The alarm threshold for the minimum Rx optical power The value ranges from -2800 to -100.	Mandatory

Command Example

Set the alarm thresholds for the ONU as follows: the maximum temperature threshold to 10000, the minimum temperature threshold to -4000, the maximum voltage threshold to 360, the minimum voltage threshold to 300, the maximum bias current threshold to 1000, the minimum bias current threshold to 0, the maximum Tx optical power threshold to 800, the minimum Tx optical power threshold to 0, the maximum Rx optical power threshold to -500, and the minimum Rx optical power threshold to -3200.

```
Admin\maintenance\alarm#set onu optthresh 10000 -4000 360 300 1000 0 800 0 -500
-2800
Admin\maintenance\alarm#
```

12.6 Viewing the Alarm Thresholds for the ONU Optical Module

Command Function

You can use this command to view the alarm thresholds for the ONU optical module.

Command Format

```
show onu optthresh
```

Parameter Description

None

Command Example

View the alarm thresholds for the ONU optical module.

```
Admin\maintenance\alarm#show onu optthresh
onuoptthresh value : 10000,-4000,360,300,1000,0,800,0,-500,-2800
Admin\maintenance\alarm#
```

Result Description

Parameter	Description
onuoptthresh value	The threshold value for the ONU optical module.

12.7 Configuring the Alarm Threshold for the Card's CPU / Memory Utilization Ratio

Command Function

You can use this command to set the alarm threshold for the card's CPU / memory utilization ratio.

Command Format

```
set cpu_threshold slot <slotno> cpu <0-100> mem <0-100>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 10 to 18.	Mandatory
cpu <0-100>	The alarm threshold for the CPU utilization ratio. The value ranges between 0 and 100, and the unit is %.	Mandatory
mem <0-100>	The alarm threshold for the memory utilization ratio. The value ranges between 0 and 100, and the unit is %.	Mandatory

Command Example

For the card in Slot 14, set the alarm threshold for the CPU utilization ratio to 60, and that for the memory utilization ratio to 50.

```
Admin\maintenance\alarm#set cpu_threshold slot 14 cpu 60 mem 50
set cpu using threshold ok!
Admin\maintenance\alarm#
```

12.8 Viewing the Alarm Threshold for the Card's CPU / Memory Utilization Ratio

Command Function

You can use this command to view the alarm threshold for the card's CPU / memory utilization ratio.

Command Format

```
show epon slot <slotno> cpu_memory_thresh
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View the alarm threshold for the memory utilization ratio of the line card in Slot 14.

```
Admin\maintenance\alarm#show cpu_threshold slot 14
slot_out 6:  cpu thresh : 6000  mem thresh : 5000
Admin\maintenance\alarm#
```

Result Description

Parameter	Description
CPU	The threshold for the CPU utilization ratio.
Memory	The threshold for the memory utilization ratio.

12.9 Configuring the Alarm Thresholds for the Optical Module

Command Function

You can use this command to configure alarm thresholds for the optical module. The parameters include temperature, voltage, bias current, Tx and Rx optical power.

Command Format

```
set optmodule_threshold module_type [ olt | onu ] max_temperature <max_t>
min_temperature <min_t> max_voltage <max_v> min_voltage <min_v>
max_bias_current <max_bc> min_bias_current <min_bs> max_TX_optical_power
<max_t_op> min_TX_optical_power <min_t_op> max_RX_optical_power <max_r_op>
min_RX_optical_power <min_r_op>
```

Parameter Description

Parameter	Description	Attribute
module_type [olt onu]	Optical module type. olt: the OLT type module. onu: the ONU type module.	Mandatory
max_temperature <max_t>	The alarm threshold for maximum temperature. The value ranges from -4000 to 10000.	Mandatory
min_temperature <min_t>	The alarm threshold for minimum temperature. The value ranges from -4000 to 10000.	Mandatory
max_voltage <max_v>	The alarm threshold for maximum voltage. The value ranges from 300 to 360.	Mandatory
min_voltage <min_v>	The alarm threshold for minimum voltage. The value ranges from 300 to 360.	Mandatory
max_bias_current <max_bc>	The alarm threshold for maximum bias current. The value ranges from 0 to 1000.	Mandatory
min_bias_current <min_bs>	The alarm threshold for minimum bias current. The value ranges from 0 to 1000.	Mandatory
max_TX_optical_power <max_t_op>	The alarm threshold for maximum Tx optical power. OLT: The value ranges from -400 to 1000 (unit: dBm). ONU: The value ranges from -400 to 800 (unit: dBm).	Mandatory
min_TX_optical_power <min_t_op>	The alarm threshold for minimum Tx optical power. OLT: The value ranges from -400 to 1000 (unit: dBm). ONU: The value ranges from -400 to 800 (unit: dBm).	Mandatory

Parameter	Description	Attribute
<code>max_RX_optical_power<max_r_op></code>	The alarm threshold for maximum Rx optical power. OLT: The value ranges between -3200 and -100; the unit is dBm; and the default value is -100. ONU: The value ranges between -2800 and -300; the unit is dBm; and the default value is -300.	Mandatory
<code>min_RX_optical_power<min_r_op></code>	The alarm threshold for maximum Rx optical power. OLT: The value ranges from -3200 to -100 (unit: dBm). ONU: The value ranges from -2800 to -300 (unit: dBm).	Mandatory

Command Example

Configure the alarm threshold of the ONU. The threshold for each alarm is described as below.

- ◆ For temperature alarm, the upper threshold is 10000; the lower threshold is -4000.
- ◆ For voltage alarm, the upper threshold is 360; the lower threshold is -300.
- ◆ For bias current, the upper threshold is 1000; the lower threshold is -0.
- ◆ For Tx optical power, the upper threshold is 400; the lower threshold is -400.
- ◆ For Rx optical power, the upper threshold is -300; the lower threshold is -3200.

```
Admin\maintenance\alarm#set optmodule_threshold module_type onu
max_temperature 10000 min_temperature -40 max_voltage 360 min_voltage 300
max_bias_current 1000 min_bias_current 0 max_tx_optical_power 400
min_tx_optical_power -400 max_rx_optical_power -300 min_rx_optical_power -2800
set onu optic module threshold ok!
Admin\maintenance\alarm#
```

12.10 Viewing the Alarm Thresholds for the Optical Module

Command Function

You can use this command to view the optical module alarm thresholds.

Command Format

```
show optmodule_threshold module_type [ olt | onu]
```


Parameter Description

Parameter	Description	Attribute
module_type[olt onu]	The optical module type: OLT ONU.	Mandatory

Command Example

View the alarm thresholds for the ONU optical module.

```
Admin\maintenance\alarm#show optmodule_threshold module_type onu
optthreshvalue:10000,-40,360,300,1000,0,400,-400,-300,-2800
Admin\maintenance\alarm#
```

12.11 Viewing the Current Alarms

Command Function

You can use this command to view the current alarm table of the system.

Command Format

```
show curalarm
```

Parameter Description

None

Command Example

View the current alarms of the system.

```
Admin\maintenance\alarm#show curalarm
-----Current Alarm-----
Item Description      Code Object      beginTime      endTime
1  CARD_NOT_PRESENT   988  10/0/0/0      2016-01-07 11:22:05
2  License Rrc Alarm  1103 9/0/0/0      2016-01-07 11:22:07
-----Current Alarm-----
Admin\maintenance\alarm#
```


Result Description

Parameter	Description
Item	The entry number.
Description	The alarm name.
Code Object	The alarm code.
beginTime	The beginning time of the alarm.
endTime	The ending time of the alarm.

12.12 Viewing the Current Events

Command Function

You can use this command to view the current event table.

Command Format

```
show curevent
```

Parameter Description

None

Command Example

You can use this command to view the current event table.

```
Admin\maintenance\alarm#show curevent
-----Current Event-----
Item Description          Object    beginTime    endTime
1    CORE_CARD_STATUS_CHA 9/0/0/0    2016-01-07 11:21:22
2    COLD_START            9/0/0/0    2016-01-07 11:21:22
3    INSERT_CARD           20/0/0/0   2016-01-07 11:21:32
4    INSERT_CARD           2/0/0/0    2016-01-07 11:21:33
5    TIME_ACK              9/0/0/0    2016-01-07 11:21:38
6    LICENSE_ESN_INVALIDA 9/0/0/0    2016-01-07 11:28:07
-----Current Event-----
Admin\maintenance\alarm#
```


Result Description

Parameter	Description
Item	The entry number.
Description	The alarm name.
Object	The alarm object in the format of slot/pon/onu/onuport. For example, 9/0/0/0 indicates Slot 9.
beginTime	The beginning time of the event.
endTime	The ending time of the event.

12.13 Viewing the Current Events in Reverse Order

Command Function

You can use this command to view the current event table in reverse order, that is, the latest event is printed in the front row.

Command Format

```
show latest event
```

Parameter Description

None

Command Example

You can use this command to view the current event table.

```
Admin\maintenance\alarm#show latest event
-----Current Event-----
Item Description          Object    beginTime      endTime
6    LICENSE_ESN_INVALID 9/0/0/0    2016-01-07 11:28:07
5    TIME_ACK             9/0/0/0    2016-01-07 11:21:38
4    INSERT_CARD          2/0/0/0    2016-01-07 11:21:33
3    INSERT_CARD          20/0/0/0   2016-01-07 11:21:32
2    COLD_START           9/0/0/0    2016-01-07 11:21:22
1    CORE_CARD_STATUS_CHA 9/0/0/0    2016-01-07 11:21:22
-----Current Event-----
Admin\maintenance\alarm#
```


Result Description

Parameter	Description
Item	The entry number.
Description	The alarm name.
Object	The alarm object in the format of slot/pon/onu/onu port. For example, 9/0/0/0 indicates Slot 9.
beginTime	The beginning time of the event.
endTime	The ending time of the event.

12.14 Viewing the Alarm History

Command Function

You can use this command to view the alarm history.

Command Format

```
show hisalarm
```

Parameter Description

None

Command Example

View the alarm history.

```
Admin\maintenance\alarm#show hisalarm
-----Alarm Message-----
Item Description          Code Object      beginTime          endTime
3    License Rrc Alarm    1103 9/0/0/0      2016-01-07 11:22:07 2016-01-07 15:22:03
-----Alarm Message-----
Admin\maintenance\alarm#
```

Result Description

Parameter	Description
Item	The entry number.
Description	The alarm name.
Code Object	The alarm code.

Parameter	Description
beginTime	The beginning time of the event.
endTime	The ending time of the event.

13 admin\device\license Directory Command

- ☒ Configuring the Alarm Threshold for the License
- ☒ Uploading the License File
- ☒ Downloading the License File
- ☒ Querying the License Resources
- ☒ Configuring the ESN
- ☒ Viewing the ESN

13.1 Configuring the Alarm Threshold for the License

Command Function

You can use this command to configure or view the alarm threshold for the License.

Command Format

```
set License Threshold <1-99> Switch[ enable | disable] interval <1-43200>
show License Threshold
```

Parameter Description

Parameter	Description	Attribute
Threshold	The alarm threshold for the License. The value ranges between 1 and 99, and the unit is %.	Mandatory
Switch	The threshold switch. ◆ enable: Enable the switch. ◆ disable: Disable the switch.	Mandatory
interval	The regular early warning interval. The value ranges from 1 to 43200; unit: minute.	Mandatory

Command Example

Enable the threshold switch. Set the alarm threshold for the License to 10% and the regular early warning interval to 10 minutes.

```
Admin\device\license#set license threshold 10 switch enable interval 10
set threshold successful...
Admin\device\license#show license threshold.
threshold:10 Switch:enable interval:10
Admin\device\license#
```

13.2 Uploading the License File

Command Function

You can use this command to upload the License file.

Command Format

```
Upload licenseFile ip <A.B.C.D> user <string> pwd <string> filename <string>
```

Parameter Description

Parameter	Description	Attribute
ip	The IP address of the FTP server. A.B.C.D.	Mandatory
user	The FTP username. String(20).	Mandatory
pwd	The FTP password. string(20).	Mandatory
filename	The filename of the License to be uploaded to the FTP server. string(20).	Mandatory

Command Example

Upload the License file. Set the server IP address to 10.33.145.118, username to 1, password to 1, and the filename to 5.5.5.177-6.xml.

```
Admin\device\license#upload licensefile ip 10.33.145.118 user 1 pwd 1 filename
5.5.5.177-6.xml
```

```
Admin\device\license#
```

13.3 Downloading the License File

Command Function

You can use this command to download the License file.

Command Format

```
Download licenseFile ip <A.B.C.D> user <string> pwd <string> filename
<string>
```

Parameter Description

Parameter	Description	Attribute
ip	The IP address of the FTP server. A.B.C.D.	Mandatory
user	The FTP username. String(20).	Mandatory

Parameter	Description	Attribute
pwd	The FTP password. string(20).	Mandatory
filename	The filename of the License to be uploaded to the FTP server. string(20).	Mandatory

Command Example

Download the License file. The server IP address is 10.33.145.118, username is 1, password is 1, and the filename is 5.5.5.177-6.xml.

```
Admin\device\license#download licensefile ip 10.166.32.3 user 1 pwd 1 filename 5.5.5.177-6.xml
```

```
Admin\device\license#
```

13.4 Querying the License Resources

Command Function

You can use this command to query the License resources.

Command Format

```
show License Usage
```

Parameter Description

None

Command Example

View the License resources.

```
Admin\device\license#show license usage
```

name	maxAuthValue	allocatedValue	applyValue
IGMPV3	0	0	1
RIP	0	0	0
OSPF	0	0	0
I_Class_Onu_Num	10	0	0
II_Class_Onu_Num	5	0	0
III_Class_Onu_Num	5	0	0
Valid Time	65535	1	1

Admin\device\license#

Parameter	Description
name	The identifier of the current License resource.
maxAuthValue	The maximum License values.
actualUsedValue	The actually used License values.
applyValue	The applied License values.

13.5 Configuring the ESN

Command Function

You can use this command to create the ESN.

Command Format

set esn <A.B.C.D>

Parameter Description

Parameter	Description	Attribute
<A.B.C.D>	The ESN number. It should be the same with the IP address of the management VLAN.	Mandatory

Command Example

The IP address of the management VLAN is 5.5.5.177, therefore you should create an ESN and set its number to 5.5.5.177.

```
Admin\device\license#set esn 5.5.5.177
Admin\device\license#
```

13.6 Viewing the ESN

Command Function

You can use this command to view the ESN.

Command Format

Show esn

Parameter Description

None

Command Example

View the ESN information.










```
Admin\device\license#show esn
```

```
ESN: 5.5.5.177 -6
```

```
Admin\device\license#
```


14 admin\qinq Directory Command

- ☒ Creating a Qinq Domain
- ☒ Configuring the Quantity of Service Entries in an Qinq Domain
- ☒ Configuring the Qinq Domain Service Type
- ☒ Configuring Uplink Rule Clauses of the Qinq Domain
- ☒ Configuring Downlink Rule Clauses for an Qinq Domain
- ☒ Configuring Qinq Domain's VLAN Service Rules
- ☒ Deleting a Qinq Domain
- ☒ Viewing Qinq Domain Configuration
- ☒ Viewing Domain Configuration for a Special Index Number
- ☒ Binding / Unbinding the Qinq Domain with the ONU
- ☒ Binding / Unbinding the Qinq Domain with the PON Port
- ☒ Viewing Qinq Domain Binding Information
- ☒ Configuring the Qinq Domain Rate Limiting Policy
- ☒ Validating the Qinq Domain Rate Limiting Policy
- ☒ Configuring the Qinq Inner VLAN
- ☒ Deleting the Qinq Inner VLAN
- ☒ Viewing the Qinq Inner VLAN Configuration
- ☒ Creating a Qinq Profile
- ☒ Configuring a Qinq Profile
- ☒ Deleting a Qinq Profile

-  Viewing the QinQ Profile Configuration
-  Configuring the VLAN Operation Table
-  Deleting the VLAN Operation Table
-  Viewing the VLAN Operation Table
-  Configuring QinQ Protocol ID
-  Viewing the QinQ Protocol ID
-  Binding a VLAN Operation Table to a PON Port
-  Unbinding a VLAN Operation Table from a PON Port
-  Viewing the VLAN Operation Table Configuration

14.1 Creating a Qinq Domain

Command Function

You can use this command to create an OLT Qinq domain.

Command Format

```
create oltqinq_domain <name>
```

Description

Parameter	Description	Attribute
oltqinq_domain <name>	The Qinq domain name. You can create up to 1024 OLT Qinq domains. Type underlines, English letters and digital numbers, and the maximum length is 16 bytes.	Mandatory

Command Example

Create an OLT Qinq domain named domain1.

```
Admin\qinq#create oltqinq_domain domain1
Admin\qinq#
```

14.2 Configuring the Quantity of Service Entries in an Qinq Domain

Command Function

You can use this command to configure the quantity of service entries in an Qinq domain.

Command Format

```
set oltqinq_domain <name> service_num <number>
```


Parameter Description

Parameter	Description	Attribute
oltqinq_domain <name>	The QinQ domain name. You can create up to 1024 OLT QinQ domains. Type underlines, English letters and digital numbers, and the maximum length is 16 bytes.	Mandatory
service_num <number>	The quantity of service entries. The value ranges from 1 to 8. You should configure one service entry at least, and eight service entries at most.	Mandatory

Command Example

Set the quantity of service entries in the domain domaintest1 to 3.

```
Admin\qinq#set oltqinq_domain domaintest1 service_num 3
```

```
Admin\qinq#
```

14.3 Configuring the QinQ Domain Service Type

Command Function

You can use this command to configure the service type in the QinQ domain.

Command Format

```
set oltqinq_domain <name> <1-8> type[ single|share]
```

Parameter Description

Parameter	Description	Attribute
oltqinq_domain <name>	The QinQ domain name. You can create up to 1024 OLT QinQ domains. Type underlines, English letters and digital numbers, and the maximum length is 16 bytes.	Mandatory
<1-8>	Index of service entries. The quantity of service entries should be the same with that of the downlink rule clauses. The value ranges from 1 to 8.	Mandatory
type [single share]	Service type. ◆ single: The service type is single. ◆ share: The service type is share.	Mandatory

Command Example

Set the service type of the second service of the domain named domaintest1 to single.

```
Admin\qinq#set oltqinq_domain domaintest1 2 type single
```

```
Admin\qinq#
```

14.4 Configuring Uplink Rule Clauses of the Qinq Domain

Command Function

The command is used to configure the Qinq domain's uplink rule clauses.

Command Format

```
set oltqinq_domain <name> <1-8> uprule{ <1-27> <value> <op>} *4 { serv_id<1-8>} *1
```

Parameter Description

Parameter	Description	Attribute
oltqinq_domain <name>	The Qinq domain name. You can create a maximum of 1024 OLT Qinq domains. Enter underlines, English letters and digital numbers, and the length cannot exceed 16 bytes.	Mandatory
<1-8>	Index of service entries. Configure the same quantity of downlink rules depending on how many services are configured. The value range is from 1 to 8.	Mandatory

Parameter	Description	Attribute
<1-27>	<p>The uplink rule type. 27 types are provided and the default one is 1.</p> <ul style="list-style-type: none"> ◆ 1: DA (Destination MAC address) ◆ 2: SA (Source MAC address) ◆ 3: ethtype (Ethernet type) ◆ 4: vlan4 (Layer 4 VLAN) ◆ 5: vlan3 (Layer 3 VLAN) ◆ 6: vlan2 (Layer 2 VLAN) ◆ 7: vlan1 (Layer 1 VLAN) ◆ 8: TOS (Service type) ◆ 10: TTL (Time-to-Live) ◆ 11: protocol type. ◆ 12: sip (source IP address) ◆ 14: dip (destination IP address) ◆ 16: L4srcport (Layer 4 source port number) ◆ 17: L4dstport (Layer 4 destination port number) ◆ 18: cos4 (Priority 4) ◆ 19: cos3 (Priority 3) ◆ 20: cos2 (Priority 2) ◆ 21: cos1(Priority 1) ◆ 22: Based on the prefix of the destination IPV6 address (DA IPV6 Prefix) ◆ 23: Based on the prefix of the source IPV6 address (SA IPV6 Prefix) ◆ 24: Based on IP version (v4 or v6) ◆ 25: Based on the IP priority field (IPV6 Traffic Class) ◆ 26: Based on the IP flow label field (IPV6 Flow Label) ◆ 27: Based on next packet header (IPV6 Next Header) 	Mandatory
<value>	The domain value of the uplink domain selection. Select the value according to the type.	Mandatory
<op>	<p>The Uplink operator. The value ranges from 0 to 7. The default value is 5.</p> <ul style="list-style-type: none"> ◆ 0: Never (never match) ◆ 1: = (equal to) ◆ 2: != (not equal to) ◆ 3: <= (smaller than or equal to) ◆ 4: >= (larger than or equal to) ◆ 5: exist (exist means match) ◆ 6: no exist (not exist means match) ◆ 7: always (always match) 	Mandatory
{ serv_id<1-8>*1	The service ID. The value ranges from 1 to 128. If it is null, the service index will be used as the Service ID.	Mandatory

Command Example

Create an OLT QinQ domain named domaintest1. Configure the domaintest1 domain's uplink rule clauses. Configure the first service: Set the uplink rule number to 1 and the rule type to 1. Set the selective domain value to the MAC address FC4DD43BA6E3, the uplink operator to 5 and the service ID to 3.

```
Admin\qinq#set oltqinq_domain domaintest1 1 uprule 1 FC4DD43BA6E3 5 serv_id 3
```

```
Admin\qinq#
```

14.5 Configuring Downlink Rule Clauses for an QinQ Domain

Command Function

The command is used to configure the QinQ domain's downlink rule clauses.

Command Format

```
set oltqinq_domain <name> <1-8> downrule { <1-27> <value> <op> } * 4
```

Parameter Description

Parameter	Description	Attribute
oltqinq_domain <name>	The QinQ domain name. You can create up to 1024 OLT QinQ domains. Type underlines, English letters and digital numbers, and the maximum length is 16 bytes.	Mandatory
<1-8>	Index of service entries. The quantity of service entries should be the same with that of the downlink rule clauses. The value ranges from 1 to 8.	Mandatory

Parameter	Description	Attribute
<1-27>	<p>Downlink rules.</p> <ul style="list-style-type: none"> ◆ 1: DA (destination MAC address) ◆ 2: SA (source MAC address) ◆ 3: ethtype (Ethernet type) ◆ 4: vlan4 (Layer 4 VLAN) ◆ 5: vlan3 (Layer 3 VLAN) ◆ 6: vlan2 (Layer 2 VLAN) ◆ 7: vlan1 (Layer 1 VLAN) ◆ 8: TOS (Service type) ◆ 10: TTL (Time-to-Live) ◆ 11: protocol type ◆ 12: sip (source IP address) ◆ 14: sip (destination IP address) ◆ 16: L4srcport (Layer 4 source port number) ◆ 17: L4dstport (Layer 4 destination port number). ◆ 18: cos4 (Priority 4) ◆ 19: cos3 (Priority 3) ◆ 20: cos2 (Priority 2) ◆ 21: cos1 (Priority 1) ◆ 22: Based on the destination IPv6 address prefix classification (DA IPv6 Prefix). ◆ 23: Based on the source IPv6 address prefix classification (SA IPv6 Prefix). ◆ 24: Based on the IP version (v4 or v6) classification (IP version). ◆ 25: Based on the IP priority field (IPv6) classification (IPv6 Traffic Class). 	Mandatory
<value>	<p>The domain value of the downlink domain selection. Select the value according to the type.</p>	Mandatory
<op>	<p>The uplink operator, ranging from 0 to 7. The default value is 5.</p> <ul style="list-style-type: none"> ◆ 0: Never (never match). ◆ 1: = (equal to). ◆ 2: != (not equal to). ◆ 3: <= (smaller than or equal to). ◆ 4: >= (larger than or equal to). ◆ 5: exist (exist means match). ◆ 6: no exist (no exist means match). ◆ 7: always (always match). 	Mandatory

Command Example

Configure the domaintest1 domain's downlink rule clauses. Configure the first service: Set the downlink rule number to 1 and the rule type to 1. Set the selection domain value to the MAC address FC4DD43BA6E3 and the downlink operator to 5.

```
Admin\qinq#set oltqinq_domain domaintest1 1 downrule 1 FC4DD43BA6E3 5
```

```
Admin\qinq#
```

14.6 Configuring QinQ Domain's VLAN Service Rules

Command Function

The command is used to configure the QinQ domain's VLAN service rules.

Command Format

```
set oltqinq_domain <name> <1-8> { vlan <1-4> [ <oldvid> | null ] [ <oldcos> | null ]  
[ add | translation | transparent ] <tpid> [ <cos> | null ] [ <newvid> | null ] } * 4
```

Parameter Description

Parameter	Description	Attribute
oltqinq_domain <name>	The QinQ domain name. You can create up to 1024 OLT QinQ domains. Type underlines, English letters and digital numbers, and the maximum length is 16 bytes.	Mandatory
<1-8>	Index of service entries. The quantity of service entries should be the same with that of the downlink rule clauses. The value ranges from 1 to 8.	Mandatory
vlan <1-4>	The Nth layer VLAN. The Nth layer of the VLAN. Up to four layers of VLAN service can be configured. The value ranges from 1 to 4.	Mandatory
[<oldvid> null]	<oldvid>: the original VLAN ID value. null: the configuration is null. The value ranges from 1 to 4095. The default value is 65535.	Mandatory
[<oldcos> null]	<oldvid>: the original CoS value. null: the configuration is null. The value ranges from 0 to 7. The default value is 0.	Mandatory
[add translation transparent]	The VLAN action of the layer. add: add. translation: translate. transparent: transparently transmit.	Mandatory

Parameter	Description	Attribute
<tpid>	The TPID value. The value ranges from 1 to 65535. The default value is 33024.	Mandatory
[<cos> null]	<cos>: the CoS value. null: the configuration is null. The value ranges from 0 to 7. The default value is 0.	Mandatory
[<newvid> null]	<newvid>: the new VLAN ID value. null: the configuration is null. The value ranges from 1 to 4095. The default value is 65535.	Mandatory

Command Example

Configure the QinQ domain's VLAN service rules as follows. Configure the first service: Set the downlink rule number to 1. Set the original VLAN ID value of the first layer VLAN to 254, CoS value to 1, VLAN mode to transparent, TPID to 33024, and CoS to Null. Set the new VLAN ID value to Null, the second layer VLAN action to add, the VLAN ID value to 300 and the CoS value to Null.

```
Admin\qinq#set oltqinq_domain domaintest1 1 vlan 1 254 1 transparent 33024 null null
vlan 2 null null add 33024 null 300
Admin\qinq#
```

14.7 Deleting a QinQ Domain

Command Function

The command is used to delete an OLT QinQ domain. The prerequisite of deleting a QinQ domain is that the QinQ domain exists and no binding operations are performed.

Command Format

```
no oltqinq_domain <name>
```

Parameter Description

Parameter	Parameter Description	Attribute
oltqinq_domain <name>	The QinQ domain name. You can create up to 1024 OLT QinQ domains. Type underlines, English letters and digital numbers, and the maximum length is 16 bytes.	Mandatory

Command Example

Delete the QinQ named domaintest1.

```
Admin\qinq#no oltqinq_domain domaintest1
```

```
Admin\qinq#
```

14.8 Viewing QinQ Domain Configuration

Command Function

You can use this command to view the QinQ domain configuration.

Command Format

```
show oltqinq_domain name <name>
```

Parameter Description

Parameter	Description	Attribute
name <name>	The QinQ name length should not exceed 16 bytes.	Mandatory

Command Example

View the configuration of the QinQ named domaintest1.

```
Admin\qinq#show oltqinq_domain name domaintest1
```



```

-----QinQ domain [domaintest1] information-----
Domain index: 2          Service num: 3
Service type: 0          Service ID: 3
Service[1] upstream rule:
Type[01]    val[fc 4d d4 3b a6 e3 00 00]    opt[5]
Service[1] downstream rule:
Type[01]    val[fc 4d d4 3b a6 e3 00 00]    opt[5]
Service[1] vlan information:
Layer 1: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 2: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 3: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 4: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]

Service type: 0          Service ID: 255
Service[2] upstream rule:
Service[2] downstream rule:
Service[2] vlan information:
Layer 1: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 2: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 3: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 4: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]

Service type: 0          Service ID: 255
Service[3] upstream rule:
Service[3] downstream rule:
Service[3] vlan information:
Layer 1: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 2: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 3: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 4: oldvlan[65535] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]

Admin\qinq#

```

14.9 Viewing Domain Configuration for a Special Index Number

Command Function

You can use this command to view the domain configuration based on the index.

Command Format

```
show oltqinq_domain index <index>
```

Parameter Description

Parameter	Description	Attribute
index <index>	The domain index number ranges from 1 to 8192. If 20000 ONU versions are supported, the value ranges from 1 to 20000.	Mandatory

Command Example

View the domain configuration based on the index.

Admin\qinq#**show oltqinq_domain index 1**

```
-----Qinq domain [Onurms002007_45] information-----
Domain index: 1          Service num: 3

Service type: 0          Service ID: 1
Service[1] upstream rule:
Type[01]    val[aa aa aa aa aa aa 00 00]    opt[5]
Service[1] downstream rule:
Type[01]    val[bb bb bb bb bb bb 00 00]    opt[5]
Service[1] vlan information:
Layer 1: oldvlan[951] oldcos[1] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 2: oldvlan[65535] oldcos[255] action[1] tpid[0x8100] cos[1] newvlan[4001]
Layer 3: oldvlan[0] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 4: oldvlan[0] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]

Service type: 0          Service ID: 2
Service[2] upstream rule:
Type[01]    val[aa aa aa aa aa aa 00 00]    opt[5]
Service[2] downstream rule:
Type[01]    val[aa aa aa aa aa aa 00 00]    opt[5]
Service[2] downstream rule:
Type[01]    val[bb bb bb bb bb bb 00 00]    opt[5]
Service[2] vlan information:
Layer 1: oldvlan[2151] oldcos[5] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 2: oldvlan[65535] oldcos[255] action[1] tpid[0x8100] cos[5] newvlan[4011]
Layer 3: oldvlan[0] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 4: oldvlan[0] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]

Service type: 0          Service ID: 3
Service[3] upstream rule:
Type[01]    val[aa aa aa aa aa aa 00 00]    opt[5]
Service[3] downstream rule:
Type[01]    val[bb bb bb bb bb bb 00 00]    opt[5]
Service[3] vlan information:
Layer 1: oldvlan[3351] oldcos[7] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 2: oldvlan[65535] oldcos[255] action[1] tpid[0x8100] cos[7] newvlan[4001]
Layer 3: oldvlan[0] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
Layer 4: oldvlan[0] oldcos[255] action[3] tpid[0x8100] cos[255] newvlan[65535]
```

Admin\device\license#

14.10 Binding / Unbinding the Qinq Domain with the ONU

Command Function

You can use this command to bind / unbind the created Qinq domain with the ONU.

Command Format

```
set onu attach slot <1-18> pon <1-16> onu <1-128> [ attach|detach] domain  
<name>
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number. The number of the slot to be bound or unbound. The value range is from 1 to 18.	Mandatory
pon <1-16>	The PON port number. The number of the PON port to be bound or unbound. The value range is from 1 to 16.	Mandatory
onu <1-128>	The ONU authorization number. The number of the ONU to be bound or unbound. The value range is from 1 to 128.	Mandatory
[attach dettach]	Binding / unbinding operations. ◆ attach: the binding operations. ◆ detach: the unbinding operations.	Mandatory
domain <name>	The QinQ name length should not exceed 16 bytes.	Mandatory

Command Example

Bind the domaintest1 to ONU 1. The ONU is connected to PON Port 1 in Slot 14.

```
Admin\qinq#set onu attach slot 14 pon 1 onu 1 attach domain domaintest1  
Admin\qinq#
```

14.11 Binding / Unbinding the QinQ Domain with the PON Port

Command Function

You can use this command to bind / unbind the created QinQ domain with the PON port.

Command Format

```
set pon attach slot <1-18> pon <1-16> [ attach|detach] domain <name>
```


Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number. The number of the slot to be bound or unbound. The value range is from 1 to 18.	Mandatory
pon <1-16>	The PON port number. The number of the PON port to be bound or unbound. The value range is from 1 to 16.	Mandatory
[attach detach]	Binding / unbinding operations. ◆ attach: the binding operations. ◆ detach: the unbinding operations.	Mandatory
domain <name>	The Qinq name length should not exceed 16 bytes.	Mandatory

Command Example

Bind the domaintest1 domain with PON Port 1 in Slot 14.

```
Admin\qinq#set pon attach slot 14 pon 1 attach domain domaintest1
Admin\qinq#
```

14.12 Viewing Qinq Domain Binding Information

Command Function

You can use this command to query the Qinq domain binding information.

Command Format

```
show attach oltqinq_domain slot <slot> pon <pon> { onu <onu> } *1
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number. The number of the slot to bind or unbind. The value ranges from 1 to 18.	Mandatory
pon <1-16>	The PON port number. The number of the PON port to be bound or unbound. The value ranges from 1 to 16.	Mandatory
onu <1-128>	The ONU authorization number. The number of the ONU to be bound or unbound. The value ranges from 1 to 128.	Mandatory

Command Example

View the binding between ONU 1 and QinQ domain. The ONU is connected to PON Port 1 of Slot 1.

```
Admin\qinq#show attach oltqinq_domain slot 1 pon 1 onu 1
Admin\qinq#
```

14.13 Configuring the QinQ Domain Rate Limiting Policy

Command Function

You can use this command to configure the QinQ domain rate limiting policy.

Command Format

```
set qinq_policing slot <1-18> pon <1-16> onu <1-128> domain <name> servindex
<value> upBandWidth <value> <value> <value> downBandWidth <value> <value>
<value>
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number. The value ranges from 1 to 18.	Mandatory
pon <1-16>	The PON port number. The value ranges from 1 to 16.	Mandatory
onu <1-128>	The ONU number. The value ranges from 1 to 128.	Mandatory
domain <name>	The name should contain no more than 16 bytes.	Mandatory
servindex <value>	The sequence number of the service, ranging from 1 to 32.	Mandatory
upBandWidth <value>	The range of the minimum bandwidth: 1 to 10000000 (unit: kbit/s)	Mandatory
<value>	The range of the maximum bandwidth: 1 to 10000000 (unit: kbit/s)	Mandatory
<value>	The range of the burst bandwidth: 1 to 10000000 (unit:kbit/s)	Mandatory
downBandWidth <value>	The range of the minimum bandwidth: 1 to 10000000 (unit: kbit/s)	Mandatory
<value>	The range of the maximum bandwidth: 1 to 10000000 (unit: kbit/s)	Mandatory
<value>	The range of the burst bandwidth: 1 to 10000000 (unit:kbit/s)	Mandatory

Command Example

Set the Qinq domain rate limiting policy for ONU 1. The minimum, maximum and bust value for both uplink and downlink bandwidth is 1000 kbit/s. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\qinq#set qinq_policing slot 1 pon 1 onu 1 domain test1 servindex 1 upBandWidth
1000 1000 1000 downBandWidth 1000 1000 1000
Admin\qinq#
```

14.14 Validating the Qinq Domain Rate Limiting Policy

Command Function

You can use this command to validate the Qinq domain rate limiting policy.

Command Format

```
apply olt qinq policing <slotno> <ponno> <onuno>
```

Parameter Description

Parameter	Description	Attribute
Policing <slotno>	The slot number. The value range: 1 to 8 or 11 to 18.	Mandatory
<ponno>	The PON port number range: 1 to 16.	Mandatory
<onuno>	The ONU number range: 1 to 128.	Mandatory

Command Example

Validate the Qinq rate limiting policy to ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\qinq#apply olt qinq policing 1 1 1
Admin\qinq#
```


14.15 Configuring the QinQ Inner VLAN

Command Function

You can use this command to configure the inner VLAN.

Command Format

```
set inner_vlan <service_name> <begin_vid> <end_vid>
```

Parameter Description

Parameter	Description	Attribute
<service_name>	The service name, which should contain no more than 30 bytes.	Mandatory
<begin_vid>	The starting VLAN ID of the inner VLAN, ranging from 1 to 4095.	Mandatory
<end_vid>	The ending VLAN ID of the inner VLAN, ranging from 1 to 4095. The ending VLAN ID should not be smaller than the starting VLAN ID.	Mandatory

Command Example

Configure the QinQ service inner VLAN for the item named test 1. Set the starting VLAN ID to 1, and ending VLAN ID to 2.

```
Admin\qinq#set inner_vlan test1 1 2
Admin\qinq#
```

14.16 Deleting the QinQ Inner VLAN

Command Function

You can use this command to delete the inner VLAN configuration.

Command Format

```
no inner_vlan <service_name> <begin_vid> <end_vid>
```


Parameter Description

Parameter	Description	Attribute
<service_name>	The service name, which should contain no more than 30 bytes.	Mandatory
<begin_vid>	The starting VLAN ID of the inner VLAN, ranging from 1 to 4095.	Mandatory
<end_vid>	The ending VLAN ID of the inner VLAN, ranging from 1 to 4095. The ending VLAN ID should not be smaller than the starting VLAN ID.	Mandatory

Command Example

Delete the QinQ service inner VLAN for the item named test 1. The starting VLAN ID is 1, and the ending VLAN ID is 2.

```
Admin\qinq#no inner_vlan test1 1 2
Admin\qinq#
```

14.17 Viewing the QinQ Inner VLAN Configuration

Command Function

You can use this command to view the inner VLAN configuration.

Command Format

```
show inner_vlan
```

Parameter Description

None

Command Example

View all the entries of the inner VLANs, and its starting and ending VLANs.

```
Admin\qinq#show inner_vlan
-----Inner vlan information-----
Service name: test1  Begin vlan: 1  End vlan: 2.
Admin\qinq#
```


14.18 Creating a QinQ Profile

Command Function

You can use this command to create a QinQ profile.

Command Format

```
create qinq_profile <name>
```

Parameter Description

Parameter	Description	Attribute
<name>	The profile name, which should contain no more than 16 bytes.	Mandatory

Command Example

Create a QinQ profile named test.

```
Admin\qinq#create qinq_profile test
```

```
Admin\qinq#
```

14.19 Configuring a QinQ Profile

Command Function

You can use this command to create a QinQ profile.

Command Format

```
set qinq_profile <name> { <field_type> <field_val> <operator> } * 8
```


Parameter Description

Parameter	Description	Attribute
<name>	The profile name cannot exceed 16 bytes.	Mandatory
<field_type>	<p>The rule domain type. The value ranges from 0 to 18.</p> <ul style="list-style-type: none"> ◆ 0(Src Mac): the source MAC address ◆ 1(Dst Mac): the destination MAC address ◆ 2(Src IPv4): the source IP address ◆ 3(Dst IPv4): the destination IP address ◆ 4(VID): the VLAN ID ◆ 5(Ethernet Type): the Ethernet type ◆ 6(Protocol Type): the IP protocol type ◆ 7(COS): the Ethernet priority ◆ 8(TOS): IP TOS/DSCP (IP v4) ◆ 9(L4 Src Port): L4 source port ◆ 10(L4 Dst Port): L4 destination port ◆ 11(Dst IPv6 Prefix): the destination IPV6 address ◆ 12(Src IPv6 Prefix): the source IPV6 address ◆ 13(IP Version): the IP version ◆ 14(IPv6 Traffic Class): the IPv6 traffic class ◆ 15(IPv6 Flow Label): the IPv6 flow label ◆ 16(IPv6 Next Header): the IPv6 next header ◆ 17(Src IPv6) ◆ 18(Dst IPv6) 	Mandatory

Parameter	Description	Attribute
<field_val>	<p>The rule domain value depends on the rule domain type. The rule domain type is shown before the brackets. The rule domain value is shown in brackets.</p> <ul style="list-style-type: none"> ◆ 0: the source MAC address (6 bytes) ◆ 1: the destination MAC address (6 bytes) ◆ 2: Based on the source IP address classification (4 bytes) ◆ 3: Based on the destination IP address classification (4 bytes) ◆ 4: Based on the VLAN ID classification (2 bytes, 0 to 4085, temporary requirement: 0 to 4095) ◆ 5: Based on the Ethernet type (2 bytes, 0 to 0xffff) ◆ 6: Based on the IP protocol type (1 byte, 0 to 0xff) ◆ 7: Based on the Ethernet priority classification (1 byte, 1 to 7) ◆ 8: Based on the IP TOS/DSCP (IPv4) classification (1 byte, 0 to 0xff) ◆ 9: Based on L4 source PORT classification (2 bytes, 0 to 0xffff) ◆ 10: Based on L4 destination PORT classification (2 bytes, 0 to 0xffff) ◆ 11: Based on the destination IPV6 address prefix classification ◆ 12: Based on the source IPV6 address prefix classification ◆ 13: Based on the IP version (v4 or v6) classification (2 bytes, v4 or v6) ◆ 14: Based on the IPv6 traffic class (1 byte, 0 to 255) ◆ 15: Based on the IPv6 flow label (4 bytes, 0 to 0xFFFFF) ◆ 16: Based on the IPv6 next header (1 byte, 0 to 255) 	Mandatory
<operator>	<p>The operator, which is an integer ranging from 0 to 6.</p> <ul style="list-style-type: none"> ◆ 0 indicates "equal to" (=). ◆ 1 indicates "not equal to" (! =). ◆ 2 indicates "equal to or smaller than" (<=). ◆ 3 indicates "equal to or larger than" (>=). ◆ 4 indicates "exist then match". ◆ 5 indicates "not exist then match". ◆ 6 indicates "always match". 	Mandatory

Command Example

Configure a QinQ profile named test. The profile rule is valid when the source MAC address 010101010101 exists.


```
Admin\qinq#set qinq_profile test 0 010101010101 0
Admin\qinq#
```

14.20 Deleting a Qinq Profile

Command Function

You can use this command to delete a Qinq profile.

Command Format

```
no qinq_profile <name>
```

Parameter Description

Parameter	Description	Attribute
<name>	The profile name should contain no more than 16 bytes.	Mandatory

Command Example

Delete the Qinq profile named test.

```
Admin\qinq#no qinq_profile test
Admin\qinq#
```

14.21 Viewing the Qinq Profile Configuration

Command Function

You can use this command to view the Qinq profile configuration.

Command Format

```
show qinq_profile { <name> } * 1
```

Parameter Description

Parameter	Description	Attribute
<name>	The profile name should contain no more than 16 bytes.	Mandatory

Command Example

View the QinQ profile configuration for the profile named test.

```
Admin\qinq#show qinq_profile test
-----Qinq profile [ test] information-----
Index: 1
Type: Source MAC Address    Value: 01 01 01 01 01 01    Operator: =
Admin\qinq#
```

14.22 Configuring the VLAN Operation Table

Command Function

You can use this command to create the VLAN operation table configuration.

Command Format

```
set qinq_domain id<1-4096> name<domain_name> \{ [ vlan] [ <1-4085>|null] } * 1
{ [ pri] [ <0-7>|null] } * 1 { [ svlan] [ <0-4085>|null] } * 1 { [ scos] [ <0-7>|null] } * 1
\{ [ srcip] <A.B.C.D> } * 1 { [ srcmask] [ <1-32>|null] } * 1 { [ dstip] <A.B.C.D> } * 1
{ [ dstmask] [ <1-32>|null] } * 1 \{ [ srcmac] <srcmac> } * 1 { [ dstmac] <dstmac> } * 1
{ [ eth_type] [ <0-65534>|null] } * 1 { [ pro_type] [ <1-255>|null] } * 1 \{ [ src_port]
[ <0-65535>|null] } * 1 { [ dst_port] [ <0-65535>|null] } * 1 { [ tos] [ <0-7>|null] } * 1
{ [ ttl] [ <1-254>|null] } * 1 \{ [ outer_vlan] [ <1-4085>|null] } * 1 { [ outer_cos]
[ <0-7>|null] } * 1 \{ [ inner_vlan] [ <1-4085>|null] } * 1 { [ inner_cos] [ <0-7>|
null] } * 1
```

Parameter Description

Parameter	Description	Attribute
id<1-4096>	The ID number, ranging from 1 to 4096.	Mandatory
name<domain_name>	The domain name range. The name should contain no more than 16 bytes.	Mandatory
[vlan] [<1-4085> null]	The VLAN value. The value ranges from 1 to 4085 or null.	Mandatory
[pri] [<0-7> null]	The priority value. The value ranges from 0 to 7 or null.	Mandatory
[svlan] [<0-4085> null]	The SLAN value. The value ranges from 0 to 4085 or null.	Mandatory
[scos] [<0-7> null]	The Scos value. The value ranges from 0 to 7 or null.	Mandatory
[srcip] <A.B.C.D>	The source IP address.	Mandatory
srcmask] [<1-32> null]	The mask value of the source IP address. The value ranges from 1 to 32 or null.	Mandatory

Parameter	Description	Attribute
[dstip] <A.B.C.D>	The destination IP address.	Mandatory
[dstmask] [<1-32> null]	The mask value of the destination IP address. The value ranges from 1 to 32 or null.	Mandatory
[srcmac] <srcmac>	The source MAC character string.	Mandatory
[dstmac] <dstmac>	The destination MAC character string.	Mandatory
[eth_type] [<0-65534> null]	The Ethernet type. The value ranges from 0 to 65534 or null.	Mandatory
[pro_type] [<1-255> null]	The protocol type. The value ranges from 1 to 255 or null.	Mandatory
[src_port] [<0-65535> null]	The source tcp/udp port. The value ranges from 0 to 65535 or null.	Mandatory
[dst_port] [<0-65535> null]	The destination tcp/udp port. The value ranges from 0 to 65535 or null.	Mandatory
[tos] [<0-7> null]	The service type. The value ranges from 0 to 7 or null.	Mandatory
[ttl] [<1-254> null]	The time-to-live value. The value ranges from 1 to 254 or null.	Mandatory
[outer_vlan] [<1-4085> null]	The outer VLAN value. The value ranges from 1 to 4085 or null.	Mandatory
[outer_cos] [<0-7> null]	The outer COS. The value ranges from 0 to 7 or null.	Mandatory
[inner_vlan] [<1-4085> null]	The inner VLAN value. The value ranges from 1 to 4085 or null.	Mandatory
[inner_cos] [<0-7> null]	The inner COS. The value ranges from 0 to 7 or null.	Mandatory

Command Example

Create a VLAN operation table named test. The profile ID of VLAN entries is 1, the priority is 1, the SVLAN is 1, the priority is 1, the source IP address is 1.1.1.1, the mask is 255.255.0.0, the destination IP address is 2.2.2.2, the mask is 255.255.0.0, the source TCP/UDP port is 2, TOS is 0, and TTL is 128.

```
Admin\qinq#set qinq_domain id 1 name test vlan 1 pri 1 svlan 1 scos 1 srcip 1.1.1.1
srcmask 16 dstip 2.2.2.2 dstmask 16 src_port 1 dst_port 2 tos 0 ttl 128 outer_vlan 11
outer_cos 1 inner_vlan 22 inner_cos 1
```

```
Admin\qinq#
```


14.23 Deleting the VLAN Operation Table

Command Function

You can use this command to delete the VLAN operation table configuration.

Command Format

```
no qinq_profile id[ <1-4096> |all]
```

Parameter Description

Parameter	Description	Attribute
id[<1-4096> all]	The profile ID. The value ranges from 1 to 4096 or null.	Mandatory

Command Example

Delete the VLAN operation table whose profile ID is 1.

```
Admin\qinq#no qinq_profile id 1
Admin\qinq#
```

14.24 Viewing the VLAN Operation Table

Command Function

You can use this command to view the VLAN operation table configuration.

Command Format

```
show qinq_profile id[ <1-4096> |all]
```

Parameter Description

Parameter	Description	Attribute
id[<1-4096> all]	The profile ID. The value ranges from 1 to 4096 or null.	Mandatory

Command Example

View the VLAN operation table configuration whose profile ID is 1.


```

Admin\qinq#show qinq_profile id 1
-----Gpon vlan table-----
Table id: 1
Table name: test
Vlan id: 1
Vlan cos: 1
SVlan id: 1
SVlan cos: 1

Qinq action layer1:
Outer cos: 1
Outer vlan: 1

Qinq action layer2:
Inner cos: 1
Inner vlan: 22
Admin\qinq#

```

14.25 Configuring QinQ Protocol ID

Command Function

You can use this command to set the QinQ parameters.

Command Format

```
set qinq_param slot <1-18> tpid <tpid>
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number. The value ranges from 1 to 18.	Mandatory
tpid <tpid>	The protocol identifier, ranging from 0 to 65534.	Mandatory

Command Example

Set the QinQ protocol ID of Slot 1 to 1.

```

Admin\qinq#set qinq_param slot 1 tpid 1
Admin\qinq#

```


14.26 Viewing the QinQ Protocol ID

Command Function

You can use this command to view the QinQ protocol ID.

Command Format

```
show qinq_param slot <1-18>
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number. The value ranges from 1 to 8, 11 to 18.	Mandatory

Command Example

View QinQ ID for Slot 1.

```
Admin\qinq#show qinq_param slot 1
TPID:  0x1
Admin\qinq#
```

14.27 Binding a VLAN Operation Table to a PON Port

Command Function

You can use this command to bind a VLAN operation table to a PON port.

Command Format

```
set attach_qinq_profile slot <1-18> pon <1-16> id <index>
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <1-16>	The PON port number, ranging from 1 to 16.	Mandatory
id <index>	The index of the VLAN operation table. The value ranges from 1 to 4096.	Mandatory

Command Example

Bind the VLAN operation table whose index ID is 1 to PON Port 1 in Slot 1.

```
Admin\qinq#set attach_qinq_profile slot 1 pon 1 id 1
```

```
Admin\qinq#
```

14.28 Unbinding a VLAN Operation Table from a PON Port

Command Function

You can use this command to unbind a VLAN operation table from a PON port.

Command Format

```
set unattach_qinq_profile slot <1-18> pon <1-16> id <index>
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <1-16>	The PON port number, ranging from 1 to 16.	Mandatory
id <index>	The ONU number. The value ranges from 1 to 128.	Mandatory

Command Example

Unbind the VLAN operation table whose profile ID is 1 from PON Port 1 in Slot 1.

```
Admin\qinq#set unattach_qinq_profile slot 1 pon 1 id 1
```

```
Admin\qinq#
```

14.29 Viewing the VLAN Operation Table Configuration

Command Function

You can use this command to view the VLAN operation table configuration.

Command Format

```
show attach_qinq_profile slot <1-18> pon <1-16>
```

Parameter Description













Parameter	Description	Attribute
slot <1-18>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <1-16>	The PON port number ranges from 1 to 16.	Mandatory

Command Example

View the binding information of the VLAN operation table of PON Port 1 in Slot 1.

```
Admin\qinq#show attach_qinq_profile slot 1 pon 1
Slot 1 pon 1 attach table ID:  1
Admin\qinq#
```


15 admin\profile Directory Command

-  Configuring a DBA Profile
-  Configuring an SLA Profile
-  Viewing an SLA Profile
-  Viewing a DBA Profile
-  Deleting an SLA Profile
-  Deleting a DBA Profile
-  Binding the DBA Profile
-  Unbinding a DBA Profile
-  Configuring DBA Parameters for the PON Port on the Line Card
-  Viewing DBA Parameters for the PON Port on the Line Card
-  Configuring SVLAN Profiles in a Batch Manner
-  Configuring Service Model Profiles in a Batch Manner

15.1 Configuring a DBA Profile

Command Function

You can use this command to configure a DBA profile. When configuring this command, make sure that the traffic classification rule profile is configured first.

Command Format

```
set dba_config_profile <id> <name> <llid_item> { <seqno> <rule_id> <sla_id> }  
* 7
```

Parameter Description

Parameter	Description	Attribute
<id>	The DBA profile ID, ranging from 0 to 1023.	Mandatory
<name>	The DBA profile name. It should include no more than 20 characters.	Mandatory
<llid_item>	The number of the services. The value ranges from 1 to 7.	Mandatory
<seqno>	The sequence number of the service. The value ranges from 1 to 7.	Mandatory
<rule_id>	The traffic classification rule profile. The value ranges from 0 to 1023.	Mandatory
<sla_id>	The LLID SLA profile. The value ranges from 0 to 1023.	Mandatory

Command Example

Configure a DBA profile named test. The profile ID is 1, the service number is 1, the service sequence number is 1, the bound profile of the traffic classification rule is 1, and the SLA profile is 1.

```
Admin\profile#set dba_config_profile 1 test 1 1 1 1  
Admin\profile#
```

15.2 Configuring an SLA Profile

Command Function

You can use this command to configure an SLA profile.

Command Format

```
set dba_sla_profile <id> <name> <upcir> <uppir> <upfir> <upminlevel>
<upmaxlevel> <uppollinglevel> <dncir> <dnpir> <dnminlevel> <dnmaxlevel>
mode[ normal|advance]
```

Parameter Description

Parameter	Description	Attribute
<id>	The SLA profile ID. The value ranges from 4 to 1023. The default value is 0.	Mandatory
<name>	The SLA profile name. It should include no more than 20 bytes.	Mandatory
<upcir>	The minimum uplink assured bandwidth. The value ranges from 256 to 10000000 or 0. The default value is 640.	Mandatory
<uppir>	The maximum uplink allowed bandwidth. The value ranges from 256 to 10000000. The default value is 1000000.	Mandatory
<upfir>	The uplink fixed bandwidth. The value ranges from 0 to 10000000. The default value is 0.	Mandatory
<upminlevel>	The minimum uplink bandwidth scheduling level. The value ranges from 0 to 7 or 0xffff. The default value is 1.	Mandatory
<upmaxlevel>	The maximum uplink assured bandwidth scheduling level. The value ranges from 0 to 7 or 0xffff. The default value is 5	Mandatory
<uppollinglevel>	The uplink polling scheduling level. The value ranges from 0 to 7. The default value is 1.	Mandatory
<dncir>	The minimum downlink assured bandwidth. The value ranges from 256 to 10000000. The default value is 640.	Mandatory
<dnpir>	The maximum downlink allowed bandwidth. The value ranges from 256 to 10000000. The default value is 1000000.	Mandatory
<dnminlevel>	The minimum downlink bandwidth scheduling level. The value ranges from 0 to 7 or 0xffff. The default value is 1.	Mandatory
<dnmaxlevel>	The maximum downlink assured bandwidth scheduling level. The value ranges from 0 to 7 or 0xffff. The default value is 5	Mandatory
mode[normal advance]	The mode. Default value: normal. ◆ Normal ◆ Advance	Mandatory

Command Example

Configure an SLA profile named test. The SLA profile ID is 1, the minimum uplink assured bandwidth is 640, the maximum uplink allowed bandwidth is 1000000, the uplink fixed bandwidth is 0, the minimum uplink bandwidth scheduling level is 1, the maximum uplink assured bandwidth scheduling level is 5, the uplink polling scheduling level is 1, the minimum downlink assured bandwidth is 640, the maximum downlink allowed bandwidth is 1000000, the minimum downlink bandwidth scheduling level is 1, the maximum downlink assured bandwidth scheduling level is 5, and the mode is normal.

```
Admin\profile#set dba_sla_profile 1 test 640 1000000 0 1 5 1 640 1000000 1 5 mode
normal
Admin\profile#
```

15.3 Viewing an SLA Profile

Command Function

You can use this command to view the SLA profile.

Command Format

```
show sla_rule id <idlist>
```

Parameter Description

Parameter	Description	Attribute
id <idlist>	The ID number, ranging from 0 to 1023.	Mandatory

Command Example

View the rules of the SLA profile whose ID is 1.

```
Admin\profile#show sla_rule id 1
prfId: 1
name: de_sla_multi1
mode: Normal
up_cir: 0
up_pir: 1000000
up_fir: 0
```



```
upmin_scheduler_level: 65535
upmax_scheduler_level: 6
up_polling_level: 2
dn_cir: 640
dn_pir: 1000000
dnmin_scheduler_level: 1
dnmax_scheduler_level: 5
=====
Admin\profile#
```

15.4 Viewing a DBA Profile

Command Function

You can use this command to view a DBA profile.

Command Format

```
show dba_profile id<idlist>
```

Parameter Description

Parameter	Description	Attribute
id<idlist>	The ID number, ranging from 0 to 1023.	Mandatory

Command Example

View the DBA profile configuration whose profile ID is 1.

```
Admin\profile#show dba_profile id 1
llid_item: 3
*****
llid_seq: 1
rule_id: 1
sla_id: 1

*****
llid_seq: 2
rule_id: 2
sla_id: 2

*****
```



```
llid_seq: 3
rule_id: 3
sla_id: 3

*****
=====
Admin\profile#
```

15.5 Deleting an SLA Profile

Command Function

The command is used to delete an SLA profile.

Command Format

```
no sla_rule id <id>
```

Parameter Description

Parameter	Description	Attribute
id <id>	The ID number, ranging from 4 to 1023.	Mandatory

Command Example

Delete the SLA profile whose profile ID is 1.

```
Admin\profile#no sla_rule id 1
Admin\profile#
```

15.6 Deleting a DBA Profile

Command Function

The command is used to delete a DBA profile.

Command Format

```
no dba_profile id <id>
```


Parameter Description

Parameter	Description	Attribute
id <id>	The ID number, ranging from 0 to 1023.	Mandatory

Command Example

Delete the DBA profile whose profile ID is 1.

```
Admin\profile#no dba_profile id 1
Admin\profile#
```

15.7 Binding the DBA Profile

Command Function

You can use this command to configure a new DBA profile.

Command Format

```
set new_dba_profile_bind <slotno> <item> { <pon1> <sequence1> <profile_id1>
<pon2> <sequence2> <profile_id2> <pon3> <sequence3> <profile_id3> <pon4>
<sequence4> <profile_id4> <pon5> <sequence5> <profile_id5> <pon6>
<sequence6> <profile_id6> } *
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number. The value ranges from 1 to 8 or 11 to 18.	Mandatory
<item>	The quantity of the ONUs. It must be a multiple of 6. The value can be 0, 6, 12 or 18.	Mandatory
<pon1>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence1>	The ONU number, ranging from 1 to 128.	Mandatory
<profile_id1>	The profile ID, ranging from 0 to 1023.	Mandatory
<pon2>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence2>	The ONU number, ranging from 1 to 128.	Mandatory
<profile_id2>	The profile ID, ranging from 0 to 1023.	Mandatory
<pon3>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence3>	The ONU number, ranging from 1 to 128.	Mandatory
<profile_id3>	The profile ID, ranging from 0 to 1023.	Mandatory

Parameter	Description	Attribute
<pon4>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence4>	The ONU number, ranging from 1 to 128.	Mandatory
<profile_id4>	The profile ID, ranging from 0 to 1023.	Mandatory
<pon5>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence5>	The ONU number, ranging from 1 to 128.	Mandatory
<profile_id5>	The profile ID, ranging from 0 to 1023.	Mandatory
<pon6>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence6>	The ONU number, ranging from 1 to 128.	Mandatory
<profile_id6>	The profile ID, ranging from 0 to 1023.	Mandatory

Command Example

Bind DBA profiles to six ONUs. Bind DBA Profile 1 to ONU 1, Profile 2 to ONU2, Profile 3 to ONU3, Profile 4 to ONU 4, Profile 5 to ONU 5, Profile 6 to ONU6. These six ONUs are connected to PON Port 1 of Slot 1.

```
Admin\profile#set new_dba_profile_bind 1 6 1 1 1 2 2 1 3 3 1 4 4 1 5 5 1 6 6
Admin\profile#
```

15.8 Unbinding a DBA Profile

Command Function

You can use this command to delete a DBA profile binding.

Command Format

```
no dba_profile_bind <slotno> <ponon> <sequence>
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
<ponon>	The PON port number, ranging from 1 to 16.	Mandatory
<sequence>	The ONU number. The value ranges from 1 to 128.	Mandatory

Command Example

Delete the DBA profile bound with ONU 1. The ONU is connected to PON Port 1 in Slot 1.

```
Admin\profile#no dba_profile_bind 1 1 1
Admin\profile#
```

15.9 Configuring DBA Parameters for the PON Port on the Line Card

Command Function

You can use this command to configure the DBA parameters for the PON port on the EPON line card.

Command Format

```
set epon_dba slot <slotno> pon <ponno> <1 - 2> <ddown1> <ddown2> <ddown3>
<ddown4> <ddown5> <ddown6> <ddown7> <prate0> <prate1> <prate2> <prate3>
<prate4> <prate5> <prate6> <prate7>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory
pon <ponno>	The PON port number, ranging from 1 to 16.	Mandatory
<1~2>	The DBA parameter mode of the PON port. The value ranges from 1 to 2. ◆ 1: manual. ◆ 2: automatic.	Mandatory
<ddown1>	Level 1 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory
<ddown2>	Level 2 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory
<ddown3>	Level 3 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory
<ddown4>	Level 4 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory
<ddown5>	Level 5 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory

Parameter	Description	Attribute
<ddown6>	Level 6 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory
<ddown7>	Level 7 Dropdown weight parameters. The value ranges from 0 to 256, and must be a multiple of 4.	Mandatory
<prate0>	Level 0 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate1>	Level 1 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate2>	Level 2 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate3>	Level 3 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate4>	Level 4 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate5>	Level 5 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate6>	Level 6 polling rate. The value ranges from 0 to 15000.	Mandatory
<prate7>	Level 7 polling rate. The value ranges from 0 to 15000.	Mandatory

Command Example

Configure the DBA parameter rule for the PON Port 1 in Slot 1. The DBA parameter rule mode is 1 which is the manual mode, Level 1 Dropdown weight parameter is 4, Level 2 Dropdown weight parameter is 8, Level 3 Dropdown weight parameter is 16, Level 4 Dropdown eight parameter is 32, Level 5 Dropdown weight parameter is 64, Level 6 Dropdown weight parameter is 128, Level 7 Dropdown weight parameter is 256, Level 0 polling rate is 1, Level 1 polling rate is 2, Level 2 polling rate is 3, Level 3 polling rate is 4, Level 4 polling rate is 5, Level 5 polling rate is 6, and Level 6 polling rate is 7.

```
Admin\profile#set epon_dba slot 1 pon 1 1 481632641282560 1 2 3 4 5 6 7
Admin\profile#
```

15.10 Viewing DBA Parameters for the PON Port on the Line Card

Command Function

You can use this command to view the DBA parameters for the PON port on the line card.

Command Format

```
show epon_dba slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number, ranging from 1 to 8 or 11 to 18.	Mandatory

Command Example

View the DBA binding information of Slot 1.

```
Admin\profile#show epon_dba slot 1
```

```
-----Epon pon dba parameter, slot 1-----
pon mode drop1 drop2 drop3 drop4 drop5 drop6 drop7 poll0 poll1 poll2 poll3 poll4 poll5 poll6 poll7
-----
1  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
2  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
3  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
4  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
5  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
6  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
7  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
8  A   23120 2875 5000 65535 64456 65535 65535 3726 23184 2875 5000 0 0 0 1
```

```
Admin\profile#
```

15.11 Configuring SVLAN Profiles in a Batch Manner

Command Function

You can use this command to add or delete an SVLAN profile.

Command Format

```
[ add|delete] svlan profile index <0-128> { name <name> service <name> svlan
<vid> <tpid> <cos> } *1
```


Parameter Description

Parameter	Description	Attribute
[add delete]	◆ add: Add an SVLAN profile. ◆ delete: Delete an SVLAN profile.	Mandatory
index <1-128>	The profile index number. The value ranges from 1 to 128.	Mandatory
name <name>	The SVLAN profile name.	Mandatory
service <name>	The SVLAN service name.	Mandatory
svlan <vid>	The SVLAN ID. The value ranges from 1 to 4085.	Mandatory
<tpid>	The SVLAN TPID. The value ranges from 0 to 65535.	Mandatory
<cos>	The SVLAN COS. The value ranges from 0 to 7.	Mandatory

Command Example

Add an SVLAN profile. Set the profile index to 7, profile name to test7, service name to 1, SVLAN ID to 7, SVLAN TPID to 5, and SVLAN COS to 7.

```
Admin\profile#add svlan profile index 7 name test7 service 1 svlan 7 5 7
Admin\profile#
```

15.12 Configuring Service Model Profiles in a Batch Manner

Command Function

You can use this command to add or delete a service mode profile, including deleting the translation VLAN and the QinQ profile.

Command Format

```
[ add|delete] servmode profile index <0-128> { name <name> type[ unicast|
multicast|multiup] cvlan[ tag|transparent] translate[ enable|disable] qinq
[ enable|disable] <qinq_profile>} *1
```


Parameter Description

Parameter	Description	Attribute
[add delete]	<ul style="list-style-type: none"> ◆ add: Add a service mode profile. ◆ delete: Delete a service mode profile. 	Mandatory
index <1-128>	The profile index number. The value ranges from 1 to 128.	Mandatory
name <name>	The service profile name	Mandatory
type[unicast multicast multiup]	The service type. <ul style="list-style-type: none"> ◆ unicast: the unicast service. ◆ multicast: the multicast service. ◆ multiup: the multicast uplink protocol. 	Mandatory
cvlan[tag transparent]	The CVLAN mode. <ul style="list-style-type: none"> ◆ tag: the TAG identifier. ◆ transparent: transparent transmission. 	Mandatory
translate[enable disable]	The translation function. <ul style="list-style-type: none"> ◆ enable: Enable the function. ◆ disable: Disable the function. 	Mandatory
qinq[enable disable]	The QinQ function. <ul style="list-style-type: none"> ◆ enable: Enable the function. ◆ disable: Disable the function. 	Mandatory
<qinq_profile>	The QinQ profile name.	Mandatory

Command Example

Add a service profile, set the profile index to 6, profile name to test2, service type to multicast, CVLAN mode to transparent transmission, the translation function and QinQ profile to enabled, and the QinQ profile name to 1.

```
Admin\profile#add servmode profile index 6 name test2 type multicast cvlan
transparent translate enable qinq enable 1
Admin\profile#
```


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- ☒ Configuring the Static Routing
- ☒ Deleting the Static Route
- ☒ Viewing the Routing Table Entries
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- ☒ Configuring Routing Transparent Transmission Function for the Designated VLAN and Slot Section
- ☒ Configuring Routing Transparent Transmission Function for the Designated VLAN and Member Port of the Slot
- ☒ Configuring Routing Transparent Transmission Function for the Designated VLAN and Member Port Section of the Slot
- ☒ Deleting Routing Transparent Transmission Configuration for the Designated VLAN and Slot
- ☒ Deleting Routing Transparent Transmission Configuration for the Designated VLAN and Member Port of the Slot
- ☒ Deleting Routing Transparent Transmission Configuration for a Designated VLAN

16.1 Configuring the Static Routing

Command Function

You can use this command to configure the unicast static route.

Command Format

```
set static-route destination-ip <A.B.C.D> mask <A.B.C.D> nexthop <A.B.C.D>
{ metric <0-255> } *1
```

Parameter Description

Parameter	Description	Attribute
destination-ip <A.B.C.D>	The destination IP address, which identifies the destination IP address or destination network of the IP messages.	Mandatory
mask <A.B.C.D>	The subnet mask of the IP address. Together with destination IP address, it can identify the address of the network segment where the destination host and router are located.	Mandatory
nexthop <A.B.C.D>	The next-hop IP address of the designated route.	Mandatory
metric <0-255>	The priority of the route. The system selects the route with highest priority (the smallest number) to forward IP messages.	Mandatory

Command Example

Configure a static route. The destination IP address is 6.6.6.0, the mask is 255.255.255.0, the next-hop IP address of designated route is 3.3.3.30, and the route priority is 10.

```
Admin\protocol#set static-route destination-ip 6.6.6.0 mask 255.255.255.0 nexthop
3.3.3.30 metric 10
Admin\protocol#
```

16.2 Deleting the Static Route

Command Function

You can use this command to delete the unicast static route.

Command Format

```
no static-route destination-ip <A.B.C.D> mask <A.B.C.D> nexthop <A.B.C.D>
{ metric <0-255> } *1
```

Parameter Description

Parameter	Description	Attribute
destination-ip <A.B.C.D>	The destination IP address, which identifies the destination IP address or destination network of the IP messages.	Mandatory
mask <A.B.C.D>	The subnet mask of the IP address. Together with destination IP address, it can identify the address of the network segment where the destination host and router are located.	Mandatory
nexthop <A.B.C.D>	The next-hop IP address of the designated route.	Mandatory
metric <0-255>	The priority of the route. The system selects the route with highest priority (the smallest number) to forward IP messages.	Mandatory

Command Example

Delete a configured static route.

```
Admin\protocol#no static-route destination-ip 6.6.6.0 mask 255.255.255.0 nexthop
3.3.3.30 metric 10
Admin\protocol#
```

16.3 Viewing the Routing Table Entries

Command Function

You can use this command to view the routing table entries in the system.

Command Format

```
show ip route
```

Description

None

Command Example

View the routing table entries in the system.

```
Admin\protocol#show ip route
Show ip route: item is 2
DestNetwork  DestMask      Dis  Met  NextHop  Status  Protocol  Interface
6.6.6.0      255.255.255.0  0    0    3.3.3.30 active  -         vlanif1
7.7.7.0      255.255.255.0  0    0    4.4.4.40 pend    -         vlanif2
Admin\protocol#
```

Result Description

Parameter	Description
route-item	The number of the routing entries.
DestNetwork	The address of the destination network.
DestMask	The address mask of the destination network.
Dis	The routing distance.
Met	The routing priority.
NextHop	The IP address of the next hop.
Status	The routing status.
protocol	The protocol type.
interface	The outgoing interface.

16.4 Viewing ARP Table Entries

Command Function

You can use this command to view the ARP table entries in the system.

Command Format

```
show arp-table all { <num> } *1
```

Parameter Description

Parameter	Description	Attribute
all { <num> } *1	The number of the ARP table entries.	Mandatory

Command Example

View the ARP table entries.

```
Admin\protocol#show arp-table all
*****
the table of arp
*****
the total number of arp is: 2
2.2.2.20 MAC(00:10:94:00:00:04),SUPERVLAN:2
        port:25, svlan:200, cvlan:0, left_timer(s):1884
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
        port:25, svlan:100, cvlan:0, left_timer(s):4686
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.5 Viewing ARP Table Entries for a Designated IP Address

Command Function

You can use this command to view ARP table entries for a system-designated IP address.

Command Format

```
show arp-table ip <A.B.C.D> { <num> } *1
```


Parameter Description

Parameter	Description	Attribute
ip <A.B.C.D>	The IP address.	Mandatory
all { <num> } *1	The number of the ARP table entries.	Mandatory

Command Example

Query the ARP table entries whose IP address is 1.1.1.10 in the system.

```
Admin\protocol#show arp-table ip 1.1.1.10
*****
the table of arp
*****
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
        port:25, svlan:100, cvlan:0, left_timer(s):4642
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.6 Viewing ARP Table Entries for the Designated VLANIF

Command Function

You can use this command to view the ARP table entries for the designated VLANIF.

Command Format

```
show arp-table vlanif <1-4095> { <num> } *1
```


Parameter Description

Parameter	Description	Attribute
vlanif	Layer 3 interface.	Mandatory
{ <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

Query the ARP table entries for the VLANIF designated by system.

```
Admin\protocol#show arp-table vlanif 1
*****
the table of arp
*****
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
        port:25, svlan:100, cvlan:0, left_timer(s):4459
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.7 Viewing ARP Table Entries for the Designated SVLAN

Command Function

You can use this command to view the ARP table entries for the designated SVLAN.

Command Format

```
show arp-table svlan <1-4095> { <num> } * 1
```


Parameter Description

Parameter	Description	Attribute
svlan	The outer VLAN.	Mandatory
{ <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

Query the ARP table entries for the VLAN designated by system.

```
Admin\protocol#show arp-table svlan 100
*****
the table of arp
*****
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
        port:25, svlan:100, cvlan:0, left_timer(s):2581
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.8 Viewing ARP Table Entries for the Designated VLANIF and SVLAN

Command Function

You can use this command to view the ARP table entries for the designated VLANIF and SVLAN.

Command Format

```
show arp-table vlanif <1-4095> svlan <1-4095> { <num> } * 1
```


Parameter Description

Parameter	Description	Attribute
vlanif <1-4095>	Designated VLAN Layer 3 interface.	Mandatory
svlan <1-4095>	The designated VLAN.	Mandatory
{ <num> } *1	The number of the ARP table entries.	Mandatory

Command Example

Query the ARP table entries for the VLAN designated by system.

```
Admin\protocol#show arp-table vlanif 1 svlan 100
*****
the table of arp
*****
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
    port:25, svlan:100, cvlan:0, left_timer(s):2546
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.9 Viewing ARP Table Entries for the Designated CVLAN

Command Function

You can use this command to view the ARP table entries for the designated CVLAN.

Command Format

```
show arp-table cvlan <1-4095> { <num> } *1
```


Parameter Description

Parameter	Description	Attribute
cvlan <1-4095>	The designated inner VLAN.	Mandatory
{ <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

View the ARP table entries for all the CVLANs whose ID is 10.

```
Admin\protocol#show arp-table cvlan 10
*****
the table of arp
*****
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
        port:25, svlan:100, cvlan:10, left_timer(s):2546

Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.10 Viewing ARP Table Entries for a Designated Port

Command Function

You can use this command to view the ARP table entries for a designated port.

Command Format

```
show arp-table port <portid> { <num> } * 1
```


Parameter Description

Parameter	Description	Attribute
port <portid>	The port number.	Mandatory
{ <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

Query the ARP table entries for port number 25 designated by system.

```
Admin\protocol#show arp-table port 25
*****
the table of arp
*****
2.2.2.20 MAC(00:10:94:00:00:04),SUPERVLAN:2
        port:25, svlan:200, cvlan:0, left_timer(s):132
1.1.1.10 MAC(00:10:94:00:00:03),SUPERVLAN:1
        port:25, svlan:100, cvlan:0, left_timer(s):2417
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.11 Viewing ARP Table Entries for a Designated MAC Address

Command Function

You can use this command to view the ARP table entries for a designated MAC address.

Command Format

```
show arp-table mac <aa:bb:cc:dd:ee:ff> { <num> } * 1
```


Parameter Description

Parameter	Description	Attribute
mac <aa:bb:cc:dd:ee:ff>	The MAC address.	Mandatory
{ <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

Query the ARP table entries for the MAC address designated by system.

```
Admin\protocol#show arp-table mac 00:10:94:00:00:04
*****
the table of arp
*****
2.2.2.20 MAC(00:10:94:00:00:04),SUPERVLAN:2
        port:25, svlan:200, cvlan:0, left_timer(s):95
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address.
SUPERVLAN	The Super VLAN corresponding to the ARP proxy.
port	The number of the port receiving the ARP messages.
s-vlan	The customer VLAN.
c-vlan	The inner VLAN.
left_timer	The remaining aging time; unit: second.

16.12 Configuring ARP Aging Time

Command Function

You can use this command to configure the ARP aging time.

Command Format

```
set arp-aging-time[ <1-4294967295> | default]
```


Parameter Description

Parameter	Description	Attribute
arp-aging-time[<1-4294967295> default]	The ARP aging time. The default value is 1200s.	Mandatory

Command Example

Configure the aging time of ARP table entries.

```
Admin\protocol#set arp-aging-time 1500
Admin\protocol#
```

16.13 Viewing ARP Table Entries for the Cross-Segment Network ARP Proxy

Command Function

You can use this command to view the ARP table entries for cross-segment network ARP proxy.

Command Format

```
show arp-proxy-table all { <num> } * 1
```

Parameter Description

Parameter	Description	Attribute
all { <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

View ARP table entries for the cross-segment network ARP Proxy

```
Admin\protocol#show arp-proxy-table all
Arp route table number 4.
*****
Flag:T - is timing, H - is in Forward Table, P - is in Netstack
R - is in requesting.
timer - time out for request,cnt - time out count,max is 3.
*****
6.6.6.1    MAC(00:10:94:00:00:07),TYPE:DYNAMIC,SUPERVLAN:3
```



```

slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):1170(0), cnt:0
6.6.6.6 MAC(00:10:94:00:00:05),TYPE:DYNAMIC,SUPERVLAN:3
slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):1171(0), cnt:0
7.7.7.1 MAC(00:10:94:00:00:08),TYPE:DYNAMIC,SUPERVLAN:3
slot 3, svlan:400, cvlan:0, flag:TH__, timer(s):1170(0), cnt:0
7.7.7.7 MAC(00:10:94:00:00:06),TYPE:DYNAMIC,SUPERVLAN:3
slot 3, svlan:400, cvlan:0, flag:TH__, timer(s):1171(0), cnt:0
Admin\protocol#

```

Result Description

Parameter	Description
MAC	The MAC address of the ARP information.
TYPE	The type of ARP table entries. It includes static and dynamic ARP.
SUPERVLAN	The Super VLAN ID.
Slot	Slot number.
svlan	The VLAN on subscriber side.
cvlan	The inner VLAN.
flag	The identification bit.
timer	The remaining aging time.

16.14 Viewing Cross-Segment Network ARP Table Entries for a Designated MAC Address

Command Function

You can use this command to view the cross-segment network ARP table entries for a designated MAC address.

Command Format

```
show arp-proxy-table mac <aa:bb:cc:dd:ee:ff> { <num> } *1
```

Parameter Description

Parameter	Description	Attribute
mac <aa:bb:cc:dd:ee:ff>	The MAC address.	Mandatory
{ <num> } *1	The number of the ARP table entries.	Mandatory

Command Example

Query the cross-segment network ARP table entries for MAC address designated by system.

```
Admin\protocol#show arp-proxy-table mac 00:10:94:00:00:07
Arp route table number 1.
*****
Flag:T - is timing, H - is in Forward Table, P - is in Netstack
R - is in requesting.
timer - time out for request,cnt - time out count,max is 3.
*****
6.6.6.1   MAC(00:10:94:00:00:07),TYPE:DYNAMIC,SUPERVLAN:3
          slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):1129(0), cnt:0
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address of the ARP information.
TYPE	The type of ARP table entries. It includes static and dynamic ARP.
SUPERVLAN	The Super VLAN ID.
Slot	The slot number.
svlan	The VLAN on subscriber side.
cvlan	The inner VLAN.
flag	The identification bit.
timer	The remaining aging time.

16.15 Viewing Cross-Segment Network ARP Table Entries for the Designated VLAN

Command Function

You can use this command to view the cross-segment network ARP table entries for the designated VLAN.

Command Format

```
show arp-proxy-table vlan <1-4085> { <num> } *1
```


Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN.	Mandatory
{ <num> } * 1	The number of the ARP table entries.	Mandatory

Command Example

Query the cross-segment network ARP table entries for the VLAN designated by system.

```
Admin\protocol#show arp-proxy-table vlan 300
Arp route table number 2.
*****
Flag:T - is timing, H - is in Forward Table, P - is in Netstack
R - is in requesting.
timer - time out for request,cnt - time out count,max is 3.
*****
6.6.6.1 MAC(00:10:94:00:00:07),TYPE:DYNAMIC,SUPERVLAN:3
        slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):1099(0), cnt:0
6.6.6.6 MAC(00:10:94:00:00:05),TYPE:DYNAMIC,SUPERVLAN:3
        slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):1100(0), cnt:0
Admin\protocol#
```

Result Description

Parameter	Description
MAC	The MAC address of the ARP information.
TYPE	The type of ARP table entries. It includes static and dynamic ARP.
SUPERVLAN	The Super VLAN ID.
Slot	The slot number.
svlan	The VLAN on subscriber side.
cvlan	The inner VLAN.
flag	The identification bit.
timer	The remaining aging time.

16.16 Viewing Cross-Segment Network ARP Table Entries for a Designated Slot

Command Function

You can use this command to view the cross-segment network ARP table entries for a designated slot.

Command Format

```
show arp-proxy-table slot <1-18> { <num> } *1
```

Parameter Description

Parameter	Description	Attribute
slot <1-18>	The slot number.	Mandatory
{ <num> } *1	The number of the ARP table entries.	Mandatory

Command Example

Query the cross-segment network ARP table entries for the slot designated by system.

```
Admin\protocol#show arp-proxy-table slot 3
Arp route table number 4.
*****
Flag:T - is timing, H - is in Forward Table, P - is in Netstack
R - is in requesting.
timer - time out for request,cnt - time out count,max is 3.
*****
6.6.6.1 MAC(00:10:94:00:00:07),TYPE:DYNAMIC,SUPERVLAN:3
      slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):833(0), cnt:0
6.6.6.6 MAC(00:10:94:00:00:05),TYPE:DYNAMIC,SUPERVLAN:3
      slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):834(0), cnt:0
7.7.7.1 MAC(00:10:94:00:00:08),TYPE:DYNAMIC,SUPERVLAN:3
      slot 3, svlan:400, cvlan:0, flag:TH__, timer(s):833(0), cnt:0
7.7.7.7 MAC(00:10:94:00:00:06),TYPE:DYNAMIC,SUPERVLAN:3
      slot 3, svlan:400, cvlan:0, flag:TH__, timer(s):834(0), cnt:0
Admin\protocol#
```


Result Description

Parameter	Description
MAC	The MAC address of the ARP information.
TYPE	The type of ARP table entries. It includes static and dynamic ARP.
SUPERVLAN	The Super VLAN ID.
Slot	Slot number.
svlan	The VLAN on subscriber side.
cvlan	The inner VLAN.
flag	The identification bit.
timer	The remaining aging time.

16.17 Viewing Cross-Segment Network ARP Table Entries for a Designated IP Address

Command Function

You can use this command to view the cross-segment network ARP table entries for a designated IP address.

Command Format

```
show arp-proxy-table ip <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
ip <A.B.C.D>	IP address.	Mandatory

Command Example

View the cross-segment network ARP table entries for a designated IP address of 6.6.6.1.

```
Admin\protocol#show arp-proxy-table ip 6.6.6.1
arp-table ip 6.6.6.1/32 num:
Arp route table number 1.
*****
Flag:T - is timing, H - is in Forward Table, P - is in Netstack
R - is in requesting.
```



```

timer - time out for request,cnt - time out count,max is 3.
*****
6.6.6.1 MAC(00:10:94:00:00:07),TYPE:DYNAMIC,SUPERVLAN:3
        slot 3, svlan:300, cvlan:0, flag:TH__, timer(s):782(0), cnt:0
Admin\protocol#

```

Result Description

Parameter	Description
MAC	The MAC address of the ARP information.
TYPE	The type of ARP table entries. It includes static and dynamic ARP.
SUPERVLAN	The Super VLAN ID.
Slot	The slot number.
svlan	The VLAN on subscriber side.
cvlan	The inner VLAN.
flag	The identification bit.
timer	The remaining aging time.

16.18 Configuring Filtering Rule Mode for Cross-Segment Network ARP Proxy

Command Function

You can use this command to configure the filtering rule mode for cross-segment network ARP proxy.

Command Format

```
set proxy-arp-acl mode[ disable|white-list|black-list]
```

Parameter Description

Parameter	Description	Attribute
mode	Configure the filtering rule mode for cross-segment network ARP proxy. <ul style="list-style-type: none"> ◆ disable: Disable the function. ◆ white-list: The white list mode. ◆ black-list: The black list mode. 	Mandatory

Command Example

Set the filtering rule mode for cross-segment network ARP proxy to white list.

```
Admin\protocol#set proxy-arp-acl mode white-list
Admin\protocol#
```

16.19 Configuring Filtering Rules for Cross-Segment Network ARP Proxy

Command Function

You can use this command to configure filtering rules for the cross-segment network ARP proxy.

Command Format

```
set proxy-arp-acl index <1-32> ip <A.B.C.D> mask <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
index <1-32>	The rule index	Mandatory
ip <A.B.C.D>	The IP address.	Mandatory
mask <A.B.C.D>	The subnet mask.	Mandatory

Command Example

Configure filtering rules for the cross-segment network ARP proxy. The index of the filtering rules is 1, the IP address is 3.3.3.30 and the mask is 255.255.255.0.

```
Admin\protocol#set proxy-arp-acl index 1 ip 3.3.3.30 mask 255.255.255.0
Admin\protocol#
```


16.20 Deleting Filtering Rules of Cross-Segment Network ARP Proxy for a Designated Index

Command Function

You can use this command to delete the filtering rules of the cross-segment network ARP proxy for a designated index.

Command Format

```
no proxy-arp-acl index <1-32>
```

Parameter Description

Parameter	Description	Attribute
index <1-32>	The rule index.	Mandatory

Command Example

Delete the filtering rules of cross-segment network ARP proxy for Index 1.

```
Admin\protocol#no proxy-arp-acl index 1
Admin\protocol#
```

16.21 Deleting All the Filtering Rules of the Cross-Segment Network ARP Proxy

Command Function

You can use this command to delete all the filtering rules of the cross-segment network ARP proxy.

Command Format

```
no proxy-arp-acl all
```

Parameter Description

None

Command Example

Delete all the filtering rules of the cross-segment network ARP proxy.

```
Admin\protocol#no proxy-arp-acl all
Admin\protocol#
```

16.22 Viewing All the Filtering Rules of the Cross-Segment Network ARP Proxy

Command Function

You can use this command to view all the filtering rules of the cross-segment network ARP proxy.

Command Format

```
show proxy-arp-acl
```

Parameter Description

None

Command Example

Query all the filtering rules of the cross-segment network ARP proxy in the system.

```
Admin\protocol#show proxy-arp-acl
Mode is WHITE LIST.
arp packets in the list is PERMIT:
-----:
Admin\protocol#
```

16.23 Enabling or Disabling Load Balancing of the Route

Command Function

You can use this command to enable or disable the load balancing of the route.

Command Format

```
set route load-balancing[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
load-balancing[enable disable]	The switch of the route load balancing mode includes: ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the load balancing of the route.

```
Admin\protocol#set route load-balancing enable
Admin\protocol#
```

16.24 Configuring Routing Transparent Transmission Function for the Designated VLAN

Command Function

You can use this command to configure the routing transparent transmission function for the designated VLAN.

Command Format

```
set route_transparent vlan <1-4085>
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID, ranging from 1 to 4085.	Mandatory

Command Example

Set the routing transparent transmission function for VLAN100.

```
Admin\protocol#set route_transparent vlan 100
```


Admin\protocol#

16.25 Configuring Routing Transparent Transmission Function for the Designated VLAN and Slot

Command Function

You can use this command to configure the routing transparent transmission function for the designated VLAN and slot.

Command Format

```
set route_transparent vlan <1-4085> inner_slot <1-18>
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID, ranging from 1 to 4085.	Mandatory
inner_slot <1-18>	The slot number.	Mandatory

Command Example

Set the routing transparent transmission function for VLAN100 in Slot 12.

```
Admin\protocol#set route_transparent vlan 100 inner_slot 12
Admin\protocol#
```

16.26 Configuring Routing Transparent Transmission Function for the Designated VLAN and Slot Section

Command Function

You can use this command to configure the routing transparent transmission function for the designated VLAN and slot section.

Command Format

```
set route_transparent vlan <1-4085> inter_slot begin <1-18> end <1-18>
```


Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID, ranging from 1 to 4085.	Mandatory
begin <1-18>	The starting slot number.	Mandatory
end <1-18>	The ending slot number.	Mandatory

Command Example

Set the routing transparent transmission function for VLAN100 from Slot 12 to 18.

```
Admin\protocol#set route_transparent vlan 100 inter_slot begin 12 end 18
Admin\protocol#
```

16.27 Configuring Routing Transparent Transmission Function for the Designated VLAN and Member Port of the Slot

Command Function

You can use this command to configure the routing transparent transmission function for a designated VLAN and member ports of a slot range.

Command Format

```
set route_transparent vlan <1-4085> inner_slot <1-18> mem_port <1-16>
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID, ranging from 1 to 4085.	Mandatory
inner_slot <1-18>	The slot number.	Mandatory
mem_port <1-16>	The member port number.	Mandatory

Command Example

Configure the routing transparent transmission function for VLAN100 and member Port 3 in Slot 12.

```
Admin\protocol#set route_transparent vlan 100 inner_slot 12 mem_port 3
```


Admin\protocol#

16.28 Configuring Routing Transparent Transmission Function for the Designated VLAN and Member Port Section of the Slot

Command Function

You can use this command to configure the routing transparent transmission function for the designated VLAN and member port section of the designated slot.

Command Format

```
set route_transparent vlan <1-4085> inner_slot <1-18> mem_port begin <1-16>
end <1-16>
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID, ranging from 1 to 4085.	Mandatory
inner_slot <1-18>	The slot number.	Mandatory
begin <1-16>	The starting member port number.	Mandatory
end <1-16>	The ending member port number.	Mandatory

Command Example

Set the routing transparent transmission function for VLAN100, and member ports 3 to 8 in Slot 12.

```
Admin\protocol#set route_transparent vlan 100 inner_slot 12 mem_port begin 3 end 8
Admin\protocol#
```


16.29 Deleting Routing Transparent Transmission Configuration for the Designated VLAN and Slot

Command Function

You can use this command to delete the routing transparent transmission configuration for the designated VLAN and slot.

Command Format

```
no route_transparent vlan <1-4085> inter_slot <1-18>
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID.	Mandatory
inter_slot <1-18>	The slot number.	Mandatory

Command Example

Delete the routing transparent transmission configuration for VLAN100 in Slot 12.

```
Admin\protocol#no route_transparent vlan 100 inter_slot 12
Admin\protocol#
```

16.30 Deleting Routing Transparent Transmission Configuration for the Designated VLAN and Member Port of the Slot

Command Function

You can use this command to delete the routing transparent transmission configuration for the designated VLAN and member port of the slot.

Command Format

```
no route_transparent vlan <1-4085> inner_slot <1-18> mem_port <1-16>
```


Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID.	Mandatory
inner_slot <1-18>	The slot number.	Mandatory
mem_port <1-16>	The member port number.	Mandatory

Command Example

Delete the routing transparent transmission configuration for VLAN100 and member port 3 in Slot 12.

```
Admin\protocol#no route_transparent vlan 100 inner_slot 12 mem_port 3
Admin\protocol#
```

16.31 Deleting Routing Transparent Transmission Configuration for a Designated VLAN

Command Function

You can use this command to delete the routing transparent transmission configuration for a designated VLAN.

Command Format

```
no route_transparent vlan <1-4085>
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4085>	The VLAN ID.	Mandatory

Command Example

Delete the routing transparent transmission configuration for VLAN100.

```
Admin\protocol#no route_transparent vlan 100
Admin\protocol#
```


17 admin\protocol\ospf Directory Command

- ☒ Enabling or Disabling the OSPF Function Globally
- ☒ Configuring the OSPF Network Advertisement
- ☒ Deleting the Announced OSPF Network
- ☒ Configuring the Router ID
- ☒ Deleting the Router ID
- ☒ Configuring the OSPF Distance
- ☒ Deleting the OSPF Distance
- ☒ Configuring the STUB Domain
- ☒ Deleting the STUB Domain
- ☒ Configuring the NSSA Domain
- ☒ Deleting the NSSA Domain
- ☒ Announcing the Default Route to All NSSA Domains
- ☒ Deleting the Default Route Announcing to All NSSA Domains
- ☒ Configuring the OSPF Route Re-allocation
- ☒ Deleting the OSPF Route Re-allocation
- ☒ Configuring Failure Interval for an Interface
- ☒ Configuring Hello Message Interval of Interface
- ☒ Configuring Re-transmitting LSA Interval of Interface
- ☒ Configuring Message Update Time for the Interface

- ☒ Configuring the COST Value of Interface
- ☒ Configuring the MTU of the Interface
- ☒ Configuring the Priority of an Interface
- ☒ Querying the OSPF Neighbor Status
- ☒ Querying the Designated OSPF Neighbor Status

17.1 Enabling or Disabling the OSPF Function Globally

Command Function

You can use this command to enable or disable the OSPF routing function.

Command Format

```
set ospf[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
ospf[enable disable]	Enable or disable the OSPF routing protocol function.	Mandatory

Command Example

Enable the OSPF function for the equipment.

```
Admin\protocol\ospf#set ospf enable  
Admin\protocol\ospf#
```

17.2 Configuring the OSPF Network Advertisement

Command Function

You can use this command to configure the corresponding relationship between the uplink VLAN IP address and the OSPF domain. When the OSPF is enabled, the uplink ports will be automatically added to the OSPF domain.

Command Format

```
set network <A.B.C.D> mask <A.B.C.D> area <A.B.C.D>
```


Parameter Description

Parameter	Description	Attribute
<code>network <A.B.C.D></code>	The network IP address of the interface that needs to run the OSPF protocol. The network should be the IP network with configured Super VLAN.	Mandatory
<code>mask <A.B.C.D></code>	Subnet mask.	Mandatory
<code>area <A.B.C.D></code>	The IP address of the OSPF domain to which the uplink port belongs. It is displayed in dotted decimal notation.	Mandatory

Command Example

Announce the OSPF network whose IP address is 10.98.0.0, subnet mask is 255.255.0.0, and domain ID is 10.98.20.1.

```
Admin\protocol\ospf#set network 10.98.0.0 mask 255.255.0.0 area 10.98.20.1
Admin\protocol\ospf#
```

17.3 Deleting the Announced OSPF Network

Command Function

You can use this command to delete the announced OSPF network.

Command Format

```
no network <A.B.C.D> mask <A.B.C.D> area <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
<code>network <A.B.C.D></code>	The network IP address of the interface that needs to run the OSPF protocol. The network should be the IP network with configured Super VLAN.	Mandatory
<code>mask <A.B.C.D></code>	The subnet mask.	Mandatory
<code>area <A.B.C.D></code>	The IP address of the OSPF domain to which the uplink port belongs, displayed in dotted decimal notation.	Mandatory

Command Example

Delete the OSPF network announcement whose IP address is 10.98.0.0, subnet mask is 255.255.0.0, and domain ID is 10.98.20.1.

```
Admin\protocol\ospf#no network 10.98.0.0 mask 255.255.0.0 area 10.98.20.1
Admin\protocol\ospf#
```

17.4 Configuring the Router ID

Command Function

You can use this command to configure the OSPF router ID, which identifies the uniqueness of the router.

Command Format

```
set router-id <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
router-id <A.B.C.D>	The ID number of the OSPF router, which in the form of IP addresses.	Mandatory

Command Example

Set the OSPF Router ID to 10.10.10.10.

```
Admin\protocol\ospf#set router-id 10.10.10.10
Admin\protocol\ospf#
```

17.5 Deleting the Router ID

Command Function

You can use this command to delete the OSPF router ID.

Command Format

```
no ospf router-id
```


Parameter Description

None

Command Example

Delete the OSPF router ID.

```
Admin\protocol\ospf#no ospf router-id
Admin\protocol\ospf#
```

17.6 Configuring the OSPF Distance

Command Function

You can use this command to configure the distance value of the OSPF routing protocol, i.e., the shortest path overhead from the root node to the destination node.

Command Format

```
set ospf distance <0-255>
```

Parameter Description

Parameter	Description	Attribute
distance <0-255>	The distance value. The value ranges from 0 to 255. The default value is 110.	Mandatory

Command Example

Configure the distance value of the OSPF routing protocol.

```
Admin\protocol\ospf#set ospf distance 120
Admin\protocol\ospf#
```

17.7 Deleting the OSPF Distance

Command Function

You can use this command to delete the distance value of the OSPF routing protocol.

Command Format

```
no ospf distance
```

Parameter Description

None

Command Example

You can use this command to delete the distance value of the OSPF routing protocol.

```
Admin\protocol\ospf#no ospf distance
Admin\protocol\ospf#
```

17.8 Configuring the STUB Domain

Command Function

You can use this command to configure the STUB domain of the OSPF.

Command Format

```
set area <A.B.C.D> stub
```

Parameter Description

Parameter	Description	Attribute
area <A.B.C.D>	The ID number of the domain. This item is displayed in dotted decimal notation, which means the domain ID is of the STUB type.	Mandatory

Command Example

Set the STUB domain ID to 20.20.20.20.

```
Admin\protocol\ospf#set area 20.20.20.20 stub
Admin\protocol\ospf#
```


17.9 Deleting the STUB Domain

Command Function

You can use this command to delete the STUB domain of the OSPF.

Command Format

```
no area <A.B.C.D> stub
```

Parameter Description

Parameter	Description	Attribute
area <A.B.C.D>	The ID number of the domain. This item is displayed in dotted decimal notation, which means that the domain ID type is STUB.	Mandatory

Command Example

Delete the STUB domain whose ID is 20.20.20.20.

```
Admin\protocol\ospf#no area 20.20.20.20 stub
Admin\protocol\ospf#
```

17.10 Configuring the NSSA Domain

Command Function

You can use this command to configure the NSSA domain of the OSPF.

Command Format

```
set area <A.B.C.D> nssa{ translator-role[ candidate|never|always]} *1
```


Parameter Description

Parameter	Description	Attribute
area <A.B.C.D>	The ID number of the domain.	Mandatory
{ translator-role [candidate never always] } * 1	<p>The Translator role.</p> <ul style="list-style-type: none"> ◆ candidate: The OLT serves as the ABR in the NSSA domain. Only if the ABR is selected, it will convert Type 7 LSA into Type 5 LSA. ◆ never: The OLT serves as the ABR in the NSSA domain. The ABR does not convert Type 7 LSA into Type 5 LSA. ◆ always: The OLT serves as the ABR in the NSSA domain. The ABR always converts Type 7 LSA of into Type 5 LSA. Default value: candidate. 	Mandatory

Command Example

Set the NSSA domain ID to 10.20.10.20, and the translator role to candidate.

```
Admin\protocol\ospf#set area 10.20.10.20 nssa translator-role candidate
Admin\protocol\ospf#
```

17.11 Deleting the NSSA Domain

Command Function

You can use this command to delete the NSSA domain of OSPF.

Command Format

```
no area <A.B.C.D> nssa
```

Parameter Description

Parameter	Description	Attribute
area <A.B.C.D>	The ID number of the domain. This item is displayed in dotted decimal notation, which means the domain ID is of the STUB type.	Mandatory

Command Example

You can use this command to delete the NSSA domain of the OSPF.


```
Admin\protocol\ospf#no area 10.20.10.20 nssa
Admin\protocol\ospf#
```

17.12 Announcing the Default Route to All NSSA Domains

Command Function

You can use this command to announce the default route to all NSSA domains.

Command Format

```
set area <A.B.C.D> nssa default-information originate always { type[ e1|e2]
metric <0-16777214>} *1
```

Parameter Description

Parameter	Description	Attribute
area <A.B.C.D>	The ID number of the domain. This item is displayed in dotted decimal notation, which means the domain ID is of the STUB type.	Mandatory
{ type[e1 e2]} *1	Type of the external route. The default value is E1. ◆ e1: E1. ◆ e2: E2.	Mandatory
{ metric <0-16777214>} *1	The metric. The value ranges from 0 to 16777214. The default value is 1.	Mandatory

Command Example

Set all the NSSA domains to announce the default routes and the external route type to E1.

```
Admin\protocol\ospf#set area 10.10.10.10 nssa default-information originate always
type e1 metric 10
[ nssa_default_information_originate_always_cmd] :db_create_ospf_area succes
Admin\protocol\ospf#
```


17.13 Deleting the Default Route Announcing to All NSSA Domains

Command Function

You can use this command to delete the default route announcing to all NSSA domains.

Command Format

```
no area <A.B.C.D> nssa default-information originate
```

Parameter Description

Parameter	Description	Attribute
area <A.B.C.D>	The ID number of the domain. This item is displayed in dotted decimal notation, which means the domain ID is of the STUB type.	Mandatory

Command Example

Delete the default route announcing to All NSSA domains.

```
Admin\protocol\ospf#no area 10.10.10.10 nssa default-information originate
Admin\protocol\ospf#
```

17.14 Configuring the OSPF Route Re-allocation

Command Function

You can use this command to configure the route re-allocation, and introduce external routes into the OSPF domain.

Command Format

```
set ospf redistribute[ connected|static] { type[ e1|e2] } *1 { metric <0-16777214> } *1
```


Parameter Description

Parameter	Description	Attribute
<code>redistribute</code>	A protocol type for re-allocating routes, which helps import external routes. ◆ connected: the connected route. ◆ static: the static route.	Mandatory
<code>{ type[e1 e2] } *1</code>	Type of the external route. Set it to E1 or E2. The default value is E1.	Mandatory
<code>{ metric <0-16777214> } *1</code>	The metric. The value ranges from 0 to 16777214. The default value is 1.	Mandatory

Command Example

Configure the re-allocation route protocol type as connected.

```
Admin\protocol\ospf#set ospf redistribute connected
Admin\protocol\ospf#
```

17.15 Deleting the OSPF Route Re-allocation

Command Function

You can use this command to delete the OSPF route re-allocation.

Command Format

```
no ospf redistribute[ connected|static]
```

Parameter Description

Parameter	Description	Attribute
<code>redistribute</code>	A protocol type for re-allocating routes, which helps import external routes. ◆ connected: the connected route. ◆ static: the static route.	Mandatory

Command Example

Delete the OSPF route protocol re-allocation.

```
Admin\protocol\ospf#no ospf redistribute connected
```


Admin\protocol\ospf#

17.16 Configuring Failure Interval for an Interface

Command Function

You can use this command to configure the failure interval of an interface.

Command Format

```
set super-vlan <1-4095> dead-interval <1-65535>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4085>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4085.	Mandatory
dead-interval <1-65535>	The failure time, to be specific, the failure time interval for the OSPF neighbor. If the Hello message is not received from the neighbor within the failure interval, the neighbor will be ascertained to be invalid. The value ranges between 1 and 65535; the unit is second; and the default value is 40. The failure interval value should be more than four times of the Hello message interval value.	Mandatory

Command Example

Set the failure interval of the interface whose Super VLAN is 2000 to 800 seconds.

```
Admin\protocol\ospf#set super-vlan 200 dead-interval 800
```

```
Admin\protocol\ospf#
```

17.17 Configuring Hello Message Interval of Interface

Command Function

You can use this command to configure the Hello message interval of the interface, i. e., the time interval for the OSPF to transmit polling Hello messages.

Command Format

```
set super-vlan <1-4095> hello-interval <1-65535>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4085>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4085.	Mandatory
Hello-interval <1-65535>	The Hello message interval. The value ranges between 1 and 65535; the unit is second; and the default value is 10.	Mandatory

Command Example

Set the Hello message interval to 800 seconds for messages whose Super VLAN is 200.

```
Admin\protocol\ospf#set super-vlan 200 hello-interval 800
Admin\protocol\ospf#
```

17.18 Configuring Re-transmitting LSA Interval of Interface

Command Function

You can use this command to configure the re-transmitting LSA interval of the interface.

Command Format

```
set super-vlan <1-4095> retransmit-interval <1-65535>
```


Parameter Description

Parameter	Description	Attribute
<code>super-vlan <1-4095></code>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4095.	Mandatory
<code>retransmit-interval <1-65535></code>	The re-transmitting LSA interval. If the confirmation message from the opposite end equipment is not received within the re-transmitting LSA interval, the interface will re-transmit the LSA. The value ranges between 1 and 65535; the unit is second; and the default value is 5.	Mandatory

Command Example

Set the re-transmitting LSA interval time of the interface whose Super VLAN is 2000 to 20 seconds.

```
Admin\protocol\ospf#set super-vlan 2000 retransmit-interval 20
Admin\protocol\ospf#
```

17.19 Configuring Message Update Time for the Interface

Command Function

You can use this command to configure message update time for the interface.

Command Format

```
set super-vlan <1-4095> transmit-delay <1-65535>
```

Parameter Description

Parameter	Description	Attribute
<code>super-vlan <1-4095></code>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4095.	Mandatory
<code>transmit-delay <1-65535></code>	The time for updating message, i.e., the delay time for transmitting the LSA at the OSPF interface. The value ranges between 1 and 65535; the unit is second; and the default value is 1.	Mandatory

Command Example

Set the message update time for the interface whose Super VLAN is 2000 to 5 seconds.

```
Admin\protocol\ospf#set super-vlan 2000 transmit-delay 5
Admin\protocol\ospf#
```

17.20 Configuring the COST Value of Interface

Command Function

You can use this command to configure the COST value of the interface.

Command Format

```
set super-vlan <1-4095> cost <1-65535>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4095>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4095.	Mandatory
cost <1-65535>	The COST value, i.e., the overhead value of transmitting message via the designated interface. The value ranges from 1 to 65535. The default value is 10.	Mandatory

Command Example

Set the COST value of the interface whose Super VLAN is 2000 to 15.

```
Admin\protocol\ospf#set super-vlan 2000 cost 15
Admin\protocol\ospf#
```

17.21 Configuring the MTU of the Interface

Command Function

You can use this command to configure the MTU of the interface.

Command Format

```
set super-vlan <1-4095> mtu <1500-10240>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4095>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4095.	Mandatory
mtu <1500-10240>	The maximum transmission unit (MTU) value. The MTU value of the DD message (Database Description message, one of the five OSPF protocol messages) transmitted by the interface. The value ranges from 576 to 65535. The default value is 1500.	Mandatory

Command Example

Set the MTU value of the interface whose Super VLAN is 2000 to 2000.

```
Admin\protocol\ospf#set super-vlan 2000 mtu 2000
Admin\protocol\ospf#
```

17.22 Configuring the Priority of an Interface

Command Function

You can use this command to configure the priority of an interface.

Command Format

```
set super-vlan <1-4095> priority <0-255>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4095>	The configured Super VLAN ID whose corresponding interfaces need to be configured. The value ranges from 1 to 4095.	Mandatory
priority <0-255>	The smaller the value is, the higher the priority becomes. The value ranges from 0 to 255. The default value is 1.	Mandatory

Command Example

Set the priority of the interface whose Super VLAN is 2000 to 2.

```
Admin\protocol\ospf#set super-vlan 2000 priority 2
Admin\protocol\ospf#
```

17.23 Querying the OSPF Neighbor Status

Command Function

You can use this command to query all the OSPF neighbor status.

Command Format

```
show ip ospf neighbor
```

Parameter Description

None

Command Example

Query the neighbor status of the OSPF protocol.

```
Admin\protocol\ospf#show ip ospf neighbor
Neighbor ID   Pri    State    Dead Time   Address    Interface
172.16.1.1    1      FULL     00:00:39    1.1.1.3    vlanif1
172.16.1.1    1      FULL     00:00:34    2.2.2.3    vlanif2
Admin\protocol\ospf#
```

Result Description

Parameter	Description
Neighbor ID	The neighbor ID.
Pri	The Priority.
State	The neighbor status.
Dead Time	The timeout period.
Address	The IP address of the interface.
interface	The interface name.

17.24 Querying the Designated OSPF Neighbor Status

Command Function

You can use this command to view the designated OSPF neighbor status.

Command Format

```
show ip ospf neighbor <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
Neighnor ID	The neighbor ID to be viewed.	Mandatory

Command Example

















View the designated OSPF neighbor status.

```
Admin\protocol\ospf#show ip ospf neighbor 172.16.1.1
Neighnor ID   Pri    State   Dead Time   Address   Interface
172.16.1.1    1      FULL    00:00:39    1.1.1.3   vlanif1
172.16.1.1    1      FULL    00:00:34    2.2.2.3   vlanif2
Admin\protocol\ospf#
```

Result Description

Parameter	Description
Neighnor ID	The neighbor ID.
Pri	Priority.
State	The neighbor status.
Dead Time	The timeout period.
Address	The IP address of the interface.
interface	The interface name.

18 admin\protocol\lACP Directory Command

-  Enabling or Disabling the LACP Function Globally
-  Configuring the Priority of the LACP System
-  Configuring the Priority of the LACP Port
-  Configuring the Operation Key of the LACP Port
-  Configuring the Timers of the LACP Port
-  Viewing LACP Aggregation Group Information
-  Viewing Statistics of the LACP Messages
-  Clearing Statistics of the LACP Messages
-  Enabling or disabling the LACP Function of the GSOF Card
-  Configuring the LACP System Priority of the GSOF Card
-  Configuring the LACP Port Priority of the GSOF Card
-  Configuring the LACP Port Operation Key of the GSOF Card
-  Configuring the LACP Port Timers of the GSOF Card
-  Configuring the Port Aggregation of the GSOF Card
-  Deleting the Port Aggregation of the GSOF Card
-  Viewing the LACP Aggregation Group Information of the GSOF Card

18.1 Enabling or Disabling the LACP Function Globally

Command Function

You can use this command to enable or disable the LACP function globally.

Command Format

```
set lacp[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
lacp[enable disable]	Enable or disable the LACP function globally. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the LACP function globally.

```
Admin\protocol\lacp#set lacp enable  
Admin\protocol\lacp#
```

18.2 Configuring the Priority of the LACP System

Command Function

You can use this command to configure the priority of the LACP system.

Command Format

```
set lacp system-priority <0-65534>
```


Parameter Description

Parameter	Description	Attribute
<code>system-priority <0-65534></code>	The priority of the LACP system. This parameter will be compared when the equipment is connected to the uplink equipment. The value ranges from 0 to 65534. The default value is 32768. The smaller the value is, the higher the priority becomes.	Mandatory

Command Example

Set the priority of the LACP system to 200.

```
Admin\protocol\lacp#set lacp system-priority 200
Admin\protocol\lacp#
```

18.3 Configuring the Priority of the LACP Port

Command Function

You can use this command to configure the priority of the LACP port.

Command Format

```
set lacp slot <slotno> port <portno> priority <0-65534>
```

Parameter Description

Parameter	Description	Attribute
<code>slot <slotno></code>	The slot number.	Mandatory
<code>port <portno></code>	The port number.	Mandatory
<code>priority <0-65534></code>	The LACP port priority. This parameter will be compared when the equipment is connected to the uplink equipment. The value ranges from 0 to 65534. The default value is 32768. The smaller the value is, the higher the priority becomes.	Mandatory

Command Example

Set the priority of Port 3 for the card in Slot 19 to 200.


```
Admin\protocol\lacp#set lacp slot 19 port 3 priority 200
Admin\protocol\lacp#
```

18.4 Configuring the Operation Key of the LACP Port

Command Function

You can use this command to configure the operation key of the LACP port.

Command Format

```
set lacp slot <slotno> port <portno> key <1-32768>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number.	Mandatory
port <portno>	The port number.	Mandatory
key <1-32768>	The operation key value. The value ranges from 1 to 32768. The default value is 1.	Mandatory

Command Example

Set the priority operation key of Port 3 to 200 for the card in Slot 19.

```
Admin\protocol\lacp#set lacp slot 19 port 3 key 200
Admin\protocol\lacp#
```

18.5 Configuring the Timers of the LACP Port

Command Function

You can use this command to configure the timers of the LACP port, including the long timer and short timer.

Command Format

```
set lacp timer[ long|short] slot <slotno> port <portno>
```


Parameter Description

Parameter	Description	Attribute
timer[long short]	The types of the port timer include: <ul style="list-style-type: none">◆ short: the short timer. The packets are transmitted every second.◆ long: the long timer. The packets are transmitted every thirty seconds.	Mandatory
slot <slotno>	The slot number.	Mandatory
port <portno>	The port number.	Mandatory

Command Example

Set the timer type of Port 3 for the card in Slot 19 to short timer.

```
Admin\protocol\lcp#set lacp timer short slot 19 port 3
Admin\protocol\lcp#
```

18.6 Viewing LACP Aggregation Group Information

Command Function

You can use this command to view the current configuration of the LACP aggregation group.

Command Format

```
show lacp channel-group trunks
```

Description

None

Command Example

View the current configuration of the LACP aggregation group.

```
Admin\protocol\lcp#show lacp channel-group trunks
LACP GROUP state information is:
Group Id: 1                      Mode: LACP
System Priority: 32768           System ID: 000a-c221-8cee
```



```

-----
ActorPortName  Status      PortPri PortKey PortState
24             select      32768   1       0x3d
27             select      32768   1       0x3d
-----
ActorPortName  SysPri  SystemID      PortPri PortNo PortKey PortState
24             32768   5439-df24-2aee 32768   1       305     0x3d
27             32768   5439-df24-2aee 32768   2       305     0x3d
Admin\protocol\lacp#

```

Result Description

Parameter	Description
Group Id	Aggregation group ID
Mode	Aggregation mode
SystemPriority	System priority
SystemID	System ID
ActorPortName	Local end port
Status	Aggregation status
PortPri	Port priority
PortState	Port status
SysPri	Far end system priority
SystemID	Far end system ID
PortPri	Far end port priority
PortNo	Far end port-number
PortState	Far end port status

18.7 Viewing Statistics of the LACP Messages

Command Function

You can use this command to view the statistics of the LACP protocol messages.

Command Format

```
show lacp statistics[ all|<groupid>]
```


Parameter Description

Parameter	Description	Attribute
statistics[all <groupid>]	Select the range for the required statistics. ◆ all: View all the statistics. ◆ <groupid>: View the statistics for the designated aggregation group.	Mandatory

Command Example

View the current configuration information of the LACP aggregation group.

```
Admin\protocol\lacp#show lacp statistics all
```

```
group 1's PDU statistic is:
```

Port	LacpRevPdu	LacpSentPdu	MarkerRevPdu	MarkerSentPdu
24	115	113	0	0
27	118	114	0	0

```
Admin\protocol\lacp#
```

Result Description

Parameter	Description
Port	The LACP member port.
LacpRevPdu	The number of the LACP messages received.
LacpSentPdu	The number of the LACP messages sent.
MarkerRevPdu	The number of the Marker LACP messages received.
MarkerSentPdu	The number of the Marker LACP messages sent.

18.8 Clearing Statistics of the LACP Messages

Command Function

You can use this command to clear the statistics of the LACP protocol messages.

Command Format

```
set lacp statistics[ all|<groupid>] clear
```


Parameter Description

Parameter	Description	Attribute
<code>statistics[all <groupid>]</code>	Select the statistics range that needs to be cleared. ◆ all: Clear all the statistics. ◆ <groupid>: Clear the statistics for the designated aggregation group.	Mandatory

Command Example

Clear all the statistics of the LACP messages.

```
Admin\protocol\lACP#set lACP statistics all clear
Admin\protocol\lACP#
```

18.9 Enabling or disabling the LACP Function of the GSOF Card

Command Function

You can use this command to enable or disable the LACP function of the GSOF card.

Command Format

```
set lACP slot <slotno> [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
<code>slot <slotno></code>	The slot number where the GSOF card is installed.	Mandatory
<code>[enable disable]</code>	Enable or disable the LACP function. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the LACP function of the GSOF card in Slot 15.

```
Admin\protocol\lACP#set lACP slot 15 enable
Admin\protocol\lACP#
```


18.10 Configuring the LACP System Priority of the GSOF Card

Command Function

You can use this command to configure the LACP system priority of the GSOF card.

Command Format

```
set lacp slot <slotno> system-priority <0-65534>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The number of the slot where the GSOF card is installed.	Mandatory
system-priority <0-65534>	The priority of the LACP System. This parameter will be compared when the equipment is connected to the uplink equipment. The value ranges from 0 to 65534. The default value is 32768. The smaller the value is, the higher the priority becomes.	Mandatory

Command Example

Set the LACP system priority of the GSOF card in Slot 15 to 300.

```
Admin\protocol\lacp#set lacp slot 15 system-priority 300
Admin\protocol\lacp#
```

18.11 Configuring the LACP Port Priority of the GSOF Card

Command Function

You can use this command to configure the LACP system priority for the designated ports on the GSOF card.

Command Format

```
set lacp slot <slotno> port <portno> priority <0-65534>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number where the GSOF card is installed.	Mandatory
port <portno>	The port number.	Mandatory
priority <0-65534>	The LACP port priority. This parameter will be compared when the equipment is connected to the uplink equipment. The value ranges from 0 to 65534. The default value is 32768. The smaller the value is, the higher the priority becomes.	Mandatory

Command Example

Set the port priority of Port 3 of the GSOF card in Slot 15 to 300.

```
Admin\protocol\lacp#set lacp slot 15 port 3 priority 300
Admin\protocol\lacp#
```

18.12 Configuring the LACP Port Operation Key of the GSOF Card

Command Function

You can use this command to configure the LACP port operation key of the GSOF card.

Command Format

```
set lacp slot <slotno> port <portno> key <1-32768>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number.	Mandatory
port <portno>	The port number.	Mandatory
key <1-32768>	The operation key value. The value ranges from 1 to 32768. The default value is 1.	Mandatory

Command Example

Set the operation key of Port 3 for the GSOF card in Slot 15 to 200.


```
Admin\protocol\lcp#set lacp slot 15 port 3 key 200
Admin\protocol\lcp#
```

18.13 Configuring the LACP Port Timers of the GSOF Card

Command Function

You can use this command to configure the LACP port timers of the GSOF card, including the long timer and short timer.

Command Format

```
set lacp slot <slotno> port <portno> timer[ long|short]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number.	Mandatory
port <portno>	The port number.	Mandatory
timer[long short]	The types of the port timer include: <ul style="list-style-type: none">◆ short: the short timer. The packets are transmitted every second.◆ long: the long timer. The packets are transmitted every thirty seconds.	Mandatory

Command Example

Set the timer type of Port 3 on the GSOF card in Slot 15 to short timer.

```
Admin\protocol\lcp#set lacp slot 15 port 3 timer short
Admin\protocol\lcp#
```

18.14 Configuring the Port Aggregation of the GSOF Card

Command Function

You can use this command to configure the port aggregation of the GSOF card.

Command Format

```
set trunk <1-64> mode[ manual|lacp] load_balance[ SA|DA|SDA|SIP|DIP|SDIP]
master_port <slotid> <portid> mem_port{ <slotid> <portid>} *8
```

Parameter Description

Parameter	Description	Attribute
trunk <1 - 64>	The Trunk group number.	Mandatory
mode[manual lacp]	The port number.	Mandatory
load_balance[SA DA SDA SIP DIP SDIP]	Configure the load balancing mode which includes: <ul style="list-style-type: none"> ◆ SA: the source MAC address. ◆ DA: the destination MAC address. ◆ SDA: the source and destination MAC addresses. ◆ SIP: the source IP address. ◆ DIP: the destination IP address. ◆ SDIP: the source and destination IP addresses. 	Mandatory
master_port <slotid> <portid>	Configure the slot number and port number of the master port.	Mandatory
mem_port{ <slotid><portid>} *8	Configure the slot number and port number of the member port.	Mandatory

Command Example

Configure the port aggregation mode of the GSOF card in Slot 15. The Trunk group number in this example is 1, the load balancing mode is the LACP mode and based on the source and destination MAC addresses. The master port is 15:3, and member port is 15:4.

```
Admin\protocol\lacp#set trunk 1 mode lacp load_balance SDA master_port 15 3
mem_port 15 4
Admin\protocol\lacp#
```

18.15 Deleting the Port Aggregation of the GSOF Card

Command Function

You can use this command to delete the Trunk group of the GSOF port.

Command Format

```
no trunk <1 - 64>
```

Parameter Description

Parameter	Description	Attribute
trunk <1 - 64>	The Trunk group number.	Mandatory

Command Example

Delete the Trunk group whose ID is 1.

```
Admin\protocol\lacp#no trunk 1
Admin\protocol\lacp#
```

18.16 Viewing the LACP Aggregation Group Information of the GSOF Card

Command Function

You can use this command to view the current LACP aggregation group configuration of the GSOF card.

Command Format

```
show lacp gs of aregation status
```

Parameter Description

None

Command Example

View the LACP aggregation group configuration of the GSOF card.

```
Admin\protocol\lacp#show lacp channel-group trunks
LACP GSOF GROUP state information is:
Slot Id:15      Group Id: 1      Mode: LACP
System Priority:32768      System ID:
Slotid          Portid
15              3
```


15 4
Admin\protocol\lacp#

Result Description

Parameter	Description
Slot Id	Slot number
Group Id	Aggregation group ID
mode	Aggregation mode. Two modes are available: <ul style="list-style-type: none">◆ LACP◆ manual

19 admin\protocol\stp Directory Command

- ☒ Enabling or Disabling the STP Function
- ☒ Configuring the STP Protocol Mode
- ☒ Configuring the Domain Name of the MSTP Spanning Tree
- ☒ Configuring the Revision Level of the MSTP
- ☒ Configuring the Spanning Tree Instance of the MSTP
- ☒ Deleting the VLAN of the MSTP Instance
- ☒ Enabling or Disabling the Common Tree Port
- ☒ Enabling or Disabling the MSTP Function of the Trunk Group
- ☒ Configuring the Physical Ports as the Edge Ports
- ☒ Configuring the Trunk Group as the Edge Port
- ☒ Configuring the Link Type of the Port
- ☒ Configuring the Link Type of the Trunk Group
- ☒ Configuring the Path Cost of the Port
- ☒ Configuring the Path Cost of the Trunk Group
- ☒ Configuring the Priority of the Port
- ☒ Configuring the Priority of the Trunk Group
- ☒ Configuring the Bridge Parameter of forward_time
- ☒ Configuring the Bridge Parameter of hello_time
- ☒ Configuring the Bridge Parameter of Max-age

- ☒ Configuring the Bridge Parameter of Max-hops
- ☒ Configuring the Priority of the Bridge Instance
- ☒ Configuring the Bridge Priority
- ☒ Deleting the Spanning Tree Instance of the MSTP
- ☒ Viewing the Brief Information of the MSTP
- ☒ Viewing the Brief Information of the Instance Port
- ☒ Viewing the Brief Information of Instance Trunk Group
- ☒ Viewing the Status Information of the MSTP
- ☒ Checking the Status of the Port Related to the MSTP
- ☒ Viewing the Status of the Trunk Group Related to the MSTP
- ☒ Viewing the Configuration Information of the STP

19.1 Enabling or Disabling the STP Function

Command Function

You can use this command to enable or disable the STP function.

Command Format

```
set stp[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
stp[enable disable]	Enable or disable the STP function. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the STP function.

```
Admin\protocol\stp#set stp enable
```

```
Admin\protocol\stp#
```

19.2 Configuring the STP Protocol Mode

Command Function

You can use this command to set the STP protocol mode to STP, MSTP or RSTP.

Command Format

```
set stp mode[ mstp|rstp|stp]
```

Parameter Description

Parameter	Description	Attribute
stp mode[mstp rstp stp]	Configure the run mode of the STP protocol. Select MSTP, RSTP or STP mode. The default value is MSTP.	Mandatory

Command Example

Set the STP protocol mode to MSTP.

```
Admin\protocol\stp#set stp mode mstp
Admin\protocol\stp#
```

19.3 Configuring the Domain Name of the MSTP Spanning Tree

Command Function

You can use this command to configure the domain name of the MSTP spanning tree.

Command Format

```
set stp region_configuration region <name>
```

Parameter Description

Parameter	Description	Attribute
region <name>	The domain name of the MSTP spanning tree. The length ranges from 1 to 32 characters. The default value is the MAC address of the current equipment.	Mandatory

Command Example

Set the domain name of the MSTP spanning tree to fiberhome.

```
Admin\protocol\stp#set stp region_configuration region fiberhome
Admin\protocol\stp#
```

19.4 Configuring the Revision Level of the MSTP

Command Function

You can use this command to configure the revision level of the MSTP.

Command Format

```
set stp region_configuration revision [ default | <0-255> ]
```

Parameter Description

Parameter	Description	Attribute
revision [default <0-255>]	The MSTP revision level. The default value is 0.	Mandatory

Command Example

Set the revision level of the MSTP to 100.

```
Admin\protocol\stp#set stp region_configuration revision 100
Admin\protocol\stp#
```

19.5 Configuring the Spanning Tree Instance of the MSTP

Command Function

You can use this command to create a spanning tree instance of the MSTP, and configure the instance ID and VLAN range associated with the instance.

Command Format

```
set stp region_configuration instance <1 - 64> vlan_id [ <string> | <1 - 4094>
{ to <1 - 4094> } * 1 ]
```

Parameter Description

Parameter	Description	Attribute
instance <1 - 64>	The instance ID	Mandatory
<string>	The VLAN range value associated with the instance. It is used to input discontinuous multi-segment VLAN values.	Mandatory
vlan_id <1-4094>	The starting value of the VLAN range associated with the instance. If it is a single VLAN, the follow-up parameter (the ending value) is not required.	Mandatory
{ to <1 - 4094> } * 1	The ending value of the VLAN range associated with the instance. If it is a single VLAN, this parameter is not required.	Optional

Command Example

Configure the MSTP spanning tree Instance 1, and associate the instance with VLAN 1 to 100.

```
Admin\protocol\stp#set stp region_configuration instance 1 vlan_id 1 to 100
Admin\protocol\stp#
```

Configure the MSTP spanning tree Instance 1, and associate the instance with VLAN 1, 2, and 4 to 8.

```
Admin\protocol\stp#set stp region_configuration instance 1 vlan_id 1,2,4-8
Admin\protocol\stp#
```

19.6 Deleting the VLAN of the MSTP Instance

Command Function

You can use this command to delete the VLAN of the MSTP instance. The VLAN can be a continuous value or a discrete value.

Command Format

```
no stp region_configuration instance <1 - 64> vlan_id[ <string> | <1 - 4094> { to
<1 - 4094>} * 1] ]
```

Parameter Description

Parameter	Description	Attribute
instance <1 - 64>	The instance ID	Mandatory
<string>	The VLAN range value associated with the instance. It is used to input discontinuous multi-segment VLAN values.	Mandatory
vlan_id <1-4094>	The starting value of the VLAN range associated with the instance. If only a single VLAN needs to be deleted, the follow-up parameter (the ending value) is not required.	Mandatory
{ to <1 - 4094>} * 1	The ending value of the VLAN range associated with the instance. If only a single VLAN needs to be deleted, this parameter is not required.	Optional

Command Example

Delete VLAN 1 to 100 associated with the MSTP spanning tree Instance 1.


```
Admin\protocol\stp#no stp region_configuration instance 1 vlan_id 1 to 100
Admin\protocol\stp#
```

Delete VLAN 1, 2, and 4 to 8 associated with the MSTP spanning tree Instance 1.

```
Admin\protocol\stp#no stp region_configuration instance 1 vlan_id 1,2,4-8
Admin\protocol\stp#
```

19.7 Enabling or Disabling the Common Tree Port

Command Function

You can use this command to enable or disable the common tree port.

Command Format

```
set stp slot <slotno> port <portno> [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number.	Mandatory
port <portno>	The port number.	Mandatory
[enable disable]	Enable or disable the common tree port. The default value is disable.	Mandatory

Command Example

Enable the MSTP for the Port 3 of Slot 19.

```
Admin\protocol\stp#set stp slot 19 port 3 enable
Admin\protocol\stp#
```

19.8 Enabling or Disabling the MSTP Function of the Trunk Group

Command Function

You can use this command to enable or disable the MSTP function of the Trunk group.

Command Format

```
set stp trunk <trunkid> [ enable | disable]
```

Parameter Description

Parameter	Description	Attribute
trunk <trunkid>	The Trunk group ID number.	Mandatory
[enable disable]	Enable or disable the Trunk group. The default value is disable.	Mandatory

Command Example

Enable the MSTP function for Trunk group 1.

```
Admin\protocol\stp#set stp trunk 1 enable
Admin\protocol\stp#
```

19.9 Configuring the Physical Ports as the Edge Ports

Command Function

You can use this command to configure some designated physical ports as the edge ports.

Command Format

```
set stp slot <slotno> port <portno> [ autoedge | edgeport]
```

Parameter Description

Parameter	Description	Attribute
slotno	The slot number.	Mandatory
<portno>	The port number.	Mandatory
[autoedge edgeport]	Set the port to auto-negotiation or edge port. The default value is auto-negotiation.	Mandatory

Command Example

Set Port 3 in Slot 19 to edge port.


```
Admin\protocol\stp#set stp slot 19 port 3 edgeport
Admin\protocol\stp#
```

19.10 Configuring the Trunk Group as the Edge Port

Command Function

You can use this command to configure some designated Trunk groups as the edge ports.

Command Format

```
set stp trunk <trunkid> [ autoedge | edgeport]
```

Parameter Description

Parameter	Description	Attribute
trunk <trunkid>	The Trunk group ID number.	Mandatory
[autoedge edgeport]	Set the port mode to auto-negotiation or edge port. The default value is auto-negotiation.	Mandatory

Command Example

Set Trunk group 1 to the edge port.

```
Admin\protocol\stp#set stp trunk 1 edgeport
Admin\protocol\stp#
```

19.11 Configuring the Link Type of the Port

Command Function

You can use this command to set the link type of some designated physical ports to point-to-point, or disable the point-to-point mode.

Command Format

```
set stp slot <slotno> port <portno> point-to-point [ enable | disable]
```


Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number.	Mandatory
<portno>	The port number.	Mandatory
[enable disable]	Enable or disable the point-to-point mode.	Mandatory

Command Example

Set the type of Port 3 in Slot 19 to point-to-point.

```
Admin\protocol\stp#set stp slot 19 port 3 point-to-point enable
Admin\protocol\stp#
```

19.12 Configuring the Link Type of the Trunk Group

Command Function

You can use this command to set the link type of some designated Trunk groups to point-to-point, or disable the point-to-point mode.

Command Format

```
set stp trunk <trunkid> point-to-point [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
trunk <trunkid>	The Trunk group ID.	Mandatory
[enable disable]	Enable or disable the point-to-point mode.	Mandatory

Command Example

Set the link type of Trunk group 1 to point-to-point.

```
Admin\protocol\stp#set stp trunk 1 point-to-point enable
Admin\protocol\stp#
```


19.13 Configuring the Path Cost of the Port

Command Function

You can use this command to configure the path cost for designated ports.

Command Format

```
set stp instance <0 - 64> slot <slotno> port <portno> pathcost[ default|<1-200000000>]
```

Parameter Description

Parameter	Description	Attribute
instance <0 - 64>	The instance ID.	Mandatory
<slotno>	The slot number.	Mandatory
<portno>	The port number.	Mandatory
[default <1-200000000>]	The path cost value of the port. The default value is 0.	Mandatory

Command Example

Set the path cost for Port 3 in Slot 19 in Instance 1 to 1000000.

```
Admin\protocol\stp#set stp instance 1 slot 19 port 3 pathcost 1000000
Admin\protocol\stp#
```

19.14 Configuring the Path Cost of the Trunk Group

Command Function

You can use this command to configure the path cost of a designated Trunk group.

Command Format

```
set stp instance <0 - 64> trunk <trunkid> pathcost[ default|<1-200000000>]
```


Parameter Description

Parameter	Description	Attribute
instance <0 - 64>	The instance ID.	Mandatory
<trunkid>	The Trunk group ID number.	Mandatory
[default <1-200000000>]	The path cost value of the Trunk group. The default value is 0.	Mandatory

Command Example

Set the path cost for Trunk group 1 in Instance 1 to 1000000.

```
Admin\protocol\stp#set stp instance 1 trunk 1 pathcost 1000000
Admin\protocol\stp#
```

19.15 Configuring the Priority of the Port

Command Function

You can use this command to configure the priority of a designated port.

Command Format

```
set stp instance <0-64> slot <slotno> port <portno> priority [ default | <0-240>]
```

Parameter Description

Parameter	Description	Attribute
instance <0 - 64>	The instance ID.	Mandatory
<slotno>	The slot number.	Mandatory
<portno>	The port number.	Mandatory
[default <0-240>]	The priority value of the port. The value must be a multiple of 16. The default value is 128.	Mandatory

Command Example

Set the priority for Port 3 in Slot 19 for Instance 1 to 160.

```
Admin\protocol\stp#set stp instance 1 slot 19 port 3 priority 160
Admin\protocol\stp#
```


19.16 Configuring the Priority of the Trunk Group

Command Function

You can use this command to configure the priority of a designated Trunk group.

Command Format

```
set stp instance <0-64> trunk <trunkid> priority[ default|<0-240>]
```

Parameter Description

Parameter	Description	Attribute
instance <0 - 64>	The instance ID.	Mandatory
<trunkid>	The Trunk group ID number.	Mandatory
[default <0-240>]	The priority value of the Trunk group. The value must be a multiple of 16. The default value is 128.	Mandatory

Command Example

Set the priority of Trunk group 1 in Instance1 to 160.

```
Admin\protocol\stp#set stp instance 1 trunk 1 priority 160
Admin\protocol\stp#
```

19.17 Configuring the Bridge Parameter of forward_time

Command Function

You can use this command to configure the port status migration delay parameter "forward_time".

Command Format

```
set stp timer forward_time[ default|<4-30>]
```

Parameter Description

Parameter	Description	Attribute
[default <4-30>]	The forward_time value. The default value is 15.	Mandatory

Command Example

Set "forward_time" to 20.

```
Admin\protocol\stp#set stp timer forward_time 20
Admin\protocol\stp#
```

19.18 Configuring the Bridge Parameter of hello_time

Command Function

You can use this command to configure the message transmission cycle parameter "hello_time".

Command Format

```
set stp timer hello_time[ default|<1-10>]
```

Parameter Description

Parameter	Description	Attribute
[default <1-10>]	The hello_time value. The default value is 2.	Mandatory

Command Example

Set hello_time to 5.

```
Admin\protocol\stp#set stp timer hello_time 5
Admin\protocol\stp#
```

19.19 Configuring the Bridge Parameter of Max-age

Command Function

You can use this command to configure the max-age value which is the maximum life cycle for the message to store in the equipment.

Command Format

```
set stp timer max_age[ default|<6-40>]
```


Parameter Description

Parameter	Description	Attribute
[default <6-40>]	The max-age value. The default value is 20.	Mandatory

Command Example

Set the max-age value to 25.

```
Admin\protocol\stp#set stp timer max_age 25
Admin\protocol\stp#
```

19.20 Configuring the Bridge Parameter of Max-hops

Command Function

You can use this command to configure the max-hops value which is the maximum times for the message to be forwarded.

Command Format

```
set stp timer max_hops [ default | <1-40>]
```

Parameter Description

Parameter	Description	Attribute
[default <1-40>]	The max-hops value. The default value is 20.	Mandatory

Command Example

Set the max-hops value to 25.

```
Admin\protocol\stp#set stp timer max_hops 25
Admin\protocol\stp#
```


19.21 Configuring the Priority of the Bridge Instance

Command Function

You can use this command to configure the priority of the bridge instance.

Command Format

```
set stp instance <0-64> priority [ default | <0-61440> ]
```

Parameter Description

Parameter	Description	Attribute
instance <0-64>	The instance ID.	Mandatory
priority [default <0-61440>]	The priority value of the instance. The default value is 32768, and the value must be a multiple of 4096.	Mandatory

Command Example

Set the priority of Instance1 to 8192.

```
Admin\protocol\stp#set stp instance 1 priority 8192
Admin\protocol\stp#
```

19.22 Configuring the Bridge Priority

Command Function

You can use this command to configure the bridge priority.

Command Format

```
set stp priority [ default | <0-61440> ]
```

Parameter Description

Parameter	Description	Attribute
priority [default <0-61440>]	The bridge priority value. The default value is 32768, and the value must be a multiple of 4096.	Mandatory

Command Example

Set the bridge priority to 8192.

```
Admin\protocol\stp#set stp priority 8192
Admin\protocol\stp#
```

19.23 Deleting the Spanning Tree Instance of the MSTP

Command Function

You can use this command to delete the spanning tree instance of the MSTP.

Command Format

```
no stp region_configuration instance <1-64>
```

Parameter Description

Parameter	Description	Attribute
instance <1-64>	The instance ID.	Mandatory

Command Example

Delete MSTP spanning tree instance 1.

```
Admin\protocol\stp#no stp region_configuration instance 1
Admin\protocol\stp#
```

19.24 Viewing the Brief Information of the MSTP

Command Function

You can use this command to view the brief MSTP status information of the current equipment.

Command Format

```
show stp { slot <slotno> port <portno> } * 1 brief
```


Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number.	Optional
<portno>	The port number.	Optional

Command Example

View the brief information of the MSTP.

```
Admin\protocol\stp#show stp brief
```

MSTID	Port	Role	STP State
0	19:4	ALTN	Discarding
0	19:3	ROOT	Forwarding
1	19:4	ALTN	Discarding
1	19:3	MSTR	Forwarding
2	19:3	MSTR	Forwarding
2	19:4	ALTN	Discarding

```
Admin\protocol\stp#
```

Result Description

Parameter	Description
MSTID	The instance ID.
Port	The port is displayed in Slot No: Port No format.
Role	The port role.
STP State	The port status.

19.25 Viewing the Brief Information of the Instance Port

Command Function

You can use this command to view the brief MSTP status information of the port.

Command Format

```
show stp instance <0-64> slot <slotno> port <portno> brief
```


Parameter Description

Parameter	Description	Attribute
instance <0-64>	The instance ID.	Mandatory
<slotno>	The slot number.	Mandatory
<portno>	The port number.	Mandatory

Command Example

View the brief MSTP information for Port 4 in Slot 19 for Instance 1.

```
Admin\protocol\stp#show stp instance 1 slot 19 port 4 brief
MSTID      Port          Role      STP State
   0        19:4          ALTN      Discarding
Admin\protocol\stp#
```

Result Description

Parameter	Description
MSTID	The instance ID.
Port	The port is displayed in Slot No: Port No format.
Role	The port role.
STP State	The port status.

19.26 Viewing the Brief Information of Instance Trunk Group

Command Function

You can use this command to view the brief MSTP status information of the Trunk group.

Command Format

```
show stp instance <0-64> trunk <trunkid> brief
```


Parameter Description

Parameter	Description	Attribute
instance <0-64>	The instance ID.	Mandatory
trunk <trunkid>	The Trunk group ID number.	Mandatory

Command Example

View the brief MSTP information of Trunk group 1 in Instance 1.

```
Admin\protocol\stp#show stp instance 1 trunk 1 brief
MSTID      Port              Role      STP State
1          trunk1          ALTN      Discarding
Admin\protocol\stp#
```

Result Description

Parameter	Description
MSTID	The instance ID.
Port	The port is displayed in Slot No: Port No format.
Role	The port role.
STP State	The port status.

19.27 Viewing the Status Information of the MSTP

Command Function

You can use this command to view the detailed status information of the MSTP.

Command Format

```
show stp { instance <0-64> } * 1
```

Parameter Description

Parameter	Description	Attribute
instance <0-64>	The instance ID.	Optional

Command Example

View the detailed status information of the MSTP.


```

Admin\protocol\stp#show stp
-----[ CIST Global Info][ Mode MSTP] -----
CIST Bridge           :32768.0023-1254-2736
Bridge Times          :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC        :32768.0023-1254-2736 / 0
CIST RegRoot/IRPC     :32768.0023-1254-2736 / 0
CIST RootPortId       :0.0
----[ Port(20:3)][ UP] ----
Port Protocol         :enable
Port Role             :Designated port
Port Priority          :128
Port Cost(Dot1T)      :Config=auto / Active=20000
Designated Bridge/Port :32768.0023-1254-2736 / 128.25
Port Edged            :Config=disable / Active=disable
Point-to-point        :Config=p2p / Active=true
Port STP Mode         :Forwarding
PortTimes             :Hello 2s MaxAge 20s FwDly 15s RemHop 20
                      TCN: 3, Config: 86, RST: 0, MST: 89
                      TCN: 0, Config: 0, RST: 0, MST: 0

-----[ MSTI 1 Global Info] -----
MSTI Bridge ID       :32769.0023-1254-2736
MSTI RegRoot/IRPC    :32769.0023-1254-2736 / 0
MSTI RootPortId      :0.0
----[ Port(20:3)][ Forwarding] ----
Port Role            :Designated port
Port Priority         :128
Port Cost(Dot1T )    :Config=auto / Active=20000
Designated Bridge/Port :32769.0023-1254-2736 / 128.25
Port Times           :RemHops 20
TC or TCN send       :2
TC or TCN received   :0
Admin\protocol\stp#

```

Result Description

Parameter	Description
CIST Global Info	The common spanning tree information.
MSTI 1 Global Info	The spanning tree instance information.
CIST Bridge	The bridge ID, which is composed of the bridge priority and MAC address.
Bridge Times	The bridge parameters, which include forward-time, hello-time, max-age and max-hops.
CIST Root/ERPC	The general root ID and external root path cost.

Parameter	Description
CIST RegRoot/IRPC	The region root ID and internal root path cost.
CIST RootPortId	The root port ID.
Port Protocol	Enable or disable the port protocol.
Port Role	The port role.
Port Priority	The port priority.
Port Cost (Dot1T)	The standards for calculating the path cost of the port.
DesignatedBridge/Port	Designated bridge and port.
Port Edged	The configuration and status of the domain boundary ports.
Point-to-point	The link type configuration and status of the port.
Port STP Mode	The port status.
PortTimes	The port parameters, which include forward-time, hello-time, max-age and max-hops.
MSTI Bridge ID	The bridge ID of the instance tree.
MSTI RegRoot/IRPC	The region root of the instance tree and internal root path cost.
MSTI RootPortId	The root port ID of the instance tree.
TC or TCNsend	The count of topology changing packets transmitted.
TC or TCNreceived	The count of topology changing packets received.

19.28 Checking the Status of the Port Related to the MSTP

Command Function

You can use this command to check the status of the port related to the MSTP.

Command Format

```
show stp { instance <0-64> } * 1 slot <slotno> port <portno>
```

Parameter Description

Parameter	Description	Attribute
instance <0-64>	The instance ID.	Optional
slot <slotno>	The slot number.	Mandatory
port <portno>	The port number.	Mandatory

Command Example

View the status information for Port 3 of Slot 20 in Instance1.

```
Admin\protocol\stp#show stp instance 1 slot 20 port 3
-----[ MSTI 1 Global Info] -----
MSTI Bridge ID      :32769.0023-1254-2736
MSTI RegRoot/IRPC   :32769.0023-1254-2736 / 0
MSTI RootPortId     :0.0
----[ Port (20:3)][ Forwarding] ----
Port Role           :Designated port
Port Priority        :128
Port Cost (Dot1T)    :Config=auto / Active=20000
Designated Bridge/Port :32769.0023-1254-2736 / 128.25
Port Times           :RemHops 20
TC or TCN send       :2
TC or TCN received   :0
Admin\protocol\stp#
```

Result Description

Parameter	Description
MSTI 1 GlobalInfo	The spanning tree instance information.
Port Protocol	Enable or disable the port protocol.
Port Role	The port role.
Port Priority	The port priority.
Port Cost (Dot1T)	The standards for calculating the path cost of the port.
DesignatedBridge/Port	A designated bridge and a designated port.
PortEdged	The configuration and status of the domain boundary ports.
Point-to-point	The link type configuration and status of the port.
Port STP Mode	The port status.
PortTimes	The port parameters, which include forward-time, hello-time, max-age and max-hops.
MSTI Bridge ID	The bridge ID of the instance tree.
MSTI RegRoot/IRPC	The region root of the instance tree and internal root path cost.
MSTI RootPortId	The root port ID of the instance tree.
TC or TCN send	The count of topology changing packets transmitted.
TC or TCN received	The count of topology changing packets received.

19.29 Viewing the Status of the Trunk Group Related to the MSTP

Command Function

You can use this command to view the status of the Trunk group related to the MSTP.

Command Format

```
show stp { instance <0-64> } *1 trunk <trunkid>
```

Parameter Description

Parameter	Description	Attribute
instance <0-64>	The instance ID.	Optional
trunk <trunkid>	The Trunk group ID number.	Mandatory

Command Example

View the MSTP status information of Trunk group 1.

```
Admin\protocol\stp#show stp trunk 1
----[ CIST][ Port(trunk1)][ DOWN] ----
Port Protocol      :enable
Port Role          :Disabled port
Port Priority       :128
Port Cost(Dot1T )  :Config=auto / Active=20000000
Designated Bridge/Port :32768.0023-1254-2736 / 128.101
Port Edged         :Config=disable / Active=disable
Point-to-point     :Config=p2p / Active=true
Port STP Mode      :Discarding
PortTimes          :Hello 2s MaxAge 20s FwDly 15s RemHop 20
                  TCN: 0, Config: 1, RST: 0, MST: 1
                  TCN: 0, Config: 0, RST: 0, MST: 0

----[ MSTI 1][ Port(trunk1)][ Discarding] ----
----[ Port(trunk1)][ Discarding] ----
Port Role          :Disabled port
Port Priority       :128
Port Cost(Dot1T )  :Config=auto / Active=20000000
Designated Bridge/Port :32769.0023-1254-2736 / 128.101
```



```
Port Times          :RemHops 20
TC or TCN send      :0
TC or TCN received  :0
Admin\protocol\stp#
```

Result Description

Parameter	Description
Port Protocol	Enable or disable the port protocol.
Port Role	The port role.
Port Priority	The port priority.
Port Cost (Dot1T)	The standards for calculating the path cost of the port.
DesignatedBridge/Port	A designated bridge and a designated port.
Port Edged	The configuration and status of the domain boundary ports.
Point-to-point	The link type configuration and status of the port.
Port STP Mode	The port status.
PortTimes	The port parameters, which include forward-time, hello-time, max-age and max-hops.
MSTI Bridge ID	The bridge ID of the instance tree.
MSTI RegRoot/IRPC	The region root of the instance tree and internal root path cost.
MSTI RootPortId	The root port ID of the instance tree.
TC or TCN send	The count of topology changing packets transmitted.
TC or TCN received	The count of topology changing packets received.

19.30 Viewing the Configuration Information of the STP

Command Function

You can use this command to view the configuration information of the STP.

Command Format

```
show stp configuration
```

Parameter Description

None

Command Example

View the configuration information of the STP.

```
Admin\protocol\stp#show stp configuration
Name          [ 0023-1254-2736]
Revision      0          Instances configured    2
Instance Vlan mapped
-----
0            1-99,201-4094
1            100-200
-----
Admin\protocol\stp#
```

Result Description

Parameter	Description
Name	The domain name of the MSTP spanning tree.
Revision	The revision level of the MSTP spanning tree.
Instances configured	The number of the instances.
Instance Vlan mapped	The mappings between the instances and VLANs.

20

admin\protocol\ntp Directory Command

- ☒ Enabling or Disabling the NTP Function
- ☒ Configuring the NTP Server IP Address
- ☒ Configuring the NTP Working Mode
- ☒ Viewing Current NTP Configuration

20.1 Enabling or Disabling the NTP Function

Command Function

You can use this command to enable or disable the NTP function.

Command Format

```
set ntp mode[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	Enable or disable the NTP function. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the NTP function.

```
Admin\protocol\ntp#set ntp mode enable
```

```
Admin\protocol\ntp#
```

20.2 Configuring the NTP Server IP Address

Command Function

You can use this command to configure the NTP server IP address.

Command Format

```
set ntp server-ip <A.B.C.D> [ primary|secondary]
```

Parameter Description

Parameter	Description	Attribute
server-ip <A.B.C.D>	The server IP address.	Mandatory
[primary secondary]	Configure the IP address for the primary or secondary server.	Mandatory

Command Example

Set the primary server IP address of the NTP to 10.2.2.2.

```
Admin\protocol\ntp#set ntp server-ip 10.2.2.2 primary
Admin\protocol\ntp#
```

20.3 Configuring the NTP Working Mode

Command Function

You can use this command to set the NTP working mode of the equipment to client or server.

Command Format

```
set ntp workingmode[ client|server]
```

Parameter Description

Parameter	Description	Attribute
[client server]	Set the working mode to client end or server end.	Mandatory

Command Example

Set the NTP working mode to the client end mode.

```
Admin\protocol\ntp#set ntp working mode client
Admin\protocol\ntp#
```

20.4 Viewing Current NTP Configuration

Command Function

You can use this command to view the current configuration of the NTP on the equipment.

Command Format

```
show ntp cfg
```


Parameter Description

None

Command Example

View the NTP configuration information.




















```
Admin\protocol\ntp#show ntp cfg
!ntp config -----
set ntp mode enable
set mode client
set server-ip 10.171.1.10 primary
!ntp config end!-----
Admin\protocol\ntp#
```





Result Description

Parameter	Description
set ntp mode	Enable or disable the NTP function.
set mode	The NTP working mode.
set server-ip	The IP address of the NTP server.

21

admin\protocol\dhcp Directory Command

-  Enabling or Disabling the DHCP Function Globally
-  Viewing the DHCP Global Switch Status
-  Configuring the DHCP Global Ping Function
-  Viewing the DHCP Ping Information
-  Configuring the DHCP Mode of Layer 3 Interface
-  Viewing the DHCP Mode of Layer 3 Interface
-  Configuring the Server IP Address of Layer 3 Interface in DHCP Relay Mode
-  Deleting the Server IP Address of Layer 3 Interface in DHCP Relay Mode
-  Configuring the DHCP Server Global Address Pool
-  Deleting the DHCP Server Global Address Pool
-  Configuring the Lease Term of DHCP Server Global Address Pool
-  Configuring the DNS Address of the DHCP Server Global Address Pool
-  Deleting the DNS Address of the DHCP Server Global Address Pool
-  Configuring the Forbidden IP Address of the DHCP Server Global Address Pool
-  Deleting the Forbidden IP Address of the DHCP Server Global Address Pool
-  Viewing the DHCP Server Global Address Pool
-  Configuring the Binding of the DHCP Client
-  Deleting the Binding of DHCP Client
-  Viewing the Status of the DHCP Client Table

-  Configuring the DHCP Relay Option 60 Information
-  Deleting the DHCP Relay Option 60 Information
-  Viewing the DHCP Relay Option 60 Configuration
-  Viewing the Overall DHCP Configuration Information

21.1 Enabling or Disabling the DHCP Function Globally

Command Function

You can use this command to enable or disable the DHCP function.

Command Format

```
set dhcp global[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
global[enable disable]	Enable or disable the DHCP function globally.	Mandatory

Command Example

Enable the DHCP function.

```
Admin\protocol\dhcp#set dhcp global enable
Admin\protocol\dhcp#
```

21.2 Viewing the DHCP Global Switch Status

Command Function

You can use this command to view the DHCP global switch status.

Command Format

```
show dhcp global switch
```

Parameter Description

None

Command Example

View the DHCP global switch status.

```
Admin\protocol\dhcp#show dhcp global switch
```



```

dhcpglobalswitchenabled
Admin\protocol\dhcp#

```

Result Description

Parameter	Description
enabled	Enable the DHCP function.
disabled	Disable the DHCP function.

21.3 Configuring the DHCP Global Ping Function

Command Function

You can use this command to configure the DHCP global Ping function.

Command Format

```
set dhcp global ping-function <0-3> ping-interval <500-5000>
```

Parameter Description

Parameter	Description	Attribute
ping-function <0-3>	Enable or disable the Ping function or the times for Ping functions. The default value is 2. 0 indicates disabling the Ping function, and the second parameter is invalid in this case.	Mandatory
ping-interval <500-5000>	The Ping interval (unit: ms). The default value is 500ms.	Mandatory

Command Example

Set the interval to 500ms for the equipment to conduct two Ping tests.

```

Admin\protocol\dhcp#set dhcp global ping-function 2 ping-interval 500
Admin\protocol\dhcp#

```

21.4 Viewing the DHCP Ping Information

Command Function

You can use this command to view the DHCP Ping information.

Command Format

```
show dhcp global pingfunc
```

Parameter Description

None

Command Example

View the DHCP Ping information.

```
Admin\protocol\dhcp#show dhcp global pingfunc
dhcpglobalpingFunc:2times,500msinterval.
Admin\protocol\dhcp#
```

Result Description

Parameter	Description
pingFunc	The Ping testing times.
interval	The interval length.

21.5 Configuring the DHCP Mode of Layer 3 Interface

Command Function

You can use this command to configure the DHCP mode for the Super VLAN.

Command Format

```
set dhcp super-vlan <1-4095> mode[ server|relay|disable]
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1 - 4095>	The Super VLAN number.	Mandatory
mode[server relay disable]	Set the DHCP mode of the Super VLAN to Server, Relay or Disable. The default value is Disable.	Mandatory

Command Example

Set the DHCP mode of the Super VLAN to Server.

```
Admin\protocol\dhcp#set dhcp super-vlan 1 mode server
Admin\protocol\dhcp#
```

21.6 Viewing the DHCP Mode of Layer 3 Interface

Command Function

You can use this command to view the DHCP mode information for the configured Super VLAN.

Command Format

```
show dhcp super-vlan[ <1-4095> | all] mode
```

Parameter Description

Parameter	Description	Attribute
[<1-4095> all] mode	View the configuration information of designated Super VLAN or all Super VLANs.	Mandatory

Command Example

View the DHCP mode information for Super VLAN 1.

```
Admin\protocol\dhcp#show dhcp super-vlan all mode
show super-vlan id 1.
dhcp super-vlan 1 mode server.
Admin\protocol\dhcp#
```

Result Description

Parameter	Description
super-vlan	The Super VLAN ID.
mode	The DHCP mode.

21.7 Configuring the Server IP Address of Layer 3 Interface in DHCP Relay Mode

Command Function

You can use this command to view the server IP address in DHCP Relay mode.

Command Format

```
set dhcp relay super-vlan <1-4095> server-ip <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1 - 4095>	The Super VLAN ID.	Mandatory
server-ip <A.B.C.D>	Configure the DHCP server IP address of the Super VLAN (maximum quantity: 16).	Mandatory

Command Example

Set the DHCP server IP address of Super VLAN 1 to 1.1.1.1.

```
Admin\protocol\dhcp#set dhcp relay super-vlan 1 server-ip 1.1.1.1
Admin\protocol\dhcp#
```

21.8 Deleting the Server IP Address of Layer 3 Interface in DHCP Relay Mode

Command Function

You can use this command to delete the server IP address in DHCP Relay mode.

Command Format

```
no dhcp relay super-vlan <1-4095> server-ip[ <A.B.C.D> | all]
```


Parameter Description

Parameter	Description	Attribute
super-vlan <1-4095>	The Super VLAN number.	Mandatory
server-ip <A.B.C.D>	Configure the DHCP server IP address of the Super VLAN (maximum quantity: 16).	Mandatory

Command Example

Delete all the DHCP server IP addresses of Super VLAN 1.

```
Admin\protocol\dhcp#no dhcp relay super-vlan 1 server-ip all
Admin\protocol\dhcp#
```

21.9 Configuring the DHCP Server Global Address Pool

Command Function

You can use this command to configure the DHCP Server global address pool.

Command Format

```
set dhcp server ip-pool <1-16> begin-ip <A.B.C.D> end-ip <A.B.C.D> mask <A.B.C.D> gateway <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
ip-pool <1-16>	The address pool number.	Mandatory
begin-ip <A.B.C.D>	The starting IP address of the address pool.	Mandatory
end-ip <A.B.C.D>	The ending IP address of the address pool.	Mandatory
mask <A.B.C.D>	The mask of the network segment within the address pool.	Mandatory
gateway <A.B.C.D>	The gateway IP address.	Mandatory

Command Example

Configure the DHCP server global address pool.

```
Admin\protocol\dhcp#set dhcp server ip-pool 1 begin-ip 10.10.10.1 end-ip 10.10.10.10
mask 255.255.255.0 gateway 10.10.10.1
```



```
Admin\protocol\dhcp#
```

21.10 Deleting the DHCP Server Global Address Pool

Command Function

You can use this command to delete the DHCP Server global address pool.

Command Format

```
no dhcp server ip-pool[ <1-16> |all]
```

Parameter Description

Parameter	Description	Attribute
[<1-16> all]	The address pool number. Delete a designated address pool or all the address pools.	Mandatory

Command Example

Delete the DHCP server global address pool.

```
Admin\protocol\dhcp#no dhcp server ip-pool all
Admin\protocol\dhcp#
```

21.11 Configuring the Lease Term of DHCP Server Global Address Pool

Command Function

You can use this command to configure the lease term of the DHCP server global address pool.

Command Format

```
set dhcp server ip-pool <1-16> lease[ <0-4294967294> | forever]
```


Parameter Description

Parameter	Description	Attribute
ip-pool <1-16>	The address pool number.	Mandatory
lease[<0-4294967294> forever]	The lease term of the address pool. The unit is second; and the default value is 86400. Forever indicates the maximum value 0xffffffff.	Mandatory

Command Example

Set the lease term of the DHCP server global address pool to forever.

```
Admin\protocol\dhcp#set dhcp server ip-pool 1 lease forever
Admin\protocol\dhcp#
```

21.12 Configuring the DNS Address of the DHCP Server Global Address Pool

Command Function

You can use this command to configure the DNS address of the DHCP server global address pool.

Command Format

```
set dhcp server ip-pool <1-16> dns-server <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
ip-pool <1-16>	The address pool number.	Mandatory
dns-server <A.B.C.D>	The address of the DNS server.	Mandatory

Command Example

Set the DNS address of the DHCP server global address pool to 10.10.10.1.

```
Admin\protocol\dhcp#set dhcp server ip-pool 1 dns-server 10.10.10.1
Admin\protocol\dhcp#
```


21.13 Deleting the DNS Address of the DHCP Server Global Address Pool

Command Function

You can use this command to delete the DNS address of the DHCP server global address pool.

Command Format

```
no dhcp server ip-pool <1-16> dns-server[ <A.B.C.D> | all]
```

Parameter Description

Parameter	Description	Attribute
ip-pool <1-16>	The address pool number.	Mandatory
dns-server[<A.B.C.D> all]	The address of the DNS server. Delete a designated server address or all the addresses.	Mandatory

Command Example

Delete all the DNS addresses of the DHCP server global address pool.

```
Admin\protocol\dhcp#no dhcp server ip-pool 1 dns-server all
Admin\protocol\dhcp#
```

21.14 Configuring the Forbidden IP Address of the DHCP Server Global Address Pool

Command Function

You can use this command to configure the forbidden IP address of the DHCP server global address pool.

Command Format

```
set dhcp server ip-pool <1-16> forbidden-ip <A.B.C.D>
```


Parameter Description

Parameter	Description	Attribute
ip-pool <1-16>	The address pool number.	Mandatory
forbidden-ip <A.B.C.D>	The IP addresses that are not allowed to exist in the address pool.	Mandatory

Command Example

Set the forbidden IP address of the DHCP server global address pool to 10.10.10.2.

```
Admin\protocol\dhcp#set dhcp server ip-pool 1 forbidden-ip 10.10.10.2
Admin\protocol\dhcp#
```

21.15 Deleting the Forbidden IP Address of the DHCP Server Global Address Pool

Command Function

You can use this command to delete the forbidden IP address of the DHCP server global address pool.

Command Format

```
no dhcp server ip-pool <1-16> forbidden-ip[ <A.B.C.D> | all]
```

Parameter Description

Parameter	Description	Attribute
ip-pool <1-16>	The address pool number.	Mandatory
forbidden-ip[<A.B.C.D> all]	The forbidden IP address. Delete a designated server address or all the addresses.	Mandatory

Command Example

Delete all the forbidden IP addresses of the DHCP server global address pool.

```
Admin\protocol\dhcp#no dhcp server ip-pool 1 forbidden-ip all
Admin\protocol\dhcp#
```


21.16 Viewing the DHCP Server Global Address Pool

Command Function

You can use this command to view the DHCP Server global address pool configuration information.

Command Format

```
show dhcp server ip-pool[ <1-16> | all]
```

Parameter Description

Parameter	Description	Attribute
ip-pool[<1-16> all]	The address pool number. View the information of some designated address pools or all the address pools.	Mandatory

Command Example

View the DHCP Server global address pool configuration information.

```
Admin\protocol\dhcp#show dhcp server ip-pool all
pool-id 1
begin-ip 10.10.10.1 end-ip 10.10.10.10
mask 255.255.255.0 gateway 10.10.10.1
lease 86400 s, 0xffffffff for forever
dns server config:
10.10.10.1
forbidden ip config:
10.10.10.5
Admin\protocol\dhcp#
```

Result Description

Parameter	Description
pool-id	The ID of the designated address pool.
begin-ip	The starting address of the address pool.
end-ip	The ending address of the address pool.
mask	The mask of the address pool.
gateway	The gateway address.

Parameter	Description
lease	The leasing term of the address pool.
dns server config	The IP address of the domain name server (DNS).
forbidden ip config	The forbidden IP address.

21.17 Configuring the Binding of the DHCP Client

Command Function

You can use this command to bind the IP address to the MAC address of the DHCP client.

Command Format

```
set dhcp client bind ip <A.B.C.D> mac <aa:bb:cc:dd:ee:ff>
```

Parameter Description

Parameter	Description	Attribute
ip <A.B.C.D>	The user IP address.	Mandatory
mac <aa:bb:cc:dd:ee:ff>	The MAC address to be bound.	Mandatory

Command Example

Configure the binding relationship of the DHCP client. Bind the IP address 10.10.10.2 to MAC address aa:bb:cc:dd:ee:ff.

```
Admin\protocol\dhcp#set dhcp client bind ip 10.10.10.2 macaa:bb:cc:dd:ee:ff
Admin\protocol\dhcp#
```

21.18 Deleting the Binding of DHCP Client

Command Function

You can use this command to unbind the IP address from the MAC address of the DHCP client.

Command Format

```
no dhcp client bind ip <A.B.C.D> mac <aa:bb:cc:dd:ee:ff>
```


Parameter Description

Parameter	Description	Attribute
ip <A.B.C.D>	The IP address allocated to users.	Mandatory
mac <aa:bb:cc:dd:ee:ff>	The MAC address to be unbound.	Mandatory

Command Example

Unbind the IP address from the MAC address.

```
Admin\protocol\dhcp#no dhcp client bind ip 10.10.10.2 macaa:bb:cc:dd:ee:ff
Admin\protocol\dhcp#
```

21.19 Viewing the Status of the DHCP Client Table

Command Function

You can use this command to view the status of the DHCP client.

Command Format

```
show dhcp client table status
```

Description

None

Command Example

View the status information of the DHCP client.

```
Admin\protocol\dhcp#show dhcp client table status
No.   IP           MAC           Lease(s)  Expire(s)  Type
1     10.10.10.1  00:00:00:00:01:02  7200      7103      dynamic
Admin\protocol\dhcp#
```

Result Description

Parameter	Description
No.	The sequence number.
IP	The IP address of the user equipment.
MAC	The MAC address of the user equipment.

Parameter	Description
Lease(s)	The leasing term of the address pool.
Expire(s)	The remaining lease time.
Type	Select dynamic or static type for the IP address obtained on the equipment.

21.20 Configuring the DHCP Relay Option 60 Information

Command Function

You can use this command to configure the DHCP relay Option 60 information.

Command Format

```
set dhcp super-vlan <1-4095> relay-ip <A.B.C.D> option60 <>
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4095>	The configured Super VLAN ID. Configure the Layer 3 interface bound with the VLAN ID.	Mandatory
relay-ip <A.B.C.D>	The Relay IP address.	Mandatory
option60 <>	The content of the Option 60 information, which should contain no more than 128 characters. Each Super VLAN can be configured with up to 64 pieces of Option 60 information.	Mandatory

Command Example

Configure the DHCP Relay Option 60 information.

```
Admin\protocol\dhcp#set dhcp super-vlan 1 relay-ip 10.10.10.1 option60 abc
Admin\protocol\dhcp#
```


21.21 Deleting the DHCP Relay Option 60 Information

Command Function

You can use this command to delete the DHCP relay Option 60 configuration.

Command Format

```
no dhcp super-vlan <1-4095> relay-ip[ <A.B.C.D> |all] option60[ <> |all]
```

Parameter Description

Parameter	Description	Attribute
super-vlan <1-4095>	The configured Super VLAN ID. Configure the Layer 3 interface bound with the VLAN ID.	Mandatory
relay-ip[<A.B.C.D> all]	Delete the designated or all the relay IP addresses.	Mandatory
option60[<> all]	Delete the designated or all the Option 60 information.	Mandatory

Command Example

Delete all the configured DHCP relay Option 60 information of Super VLAN1.

```
Admin\protocol\dhcp#no dhcp super-vlan 1 relay-ip 10.10.10.1 option60 all
Admin\protocol\dhcp#
```

21.22 Viewing the DHCP Relay Option 60 Configuration

Command Function

You can use this command to view the DHCP relay Option 60 configuration.

Command Format

```
show dhcp super-vlan[ <1-4095> |all] relay_option60
```


Parameter Description

Parameter	Description	Attribute
[<1-4095> all]	View the configuration information of designated Super VLAN or all Super VLANs.	Mandatory

Command Example

View the DHCP option 60 configuration information.

```
Admin\protocol\dhcp#show dhcp super-vlan all relay_option60
showallsuper-vlanrelayoption:
super-vlanid1relay-ip:10.10.10.1option60abc
Admin\protocol\dhcp#
```

Result Description

Parameter	Description
super-vlan id	The Super VLAN ID.
relay-ip	The relay IP address.
option60	The option 60 information.

21.23 Viewing the Overall DHCP Configuration Information

Command Function

You can use this command to view all the DHCP-related configuration information.

Command Format

```
show dhcp running-config
```

















Parameter Description

None

Command Example

View all the DHCP configuration information.


```
Admin\protocol\dhcp#show dhcp running-config
!dhcp config -----
set dhcp global enable
set dhcp global ping-function 2 ping-interval 500
set dhcp server ip-pool 1 begin-ip 10.10.10.1 end-ip 10.10.10.10
mask 255.255.255.0 gateway 10.10.10.1
set dhcp server ip-pool 1 lease 86400
set dhcp client bind ip 10.10.10.2 mac aa:bb:cc:dd:ee:ff
!dhcp config end!-----
Admin\protocol\dhcp#
```


-  Enabling or Disabling the ERPS Function
-  Creating Mappings between the VLAN and Ring Instance
-  Deleting Mappings between the VLAN and Ring Instance
-  Creating an ERPS Ring Instance
-  Deleting an ERPS Ring Instance
-  Configuring the Signaling VLAN of the ERPS Ring Instance
-  Configuring the Management Domain Level
-  Associating ERPS Ring Instances with VLAN Ring Instances
-  Configuring Node Roles of the ERPS Ring Instance
-  Configuring WRT of the ERPS Ring Instance
-  Configuring Hold-off Time of the ERPS Ring Instance
-  Configuring Guard Time of the ERPS Ring Instance
-  Configuring Properties of Primary Port in ERPS Ring Instance
-  Configuring the Second Port Properties in ERPS Ring Instance
-  Viewing the Configuration of the ERPS Ring Instance
-  Viewing the Port Information of the ERPS Ring Instance

22.1 Enabling or Disabling the ERPS Function

Command Function

You can use this command to enable or disable the ERPS function.

Command Format

```
set erps mode[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	Enable or disable the ERPS function.	Mandatory

Command Example

Enable the ERPS function.

```
Admin\protocol\erps#set erps mode enable
Admin\protocol\erps#
```

22.2 Creating Mappings between the VLAN and Ring Instance

Command Function

You can use this command to create the mappings between the ring instance and VLAN.

Command Format

```
set erps instance <1-64> vlan_id <1-4094> { to <1-4094> } * 1
```

Parameter Description

Parameter	Description	Attribute
instance <1-64>	The ERPS instance ID.	Mandatory
vlan_id <1-4094>	The starting VLAN ID of the range needs to be mapped.	Mandatory
{ to <1-4094> } * 1	The ending VLAN ID of the range.	Optional

Command Example

Map VLAN 1 to 200 to ring Instance 1.

```
Admin\protocol\erps#set erps instance 1 vlan_id 1 to 200
Admin\protocol\erps#
```

22.3 Deleting Mappings between the VLAN and Ring Instance

Command Function

You can use this command to delete the mappings between the ring instance and VLAN.

Command Format

```
no erps instance <1-64> vlan_id <1-4094> { to <1-4094> } * 1
```

Parameter Description

Parameter	Description	Attribute
instance <1-64>	The ERPS instance ID.	Mandatory
vlan_id <1-4094>	The starting VLAN ID of the range within which the mappings needs to be deleted.	Mandatory
{ to <1-4094> } * 1	The ending VLAN ID of the range.	Optional

Command Example

Delete the mappings between the VLAN 1 to 200 and ring Instance 1.

```
Admin\protocol\erps#no erps instance 1 vlan_id 1 to 200
Admin\protocol\erps#
```

22.4 Creating an ERPS Ring Instance

Command Function

You can use this command to create an ERPS ring instance.

Command Format

```
set erps ring <1-239>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory

Command Example

Create ring Instance 1.

```
Admin\protocol\erps#set erps ring 1
Admin\protocol\erps#
```

22.5 Deleting an ERPS Ring Instance

Command Function

You can use this command to delete an ERPS ring instance.

Command Format

```
no erps ring <1-239>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID that needs to be deleted.	Mandatory

Command Example

Delete ring Instance 1.

```
Admin\protocol\erps#no erps ring 1
Admin\protocol\erps#
```


22.6 Configuring the Signaling VLAN of the ERPS Ring Instance

Command Function

You can use this command to configure the signaling VLAN of the ERPS ring instance.

Command Format

```
set erps ring <1-239> control-vlan <1 - 4094>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
control-vlan <1 - 4094>	The signaling VLAN ID.	Mandatory

Command Example

Set the signaling VLAN ID of ring Instance 1 to 100.

```
Admin\protocol\erps#set erps ring 1 control-vlan 100
Admin\protocol\erps#
```

22.7 Configuring the Management Domain Level

Command Function

You can use this command to configure the MEL value of the domain where the equipment is located.

Command Format

```
set erps ring <1-239> mel <0-7>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
mel <0-7>	The management domain level.	Mandatory

Command Example

Set the management domain level to 7.

```
Admin\protocol\erps#set erps ring 1 mel 7
Admin\protocol\erps#
```

22.8 Associating ERPS Ring Instances with VLAN Ring Instances

Command Function

You can use this command to create the mappings between the ERPS ring instances with VLAN instances.

Command Format

```
set erps ring <1-239> protect-inst <1-64>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
protect-inst <1-64>	The VLAN instance number.	Mandatory

Command Example

Associate ring Instance 1 with VLAN Instance 1.

```
Admin\protocol\erps#set erps ring 1 protect-inst 1
Admin\protocol\erps#
```

22.9 Configuring Node Roles of the ERPS Ring Instance

Command Function

You can use this command to configure the roles of the equipment on the ERPS ring.

Command Format

```
set erps ring <1-239> erps-role [ common | rpl-owner ]
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
[common rpl-owner]	The role of the node can be common node or RPL owner.	Mandatory

Command Example

Set the role of the equipment in ring Instance 1 to RPL owner.

```
Admin\protocol\erps#set erps ring 1 erps-role rpl-owner
Admin\protocol\erps#
```

22.10 Configuring WRT of the ERPS Ring Instance

Command Function

You can use this command to configure the wait-to-restore time (WRT) of the ERPS ring instance.

Command Format

```
set erps ring <1-239> wrt-time <1-12>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
wrt-time <1-12>	The wait-to-restore time; unit: minute.	Mandatory

Command Example

Set the wait-to-restore time of the ring instance to 5 minutes.

```
Admin\protocol\erps#set erps ring 1 wrt-time 5
Admin\protocol\erps#
```


22.11 Configuring Hold-off Time of the ERPS Ring Instance

Command Function

You can use this command to configure the port oscillation protection time of the ERPS ring instance.

Command Format

```
set erps ring <1-239> holdoff-time <0-10000>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
holdoff-time <0-10000>	The port oscillation protection time; unit:ms.	Mandatory

Command Example

Set the port oscillation protection time of the ring instance to 1000ms.

```
Admin\protocol\erps#set erps ring 1 holdoff-time 1000
Admin\protocol\erps#
```

22.12 Configuring Guard Time of the ERPS Ring Instance

Command Function

You can use this command to configure the guard time of the ERPS ring instance.

Command Format

```
set erps ring <1-239> guard-time <10-2000>
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
guard-time <10-2000>	The guard time; unit:ms.	Mandatory

Command Example

Set the guard time of the ring instance to 500ms.

```
Admin\protocol\erps#set erps ring 1 guard-time 500
Admin\protocol\erps#
```

22.13 Configuring Properties of Primary Port in ERPS Ring Instance

Command Function

You can use this command to configure the properties of the primary uplink port for node equipment on ERPS ring.

Command Format

```
set erps ring <1-239> primary-slot <value> primary-port <value> role[ common |
rpl-port]
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
primary-slot <value>	The slot number.	Mandatory
primary-port <value>	The port number.	Mandatory
role[common rpl-port]	The port property. Select common port or RPL port. Only one RPL port can be configured in a ring instance.	Mandatory

Command Example

Set the property of the primary port in ERPS ring instance to RPL port.

```
Admin\protocol\erps#set erps ring 1 primary-slot 19 primary-port 1 role rpl-port
Admin\protocol\erps#
```


22.14 Configuring the Second Port Properties in ERPS Ring Instance

Command Function

You can use this command to configure the second uplink port properties for node equipment on ERPS ring.

Command Format

```
set erps ring <1-239> second-slot <value> second-port <value> role[ common |  
rpl-port]
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ERPS instance ID.	Mandatory
second-slot <value>	The slot number.	Mandatory
second-port <value>	The port number.	Mandatory
role[common rpl-port]	The port property. Select common port or RPL port. Only one RPL port can be configured in a ring instance.	Mandatory

Command Example

Set the property of the second port in ERPS ring instance to common.

```
Admin\protocol\erps#set erps ring 1 second-slot 19 second-port 2 role common  
Admin\protocol\erps#
```

22.15 Viewing the Configuration of the ERPS Ring Instance

Command Function

You can use this command to view the configuration of the ERPS ring instance.

Command Format

```
show erps ring <1-239> info
```


Parameter Description

Parameter	Description	Attribute
ring<1-239>	The ring instance number.	Mandatory

Command Example

View the configuration of the ERPS instance.

```
Admin\protocol\erps#show erps ring 1 info
erp ring id: 1.
instance mel: 7.
instance control vid: 100.
instance stgid: 1.
instance role: RPLOWNER.
instance row status: G8032_VALID.
instance guardTimeMS: 500ms.
instance holdoffTimeMS: 1000ms.
instance waittorestoreTimeM: 5m.
instance transmissionTime: 5s.
instance primaryPort unit: 19.
instance primaryPort RPL: true.
instance primaryPort portOper: NONFAILED.
instance primaryPort portState: BLOCK.
instance primaryPort holdoffRunning: false.
instance secondaryPort unit: 20.
instance primaryPort RPL: false.
instance secondaryPort portOper: NONFAILED.
instance secondaryPort portState: FORWARD.
instance secondaryPort holdoffRunning: false.
instance DNF: false.
instance state: IDLE.
instance guardRunning: false.
instance wtrRunning: false.
instance waittorestoreTimer: 0s.
instance transmissionRunnnng: ture.
instance transmissionTimer: 1s.
Admin\protocol\erps#
```


Result Description

Parameter	Description
erp ring id	The ring instance number.
instance mel	The management domain level.
instance control vid	The signaling VLAN of the ring instance.
instance stgid	The management VLAN instance ID.
instance role	The ring instance role.
instance row status	The running status of the ring instance.
instance guardTimeMS	The time of the guard timer; unit:ms.
instance holdoffTimeMS	The time of the hold-off timer; unit:ms.
instance waittorestoreTimeM	The time of the switching timer; unit: minute.
instance transmissionTime	The time of the packet transmission timer; unit: second.
instance primaryPort unit	The primary port.
instance primaryPort RPL	The role of the primary port.
instance primaryPort portOper	The link status of the primary port.
instance primaryPort portState	The state of the primary port protocol.
instance primaryPort holdoffRunnig	The state of the hold-off timer for the primary port.
instance secondaryPort unit	The secondary port.
instance secondaryPort RPL	The role of the secondary port.
instance secondaryPort portOper	The link status of the secondary port.
instance secondaryPort portState	The state of the secondary port protocol.
instance secondaryPort holdoffRunning	The state of the hold-off timer for the secondary port.
instance DNF	The state of refreshing the MAC address table by the ring instance.
instance state	The state of the ring instance.
instance guardRunning	The state of the guard timer in the ring instance.
instance wtrRunning	The state of the switching timer in the ring instance.
instance waittorestoreTimer	The timeout period of the switching timer in the ring instance; unit: second.
instance transmissionRunnning	The state of the packet transmission timer in the ring instance.
instance transmissionTimer	The timeout period of the packet transmission timer in the ring instance.

22.16 Viewing the Port Information of the ERPS Ring Instance

Command Function

You can use this command to view the port information of the ERPS instance.

Command Format

```
show erps ring <1-239> port
```

Parameter Description

Parameter	Description	Attribute
ring <1-239>	The ring instance number.	Mandatory

Command Example


















View the port information of the ERPS instance.

```
Admin\protocol\erps#show erps ring 1 port
erp ring id 1
Port          Port-role    Port-state    Link-state
19:3          RPL-owner    Up            Block
19:4          common      Up            Forward
Admin\protocol\erps#
```

Result Description

Parameter	Description
erp ring id	The ring instance number.
Port	The port number.
Port-role	The port role.
Port-state	The status of the port.
Link-state	The state of the port protocol.

23 admin\protocol\igmp Directory Command

-  Configuring Port Parameters
-  Deleting Port Parameters
-  Configuring ONU Multicast Protocol Parameters
-  Configuring the Multicast VLAN Flooding Mode
-  Configuring the Multicast QinQ Function
-  Configuring the Multicast Mode
-  Configuring the Multicast VLAN
-  Configuring the Multicast Protocol Version
-  Configuring Multicast Proxy IP Address
-  Configuring the Multicast Simulation Function
-  Deleting the Multicast Simulation Function
-  Viewing the Multicast Proxy IP address
-  Viewing Multicast Protocol Parameters
-  Viewing Multicast Group Information
-  Viewing Multicast Group Information on Host Side
-  Viewing Multicast Global Information
-  Viewing Traffic Statistics of the Multicast Group

23.1 Configuring Port Parameters

Command Function

You can use this command to configure the port parameters.

Command Format

```
set igmp port <slot> <pon> <onu> <port> {[ control] [ enable|disable]} *1
{[ bandwidth] <0-100000>} *1 {[ leave] [ fast|non_fast]} *1 {[ max_group] <0-
255>} *1 {[ profile] <porifle>} *1 {[ signal_vlan] <0-4085>} *1
```

Parameter Description

Parameter	Description	Attribute
<slot>	The slot number.	Mandatory
<pon>	The PON port number.	Mandatory
<onu>	The ONU number.	Mandatory
<port>	The ONU port number.	Mandatory
{[control] [enable disable]} *1	The controlled mode. Enable or disable the function.	Mandatory
{[bandwidth] <0-100000>} *1	The maximum bandwidth. The value ranges from 0 to 100000, and the default value is 0.	Mandatory
{[leave] [fast non_fast]} *1	The leaving mode. Select not fast leave or fast leave mode. The default value is fast leave.	Mandatory
{[max_group] <0-255>} *1	The maximum number of the groups. The value ranges from 0 to 255, and the default value is 32.	Mandatory
{[profile] <porifle>} *1	The multicast profile. 32 character strings.	Mandatory
{[signal_vlan] <0-4085>} *1	The signaling VLAN. The value ranges from 0 to 4085, and the default value is 0.	Mandatory

Command Example

Set the leaving mode for Port 1 of ONU2 to Not Fast Leave, the maximum online group number is 48, the maximum bandwidth is 5000, and the signaling VLAN is 100. The ONU is connected to PON Port 1 in Slot 13.

```
Admin\protocol\igmp#set igmp port 13 1 2 1 leavemode non_fast max_group 48
bandwidth 5000 signal_vlan 100
Admin\protocol\igmp#
```


23.2 Deleting Port Parameters

Command Function

You can use this command to delete the port parameters.

Command Format

```
no igmp onu_port_parameters { slot <slotno> pon <ponno> onu <onuno> port  
<portno> } *1
```

Parameter Description

Parameter	Description	Attribute
<slotno>	The slot number.	Mandatory
<ponno>	The PON port number.	Mandatory
<onuno>	The ONU number.	Mandatory
<portno>	The ONU port number.	Mandatory

Command Example

Delete the port parameters of Port 1 for ONU2. The ONU is connected to PON Port 1 in Slot 13.

```
Admin\protocol#no igmp onu_port_parameters slot 13 pon 1 onu 2 port 1  
Admin\protocol#
```

23.3 Configuring ONU Multicast Protocol Parameters

Command Function

You can use this command to configure the ONU parameters.

Command Format

```
set igmp onu <slot> <pon> <onu> {[ robustness] <0-12>} *1 {[ leave] [ fast |  
non_fast]} *1 {[ last_query_count] <0-12>} *1 {[ mode] [ snooping|proxy]} *1
```


Parameter Description

Parameter	Description	Attribute
<slot>	The slot number.	Mandatory
<pon>	The PON port number.	Mandatory
<onu>	The ONU number.	Mandatory
{[robustness] <0-12>} *1	The robustness. The value ranges from 0 to 12, and the default value is 2.	Mandatory
{[leave] [fast non_fast]} *1	The leaving mode. Select fast leave or not fast leave.	Mandatory
{[last_query_count] <0-12>} *1	The last query times. The value ranges from 0 to 12, and the default value is 2.	Mandatory
{[mode] [snooping proxy]} *1	The multicast mode. Select snooping or proxy mode. The default value is snooping mode.	Mandatory

Command Example

Set the leaving mode for ONU2 to Not Fast Leave, the robustness to 5, the last query times to 3, and multicast mode to proxy mode. The ONU is connected to PON Port 1 in Slot 13.

```
Admin\protocol\igmp#set igmp onu 13 1 2 robustness 5 leave non_fast
last_query_count 3 mode proxy
Admin\protocol\igmp#
```

23.4 Configuring the Multicast VLAN Flooding Mode

Command Function

You can use this command to configure the multicast VLAN flooding mode.

Command Format

```
set igmp vlan <1-4088> flood mode[ all|unknown|none]
```


Parameter Description

Parameter	Description	Attribute
<1-4088>	The multicast VLAN.	Mandatory
[all unknown none]	Configure whether the multicast packets are transparently transmitted. ◆ all: all the known and unknown multicast messages are transparently transmitted. ◆ unknown: the unknown multicast messages are transparently transmitted. ◆ none: the unknown multicast messages are discarded.	Mandatory

Command Example

Set the flooding mode of the multicast VLAN 100 to none.

```
Admin\protocol\igmp#set igmp vlan 100 flood mode none
Admin\protocol\igmp#
```

23.5 Configuring the Multicast QinQ Function

Command Function

You can use this command to configure the multicast QinQ function.

Command Format

```
set igmp signalling qinq[ enable | disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	Enable or disable the function. The default value is disable. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the multicast QinQ function.

```
Admin\protocol\igmp#set igmp signalling qinq enable
Admin\protocol\igmp#
```


23.6 Configuring the Multicast Mode

Command Function

You can use this command to configure the multicast mode.

Command Format

```
set igmp mode [ control | proxy-proxy | snooping | proxy-snooping | disable |
igmpv3_proxy]
```

Parameter Description

Parameter	Description	Attribute
[control proxy-proxy snooping proxy-snooping disable igmpv3_proxy]	<p>The multicast mode. The default mode is proxy-proxy mode. The options include:</p> <ul style="list-style-type: none"> ◆ 1: controlled mode ◆ 2: proxy-proxy mode ◆ 3: snooping mode ◆ 4: proxy-snooping mode ◆ 5: close ◆ 6: active snooping mode 	Mandatory

Command Example

Set the multicast mode to proxy-snooping mode.

```
Admin\protocol\igmp#set igmp mode proxy-snooping
Admin\protocol\igmp#
```

23.7 Configuring the Multicast VLAN

Command Function

You can use this command to configure the multicast VLAN.

Command Format

```
set igmp vlan [ default ] *1 { <1-4088> } *1
```


Parameter Description

Parameter	Description	Attribute
{ [default] } * 1	The multicast VLAN. Default value: 4088.	Mandatory
{ <1-4088> } * 1	The multicast VLAN. Value range: 1 to 4088.	Mandatory

Command Example

Set the multicast VLAN to 100.

```
Admin\protocol\igmp#set igmp vlan 100
Admin\protocol\igmp#
```

23.8 Configuring the Multicast Protocol Version

Command Function

You can use this command to configure the multicast protocol version.

Command Format

```
set igmp stack [ v1 | v2 | v3]
```

Parameter Description

Parameter	Description	Attribute
[v1 v2 v3]	The multicast protocol version includes: <ul style="list-style-type: none">◆ V1: IGMP Version 1.◆ V2: IGMP Version 2.◆ V3: IGMP Version 3.	Mandatory

Command Example

Configure the multicast protocol version as IGMP V2.

```
Admin\protocol\igmp#set igmp stack v2
Admin\protocol\igmp#
```


23.9 Configuring Multicast Proxy IP Address

Command Function

You can use this command to configure the multicast proxy IP address.

Command Format

```
set igmp proxy ip[ <A.B.C.D> | default]
```

Parameter Description

Parameter	Description	Attribute
[<A.B.C.D> default]	The multicast proxy IP address. It should be IP address of Class A to Class C. The default value is 10.25.14.57.	Mandatory

Command Example

Set the multicast proxy IP address to 10.25.100.100.

```
Admin\protocol\igmp#set igmp proxy ip 10.25.100.100
Admin\protocol\igmp#
```

23.10 Configuring the Multicast Simulation Function

Command Function

You can use this command to configure the multicast simulation function.

Command Format

```
set igmp simulation program <A.B.C.D> vlan <vlanid> slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
<A.B.C.D>	The multicast group address or the multicast IP address.	Mandatory
<vlanid>	The VLAN ID.	Mandatory
<slotno>	The slot number.	Mandatory

Command Example

Configure the simulation function for the multicast group whose address is 225.1.1.1 and VLAN is 100.

```
Admin\protocol\igmp#set igmp simulation program 225.1.1.1 vlan 100 slot 16
Admin\protocol\igmp#
```

23.11 Deleting the Multicast Simulation Function

Command Function

You can use this command to delete the multicast simulation function.

Command Format

```
no igmp simulation program <A.B.C.D> vlan <vlanid> slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
<A.B.C.D>	The multicast group address or the multicast IP address.	Mandatory
<vlanid>	The VLAN ID.	Mandatory
<slotno>	The slot number.	Mandatory

Command Example

Delete the simulation function for the multicast group whose address is 225.1.1.1 and VLAN is 100.

```
Admin\protocol\igmp#set igmp simulation program 225.1.1.1 vlan 100 slot 16
Admin\protocol\igmp#
```

23.12 Viewing the Multicast Proxy IP address

Command Function

You can use this command to view the multicast proxy IP address.

Command Format

```
show igmp proxy ip
```

Parameter Description

None

Command Example

View the multicast proxy IP address.

```
Admin\protocol\igmp#show igmp proxy ip
igmp proxy ip is 10.25.14.57
Admin\protocol\igmp#
```

23.13 Viewing Multicast Protocol Parameters

Command Function

You can use this command to view the multicast parameters.

Command Format

```
show igmp mode
```

Description

None

Command Example

View the multicast protocol parameters.

```
Admin\protocol\igmp#show igmp mode
system is running in IGMPv3 proxy/snooping protocol
IGMP/MLD Mode      : proxy-proxy
Robustness variable : 2
Group membership interval : 260
Last member query interval: 1
Last member query count  : 2
Query interval       : 125
Query response interval : 10
```



```
Admin\protocol\igmp#
```

Result Description

Parameter	Description
IGMP/MLD Mode	The multicast mode.
Robustness variable	The robustness count.
Group membership interval	The aging time of the group member.
Last member query interval	The query interval of the last group member.
Last member query count	The query times of the last group member.
Query interval	The interval of general query.
Query response interval	The response time of general query.

23.14 Viewing Multicast Group Information

Command Function

You can use this command to view the multicast group information.

Command Format

```
show igmpv3 group { <A.B.C.D> } *1
```

Parameter Description

Parameter	Description	Attribute
{ <A.B.C.D> } *1	The multicast group address.	Mandatory

Command Example

View statistics information of the multicast group whose address is 255.1.1.1, arranging in chronological order.

```
Admin\protocol\igmp#show igmpv3 group 225.1.1.1
=====Vlan 100=====
IGMP Connected Group Membership
Group Address  Interface    Uptime    Expires    Last Reporter
225.1.1.1      interface12  17:10:44  00:03:12  10.25.14.56
-----
Admin\protocol\igmp#
```


Result Description

Parameter	Description
Group Address	The multicast group address.
Interface	The interface name.
Uptime	The online duration.
Expires	The timeout period of corresponding group.
Last Reporter	The last reporter in the group.

23.15 Viewing Multicast Group Information on Host Side

Command Function

You can use this command to view the multicast group information on the host side.

Command Format

```
show igmpv3 host-group { <A.B.C.D> } *1
```

Parameter Description

Parameter	Description	Attribute
{ <A.B.C.D> } *1	The multicast group address.	Mandatory

Command Example

View statistics information of the multicast group whose address is 255.1.1.1, arranging in chronological order.

```
Admin\protocol\igmp#show igmpv3 host-group 225.1.1.1
=====Vlan 100=====
IGMP Connected Proxy Group Membership
Group Address      Interface          Member state
225.1.1.1          interface65535    Idle
-----
Admin\protocol\igmp#
```


Result Description

Parameter	Description
Group Address	The multicast group address.
Interface	The interface name.
Member state	The group member status.

23.16 Viewing Multicast Global Information

Command Function

You can use this command to view the multicast global information.

Command Format

```
show igmpv3 globle
```

Description

None

Command Example

View statistics information of the multicast group whose address is 255.1.1.1, arranging in chronological order.

```
Admin\protocol\igmp#show igmpv3 globle
=====
Compiled Version           :RP1001
SVN Version                : Rev: 435719
IGMP Version              :v3
Work Mode                  :Proxy
Vlan Learning              :Disable
Fast Leave                 :Disable
Max Transmit Unit         :1500
Proxy Ip Address           :10.25.14.57
SSM Ip Address             :232.0.0.0
SSM Ip Mask                :255.0.0.0

General Member Interval    :260
Robustness                 :2
Query Interval             :125
```



```

Query Response Interval      :10
Last Member Query Interval   :1
Last Member Query Count      :2
Igmp Group/Source age        :enable

Input Buffer Size             :131072 Bytes
Output Buffer Size            :1500 Bytes
Work mode                    :proxy-proxy

up_vlan  up_cos  dw_vlan  dw_cos
1002      200      3
Admin\protocol\igmp#

```

Result Description

Parameter	Description
Compiled Version	The compiled version.
SVN Version	The subversion.
IGMP Version	The multicast protocol version.
Work Mode	The multicast mode.
Vlan Learning	The VLAN learning function.
Fast Leave	The fast leave mode.
Max Transmit Unit	The maximum transmission unit.
Proxy Ip Address	The proxy IP address.
SSM Ip Address	The IP address of the mapping source.
SSM Ip Mask	The mask of the mapping source.
General Member Interval	The aging time of the group member.
Robustness	The robustness count.
Query Interval	The interval of general query.
Query Response Interval	The response time of general query.
Last Member Query Interval	The query interval for specific groups.
Last Member Query Count	The query times for specific groups.
Igmp Group/Source age	The IGMP aging.
Input Buffer Size	The size of the Rx buffer area for the main control multicast protocol stack.
Output Buffer Size	The size of the Tx buffer area for the main control multicast protocol stack.
up_vlan	The Uplink VLAN.
up_cos	The uplink VLAN priority.

Parameter	Description
dw_vlan	The downlink VLAN.
dw_cos	The downlink VLAN priority.

23.17 Viewing Traffic Statistics of the Multicast Group

Command Function

You can use this command to view the traffic statistics of the multicast group.

Command Format

```
show igmp flow-statistic program <A.B.C.D> vlan <vlanid>
```

Parameter Description











Parameter	Description	Attribute
<A.B.C.D>	The multicast group address.	Mandatory
<vlanid>	The VLAN ID.	Mandatory

Command Example

View traffic statistics of the multicast group whose address is 255.1.1.1, arranging in chronological order.

```
Admin\protocol\igmp#show igmp flow-statistic program 225.1.1.1 vlan 100
command is being executed, please wait...
igmp flow statistic result:248(fps).
Admin\protocol\igmp#
```


24 admin\device\circuitid Directory Command

-  Enabling or Disabling the DHCP Option 82 Function
-  Enabling or Disabling the DHCP Option 18 / 37 Function
-  Enabling or Disabling the PPPoE Plus Function
-  Enabling or Disabling the Remote End ID Function
-  Configuring the Line Identifier / Remote End Identifier Format
-  Configuring the Line Identifier Access Node Parameters
-  Viewing the Line Identifier / Remote End Identifier Format
-  Viewing Parameter Value of the Line Identifier Access Node
-  Viewing the DHCP Status
-  Viewing the PPPoE Plus Status

24.1 Enabling or Disabling the DHCP Option 82 Function

Command Function

You can use this command to enable or disable the DHCP Option 82 function.

Command Format

```
set dhcp option82 [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	<ul style="list-style-type: none">◆ Enable: Enable the function.◆ Disable: Disable the function.	Mandatory

Command Example

Enable the DHCP Option 82 service.

```
Admin\device\circuitid#set dhcp option82 enable
Admin\device\circuitid#
```

24.2 Enabling or Disabling the DHCP Option 18 / 37 Function

Command Function

You can use this command to enable or disable the DHCP Option 18 / 37 service.

Command Format

```
set dhcp [ option18|option37] [ enable|disable]
```


Parameter Description

Parameter	Description	Attribute
[option18 option37]	<ul style="list-style-type: none"> ◆ option18: The Option 18 service. ◆ option18: The Option 37 service. 	Mandatory
[enable disable]	<ul style="list-style-type: none"> ◆ Enable: Enable the function. ◆ Disable: Disable the function. 	Mandatory

Command Example

Enable the DHCP Option 18 service.

```
Admin\device\circuitid#set dhcp option18 enable
Admin\device\circuitid#
```

24.3 Enabling or Disabling the PPPoE Plus Function

Command Function

You can use this command to enable or disable the PPPoE Plus function.

Command Format

```
set pppoe_plus [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	<ul style="list-style-type: none"> ◆ Enable: Enable the function. ◆ Disable: Disable the function. 	Mandatory

Command Example

Enable the PPPoE Plus function.

```
Admin\device\circuitid#set pppoe_plus enable
Admin\device\circuitid#
```


24.4 Enabling or Disabling the Remote End ID Function

Command Function

You can use this command to enable or disable the remote end ID function.

Command Format

```
set remote_id[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	◆ Enable: Enable the function. ◆ Disable: Disable the function.	Mandatory

Command Example

Enable or Disable the Remote End ID Function

```
Admin\device\circuitid#set remote_id enable  
Admin\device\circuitid#
```

24.5 Configuring the Line Identifier / Remote End Identifier Format

Command Function

You can use this command to configure the format of the line identifier or remote end identifier and determine how to add user and equipment information into the data packets, so as to manage the higher-layer BRAS equipment conveniently.

Command Format

```
set[ circuit_id|remote_id] format[ <format_str>|ctc|cnc]
```


Parameter Description

Parameter	Description	Attribute
[circuit_id remote_id]	<ul style="list-style-type: none"> ◆ circuit_id: the line identifier format. ◆ remote_id: the remote end identifier format. 	Mandatory
[<format_str> ctc cnc]	<ul style="list-style-type: none"> ◆ <format_str>: the customized format. ◆ ctc: the CTC format, which means the standard of China Telecom Corporation. ◆ cnc: the CNC format, which means the standard of China Netcom Corporation. 	Mandatory

Command Example

Set the line identifier format to CNC.

```
Admin\device\circuitid#set circuit_id format cnc
Admin\device\circuitid#
```

24.6 Configuring the Line Identifier Access Node Parameters

Command Function

You can use this command to configure parameters of the system line identifier, which include access node identifier, rack number and shelf number.

Command Format

```
set circuit_id accessNodeIdentifier <identifier> ani_rack <0-31> ani_frame
<0-127>
```


Parameter Description

Parameter	Description	Attribute
<code>accessNodeIdentifier</code> <code><identifier></code>	Identifier format of the access node. A character string that should include no more than 50 characters, sans spaces.	Mandatory
<code>ani_rack<0-15></code>	Rack number of the access node. The value range is 0 to 15. The valid value range varies with the operator.	Mandatory
<code>ani_frame<0-31></code>	Subrack number of the access node. The value range is 0 to 31. The valid value range varies with the operator.	Mandatory

Command Example

Configure the line identifier. Set the access node identifier to abcdefg, the rack number to 15, and the shelf number to 31.

```
Admin\device\circuitid#set circuit_id accessnodeidentifier abcdefg ani_rack 15  
ani_frame 31  
Admin\device\circuitid#
```

24.7 Viewing the Line Identifier / Remote End Identifier Format

Command Function

You can use this command to view the line identifier / remote end identifier format.

Command Format

```
show[ remote_id|circuit_id] format
```

Parameter Description

Parameter	Description	Attribute
<code>[circuit_id remote_id]</code>	◆ circuit_id: the line identifier format. ◆ remote_id: the remote end identifier format.	Mandatory

Command Example

View the line identifier format information.

```
Admin\device\circuitid#show circuit_id format  
Circuit ID format : CNC Standard  
Admin\device\circuitid#
```

24.8 Viewing Parameter Value of the Line Identifier Access Node

Command Function

You can use this command to view the parameter values of the line identifier access node.

Command Format

```
show circuit_id value
```

Parameter Description

None

Command Example

View the parameter value of the line identifier access node.

```
Admin\device\circuitid#show circuit_id value  
AccessNodeIdentifier : abcdefg  
ANI rack             : 15  
ANI frame             : 31  
Admin\device\circuitid#
```

24.9 Viewing the DHCP Status

Command Function

You can use this command to view the status of the DHCP service.

Command Format

```
show dhcp state
```

Description

None

Command Example

View the status information of the DHCP service.

```
Admin\device\circuitid#show dhcp state  
DHCP option82   : enabled  
DHCP option18   : disabled  
DHCP option37   : disabled  
EPON DHCP Patch: disabled  
EPON ARP Patch: disabled  
Admin\device\circuitid#
```

24.10 Viewing the PPPoE Plus Status

Command Function

You can use this command to view the service status of the PPPoE Plus.

Command Format

```
show pppoe_plus state
```

Description

None

Command Example

View the service status information of the PPPoE Plus.

```
Admin\device\circuitid#show pppoe_plus state  
PPPoE+ : Enabled  
Admin\device\circuitid#
```


- ☒ Configuring a System Trunk Group
- ☒ Deleting a Trunk Group
- ☒ Adding a Trunk Group Member Port
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- ☒ Configuring a Downlink Sub VLAN
- ☒ Deleting a Downlink Sub VLAN
- ☒ Configuring the ARP Proxy Switch of Super VLAN

25.1 Configuring a System Trunk Group

Command Function

You can use this command to create a system Trunk group.

Command Format

```
create trunk <id>
```

Parameter Description

Parameter	Description	Attribute
<id>	The Trunk group ID. The value ranges from 1 to 6.	Mandatory

Command Example

Create a Trunk group. The group number is 1.

```
Admin\interface#create trunk 1  
Admin\interface#
```

25.2 Deleting a Trunk Group

Command Function

You can use this command to delete a system Trunk group.

Command Format

```
no trunk <id>
```

Parameter Description

Parameter	Description	Attribute
<id>	The Trunk group ID. The value ranges from 1 to 6.	Mandatory

Command Example

Delete the Trunk group whose ID is 1.

```
Admin\interface#no trunk 1
```



```
Admin\interface#
```

25.3 Adding a Trunk Group Member Port

Command Function

You can use this command to add a member port to the Trunk group.

Command Format

```
add trunk <id> slot <slotno> port <portno>
```

Parameter Description

Parameter	Description	Attribute
<id>	The Trunk group ID.	Mandatory
slot <slotno>	The slot number. The value ranges from 19 to 20.	Mandatory
port <portno>	The port number. The value ranges from 1 to 6.	Mandatory

Command Example

Create Trunk Group 6, and add Member Port 19:6.

```
Admin\interface#add trunk 6 slot 19 port 6
Admin\interface#
```

25.4 Deleting a Trunk Group Member Port

Command Function

You can use this command to delete a member port from the Trunk group.

Command Format

```
no trunk <id> slot <slotno> port <portno>
```


Parameter Description

Parameter	Description	Attribute
<id>	The Trunk group ID.	Mandatory
slot <slotno>	The slot number. The value ranges from 19 to 20.	Mandatory
port <portno>	The port number. The value ranges from 1 to 6.	Mandatory

Command Example

Delete Member Port 19:6 from Trunk Group 6.

```
Admin\interface#no trunk 6 slot 19 port 6
Admin\interface#
```

25.5 Configuring Reference Factors for the System Trunk Group

Command Function

You can use this command to configure the reference factors for Trunk group to implement the load sharing.

Command Format

```
set trunking groupno <1-6> criteria[ smac|dmac|sdmac|sip|dip|sdip]
```

Parameter Description

Parameter	Description	Attribute
groupno <1-6>	The Trunk group ID.	Mandatory
criteria[smac dmac sdmac sip dip sdip]	<p>The reference factors include:</p> <ul style="list-style-type: none"> ◆ smac: the source MAC address ◆ dmac: the destination MAC address ◆ sdmac: the source and destination MAC addresses ◆ sip: the source IP address ◆ dip: the destination IP address ◆ sdip: the source and destination IP addresses 	Mandatory

Command Example

Configure load sharing for Trunk Group 6 based on source IP address.

```
Admin\interface#set trunking groupno 6 criteria sip
Admin\interface#
```

25.6 Configuring the Maximum Number of Members in a Trunk Group

Command Function

You can use this command to configure the maximum number of members in a Trunk group.

Command Format

```
set trunk <1-6> max-member-num <1-12>
```

Parameter Description

Parameter	Description	Attribute
trunk <1-6>	The Trunk group ID.	Mandatory
max-member-num <1-12>	The maximum number of members in a Trunk group. The value ranges from 1 to 12.	Mandatory

Command Example

Set the maximum number of members in Trunk Group 6 to 2.

```
Admin\interface#set trunk 6 max-member-num 2
Admin\interface#
```

25.7 Configuring the Trunk Group Aggregation Mode

Command Function

You can use this command to set the Trunk group aggregation mode to either manual or LACP mode.

Command Format

```
set trunking groupno <1-6> mode[ static|lacp]
```

Parameter Description

Parameter	Description	Attribute
groupno <1-6>	The Trunk group ID.	Mandatory
mode[static lacp]	The aggregation mode. It can be set to manual aggregation or the LACP mode.	Mandatory

Command Example

Set the aggregation mode for Trunk group No. 6 to manual.

```
Admin\interface#set trunking groupno 6 mode static
Admin\interface#
```

25.8 Viewing Configuration of a Trunk Group

Command Function

You can use this command to view the Trunk group configuration in the system.

Command Format

```
show trunk[ all|<trunkid>]
```

Parameter Description

Parameter	Description	Attribute
[all <trunkid>]	View the information of all the Trunk groups or a designated Trunk group.	Mandatory

Command Example

View the configuration of Trunk Group 6.

```
Admin\interface#show trunk 6
trunk 6 info :
portId(option):19:1 19:2 .
master_port 19:1,
```



```
trunk_mode : TRUNK STATIC
trunk_psc : SRC and DST MAC
auto_negotiation : ENABLE
duplex : HALF
flow_switch : DISABLE
mac_learning_switch : ENABLE
pri_enable : DISABLE
priority 0 :
speed 0 :
wan_lan_mode 1 :
work_mode 0 :
jumbo_frame 0 :
Admin\interface#
```

Result Description

Parameter	Description
port info	The uplink port added in the Trunk group.
master_port	The master port of the Trunk group.
trunk_mode	The aggregation mode of the Trunk group.
auto_negotiation	The auto-negotiation mode of the port.
duplex	The data communication mode of the port.
flow_switch	The switch of the flow.
mac_learning_switch	The MAC address learning switch.
pri_enable	Enable or disable the priority.
priority	The priority value.
speed	The rate.
wan_lan_mode	The working mode of the port.
work_mode	0 stands for SGMII, and 1 stands for Serdes.
jumbo_frame	The number of the jumbo frames.

25.9 Configuring the Broadcast / Multicast / Unknown Packet Suppression Mode for the Uplink Port

Command Function

You can use this command to configure the packet suppression mode for the uplink port. The unit can be packets/second, or kbit/s.

Command Format

```
set uplink slot <slotno> port <portno> pkt_ctrl mode[ speed|pktnum]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
mode[speed pktnum]	The rate of the packet suppression. It can be configured as below: <ul style="list-style-type: none"> ◆ speed: The unit is kbit/s. ◆ pktnum: The unit is packets/second. 	Mandatory

Command Example

Set the unit of the packet suppression rate for Port 19:1 to kbit/s.

```
Admin\interface#set uplink slot 19 port 1 pkt_ctrl mode speed
Admin\interface#
```

25.10 Disabling the Broadcast / Multicast / Unknown Packet Suppression for the Uplink Port

Command Function

You can use this command to disable packet suppression for the uplink port.

Command Format

```
set control uplink slot <slotno> port <portno> [ broadcast|multicast|
unknown|all] disable
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
[broadcast multicast unknown all]	The packet suppression object includes: <ul style="list-style-type: none">◆ broadcast: broadcast packets.◆ multicast: multicast packets.◆ unknown: unknown packets.◆ all: all types of packets.	Mandatory

Command Example

Disable the broadcast packet suppression at the Port 19:1.

```
Admin\interface#set control uplink slot 19 port 1 broadcast disable
Admin\interface#
```

25.11 Enabling the Broadcast / Multicast / Unknown Packet Suppression for the Uplink Port

Command Function

You can use this command to enable packet suppression for the uplink port and configure the rate limiting value.

Command Format

```
set control uplink slot <slotno> port <portno> [ broadcast|multicast|
unknown|all] enable limit <val>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory

Parameter	Description	Attribute
[broadcast multicast unknown all]	The packet suppression object includes: ◆ broadcast: broadcast packets. ◆ multicast: multicast packets. ◆ unknown: unknown packets. ◆ all: all types of packets.	Mandatory
limit <val>	The rate limiting value. The value ranges from 1 to 262142, and the unit is packets/second.	Mandatory

Command Example

Enable the broadcast packet suppression at the 19:1 port; set the rate limit to 200 packets/second.

```
Admin\interface#set control uplink slot 19 port 1 broadcast enable limit 200
Admin\interface#
```

25.12 Viewing the Broadcast / Multicast / Unknown Packet Suppression for a Designated Uplink Port

Command Function

You can use this command to view the packet suppression function of a designated uplink port, including the packet type, state of packet suppression (enabled or disabled) and rate limit.

Command Format

```
show uplink packet_control slot <slotno> port <portno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value can be 19 or 20.	Mandatory
port <portno>	The port number. The value ranges from 1 to 6.	Mandatory

Command Example

View packet suppression configuration for Port 19:1.


```
Admin\interface#show uplink packet_control slot 19 port 1
port pkt_ctrl slot 19 port 1 unknown enable limit 100
port pkt_ctrl slot 19 port 1 multicast enable limit 150
port pkt_ctrl slot 19 port 1 broadcast enable limit 200
Admin\interface#
```

Result Description

Parameter	Description
slot	The slot number.
port	The port number.
unknown	The unknown packets.
multicast	The multicast packets.
broadcast	The broadcast packets.
limit	The rate limit.

25.13 Viewing the Broadcast / Multicast / Unknown Packet Suppression for All Uplink Ports

Command Function

You can use this command to view the packet suppression function for all the uplink ports, including the packet type, state of packet suppression (enabled or disabled) and rate limit.

Command Format

```
show uplink packet_control port all
```

Parameter Description

None

Command Example

View packet suppression information for all the uplink ports.

```
Admin\interface#show uplink packet_control port all
port pkt_ctrl slot 1 port 0 unknown disable
port pkt_ctrl slot 1 port 0 multicast disable
port pkt_ctrl slot 1 port 0 broadcast disable
```



```
port pkt_ctrl slot 2 port 0 unknown disable
port pkt_ctrl slot 2 port 0 multicast disable
port pkt_ctrl slot 2 port 0 broadcast disable
port pkt_ctrl slot 3 port 0 unknown disable
port pkt_ctrl slot 3 port 0 multicast disable
port pkt_ctrl slot 3 port 0 broadcast disable
port pkt_ctrl slot 4 port 0 unknown disable
port pkt_ctrl slot 4 port 0 multicast disable
port pkt_ctrl slot 4 port 0 broadcast disable
port pkt_ctrl slot 5 port 0 unknown disable
port pkt_ctrl slot 5 port 0 multicast disable
port pkt_ctrl slot 5 port 0 broadcast disable
port pkt_ctrl slot 6 port 0 unknown disable
port pkt_ctrl slot 6 port 0 multicast disable
port pkt_ctrl slot 6 port 0 broadcast disable
port pkt_ctrl slot 7 port 0 unknown disable
port pkt_ctrl slot 7 port 0 multicast disable
port pkt_ctrl slot 7 port 0 broadcast disable
port pkt_ctrl slot 8 port 0 unknown disable
port pkt_ctrl slot 8 port 0 multicast disable
port pkt_ctrl slot 8 port 0 broadcast disable
port pkt_ctrl slot 11 port 0 unknown disable
port pkt_ctrl slot 11 port 0 multicast disable
port pkt_ctrl slot 11 port 0 broadcast disable
port pkt_ctrl slot 12 port 0 unknown disable
port pkt_ctrl slot 12 port 0 multicast disable
port pkt_ctrl slot 12 port 0 broadcast disable
port pkt_ctrl slot 13 port 0 unknown disable
port pkt_ctrl slot 13 port 0 multicast disable
port pkt_ctrl slot 13 port 0 broadcast disable
port pkt_ctrl slot 14 port 0 unknown disable
port pkt_ctrl slot 14 port 0 multicast disable
port pkt_ctrl slot 14 port 0 broadcast disable
port pkt_ctrl slot 15 port 0 unknown disable
port pkt_ctrl slot 15 port 0 multicast disable
port pkt_ctrl slot 15 port 0 broadcast disable
port pkt_ctrl slot 16 port 0 unknown disable
port pkt_ctrl slot 16 port 0 multicast disable
port pkt_ctrl slot 16 port 0 broadcast disable
port pkt_ctrl slot 17 port 0 unknown disable
port pkt_ctrl slot 17 port 0 multicast disable
port pkt_ctrl slot 17 port 0 broadcast disable
port pkt_ctrl slot 18 port 0 unknown disable
port pkt_ctrl slot 18 port 0 multicast disable
```



```
port pkt_ctrl slot 18 port 0 broadcast disable
port pkt_ctrl slot 19 port 1 unknown enable limit 100
port pkt_ctrl slot 19 port 1 multicast enable limit 150
port pkt_ctrl slot 19 port 1 broadcast enable limit 200
port pkt_ctrl slot 19 port 2 unknown enable limit 150
port pkt_ctrl slot 19 port 2 multicast enable limit 150
port pkt_ctrl slot 19 port 2 broadcast enable limit 150
port pkt_ctrl slot 19 port 3 unknown enable limit 150
port pkt_ctrl slot 19 port 3 multicast enable limit 150
port pkt_ctrl slot 19 port 3 broadcast enable limit 150
port pkt_ctrl slot 19 port 4 unknown enable limit 150
port pkt_ctrl slot 19 port 4 multicast enable limit 150
port pkt_ctrl slot 19 port 4 broadcast enable limit 150
port pkt_ctrl slot 19 port 5 unknown enable limit 150
port pkt_ctrl slot 19 port 5 multicast enable limit 150
port pkt_ctrl slot 19 port 5 broadcast enable limit 150
port pkt_ctrl slot 19 port 6 unknown enable limit 150
port pkt_ctrl slot 19 port 6 multicast enable limit 150
port pkt_ctrl slot 19 port 6 broadcast enable limit 150
port pkt_ctrl slot 20 port 1 unknown enable limit 150
port pkt_ctrl slot 20 port 1 multicast enable limit 150
port pkt_ctrl slot 20 port 1 broadcast enable limit 150
port pkt_ctrl slot 20 port 2 unknown enable limit 150
port pkt_ctrl slot 20 port 2 multicast enable limit 150
port pkt_ctrl slot 20 port 2 broadcast enable limit 150
port pkt_ctrl slot 20 port 3 unknown enable limit 150
port pkt_ctrl slot 20 port 3 multicast enable limit 150
port pkt_ctrl slot 20 port 3 broadcast enable limit 150
port pkt_ctrl slot 20 port 4 unknown enable limit 150
port pkt_ctrl slot 20 port 4 multicast enable limit 150
port pkt_ctrl slot 20 port 4 broadcast enable limit 150
port pkt_ctrl slot 20 port 5 unknown enable limit 150
port pkt_ctrl slot 20 port 5 multicast enable limit 150
port pkt_ctrl slot 20 port 5 broadcast enable limit 150
port pkt_ctrl slot 20 port 6 unknown enable limit 150
port pkt_ctrl slot 20 port 6 multicast enable limit 150
port pkt_ctrl slot 20 port 6 broadcast enable limit 150
Admin\interface#
```

Result Description

Parameter	Description
slot	The slot number.
port	The port number.

Parameter	Description
unknown	The unknown packets.
multicast	The multicast packets.
broadcast	The broadcast packets.
limit	The rate limiting value.

25.14 Configuring the Interface Mode for the Uplink Port

Command Function

You can use this command to configure the interface mode for the uplink port.

Command Format

```
set uplink slot <slotno> port <portno> Interface [ sgmi | serdes]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
[sgmi serdes]	The interface mode. When the port serves as an optical interface, set it to SerDes. When this port serves as an electrical interface, set it to SGMII.	Mandatory

Command Example

Set the interface mode for uplink port 19:1 to the SGMII mode.

```
Admin\interface#set uplink slot 19 port 1 interface sgmi
Admin\interface#
```

25.15 Enabling or Disabling the Uplink Port

Command Function

You can use this command to enable or disable the uplink port.

Command Format

```
set uplink slot <slotno> port <portno> [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
[enable disable]	Enable or disable the uplink port.	Mandatory

Command Example

Enable the uplink port 19:3.

```
Admin\interface#set uplink slot 19 port 3 enable
Admin\interface#
```

25.16 Enabling or Disabling the Flow Control Function of the Uplink Port

Command Function

You can use this command to enable or disable the flow control function of the uplink port.

Command Format

```
set uplink slot <slotno> port <portno> flow_control [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
[enable disable]	Enable or disable the flow control function of the uplink port.	Mandatory

Command Example

Enable the flow control function of the uplink port 19:3.

```
Admin\interface#set uplink slot 19 port 3 flow_control enable
Admin\interface#
```

25.17 Enabling or Disabling the Learning Function of the Uplink Port

Command Function

You can use this command to enable or disable the learning function of the uplink port.

Command Format

```
set uplink slot <slotno> port <portno> learning[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
[enable disable]	Enable or disable the learning function of the uplink port.	Mandatory

Command Example

Enable the learning function of the uplink port 19:3.

```
Admin\interface#set uplink slot 19 port 3 learning enable
Admin\interface#
```


25.18 Enabling or Disabling the Priority Function of the Uplink Port

Command Function

You can use this command to enable or disable the priority function of the uplink port.

Command Format

```
set uplink slot <slotno> port <portno> priority[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
[enable disable]	Enable or disable the priority function of the uplink port.	Mandatory

Command Example

Enable the priority function of the uplink port 19:3.

```
Admin\interface#set uplink slot 19 port 3 priority enable
Admin\interface#
```

25.19 Configuring the Priority of the Uplink Port

Command Function

You can use this command to configure the priority of an uplink port.

Command Format

```
set uplink slot <slotno> port <portno> priority privalue <0-7>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
privalue <0-7>	The priority value, ranging from 0 to 7. The greater the value is, the higher the priority becomes.	Mandatory

Command Example

Set the priority of the uplink port 19:3 to 6.

```
Admin\interface#set uplink slot 19 port 3 priority privalue 6
Admin\interface#
```

25.20 Configuring the WAN / LAN Mode for the Uplink Port

Command Function

You can use this command to configure the WAN or LAN mode for the uplink port. It is only valid for 10G optical port.

Command Format

```
set uplink slot <slotno> port <portno> wanlan_mode[ wan|lan]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
wanlan_mode[wan lan]	The port mode. If the equipment is connected to the SDH equipment over a 10G optical port, select the WAN mode. If the equipment is connected to the Ethernet equipment, select the LAN mode.	Mandatory

Command Example

Set the uplink port 19:3 to the WAN mode.

```
Admin\interface#set uplink slot 19 port 3 wanlan_mode wan
Admin\interface#
```

25.21 Configuring Basic Properties of the Uplink Port

Command Function

You can use this command to configure the basic properties of an uplink port, which include the auto-negotiation switch, port rate, and data communication mode.

Command Format

```
set uplink slot <slotno> port <portno> auto_negotiation[ enable|disable]
speed[ 10m|100m|1000m|10000m] duplex[ full|half]
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
auto_negotiation[enable disable]	Enable or disable the auto-negotiation function of the port. Note that the optical interface does not support the auto-negotiation function. This function is only valid for electrical interface.	Mandatory
speed[10m 100m 1000m 10000m]	The port rate; unit: Mbit/s.	Mandatory
[full half]	Set the data communication mode of the port to full duplex or half duplex.	Mandatory

Command Example

Enable the auto-negotiation function for the uplink port 19:3; set the port rate to 1000 Mbit/s, and the data communication mode of the port to half duplex.

```
Admin\interface#set uplink slot 19 port 3 auto_negotiation enable speed 1000m duplex
half
```



```
Admin\interface#
```

25.22 Configuring the Jumbo Frame Length of the Uplink Port

Command Function

You can use this command to configure the jumbo frame length of an uplink port.

Command Format

```
set uplink slot <slotno> port <portno> jumbo_frame <value>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the uplink card. The value ranges from 19 to 20.	Mandatory
port <portno>	The uplink port number. The value ranges from 1 to 6.	Mandatory
jumbo_frame <value>	The length of the jumbo frame; unit: byte. The value is greater than 1518. The default value is 2000.	Mandatory

Command Example

Set the length of the jumbo frame for Port 1 Slot 19 to 2048 bytes.

```
Admin\interface#set uplink slot 19 port 1 jumbo_frame 2048
Admin\interface#
```

25.23 Creating a Super VLAN

Command Function

You can use this command to create a Super VLAN.

Command Format

```
create super_vlan <1-4095>
```


Parameter Description

Parameter	Description	Attribute
super_vlan <1-4095>	The Super VLAN ID that needs to be created.	Mandatory

Command Example

Create Super VLAN 1.

```
Admin\interface#create super_vlan 1  
Admin\interface#
```

25.24 Deleting the Super VLAN

Command Function

You can use this command to delete the existing Super VLAN.

Command Format

```
no super-vlan[ <1-4095> |all]
```

Parameter Description

Parameter	Description	Attribute
super-vlan[<1-4095> all]	Delete the designated Super VLAN or all the Super VLANs.	Mandatory

Command Example

Delete Super VLAN 1.

```
Admin\interface#no super-vlan 1  
Admin\interface#
```

25.25 Viewing the Super VLAN Information

Command Function

You can use this command to query the Super VLAN information.

Command Format

```
show[ super-vlan|vlan-if] [ <1-4095>|all]
```

Parameter Description

Parameter	Description	Attribute
[super-vlan vlan-if]	Select to view the information of Super VLAN or VLAN-IF interface.	Mandatory
[<1-4095> all]	View the information of the designated Super VLAN or all Super VLANs.	Mandatory

Command Example

View the configuration information of all Super VLANs.

```
Admin\interface#show super-vlan all
-----
supervlanvid1
routeArp:disable
interVlanArp:disable
innerVlanArp:disable
VLAN_IF:1
IP:3.3.3.3->primaryMask:255.255.255.0
subvlanbeginid100subvlanendid100
-----
supervlanvid2
routeArp:disable
interVlanArp:disable
innerVlanArp:disable
VLAN_IF:2
IP:4.4.4.4->primary Mask:255.255.255.0
subvlanbeginid200 subvlanendid200
-----
supervlanvid3
routeArp:disable
interVlanArp:disable
innerVlanArp:disable
Admin\interface#
```


Result Description

Parameter	Description
super vlan vid	The Super VLAN ID.
routeArp	The state of the RouteARP proxy switch.
interVlanArp	The state of the inter-VLAN ARP proxy switch.
innerVlanArp	The state of the intra-VLAN ARP proxy switch.
VLAN_IF	The VLANIF ID.
IP	The IP address of the Super VLAN.
sub vlan begin id	The starting Sub VLAN.
sub vlan end id	The ending Sub VLAN.

25.26 Binding the Sub VLAN to the Super VLAN

Command Function

You can use this command to configure the binding relationship between Super VLAN and Sub VLAN.

Command Format

```
set super-vlan <svid> add sub-vlan <vid_begin> { <vid_end> } *1
```

Parameter Description

Parameter	Description	Attribute
super_vlan <1-4095>	The Super VLAN ID.	Mandatory
psub-vlan <vid_begin>	The starting value of the Sub VLAN ID range. The value ranges from 1 to 4085.	Mandatory
{ <vid_end> } *1	The ending value of the Sub VLAN ID range. The value ranges from 1 to 4085.	Optional

Command Example

Bind Sub VLAN with ID 100 and 105 to Super VLAN with ID 1.

```
Admin\interface#set super-vlan 1 add sub-vlan 100 105
Admin\interface#
```


25.27 Deleting the Designated Sub VLAN from the Super VLAN

Command Function

You can use this command to delete the Sub VLAN that is bound to Super VLAN.

Command Format

```
set super-vlan <svid> delete sub-vlan <vid_begin> { <vid_end> } *1
```

Parameter Description

Parameter	Description	Attribute
super_vlan <1-4095>	The Super VLAN ID.	Mandatory
sub-vlan <vid_begin>	The starting value of the Sub VLAN ID range that needs to be deleted.	Mandatory
{ <vid_end> } *1	The ending value of the Sub VLAN ID range that needs to be deleted.	Mandatory

Command Example

Delete the Sub VLANs that are bound to Super VLAN 1, whose ID range from 100 to 105.

```
Admin\interface#set super-vlan 1 delete sub-vlan 100 105
Admin\interface#
```

25.28 Configuring the MTU Value of the Designated Super VLAN

Command Function

You can use this command to configure the MTU value of the designated Super VLAN.

Command Format

```
set vlan <1-4095> [ ipv4 | ipv6 ] mtu <68-1500>
```


Parameter Description

Parameter	Description	Attribute
vlan <1-4095>	The Super VLAN ID.	Mandatory
[ipv4 ipv6]	The IP type.	Mandatory
mtu <68-1500>	The maximum transmission unit. The value ranges from 68 to 1500; unit: byte.	Mandatory

Command Example

Set the MTU value of the designated Super VLAN to 1500.

```
Admin\interface#set vlan 1 ipv4 mtu 1500
Admin\interface#
```

25.29 Configuring the IP address of the Super VLAN

Command Function

You can use this command to configure the IP address for the designated Super VLAN.

Command Format

```
set vlan <1-4095> ipv4 <A.B.C.D> mask <A.B.C.D> { [ secondary] } * 1
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4095>	The Super VLAN ID.	Mandatory
ipv4 <A.B.C.D>	The IP address.	Mandatory
mask <A.B.C.D>	The subnet mask.	Mandatory
{ [secondary] } * 1	The standby IP address.	Optional

Command Example

Set IP address to 3.3.3.3, subnet mask to 255.255.255.0, and no secondary IP address for Super VLAN 1.


```
Admin\interface#set vlan 1 ipv4 3.3.3.3 mask 255.255.255.0
Admin\interface#
```

25.30 Deleting the IP Address of the VLAN

Command Function

You can use this command to delete the IP address that has been configured in the VLAN.

Command Format

```
no vlan <1-4095> ipv4 [ <A.B.C.D> | all]
```

Parameter Description

Parameter	Description	Attribute
vlan <1-4095>	The Super VLAN ID.	Mandatory
ipv4 <A.B.C.D> [<A.B.C.D> all]	Delete the designated or all the IP addresses.	Mandatory

Command Example

Delete the IP address of Super VLAN 1.

```
Admin\interface#no vlan 1 ipv4 3.3.3.3
Admin\interface#
```

25.31 Configuring a Downlink Sub VLAN

Command Function

You can use this command to create a downlink SubVLAN.

Command Format

```
set sub-vlan <1-4085> downlink
```

Parameter Description

Parameter	Description	Attribute
sub-vlan <1-4085>	The SubVLAN ID.	Mandatory

Command Example

Create a SubVLAN whose ID is 100.

```
Admin\interface#set sub-vlan 100 downlink
Admin\interface#
```

25.32 Deleting a Downlink Sub VLAN

Command Function

You can use this command to delete a downlink SubVLAN.

Command Format

```
no sub-vlan <1-4085> downlink
```

Parameter Description

Parameter	Description	Attribute
sub-vlan <1-4085>	The Sub VLAN ID that needs to be deleted.	Mandatory

Command Example

Delete Sub VLAN 100.

```
Admin\interface#no sub-vlan 100 downlink
Admin\interface#
```

25.33 Configuring the ARP Proxy Switch of Super VLAN

Command Function

You can use this command to configure the ARP proxy switch of the designated Super VLAN.

Command Format

```
set arp-switch <supervlan_id> route[ enable|disable] inner-subvlan[ enable|
disable] among-subvlan[ enable|disable]
```


Parameter Description

Parameter	Description	Attribute
arp-switch <supervlan_id>	The Super VLAN ID whose ARP proxy switch needs to be configured.	Mandatory
route[enable disable]	Enable or disable the route ARP proxy function.	Mandatory
inner-subvlan[enable disable]	Enable or disable the intra-Sub VLAN ARP proxy function.	Mandatory
among-subvlan[enable disable]	Enable or disable the inter-Sub VLAN ARP proxy function.	Mandatory

Command Example

Configure the ARP proxy function of Super VLAN 1. Enable the route ARP, intra-Sub VLAN ARP and inter-Sub VLAN ARP functions.

```
Admin\interface#set super-vlan 1 route enable inner-subvlan enable among-subvlan enable
Admin\interface#
```


- ☒ Adding a Command Line Account
- ☒ Configuring Command Line Accounts as Advanced Users
- ☒ Configuring Command Line Accounts as Normal Users
- ☒ Modifying First Login Password of the Command Line Account
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- ☒ Viewing the RADIUS Server Information

26.1 Adding a Command Line Account

Command Function

You can use this command to add a command line account. The default value is normal account.

Command Format

```
user add <username> login-password <login_password>
```

Parameter Description

Parameter	Description	Attribute
<username>	The username.	Mandatory
login_password	The first login password.	Mandatory

Command Example

Add a command line account named ABCD, and password is 11111111.

```
Admin\aaa#user add ABCD login-password 11111111
Successfully added user ABCD as a NORMAL_USER ,
To change user role use "user role" command .
Admin\aaa#user list
UserName ----- User_role ----- User_level -----
GEPON             ADMIN_USER             15
ABCD              NORMAL_USER             15
Total 2 users in system.
Admin\aaa#
```

26.2 Configuring Command Line Accounts as Advanced Users

Command Function

You can use this command to configure the level of users with command line accounts as advanced users.

Command Format

```
user role <username> ADMIN enable-password <enable_password>
```

Parameter Description

Parameter	Description	Attribute
<username>	The username.	Mandatory
enable_password	The secondary login password.	Mandatory

Command Example

Configure a user whose account is ABCD as an advanced user, and the secondary login password is 11111111.

```
Admin\aaa#user role ABCD ADMIN enable-password 11111111
Successfully change user ABCD to ADMIN mode.
Admin\aaa#user list
UserName  ----- User_role  ----- User_level  -----
GEPON          ADMIN_USER          15
ABCD           ADMIN_USER          15
Total 2 users in system.
Admin\aaa#
```

26.3 Configuring Command Line Accounts as Normal Users

Command Function

You can use this command to configure the level of users with command line accounts as normal users.

Command Format

```
user role <username> NORMAL
```

Parameter Description

Parameter	Description	Attribute
<username>	The username.	Mandatory

Command Example

Configure a user whose account is ABCD as a normal user.

```
Admin\aaa#user role ABCD NORMAL
Successfully change user ABCD to NORMAL mode.
Admin\aaa#user list
UserName ----- User_role ----- User_level -----
GEPON             ADMIN_USER             15
ABCD              NORMAL_USER             15
Total 2 users in system.
Admin\aaa#
```

26.4 Modifying First Login Password of the Command Line Account

Command Function

You can use this command to modify the first login password of the command line account.

Command Format

```
user login-password <username> <old_password>
```

Parameter Description

Parameter	Description	Attribute
<username>	The username.	Mandatory
<old_password>	The old password.	Mandatory

Command Example

Modify the first password of the account ABCD from 11111111 (old password) to 22222222.

```
Admin\aaa#user login-password ABCD 11111111
Input new login password for user ABCD please.
New Password:*****
Confirm Password:*****
Successfully changed password!.
Admin\aaa#
```


26.5 Modifying Secondary Login Password of the Command Line Account

Command Function

You can use this command to modify secondary login password for the command line account.

Command Format

```
user enable-password <username>
```

Parameter Description

Parameter	Description	Attribute
<username>	The user name.	Mandatory

Command Example

Modify the secondary password of the account ABCD into 22222222.

```
Admin\aaa#user enable-password ABCD 22222222
Input new login password for user ABCD please.
New Password:*****
Confirm Password:*****
Successfully changed password!.
Admin\aaa#
```

26.6 Modifying the Command Line Account Level

Command Function

You can use this command to modify the command line account level.

Command Format

```
user <username> level <0-15>
```


Parameter Description

Parameter	Description	Attribute
<username>	The username.	Mandatory
<0-15>	The account level. The value ranges from 0 to 15.	Mandatory

Command Example

Modify the account level for ABCD into 1.

```
Admin\aaa#user ABCD level 1
Admin\aaa#
```

26.7 Deleting a Command Line Account

Command Function

Delete a command line account.

Command Format

```
user delete <username>
```

Parameter Description

Parameter	Description	Attribute
<username>	The user name that needs to be deleted.	Mandatory

Command Example

Delete an account named ABCD.

```
Admin\aaa#user delete ABCD
Successfully delete user ABCD .
Admin\aaa#
```


26.8 Viewing a Command Line Account

Command Function

You can use this command to view the current configuration information of the command line account on the equipment.

Command Format

```
user list
```

Parameter Description

None

Command Example

View the configuration information of a command line account.

```
Admin\aaa#user list
UserName ----- User_role ----- User_level -----
GEPON             ADMIN_USER         15
ABCD              ADMIN_USER         1
Total 2 users in system.
Admin\aaa#
```

26.9 Configuring the Authentication Mode

Command Function

You can use this command to configure the authentication mode.

Command Format

```
aaa authentication-mode[ local | radius | tacacs]
```

Parameter Description

Parameter	Description	Attribute
local	The local authentication mode.	Optional
radius	The RADIUS authentication mode.	Optional
tacacs	The tacacs authentication mode.	Optional

Command Example

Set the authentication mode.

```
Admin\aaa#aaa authentication-mode tacacs
Admin\aaa#
```

26.10 Configuring the Authorization Mode

Command Function

You can use this command to configure the user authorization mode.

Command Format

```
aaa authorization-mode[ none | tacacs]
```

Parameter Description

Parameter	Description	Attribute
none	No authorization mode.	Optional
tacacs	The authorization mode is tacacs.	Optional

Command Example

Set the authorization mode.

```
Admin\aaa#aaa authorization-mode tacacs
Admin\aaa#
```

26.11 Configuring the Command Line Authorization Mode

Command Function

You can use this command to set the command line authorization mode.

Command Format

```
aaa authorization-mode command[ none | tacacs]
```


Parameter Description

Parameter	Description	Attribute
none	No command line authorization mode.	Optional
tacacs	The command line authorization mode is tacacs.	Optional

Command Example

Set the command line authorization mode to tacacs.

```
Admin\aaa#aaa authorization-mode command tacacs
Admin\aaa#
```

26.12 Configuring the Accounting Mode

Command Function

You can use this command to set the accounting mode.

Command Format

```
aaa accounting-mode[ none | tacacs]
```

Parameter Description

Parameter	Description	Attribute
none	No accounting mode.	Optional
tacacs	The accounting mode is tacacs.	Optional

Command Example

Set the accounting mode to Tacacs.

```
Admin\aaa#aaa accounting-mode tacacs
Admin\aaa#
```


26.13 Configuring the Command Line Accounting Mode

Command Function

You can use this command to set the command line accounting mode.

Command Format

```
aaa accounting-mode command[ none | tacacs]
```

Parameter Description

Parameter	Description	Attribute
none	No accounting mode.	Optional
tacacs	The accounting mode is tacacs.	Optional

Command Example

Set the command line accounting mode.

```
Admin\aaa#aaa accounting-mode command tacacs  
Admin\aaa#
```

26.14 Configuring the Tacacs Server Address

Command Function

You can use this command to configure the Tacacs server address and access information.

Command Format

```
tacacs-server host <A.B.C.D>[ key|port|timeout] <value>
```


Parameter Description

Parameter	Description	Attribute
host <A.B.C.D>	The destination IP address, which identifies the destination IP address of the IP messages.	Mandatory
key	The encrypted key for interacting with the server. The length ranges from 1 to 255 characters.	Mandatory
port	The port for interacting with the server. The value ranges from 1 to 65535.	Mandatory
timeout	The timeout period for connecting to the server. The value ranges from 3 to 10 seconds.	Mandatory
value	Input the value of the above parameters.	Mandatory

Command Example

Configure the Tacacs server. The address is 10.190.44.156, and the key is fiberhome.

```
Admin\aaa#tacacs-server host 10.190.44.156 key fiberhome
Admin\aaa#
```

26.15 Deleting the Tacacs Server

Command Function

You can use this command to delete the Tacacs server configuration.

Command Format

```
no tacacs-server host <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
Host <A.B.C.D>	The server IP address that needs to be deleted.	Mandatory

Command Example

Delete the Tacacs server whose IP address is 10.190.44.156.

```
Admin\aaa#no tacacs-server host 10.190.44.156
```



```
Admin\aaa#
```

26.16 Viewing the Tacacs Server Information

Command Function

You can use this command to view the configured Tacacs server information.

Command Format

```
show tacacs-server info
```

Description

None

Command Example

View the Tacacs server information.

```
Admin\aaa#show tacacs-server info
first server information:
  ip address: 0.0.0.0
  ip key: 000
  ip port: 49
  ip timeout: 5 seconds
second server information:
  ip address: 0.0.0.0
  ip key: 000
  ip port: 49
  ip timeout: 5 seconds
authentication mode: tacacs
authorization mode: disable
authorization command mode: none
accounting mode: none
accounting command mode: none
Admin\aaa#
```

Result Description

Parameter	Description
ip address	The address of the destination network.
ip key	The interaction key.

Parameter	Description
ip port	The server port.
ip timeout	The timeout period.
authentication mode	The authentication mode.
authorization mode	The authorization mode.
authorization command mode	The authorization command line mode.
accounting mode	The accounting mode.
accounting command mode	The accounting command line mode.

26.17 Configuring the RADIUS Server Information

Command Function

You can use this command to configure the RADIUS server information, which includes the IP address, key, port number, timeout period, and retransmission times.

Command Format

```
radius server ip-address <A.B.C.D> [ key|auth-port|acct-port|timeout |  
retransmit] <value>
```

Parameter Description

Parameter	Description	Attribute
ip-address <A.B.C.D>	The destination IP address, which identifies the destination IP address of the IP messages.	Mandatory
key	The encrypted key for interacting with the server.	Mandatory
auth-port	The authorized port for interacting with the server.	Mandatory
acct-port	The account port for interacting with the server.	Mandatory
timeout	The timeout period for connecting to the server.	Mandatory
retransmit	The retransmission times.	Mandatory
value	<ul style="list-style-type: none">◆ Key range: 0 to 255 characters◆ auth-port range: 1 to 65535.◆ acct-port range: 1 to 65535.◆ Timeout range: 3 to 10s.◆ Retransmit range: 3 to 10s.	Mandatory

Command Example

Configure the Radius server information. The IP address is 10.490.44.156, and the key is fiberhome.

```
Admin\aaa#radius server ip-address 10.490.44.156 key fiberhome
Admin\aaa#
```

26.18 Deleting the RADIUS Server

Command Function

You can use this command to delete the RADIUS server configuration.

Command Format

```
no radius-server host <A.B.C.D>
```

Parameter Description

Parameter	Description	Attribute
host <A.B.C.D>	The server IP address that needs to be deleted.	Mandatory

Command Example

Delete the RADIUS server configuration.

```
Admin\aaa#no radius-server host 10.190.44.156
Admin\aaa#
```

26.19 Viewing the RADIUS Server Information

Command Function

You can use this command to view the RADIUS server information.

Command Format

```
show radius
```


Parameter Description

None

Command Example

View the RADIUS server information.

```
Admin\aaa#show radius  
radius = disable  
first radius server information:  
  ip address: 10.190.44.195  
  ip key: wr1l23  
  ip authen_port: 65535  
  ip account_port: 65535  
  ip timeout: 10 seconds  
  ip retransmit: 10 counts
```








```
Admin\aaa#
```

Result Description

Parameter	Description
radius	The RADIUS server status: enable or disable.
ip address	The address of the destination network.
ip key	The encrypted key.
ip authen_port	The authenticated port.
ip account_port	The accounting port.
ip timeout	The timeout period.
ip retransmit	The retransmission times.

27 admin\upgrade Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\upgrade directory.

-  Upgrading Line Cards in a Batch Manner
-  Upgrading the ONUs in a Batch Manner
-  Upgrading the ONU automatically
-  Starting the ONU Automatic Upgrade Task
-  Disabling the Automatic Upgrade of the ONU
-  Viewing the ONU Automatic Upgrade Configuration
-  Checking the ONU Automatic Upgrade Log

27.1 Upgrading Line Cards in a Batch Manner

Command Function

You can use this command to update line cards in a batch manner.

Command Format

```
upgrade xdu <ftp_serv_ip> <username> <password> <filename> <slotlist>
```

Parameter Description

Parameter	Description	Attribute
<ftp_serv_ip>	The IP address of the FTP server.	Mandatory
<username>	The login username of the FTP server.	Mandatory
<password>	The login password of the FTP server.	Mandatory
<filename>	The name of upgrade file.	Mandatory
<slotlist>	The slot number of the line card to be upgraded.	Mandatory

Command Example

Upgrade the line card in Slot 1. The IP address of the FTP server is 10.33.150.2, login username is 1, password is 1, and name of upgrade file is ECXB_HEBIN.bin.

```
Admin\upgrade#upgrade xdu 10.33.150.2 1 1 ECXB_HEBIN.bin 1
upgrade success
Admin\upgrade#
```

27.2 Upgrading the ONUs in a Batch Manner

Command Function

You can use this command to update the ONUs in a batch manner.

Command Format

```
upgrade[ onu_cpu|onu_firmware|iad] slot <slotno> pon <ponno> onu <onulist>
<ftp_serv_ip> <username> <pass> <filename>
```


Parameter Description

Parameter	Description	Attribute
[onu_cpu onu_firmware iad]	The type of the upgrade file. ◆ onu_cpu: the CPU file of the ONU. ◆ onu_firmware: the ONU firmware. ◆ iad: the IAD file of the ONU.	Mandatory
slot <slotno>	The slot number of the line card to which the to-be-upgraded ONU connects.	Mandatory
pon <ponno>	The PON port number to which the to-be-graded ONU connects.	Mandatory
onu <onulist>	The authorization number of the to-be-graded ONU.	Mandatory
<ftp_serv_ip>	The IP address of the FTP server.	Mandatory
<username>	The login username of the FTP server.	Mandatory
<pass>	The login password of the FTP server.	Mandatory
<filename>	The name of upgrade file.	Mandatory

Command Example

Upgrade the ONU_CPU file. The slot number of the line card corresponding to the ONU is 1; the PON port number is 1; the IP address of the FTP server is 10.92.20.223; the username and password for the FTP server are both 1; and the FTP filename is gcxb.gz.

```
Admin\upgrade#upgrade onu_cpu slot 1 pon 1 onu 1 10.92.20.223 1 1 gcxb.gz
ldu_upgrade_batch >>>> now
upgrade success
Admin\upgrade#
```

27.3 Upgrading the ONU automatically

Command Function

You can use this command to configure the automatic upgrade of the ONU.

Command Format

```
set enable_onu_auto_upgrade_cfg slot <slotno> ftpip[ ipv4|ipv6|ipv4z|
ipv6z|dns] <ftp_serv> username <name> password <psw> {[ begin_time] <hh:mm>
[ end_time] <hh:mm>} *1 {[ day] <days>} *1 {[ mode] [ immediate|no_reboot|delay]
[ reboot_time] <hh:mm>} *1 {[ onutype] <onu_type_str> filename <file_name>} *6
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the line card to which the to-be-upgraded ONU connects.	Mandatory
ftpip[ipv4 ipv6 ipv4z ipv6z dns]	The IP address of the FTP server. Only IPv4 is supported temporarily.	Mandatory
<ftp_serv>	The IP address of the FTP server.	Mandatory
username <name>	The login username of the FTP server.	Mandatory
password <psw>	The login password of the FTP server.	Mandatory
[begin_time] <hh:mm>	The starting time of the upgrade.	Optional
[end_time] <hh:mm>	The ending time of the upgrade.	Optional
[day] <days>	The total days for upgrade.	Optional
[mode] [immediate no_ reboot delay]	The rebooting mode of the ONU. ◆ immediate: Reboot immediately. ◆ no_reboot: Do not reboot. ◆ delay: Reboot later.	Mandatory
[reboot_time] <hh:mm>	The time of rebooting the ONU.	Mandatory
[onutype] <onu_type_ str>	The type of the to-be-upgraded ONU.	Mandatory
filename <file_name>	The name of upgrade file.	Mandatory

Command Example

Upgrade the AN5006-04 that is connected to the line card in Slot 1. The server IP address of the FTP server is 10.33.150.2. The login username and password are both 1, the starting time of the upgrade is 00:00, the ending time is 12:00. The upgrade lasts for 5 days. Reboot immediately after upgrade is complete. The reboot starts at 03:00. The name of upgrade file is AN5006-04.bin.

```
Admin\upgrade#set enable_onu_auto_upgrade_cfg slot 1 ftpip ipv4 10.33.150.2 username
1 password 1 begin_time 0 end_time 12 day 5 mode immediate reboot_time 3 onutype
5006-04 filename AN5006-04.bin
enable onu auto upgrade cfg ok!
Admin\upgrade#
```


27.4 Starting the ONU Automatic Upgrade Task

Command Function

You can use this command to start the ONU automatic upgrade task.

Command Format

```
set apply_auto_upgrade_cfg
```

Parameter Description

None

Command Example

Start the ONU automatic upgrade task.

```
Admin\upgrade#set apply_auto_upgrade_cfg
apply onu auto upgrade cfg ok!
Admin\upgrade#
```

27.5 Disabling the Automatic Upgrade of the ONU

Command Function

You can use this command to disable the ONU automatic upgrade task.

Command Format

```
set disable_onu_auto_upgrade_cfg slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the line card to which the to-be-upgraded ONU connects.	Mandatory

Command Example

Disabling the automatic upgrade task of the ONU which is connected to the line card in Slot 1.


```
Admin\upgrade#set disable_onu_auto_upgrade_cfg slot 1
disable onu auto upgrade cfg ok!
Admin\upgrade#
```

27.6 Viewing the ONU Automatic Upgrade Configuration

Command Function

You can use this command to view the automatic upgrade configuration of the ONU.

Command Format

```
show cfg_onu_auto_upgrade slot <slotno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number of the line card to which the to-be-upgraded ONU connects.	Mandatory

Command Example

View the automatic upgrade configuration of the ONU which is connected to the line card in Slot 1.

```
Admin\upgrade#show cfg_onu_auto_upgrade slot 1
----- SLOt[ 1] enable -----
FTP SVR IP = 10.33.150.2
FTP SVR USR = 1
FTP SVR RWD = 1
Start Time = 00:00:00
End Time = 12:00:00
Upgrade Days = 5
Reboot Mode = Reboot immediately.
Reboot Time = 03:00:00
Upgrade Files: Item = 1
i = 1, ONU type = 5006-04, Filename: AN5006-04.bin
Admin\upgrade#
```


Result Description

Parameter	Description
FTP SVR IP	The IP address of the FTP server.
FTP SVR USR	The login username of the FTP server.
FTP SVR RWD	The login password of the FTP server.
Start Time	The starting time of the upgrade.
End Time	The ending time of the upgrade.
Upgrade Days	The total days for upgrade.
Reboot Mode	The rebooting mode of the ONU.
Reboot Time	The time of rebooting the ONU.
Upgrade Files	The file used for upgrade.
ONU type	The ONU type.
Filename	The name of upgrade file.

27.7 Checking the ONU Automatic Upgrade Log

Command Function

You can use this command to view the automatic upgrade log of the ONU.

Command Format

```
show log_onu_auto_upgrade
```

Description

None

Command Example







View the ONU automatic upgrade log.

```
Admin\upgrade# show log_onu_auto_upgrade
----- ONU auto-upgrade log, ITEM = 515 -----
      TIME          SLOT PON ONU          EVENT          TYPE          FILE NAME
-----
1  2015-12-23 16:15:36  1    1    2  upgr success          Unkno AN5006-04A6G_08.bin
2  2015-12-23 16:14:32  1    0    0  file down to linecard success CPU  AN5006-04A6G_08.bin
3  2015-12-23 16:09:23  1    1    2  upgr success          Unkno AN5006-04A6G_08.bin
4  2015-12-23 16:08:19  1    0    0  file down to linecard success CPU  AN5006-04A6G_08.bin
5  2015-12-23 16:05:13  1    0    0  file down success
----- End of onu auto-upgrade log(5) -----
Admin\upgrade#
```


Result Description

Parameter	Parameter Description
TIME	The time.
SLOT	The slot number of the line card.
PON	The PON port number.
ONU	The ONU authorization number.
EVENT	The event.
TYPE	The ONU type.
FILE NAME	The name of the upgrade file.

This chapter introduces functions, formats, parameters and examples of commands run in the admin\maintenance\mirror directory.

-  Configuring a Dual-Uplink Protection Group
-  Deleting a Dual-Uplink Protection Group
-  Configuring the Link Recovery Mode for the Dual-Uplink Protection Group
-  Adding Master and Slave Ports for the Dual-Uplink Protection Group
-  View the Information of the Dual-Uplink Protection Group
-  Configuring the Uplink Card Protection Mode

28.1 Configuring a Dual-Uplink Protection Group

Command Function

You can use this command to configure a dual-uplink protection group.

Command Format

```
create upbak_port <id>
```

Parameter Description

Parameter	Description	Attribute
upbak_port <id>	The dual-uplink number. The value ranges from 1 to 6.	Mandatory

Command Example

Create a dual-uplink protection group whose ID is 1.

```
Admin\device\protect#create upbak_port 1  
Admin\device\protect#
```

28.2 Deleting a Dual-Uplink Protection Group

Command Function

You can use this command to delete the dual-uplink protection group.

Command Format

```
no upbak_port <id>
```

Parameter Description

Parameter	Description	Attribute
upbak_port <id>	The dual-uplink number. The value ranges from 1 to 6.	Mandatory

Command Example

Delete a dual-uplink protection group whose ID is 1.

```
Admin\device\protect#no upbak_port 1
```


Admin\device\protect#

28.3 Configuring the Link Recovery Mode for the Dual-Uplink Protection Group

Command Function

You can use this command to configure the link recovery mode for the dual-uplink protection group.

Command Format

```
set upbak_group linkrecovermode[ autorecover|nonautorecover]
```

Parameter Description

Parameter	Description	Attribute
linkrecovermode [autorecover nonautorecover]	Configure the link recovery mode for the dual-uplink protection group. <ul style="list-style-type: none"> ◆ autorecover: automatic recovery of the link mode. In this mode, when the working link recovers from a fault, the system will automatically return to the working link. ◆ nonautorecover: non-automatic recovery of the link mode. 	Mandatory

Command Example

Configure the link recovery mode for the dual-uplink protection group in the automatic recovery of the link mode.

```
Admin\device\protect#set upbak_group linkrecovermode autorecover
Admin\device\protect#
```

28.4 Adding Master and Slave Ports for the Dual-Uplink Protection Group

Command Function

You can use this command to add master and slave ports for the dual-uplink protection group.

Command Format

```
add upbak_port <id> master <slotno> <portno> slave <slotno> <portno>
```

Parameter Description

Parameter	Description	Attribute
upbak_port <id>	The number of the dual-uplink protection group. The value ranges from 1 to 6.	Mandatory
master <slotno> <portno>	The slot number and port number of the master port.	Mandatory
slave <slotno> <portno>	The slot number and port number of the slave port.	Mandatory

Command Example

Configure Port 20:1 as the master port and Port 20:2 as the slave port for the dual-uplink protection group.

```
Admin\device\protect#add upbak_port 1 master 20 1 slave 20 2
Admin\device\protect#
```

28.5 View the Information of the Dual-Uplink Protection Group

Command Function

You can use this command to view the information of the dual-uplink protection group.

Command Format

```
show upbak_group[ all | <trunkid>]
```

Parameter Description

Parameter	Description	Attribute
[all <trunkid>]	The dual-uplink protection group. <ul style="list-style-type: none">◆ all: all the dual-uplink protection groups.◆ trunkid: the dual-uplink protection group of designated ID.	Mandatory

Command Example

View the information of the dual-uplink protection group whose ID is 1.

```
Admin\device\protect#show upbak_group 1
upbak 1 info :
portId(option):20:3 20:4 .
master_port 20:3,
trunk_mode : TRUNK STATIC
trunk_psc : UNKNOW
auto_negotiation : ENABLE
duplex : HALF
flow_switch : DISABLE
mac_learning_switch : ENABLE
pri_enable : DISABLE
priority 0 :
speed 0 :
wan_lan_mode 1 :
work_mode 0 :
Admin\device\protect#
```

Result Description

Parameter	Description
portId(option)	The port number of the dual-uplink protection group.
master_port	The master port number.
trunk_mode	The aggregation mode.
trunk_psc	The reference factor.
auto_negotiation	The auto-negotiation mode.
duplex	The duplex mode.
flow_switch	Enable the flow control.
mac_learning_switch	The MAC address learning switch.
pri_enable	Enable or disable the priority.
priority	The priority value.
speed	The port rate.
wan_lan_mode	The WAN or LAN mode of the port. ◆ 0: the WAN mode. ◆ 1: the LAN mode.
work_mode	The aggregation mode. ◆ 0: manual aggregation mode. ◆ 1: LACP mode.

28.6 Configuring the Uplink Card Protection Mode

Command Function

You can use this command to configure the protection mode of uplink cards.

Command Format

```
set uplink card_protect_mode[ loads_balance|master_standby|disable]
```

Parameter Description

Parameter	Description	Attribute
[loads_balance master_standby disable]	The protection switch and mode for uplink cards include: <ul style="list-style-type: none">◆ loads_balance: the load balancing mode.◆ master_standby: the active/standby mode.◆ disable: Disable the protection mechanism for the uplink cards.	Mandatory

Command Example














Set the protection mode for uplink cards to master_standby mode.

```
Admin\device\protect#set uplink card_protect_mode master_standby
Admin\device\protect#
```


29

admin\vlan Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\vlan directory.

-  Creating a Management VLAN
-  Creating the Service VLAN Index
-  Configuring the Service VLAN Name and Type
-  Configuring the Service VLAN Range
-  Deleting the Designated Service VLAN
-  Viewing the Designated Service VLAN Information
-  Viewing all Service VLANs
-  Adding the VLAN to the Port
-  Deleting the VLAN of the Port
-  Adding VLANs at the Uplink Port
-  Deleting the Uplink Port VLAN
-  Viewing VLAN Information of the Port
-  Viewing the VLAN Information of the Aggregation Group or Dual Uplink

29.1 Creating a Management VLAN

Command Function

You can use this command to create a management VLAN.

Command Format

```
set manage_vlan <1-4085> <name> { innervlan <0-4085> } * 1
```

Parameter Description

Parameter	Description	Attribute
<1-4085>	The VLAN ID of the management VLAN. The value ranges from 1 to 4085.	Mandatory
<name>	The name of the management VLAN.	Mandatory
{ innervlan <0-4085> } * 1	The inner VLAN ID of the management VLAN. The value ranges from 1 to 4085.	Optional

Command Example

Configure a management VLAN named Mgname, inner VLAN ID 1000 and outer VLAN ID 2000.

```
Admin\vlan#set manage_vlan 2000 Mgname innervlan 1000
Admin\vlan#
```

29.2 Creating the Service VLAN Index

Command Function

You can use this command to create the service VLAN index.

Command Format

```
create service_vlan <id>
```

Parameter Description

Parameter	Description	Attribute
service_vlan <id>	The service VLAN ID. The value ranges from 101 to 4195.	Mandatory

Command Example

Create a service VLAN whose ID is 101.

```
Admin\vlan#create service_vlan 101
Admin\vlan#
```

29.3 Configuring the Service VLAN Name and Type

Command Function

You can use this command to configure the name and type for service VLAN.

Command Format

```
set service_vlan <id> <name> type[ data|iptv|ngn|voip|void|cnc|system|
uplinksub]
```

Parameter Description

Parameter	Description	Attribute
<id>	The service VLAN ID. The value ranges from 101 to 4195.	Mandatory
<name>	The service VLAN name.	Mandatory
type[data iptv ngn voip void cnc system uplinksub]	The service VLAN type.	Mandatory

Command Example

Set the name for the service VLAN whose ID is 101 to fh, and the service VLAN type to data.

```
Admin\vlan#set service_vlan 101 fh type data
Admin\vlan#
```

29.4 Configuring the Service VLAN Range

Command Function

You can use this command to configure the service VLAN range.

Command Format

```
set service_vlan <vid> vlan_begin <1-4085> vlan_end <1-4085>
```

Parameter Description

Parameter	Description	Attribute
service_vlan <vid>	The service VLAN ID. The value ranges from 101 to 4195.	Mandatory
vlan_begin <1-4085>	The starting VLAN ID. The value ranges from 1 to 4085.	Mandatory
vlan_end <1-4085>	The ending VLAN ID The value ranges from 1 to 4085.	Mandatory

Command Example

Set the range of the service VLAN whose ID is 101 to 100 (starting VLAN ID) to 200 (ending VLAN ID).

```
Admin\vlan#set service_vlan 101 vlan_begin 100 vlan_end 200
Admin\vlan#
```

29.5 Deleting the Designated Service VLAN

Command Function

You can use this command to delete the designated service VLAN.

Command Format

```
no service_vlan [ id|name] <value>
```

Parameter Description

Parameter	Description	Attribute
[id name]	The designated service VLAN ID or VLAN name.	Mandatory
<value>	The service VLAN ID or name.	Mandatory

Command Example

Delete the service VLAN whose ID is 101.

```
Admin\vlan#no service_vlan id 101
Admin\vlan#
```


29.6 Viewing the Designated Service VLAN Information

Command Function

You can use this command to view the designated service VLAN information.

Command Format

```
show service_vlan[ name|vlan] <val>
```

Parameter Description

Parameter	Description	Attribute
[name vlan]	<ul style="list-style-type: none"> ◆ name: the name of the service VLAN. ◆ vlan: the ID of the service VLAN. 	Mandatory
<val>	The name or ID of the service VLAN.	Mandatory

Command Example

View the information of the service VLAN named fh.

```
Admin\vlan#show service_vlan name fh
servicevlan 101 :
name : fh,    type : data
vlan range:  100 ~ 200 #####end.
Admin\vlan#
```

Result Description

Parameter	Description
servicevlan	The service VLAN ID.
name	The service VLAN name.
type	The service VLAN type.
vlan range	The service VLAN range.

29.7 Viewing all Service VLANs

Command Function

You can use this command to view all the service VLAN information.

Command Format

```
show service_vlan all
```

Parameter Description

None

Command Example

View all the service VLAN information.

```
Admin\vlan#show service_vlan all
servicevlan 101 :
name : fh,    type : data
vlan range:  100 ~ 200 #####end.
servicevlan 102 :
name : ngn,   type : ngn
vlan range:  400 ~ 500 #####end.
Admin\vlan#
```

Result Description

Parameter	Description
servicevlan	The service VLAN ID.
name	The service VLAN name.
type	The service VLAN type.
vlan range	The service VLAN range.

29.8 Adding the VLAN to the Port

Command Function

You can use this command to add the VLAN to the port.

Command Format

```
add vlan vlan_begin <value> vlan_end<value> [ untag|tag] [ trunk|upbak|
allslot] <portno>
```


Parameter Description

Parameter	Description	Attribute
vlan_begin <value>	The starting VLAN ID. The value ranges from 1 to 4085.	Mandatory
vlan_end <value>	The ending VLAN ID The value ranges from 1 to 4085.	Mandatory
[untag tag]	The mode for adding service VLAN. <ul style="list-style-type: none"> ◆ untag: strip the tags. ◆ tag: keep the tags. 	Mandatory
[trunk upbak allslot]	<ul style="list-style-type: none"> ◆ trunk: the aggregation group. ◆ upbak: the dual uplinking. ◆ allslot: All slots. 	Mandatory
<portno>	<ul style="list-style-type: none"> ◆ When the type is allslot, the value is 0. ◆ When the type is trunk or upbak, the value ranges from 1 to 6. 	Mandatory

Command Example

Add VLAN 10 to 20 to all the slots in the tag mode.

```
Admin\vlan#add vlan vlan_begin 10 vlan_end 20 tag allslot 0
Admin\vlan#
```

29.9 Deleting the VLAN of the Port

Command Function

You can use this command to delete the VLAN of the port.

Command Format

```
no vlan vlan_begin <1-4085> vlan_end <1-4085> [ trunk|upbak|allslot|portall]
<portno>
```

Parameter Description

Parameter	Description	Attribute
vlan_begin <1-4085>	The starting VLAN ID. The value ranges from 1 to 4085.	Mandatory
vlan_end <1-4085>	The ending VLAN ID The value ranges from 1 to 4085.	Mandatory

Parameter	Description	Attribute
[trunk upbak allslot portall]	<ul style="list-style-type: none"> ◆ trunk: the aggregation group. ◆ upbak: the dual uplinking. ◆ allslot: All slots. ◆ portall: All ports. 	Mandatory
<portno>	<ul style="list-style-type: none"> ◆ When the type is allslot, the value is 0. ◆ When the type is trunk or upbak, the value ranges from 1 to 6. 	Mandatory

Command Example

Delete the VLAN from the Trunk group whose ID is 6. The starting VLAN ID is 30, and the ending VLAN ID is 35.

```
Admin\vlan#no vlan vlan_begin 30 vlan_end 35 trunk 6
Admin\vlan#
```

29.10 Adding VLANs at the Uplink Port

Command Function

You can use this command to add VLANs at the uplink port.

Command Format

```
add vlan vlan_begin <1-4085> vlan_end <1-4085> [ untag|tag] uplink slot
<slotno> port <portno>
```

Parameter Description

Parameter	Description	Attribute
vlan_begin <1-4085>	The starting VLAN ID. The value ranges from 1 to 4085.	Mandatory
vlan_end <1-4085>	The ending VLAN ID. The value ranges from 1 to 4085.	Mandatory
[untag tag]	The mode for adding service VLAN. <ul style="list-style-type: none"> ◆ untag: strip the tags. ◆ tag: keep the tags. 	Mandatory
uplink slot <slotno>	The slot number of the uplink port.	Mandatory
port <portno>	The port number of the uplink port.	Mandatory

Command Example

Add the VLAN 1000 to 1005 to the uplink port 20:1 in the tag mode.

```
Admin\vlan#add vlan vlan_begin 1000 vlan_end 1005 tag uplink slot 20 port 1
Admin\vlan#
```

29.11 Deleting the Uplink Port VLAN

Command Function

You can use this command to delete the uplink port VLAN.

Command Format

```
no vlan vlan_begin <1-4085> vlan_end <1-4085> uplink slot <slotno> port
<portno>
```

Parameter Description

Parameter	Description	Attribute
vlan_begin <1-4085>	The starting VLAN ID. The value ranges from 1 to 4085.	Mandatory
vlan_end <1-4085>	The ending VLAN ID The value ranges from 1 to 4085.	Mandatory
uplink slot <slotno>	The slot number of the uplink port.	Mandatory
port <portno>	The port number of the uplink port.	Mandatory

Command Example

Delete the VLAN 1000 to 1002 from the uplink port 20:1.

```
Admin\vlan#no vlan vlan_begin 1000 vlan_end 1002 uplink slot 20 port 1
Admin\vlan#
```

29.12 Viewing VLAN Information of the Port

Command Function

You can use this command to view the VLAN information of the port.

Command Format

```
show port_vlan slot <slotno> port <portno>
```

Parameter Description

Parameter	Description	Attribute
slot <slotno>	The slot number. The value ranges from 1 to 20.	Mandatory
port <portno>	The port number. When the slot number is 1 to 18, the port number is 0. When the slot number is 19 or 20, the port number ranges from 1 to 6.	Mandatory

Command Example

View the VLAN information of the uplink port 20:1.

```
Admin\vlan#show port_vlan slot 20 port 1
port 20:1,
vlan(optin):
1003(1) .
1004(1) .
1005(1) .
Admin\vlan#
```

29.13 Viewing the VLAN Information of the Aggregation Group or Dual Uplink

Command Function

You can use this command to view the VLAN information of the aggregation group or dual uplink.

Command Format

```
show port_vlan port_type <type> agid <id>
```


Parameter Description

Parameter	Description	Attribute
port_type <type>	The value ranges from 1 to 2. ◆ 1: the Trunk group. ◆ 2: the dual uplink.	Mandatory
agid <id>	The aggregation group or dual-uplink ID. The value ranges from 1 to 6.	Mandatory



Command Example

View the VLAN information of the Trunk group whose ID is 6.

```
Admin\vlan#show port_vlan port_type 1 agid 6
trunk 6 :
vlan(optin) :
30 (1) .
31 (1) .
32 (1) .
33 (1) .
34 (1) .
35 (1) .
36 (1) .
37 (1) .
38 (1) .
39 (1) .
40 (1) .
Admin\vlan#
```


30 admin\maintenance\mirror Directory Command

This chapter introduces functions, formats, parameters and examples of commands run in the admin\maintenance\mirror directory.

-  Configuring the Flow Mirroring of the Uplink Port
-  Disabling the Flow Mirroring of the Uplink Port

30.1 Configuring the Flow Mirroring of the Uplink Port

Command Function

You can use this command to configure the flow mirroring function of the uplink port. The data of the source uplink port can be diagnosed from monitoring of the destination uplink port.

Command Format

```
set mirror source[ port|trunk|cpu] <portlist> destination[ port|trunk]
<portlist> direction <0-2>
```

Parameter Description

Parameter	Description	Attribute
source[port trunk]	The source uplink port or trunking group of the flow mirroring.	Mandatory
<portlist>	The source uplink port number.	Mandatory
destination[port trunk]	The destination uplink port or trunking group of the flow mirroring.	Mandatory
<portlist>	The destination uplink port number.	Mandatory
direction<0-2>	The direction of the data stream. ◆ 0: the uplink and downlink data stream. ◆ 1: the uplink data stream. ◆ 2: the downlink data stream.	Mandatory

Command Example

Implement the flow mirroring on the uplink and downlink data of uplink port 19:1 to uplink port 19:2.

```
Admin\maintenance\mirror#set mirror source port 19:1 destination port 19:2 direction 0
Admin\maintenance\mirror#
```


30.2 Disabling the Flow Mirroring of the Uplink Port

Command Function

You can use this command to disable the flow mirroring function of the uplink port.

Command Format

```
set mirror disable
```

Parameter Description

None

Command Example

Disable the flow mirroring function of the uplink port.

```
Admin\maintenance\mirror#set mirror disable  
Admin\maintenance\mirror#
```


31 admin-msan Directory Command

- ☒ Enabling the ADSL Bit Swap Function
- ☒ Configuring the ADSL Downlink Rate Mode
- ☒ Configuring the ADSL Line Type
- ☒ Configuring the Maximum ADSL Interval Delay
- ☒ Configuring the ADSL Pulse
- ☒ Configuring the Minimum ADSL Rate
- ☒ Configuring the ADSL L0 Duration
- ☒ Configuring the ADSL L2 Adjustment Power
- ☒ Configuring ADSL L2 Rate
- ☒ Configuring the ADSL L2 Duration
- ☒ Configuring the ADSL Power Mode
- ☒ Configuring the ADSL Maximum and Minimum Signal-to-Noise Ratio Margin
- ☒ Configuring the ADSL Signal-to-Noise Ratio Margin
- ☒ Configuring the ADSL Uplink Rate Mode
- ☒ Configuring ADSL PVC Data
- ☒ Configuring ADSL Breakpoint Number
- ☒ Configuring the ADSL Transmission Mode
- ☒ Configuring an ADSL Line Profile
- ☒ Creating an Alarm Profile
- ☒ Configuring the Far-end 15-Min ES Threshold for an Alarm Profile

- ☒ Configuring the Far-end 15-Min LOF Second Threshold for an Alarm Profile
- ☒ Configuring the Far-End 15-Min LOS Second Threshold for an Alarm Profile
- ☒ Configuring the Far-End 15-Min Power-off Second Threshold for an Alarm Profile
- ☒ Configuring the Far-End 15-Min SES Threshold for an Alarm Profile
- ☒ Configuring the Far-End 15-Min UAT Threshold for an Alarm Profile
- ☒ Configuring the Local-end 15-Min ES Threshold for an Alarm Profile
- ☒ Configuring the Local-end 15-Min LOF Second Threshold for an Alarm Profile
- ☒ Configuring the Local-end 15-Min LOL Second Threshold for an Alarm Profile
- ☒ Configuring the Local-end 15-Min LOS Second Threshold for an Alarm Profile
- ☒ Configuring the Local-end 15-Min SES Threshold for an Alarm Profile
- ☒ Configuring the Local-end 15-Min UAT Threshold for an Alarm Profile
- ☒ Configuring ID or Name of an Alarm Profile
- ☒ Configuring the CID Mode
- ☒ Enabling or Disabling a Port
- ☒ Configuring the Port Isolation
- ☒ Configuring Limit on the Number of MAC Addresses
- ☒ Configuring a PVC Profile
- ☒ Configuring the Queue Scheduling
- ☒ Configuring the Port Rate Limiting Profile
- ☒ Configuring Parameters Based on RFC2833/RFC2198
- ☒ Configuring Howler Tone Timeout Processing
- ☒ Configuring the Timeout Duration of the Signal Tone

- ☒ Configuring the Timeout Duration of the Signal Tone
- ☒ Configuring Broadcast Storm
- ☒ Configuring the TLS
- ☒ Configuring Voice MD5 Authentication Parameters
- ☒ Enabling a Voice Port
- ☒ Configuring the Voice Timer
- ☒ Erasing Feed Voltage and Current of POTS Port
- ☒ Configuring the NGN Protocol Type
- ☒ Configuring Feed Voltage and Current of POTS Port
- ☒ Configuring a VDSL Line Profile
- ☒ Configuring the Downlink Transmitting Power in a VDSL Line Profile
- ☒ Configuring the Uplink Transmitting Power in a VDSL Line Profile
- ☒ Configuring the VDSL Mode in a VDSL Line Basic Profile
- ☒ Configuring a PSD Profile for the VDSL Line Profile
- ☒ Configuring Notching Breakpoints for the VDSL Line Profile
- ☒ Configuring the Standard Profile of the VDSL Line Profile
- ☒ Configuring Shielding Breakpoints of the VDSL Line Profile
- ☒ Configuring a VDSL Custom PSD Profile
- ☒ Configuring a Downlink PSD Rule for a VDSL Custom PSD Profile
- ☒ Configuring an Uplink PSD Rule for a VDSL Custom PSD Profile
- ☒ Configuring the VDSL Power Back-off Profile
- ☒ Configuring the Mandatory Electronic Length for VDSL Power Back-off Profile

- ☒ Configuring the Uplink Power Back-off Mode for the VDSL Power Back-off Profile
- ☒ Configuring a VDSL Service Profile
- ☒ Configuring the Maximum Interleave Delay for the VDSL Service Profile
- ☒ Configuring the Minimum Impulse Noise Protection for the VDSL Service Profile
- ☒ Viewing Port Enabling Status
- ☒ Viewing Port Rate Limiting Profile Binding
- ☒ Viewing the POTS Telephone Number
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31.1 Enabling the ADSL Bit Swap Function

Command Function

You can use this command to enable or disable the ADSL bit swap function.

Command Format

```
set adsl BitSwap[ down|up] [ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
[down up]	ADSL bit swap direction. ◆ down: downlink bit swap. ◆ up: uplink bit swap.	Mandatory
[enable disable]	ADSL bit swap enabling flag. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Configure the ADSL uplink bit swap function.

```
Admin\msan#set adsl bitswap up enable
Admin\msan#
```

31.2 Configuring the ADSL Downlink Rate Mode

Command Function

You can use this command to set the ADSL downlink rate mode.

Command Format

```
set adsl DownRateMode[ StartAdpt|fixed|RunAdpt]
```


Parameter Description

Parameter	Description	Attribute
DownRateMode[StartAdpt fixed RunAdpt]	The ADSL downlink rate mode. <ul style="list-style-type: none">◆ startAdpt: start adaptive mode◆ fixed: fixed mode◆ runAdpt: running adaptive mode	Mandatory

Command Example

Set the ADSL downlink rate mode to fixed.

```
Admin\msan#set adsl downratemode fixed
Admin\msan#
```

31.3 Configuring the ADSL Line Type

Command Function

You can use this command to configure the ADSL line type.

Command Format

```
set adsl LineType[ none | fastOnly | interleave | FastOrInter | FastAndInter]
```

Parameter Description

Parameter	Description	Attribute
LineType[none fastOnly interleave FastOrInter FastAndInter]	ADSL line type. <ul style="list-style-type: none">◆ None: no channel◆ fastOnly: fast channel◆ Interleave: interleave channel◆ FastOrInter: fast or interleave channel◆ FastAndInter: fast and interleave channel	Mandatory

Command Example

Set the ADSL line type to fast and interleave channel.

```
Admin\msan#set adsl linetype fastandinter
Admin\msan#
```


31.4 Configuring the Maximum ADSL Interval Delay

Command Function

You can use this command to configure the maximum ADSL interval delay.

Command Format

```
set adsl MaxInterLeaveDelay[ down|up] <value>
```

Parameter Description

Parameter	Description	Attribute
[down up]	Maximum ADSL interval delay direction. ◆ down: downlink ◆ up: uplink	Mandatory
<value>	Delay value. Value range: 0 to 63. Unit: ms.	Mandatory

Command Example

Set the maximum downlink ADSL delay interval to 50ms.

```
Admin\msan#set adsl maxinterleavedelay down 50
Admin\msan#
```

31.5 Configuring the ADSL Pulse

Command Function

You can use this command to configure the ADSL pulse.

Command Format

```
set adsl MinInp[ down|up] <value>
```


Parameter Description

Parameter	Description	Attribute
[down up]	Pulse direction. ◆ down: downlink ◆ up: uplink	Mandatory
<value>	Pulse value. Value range: 1 to 18.	Mandatory

Command Example

Set the ADSL downlink pulse to 10.

```
Admin\msan#set adsl mininp down 10
Admin\msan#
```

31.6 Configuring the Minimum ADSL Rate

Command Function

You can use this command to configure the minimum ADSL rate.

Command Format

```
set adsl MinRate[ down | up] <value>
```

Parameter Description

Parameter	Description	Attribute
[down up]	Minimum rate direction. ◆ down: downlink ◆ up: uplink	Mandatory
<value>	Minimum rate. Value range: 0 to 100000; unit: Kbps.	Mandatory

Command Example

Set the minimum downlink ADSL rate to 500 Kbps.

```
Admin\msan#set adsl minrate down 500
Admin\msan#
```


31.7 Configuring the ADSL L0 Duration

Command Function

You can use this command to configure the ADSL L0 duration.

Command Format

```
set adsl PmL0Time <value>
```

Parameter Description

Parameter	Description	Attribute
PmL0Time <value>	ADSL L0 duration. Value range: 0 to 65534; unit: s.	Mandatory

Command Example

Set the ADSL L0 duration to 1000s.

```
Admin\msan#set adsl pml0time 1000  
Admin\msan#
```

31.8 Configuring the ADSL L2 Adjustment Power

Command Function

You can use this command to configure the ADSL L2 adjustment power.

Command Format

```
set adsl PmL2Atprt <value>
```

Parameter Description

Parameter	Description	Attribute
PmL2Atprt <value>	ADSL L2 adjustment power. Value range: 0 to 15; unit: dB.	Mandatory

Command Example

Set the ADSL adjustment power to 10 dB.


```
Admin\msan#set adsl pml2atprt 10
```

```
Admin\msan#
```

31.9 Configuring ADSL L2 Rate

Command Function

You can use this command to configure the ADSL L2 rate.

Command Format

```
set adsl PmL2Rate <value>
```

Parameter Description

Parameter	Description	Attribute
PmL2Rate <value>	L2 rate. Value range: 0 to 65543; unit: Kbps.	Mandatory

Command Example

Set the ADSL L2 rate to 200 Kbps.

```
Admin\msan#set adsl pml2rate 200
```

```
Admin\msan#
```

31.10 Configuring the ADSL L2 Duration

Command Function

You can use this command to configure the ADSL L2 duration.

Command Format

```
set adsl PmL2Time<value>
```

Parameter Description

Parameter	Description	Attribute
PmL2Time<value>	ADSL L2 duration. Value range: 0 to 65534; unit: s.	Mandatory

Command Example

Set the ADSL L2 duration to 1000s.

```
Admin\msan#set adsl pml2time 1000
Admin\msan#
```

31.11 Configuring the ADSL Power Mode

Command Function

You can use this command to set the ADSL power mode.

Command Format

```
set adsl PowerMode [ L0Mode | L3Mode | L2Mode | L2AndL3]
```

Parameter Description

Parameter	Description	Attribute
PowerMode [L0Mode L3Mode L2Mode L2AndL3]	ADSL power mode. ◆ L0Mode: L0 mode ◆ L3Mode: L3 mode ◆ L2Mode: L2 mode ◆ L2AndL3: L2 or L3 mode	Mandatory

Command Example

Set the ADSL power mode to L2 mode.

```
Admin\msan#set adsl powermode l2mode
Admin\msan#
```

31.12 Configuring the ADSL Maximum and Minimum Signal-to-Noise Ratio Margin

Command Function

You can use this command to configure the ADSL maximum and minimum signal-to-noise ratio margin.

Command Format

```
set adsl Snrm[ down|up] MaxSnrm <value1> MinSnrm <value2>
```

Parameter Description

Parameter	Description	Attribute
[down up]	Direction ◆ down: downlink. ◆ up: uplink.	Mandatory
MaxSnrm <value1>	Maximum signal-to-noise ratio margin. Value range: 0 to 31. (unit: dB)	Mandatory
MinSnrm <value2>	Minimum signal-to-noise ratio margin. Value range: 0 to 31. (unit: dB)	Mandatory

Command Example

Set the uplink maximum and minimum ADSL signal-to-noise ratio margin to 20 dB and 10 dB.

```
Admin\msan#set adsl snrm up maxsnrm 20 minsnm 10
Admin\msan#
```

31.13 Configuring the ADSL Signal-to-Noise Ratio Margin

Command Function

You can use this command to configure the ADSL signal-to-noise ratio margin.

Command Format

```
set adsl SnrmMargin[ down|up] <value>
```


Parameter Description

Parameter	Description	Attribute
<code>SnrmMargin[down up]</code>	Signal-to-noise ratio margin. ◆ down: downlink. ◆ up: uplink.	Mandatory
<code>MaxSnrm <value1></code>	Signal-to-noise ratio margin. Value range: 0 to 31. (unit: dB)	Mandatory

Command Example

Set the downlink ADSL signal-to-noise ratio margin to 20dB.

```
Admin\msan#set adsl snrmMargin down 20
Admin\msan#
```

31.14 Configuring the ADSL Uplink Rate Mode

Command Function

You can use this command to set the ADSL uplink rate mode.

Command Format

```
set adsl UpRateMode[ StartAdpt|fixed|RunAdpt]
```

Parameter Description

Parameter	Description	Attribute
<code>UpRateMode[StartAdpt fixed RunAdpt]</code>	ADSL uplink rate mode ◆ startAdpt: start adaptive mode ◆ fixed: fixed mode ◆ runAdpt: running adaptive mode	Mandatory

Command Example

Set the ADSL uplink rate mode to running adaptive.

```
Admin\msan#set adsl upratemode runadpt
Admin\msan#
```


31.15 Configuring ADSL PVC Data

Command Function

You can use this command to configure the ADSL PVC data.

Command Format

```
set adsl pvcNo <value1> vpi <value2> vci <value3>
```

Parameter Description

Parameter	Description	Attribute
pvcNo <value1>	PVC index. Value range: 0 to 7.	Mandatory
vpi <value2>	Virtual path identifier. Value range: 32 to 65535, or 0.	Mandatory
vci <value3>	Virtual channel identifier. Value range: 32 to 65535.	Mandatory

Command Example

Set the virtual path identifier to 20, and virtual channel identifier to 100 for ADSL PVC1.

```
Admin\msan#set adsl pvcno 1 vpi 20 vci 100
Admin\msan#
```

31.16 Configuring ADSL Breakpoint Number

Command Function

You can use this command to configure the ADSL breakpoint number.

Command Format

```
set adsl toneblackout number <number> { <no> start <value1> end <value2> } * 8
{ <no> start <value3> end <value4> } * 8
```


Parameter Description

Parameter	Description	Attribute
number <number>	Number of breakpoints Value range: 1 to 16.	Mandatory
<no>	Index number. Value range: 1 to 8.	Optional
start <value1>	Starting frequency band. Value range: 0 to 511; unit: tone.	Optional
<no>	Index number. The value ranges from 1 to 8.	Optional
start <value3>	Starting frequency band. Value range: 0 to 511; unit: tone.	Optional
end <value4>	Ending frequency band. Value range: 0 to 511; unit: tone.	Optional

Command Example

Configure two ADSL blackouts. Set the starting frequency band to 5 tones and ending frequency band to 10 tones for Index 1; set the starting frequency band to 15 tones and ending frequency band to 20 tones for Index 3.

```
Admin\msan#set adsl toneblackout number 2 1 start 5 end 10 3 start 15 end 20
Admin\msan#
```

31.17 Configuring the ADSL Transmission Mode

Command Function

You can use this command to set the ADSL transmission mode.

Command Format

```
set adsl transmode [ adpt | gdmr | adsl_2 | adsl2+ | t1413 ]
```

Parameter Description

Parameter	Description	Attribute
transmode[adpt gdmr adsl_2 adsl2+ t1413]	Transmission mode. ◆ adpt: self adaptive mode ◆ gdmr: g.dmr mode ◆ adsl_2: adsl2 mode ◆ adsl2+: adsl2+ mode ◆ t1413: t1413 mode	Mandatory

Command Example

Set the ADSL transmission mode to g.dmt mode.

```
Admin\msan#set adsl transmode gdm  
Admin\msan#
```

31.18 Configuring an ADSL Line Profile

Command Function

You can use this command to configure an ADSL line profile.

Command Format

```
set adslLine profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Set an ADSL line profile whose profile ID is "2".

```
Admin\msan#set adslLine profile id 2  
Admin\msan#
```

31.19 Creating an Alarm Profile

Command Function

You can use this command to create an alarm profile.

Command Format

```
add alarm profile <name> { id<id> } *1
```


Parameter Description

Parameter	Description	Attribute
<name>	Profile name	Mandatory
{ id <id> } * 1	Profile ID.	Optional

Command Example

Create an alarm profile whose ID is "1" and name is "test_alarm_prf".

```
Admin\msan#add alarm profile test_alarm_prf id 1
Admin\msan#
```

31.20 Configuring the Far-end 15-Min ES Threshold for an Alarm Profile

Command Function

You can use this command to set the far-end 15-min errored second (ES) threshold for an alarm profile.

Command Format

```
set alarm FeEsThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
FeEsThreshold15min	Far-end 15-min ES threshold	Mandatory
<value>	Value range: 0 to 900	Mandatory

Command Example

Set the far-end 15-min ES threshold to 600 for an alarm profile.

```
Admin\msan#set alarm feesthreshold15min 600
Admin\msan#
```


31.21 Configuring the Far-end 15-Min LOF Second Threshold for an Alarm Profile

Command Function

You can use this command to set the far-end 15-min loss of frame (LOF) second threshold for an alarm profile.

Command Format

```
set alarm FeLofsThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
FeLofsThreshold15min <value>	Far-end 15-min LOF second threshold The value ranges from 0 to 900.	Mandatory

Command Example

Set the far-end 15-min LOF second threshold for an alarm profile to 500.

```
Admin\msan#set alarm felofsthreshold15min 500
Admin\msan#
```

31.22 Configuring the Far-End 15-Min LOS Second Threshold for an Alarm Profile

Command Function

You can use this command to configure the far-end 15-min loss of signal (LOS) second threshold for an alarm profile.

Command Format

```
set alarm FeLossThreshold15min <value>
```


Parameter Description

Parameter	Description	Attribute
FeLossThreshold15min <value>	Far-end 15-min LOS second threshold. Value range: 0 to 900. (unit: s)	Mandatory

Command Example

Set the far-end 15-min LOS second threshold for an alarm profile to 400.

```
Admin\msan#set alarm felossthreshold15min 400
```

```
Admin\msan#
```

31.23 Configuring the Far-End 15-Min Power-off Second Threshold for an Alarm Profile

Command Function

You can use this command to set the far-end 15-min power-off second threshold for an alarm profile.

Command Format

```
set alarm FeLprsThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
FeLprsThreshold15min <value>	Far-end 15-min power-off second threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the far-end 15-min power-off second threshold for an alarm profile to 200.

```
Admin\msan#set alarm felprsthreshold15min 200
```

```
Admin\msan#
```


31.24 Configuring the Far-End 15-Min SES Threshold for an Alarm Profile

Command Function

You can use this command to set the far-end 15-min severely errored second (SES) threshold for an alarm profile.

Command Format

```
set alarm FeSesThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
FeSesThreshold15min <value>	Far-end 15-min SES threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the far-end 15-min SES threshold for an alarm profile to 100.

```
Admin\msan#set alarm fesesthreshold15min 100
Admin\msan#
```

31.25 Configuring the Far-End 15-Min UAT Threshold for an Alarm Profile

Command Function

You can use this command to set the far-end 15-min unavailable time (UAT) threshold for an alarm profile.

Command Format

```
set alarm FeUasThreshold15min <value>
```


Parameter Description

Parameter	Description	Attribute
FeUasThreshold15min <value>	Far-end 15-min UAT threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the far-end 15-min UAT threshold for an alarm profile to 50.

```
Admin\msan#set alarm feuasthreshold15min 50
Admin\msan#
```

31.26 Configuring the Local-end 15-Min ES Threshold for an Alarm Profile

Command Function

You can use this command to set the local-end 15-min errored second (ES) threshold for an alarm profile.

Command Format

```
set alarm NeEsThreshold15min <value>
```

Description

Parameter	Description	Attribute
NeEsThreshold15min <value>	Local-end 15-min ES threshold Value range: 0 to 900	Mandatory

Command Example

Set the local-end 15-min ES threshold to 20 for an alarm profile.

```
Admin\msan#set alarm neesthreshold15min 20
Admin\msan#
```


31.27 Configuring the Local-end 15-Min LOF Second Threshold for an Alarm Profile

Command Function

You can use this command to set the local-end 15-min loss of frame (LOF) second threshold for an alarm profile.

Command Format

```
set alarm NeLofsThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
NeLofsThreshold15min <value>	Local-end 15-min LOF second threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the local-end 15-min LOF second threshold for an alarm profile to 300.

```
Admin\msan#set alarm nelofsthreshold15min 300
Admin\msan#
```

31.28 Configuring the Local-end 15-Min LOL Second Threshold for an Alarm Profile

Command Function

You can use this command to set the local-end 15-min LOL second threshold for an alarm profile.

Command Format

```
set alarm NeLolsThreshold15min <value>
```


Parameter Description

Parameter	Description	Attribute
NeLolsThreshold15min <value>	Local-end 15-min LOL second threshold	Mandatory

Command Example

Set the local-end 15-min LOL second threshold to 150 for an alarm profile.

```
Admin\msan#set alarm NeLolsThreshold15min 150
Admin\msan#
```

31.29 Configuring the Local-end 15-Min LOS Second Threshold for an Alarm Profile

Command Function

You can use this command to configure the local-end 15-min loss of signal (LOS) second threshold for an alarm profile.

Command Format

```
set alarm NeLossThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
NeLossThreshold15min <value>	Local-end 15-min LOS second threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the local-end 15-min LOS second threshold for an alarm profile to 500.

```
Admin\msan#set alarm nelossthreshold15min 500
Admin\msan#
```


31.30 Configuring the Local-end 15-Min SES Threshold for an Alarm Profile

Command Function

You can use this command to set the local-end 15-min severely errored second (SES) threshold for an alarm profile.

Command Format

```
set alarm NeSesThreshold15min <value>
```

Parameter Description

Parameter	Description	Attribute
NeSesThreshold15min <value>	Local-end 15-min SES threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the local-end 15-min SES threshold for an alarm profile to 350.

```
Admin\msan#set alarm nesesthreshold15min 350
Admin\msan#
```

31.31 Configuring the Local-end 15-Min UAT Threshold for an Alarm Profile

Command Function

You can use this command to set the local-end 15-min unavailable time (UAT) threshold for an alarm profile.

Command Format

```
set alarm NeUasThreshold15min <value>
```


Parameter Description

Parameter	Description	Attribute
NeUasThreshold15min <value>	Local-end 15-min UAT threshold. Value range: 0 to 900.	Mandatory

Command Example

Set the local-end 15-min UAT threshold to 200 for an alarm profile.

```
Admin\msan#set alarm neuasthreshold15min 200
Admin\msan#
```

31.32 Configuring ID or Name of an Alarm Profile

Command Function

You can use this command to set the ID or name of an alarm profile.

Command Format

```
set alarm profile[ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Configure an alarm profile whose ID is "1".

```
Admin\msan#set alarm profile id 1
Admin\msan#
```


31.33 Configuring the CID Mode

Command Function

You can use this command to set the CID mode.

Command Format

```
set cidmode[ fsk|dtmf]
```

Parameter Description

Parameter	Description	Attribute
mode[fsk dtmf]	CID mode. ◆ fsk: FSK mode ◆ dtmf: DTMF mode	Mandatory

Command Example

Set the CID mode to FSK.

```
Admin\msan#set cid mode fsk
set CID mode configuration successfully(0).
Admin\msan#
```

31.34 Enabling or Disabling a Port

Command Function

You can use this command to enable or disable a port.

Command Format

```
set interface<ifStr>[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
interface<ifStr>	Port number. Format: Slot number/port number.	Mandatory
[enable disable]	Enable or disable. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable Port 1 in Slot 8.

```
Admin\msan#set interface 8/1 enable
Admin\msan#
```

31.35 Configuring the Port Isolation

Command Function

You can use this command to configure the port isolation.

Command Format

```
set isolation[ enable|disable] interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
isolation[enable disable]	Port isolation enabling flag. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
interface <ifStr>	Slot number. Value range: 1 to 8 or 11 to 18.	Mandatory

Command Example

Enable the port isolation function for Slot 8.

```
Admin\msan#set isolation enable interface 8
Admin\msan#
```

31.36 Configuring Limit on the Number of MAC Addresses

Command Function

You can use this command to set the limit on the number of MAC addresses.

Command Format

```
set mac limit [ enable|disable ] { [ number ] [ <limitNum> ] } * 1 interface <ifStr>
{ pvc <pvc_value> } * 1
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	Enable or disable. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
[number] [<limitNum>]	The limit on the number of MAC addresses. Value range: 1 to 16.	Optional
interface <ifStr>	Slot number/port number	Optional
pvc <pvc_value>	PVC index. Value range: 0 to 7.	Optional

Command Example

Set the limit on the number of MAC addresses to 10 for PVC 1 in Slot 11.

```
Admin\msan#set mac limit enable number 10 interface 11/1 pvc 1
Admin\msan#
```

31.37 Configuring a PVC Profile

Command Function

You can use this command to set a PVC profile.

Command Format

```
set pvc profile [ id|name ] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Configure a PVC profile.

```
Admin\msan#set pvc profile id 1
Admin\msan#
```

31.38 Configuring the Queue Scheduling

Command Function

You can use this command to configure the queue scheduling.

Command Format

```
set queue schedule interface <interface> mode[ sp|wrr|sp+wrr] <w7> <w6> <w5>
<w4> <w3> <w2> <w1> <w0>
```

Parameter Description

Parameter	Description	Attribute
interface <interface>	Slot number/port number Value range of slot number: 1 to 8 or 11 to 18. Value range of port number: 1 to 16.	Mandatory
mode[sp wrr sp+wrr]	Queue scheduling mode. ◆ sp: strict priority ◆ wrr: Weighted Round Robin ◆ sp+wrr: combined priority	Mandatory
<w7>	Weight 7. Value range: 1 to 127.	Mandatory
<w6>	Weight 6. Value range: 1 to 127.	Mandatory
<w5>	Weight 5. Value range: 1 to 127.	Mandatory
<w4>	Weight 4. Value range: 1 to 127.	Mandatory
<w3>	Weight 3. Value range: 1 to 127.	Mandatory
<w2>	Weight 2. Value range: 1 to 127.	Mandatory
<w1>	Weight 1. Value range: 1 to 127.	Mandatory
<w0>	Weight 0. Value range: 1 to 127.	Mandatory

Command Example

Set the queue scheduling mode of Port 2 in Slot 11 to strict priority. The weight values are 1, 2, 3, 4, 5, 6, 7 and 8, respectively.

```
Admin\msan#set queue schedule interface 11/2 mode wrr 1 2 3 4 5 6 7 8
Admin\msan#
```

31.39 Configuring the Port Rate Limiting Profile

Command Function

You can use this command to set the port rate limiting profile.

Command Format

```
set rate-limit id<id> name <name> us-status[ enable|disable] us-cir <value>
ds-status[ enable|disable] ds-cir <value>
```

Parameter Description

Parameter	Description	Attribute
id<id>	Profile ID. Value range: 0 to 255. Default value: 0. (Modification is not allowed.)	Mandatory
name <name>	Profile name. The profile name is a string containing no more than 20 characters.	Mandatory
us-status[enable disable]	Uplink Policing status. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
us-cir <value>	CIR of the uplink port. Value range: 64 to 1000000; unit: kb/s.	Mandatory
ds-status[enable disable]	Downlink Policing status ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
ds-cir <value>	CIR of the downlink port Value range: 64 to 1000000; unit: kb/s.	Mandatory

Command Example

Set the port rate limiting profile ID to 1, name to aa, uplink Policing status to enabled, CIR of the uplink port to 1000 kb/s, downlink Policing status to enabled, and CIR of the uplink port to 2000 kb/s.

```
Admin\msan#set rate-limit id 1 name aa us-status enable us-cir 1000 ds-status enable ds-
cir 2000
Admin\msan#
```

31.40 Configuring Parameters Based on RFC2833/RFC2198

Command Function

You can use this command to configure parameters based on RFC2833/RFC2198.

Command Format

```
set rfc2833 negotiation[ auto|manual] default pt <default2833PT> rfc2198
negotiation[ auto|manual] default pt <default2198PT>
```

Parameter Description

Parameter	Description	Attribute
rfc2833 negotiation[auto manual]	RFC2833 negotiation. ◆ auto: Automatic. ◆ manual: Manual.	Mandatory
default pt <default2833PT>	Default PT value in RFC2833. Value range: 0, 96 to 127.	Mandatory
rfc2198 negotiation[auto manual]	RFC2198 negotiation. ◆ auto: Automatic. ◆ manual: Manual.	Mandatory
default pt <default2198PT>	Default PT value in RFC2198. Value range: 0, 96 to 127.	Mandatory

Command Example

Set RFC2833 negotiation mode to manual, RFC2833 default PT value to 100, RFC2198 negotiation mode to null, and RFC2198 default PT value to 150.


```
Admin\msan#set rfc2833 negotiation manul default pt 100 rfc2198 negotiation manul
default pt 150
Admin\msan#
```

31.41 Configuring Howler Tone Timeout Processing

Command Function

You can use this command to configure the howler tone timeout processing.

Command Format

```
set roh timeout procession[ not_unregister|unregister] terminal service
status[ keep|over]
```

Parameter Description

Parameter	Description	Attribute
roh timeout procession[not_unregister unregister]	Howler tone timeout processing. ◆ not_unregister: Register. ◆ unregister: Log out.	Mandatory
terminal service status [keep over]	Terminal service status. ◆ keep: in service ◆ over: out of service	Mandatory

Command Example

Set the howler tone timeout processing mode to unregister, and terminal service status to out of service.

```
Admin\msan#set roh timeout procession unregister terminal service status over
set ROH timeout procession configuration successfully(0).
Admin\msan#
```


31.42 Configuring the Timeout Duration of the Signal Tone

Command Function

You can use this command to configure the timeout duration of the signal tone. Two commands are used to set the timeout duration of the signal tone. This command is the first one.

Command Format

```
set signal tone timeout busy <busyTimeout> dial <dialTimeout> roh  
<rohTimeout> call-waiting <calWaitTimeout>
```

Parameter Description

Parameter	Description	Attribute
busy <busyTimeout>	Busy tone time. Value range: 1 to 3600; unit: s.	Mandatory
dial <dialTimeout>	Dial tone time. Value range: 1 to 3600; unit: s.	Mandatory
roh <rohTimeout>	Howler tone time. Value range: 1 to 3600; unit: s.	Mandatory
call-waiting <calWaitTimeout>	Call waiting time. Value range: 1 to 3600; unit: s.	Mandatory

Command Example

Configure the timeout duration of the signal tone. Set the busy tone time to 100s, dial tone time to 200s, howler tone time to 300s, and call waiting time to 400s.

```
Admin\msan#set signal tone timeout busy 100 dial 200 roh 300 call-waiting 400  
set signal tone timeout configuration successfully(0).  
Admin\msan#
```


31.43 Configuring the Timeout Duration of the Signal Tone

Command Function

You can use this command to configure the timeout duration of the signal tone. Two commands are used to set the timeout duration of the signal tone. This command is the second one.

Command Format

```
set signal tone timeout ring <ringTimeout> ring-back <ringBackTimeout> no-  
answer <noAnswerTimeout> interval-dial <intDialTimeout>
```

Parameter Description

Parameter	Description	Attribute
ring <ringTimeout>	Ring tone time. Value range: 1 to 3600; unit: s.	Mandatory
ring-back <ringBackTimeout>	Ring back tone time. Value range: 1 to 3600; unit: s.	Mandatory
no-answer <noAnswerTimeout>	No answer tone time Value range: 1 to 3600; unit: s.	Mandatory
interval-dial <intDialTimeout>	Dialing tone interval time. Value range: 1 to 3600; unit: s.	Mandatory

Command Example

Configure the timeout duration of the signal tone. Set the ring tone time to 200s, ring back tone time to 300s, no answer tone time to 400s, and dialing tone interval time to 500s.

```
Admin\msan#set signal tone timeout ring 200 ring-back 300 no-answer 400 interval-dial 500  
set signal tone timeout configuration successfully(0).  
Admin\msan#
```

31.44 Configuring Broadcast Storm

Command Function

You can use this command to configure the broadcast storm.

Command Format

```
set storm-suppression{[ broadcast|multicast|unknown] [ enable|disable] rate
<value>} *3 interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
[broadcast multicast unknown]	Packet type. ◆ broadcast: broadcast packets. ◆ multicast: multicast packets. ◆ unknown: unknown packets.	Mandatory
[enable disable]	Enable or disable. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
rate <value>	Rate limit. Value range: 64 to 16384; unit: kb/s.	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Set broadcast packet suppression rate to 1000 kb/s for Port 3 in Slot 11.

```
Admin\msan#set storm-suppression broadcast enable rate 1000 interface 11/3
Admin\msan#
```

31.45 Configuring the TLS

Command Function

You can use this command to configure the TLS.

Command Format

```
set tls[ enable|disable] { tpid[ <tpid>] vid[ <vid>] cos[ <cos>] copy-inner-
cos[ enable|disable]} *1
```


Parameter Description

Parameter	Description	Attribute
tls[enable disable]	Enable or disable the TLS. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
tpid[<tpid>]	Tag protocol identifier. Value range: 0 to 0xfffe.	Mandatory
vid[<vid>]	VLAN ID. Value range: 1 to 4085.	Mandatory
cos[<cos>]	COS Value range: 0 to 7.	Mandatory
copy-inner-cos[enable disable]	Enable or disable copy of the CVLAN priority. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory

Command Example

Enable the transparent Ethernet service VLAN. Set the VLAN TPID to 33024, VLAN ID to 2000, priority to 6, and enable the copy of the CVLAN priority.

```
Admin\msan#set tls enable tpid 33024 vid 2000 cos 6 copy-inner-cos enable
Admin\msan#
```

31.46 Configuring Voice MD5 Authentication Parameters

Command Function

You can use this command to configure voice MD5 authentication parameters.

Command Format

```
set voice md5 authentication[ open|close] { mg id <mgID>} *1 { shared key
<sharedKey>} *1 { exchanged base <xBase>} *1 { prime <xPrime>} *1
```

Parameter Description

Parameter	Description	Attribute
authentication[open close]	Authentication switch. ◆ Open: The authentication is enabled. ◆ Close: The authentication is disabled.	Mandatory
mg id <mgID>	MG identifier. Value range: a string not exceeding 32 characters.	Mandatory

Parameter	Description	Attribute
shared key <sharedKey>	Public key. Value range: a string not exceeding 32 characters.	Mandatory
exchanged base <xBase>	Exchange base "g". Value range: a string not exceeding 16 characters.	Mandatory
prime <xPrime>	Exchange prime number "p". Value range: a string not exceeding 16 characters.	Mandatory

Command Example

Set the voice MD5 authentication parameters. Enable the authentication. Set the MG ID to 123, public key to abc, exchange base g to def, and exchange prime number p to xyz.

```
Admin\msan#set voice md5 authentication open mg id 123 shared key abc exchanged
base def prime xyz
Admin\msan#
```

31.47 Enabling a Voice Port

Command Function

You can use this command to enable a voice port.

Command Format

```
set voice port[ disable|enable] interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
voice port[disable enable]	Enable or disable a voice port. ◆ disable: Disable the function. ◆ enable: Enable the function.	Mandatory
interface <ifStr>	Voice port. Format: Slot number/port number.	Mandatory

Command Example

Enable voice port for Port 3 in Slot 16.

```
Admin\msan#set voice port enable interface 16/3
```


Admin\msan#

31.48 Configuring the Voice Timer

Command Function

You can use this command to configure the voice timer.

Command Format

```
set voice timer waiting time <maxWaitTime> start-timer <startTimer> long-  
timer <longTimer> short-timer <shortTimer> notify-immediately[ yes|no]
```

Parameter Description

Parameter	Description	Attribute
waiting time <maxWaitTime>	Maximum waiting time (unit: s) Value range: 0 to 254; unit: s.	Mandatory
start-timer <startTimer>	Starting timer. Value range: 1 to 3600; unit: s.	Mandatory
long-timer <longTimer>	Long timer. Value range: 1 to 3600; unit: s.	Mandatory
short-timer <shortTimer>	Short timer. Value range: 1 to 3600; unit: s.	Mandatory
notify-immediately[yes no]	Whether to report immediately if any dialing match is found. ◆ yes: Report immediately. ◆ no: Do not report immediately.	Mandatory

Command Example

Set the voice timer as follows: the maximum waiting time to 100, the start timer to 200s, the long timer to 300s, the short timer to 400s, and report immediately if any dialing match is found.

```
Admin\msan#set voice timer waiting time 100 start-timer 200 long-timer 300 short-timer 400  
notify-immediately yes  
Admin\msan#
```


31.49 Erasing Feed Voltage and Current of POTS Port

Command Function

You can use this command to erase feed voltage and current configuration of the POTS port.

Command Format

```
erase slot <slotNo> pots port feed voltage and current configuration
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	The slot number whose configuration needs to be erased.	Mandatory

Command Example

Erase feed voltage and current configuration of the POTS port in Slot 2.

```
Admin\msan#erase slot 2 pots port feed voltage and current configuration
erase slot 2 POTS port feed voltage & current configuration successfully
Admin\msan#
```

31.50 Configuring the NGN Protocol Type

Command Function

You can use this command to configure the NGN protocol type.

Command Format

```
set ngn_protocol_type[ none|sip|h248]
```


Parameter Description

Parameter	Description	Attribute
<code>ngn_protocol_type[none sip h248]</code>	NGN protocol type. <ul style="list-style-type: none">◆ None: Do not load the protocol type.◆ sip: SIP protocol.◆ h248: H248 protocol.	Mandatory

Command Example

Configure the NGN protocol type.

```
Admin\msan#set ngn_protocol_type h248
```

The operation will load the voice module, make sure whether or not to continue?[Y/N] . Y

```
Admin\msan#
```

31.51 Configuring Feed Voltage and Current of POTS Port

Command Function

You can use this command to configure the feed voltage and current of the POTS port.

Command Format

```
set pots port feed voltage <feedVoltage> current <feedCurrent> interface  
<ifStr>
```

Parameter Description

Parameter	Description	Attribute
<code>voltage <feedVoltage></code>	Value range: 37 to 51; unit: V.	Mandatory
<code>current <feedCurrent></code>	Value range: 18 to 49; unit: mA.	Mandatory
<code>interface <ifStr></code>	Interface: Slot number/port number	Mandatory

Command Example

Set the feed voltage to 37 V and current to 18mA for POTS port (that is, Port 1 in Slot 2).


```
Admin\msan#set pots port feed voltage 37 current 18 interface 2/1
set POTS port feed voltage & current configuration successfully(0)
Admin\msan#
```

31.52 Configuring a VDSL Line Profile

Command Function

You can use this command to configure a VDSL line basic profile. After being bound to a line basic profile, the port will send and receive data based on the power configuration in it.

Command Format

```
set vdslLine profile[ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile[id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Create a VDSL line basic profile named "ee".

```
Admin\msan#set vdslLine profile name ee
Admin\msan#
```

Create a VDSL line basic profile whose ID is "1".

```
Admin\msan#set vdslLine profile id 1
Admin\msan#
```


31.53 Configuring the Downlink Transmitting Power in a VDSL Line Profile

Command Function

You can use this command to configure the downlink transmitting power in a VDSL line basic profile. The downlink transmitting power can be set according to different application scenarios so as to enhance the valid transmission distance of the signal.

Command Format

```
set vdslline para maxTxPowerDn <value>
```

Parameter Description

Parameter	Description	Attribute
maxTxPowerDn <value>	Downlink transmitting power. Value range: 0.0 to 25.5; unit: dBm; accuracy: 0.1.	Mandatory

Command Example

Set the downlink transmitting power to 14.5 dBm for the VDSL line basic profile.

```
Admin\msan#set vdslline para maxtxpowerdn 14.5
Admin\msan#
```

31.54 Configuring the Uplink Transmitting Power in a VDSL Line Profile

Command Function

You can use this command to configure the uplink transmitting power in a VDSL line basic profile. The uplink transmitting power can be set according to different application scenarios so as to enhance the valid transmission distance of the signal.

Command Format

```
set vdslline para maxTxPowerUp <value>
```


Parameter Description

Parameter	Description	Attribute
maxTxPowerUp <value>	Uplink transmitting power. Value range: 0.0 to 20.2; unit: dBm; accuracy: 0.1.	Mandatory

Command Example

Set the uplink transmitting power to 19.5 dBm for the VDSL line basic profile.

```
Admin\msan#set vdslline para maxtxpowerup 19.5
```

```
Admin\msan#
```

31.55 Configuring the VDSL Mode in a VDSL Line Basic Profile

Command Function

You can use this command to configure the VDSL mode in a VDSL line basic profile.

Command Format

```
set vdslline para portmode[ atm|ptm|self-adaption]
```

Parameter Description

Parameter	Description	Attribute
portmode[atm ptm self-adaption]	Port mode. <ul style="list-style-type: none"> ◆ atm: asynchronous transmission mode ◆ ptm: packet transmission mode ◆ self-adaption: self adaptive mode 	Mandatory

Command Example

Set the VDSL mode to "atm" for the VDSL line basic profile.

```
Admin\msan#set vdslline para portmode atm
```

```
Admin\msan#
```


31.56 Configuring a PSD Profile for the VDSL Line Profile

Command Function

You can use this command to configure a PSD profile for the VDSL line profile.

Command Format

```
set vdslline para psd<0-42>
```

Parameter Description

Parameter	Description	Attribute
psd<0-42>	Power spectral density. Value range: 0 to 42. The mappings between the numbers and PSD profiles are described as below:	Mandatory

Parameter	Description	Attribute
	<ul style="list-style-type: none"> ◆ 0: Profile A_NUSO ◆ 1: Profile A_EU_32 ◆ 2: Profile A_EU_36 ◆ 3: Profile A_EU_40 ◆ 4: Profile A_EU_44 ◆ 5: Profile A_EU_48 ◆ 6: Profile A_EU_52 ◆ 7: Profile A_EU_56 ◆ 8: Profile A_EU_60 ◆ 9: Profile A_EU_64 ◆ 10: Profile A_EU_128 ◆ 11: Profile B8_1_998_M1x_A ◆ 12: Profile B8_2_998_M1x_B ◆ 13: Profile B8_3_998_M1x_NUSO ◆ 14: Profile B8_4_998_M2x_A ◆ 15: Profile B8_5_998_M2x_M ◆ 16: Profile B8_6_998_M2x_B ◆ 17: Profile B8_7_998_M2x_NUSO ◆ 18: Profile B8_8_998E17_M2x_NUSO ◆ 19: Profile B8_9_998_M2x_NUSO_M ◆ 20: Profile B8_10_998ADE17_M2x_NUSO_M ◆ 21: Profile B8_11_998ADE17_M2x_A ◆ 22: Profile B8_12_998ADE17_M2x_B ◆ 23: Profile B8_13_998E30_M2x_nuso ◆ 24: Profile B8_14_998 ◆ 25: Profile B8_15_998ADE30_M2x_NUSO_M ◆ 26: Profile B8_16_998ADE30_M2x_NUSO_A ◆ 27: Profile B7_1_997_M1c_A_7 ◆ 28: Profile B7_2_997_M1x_M_8 ◆ 29: Profile B7_3_997_M1x_M ◆ 30: Profile B7_4_997_M2x_M_8 ◆ 31: Profile B7_5_997_M2x_A ◆ 32: Profile B7_6_997_M2x_M ◆ 33: Profile B7_7_HPE17_M1x_NUSO ◆ 34: Profile B7_8_HPE30_M1x_NUSO ◆ 35: Profile B7_9_997E17_M2x_A ◆ 36: Profile B7_10_997E30_M2x_NUSO ◆ 37: Profile B7_BT_ANFP ◆ 38: Profile C_138_b ◆ 39: Profile C_276_b ◆ 40: Profile C_138_co ◆ 41: Profile C_276_co ◆ 42: Profile C_TCMISDN 	

Command Example

Set the PSD profile to "A_EU_32" for the VDSL line basic profile.

```
Admin\msan#set vdsline para psd 1
Admin\msan#
```


31.57 Configuring Notching Breakpoints for the VDSL Line Profile

Command Function

You can use this command to configure the notching breakpoints in a VDSL line basic profile. The VDSL frequency covers spectrum of the medium wave, short wave broadcast and amateur radio, and it will be interfered by the radio frequency of these radio signals. You can configure the notching breakpoints in the spectrum to reduce the radio signals within the frequency band so as to lower the interference from other signals on the line.

Command Format

```
set vdslline para rfi { start <0-4095> end <0-4095> } * 8 { start <0-4095> end <0-4095> } * 8
```

Parameter Description

Parameter	Description	Attribute
start <0-4095>	Starting value of notching frequency band. Value range: 0 to 4095; unit: tone.	Mandatory
end <0-4095>	Ending value of notching frequency band. Value range: 0 to 4095; unit: tone.	Mandatory

Command Example

Configure two notching breakpoints for the current VDSL line basic profile. The frequency band ranges are 180 to 220 tones, and 350 to 500 tones, respectively.

```
Admin\msan#set vdslline para rfi start 180 end 220 start 350 end 500
Admin\msan#
```

31.58 Configuring the Standard Profile of the VDSL Line Profile

Command Function

You can use this command to configure the standard profile of the VDSL line basic profile.

Command Format

```
set vdslline para stdPrf[ 8a|8b|8c|8d|12a|12b|17a|30a|all]
```

Parameter Description

Parameter	Description	Attribute
stdPrf[8a 8b 8c 8d 12a 12b 17a 30a all]	<p>A VDSL defined transmission profile. Each transmission profile defines a parameter set, including transmitted power, sub-channel bandwidth, maximum bandwidth and rate.</p> <ul style="list-style-type: none"> ◆ 8A: 8A standard profile ◆ 8B: 8B standard profile ◆ 8C: 8C standard profile ◆ 8D: 8D standard profile ◆ 12A: 12A standard profile ◆ 12B: 12B standard profile ◆ 17A: 17A standard profile ◆ 30A: 30A standard profile ◆ ALL: All the nine profiles above. 	Mandatory

Command Example

Set the standard profile of the VDSL line basic profile to "all".

```
Admin\msan#set vdslline para stdprf all
Admin\msan#
```

31.59 Configuring Shielding Breakpoints of the VDSL Line Profile

Command Function

You can use this command to configure shielding breakpoints of the VDSL line basic profile. The radio signal will be shielded within this frequency band. You can close the interference spectrum to avoid the interference on the line.

Command Format

```
set vdslline para tone{ start <0-4095> end <0-4095>} *8
```


Parameter Description

Parameter	Description	Attribute
start <0-4095>	Starting value of shielding frequency band. Value range: 0 to 4095; unit: tone.	Mandatory
end <0-4095>	Ending value of shielding frequency band. Value range: 0 to 4095; unit: tone.	Mandatory

Command Example

Configure two shielding breakpoints for the current VDSL line basic profile. The frequency band ranges are 180 to 220, and 350 to 500, respectively.

```
Admin\msan#set vdslline para tone start 180 end 220 start 350 end 500
Admin\msan#
```

31.60 Configuring a VDSL Custom PSD Profile

Command Function

You can use this command to configure a VDSL custom PSD profile. So the radio frequency interference and line-to-line cross interference can be avoided. The PSD profile can also eliminate or reduce the interference on the transmission performance, so as to improve the adaptability for the access environment.

Command Format

```
set vdslcpsd profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Configure a VDSL custom PSD profile named "ee".


```
Admin\msan#set vdslcpsd profile name ee
Admin\msan#
```

Configure a VDSL custom PSD profile whose ID is "1".

```
Admin\msan#set vdslcpsd profile id 1
Admin\msan#
```

31.61 Configuring a Downlink PSD Rule for a VDSL Custom PSD Profile

Command Function

You can use this command to configure a downlink PSD rule for the VDSL custom PSD profile. Thus, the signal interference on downlink lines can be reduced.

Command Format

```
set vdslcpsd para dn index <1-40> tone[ <33-859> | <1216-1961> | <2793-4081>]
value <value>
```

Parameter Description

Parameter	Description	Attribute
index <1-40>	VDSL custom PSD profile ID	Mandatory
tone[<33-859> <1216-1961> <2793-4081>]	Downlink PSD frequency band. Value range: 33 to 859, 1216 to 1961 or 2793 to 4081; unit: tone. The downlink PSD frequency band should be within one of the three ranges.	Mandatory
value <value>	Downlink PSD value. Value range: -120.0 to 0.0; unit: dBm/Hz; accuracy: 0.1.	Mandatory

Command Example

Configure a downlink PSD rule for the current VDSL custom PSD profile. Set the downlink PSD frequency band to 33 tones, and downlink PSD value to -60.0 dBm/Hz.

```
Admin\msan#set vdslcpsd para dn index 1 tone 33 value -60.0
Admin\msan#
```


31.62 Configuring an Uplink PSD Rule for a VDSL Custom PSD Profile

Command Function

You can use this command to configure an uplink PSD rule for the VDSL custom PSD profile. Thus, the signal interference on uplink lines can be reduced.

Command Format

```
set vdslcpsd para up index <1-16> tone[ <7-32> | <880-1196> | <1981-2773>] value  
<value>
```

Parameter Description

Parameter	Description	Attribute
index <1-40>	VDSL custom PSD profile ID	Mandatory
tone[<7-32> <880-1196> <1981-2773>]	Uplink PSD frequency band. Value range: 7 to 32, 880 to 1196 or 1981 to 2773; unit: tone. (The uplink PSD frequency band should be within one of the three ranges.)	Mandatory
value <value>	Uplink PSD value. Value range: -120.0 to 0.0; unit: dBm/Hz; accuracy: 0.1.	Mandatory

Command Example

Set an uplink PSD rule for the current VDSL custom PSD profile as below: the uplink PSD frequency band to 880 tones, the uplink PSD value to -50.0 dBm/Hz.

```
Admin\msan#set vdslcpsd para up index 1 tone 880 value -50  
Admin\msan#
```

31.63 Configuring the VDSL Power Back-off Profile

Command Function

You can use this command to configure a VDSL power back-off profile. This profile is used to reduce the transmitted power, close the interfered frequency band, reduce the cross interference on other DSL services of the neighboring lines, and enhance the stability of the VDSL2 service.

Command Format

```
set vdslpbo profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Create a VDSL power back-off profile named "ee".

```
Admin\msan#set vdslpbo profile name ee
Admin\msan#
```

Create a VDSL power back-off profile whose ID is "1".

```
Admin\msan#set vdslpbo profile id 1
Admin\msan#
```

31.64 Configuring the Mandatory Electronic Length for VDSL Power Back-off Profile

Command Function

You can use this command to configure the mandatory electronic length for the VDSL power back-off profile.

Command Format

```
set vdslpbo para elec-len <value> scalara <value> scalarb <value> scalarc
<value> mus <value> minfreq <0-2048> maxfreq <32-6956>
```


Parameter Description

Parameter	Description	Attribute
<code>elec-len <value></code>	Estimated value of line length. Value range: 0.0 to 255.5; unit: dB; accuracy: 0.1.	Mandatory
<code>scalara <value></code>	Model parameter A. Value range: -1.0 to 1.5; accuracy: 10E-8.	Mandatory
<code>scalarb <value></code>	Model parameter B. Value range: -1.0 to 1.5; accuracy: 10E-8.	Mandatory
<code>scalarc <value></code>	Model parameter C Value range: -1.0 to 1.5; accuracy: 10E-8.	Mandatory
<code>mus <value></code>	Minimum available power spectral density (PSD). Value range: -127.5 to 0.0; unit: dBm/Hz; accuracy: 0.1.	Mandatory
<code>minfreq <0-2048></code>	Minimum available frequency band. Value range: 0 and 2048; unit: tone.	Mandatory
<code>maxfreq <32-6956></code>	Maximum available frequency band. Value range: 32 and 6956; unit: tone.	Mandatory

Command Example

Set the mandatory electronic length to 0dB, the model parameter A to 0.02734400, the model parameter B to 0.98828100, the model parameter C to 0.01953100, the minimum available PSD to -90.3dBm/Hz, the minimum frequency band to 0, and the maximum frequency band to 580 for the current VDSL power back-off profile.

```
Admin\msan#set vdslpbo para elec-len 0 scalara 0.02734400 scalarb 0.98828100 scalarc
0.01953100 mus -90.3 minfreq 0 maxfreq 580
Admin\msan#
```

31.65 Configuring the Uplink Power Back-off Mode for the VDSL Power Back-off Profile

Command Function

You can use this command to configure the uplink power back-off mode for the VDSL power back-off profile.

Command Format

```
set vdslpbo para pbomodeup[ manual|auto|disable] us0a <value> us0b <value>
us1a <value> us1b <value> us2a <value> us2b <value> us3a <value> us3b <value>
{ elec-len <value>} *1
```

Parameter Description

Parameter	Description	Attribute
pbomodeup[manual auto disable]	Uplink power back-off mode. ◆ manual: Manual. ◆ auto: Automatic. ◆ disable: Disable the function.	Mandatory
us0a <value>	US0A parameters. Value range: 40.00 to 80.95. ◆ Unit: dBm/Hz. ◆ Accuracy: 0.01.	Mandatory
us0b <value>	US0B parameters. Value range: 0.00 to 40.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
us1a <value>	US1A parameters. Value range: 40.00 to 80.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
us1b <value>	US1B parameters. Value range: 0.00 to 40.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
us2a <value>	US2A parameters. Value range: 40.00 to 80.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
us2b <value>	US2B parameters. Value range: 0.00 to 40.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
us3a <value>	US3A parameters. Value range: 40.00 to 80.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
us3b <value>	US3B parameters. Value range: 0.00 to 40.95; unit: dBm/Hz; accuracy: 0.01.	Mandatory
elec-len <value>	Mandatory electronic length. Value range: 0.0 to 255.5; unit: dB; accuracy: 0.1.	Mandatory

Command Example

Set the uplink power back-off mode for the current VDSL power back-off profile.

```
Admin\msan#set vdslpbo para pbomodeup manual us0a 40 us0b 0 us1a 40 us1b 0 us2a 40
us2b 0 us3a 40 us3b 0 elec-len 0
Admin\msan#
```


31.66 Configuring a VDSL Service Profile

Command Function

You can use this command to configure a VDSL service profile. Bind a port to the service profile, and the port will control the line according to the transmission rules and rate limit defined in the profile.

Command Format

```
set vdslser profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Create a VDSL service profile named "ee".

```
Admin\msan#set vdslser profile name ee
Admin\msan#
```

Create a VDSL service profile whose ID is "1".

```
Admin\msan#set vdslser profile id 1
Admin\msan#
```

31.67 Configuring the Maximum Interleave Delay for the VDSL Service Profile

Command Function

You can use this command to configure the maximum uplink and downlink interleave delay for the VDSL service profile. According to sensitivity of packet loss and bit error on various services, different interleave delays can be set to meet users' multi-service requirements.

Command Format

```
set vdslser para delay up <0-63> dn <0-63>
```

Parameter Description

Parameter	Description	Attribute
up <0-63>	Maximum uplink interleave delay. Value range: 0 to 63; unit: ms. When the line type is "fast or interleave channel" or "fast and interleave channel", this parameter indicates the maximum ingress interleave delay. This parameter is valid only for these two types.	Mandatory
dn <0-63>	Maximum downlink interleave delay. Value range: 0 to 63; unit: ms. When the line type is "fast or interleave channel" or "fast and interleave channel", this parameter indicates the maximum egress interleave delay. This parameter is valid only for these two types.	Mandatory

Command Example

Set the maximum uplink interleave delay to 16ms, maximum downlink interleave delay to 16ms for the VDSL service profile.

```
Admin\msan#set vdslser para delay up 16 dn 16
Admin\msan#
```

31.68 Configuring the Minimum Impulse Noise Protection for the VDSL Service Profile

Command Function

You can use this command to configure the minimum uplink and downlink impulse noise protection for the VDSL service profile.

Command Format

```
set vdslser para min inp up <value> dn <value>
```


Parameter Description

Parameter	Description	Attribute
up <value>	Minimum uplink impulse noise protection. Mappings are described as below: ◆ 1 : 0 Symbol ◆ 2 : 0.5 Symbol ◆ 3 : 1 Symbol ◆ 4 : 2 Symbols ◆ 5 : 3 Symbols ◆ 6 : 4 Symbols ◆ 7 : 5 Symbols ◆ 8 : 6 Symbols ◆ 9 : 7 Symbols ◆ 10 : 8 Symbols ◆ 11 : 9 Symbols ◆ 12 : 10 Symbols ◆ 13 : 11 Symbols ◆ 14 : 12 Symbols ◆ 15 : 13 Symbols ◆ 16 : 14 Symbols ◆ 17 : 15 Symbols ◆ 18 : 16 Symbols	Mandatory
dn <value>	Minimum downlink impulse noise protection. Same as mappings for minimum uplink impulse noise protection (see above).	Mandatory

Command Example

Set the minimum uplink impulse noise protection to 3 Symbols, and minimum downlink impulse noise protection to 4 Symbols for the VDSL service profile.

```
Admin\msan#set vdslser para min inp up 3 dn 4
Admin\msan#
```

31.69 Viewing Port Enabling Status

Command Function

You can use this command to view the port enabling status.

Command Format

```
show port enableConfig <ifStr>
```

Parameter Description

Parameter	Description	Attribute
ifStr	The port list character string.	Mandatory

Command Example

View port enabling status of Port 1 in Slot 2.

```
admin\msan#show port enableconfig 2/1
slotNo      portNo      enableConfig
  2          1          disable
admin\msan#
```

Result Description

Parameter	Description
slotNo	Slot number.
portNo	Port number.
enableConfig	Enabling status.

31.70 Viewing Port Rate Limiting Profile Binding

Command Function

You can use this command to view the port rate limiting profile binding.

Command Format

```
show port rate-limit-profile-binding interface <if_list>
```

Parameter Description

Parameter	Description	Attribute
if_list	Port list.	Mandatory

Command Example

View the port rate limiting profile binding of Port 1 in Slot 2.

```
admin\msan#show port rate-limit-profile-binding interface 2/1
interface  profile id  profile name 2/1          0          --
admin\msan#
```

Result Description

Parameter	Description
interface	Slot number/port number
profile id	Profile ID.
profile name	Profile name.

31.71 Viewing the POTS Telephone Number

Command Function

You can use this command to view the POTS telephone number.

Command Format

```
show pots telephone number
```

Command Example

View POTS telephone number.

```
admin\msan#show pots telephone number
POTS Telephone Number Configuration -----
No.
Telephone Number
Type
-----
get POTS number configuration successfully.
admin\msan#
```


Result Description

Parameter	Description
No	Telephone number index.
Telephone Number	Telephone number.
Type	Type of the number.

31.72 Viewing the PVC Profile

Command Function

You can use this command to view the PVC profile.

Command Format

```
show pvc profile [ id|name|all ] { <idOrName> } *1
```

Parameter Description

Parameter	Description	Attribute
id name all	Profile ID/profile name/all profiles. Default: all.	Mandatory
idOrName	Specified ID or name	Mandatory

Command Example

View the PVC profile.

```
admin\msan#show pvc profile all
Profile name          DEFPVC.PRF Profile id          0
PvcNum                1 PvcIndex                0
Vpi                   1 Vci                   35
PvcIndex              1 Vpi                   0
Vci                   0
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	Profile ID
PvcNum	Quantity of PVC profiles

Parameter	Description
PvcIndex	PVC index
Vpi	Virtual path identifier
Vci	Virtual channel identifier

31.73 Viewing Binding Ports of the PVC Profile

Command Function

You can use this command to view the binding port of the PVC profile.

Command Format

```
show pvc profile attach interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
ifStr	Port list character string	Mandatory

Command Example

View the PVC profile bindings of Ports 1 to 8 in Slot 17.

```
admin\msan#show pvc profile attach interface 17/1-8
slotNO      portNo      profile id 17      1      0 17      2
0 17        3          0 17          4      0 17        5
0 17        6          0 17          7      0 17        8      0
admin\msan#
```

Result Description

Parameter	Description
slotNO	Slot number
portNo	Port number
profile id	Profile ID

31.74 Viewing Binding Ports of the PVC Policy

Command Function

You can use this command to view the binding port of the PVC policy.

Command Format

```
show pvc_policy_binding interface <interface>
```

Parameter Description

Parameter	Description	Attribute
interface	Port list character string	Mandatory

Command Example

View the PVC policy bindings of Ports 1 to 8 in Slot 17.

```
admin\msan#show pvc_policy_binding interface 17/1-8
***** slot    port 17    1
***** slot    port 17    2
***** slot    port 17    3
***** slot    port 17    4
***** slot    port 17    5
***** slot    port 17    6
***** slot    port 17    7
***** slot    port 17    8
*****
admin\msan#
```

31.75 Viewing the Queue Scheduling

Command Function

You can use this command to view the queue scheduling.

Command Format

```
show queue schedule interface <interface>
```


Parameter Description

Parameter	Description	Attribute
interface	Port list character string	Mandatory

Command Example

View the queue scheduling of Ports 1 to 8 in Slot 17.

```
admin\msan#show queue schedule interface 17/1-8
Interface   mode           weight 17/1
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/2
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/3
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/4
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/5
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/6
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/7
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1 17/8
sp+wrr      7 65535      6 65535      5 32   4 16   3 8   2 4   1 2   0 1
admin\msan#
```

Result Description

Parameter	Description
slotNO	Slot number
mode	Mode
weight	Weight value

31.76 Viewing the Port Rate Limiting Profile

Command Function

You can use this command to view the port rate limiting profile.

Command Format

```
show rate-limit profile [ id | name | all ] { <id_or_name> } * 1
```


Parameter Description

Parameter	Description	Attribute
id name all	Profile ID/profile name/all profiles. Default: all.	Mandatory
id_or_name	ID or name.	Mandatory

Command Example

View the port rate limiting profile.

```
admin\msan#show rate-limit profile all
port rate profile item: 1 id      name
us_sta      us_cir      dn_sta      dn_cir 0
PORTRATE.PRF          disable      64          disable      64
admin\msan#show rate-limit profile id 0
id is default prf.
admin\msan#
```

Result Description

Parameter	Description
id	Profile ID
name	Profile Name
us_sta	Uplink status
us_cir	Uplink value
dn_sta	Downlink status
dn_cir	Downlink value

31.77 Viewing the RFC2833 Configuration

Command Function

You can use this command to view the RFC2833 configuration.

Command Format

```
show rfc2833 configuration
```

Parameter Description

None

Command Example

View the RFC2833 configuration.

```
admin\msan#show rfc2833 configuration
RFC2833 Configuration
-----
RFC2833 Negotiation:  Manual
RFC2198 Negotiation:  Manual
Default RFC2833 PT:   97
Default RFC2198 PT:   96
get RFC2833 configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
RFC2833 Negotiation	RFC2833 negotiation
RFC2198 Negotiation	RFC2198 negotiation
Default RFC2833 PT	Default PT in RFC2833
Default RFC2198 PT	Default PT in RFC2198

31.78 Viewing Howler Tone Timeout Processing

Command Function

You can use this command to view the configuration of howler tone timeout processing.

Command Format

```
show roh timeout procession
```

Parameter Description

None

Command Example

View the configuration of howler tone timeout processing.

```
admin\msan#show roh timeout procession
```



```

ROH Timeout Procession Configuration
-----
ROH Timeout Operation:    Not Unregister
Terminal Service Status:  Service Over
get ROH timeout procession configuration successfully.
admin\msan#

```

Result Description

Parameter	Description
ROH Timeout Operation	Howler tone timeout processing
Terminal Service Status	Terminal service status

31.79 Viewing the VLAN Service

Command Function

You can use this command to view the VLAN service.

Command Format

```
show service vlan interface <ifStr> { pvc <pvcindex>} *1
```

Parameter Description

Parameter	Description	Attribute
ifStr	Port list character string	Mandatory
pvcindex	PVC index value	Optional

Command Example

Query VLAN service of Port 1 in Slot 17.

```

admin\msan#show service vlan interface 17/1
show vlan service of slot 17 port 1
*****pvc 0 *****
vlan          flag      tpid      vid      cos
cos copy tls vlan          disable  0x8100   0        0
enable service number:      0
admin\msan#

```


Result Description

Parameter	Description
vlan	VLAN name
flag	Identifier
tpid	VLAN TPID
vid	VLAN rule ID
cos	VLAN CoS
cos copy	Enabled status of cos copy
service number	Service number

31.80 Viewing Signal Tone Timeout Length Configuration

Command Function

You can use this command to view the signal tone timeout length configuration.

Command Format

```
show signal tone timeout configuration
```

Parameter Description

None

Command Example

View signal tone timeout length configuration.

```
admin\msan#show signal tone timeout configuration
Signal Tone Timeout Timers Configuration
-----
Busy Tone Time(s):          40 Dialing Tone Time(s):          60
ROH Tone Time(s):          60 Call Waiting Tone Time(s): 60
Ringing Tone Time(s):       60 Ringing Back Tone Time(s): 60
No Answer Tone Time(s):     60 Dialing Interval Time(s):  4
get signal tone timeout timers configuration successfully.
admin\msan#
```


Result Description

Parameter	Description
Busy Tone Time (s)	Busy tone timeout length (unit: s)
Dialing Tone Time (s)	Dialing tone timeout length (unit: s)
ROH Tone Time (s)	Howler tone timeout length (unit: s)
Call Waiting Tone Time (s)	Call waiting tone timeout length (unit: s)
Ringing Tone Time (s)	Ringing tone timeout length (unit: s)
Ringing Back Tone Time (s)	Ring back tone timeout length (unit: s)
No Answer Tone Time (s)	No answer tone time length (unit: s)
Dialing Interval Time (s)	Dialing tone interval timeout length (unit: s)

31.81 Viewing Broadcast Storm Configuration

Command Function

You can use this command to view the broadcast storm configuration.

Command Format

```
show storm-suppression <interface>
```

Parameter Description

Parameter	Description	Attribute
interface	Port list character string.	Mandatory

Command Example

View broadcast storm configuration of Ports 1 to 8 in Slot 17.

```
admin\msan#show storm-suppression 17/1-8
port: 17/1 port: 17/2 port: 17/3 port: 17/4
port: 17/5 port: 17/6 port: 17/7 port: 17/8
admin\msan#
```


31.82 Viewing a VLAN Profile

Command Function

You can use this command to view a VLAN profile.

Command Format

```
show vlan profile <name> { service <serviceid> } * 1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
serviceid	Service ID	Optional

Command Example

View a VLAN profile.

```
admin\msan#show vlan profile abc
profile name:      abc profile id:      1 vlan      flag
tpid      vid      cos      cos copy tls vlan      disable
0x8100      0      0      enable
service number:      0
admin\msan#
```

Result Description

Parameter	Description
vlan	VLAN name
flag	Identifier
tpid	VLAN TPID
vid	VLAN rule ID
cos	VLAN CoS
cos copy	Enabled status of cos copy
service number	Service number

31.83 Viewing Voice MD5 Authentication Configuration

Command Function

You can use this command to view the voice MD5 authentication configuration.

Command Format

```
show voice md5 authentication
```

Parameter Description

None

Command Example

View the voice MD5 authentication configuration.

```
admin\msan#show voice md5 authentication
Voice MD5 Authentication Configuration
-----
MD5 Switch:          Close
get voice md5 authentication configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
MD5 Switch	Authentication switch

31.84 Viewing Voice Timer Configuration

Command Function

You can use this command to view the voice timer configuration.

Command Format

```
show voice timer
```


Parameter Description

None

Command Example

View the voice timer configuration.

```
admin\msan#show voice timer
Voice Timer Configuration
-----
Max Waiting Time(s): 60 Start Timer(s):      16
Long Timer(s):      16 Short Timer(s):      4
Digital Map Notify:  Not Immediately
get voice timer configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
Max Waiting Time(s)	Maximum waiting time (unit: s)
Start Timer(s)	Starting timer (unit: s)
Long Timer(s)	Long timer (unit: s)
Short Timer(s)	Short timer (unit: s)
Digital Map Notify	Report when dialing matches a numbering scheme of the DigitMap.

31.85 Binding Traffic Policy to a Port

Command Function

You can use this command to bind traffic policy to a port.

Command Format

```
attach policy interface <interface> { up <upPId> <upRId> down <downPId>
<downRId>} * 8
```


Parameter Description

Parameter	Description	Attribute
interface	Port list character string	Mandatory
upPID	Uplink PID	Optional
upRId	Uplink RID	Optional
downPID	Downlink PID	Optional
downRId	Downlink RID	Optional

Command Example

Bind traffic policy to Port 1 in Slot 2.

```
admin\msan#attach policy interface 2/1
admin\msan#
```

31.86 Viewing Traffic Policy Bindings of Ports

Command Function

You can use this command to query traffic policy bindings of the ports.

Command Format

```
show port_policy_binding interface <interface>
```

Parameter Description

Parameter	Description	Attribute
interface	Port list character string.	Mandatory

Command Example

View traffic policy bindings of Ports 1 to 8 in Slot 17.

```
admin\msan#show port_policy_binding interface 17/1-8
*****
slot  port 17      1 slot  port 17      2
slot  port 17      3 slot  port 17      4
slot  port 17      5 slot  port 17      6
slot  port 17      7 slot  port 17      8
```



```
admin\msan#
```

31.87 Unbinding Traffic Policy from a Port

Command Function

You can use this command to unbind traffic policy from a port.

Command Format

```
detach policy interface <interface>
```

Parameter Description

Parameter	Description	Attribute
interface	Port list character string	Mandatory

Command Example

Unbind traffic policy from Port 1 in Slot 2.

```
admin\msan#detach policy interface 2/1  
admin\msan#
```

31.88 Configuring Voice Self-Exchanging Port Telephone Numbers in a Batch Manner

Command Function

You can use this command to configure voice self-exchanging port telephone numbers in a batch manner.

Command Format

```
set voice self_port telephone number <startNumber> step <numberStep>  
interface <ifStr>
```


Parameter Description

Parameter	Description	Attribute
startNumber	Starting number	Mandatory
numberStep	Step	Mandatory
ifStr	Port list character string	Mandatory

Command Example

Set the starting number to 1, step to 1 for Ports 1 to 8 in Slot 17.

```
admin\msan#set voice self_port telephone number 1 step 1 interface 17/1-8
set voice port configuration successfully(0).
admin\msan#
```

31.89 Configuring the Voice Service VLAN Name

Command Function

You can use this command to configure the name of the voice service VLAN.

Command Format

```
set voice vlan[ signalling|rtpstream] service name <serviceName>
```

Parameter Description

Parameter	Description	Attribute
signalling	Signaling VLAN	Mandatory
rtpstream	RTP stream VLAN	Mandatory
serviceName	Service name	Mandatory

Command Example

Set the name of the voice service VLAN to abc.

```
admin\msan#set voice vlan signalling service name abc
admin\msan#
```


31.90 Configuring a Voice Self-Exchanging Port Telephone Number

Command Function

You can use this command to configure a voice self-exchanging port telephone number.

Command Format

```
set voice_self_port_cfg slot <slotno> port <portno> phone <phonenum>
```

Parameter Description

Parameter	Description	Attribute
slotno	Slot number	Mandatory
portno	Port number	Mandatory
phonenum	Telephone number	Mandatory

Command Example

Set the voice self-exchanging port telephone number to 1 for Port 1 in Slot 1.

```
admin\msan#set voice_self_port_cfg slot 1 port 1 phone 1
admin\msan#
```

31.91 Enabling or Disabling the Voice Self Switch

Command Function

You can use this command to enable or disable the voice self switch.

Command Format

```
set voice_self_switch[ enable|disable]
```

Parameter Description

Parameter	Description	Attribute
enable	Enable	Optional
disable	Disable	Optional

Command Example

Disable and view the voice self switch function.

```
admin\msan#set voice_self_switch disable
admin\msan#show voice_self_switch
voice_self_switch:  disable
admin\msan#
```

Enable and view the voice self switch.

```
admin\msan#set voice_self_switch enable
admin\msan#show voice_self_switch
voice_self_switch:  enable
admin\msan#
```

31.92 Viewing Loop Detection

Command Function

You can use this command to view the loop detection.

Command Format

```
show loop detect interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
ifStr	Port list character string	Mandatory

Command Example

Query loop detection of Port 1 in Slot 2.

```
admin\msan#show loop detect interface 2/1
slot    port    detect    auto-recovery
2       1       enable    enable
admin\msan#
```


Result Description

Parameter	Description
slot	Slot number
port	Port number
detect	Enable the loop detection.
auto-recovery	Enable the loop recovery detection.

31.93 Viewing the MAC Address of MSAN Card's Port

Command Function

You can use this command to view the MAC address of the MSAN card's port.

Command Format

```
show msan_mac slot <slotno> link <linkNo>
```

Parameter Description

Parameter	Description	Attribute
slotno	Slot number	Mandatory
linkNo	Port connection number	Mandatory

Command Example

Query the MAC address of Port 1 in Slot 5.

```
admin\msan#show msan_mac slot 5 link 1
----- PON MAC ADDRESS, ITEM=1
----- SLOT 5 PON 1 PVC_ITEM = 8
PVC_INDEX 0 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 1 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 2 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 3 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 4 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 5 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 6 : total_mac_item = 0, report_mac_item = 0
PVC_INDEX 7 : total_mac_item = 0, report_mac_item = 0
admin\msan#
```


Result Description

Parameter	Description
slot	Slot number
pon	Port number
PVC_ITEM	Total number of PVC items
PVC_INDEX	PVC index value
total_mac_item	Total number of MAC addresses of the port learned
report_mac_item	Total number of actual reported items

31.94 Viewing NGN Protocol Type

Command Function

You can use this command to view the NGN protocol type.

Command Format

```
show ngn_protocol_type
```

Parameter Description

None

Command Example

View the NGN protocol type.

```
admin\msan#show ngn_protocol_type
ngn_protocol_type: none
admin\msan#
```

31.95 Querying the Port Call Statistics Information

Command Function

You can use this command to query the port call statistics information.

Command Format

```
show port call statistics information interface <ifStr>
```


Parameter Description

Parameter	Description	Attribute
ifStr	Port list character string	Mandatory

Command Example

Query port call statistics information of Port 1 in Slot 5.

```
admin\msan#show port call statistics information interface 5/1
Port Call Statistics Information
-----
Slot No./Port No.: 5/1 The Last Call Time(s):
Total Calls: 0          Total Call Times (s): 0
Total Off-Hooks: 0
get port call statistics info successfully
admin\msan#
```

Result Description

Parameter	Description
Slot No./Port No.	Slot number/port number
The Last Call Time (s)	The last call duration (unit: s)
Total Calls	Total call duration (unit: s)
Total Off-Hooks	Total number of off-hooks
Total On-Hooks	Total number of on-hooks

31.96 Querying POTS Common Parameters

Command Function

You can use this command to query POTS common parameters.

Command Format

```
show pots general para configuration
```

Parameter Description

None

Command Example

Query POTS common parameters.

```
admin\msan#show pots general para configuration
POTS General Parameters Configuration
-----
Pulse Width(ms):          40 Pulse Interval(ms):          60
Flash Width(ms):          90 Bill Type:                  16KC
Bill Pulse Voltage(0.1V): 20 POTS Impedance Mode(Ohm):    600
Off Hook Check Time(ms):  20 On Hook Check Time(ms):     200
Send CODEC Gain(0.1dB):   0 Recv CODEC Gain(0.1dB):      -35
get POTS general para configuration successfully
admin\msan#
```

Result Description

Parameter	Description
Pulse Width(ms)	Pulse width (unit: ms)
Pulse Interval (ms)	Pulse interval (unit: ms)
Flash Width(ms)	Flash width (unit: ms)
Bill Type	Billing type
Bill Pulse Voltage(0.1V)	Metering pulse amplitude
POTS Impedance Mode (Ohm)	POTS impedance mode
Off Hook Check Time (ms)	Off-hook detection time length
On Hook Check Time (ms)	On-hook detection time length
Send CODEC Gain (0.1dB)	Send CODEC gain
Recv CODEC Gain (0.1dB)	Receive CODEC gain

31.97 Querying RTP Resource Configuration Profile

Command Function

You can use this command to query the RTP resource configuration profile.

Command Format

```
show rtp resource profile
```


Parameter Description

None

Command Example

Query the RTP resource configuration profile.

```
admin\msan#show rtp resource profile
RTP Resource Profile Configuration
-----
Fixed of the Name: RTP/ Begin of the Name: 4000
End of the Name: 9000 Step of the Name: 1
Name Filled: Yes
get RTP resource profile configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
Fixed of the Name	Fixed part of the RTP name
Begin of the Name	Starting value of the RTP name's variable part
End of the Name	Ending value of the RTP name's variable part
Step of the Name	Step of the RTP name's variable part
Name Filled	Check whether the RTP name is filled or not.

31.98 Querying Signaling Packet Statistics Information

Command Function

You can use this command to query signaling packet statistics information.

Command Format

```
show signalling packets statistics information
```

Parameter Description

None

Command Example

Query signalling packet statistics information.

```
admin\msan#show signalling packets statistics information
Signalling Packets Statistics Information
-----
NGN Request Packets Rx:      0              Tx:  0
NGN Confirm Packets Rx:     0              Tx:  0
Loss Signalling Packets:    0 ReTrans Signalling Packets:  0
Wrong Signalling Packets:   0 Unknown Signalling Packets:  0
RTP Stream Packets Rx:      0              Tx:  0
RTP Stream Bytes Rx:        0              Tx:  0
Loss Packets Ratio(%):      0 Average Network Delay(ms):  0
Average Jitter Delay(ms):   0 Bandwidth Usage(Kbps):      0
get signalling packets statistics info successfully.
admin\msan#
```

Result Description

Parameter	Description
NGN Request Packets Rx	Total number of received NGN packets
NGN Confirm Packets Rx	Total number of received NGN acknowledgment packets
Loss Signalling Packets	Total number of loss signaling packets
Wrong Signalling Packets	Total number of wrong signaling packets
Unknown Signalling Packets	Total number of unknown signaling packets
RTP Stream Packets Rx	Total number of received RTP voice packets
RTP Stream Bytes Rx	Total number of received RTP voice bytes
Loss Packets Ratio(%)	Packet loss rate (%)
Average Network Delay (ms)	Average network delay (unit: ms)
Average Jitter Delay (ms)	Average jitter delay (unit: ms)
Bandwidth Usage (Kbps)	Occupied bandwidth (unit: Kbps)

31.99 Querying SIP Advanced Configuration

Command Function

You can use this command to query SIP advanced configuration.

Command Format

```
show sip advanced configuration
```

Parameter Description

None

Command Example

Query SIP advanced configuration.

```
admin\msan#show sip advanced configuration
SIP Advanced Configuration
-----
CW/CONF Mode:          Common Conference URI:  #
Escape Mode:          Enable Caller ID Head Field:  P-Asserted-ID
get SIP Advanced configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
CW/CONF Mode	Call waiting or three-party conference mode
Conference URI	Conference mixing audio URI
Escape Mode	"#" escaping switch
Caller ID Head Field	Header field of the caller number

31.100 Querying SIP Digitmap Configuration

Command Function

You can use this command to query SIP digitmap configuration.

Command Format

```
show sip digital map
```

Parameter Description

None

Command Example

Query SIP digitmap configuration.

```
admin\msan#show sip digital map
get SIP server configuration successfully.
SIP Digital Map Configuration
-----
Digital Map Length:  27 [ 0-9ABCD] .|[ EF][ 0-9ABCDEF] .
get SIP digital map configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
Digital Map Length	SIP digitmap length

31.101 Querying SIP Server Configuration

Command Function

You can use this command to query SIP server configuration.

Command Format

```
show sip server
```

Description

None

Command Example

Query SIP server configuration.

```
admin\msan#show sip server
SIP Server Configuration
-----
Proxy Server Addr:  Proxy Server Port:                5060
Backup Proxy Server Addr:  Backup Proxy Server Port:    5060
Proxy Server Register Addr:  Proxy Server Register Port:    5060
Backup Proxy Server Register Addr:  Backup Proxy Server Register Port:  5060
Register Interval(s):                3600
```



```

Heartbeat:                               Initiative
Heartbeat Interval(s):                   30 Heartbeat Timeouts:
Heartbeat Mode:                           By Device
get SIP server configuration successfully.
admin\msan#

```

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Result Description

Parameter	Description
Proxy Server Addr	Main proxy server address
Proxy Server Port	Main proxy server port
Backup Proxy Server Addr	Backup proxy server address
Backup Proxy Server Port	Backup proxy server port
Proxy Server Register Addr	Main proxy server registration address
Proxy Server Register Port	Main proxy server registration port
Backup Proxy Server Register Addr	Backup proxy server registration address
Backup Proxy Server Register Port	Backup proxy server registration port
Register Interval (s)	Registration refresh interval
Heartbeat	Heartbeat switch
Heartbeat Interval (s)	Heartbeat interval (unit: s)
Heartbeat Timeouts	Heartbeat timeout times
Heartbeat Mode	Heartbeat mode

31.102 Querying SIP User Call Profile Configuration

Command Function

You can use this command to query the SIP user call profile configuration.

Command Format

```
show sip user call profile [ id|name|all] { <IDorName> } *1
```

Parameter Description

Parameter	Description	Attribute
id name all	Profile ID/profile name/all profiles. Default: all.	Mandatory
IDorName	Specified ID or name	Mandatory

Command Example

Query the SIP user call profile configuration.

```
admin\msan#show sip user call profile all
SIP User Call Profile Configuration
-----
Profile ID/Name:      0/Default Call ID Type:      FSK-SDMF
Call Waiting:         Disable Busy Forward:         Disable
Ring Forward:         Disable Force Forward:         Disable
Forward Phone Number: Call Conference:         Disable
Polarity Reverse:     Enable
get SIP user call profile configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
Profile ID/Name	Profile ID/profile name
Call ID Type	Caller ID display type
Call Waiting	Call waiting function
Busy Forward	Call forwarding function in case of busy calls
Ring Forward	Call forwarding function in case of ringing timeout
Force Forward	Forced call forwarding function
Forward Phone Number	Destination phone number that is forwarded to
Call Conference	Three-party calling
Polarity Reverse	Polarity reversal

31.103 Querying Feed Voltage and Current Configuration of POTS Port

Command Function

You can use this command to query feed voltage and current configuration of POTS port.

Command Format

```
show slot <slotNo> pots port feed voltage and current configuration
```


Parameter Description

Parameter	Description	Attribute
slotNo	Slot number	Mandatory

Command Example

Query feed voltage and current configuration of POTS port in Slot 2.

```
admin\msan#show slot 2 pots port feed voltage and current configuration
Slot 2 POTS Port Feed Voltage & Current Configuration
-----
PortNo  Voltage(V)  Current (mA)
-----
get slot 2 POTS port feed voltage & current configuration successfully.
admin\msan#
```

Result Description

Parameter	Description
PortNo	Port number
Voltage (V)	Voltage (unit: V)
Current (mA)	Current (unit: mA)

31.104 Querying the Subscriber Internal Line Test Result

Command Function

You can use this command to query the result of the subscriber internal line test.

Command Format

```
show test 112 inline result interface slotNo <slot_no> portNo <port_no>
```

Parameter Description

Parameter	Description	Attribute
slot_no	Slot number	Mandatory
port_no	Port number	Mandatory

Command Example

Query the result of subscriber internal line test for Port 1 in Slot 5.

```
admin\msan#show test 112 inline result interface slotNo 5 portNo 1
Inline Test 112 Result
=====
Slot No:  5, Port No:  1
-----
Test Type:          No Force Test Status:      Waiting Test Result:      Success
Refuse Reason:      Invalid refuse reason Signal Tone Status:          Normal
Feeder Voltage Status:          Normal Loop Current Status:          Normal
Loop Current (A): Feeder Voltage (V): Signal Tone Volume (dB):
Signal Tone Frequency (Hz): Ringing Current Voltage (V):
Ringing Current Status:          Normal
get inline test 112 result successfully.
admin\msan#
```

Result Description

Parameter	Description
Slot No	Slot number
Port No	Port number
Test Type	Test type
Test Status	Test status
Test Result	Test result
Refuse Reason	Reasons for rejection
Signal Tone Status	Signal tone status
Feeder Voltage Status	Feed voltage status
Loop Current Status	Loop current status
Loop Current (A)	Loop current
Feeder Voltage (V)	Feed voltage
Signal Tone Volume (dB)	Signal tone level (unit: dB)
Signal Tone Frequency (Hz)	Signal tone frequency (unit: Hz)
Ringing Current Voltage (V)	Ringing current voltage
Ringing Current Status	Ringing current status

31.105 Querying the Subscriber External Line Test Result

Command Function

You can use this command to query the result of the subscriber external line test.

Command Format

```
show test 112 outline result slot <slot_no> port <port_no>
```

Parameter Description

Parameter	Description	Attribute
slot_no	Slot number	Mandatory
port_no	Port number	Mandatory

Command Example

Query the result of subscriber external line test for Port 1 in Slot 5.

```
admin\msan#show test 112 outline result slot 5 port 1
Outline Test 112 Result
=====
Slot No:  5, Port No:  1
-----
Test Type:          No Force Test Status:      Waiting Test Result:      Success
Refuse Reason:      Invalid refuse reason Port Status:      Normal
A->GND DC Voltage(V): B->GND DC Voltage(V): A->B DC Voltage(V):
A->GND Insulation Resistance(Ohm): B->GND Insulation Resistance(Ohm):
A->B Insulation Resistance(Ohm): A->B Polarity Reversal Resistance(Ohm):
A->GND Capacitance(pF): B->GND Capacitance(pF):
A->B Capacitance(pF): A->GND AC Voltage(V):
B->GND AC Voltage(V): A->B AC Voltage(V): A->B Loop Resistance(Ohm):
get outline test 112 result successfully.
admin\msan#
```

Result Description

Parameter	Description
Slot No	Slot number
Port No	Port number

Parameter	Description
Test Type	Test type
Test Status	Test status
Test Result	Test result
Refuse Reason	Reasons for rejection
A->GND DC Voltage (V)	DC voltage from A to ground (unit: V)
B->GND DC Voltage (V)	DC voltage from B to ground (unit: V)
A->B DC Voltage (V)	DC voltage between A and B (unit: V)
A->GND Insulation Resistance (Ohm)	Insulation resistance from A to ground (unit: Ohm)
B->GND Insulation Resistance (Ohm)	Insulation resistance from B to ground (unit: Ohm)
A->B Insulation Resistance (Ohm)	Insulation resistance between A and B (unit: Ohm)
A->B Polarity Reversal Resistance (Ohm)	Polarity reversal resistance between A and B (unit: Ohm)
A->GND Capacitance (pF)	Capacitance from A to ground (unit: pF)
B->GND Capacitance (pF)	Capacitance from B to ground (unit: pF)
A->B Capacitance (pF)	Capacitance between A and B (unit: pF)
A->GND AC Voltage (V)	AC voltage from A to ground (unit: V)
B->GND AC Voltage (V)	AC voltage from B to ground (unit: V)
A->B AC Voltage (V)	AC voltage between A and B (unit: V)
A->B Loop Resistance (Ohm)	Loop resistance between A and B (unit: Ohm)

31.106 Adding a VDSL Line Profile

Command Function

You can use this command to add a VDSL line profile.

Command Format

```
add vdslLine profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory

Command Example

Add a VDSL line profile named "abc".

```
admin\msan#add vdslLine profile abc
admin\msan#show vdslline profile name abc
Profile name          abc Profile id          1
portmode              ptm Standard Profile    255
Psd Shape             21 maxTxPowerDn          20.5
maxTxPowerUp          14.5
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
portmode	Port mode
Standard Profile	Standard profile
Psd Shape	Power spectral density mask
maxTxPowerDn	Maximum downlink transmitting power
maxTxPowerUp	Maximum uplink transmitting power

31.107 Adding a VDSL Custom PSD Profile

Command Function

You can use this command to add a VDSL custom PSD profile.

Command Format

```
add vdslcpsd profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Optional

Command Example

Add a VDSL custom PSD line profile named "abc".

```
admin\msan#add vdslcpsd profile abc
admin\msan#show vdslcpsd profile name abc
Profile name          abc Profile id          1
Up PSD num           0 Dn PSD num           0
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
Up PSD num	Number of uplink PSD profiles.
Dn PSD num	Number of downlink PSD profiles.

31.108 Adding a VDSL Extension Profile

Command Function

You can use this command to add a VDSL extension profile.

Command Format

```
add vdslextra profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Optional

Command Example

Add a VDSL extension profile named "abc".

```
admin\msan#add vdslextra profile abc
admin\msan#show vdslextra profile name abc
Profile name          abc Profile id          1
Vectoring Enable      enable annexUs0          annexA (G.992.5)
```



```
PMSF                               disable
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
Vectoring Enable	Vectoring enabled
annexUs0	US0 type
PMSF	Forced power management state enabled

31.109 Adding a VDSL Retransmission Profile

Command Function

You can use this command to add a VDSL retransmission profile.

Command Format

```
add vdslginp profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Optional

Command Example

Add a VDSL retransmission profile named "abc".

```
admin\msan#add vdslginp profile abc
admin\msan#show vdslginp profile name abc
Profile name          abc Profile id          1
dn Retran Mode        forbid
up Retran Mode        forbid
dn max delay          0                      ms
up max delay          0                      ms
G.INP dn INPmin       0.0                  symbol
G.INP up INPmin       0.0                  symbol
```



```

REIN enable                disable
dn ETRmin                  256                Kbps
dn ETRmax                  100000             Kbps
dn NDRmax                  100000             Kbps
up ETRmin                  256                Kbps
up ETRmax                  100000             Kbps
up NDRmax                  100000             Kbps
dn ROC Margin              0                dB
up ROC Margin              0                dB
dn ROC INPmin              0.0              symbol
up ROC INPmin              0.0              symbol
dn MSGmin                  16                Kbps
up MSGmin                  16                Kbps
admin\msan#

```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
dn Retran Mode	Downlink retransmission mode
up Retran Mode	Uplink retransmission mode
dn max delay	Maximum downlink retransmission delay
G.INP dn INPmin	Minimum downlink retransmission impulse noise protection
G.INP up INPmin	Minimum uplink retransmission impulse noise protection
REIN enable	Repeated impulse noise protection enabled
dn ETRmin	Minimum expected downlink throughput
dn ETRmax	Maximum expected downlink throughput
dn NDRmax	Downlink user rate
up ETRmin	Minimum expected uplink throughput
up ETRmax	Maximum expected uplink throughput
up NDRmax	Uplink user rate
dn ROC Margin	Downlink ROC channel noise margin
up ROC Margin	Uplink ROC channel noise margin
dn ROC INPmin	Downlink ROC impulse noise protection
up ROC INPmin	Uplink ROC impulse noise protection
dn MSGmin	Minimum downlink message overhead rate
up MSGmin	Minimum uplink message overhead rate

31.110 Adding a VDSL Power Back-off Profile

Command Function

You can use this command to add a VDSL power back-off profile.

Command Format

```
add vdslpbo profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Optional

Command Example

Add a VDSL power back-off profile named "abc".

```
admin\msan#add vdslpbo profile abc
admin\msan#show vdslpbo profile name abc
Profile name          abc Profile id          1
upPBOMode            disable
DPBO esel            0.0                      dB
DPBO Scalar A        0.02734375
DPBO Scalar B        0.98828125
DPBO Scalar C        0.01953125
DPBO MUS             -90.0                      dBm/Hz
DPBO Span Min Frequency 0                      tone
DPBO Span Max  Frequency 511                  tone
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
upPBOMode	Uplink power back-off mode
DPBO esel	Electronic length
DPBO Scalar A	Model parameter A
DPBO Scalar B	Model parameter B

Parameter	Description
DPBO Scalar C	Model parameter C
DPBO MUS	Minimum available power spectral density
DPBO Span Min Frequency	Minimum frequency band
DPBO Span Max Frequency	Maximum frequency band

31.111 Adding a VDSL Service Profile

Command Function

You can use this command to add a VDSL service profile.

Command Format

```
add vdslser profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Optional

Command Example

Add a VDSL service profile named "abc".

```
admin\msan#add vdslser profile abc
admin\msan#show vdslser profile name abc
Profile name          abc Profile id          1
upRateMode            adaptAtStart
downRateMode          adaptAtStart
Target SNRM Dn        6.0                      dB
MaxSNRMDnMode         0
Max SNRM Dn           31.0                      dB
Min SNRM Dn           0.0                      dB
Target SNRM Up        6.0                      dB
MaxSNRMUpMode         0
Max SNRM Up           31.0                      dB
Min SNRM Up           0.0                      dB
Min Rate Dn           64                      kbit/s
Min Rate Up           64                      kbit/s
```



```
Max Interleave Delay Dn 16 ms
Max InterleaveDelay Up 16 ms
Min INP Dn 1
Min INP Up 1
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
upRateMode	Uplink rate mode
downRateMode	Downlink rate mode
Target SNRM Dn	Downlink target signal-to-noise ratio margin
MaxSNRMDnMode	Maximum downlink signal-to-noise ratio margin mode
Max SNRM Dn	Maximum downlink signal-to-noise ratio margin
Min SNRM Dn	Minimum downlink signal-to-noise ratio margin
Target SNRM Up	Uplink target signal-to-noise ratio margin
MaxSNRMUpMode	Maximum uplink signal-to-noise ratio margin mode
Max SNRM Up	Maximum uplink signal-to-noise ratio margin
Min SNRM Up	Minimum uplink signal-to-noise ratio margin
Min Rate Dn	Minimum downlink rate
Min Rate Up	Minimum uplink rate
Max Interleave Delay Dn	Maximum downlink interleave delay
Max InterleaveDelay Up	Maximum uplink interleave delay
Min INP Dn	Minimum downlink impulse noise protection
Min INP Up	Minimum uplink impulse noise protection

31.112 Adding a VDSL Virtual Noise Profile

Command Function

You can use this command to add a VDSL virtual noise profile.

Command Format

```
add vdslvn profile <name> { id <id> } *1
```


Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Optional

Command Example

Add a VDSL virtual noise profile named "abc".

```
admin\msan#add vdslvn profile abc
admin\msan#show vdslvn profile name abc
Profile name          abc
Profile id            1
VN Up num             0
VN Dn num             0
admin\msan#
```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	ID number
VN Up num	Number of uplink virtual noise breakpoints
VN Dn num	Number of downlink virtual noise breakpoints

31.113 Binding a VDSL Line Profile to a Port

Command Function

You can use this command to bind a VDSL line profile to a port.

Command Format

```
attach vdslLine profile [ id|name] <idOrName> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory

Parameter	Description	Attribute
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind a VDSL line profile to Port 1 in Slot 2.

```
admin\msan#attach vdslLine profile name abc interface 2/1
admin\msan#
```

31.114 Binding a VDSL Custom PSD Profile to a Port

Command Function

You can use this command to bind a VDSL custom PSD profile to a port.

Command Format

```
attach vdslcpsdprofile[ id|name] <idOrName> interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind a VDSL custom PSD profile to Port 1 in Slot 2.

```
admin\msan#attach vdslcpsd profile name abc interface 2/1
admin\msan#
```


31.115 Binding a VDSL Extension Profile to a Port

Command Function

You can use this command to bind a VDSL extension profile to a port.

Command Format

```
attach vdslextra profile[ id|name] <idOrName> interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind a VDSL extension profile to Port 1 in Slot 2.

```
admin\msan#attach vdslextra profile name abc interface 2/1
admin\msan#
```

31.116 Binding a VDSL Retransmission Profile to a Port

Command Function

You can use this command to bind a VDSL retransmission profile to a port.

Command Format

```
attach vdslginp profile[ id|name] <idOrName> interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory

Parameter	Description	Attribute
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind a VDSL retransmission profile to Port 1 in Slot 2.

```
admin\msan#attach vdslginp profile name abc interface 2/1
admin\msan#
```

31.117 Binding a VDSL Power Back-off Profile to a Port

Command Function

You can use this command to bind a VDSL power back-off profile to a port.

Command Format

```
attach vdslpbo profile[ id|name] <idOrName> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind the VDSL power back-off profile named "abc" to Port 1 in Slot 2.

```
admin\msan#attach vdslpbo profile name abc interface 2/1
admin\msan#
```


31.118 Binding a VDSL Service Profile to a Port

Command Function

You can use this command to bind a VDSL service profile to a port.

Command Format

```
attach vdslser profile[ id|name] <idOrName> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind a VDSL service profile named "abc" to Port 1 in Slot 2.

```
admin\msan#attach vdslser profile name abc interface 2/1
admin\msan#
```

31.119 Binding a VDSL Virtual Noise Profile to a Port

Command Function

You can use this command to bind a VDSL virtual noise profile to a port.

Command Format

```
attach vdslvn profile[ id|name] <idOrName> interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory

Parameter	Description	Attribute
idOrName	Specified profile name or ID	Mandatory
ifStr	Port parameter list	Mandatory

Command Example

Bind the VDSL virtual noise profile named "abc" to Port 1 in Slot 2.

```
admin\msan#attach vdslvn profile name abc interface 2/1
admin\msan#
```

31.120 Deleting a VDSL Line Profile

Command Function

You can use this command to delete a VDSL line profile.

Command Format

```
delete vdslLine profile [ id|name ] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL line profile named "abc".

```
admin\msan#delete vdslLine profile name abc
admin\msan#
```

31.121 Deleting a VDSL Custom PSD Profile

Command Function

You can use this command to delete a VDSL custom PSD profile.

Command Format

```
delete vdslcpsd profile[ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL custom PSD profile named "abc".

```
admin\msan#delete vdslcpsd profile name abc
admin\msan#
```

31.122 Deleting a VDSL Extension Profile

Command Function

You can use this command to delete a VDSL extension profile.

Command Format

```
delete vdslextra profile[ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL extension profile named "abc".

```
admin\msan#delete vdslextra profile name abc
admin\msan#
```


31.123 Deleting a VDSL Retransmission Profile

Command Function

You can use this command to delete a VDSL retransmission profile.

Command Format

```
delete vdslginp profile [ id | name ] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL retransmission profile named "abc".

```
admin\msan#delete vdslginp profile name abc
admin\msan#
```

31.124 Deleting a VDSL Power Back-off Profile

Command Function

You can use this command to delete a VDSL power back-off profile.

Command Format

```
delete vdslpbo profile [ id | name ] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL power back-off profile named "abc".

```
admin\msan#delete vdslpbo profile name abc
admin\msan#
```

31.125 Deleting a VDSL Service Profile

Command Function

You can use this command to delete a VDSL service profile.

Command Format

```
delete vdslser profile[ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
name	Profile name	Mandatory
id	ID number	Mandatory
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL service profile named "abc".

```
admin\msan#delete vdslser profile name abc
admin\msan#
```

31.126 Deleting a VDSL Virtual Noise Profile

Command Function

You can use this command to delete a VDSL virtual noise profile.

Command Format

```
delete vdslvn profile[ id|name] <idOrName>
```


Parameter Description

Parameter	Description	Attribute
name	Profile name	Optional
id	ID number	Optional
idOrName	Specified profile name or ID	Mandatory

Command Example

Delete a VDSL virtual noise profile named "abc".

```
admin\msan#delete vdslvn profile name abc
admin\msan#
```

31.127 Disabling Loop Detection Function

Command Function

You can use this command to disable the loop detection function.

Command Format

```
set loop detect disable interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Disable the loop detection function for Port 1 in Slot 18.

```
Admin\msan#set loop detect disable interface 18/1
Admin\msan#
```


31.128 Enabling or Disabling Loop Detection Auto-Discovery Function

Command Function

You can use this command to enable or disable the loop detection enabling auto-recovery function.

Command Format

```
set loop detect enable auto-recovery[ enable|disable] interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
[enable disable]	Enable or disable.	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Enable the loop detection enabling auto-discovery function for Port 1 in Slot 18.

```
Admin\msan#set loop detect enable auto-recovery enable interface 18/1
Admin\msan#
```

Disable the loop detection enabling auto-discovery function for Port 1 in Slot 18.

```
Admin\msan#set loop detect enable auto-recovery disable interface 18/1
Admin\msan#
```

31.129 Distributing or Erasing a DSP Configuration Profile

Command Function

You can use this command to distribute or erase a DSP configuration profile.

Command Format

```
[ distribute|erase] dsp profile
```


Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute a DSP configuration profile.

```
Admin\msan#distribute dsp profile  
distribute DSP profile configuration successfully.  
Admin\msan#
```

Erase a DSP configuration profile.

```
Admin\msan#erase dsp profile  
erase DSP profile configuration successfully.  
Admin\msan#
```

31.130 Distributing or Erasing the RFC2833 Configuration

Command Function

You can use this command to distribute or erase the RFC2833 configuration.

Command Format

```
[ distribute|erase] rfc2833 configuration
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the RFC2833 configuration.

```
Admin\msan#distribute rfc2833 configuration  
distribute RFC2833 configuration successfully.  
Admin\msan#
```


Erase the RFC2833 configuration.

```
Admin\msan#erase rfc2833 configuration  
erase RFC2833 configuration successfully.  
Admin\msan#
```

31.131 Distributing or Erasing the MGC Configuration

Command Function

You can use this command to distribute or erase the MGC configuration.

Command Format

```
[ distribute|erase] mgc configuration
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the MGC configuration.

```
Admin\msan#distribute mgc configuration  
distribute MGC configuration successfully.  
Admin\msan#
```

Erase the MGC configuration.

```
Admin\msan#erase mgc configuration  
erase MGC configuration successfully.  
Admin\msan#
```


31.132 Distributing or Erasing the RTP Resource Configuration Profile

Command Function

You can use this command to distribute or erase the RTP resource configuration profile.

Command Format

```
[ distribute|erase] rtp resource profile
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the RTP configuration.

```
Admin\msan#distribute rtp resource profile  
Admin\msan#
```

Erase the RTP configuration.

```
Admin\msan#erase rtp resource profile  
Admin\msan#
```

31.133 Distributing or Erasing the SIP Advanced Configuration

Command Function

You can use this command to distribute or erase the SIP advanced configuration.

Command Format

```
[ distribute|erase] sip advanced configuration
```


Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the SIP advanced configuration.

```
Admin\msan#distribute sip advanced configuration
distribute SIP advanced configuration successfully.
Admin\msan#
```

Erase the SIP advanced configuration.

```
Admin\msan#erase SIP advanced configuration
erase SIP advanced configuration successfully.
Admin\msan#
```

31.134 Distributing or Erasing the SIP Digitmap Configuration

Command Function

You can use this command to distribute or erase the SIP digitmap configuration.

Command Format

```
[ distribute|erase] sip digital map
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the SIP digitmap configuration.

```
Admin\msan#distribute sip digital map
distribute sip digital map configuration successfully.
Admin\msan#
```


Erase the SIP digitmap configuration.

```
Admin\msan#erase sip digital map  
erase sip digital map configuration successfully.  
Admin\msan#
```

31.135 Distributing or Erasing the SIP Server Configuration

Command Function

You can use this command to distribute or erase the SIP server configuration.

Command Format

```
[ distribute|erase] sip server
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the SIP server configuration.

```
Admin\msan#distribute sip server  
distribute sip server configuration successfully.  
Admin\msan#
```

Erase the SIP server configuration.

```
Admin\msan#erase sip server  
erase sip server configuration successfully.  
Admin\msan#
```


31.136 Distributing or Erasing the SIP User Call Configuration Profile

Command Function

You can use this command to distribute or erase the SIP user call configuration profile.

Command Format

```
[ distribute|erase] sip user call profile
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute the SIP user call configuration profile.

```
Admin\msan#distribute sip user call profile  
distribute SIP user call profile configuration successfully.  
Admin\msan#
```

Erase the SIP user call configuration profile.

```
Admin\msan#erase sip user call profile  
erase SIP user call profile configuration successfully.  
Admin\msan#
```

31.137 Distributing or Erasing Basic Voice Configuration

Command Function

You can use this command to distribute or erase basic voice configuration.

Command Format

```
[ distribute|erase] voice basic configuration
```


Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute basic voice configuration.

```
Admin\msan#distribute voice basic configuration  
distribute voice basic configuration successfully.  
Admin\msan#
```

Erase voice basic configuration.

```
Admin\msan#erase voice basic configuration  
erase voice basic configuration successfully.  
Admin\msan#
```

31.138 Distributing or Erasing Voice IP Configuration

Command Function

You can use this command to distribute or erase IP configuration of voice.

Command Format

```
[ distribute|erase] voice ip
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute voice IP configuration.

```
Admin\msan#distribute voice ip  
distribute voice IP configuration successfully.  
Admin\msan#
```


Erase Voice IP configuration.

```
Admin\msan#erase voice ip  
erase voice IP configuration successfully.  
Admin\msan#
```

31.139 Distributing or Erasing Voice Port Configuration

Command Function

You can use this command to distribute or erase voice port configuration.

Command Format

```
[ distribute|erase] voice port configuration slot <slotNo>
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute voice port configuration for Slot 18.

```
Admin\msan#distribute voice port configuration slot 18  
distribute slot 18 voice port configuration successfully.  
Admin\msan#
```

Erase voice port configuration for Slot 18.

```
Admin\msan#erase voice port configuration slot 18  
erase slot 18 voice port configuration successfully.  
Admin\msan#
```


31.140 Distributing or Erasing Voice VLAN Configuration

Command Function

You can use this command to distribute or erase voice VLAN configuration.

Command Format

```
[ distribute|erase] voice vlan
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	Distribute or erase	Mandatory

Command Example

Distribute voice VLAN configuration.

```
Admin\msan#distribute voice vlan  
distribute voice VLAN configuration successfully.  
Admin\msan#
```

Erase voice VLAN configuration.

```
Admin\msan#erase voice vlan  
erase voice VLAN configuration successfully.  
Admin\msan#
```

31.141 Configuring the SIP Digitmap

Command Function

You can use this command to configure the SIP digitmap.

Command Format

```
add sip digital map <digitalMap>
```


Parameter Description

Parameter	Description	Attribute
map <digitalMap>	Digitmap name.	Mandatory

Command Example

Add an SIP digitmap named "aaa".

```
Admin\msan#add sip digital map aaa
set SIP digital map configuration successfully(0).
Admin\msan#
```

31.142 Binding an Alarm Profile to a Port

Command Function

You can use this command to bind an alarm profile to a port.

Command Format

```
attach alarm profile [ id|name] <idOrName> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile ID or profile name.	Mandatory
<idOrName>	Profile name that is entered.	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Bind an alarm profile named "aaa" to Port 1 in Slot 18.

```
Admin\msan#attach alarm profile name aaa interface 18/1
Admin\msan#
```

Bind an alarm profile whose profile ID is "10" to Port 1 in Slot 18.

```
Admin\msan#attach alarm profile id 10 interface 18/1a
Admin\msan#
```


31.143 Deleting a DSP Configuration Profile

Command Function

You can use this command to delete a DSP configuration profile.

Command Format

```
delete dsp profile [ id|name] <IDorName>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile ID or profile name	Mandatory
<idOrName>	Profile ID or profile name that is entered.	Mandatory

Command Example

Delete a DSP configuration profile named "aaa".

```
Admin\msan#delete dsp profile name aaa
Admin\msan#
```

Delete a DSP configuration profile whose profile ID is 10.

```
Admin\msan#delete dsp profile id 10
Admin\msan#
```

31.144 Deleting the SIP User Call Configuration Profile

Command Function

You can use this command to delete the SIP user call configuration profile.

Command Format

```
delete sip user call profile [ id|name] <IDorName>
```


Parameter Description

Parameter	Description	Attribute
profile[id name]	Profile ID or profile name.	Mandatory
<idOrName>	Specified profile ID or profile name.	Mandatory

Command Example

Delete the SIP user call configuration profile named "aaa".

```
Admin\msan#delete sip user call profile name aaa
Admin\msan#
```

Delete the SIP user call configuration profile whose ID is "10".

```
Admin\msan#delete sip user call profile id 10
Admin\msan#
```

31.145 Distributing POTS Common Parameters

Command Function

You can use this command to distribute POTS common parameters.

Command Format

```
distribute slot <slotNo> pots general para configuration
```

Parameter Description

Parameter	Description	Attribute
slot <slotNo>	Slot number	Mandatory

Command Example

Distribute POTS common parameters for Slot 18.

```
Admin\msan#distribute slot 18 pots general para configuration
Admin\msan#
```


31.146 Erasing POTS Common Parameter Configurations

Command Function

You can use this command to erase POTS common parameter configurations.

Command Format

```
erase pots general para configuration
```

Parameter Description

None

Command Example

Erase POTS common parameter configurations.

```
Admin\msan#erase pots general para configuration
erase POTS general para configuration successfully.
Admin\msan#
```

31.147 Configuring a DSP Profile Name

Command Function

You can use this command to configure a DSP profile name.

Command Format

```
set dsp profile <profileID> name <profileName>
```

Parameter Description

Parameter	Description	Attribute
profile <profileID>	Profile ID	Mandatory
name <profileName>	Profile name	Mandatory

Command Example

Set the name of an DSP profile (profile ID=1) to "aaa".

```
Admin\msan#set dsp profile 1 name aaa
Admin\msan#
```

31.148 Configuring DSP Profile Parameters

Command Function

You can use this command to configure DSP profile parameters.

Command Format

```
set dsp profile [ id|name] <IDorName> default code [ 711u|711a|723|729] mute
[ disable|enable] echo cancel [ disable|enable]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Specified profile ID or profile name	Mandatory
default code [711u 711a 723 729]	Default code	Mandatory
mute [disable enable]	Enable or disable the mute.	Mandatory
echo cancel [disable enable]	Enable or disable the echo suppression.	Mandatory

Command Example

Set the default code to 711u, enable the mute and disable the echo suppression for the DSP profile whose profile ID is "1".

```
Admin\msan#set dsp profile id 1 default code 711u mute enable echo cancel disable
set DSP profile 1 default coder, mute and echo cancel successfully(0).
Admin\msan#
```

31.149 Configuring the DTMF Mode for a DSP Profile

Command Function

You can use this command to configure the DTMF mode for a DSP profile.

Command Format

```
set dsp profile [ id | name ] <IDorName> dtmf mode [ transparent | 2833 | 2833redun |  
outband ]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name.	Mandatory
mode [transparent 2833 2833redun outband]	DTMF mode. ◆ transparent: transparent transmission mode ◆ 2833: 2833 mode ◆ 2833redun: 2833 redundancy mode ◆ outband: out-of-band mode	Mandatory

Command Example

Set the DTMF mode to outband for the DSP profile whose profile ID is "1".

```
Admin\msan#set dsp profile id 1 dtmf mode outband  
set DSP profile 1 DTMF mode successfully(0).  
Admin\msan#
```

31.150 Configuring Fax Rate for a DSP Profile

Command Function

You can use this command to configure the fax rate for a DSP Profile.

Command Format

```
set dsp profile [ id | name ] <IDorName> fax rate [ 2400 | 4800 | 7200 | 9600 | 12000 |  
14400 ]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name.	Mandatory
fax rate [2400 4800 7200 9600 12000 14400]	Fax rate	Mandatory

Command Example

Set the fax rate of the DSP profile whose profile ID is "1" to 4800.

```
Admin\msan#set dsp profile id 1 fax rate 4800
set DSP profile 1 fax rate successfully(0).
Admin\msan#
```

31.151 Configuring Input and Output Gain for a DSP Profile

Command Function

You can use this command to configure the input and output gain for a DSP profile.

Command Format

```
set dsp profile [ id|name] <IDorName> input gain <inputGain> output gain
<outputGain>
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name.	Mandatory
input gain <inputGain>	Input gain	Mandatory
output gain <outputGain>	Output gain	Mandatory

Command Example

Set the input gain to 10, and output gain to 20 for the DSP profile whose profile ID is "1".

```
Admin\msan#set dsp profile id 1 input gain 10 output gain 20
set DSP profile 1 I/O gaind successfully(0).
Admin\msan#
```


31.152 Configuring Jitter and Packet Interval for a DSP Profile

Command Function

You can use this command to configure the jitter and packet interval for a DSP profile.

Command Format

```
set dsp profile [ id|name] <IDorName> jitter buffer <bufSize> fax jitter  
buffer <faxBufSize> packet interval [ 10|20|30|40|50|60]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name.	Mandatory
jitter buffer <bufSize>	Size of jitter buffer area	Mandatory
Fax jitter buffer <faxBufSize>	Size of fax jitter buffer area	Mandatory
packet interval [10 20 30 40 50 60]	Interval for sending packets	Mandatory

Command Example

Set the size of jitter buffer area to 200, size of fax jitter buffer area to 100, and packet interval to 60 for a DSP profile whose profile ID is "1".

```
Admin\msan#set dsp profile id 1 jitter buffer 200 fax jitter buffer 100 packet interval 60  
set DSP profile 1 jitter buffer and packet interval successfully(0).  
Admin\msan#
```

31.153 Configuring Fax Encoding Mode

Command Function

You can use this command to configure the fax encoding mode.

Command Format

```
set fax encode mode [ default|711u|711a]
```


Parameter Description

Parameter	Description	Attribute
fax encode mode[default 711u 711a]	Fax encoding mode	Mandatory

Command Example

Set the fax encoding mode to 711a.

```
Admin\msan#set fax encode mode 711a
set fax parameter configuration successfully(0).
Admin\msan#
```

31.154 Configuring Fax Event Reporting

Command Function

You can use this command to configure the fax event reporting.

Command Format

```
set fax event notify[ disable|enable] type[ normal|only_v21|all_v21] { ans
[ disable|enable]} *1 { vbd[ disable|enable]} *1
```

Parameter Description

Parameter	Description	Attribute
fax event notify[disable enable]	Enable or disable the fax event reporting.	Mandatory
type[normal only_v21 all_v21]	Type	Mandatory
ans[disable enable]	Enable or disable the ANS reporting.	Mandatory
vbd[disable enable]	Enable or disable the VBD.	Mandatory

Command Example

Enable the fax event reporting, set the type to normal, and enable the ANS and VBD.

```
Admin\msan#set fax event notify enable type normal ans enable vbd enable
set fax parameter configuration successfully(0).
Admin\msan#
```


31.155 Configuring Fax Mode

Command Function

You can use this command to configure the fax mode.

Command Format

```
set fax mode[ t30|t38]
```

Parameter Description

Parameter	Description	Attribute
fax mode[t30 t38]	Fax mode	Mandatory

Command Example

Set the fax mode to t38.

```
Admin\msan#set fax mode t38
set fax parameter configuration successfully(0).
Admin\msan#
```

31.156 Configuring Fax Packet Interval

Command Function

You can use this command to configure the fax packet interval.

Command Format

```
set fax packet interval tx[ 10|20|30|40|50|60] rx[ 10|20|30|40|50|60]
```

Parameter Description

Parameter	Description	Attribute
tx[10 20 30 40 50 60]	Interval for transmitting packets	Mandatory
rx[10 20 30 40 50 60]	Interval for receiving packets	Mandatory

Command Example

Set the packet transmitting interval to 60, and packet receiving interval to 50 in fax mode.

```
Admin\msan#set fax packet interval tx 60 rx 50
set fax parameter configuration successfully(0).
Admin\msan#
```

31.157 Configuring Fax SDP Media

Command Function

You can use this command to configure the fax SDP media.

Command Format

```
set fax sdp media type[ single|multiple] control mode[ passthrough|ss|auto]
```

Parameter Description

Parameter	Description	Attribute
Media type[single multiple]	Media type	Mandatory
control mode[passthrough ss auto]	Control mode	Mandatory

Command Example

Set the fax SDP media type to single, and control mode to auto.

```
Admin\msan#set fax sdp media type single control mode auto
set fax parameter configuration successfully(0).
Admin\msan#
```

31.158 Registering / Unregistering the MGC

Command Function

You can use this command to register or unregister the MGC.

Command Format

```
set mgc[ primary|secondary] [ register|unregister]
```


Parameter Description

Parameter	Description	Attribute
[primary secondary]	Primary or secondary	Mandatory
[register unregister]	Register or unregister	Mandatory

Command Example

Register the primary MGC.

```
admin\msan#set mgc primary register
admin\msan#
```

31.159 Configuring the MGC Heartbeat

Command Function

You can use this command to configure the MGC heartbeat.

Command Format

```
set mgc heartbeat[ disable|initiative|passive] { interval <bInterval>
timeouts <bTimeouts> format[ notify|servicechange] } *1
```

Parameter Description

Parameter	Description	Attribute
[disable initiative passive]	Disable, initiative or passive	Mandatory
interval <bInterval>	Time interval	Mandatory
timeouts <bTimeouts>	Timeout duration	Mandatory
format[notify servicechange]	Heartbeat mode	Mandatory

Command Example

Set the primary MGC heartbeat to initiative, time interval to 30, timeout duration to 50, and heartbeat mode to notify.

```
admin\msan#set mgc heartbeat passive interval 30 timeouts 50 format notify
admin\msan#
```


31.160 Configuring the MGC Address and Port

Command Function

You can use this command to configure the MGC address and port.

Command Format

```
set mgc primary <primaryAddr> port <primaryPort> { secondary <secondaryAddr>
port <secondaryPort> } *1
```

Parameter Description

Parameter	Description	Attribute
primary <primaryAddr>	Primary MGC IP address	Mandatory
port <primaryPort>	Primary port	Mandatory
secondary <secondaryAddr>	Secondary MGC IP address	Optional
port <secondaryPort>	Secondary port	Optional

Command Example

Set the primary MGC IP address to 1.1.1.1, port number to 10, secondary MGC IP address to 2.2.2.2, and port number to 20.

```
admin\msan#set mgc primary 1.1.1.1 port 10 secondary 2.2.2.2 port 20
admin\msan#
```

31.161 Registering / Unregistering the NGN User

Command Function

You can use this command to register or unregister the NGN user.

Command Format

```
set ngn user[ register|unregister] interface <ifStr>
```


Parameter Description

Parameter	Description	Attribute
[register unregister]	Register or unregister	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Register the NGN user for Port 1 in Slot 18.

```
admin\msan#set ngn user register interface 18/1
admin\msan#
```

31.162 Configuring POTS Common Billing Parameters

Command Function

You can use this command to configure the POTS common billing parameters.

Command Format

```
set pots general para bill type[ 12kc|16kc|anc] pulse voltage
<billPulseVoltage>
```

Parameter Description

Parameter	Description	Attribute
bill type[12kc 16kc anc]	Billing type	Mandatory
pulse voltage <billPulseVoltage>	Metering pulse amplitude	Mandatory

Command Example

Set the POTS common billing mode to 12kc, and metering pulse amplitude to 10.

```
admin\msan#set pots general para bill type 12kc pulse voltage 10
admin\msan#
```


31.163 Configuring POTS Common Coding Gain Parameters

Command Function

You can use this command to configure the POTS common coding gain parameters.

Command Format

```
set pots general para codec gain send <sendCodecGain> receive <recvCodecGain>
```

Parameter Description

Parameter	Description	Attribute
send <sendCodecGain>	Tx coding gain	Mandatory
receive <recvCodecGain>	Rx coding gain	Mandatory

Command Example

Configure the POTS common coding gain parameters. Set Tx coding gain to 10, and Rx coding gain to 20.

```
admin\msan#set pots general para codec gain send 10 receive 20
admin\msan#
```

31.164 Configuring POTS Common Impedance Interface Mode

Command Function

You can use this command to configure the POTS common impedance interface mode.

Command Format

```
set pots general para impedance mode [ 560 | 600 | 680 ]
```

Parameter Description

Parameter	Description	Attribute
impedance mode [560 600 680]	Impedance interface mode	Mandatory

Command Example

Set the POTS common impedance interface mode to 560.

```
admin\msan#set pots general para impedance mode 560
admin\msan#
```

31.165 Configuring POTS Common On-hook and Off-hook Detection Time

Command Function

You can use this command to configure the POTS common on-hook and off-hook detection time.

Command Format

```
set pots general para off hooktime <offHookcheckTime> on hooktime
<onHookcheckTime>
```

Parameter Description

Parameter	Description	Attribute
off hooktime <offHookcheckTime>	Off-hook detection time length	Mandatory
on hooktime <onHookcheckTime>	On-hook detection time length	Mandatory

Command Example

Configure the POTS common off-hook detection time to 100, and on-hook detection time to 200.

```
admin\msan#set pots general para off hooktime 100 on hooktime 200
admin\msan#
```

31.166 Configuring POTS Common Pulse Parameters

Command Function

You can use this command to configure the POTS common pulse parameters.

Command Format

```
set pots general para pulse width <pulseWidth> interval <pulseInterval> flash
width <flashWidth>
```

Parameter Description

Parameter	Description	Attribute
pulse width <pulseWidth>	Pulse width	Mandatory
interval <pulseInterval>	Pulse interval	Mandatory
flash width <flashWidth>	Flash width	Mandatory

Command Example

Set the POTS common pulse width to 30, pulse interval to 40 and flash width to 50.

```
admin\msan#set pots general para pulse width 30 interval 40 flash width 50
admin\msan#
```

31.167 Configuring the RTP Resource Configuration Profile

Command Function

You can use this command to configure the RTP resource configuration profile.

Command Format

```
set rtp resource profile <nameFixed> begin <nameBegin> end <nameEnd> step
<nameStep> filled[ yes|no]
```

Parameter Description

Parameter	Description	Attribute
profile <nameFixed>	Fixed part of the RTP profile name	Mandatory
begin <nameBegin>	Beginning number of the RTP profile name's variable part	Mandatory
end <nameEnd>	Ending number of the RTP profile name's variable part	Mandatory
step <nameStep>	Step of the RTP profile name's variable part	Mandatory
filled[yes no]	Whether the profile name can be filled or not.	Mandatory

Command Example

Configure the RTP resource configuration profile. Set the profile name's variable part to rtp, beginning number of the variable part to 1, ending number to 9, and step to 1. And the profile name can be filled.

```
admin\msan#set rtp resource profile rtp begin 1 end 9 step 1 filled yes
admin\msan#
```

31.168 Configuring the SIP Advanced Configuration

Command Function

You can use this command to configure the SIP advanced configuration.

Command Format

```
set sip call-waiting-conference mode[ normal|refer|info1|info2|other]
{ conference uri <confURI>*1 sharp escape[ disable|enable] caller-id head
[ asserted|from]
```

Parameter Description

Parameter	Description	Attribute
mode[normal refer info1 info2 other]	Conference mode	Mandatory
conference uri <confURI>	Conference audio mixing	Mandatory
sharp escape[disable enable]	Character defined switch	Mandatory
caller-id head[asserted from]	Mode of extracting header field of the caller number	Mandatory

Command Example

Configure the SIP advanced configuration. Set the conference mode to normal, conference audio mixing to 11, and caller-id head extraction mode to from. Enable the character defined function.

```
admin\msan#set sip call-waiting-conference mode normal conference uri 11 sharp escape
enable caller-id head from
admin\msan#
```


31.169 Configuring IP Address and Port for the SIP Server

Command Function

You can use this command to configure the IP address and port for the SIP server.

Command Format

```
set sip server address <serverAddr> port <serverPort> { backup server
<backupAddr> port <backupPort>} * 1
```

Parameter Description

Parameter	Description	Attribute
address <serverAddr>	SIP Server IP address	Mandatory
port <serverPort>	Port number	Mandatory
backup server <backupAddr>	IP address of the backup server.	Optional
port <backupPort>	Backup port number.	Optional

Command Example

Set IP address to 1.1.1.1, and port number to 5060 for the SIP primary server; set the IP address to 2.2.2.2, and port number to 5060 for the backup server.

```
admin\msan#set sip server address 1.1.1.1 port 5060 backup server 2.2.2.2 port 5060
admin\msan#
```

31.170 Configuring the SIP Server Heartbeat

Command Function

You can use this command to configure the SIP server's heartbeat.

Command Format

```
set sip server heartbeat [ disable|initiative|passive] { interval <bInterval>
timeouts <bTimeouts> mode [ bydevice|byport]} * 1
```


Parameter Description

Parameter	Description	Attribute
[disable initiative passive]	Disable, initiative or passive	Mandatory
interval <bInterval>	Time interval	Mandatory
timeouts <bTimeouts>	Timeout duration	Optional
mode[bydevice byport]	Mode	Optional

Command Example

Set the SIP server heartbeat to initiative, time interval to 10, time-out duration to 5, and mode to "bydevice".

```
admin\msan#set sip server heartbeat initiative interval 10 timeouts 5 mode bydevice
admin\msan#
```

31.171 Configuring IP Address and Port for the SIP Proxy Server

Command Function

You can use this command to configure the IP address and port for the SIP proxy server.

Command Format

```
set sip server register address <registerAddr> port <registerPort> { backup
server <bRegisterAddr> port <bRegisterPort>} *1
```

Parameter Description

Parameter	Description	Attribute
address <registerAddr>	Proxy server IP address	Mandatory
port <registerPort>	Port number	Mandatory
backup server <bRegisterAddr>	IP address of the backup proxy server.	Optional
port <bRegisterPort>	Port number	Optional

Command Example

Set the IP address to 1.1.1.1, and port number to 5060 for the SIP proxy server; set the IP address to 2.2.2.2, and port number to 5060 for the backup proxy server.

```
admin\msan#set sip server register address 1.1.1.1 port 5060 backup server 2.2.2.2 port
5060
admin\msan#
```

31.172 Configuring the SIP Server Registration Refreshing Interval

Command Function

You can use this command to configure the SIP server registration refreshing interval.

Command Format

```
set sip server register interval <regInterval>
```

Parameter Description

Parameter	Description	Attribute
interval <regInterval>	Registration refreshing interval	Mandatory

Command Example

Set the SIP server registration refreshing interval to 60.

```
admin\msan#set sip server register interval 60
admin\msan#
```

31.173 Configuring the SIP User Call Profile Name

Command Function

You can use this command to configure the SIP user call profile name.

Command Format

```
set sip user call profile <profileID> name <profileName>
```

Parameter Description

Parameter	Description	Attribute
profile <profileID>	Profile ID	Mandatory
name <profileName>	Profile name	Mandatory

Command Example

Set the name of an SIP user call profile (profile ID=1) to "aaa".

```
admin\msan#set sip user call profile 1 name aaa
admin\msan#
```

31.174 Configuring the SIP User Call Profile - Enabling or Disabling Call Conference and Polarity Reversal

Command Function

You can use this command to enable or disable the call conference and polarity reversal configuration for the SIP user call profile.

Command Format

```
set sip user call profile[ id|name] <IDorName> call-conference[ disable|
enable] reverse-polarity[ disable|enable]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name	Mandatory
call-conference[disable enable]	Enable or disable call conference.	Mandatory
reverse-polarity[disable enable]	Enable or disable the polarity reversal configuration.	Mandatory

Command Example

Enable the call conference and polarity reversal configuration for the SIP user call profile whose ID is 1.

```
admin\msan#set sip user call profile id 1 call-conference enable reverse-polarity enable
admin\msan#
```

31.175 Configuring the SIP User Call Profile - Call Forwarding Number

Command Function

You can use this command to configure the telephone number that the call is forwarded to for the SIP user call profile.

Command Format

```
set sip user call profile[ id|name] <IDorName> call-forward telephone-number
<phoneNumber>
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name	Mandatory
<phoneNumber>	Telephone number.	Mandatory

Command Example

Set the call forwarding telephone number to 123456 for the SIP user call profile whose ID is 1.

```
admin\msan#set sip user call profile id 1 call-forward telephone-number 123456
admin\msan#
```


31.176 Configuring SIP User Call Configuration Profile - Caller ID Display Mode

Command Function

You can use this command to set the caller ID display mode for SIP user call configuration.

Command Format

```
set sip user call profile [ id | name ] <IDorName> call-id type [ disable | sdmf |  
mdmf | dtmf ]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name	Mandatory
type [disable sdmf mdmf dtmf]	Type ◆ Disable ◆ sdmf ◆ mdmf ◆ dtmf	Mandatory

Command Example

Set the caller ID display mode to dtmf for the SIP user call configuration profile whose profile ID is "1".

```
admin\msan#set sip user call profile id 1 call-id type dtmf  
admin\msan#
```

31.177 Configuring the SIP User Call Profile - Call Forwarding Configuration

Command Function

You can use this command to configure the call forwarding function in the SIP user call profile.

Command Format

```
set sip user call profile [ id|name] <IDorName> call-waiting[ disable|enable]
busy-forward[ disable|enable] ring-forward[ disable|enable] force-forward
[ disable|enable]
```

Parameter Description

Parameter	Description	Attribute
[id name] <IDorName>	Profile ID or profile name	Mandatory
call-waiting[disable enable]	Enable or disable the call waiting function.	Mandatory
busy-forward[disable enable]	Enable or disable the call forwarding function in case of busy call.	Mandatory
ring-forward[disable enable]	Enable or disable the call forwarding function in case of ringing timeout.	Mandatory
force-forward[disable enable]	Enable or disable the forced call forwarding function.	Mandatory

Command Example

Enable the call waiting function, call forwarding function in case of busy call and ringing timeout, and forced call forwarding function for an SIP user call profile whose ID is 1.

```
admin\msan#set sip user call profile id 1 call-waiting enable busy-forward enable ring-
forward enable force-forward enable
admin\msan#
```

31.178 Executing an Internal or External Subscriber Line Test

Command Function

You can use this command to execute an internal or external line test.

Command Format

```
set test 112 mode[ inline|outline] type[ force|unforce] interface <ifStr>
```


Parameter Description

Parameter	Description	Attribute
mode[inline outline]	Internal line test or external line test	Mandatory
type[force unforce]	Forced test or non-forced test	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Execute forced internal subscriber line test for Port 1 in Slot 1.

```
admin\msan#set test 112 mode inline type force interface 1/1
admin\msan#
```

31.179 Configuring the Voice VLAN

Command Function

You can use this command to configure the voice VLAN.

Command Format

```
set voice[ signalling|rtpstream] svlan tpid<sVlanTpid> vid<sVlanID> cos
<sValnCcos> { cvlan tpid<cVlanTpid> vid<cVlanID> cos<cValnCcos>} *1
```

Parameter Description

Parameter	Description	Attribute
[signalling rtpstream]	Signaling or RTP	Mandatory
<sVlanTpid>	Outer VLAN tag	Mandatory
<sVlanID>	Outer VLAN ID	Mandatory
<sValnCcos>	Outer VLAN priority	Mandatory
<cVlanTpid>	Inner VLAN tag	Mandatory
<cVlanID>	Inner VLAN ID	Mandatory
<cValnCcos>	Inner VLAN priority	Mandatory

Command Example

Set voice VLAN type to signaling, svlan tpid to 33024, svlan id to 100, svlan cos to 5, cvlan tpid to 33024, cvlan id to 200 and cvlan cos to 6.


```
admin\msan#set voice signalling svlan tpid 33024 vid 100 cos 5 cvlan tpid 33024 vid 200
cos 6
admin\msan#
```

31.180 Configuring the Voice RTP IP Address

Command Function

You can use this command to configure the voice RTP IP address.

Command Format

```
set voice rtp ip ipv4 <ipAddress> mask <ipMask> { gateway <gateAddress> } * 1
```

Parameter Description

Parameter	Description	Attribute
<ipAddress>	IP address	Mandatory
<ipMask>	Mask	Mandatory
<gateAddress>	Gateway	Mandatory

Command Example

Set the voice RTP IP address to 1.1.1.1, mask to 255.255.0.0 and gateway to 2.2.2.2.

```
admin\msan#set voice rtp ip ipv4 1.1.1.1 mask 255.255.0.0 gateway 2.2.2.2
admin\msan#
```

31.181 Configuring the Voice Signaling IP Address

Command Function

You can use this command to configure the voice signaling IP address.

Command Format

```
set voice signalling ip ipv4 <ipAddress> mask <ipMask> { gateway
<gateAddress> } * 1
```


Parameter Description

Parameter	Description	Attribute
<ipAddress>	IP address	Mandatory
<ipMask>	Mask	Mandatory
<gateAddress>	Gateway	Mandatory

Command Example

Set the voice signaling IP address to 1.1.1.1, mask to 255.255.0.0 and gateway to 2.2.2.2.

```
admin\msan#set voice signalling ip ipv4 1.1.1.1 mask 255.255.0.0 gateway 2.2.2.2
admin\msan#
```

31.182 Configuring the Voice PPPoE

Command Function

You can use this command to configure the voice PPPoE.

Command Format

```
set voice pppoe operation[ dial|disconnect] { user name <userName> password
<password> authentication mode[ pap|chap] } * 1
```

Parameter Description

Parameter	Description	Attribute
operation[dial disconnect]	Dial or disconnect	Mandatory
<userName>	User name	Mandatory
<password>	Password	Mandatory
authentication mode[pap chap]	Authentication mode	Mandatory

Command Example

Configure the PPPoE dialing. Set the user name to 111, password to 222, and authentication mode to pap.

```
admin\msan#set voice pppoe operation dia user name 111 password 222 authentication
mode pap
```



```
admin\msan#
```

31.183 Configuring the Voice DHCP

Command Function

You can use this command to configure the voice DHCP.

Command Format

```
set voice dhcp operation[ disable|enable] { option60[ disable|enable]} *1
{ base <option60Fixed> suffix <option60Suffix>} *1
```

Parameter Description

Parameter	Description	Attribute
[disable enable]	Enable or disable the function.	Mandatory
option60[disable enable]	Enable or disable the Option 60 function.	Mandatory
<option60Fixed>	Fixed part of Option 60	Mandatory
<option60Suffix>	Variable part of Option 60	Mandatory

Command Example

Enable the DHCP function and Option 60. Set the fixed part of Option 60 to 111, and variable part to 222.

```
admin\msan#set voice dhcp operation enable option60 enable base 111 suffix 222
admin\msan#
```

31.184 Creating an Extension Profile for a VDSL Profile

Command Function

You can use this command to configure an extension profile for a VDSL profile.

Command Format

```
set vdslextra profile[ id|name] <idOrName>
```


Parameter Description

Parameter	Description	Attribute
profile[id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Configure a VDSL extension profile named "ee".

```
admin\msan#set vdslextra profile name ee
admin\msan#
```

Configure a VDSL extension profile whose ID is "1".

```
admin\msan#set vdslextra profile id 1
admin\msan#
```

31.185 Configuring Extension Profile Parameters for a VDSL Profile

Command Function

You can use this command to configure extension profile parameters for a VDSL profile.

Command Format

```
set vdslextra para vectEnable[ enable|disable] annexUs0[ annexa|annexb|
annexc] pmsf[ enable|disable] dnNMFlr <value> dnNMTop <value> dnAdaTimeFlr
<value> dnAdaTimeTop <value> upNMFlr <value> upNMTop <value> upAdaTimeFlr
<value> upAdaTimeTop <value>
```


Parameter Description

Parameter	Description	Attribute
vectEnable[enable disable]	Switch. ◆ enable: Enable the function ◆ disable: Disable the function.	Mandatory
annexUs0[annexa annexb annexc]	US0 parameters. ◆ Annexa: us0 a ◆ Annexb: us0 b ◆ Annexc: us0 c	Mandatory
pmsf[enable disable]	PMSF switch ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
dnNMFlr <value>	Minimum noise reduction margin range of downlink flow: 0.0 to 31.0.	Mandatory
dnNMTop <value>	Maximum noise reduction margin range of downlink flow: 0.0 to 31.0.	Mandatory
dnAdaTimeFlr <value>	Minimum downlink rate adaptation interval range: 0 to 16383.	Mandatory
dnAdaTimeTop <value>	Maximum downlink rate adaptation interval range: 0 to 16383.	Mandatory
upNMFlr <value>	Minimum noise reduction margin range of uplink flow: 0.0 to 31.0.	Mandatory
upNMTop <value>	Maximum noise reduction margin range of uplink flow: 0.0 to 31.0.	Mandatory
upAdaTimeFlr <value>	Minimum uplink rate adaptation interval range: 0 to 16383.	Mandatory
upAdaTimeTop <value>	Maximum uplink rate adaptation interval range: 0 to 16383.	Mandatory

Command Example

Set specific parameters for a VDSL extension profile.

```
admin\msan#set vdslextra para vectenable en annexus0 annexa pmsf enable dnnmflr 5
dnnmtop 10 dnadatimeflr 100 dnadatimetop 200 upnmflr 15 upnmtop 20 upadatimeflr 300
upadatimetop 400
admin\msan#
```


31.186 Creating a Retransmission Profile for a VDSL Profile

Command Function

You can use this command to configure a retransmission profile for a VDSL profile.

Command Format

```
set vdslginp profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Configure a VDSL retransmission profile named "ee".

```
admin\msan#set vdslginp profile name ee
admin\msan#
```

Configure a VDSL retransmission profile whose ID is "1".

```
admin\msan#set vdslginp profile id 1
admin\msan#
```

31.187 Configuring Retransmission Profile Parameters for a VDSL Profile

Command Function

You can use this command to configure retransmission profile parameters for a VDSL profile.

Command Format

```
set vdslginp para dnETRmin <value> dnETRmax <value> dnNDRmax <value> upETRmin
<value> upETRmax <value> upNDRmax <value> dnROC <value> upROC <value>
dnROCImpMin <value> upROCImpMin <value> dnMsgMin <value> upMsgMin <value>
```

Parameter Description

Parameter	Description	Attribute
dnETRmin <value>	Minimum downlink ETR range: 64 to 512000	Mandatory
dnETRmax <value>	Maximum downlink ETR range: 64 to 512000	Mandatory
dnNDRmax <value>	Maximum downlink NDR range: 64 to 512000	Mandatory
upETRmin <value>	Minimum uplink ETR range: 64 to 512000	Mandatory
upETRmax <value>	Maximum uplink ETR range: 64 to 512000	Mandatory
upNDRmax <value>	Maximum uplink NDR range: 64 to 512000	Mandatory
dnROC <value>	Downlink ROC range: 0 to 31	Mandatory
upROC <value>	Uplink ROC range: 0 to 31	Mandatory
dnROCImpMin <value>	Minimum downlink ROC impulse noise protection range: 0.0 to 16.0	Mandatory
upROCImpMin <value>	Minimum uplink ROC impulse noise protection range: 0.0 to 16.0	Mandatory
dnMsgMin <value>	Minimum downlink MSG range: 4 to 236	Mandatory
upMsgMin <value>	Minimum uplink MSG range: 4 to 236	Mandatory

Command Example

Set retransmission profile parameters for a VDSL profile named "ee".

```
admin\msan#set vdslginp para dnetrmin 128 dnetrmax 128 dnndrmax 256 upetrmin 256
upetrmax 512 upndrmax 512 dnroc 15 uproc 20 dnrocinpmin 5 uprocinpmin 10 dnmsgmin
25 upmsgmin 45
admin\msan#
```

31.188 Configuring Uplink and Downlink Modes for a VDSL Retransmission Profile

Command Function

You can use this command to configure uplink and downlink modes for a VDSL retransmission profile.

Command Format

```
set vdslginp para dnReMode[ forbid|first|force|test] upReMode[ forbid|
first|force|test] dnMaxDelay <value> upMaxDelay <value> dnMinInp <value>
upMinInp <value>
```

Parameter Description

Parameter	Description	Attribute
dnReMode[forbid first force test]	Downlink retransmission mode. <ul style="list-style-type: none"> ◆ forbid: Forbidden mode ◆ first: choosing mode for the first time ◆ force: forcible mode ◆ test: test mode 	Mandatory
upReMode[forbid first force test]	Uplink retransmission mode. <ul style="list-style-type: none"> ◆ forbid: Forbidden mode ◆ first: choosing mode for the first time ◆ force: forcible mode ◆ test: test mode 	Mandatory
dnMaxDelay <value>	Maximum downlink delay range: 0 to 63	Mandatory
upMaxDelay <value>	Maximum downlink delay range: 0 to 63	Mandatory
dnMinInp <value>	Minimum downlink impulse noise protection range: 0.0 to 127.0	Mandatory
upMinInp <value>	Minimum uplink impulse noise protection range: 0.0 to 127.0	Mandatory

Command Example

Configure uplink and downlink modes for the retransmission profile in the VDSL profile.

```
admin\msan#set vdslginp para dnremode forbid upremode first dnmaxdelay 25
upmaxdelay 50 dnmininp 64 upmininp 32
admin\msan#
```


31.189 Configuring Flow Control Frequency for a VDSL Retransmission Profile

Command Function

You can use this command to configure the flow control frequency for a VDSL retransmission profile.

Command Format

```
set vdslginp para rein[ enable|disable] { dnREINFreq[ 0|1] dnREININPmin
<value> upREINFreq[ 0|1] upREININPmin <value>}
```

Parameter Description

Parameter	Description	Attribute
rein[enable disable]	Control switch. ◆ enable: Enable the function. ◆ disable: Disable the function.	Mandatory
dnREINFreq[0 1]	Downlink flow control frequency ◆ 0: 100 HZ ◆ 1: 120 HZ	Mandatory
dnREININPmin <value>	Minimum impulse noise protection range of downlink flow: 0.0 to 7.0	Mandatory
upREINFreq[0 1]	Uplink flow control frequency. ◆ 0: 100 HZ ◆ 1: 120 HZ	Mandatory
upREININPmin <value>	Minimum impulse noise protection range of uplink flow: 0.0 to 7.0	Mandatory

Command Example

You can use this command to configure the flow control frequency for a retransmission profile in a VDSL profile.

```
admin\msan#set vdslginp para rein enable dnreinfreq 1 dnreininpmin 3 upreinfreq 1
upreininpmin 4
admin\msan#
```


31.190 Configuring Uplink and Downlink Rate Parameters for a VDSL Service Profile

Command Function

You can use this command to configure uplink and downlink rate parameters for lines in a VDSL service profile.

Command Format

```
set vdslser para rate upMin <value> dnMin <value>
```

Parameter Description

Parameter	Description	Attribute
upMin <value>	Minimum uplink rate. Value range: 0 to 200000; unit: kbit/s.	Mandatory
dnMin <value>	Minimum downlink rate. Value range: 0 to 200000; unit: kbit/s.	Mandatory

Command Example

Set rate parameters for the current VDSL service profile, including minimum uplink rate and minimum downlink rate.

```
admin\msan#set vdslser para rate upmin 1000 dnmin 20000
admin\msan#
```

31.191 Configuring Uplink and Downlink Rate Modes for a VDSL Service Profile

Command Function

You can use this command to configure uplink and downlink rate modes for lines in a VDSL service profile.

Command Format

```
set vdslser para rateMode up[ fixed|adaptatstart|adaptatruntime] dn[ fixed|
adaptatstart|adaptatruntime]
```


Parameter Description

Parameter	Description	Attribute
up fixed adaptatstart adaptatruntime]	Uplink rate mode. <ul style="list-style-type: none"> ◆ fixed: fixed mode. ◆ adaptatstart: self adaptive in case of startup ◆ adaptatruntime: self adaptive in case of running 	Mandatory
dn fixed adaptatstart adaptatruntime]	Downlink rate mode. <ul style="list-style-type: none"> ◆ fixed: fixed mode ◆ adaptatstart: self adaptive mode in case of startup ◆ adaptatruntime: self adaptive mode in case of running 	Mandatory

Command Example

Set uplink and downlink rate modes for a VDSL service profile.

```
admin\msan#set vdslser para ratemode up fixed dn fixed
admin\msan#
```

31.192 Configuring Uplink Signal-to-Noise Ratio Margin for a VDSL Service Profile

Command Function

You can use this command to configure the uplink signal-to-noise ratio (SNR) margin for a VDSL service profile. Thus, bit errors can be cleared in the line in case of noise burst to guarantee the QOS of network.

Command Format

```
set vdslser para tsnrup <value> mode[ userdefine|infinity] { max<value> min<value>}
```

Parameter Description

Parameter	Description	Attribute
tsnrup <value>	Uplink signal-to-noise ratio margin	Mandatory
mode[userdefine infinity]	Mode <ul style="list-style-type: none"> ◆ userdefine: user-defined ◆ Infinity: unlimited 	Mandatory

Parameter	Description	Attribute
max <value>	Maximum uplink signal-to-noise ratio margin. Value range: 0.0 to 31.0; unit: dB; accuracy: 0.1.	Mandatory
min <value>	Minimum uplink signal-to-noise ratio margin. Value range: 0.0 to 31.0; unit: dB; accuracy: 0.1.	Mandatory

Command Example

Set an uplink signal-to-noise ratio margin for a VDSL service profile.

```
admin\msan#set vdslser para tsnm up 0 mode userdefine max 1 min 0
admin\msan#
```

31.193 Configuring Downlink Signal-to-Noise Ratio Margin for a VDSL Service Profile

Command Function

You can use this command to configure the downlink signal-to-noise ratio (SNR) margin for a VDSL service profile. Thus, bit errors can be cleared in the line in case of noise burst to guarantee the QOS of network.

Command Format

```
set vdslser para tsnm dn <value> mode[ userdefine|infinity] { max <value> min <value>}
```

Parameter Description

Parameter	Description	Attribute
tsnm dn <value>	Downlink signal-to-noise ratio margin. Value range: 0.0 to 31.0; unit: dB; accuracy: 0.1.	Mandatory
mode[userdefine infinity]	Signal-to-noise margin setting mode. ◆ Userdefine: user-defined ◆ Infinity: unlimited	Mandatory
max <value>	Maximum downlink signal-to-noise ratio margin. Value range: 0.0 to 31.0; unit: dB; accuracy: 0.1.	Mandatory
min <value>	Minimum downlink signal-to-noise ratio margin. Value range: 0.0 to 31.0; unit: dB; accuracy: 0.1.	Mandatory

Command Example

Set a downlink signal-to-noise ratio margin for a VDSL service profile.

```
admin\msan#set vdslser para tsnrn dn 1 mode userdefine max 1.5 min 1
admin\msan#
```

31.194 Configuring a VDSL Virtual Noise Profile

Command Function

You can use this command to configure a VDSL virtual noise profile. The performance thus can avoid serious degradation caused by crosstalk interference.

Command Format

```
set vdslvn profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile [id name]	Profile name or ID. ◆ id: profile ID ◆ name: profile name	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

Configure a VDSL virtual noise profile named "ee".

```
admin\msan#set vdslvn profile name ee
admin\msan#
```

Configure a VDSL virtual noise profile whose ID is "1".

```
admin\msan#set vdslvn profile id 1
admin\msan#
```


31.195 Configuring Uplink Virtual Noise for a VDSL Service Profile

Command Function

You can use this command to configure uplink virtual noise rules for a VDSL virtual noise profile and configure signals within the specific frequency band with virtual noise, so as to avoid noise interference on the uplink lines.

Command Format

```
set vdslvn para up index <1-16> tone[ <7-32> |<880-1196> |<1981-2773>] level  
<value>
```

Parameter Description

Parameter	Description	Attribute
index <1-16>	VDSL virtual noise profile ID	Mandatory
tone[<7-32> <880-1196> <1981-2773>]	Uplink virtual noise frequency band. Value range: 7 to 32, 880 to 1196 or 1981 to 2773; unit: tone. (The uplink virtual noise frequency band should be within one of the three ranges.)	Mandatory
level <value>	Uplink virtual noise value. Value range: -140 to -40; unit: dBm/Hz.	Mandatory

Command Example

Set an uplink virtual noise rule for the current VDSL virtual noise profile as below: the uplink virtual noise frequency band to 1010 tones, the uplink virtual noise value to -140.0 dBm/Hz.

```
admin\msan#set vdslvn para up index 1 tone 1010 level -140  
admin\msan#
```


31.196 Configuring Downlink Virtual Noise for a VDSL Service Profile

Command Function

You can use this command to configure downlink virtual noise rules for a VDSL virtual noise profile and configure signals within the specific frequency band with virtual noise, so as to avoid noise interference on the downlink lines.

Command Format

```
set vdslvn para dn index <1-32> tone[ <33-859> | <1216-1961> | <2793-4081>]
level <value>
```

Parameter Description

Parameter	Description	Attribute
index <1-32>	VDSL virtual noise profile ID	Mandatory
tone[<33-859> <1216-1961> <2793-4081>]	Downlink virtual noise frequency band. Value range: 33 to 859, 1216 to 1961 or 2793 to 4081; unit: tone. (The downlink virtual noise frequency band should be within one of the three ranges.)	Mandatory
level <value>	Downlink virtual noise value. Value range: -140 to -40; unit: dBm/Hz.	Mandatory

Command Example

Configure a downlink virtual noise rule for the current VDSL virtual noise profile. Set the downlink virtual noise frequency band to 88 tones, the downlink virtual noise value to -120 dBm/Hz.

```
admin\msan#set vdslvn para dn index 1 tone 88 level -120
admin\msan#
```

31.197 Viewing a VDSL Line Basic Profile

Command Function

You can use this command to view parameters in a VDSL line basic profile.

Command Format

```
show vdslLine profile [ id|name|all ] { <idOrName> } *1
```

Parameter Description

Parameter	Description	Attribute
profile [id name all]	Profile name or ID. ◆ id: profile ID ◆ name: profile name ◆ all: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL line basic profile named "ee".

```
admin\msan#show vdslLine profile name ee
Profile name          ee Profile id          1
portmode              ptm Standard Profile      1
Psd Shape             1 maxTxPowerDn          16.5
maxTxPowerUp          16.5
rfiInfo no            1
start                 180 end                220
rfiInfo no            2
start                 350 end                500
tbOutInfo no          1
start                 180 end                220
tbOutInfo no          2
start                 350 end                500
admin\msan#
```

View a VDSL line basic profile whose ID is "1".

```
admin\msan#show vdslLine profile id 1
Profile name          ee Profile id          1
portmode              ptm Standard Profile      1
Psd Shape             1 maxTxPowerDn          16.5
maxTxPowerUp          16.5
rfiInfo no            1
start                 180 end                220
rfiInfo no            2
start                 350 end                500
tbOutInfo no          1
```



```

start          180 end          220
tbOutInfo no   2
start          350 end          500
admin\msan#

```

Result Description

Parameter	Description
Profile name	VDSL line basic profile name
Profile id	VDSL line basic profile ID
portmode	Port mode
Standard Profile	Standard profile(s) bound to the VDSL line basic profile
Psd Shape	Power spectral density mask
maxTxPowerDn	Maximum downlink transmitting power
maxTxPowerUp	Maximum uplink transmitting power
rfiInfo no	Number of notching breakpoints
start	Starting value of notching frequency band
end	Ending value of notching frequency band
tbOutInfo no	Number of shielding breakpoints
start	Starting value of shielding frequency band
end	Ending value of shielding frequency band

31.198 Viewing Parameters of a Line Basic Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters of a VDSL line basic profile bound to a specified VDSL port.

Command Format

```
show vdslLine profile attach interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View a VDSL line basic profile named "ee" bound to Port 2 in Slot 1.

```
admin\msan#show vdslprofile attach interface 1/2
slotNO      port_no    profile id 1          2          1
admin\msan#
```

31.199 Viewing VDSL Custom PSD Profile

Command Function

You can use this command to view parameters in a VDSL custom PSD profile.

Command Format

```
show vdslcpsdprofile [ id|name|all ] { <idOrName> } * 1
```

Parameter Description

Parameter	Description	Attribute
profile [id name all]	Profile name or ID. ◆ id: profile ID ◆ name: profile name ◆ all: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL custom PSD profile named "ee".

```
admin\msan#show vdslcpsd profile name ee
Profile name      ee Profile id      1
Up PSD num        1 Up PSD No        1
Tone              880 Value          -50.0
Dn PSD num        1 Dn PSD No        1
Tone              33 Value          -60.0
admin\msan#
```

View a VDSL custom PSD profile whose ID is "1".

```
admin\msan#show vdslcpsd profile id 1
Profile name      ee Profile id      1
```



```

Up PSD num          1 Up PSD No          1
Tone                 880 Value            -50.0
Dn PSD num          1 Dn PSD No          1
Tone                 33 Value            -60.0
admin\msan#

```

31.200 Viewing Parameters of a PSD Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters in a custom PSD profile bound to the VDSL port.

Command Format

```
show vdslcpsd profile attach interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View a VDSL custom PSD profile named "ee" bound to Port 2 in Slot 1.

```

admin\msan#show vdslcpsd profile attach interface 1/2
slotNO    port_no    profile id 1          2          1
admin\msan#

```

Result Description

Parameter	Description
slotNO	Slot number
port_no	Port number
profile id	Profile ID

31.201 Viewing VDSL Extension Profile Parameters

Command Function

You can use this command to view parameters in a VDSL extension profile.

Command Format

```
show vdslextra profile[ id|name|all] { <idOrName> } *1
```

Parameter Description

Parameter	Description	Attribute
profile[id name all]	Profile name or ID. ◆ id: profile ID ◆ name: profile name ◆ all: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL extension profile named "ee".

```
admin\msan#show vdslextra profile name ee
Profile name          ee Profile id          1
Vectoring Enable      enable
annexUs0              annexA(G.992.5)
PMSF                  enable
dn NM floor           5.0                      dB
dn Rate AdaInt floor  100                      s
dn NM top              10.0
dB dn Rate AdaInt top  200                      s
up NM floor           15.0
dB up Rate AdaInt floor 300                      s
up NM top              20.0                      dB
up Rate AdaInt top     400                      s
admin\msan#
```

View a VDSL extension profile whose ID is "1".

```
admin\msan#show vdslextra profile id 1
Profile name          ee Profile id          1
Vectoring Enable      enable
```



```

annexUs0          annexA(G.992.5)
PMSF              enable
dn NM floor       5.0                dB
dn Rate AdaInt floor 100             s
dn NM top         10.0               dB
dn Rate AdaInt top 200               s
up NM floor       15.0               dB
up Rate AdaInt floor 300             s
up NM top         20.0               dB
up Rate AdaInt top 400               s
admin\msan#

```

Result Description

Parameter	Description
Profile name	VDSL extension profile name
Profile id	VDSL extension profile ID
Vectoring Enable	Vectoring switch
annexUs0	US0 parameters
PMSF	PMSF switch
dn NM floor	Minimum noise reduction margin of downlink flow
dn Rate AdaInt floor	Minimum downlink rate adaptation interval
dn NM top	Maximum noise reduction margin of downlink flow
dn Rate AdaInt top	Maximum downlink rate adaptation interval
up NM floor	Minimum noise reduction margin of uplink flow
up Rate AdaInt floor	Minimum uplink rate adaptation interval
up NM top	Maximum noise reduction margin of uplink flow
up Rate AdaInt top	Maximum uplink rate adaptation interval

31.202 Viewing Parameters of an Extension Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters of a VDSL extension profile bound to a specified VDSL port.

Command Format

```
show vdslextra profile attach interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View a VDSL extension profile named "ee" bound to Port 2 in Slot 1.

```
admin\msan#show vdslextra profile attach interface 1/2
slotNO      port_no    profile id 1          2          1
admin\msan#
```

Result Description

Parameter	Description
slotNO	Slot number
port_no	Port number
profile id	Profile ID

31.203 Viewing VDSL Retransmission Profile Parameters

Command Function

You can use this command to view parameters in a VDSL retransmission profile.

Command Format

```
show vdslginp profile[ id|name|all] { <idOrName> } *1
```


Parameter Description

Parameter	Description	Attribute
profile[id name all]	Profile name or ID. ◆ id: profile ID ◆ name: profile name ◆ all: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL retransmission profile named "ee".

```
admin\msan#show vdslginp profile name ee
Profile name          ee Profile id          1 dn
Retran Mode          forbid up Retran Mode          first
dn max delay          25                      ms
up max delay          50                      ms
G.INP dn INPmin       64.0                      symbol
G.INP up INPmin       32.0                      symbol
REIN enable           enable
dn REIN Frequency     120HZ
dn REIN INPmin        3.0                      symbol
up REIN Frequency     120HZ
up REIN INPmin        4.0                      symbol
dn ETRmin             128                      Kbps
dn ETRmax             128                      Kbps
dn NDRmax             256                      Kbps
up ETRmin             256                      Kbps
up ETRmax             512                      Kbps
up NDRmax             512                      Kbps
dn ROC Margin         15                      dB
up ROC Margin         20                      dB
dn ROC INPmin         5.0                      symbol
up ROC INPmin         10.0                     symbol
dn MSGmin             25                      Kbps
up MSGmin             45                      Kbps
admin\msan#
```

View a VDSL retransmission profile whose ID is "1".

```
admin\msan#show vdslginp profile id 1
Profile name          ee Profile id          1
```



```

dn Retran Mode          forbid up Retran Mode          first
dn max delay            25                      ms
up max delay            50                      ms
G.INP dn INPmin         64.0                    symbol
G.INP up INPmin         32.0                    symbol
REIN enable             enable dn REIN Frequency 120HZ
dn REIN INPmin          3.0                      symbol
up REIN Frequency       120HZ
up REIN INPmin          4.0                      symbol
dn ETRmin               128                      Kbps
dn ETRmax               128                      Kbps
dn NDRmax               256                      Kbps
up ETRmin               256                      Kbps
up ETRmax               512                      Kbps
up NDRmax               512                      Kbps
dn ROC Margin           15                      dB
up ROC Margin           20                      dB
dn ROC INPmin           5.0                    symbol
up ROC INPmin           10.0                   symbol
dn MSGmin               25                      Kbps
up MSGmin               45                      Kbps
admin\msan#

```

Result Description

Parameter	Description
Profile name	VDSL retransmission profile name
Profile id	VDSL retransmission profile ID
dn Retran Mode	Downlink retransmission mode
up Retran Mode	Uplink retransmission mode
dn max delay	Maximum downlink delay
up max delay	Maximum uplink delay
G.INP dn INPmin	Minimum downlink impulse noise protection
G.INP up INPmin	Minimum uplink impulse noise protection
REIN enable	Control switch
dn REIN Frequency	Downlink flow control frequency
dn REIN INPmin	Minimum downlink flow impulse noise protection
up REIN Frequency	Uplink flow control frequency
up REIN INPmin	Minimum uplink flow impulse noise protection
dn ETRmin	Minimum downlink ETR
dn ETRmax	Maximum downlink ETR

Parameter	Description
dn NDRmax	Maximum downlink NDR
up ETRmin	Minimum uplink ETR
up ETRmax	Maximum uplink ETR
up NDRmax	Maximum uplink NDR
dn ROC Margin	Downlink ROC margin
up ROC Margin	Uplink ROC margin
dn ROC INPmin	Minimum downlink ROC impulse noise protection
up ROC INPmin	Minimum uplink ROC impulse noise protection
dn MSGmin	Minimum downlink MSG
up MSGmin	Minimum uplink MSG

31.204 Viewing Parameters of a Retransmission Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters of a VDSL retransmission profile bound to a specified VDSL port.

Command Format

```
show vdslginp profile attach interface <if_str>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View a VDSL port retransmission profile named "ee" bound to Port 2 in Slot 1.

```
admin\msan#show vdslginp profile attach interface 1/2
slotNO    port_no    profile id 1          2          1
admin\msan#
```


Result Description

Parameter	Description
slotNO	The slot number.
port_no	Port number
profile id	Profile ID

31.205 Viewing a VDSL Power Back-off Profile

Command Function

You can use this command to view parameters in a VDSL power back-off profile.

Command Format

```
show vdslpbo profile [ id|name|all] { <idOrName> } * 1
```

Parameter Description

Parameter	Description	Attribute
profile [id name all]	Profile name or ID. ◆ id: profile ID ◆ name: profile name ◆ all: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL power back-off profile named "ee".

```
admin\msan#show vdslpbo profile name ee
Profile name          ee Profile id          1
upPBOMode            manual
forceElectricalLength 0.0                      dB
US0 A                 40.00                   dBm/Hz
US0 B                 0.00                    dBm/Hz
US1 A                 40.00                   dBm/Hz
US1 B                 0.00                    dBm/Hz
US2 A                 40.00                   dBm/Hz
US2 B                 0.00                    dBm/Hz
US3 A                 40.00                   dBm/Hz
US3 B                 0.00                    dBm/Hz
```



```

DPBO esel                0.0                dB
DPBO Scalar A            0.02734400
DPBO Scalar B            0.98828100
DPBO Scalar C            0.01953100
DPBO MUS                 -90.3              dBm/Hz
DPBO Span Min Frequency  0                  tone
DPBO Span Max Frequency  580               tone
admin\msan#

```

View a VDSL power back-off profile whose ID is "1".

```

admin\msan#show vdslpbo profile id 1
Profile name              ee Profile id      1
upPBOMode                manual
forceElectricalLength    0.0                dB
US0 A                    40.00              dBm/Hz
US0 B                    0.00               dBm/Hz
US1 A                    40.00              dBm/Hz
US1 B                    0.00               dBm/Hz
US2 A                    40.00              dBm/Hz
US2 B                    0.00               dBm/Hz
US3 A                    40.00              dBm/Hz
US3 B                    0.00               dBm/Hz
DPBO esel                0.0                dB
DPBO Scalar A            0.02734400
DPBO Scalar B            0.98828100
DPBO Scalar C            0.01953100
DPBO MUS                 -90.3              dBm/Hz
DPBO Span Min Frequency  0                  tone
DPBO Span Max Frequency  580               tone
admin\msan#

```

Result Description

Parameter	Description
Profile name	VDSL power back-off profile name
Profile id	VDSL power back-off profile ID
upPBOMode	Uplink power back-off mode
forceElectricalLength	Mandatory electronic length
US0 A	US0 parameter A
US0 B	US0 parameter B
US1 A	US1 parameter A

Parameter	Description
US1 B	US1 parameter B
US2 A	US2 parameter A
US2 B	US2 parameter B
US3 A	US3 parameter A
US3 B	US3 parameter B
DPBO esel	Electronic length
DPBO Scalar A	Model parameter A
DPBO Scalar B	Model parameter B
DPBO Scalar C	Model parameter C
DPBO MUS	Minimum available power spectral density (PSD)
DPBO Span Min Frequency	Minimum frequency band
DPBO Span Max Frequency	Maximum frequency band

31.206 Viewing Parameters of a Power Back-off Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters of a VDSL power back-off profile bound to a specified VDSL port.

Command Format

```
show vdslpbo profile attach interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View a VDSL power back-off profile named "ee" bound to Port 2 in Slot 1.

```
admin\msan#show vdslpbo profile attach interface 1/2
slotNO      port_no    profile id 1          2          1
admin\msan#
```


Result Description

Parameter	Description
slotNO	Slot number
port_no	Port number
profile id	Profile ID

31.207 Viewing a VDSL Service Profile

Command Function

You can use this command to view parameters in a VDSL service profile.

Command Format

```
show vdslser profile[ id|name|all] { <idOrName> } *1
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Profile name or ID. ◆ ID: profile ID ◆ NAME: profile name. ◆ All: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL service profile named "ee".

```
admin\msan#show vdslser profile name ee
Profile name          ee Profile id          1
upRateMode            fixed
downRateMode          fixed
Target SNRM Dn        1.0                dB
MaxSNRMDnMode         0
Max SNRM Dn           1.5                dB
Min SNRM Dn           1.0                dB
Target SNRM Up        0.0                dB
MaxSNRMUpMode         0
Max SNRM Up           1.0                dB
Min SNRM Up           0.0                dB
```



```

Min Rate Dn          20000          kbit/s
Min Rate Up          1000           kbit/s
Max Interleave Delay Dn 16           ms
Max InterleaveDelay Up 16           ms
Min INP Dn           4 Min INP Up    3
admin\msan#

```

View a VDSL service profile whose ID is "1".

```

admin\msan#show vdslser profile id 1
Profile name          ee
Profile id            1
upRateMode            fixed
downRateMode          fixed
Target SNRM Dn        1.0           dB
MaxSNRMDnMode         0
Max SNRM Dn           1.5           dB
Min SNRM Dn           1.0           dB
Target SNRM Up        0.0           dB
MaxSNRMUpMode         0
Max SNRM Up           1.0           dB
Min SNRM Up           0.0           dB
Min Rate Dn           20000         kbit/s
Min Rate Up           1000          kbit/s
Max Interleave Delay Dn 16           ms
Max InterleaveDelay Up 16           ms
Min INP Dn            4 Min INP Up    3
admin\msan#

```

Result Description

Parameter	Description
slotNO	VDSL service profile name
port_no	VDSL service profile ID
profile id	Uplink rate mode
downRateMode	Downlink rate mode
Target SNRM Dn	Downlink target signal-to-noise ratio margin
MaxSNRMDnMode	Maximum downlink signal-to-noise ratio margin mode
Max SNRM Dn	Maximum downlink signal-to-noise ratio margin
Min SNRM Dn	Minimum downlink signal-to-noise ratio margin
Target SNRM Up	Uplink target signal-to-noise ratio margin
MaxSNRMUpMode	Maximum uplink signal-to-noise ratio margin mode

Parameter	Description
Max SNRM Up	Maximum uplink signal-to-noise ratio margin
Min SNRM Up	Minimum uplink signal-to-noise ratio margin
Min Rate Dn	Minimum downlink rate
Min Rate Up	Minimum uplink rate
Max Interleave Delay Dn	Maximum downlink interleave delay
Max InterleaveDelay Up	Maximum uplink interleave delay
Min INP Dn	Minimum downlink impulse noise protection
Min INP Up	Minimum uplink impulse noise protection

31.208 Viewing a Service Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters of a VDSL service profile bound to a specified VDSL port.

Command Format

```
show vdslser profile attach interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View parameters of a VDSL service profile bound to a VDSL port (that is, Port 2 in Slot 1).

```
admin\msan#show vdslser profile attach interface 1/2
slotNO    port_no    profile id 1          2          1
admin\msan#
```


Result Description

Parameter	Description
slotNO	Slot number
port_no	Port number
profile id	Profile ID

31.209 Viewing a VDSL Virtual Noise Profile

Command Function

You can use this command to view parameters in a VDSL virtual noise profile.

Command Format

```
show vdslvn profile [ id | name | all ] { <idOrName> } * 1
```

Parameter Description

Parameter	Description	Attribute
profile [id name all]	Profile name or ID. ◆ id: profile ID ◆ name: profile name ◆ all: all profiles	Mandatory
<idOrName>	Specified profile ID or name	Mandatory

Command Example

View a VDSL virtual noise profile named "ee".

```
admin\msan#show vdslvn profile name ee
Profile name          ee
Profile id            1
VN Up num             1
VN US No              1
Tone                  1010
Level                 -140
VN Dn num             1
VN DS No              1
Tone                  88
Level                 -120
admin\msan#
```


View a VDSL virtual noise profile whose ID is "1".

```
admin\msan#show vdslvn profile id 1
Profile name          ee
Profile id            1
VN Up num             1
VN US No              1
Tone                  1010
Level                 -140
VN Dn num             1
VN DS No              1
Tone                  88
Level                 -120
admin\msan#
```

Result Description

Parameter	Description
Profile name	VDSL virtual noise profile name
Profile id	VDSL virtual noise profile ID
VN Up num	Number of uplink virtual noise breakpoints
VN US No	Sequence number of uplink virtual noise breakpoints
Tone	Uplink virtual noise frequency band
Level	Uplink virtual noise value
VN Dn num	Number of downlink virtual noise breakpoints
VN DS No	Sequence number of downlink virtual noise breakpoints
Tone	Downlink virtual noise frequency band
Level	Downlink virtual noise value

31.210 Viewing a Virtual Noise Profile Bound to the VDSL Port

Command Function

You can use this command to view parameters of a VDSL virtual noise profile bound to a specified VDSL port.

Command Format

```
show vdslvn profile attach interface <if_str>
```


Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View a virtual noise profile named "ee" bound to Port 2 in Slot 1.

```
admin\msan#show vdsiser profile attach interface 1/2
slotNO      port_no  profile id 1          2          1
admin\msan#
```

Result Description

Parameter	Description
slotNO	Slot number
port_no	Port number
profile id	Profile ID

31.211 Viewing the Voice Basic Configuration

Command Function

You can use this command to view voice basic configuration.

Command Format

```
show voice basic configuration
```

Parameter Description

None

Command Example

View the voice basic configuration.

```
admin\msan#show voice basic configuration
Voice Basic Configuration
-----
Domain Name:                test
```



```

Transport Protocol Type:  TCP
Local Protocol Port:      1
Protocol Encode Type:     Uncompacted
get voice basic configuration successfully.
admin\msan#

```

Result Description

Parameter	Description
Domain Name	Domain name
Transport Protocol Type	Transport protocol type
Local Protocol Port	Local protocol port
Protocol Encode Type	Protocol encoding type

31.212 Viewing the Voice Equipment Status

Command Function

You can use this command to view the voice equipment status.

Command Format

```
show voice device status
```

Parameter Description

None

Command Example

View the voice equipment status.

```

admin\msan#show voice device status
Voice Device Status
-----
Register Status:  Register Success
Server IP:  192.168.1.1
Proxy Server IP:  192.168.2.2
get voice device status successfully.
admin\msan#

```


Result Description

Parameter	Description
Register Status	Registration status
Server IP	Server IP address
Proxy Server IP	Proxy server IP address

31.213 Viewing the Voice IP Address

Command Function

You can use this command to view the voice IP address.

Command Format

```
show voice ip
```

Parameter Description

None

Command Example

View the voice IP address.

```
admin\msan#show voice ip
Voice IP Configuration
-----
IP Configuration Mode:      Static
Signalling IP(IPv4):        1.1.1.1          /0
Signalling Gateway(IPv4):   2.2.2.2
RTP IP(IPv4):               3.3.3.3          /0
RTP Gateway(IPv4):          4.4.4.4
Primary DNS(IPv4):          5.5.5.5
Secondary DNS(IPv4):         6.6.6.6
get voice IP configuration successfully.
admin\msan#
```


Result Description

Parameter	Description
IP Configuration Mode	Voice IP mode
Signalling IP (IPv4)	Signaling IP address
Signalling Gateway (IPv4)	Signaling gateway address
RTP IP (IPv4)	RTP IP address
RTP Gateway (IPv4)	RTP gateway address
Primary DNS (IPv4)	Primary DNS
Secondary DNS (IPv4)	Secondary DNS

31.214 Viewing the Voice IP Status

Command Function

You can use this command to view the voice IP status.

Command Format

```
show voice ip status
```

Parameter Description

None

Command Example

View the voice IP status.

```
admin\msan#show voice ip status
Voice IP Status
-----
IAD MAC Address:          00:00:23:56:00:ac
IP Config Mode:           Static
Get IP Result:            Success
Signalling IP(N/A):  1.1.1.1          /0
Signalling Gateway(N/A): 2.2.2.2
RTP IP(N/A):   3.3.3.3          /0
RTP Gateway(N/A): 4.4.4.4
Primary DNS(N/A): 5.5.5.5
Secondary DNS(N/A): 6.6.6.6
```



```
PPPoE Server(N/A) : 7.7.7.7           /0
DHCP Server(N/A) : 8.8.8.8           /0
DHCP Lease Begin(hhmmss) : 2016-06-21 20:02:09
DHCP Lease Expired(hhmmss) : 2016-06-21 20:13:15
get voice IP status successfully.
admin\msan#
```

Result Description

Parameter	Description
IAD MAC Address	VDSL virtual noise profile name
IP Config Mode	VDSL virtual noise profile ID
Get IP Result	Number of uplink virtual noise breakpoints
Signalling IP(N/A)	Signaling IP address
Signalling Gateway(N/A)	Signaling gateway address
RTP IP(N/A)	RTP IP address
RTP Gateway(N/A)	RTP gateway address
Primary DNS(N/A)	Primary DNS
Secondary DNS(N/A)	Standby DNS
PPPoE Server(N/A)	PPPoE Server
DHCP Server(N/A)	DHCP server
DHCP Lease Begin(hhmmss)	Starting time of the DHCP lease
DHCP Lease Expired(hhmmss)	Expiration time of the DHCP lease

31.215 Viewing the Voice Port Configuration

Command Function

You can use this command to view the voice port configuration.

Command Format

```
show voice port configuration interface <ifStr>
```

Parameter Description

None

Command Example

View the voice port configuration.

```
admin\msan#show voice port configuration interface 1/2
Voice Port Configuration
-----
Slot No./Port No.:          1/2
User Name/SIP Telephone No.:
DSP ProfileID:      1
SIP Auth Name:      sip_test
SIP Auth Password:   sip_test
SIP User Call Profile ID:  2
get voice port configuration successfully(0).
admin\msan#
```

Result Description

Parameter	Description
Slot No./Port No.	Slot number/port number
User Name/SIP Telephone No.	User name or SIP telephone No.
DSP ProfileID	DSP profile ID
SIP Auth Name	SIP authentication name
SIP Auth Password	SIP authentication password
SIP User Call Profile ID	SIP user call profile ID

31.216 Viewing Statistics Information of a Voice Stream Port

Command Function

You can use this command to view statistics information of a voice stream port.

Command Format

```
show voice streamport statistics information interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View statistics information of the voice stream port for Port 2 in Slot 1.

```
admin\msan#show voice stream port statistics information interface 1/2
Voice Stream Port Statistics Information
Slot No./Port No.: 1/2
RTP Stream Packets Rx: 139          Tx: 87
RTP Stream Bytes Rx: 1513         Tx: 1156
Jitter Delay(ms): 20              Loss Packets Ratio(%): 0%
Last Call Begin(hhmmss): 2016-06-21 20:29:05
Last Call End(hhmmss): 2016-06-21 20:29:60
admin\msan#
```

Result Description

Parameter	Description
Slot No./Port No.	Slot number/port number
User Name/SIP Telephone No.	User name or SIP telephone No.
DSP ProfileID	DSP profile ID
SIP Auth Name	SIP authentication name
SIP Auth Password	SIP authentication password
SIP User Call Profile ID	SIP user call profile ID

31.217 Viewing the Voice VLAN

Command Function

You can use this command to view the voice VLAN.

Command Format

```
show voice vlan
```

Parameter Description

None

Command Example

View the voice VLAN.


```

admin\msan#show voice vlan
Voice VLAN Configuration
-----
VLAN Type:    Signalling SVLAN TPID:  33024
SVLAN ID:     NULL SVLAN COS:    5 CVLAN TPID:  33024
CVLAN ID:     NULL CVLAN COS:    NULL VLAN Type:    RTP Stream SVLAN
TPID:  33024 SVLAN ID:     NULL
SVLAN COS:    5 CVLAN TPID:  33024
CVLAN ID:     NULL CVLAN COS:    NULL
admin\msan#

```

Result Description

Parameter	Description
VLAN Type	VLAN type
SVLAN TPID	The SVLAN protocol identifier.
SVLAN ID	SVLAN ID
SVLAN COS	SVLAN COS
CVLAN TPID	CVLAN protocol identifier
CVLAN ID	CVLAN ID
CVLAN COS	CVLAN COS
VLAN Type	VLAN type
SVLAN TPID	SVLAN protocol identifier.
SVLAN ID	SVLAN ID
SVLAN COS	SVLAN COS
CVLAN TPID	CVLAN protocol identifier
CVLAN ID	CVLAN ID
CVLAN COS	CVLAN COS

31.218 Viewing the Voice Self-Exchanging Port Configuration

Command Function

You can use this command to view the voice self-exchanging port configuration.

Command Format

```
show voice_self_port_cfg slot <slotno> port <portno>
```


Parameter Description

Parameter	Description	Attribute
slot <slotno>	Slot number	Mandatory
port <portno>	Port number	Mandatory

Command Example

View the voice self-exchanging port configuration of Port 1 in Slot 1.

```
admin\msan#show voice_self_port_cfg slot 1 port 1
phoneNum = 123456 .
admin\msan#
```

Result Description

Parameter	Description
phoneNum	Phone number

31.219 Viewing Voice Self-Exchanging Enabling Status

Command Function

You can use this command to view the voice self-exchanging enabling status.

Command Format

```
show voice_self_switch
```

Parameter Description

None

Command Example

View the voice self-exchanging enabling status.

```
admin\msan#show voice_self_switch
voice_self_switch:  enable
admin\msan#
```


Result Description

Parameter	Description
voice_self_switch	Voice switch

31.220 Viewing Limit Configuration on the Number of MAC Addresses

Command Function

You can use this command to view the limit configuration on the number of MAC addresses.

Command Format

```
show mac limit interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View the limit configuration on the number of MAC addresses for Port 1 in Slot 14.

```
admin\msan#show mac limit interface 1/1
slot      port      pvc      flag      number
1         1         0        disable   16
1         1         1        disable   16
1         1         2        disable   16
1         1         3        disable   16
1         1         4        disable   16
1         1         5        disable   16
1         1         6        disable   16
1         1         7        disable   16
admin\msan#
```


Result Description

Parameter	Description
Slot	Slot number
Port	Port number
pvc	PVC index
flag	Enabling identifier
number	Limit on the number of MAC addresses

31.221 Viewing an ADSL Line Profile

Command Function

You can use this command to view an ADSL line profile.

Command Format

```
show adslLine profile[ id|name|all] { <idOrName> } *1
```

Parameter Description

Parameter	Description	Attribute
[id name all]	Profile ID, profile name or all profiles	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

View parameters of an ADSL line profile whose profile ID is "1".

```
admin\msan#show adslLine profile id 1
Profile name          adslLine Profile id          1
transmode             3 DownRateMode             2
UpRateMode            2 LineType              3
SnrmDn                600 SnrmUp                600
MaxInterLeaveDelayDn   16 MaxInterLeaveDelayUp   16
MinInpDn              1 MinInpUp              1
BitSwapDn             0 BitSwapUp             0
PowerMode             3 PmL0Time              30
PmL2Time              30 PmL2Atprt              3
PmL2Rate              32 MaxSnrmDn              31
MaxSnrmUp             31 MinSnrmDn              0
```



```

MinSnrmUp          0 ToneBlackoutNum          0
MinRateDn          0 MinRateUp                0
admin\msan#

```

Result Description

Parameter	Description
Profile name	Profile name
Profile id	Profile ID
transmode	Transmission mode
DownRateMode	Downlink rate mode
UpRateMode	Uplink rate mode
LineType	Line type
SnrmDn	Downlink signal-to-noise ratio margin
SnrmUp	Uplink signal-to-noise ratio margin
MaxInterLeaveDelayDn	Maximum downlink interleave delay
MaxInterLeaveDelayUp	Maximum uplink interleave delay
MinInpDn	Minimum downlink impulse noise protection
MinInpUp	Minimum uplink impulse noise protection
BitSwapDn	Downlink bit swap
BitSwapUp	Uplink bit swap
PowerMode	Power mode
PmL0Time	L0 holding time
PmL2Time	L2 holding time
PmL2Atprt	Maximum adaptive power
PmL2Rate	L2 rate
MaxSnrmDn	Maximum downlink signal-to-noise ratio margin
MaxSnrmUp	Maximum uplink signal-to-noise ratio margin
MinSnrmDn	Minimum downlink signal-to-noise ratio margin
MinSnrmUp	Minimum uplink signal-to-noise ratio margin
ToneBlackoutNum	Number of breakpoints
MinRateDn	Minimum downlink rate
MinRateUp	Minimum uplink rate

31.222 Viewing an ADSL Line Profile Bound to a Port

Command Function

You can use this command to view an ADSL line profile bound to a Port.

Command Format

```
show adslLine profile attach interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View an ADSL line profile bound to Port 1 in Slot 1.

```
admin\msan#show adslLine profile attach interface 1/1
slotNO      portNo      profile id 1          1          8682
admin\msan#
```

Result Description

Parameter	Description
slotNo	Slot number
portNo	Port number
profile id	ADSL line profile ID

31.223 Querying the Alarm Profile Configuration

Command Function

You can use this command to query the alarm profile.

Command Format

```
show alarmprofile[ id|name|all] {<idOrName>} *1
```


Parameter Description

Parameter	Description	Attribute
[id name all]	Profile ID, profile name or all profiles	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Query an alarm profile named "DEFAlarm.PRF0".

```
admin\msan#show alarm profile name DEFAlarm.PRF0
Profile name          DEFAlarm.PRF0 Profile id          1
NeLossThreshold15min  2 NeLofsThreshold15min  0
NeEsThreshold15min    0 NeSesThreshold15min    0
NeUasThreshold15min   0 NeLolsThreshold15min   0
FeLossThreshold15min  0 FeLofsThreshold15min   0
FeEsThreshold15min    0 FeSesThreshold15min    0
FeUasThreshold15min   0 FeLprsThreshold15min    0
admin\msan#
```

Result Description

Parameter	Description
Profile name	The profile name
Profile id	Profile ID
NeLossThreshold15min	Local-end 15-min LOS second threshold
NeLofsThreshold15min	Local-end 15-min LOF second threshold
NeEsThreshold15min	Local-end 15-min ES threshold
NeSesThreshold15min	Local-end 15-min SES threshold
NeUasThreshold15min	Local-end 15-min UAT threshold
NeLolsThreshold15min	Local-end 15-min LOS threshold
FeLossThreshold15min	Far-end 15-min LOS second threshold
FeLofsThreshold15min	Far-end 15-min LOF second threshold
FeEsThreshold15min	Far-end 15-min ES threshold
FeSesThreshold15min	Far-end 15-min SES threshold
FeUasThreshold15min	Far-end 15-min UAT threshold
FeLprsThreshold15min	Far-end 15-min power-off second threshold

31.224 Viewing the Caller ID Display Mode

Command Function

You can use this command to view the caller ID display mode.

Command Format

```
show cid mode
```

Command Example

View the caller ID display mode.

```
admin\msan#show cid mode
CID Mode Configuration
-----
CID Mode:   DTMF
get CID mode configuration successfully
```

Result Description

Parameter	Description
CID Mode	Caller ID display mode. ◆ fsk: FSK mode ◆ dtmf: DTMF mode

31.225 Viewing the IPT Telephone Number Configuration

Command Function

You can use this command to view the IPT telephone number configuration.

Command Format

```
show ipt telephone number
```

Command Example

View the IPT telephone number configuration.


```

admin\msan#show ipt telephone number
CID Mode Configuration
-----
CID Mode:   DTMF
get CID mode configuration successfully
IPT Telephone Number Configuration
-----
No.    Telephone Number    Type
-----
1      123456789             H
get IPT number configuration successfully.
admin\msan#

```

Result Description

Parameter	Description
No	Sequence number
Telephone Number	Telephone number
Type	Type of the number.

31.226 Viewing the Port Isolation

Command Function

You can use this command to view the port isolation.

Command Format

```
show isolation interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

View the isolation status of Port 1 in Slot 8.

```

admin\msan#show isolation interface 8/1
slot: 8 switch: enable
admin\msan#

```


Result Description

Parameter	Description
Slot	Slot number
switch	Port isolation status

31.227 Viewing MAC Address Table Entries

Command Function

You can use this command to query the MAC address table entries.

Command Format

```
show msan_mac slot[ <slotno>] link<linkNo>
```

Parameter Description

Parameter	Description	Attribute
slot[<slotno>]	Slot number	Mandatory
link<linkNo>	Port number	Mandatory

Command Example

Query the MAC address table entries for Port 1 in Slot 14.

```
admin\msan#show msan_mac slot 14 link 1
----- PON MAC ADDRESS, ITEM=1 -----
SLOT 14 PON 1 PVC_ITEM = 8 PVC_INDEX
0 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
1 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
2 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
3 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
4 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
5 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
6 : total_mac_item = 0, report_mac_item = 0 PVC_INDEX
7 : total_mac_item = 0, report_mac_item = 0
admin\msan#
```


Result Description

Parameter	Description
PVC_ITEM	Total number of PVC entries
total_mac_item	Total number of MAC entries
report_mac_item	Number of MAC entries that have been actually reported

31.228 Viewing the Off-hook or On-hook State of a Port

Command Function

You can use this command to query the off-hook or on-hook state of a port.

Command Format

```
show onhook state slot <slotNo> { port <portNo> } *1
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number	Mandatory
{ port <portNo> } *1	Port number	Mandatory

Command Example

Query the off-hook or on-hook state of Port 1 in Slot 1.

```
admin\msan#show onhook state slot 1 port 1
show onhook state of slot 1 port          state 1          off
admin\msan#
```

Result Description

Parameter	Description
port	Port number
state	Off-hook or on-hook state

31.229 Viewing DELT Results of a Port

Command Function

You can use this command to query DELT (double-ended loop test) results of a port.

Command Format

```
show port DELT_TEST[ status|hlog|hlin|qln|snr_us|snr_ds] slot[ <slotno>]
port <portNo>
```

Parameter Description

Parameter	Description	Attribute
[status hlog hlin qln snr_us snr_ds]	DELT Results of a port. ◆ status: DELT status of a port ◆ hlog: DELT status "Hlog" of a port ◆ hlin: DELT status "Hlin" of a port ◆ qln: DELT status "QLN" of a port ◆ snr_us: DELT status "SNR US" of a port ◆ snr_ds: DELT status "SNR DS" of a port	Mandatory
slot[<slotno>]	Slot number	Mandatory
port <portNo>	Port number	Mandatory

Command Example

Query DELT status "QLN" of a port.

```
admin\msan#show port delt_test qln slot 1 port 1
slotOut:1          , portNo:1          , Num:512          .
seqNo 1:  QLN Us:  429496704.00 dB ,QLN Ds:  429496704.00 dB
seqNo 2:  QLN Us:  429496704.00 dB ,QLN Ds:  429496704.00 dB
seqNo 3:  QLN Us:  429496704.00 dB ,QLN Ds:  429496704.00 dB
seqNo 4:  QLN Us:  429496704.00 dB ,QLN Ds:  429496704.00 dB
seqNo 5:  QLN Us:  429496704.00 dB ,QLN Ds:  429496704.00 dB
seqNo 6:  QLN Us:  429496704.00 dB ,QLN Ds:  429496704.00 dB
admin\msan#
```


Result Description

Parameter	Description
slotOut	Slot number
portNo	Port number
Num	Number of services
seqNo	Sequence number
QLN Us	Uplink QLN
QLN Ds	Downlink QLN

31.230 Viewing SELT Results of a Port

Command Function

You can use this command to query the SELT (single-ended loop test) results.

Command Format

```
show port SELT_test_result slot[ <slotno>] port <portNo>
```

Parameter Description

Parameter	Description	Attribute
slot[<slotno>]	Slot number	Mandatory
port <portNo>	Port number	Mandatory

Command Example

Query the SELT result of Port 1 in Slot 1.

```
admin\msan#show port SELT_test_result slot 1 port 1
slot: 1 , port: 1 , SELT Test Result:
Loop Length: 0 m Atn@180kHz: 0.00 dB Atn@300kHz: 0.00 dB
Loop type: 0 state: 2 Termination: 1
Downstream capacity: 0 kbps Upstream capacity: 0 kbps
Quiet line noise: 0.00 dBm/Hz
```


Result Description

Parameter	Description
slot	Slot number
port	Port number
Loop Length	Line length
Atn@180kHz	Line attenuation (180kHz)
Atn@300kHz	Line attenuation (300kHz)
Loop type	Line type
Atn@300kHz	Line attenuation (300kHz)
Loop type	Line type
state	Operation status
Termination	Terminal state
Downstream capacity	Maximum downlink rate
Upstream capacity	Maximum uplink rate
Quiet line noise	Line static noise

31.231 Viewing Configuration Status of a Port

Command Function

You can use this command to query the configuration status of a port.

Command Format

```
show port[ bit_alloc|gain_map|dsl_status|drop_reason] slot[ <slotno>] port  
<portNo>
```

Parameter Description

Parameter	Description	Attribute
[bit_alloc gain_map dsl_status drop_reason]	Configuration status of the port. ◆ bit_alloc: bit distribution ◆ gain_map: gain distribution ◆ dsl_status: DSL port status ◆ drop_reason: line drop reason	Mandatory
slot[<slotno>]	Slot number	Mandatory
port <portNo>	Port number	Mandatory

Command Example

Query the gain distribution status of Port 1 in Slot 1.

```
admin\msan#show port gain_map slot 1 port 1
```

```
-----
slotOut  portNo 1          1 Servicenum          512
gain                : 0.00
gain                : 0.00
gain                : 0.00
gain                : 0.00
gain                : 0.00
gain                : 0.00
admin\msan#
```

Result Description

Parameter	Description
slotOut	Slot number
portNo	Port number
Servicenum	Total number of services
gain	Gain

31.232 Configuring the Voice IP Mode

Command Function

You can use this command to configure the voice IP mode.

Command Format

```
set voice ip configuration mode [ static | pppoe | dhcp | pppoe_v6 | dhcp_v6 ]
```

Parameter Description

Parameter	Description	Attribute
[static pppoe dhcp pppoe_v6 dhcp_v6]	IP configuration mode.	Mandatory

Command Example

Set the voice IP to PPPoE mode.


```
admin\msan#set voice ip configuration mode pppoe
admin\msan#
```

31.233 Configuring the Voice DNS Address

Command Function

You can use this command to configure the voice DNS address.

Command Format

```
set voice dns ipv4 primary <primaryAddr> { secondary <secondaryAddr> } * 1
```

Parameter Description

Parameter	Description	Attribute
<primaryAddr>	Primary DNS address	Mandatory
<secondaryAddr>	Secondary DNS address	Mandatory

Command Example

Set the primary DNS address to 10.190.352.13, secondary DNS address to 10.190.50.28 for the voice IP.

```
admin\msan#set voice dns ipv4 primary 10.190.352.13 secondary 10.190.50.28
admin\msan#
```

31.234 Configuring Basic Voice Configuration

Command Function

You can use this command to configure the basic voice configuration.

Command Format

```
set voice transport protocol [ udp | tcp ] local port <localPort> encode
[ compact | uncompact ]
```


Parameter Description

Parameter	Description	Attribute
[udp tcp]	Transport protocol type ◆ 0: UDP ◆ 1: TCP	Mandatory
<localPort>	Local protocol port number: 0 to 65534	Mandatory
[compact uncompact]	Compressed encoding mode. ◆ 0: compressed encoding ◆ 1: uncompressed encoding	Mandatory

Command Example

Set the transport protocol type to TCP, port number to 1024, and encoding mode is uncompressed encoding for basic voice configurations.

```
admin\msan#set voice transport protocol tcp local port 1024 encode uncompact
admin\msan#
```

31.235 Configuring the Voice Service Domain Name

Command Function

You can use this command to configure the voice domain name.

Command Format

```
set voice domain name <domainName>
```

Parameter Description

Parameter	Description	Attribute
<domainName>	Domain name. The character string contains 0 to 64 bytes.	Mandatory

Command Example

Set the domain name of voice basic configuration to "yydommail".

```
admin\msan#set voice domain name yydommail
set voice basic configuration successfully(0).
admin\msan#
```


31.236 Binding DSP and SIP User Caller Configuration Profiles to a Voice Port

Command Function

You can use this command to bind DSP and SIP user caller configuration profiles to a voice port.

Command Format

```
set voice port dsp profile [ id|name] <dspProfileIDorName> { call profile [ id|name] <callProfileIDorName>} *1 interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
dsp profile [id name]	DSP profile name or ID; value range: 0 to 9 bytes.	Mandatory
<dspProfileIDorName>	DSP profile name. The character string contains 0 to 20 bytes.	Mandatory
call profile [id name]	SIP user call configuration profile name or profile ID. The character string contains 0 to 20 bytes.	Optional
<callProfileIDorName>	SIP user call configuration profile name. The character string contains 0 to 20 bytes.	Optional
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Bind a DSP profile named "DSP" and an SIP user caller profile named "SIP" to Port 2 in Slot 1.

```
admin\msan#set voice port dsp profile name dsp call profile name sip interface 1/2
set voice basic configuration successfully(0).
admin\msan#
```


31.237 Configuring the SIP Authentication User Name and Password

Command Function

You can use this command to configure the SIP authentication user name and password for a voice port.

Command Format

```
set voice port sip authentication user <authUserName> { password  
<authPassword>} *1 interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
<authUserName>	SIP authentication user name. The character string contains 0 to 64 bytes.	Mandatory
{ password <authPassword>}	SIP authentication password. The character string contains 0 to 64 bytes.	Optional
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Configure the voice port of Port 2 in Slot 1. Set SIP authentication user name to "ggggg", and SIP authentication password to "yyyyy".

```
admin\msan#set voice port sip authentication user ggggg password yyyyy interface 1/2  
set voice port configuration successfully(0).  
admin\msan#
```

31.238 Configuring the SIP User Telephone Number

Command Function

You can use this command to configure the SIP user telephone number for a voice port.

Command Format

```
set voice port telephone number <startNumber> step <numberStep> interface  
<ifStr>
```

Parameter Description

Parameter	Description	Attribute
<startNumber>	Telephone number. Value range: 0 to 32-byte character strings.	Mandatory
<numberStep>	Telephone number step	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Configure the voice port for Port 2 in Slot 1. Set port telephone number to "123456789" and telephone number step to "1".

```
admin\msan#set voice port telephone number 123456789 step 1 in 1/2  
set voice port configuration successfully(0).  
admin\msan#
```

31.239 Configuring User Name of Voice Port

Command Function

You can use this command to configure the user name of voice port.

Command Format

```
set voice port user name <userNamePrefix> start <userNameStart> step  
<userNameStep> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
<userNamePrefix>	User name prefix. Value range: 0 to 30 bytes.	Mandatory
<userNameStart>	Starting value of user name	Mandatory
<userNameStep>	Step of user name	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Configure the voice port for Port 2 in Slot 1. Set user name's prefix to "hhh", user name's starting value to "111", and user name's step to "1".

```
admin\msan#set voice port user name hhh start 111 step 1 interface 2/1
set voice port configuration successfully(0)
admin\msan#
```

31.240 Creating a VLAN Profile

Command Function

You can use this command to create a VLAN profile.

Command Format

```
[ create|destroy] vlan profile <name>
```

Parameter Description

Parameter	Description	Attribute
[create destroy]	Create or delete a VLAN profile.	Mandatory
<name>	Profile name The character string contains 0 to 20 bytes.	Mandatory

Command Example

Create a VLAN profile named "ghghg".

```
admin\msan#create vlan profile ghghg
Create vlan profile ghghg(id:1) success
admin\msan#
```

31.241 Distributing or Erasing the CID Configuration

Command Function

You can use this command to distribute or erase the CID mode configuration.

Command Format

```
[ distribute|erase] cid mode
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	◆ distribute: Distribute CID configuration. ◆ erase: Erase CID configuration.	Mandatory

Command Example

Distribute CID mode configuration.

```
admin\msan#distribute cid mode  
distribute CID mode configuration successfully.  
admin\msan#
```

31.242 Distributing or Erasing the IPT Telephone Number Configuration

Command Function

You can use this command to distribute or erase the IPT telephone number configuration.

Command Format

```
[ distribute|erase] ipt telephone number
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	◆ distribute: Distribute the IPT telephone number configuration. ◆ erase: Erase the IPT telephone number configuration.	Mandatory

Command Example

Distribute the IPT telephone number configuration.


```
admin\msan#distribute ipt telephone number  
distribute IPT telephone number configuration successfully.  
admin\msan#
```

31.243 Distributing or Erasing the POTS Telephone Number Configuration

Command Function

You can use this command to distribute or erase the POTS telephone number configuration.

Command Format

```
[ distribute|erase] pots telephone number
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	<ul style="list-style-type: none">◆ distribute: Distribute the POTS telephone number configuration.◆ erase: Erase the POTS telephone number configuration.	Mandatory

Command Example

Distribute the POTS telephone number configuration.

```
admin\msan#distribute pots telephone number  
distribute IPT telephone number configuration successfully.  
admin\msan#
```

31.244 Distributing or Erasing the Howler Tone Timeout Processing Configuration

Command Function

You can use this command to distribute or erase the howler tone timeout processing configuration.

Command Format

```
[ distribute|erase] roh timeout procession
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	<ul style="list-style-type: none">◆ distribute: Distribute the howler tone timeout processing configuration.◆ erase: Erase the howler tone timeout processing configuration.	Mandatory

Command Example

Distribute the howler tone timeout processing configuration.

```
admin\msan#distribute roh timeout procession
distribute ROH timeout procession configuration successfully.
admin\msan#
```

31.245 Distributing or Erasing the Signal Tone Timeout Length Configuration

Command Function

You can use this command to distribute or erase the signal tone timeout length configuration.

Command Format

```
[ distribute|erase] signal tone timeout configuration
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	<ul style="list-style-type: none">◆ distribute: Distribute the signal tone timeout configuration.◆ erase: Erase the signal tone timeout configuration.	Mandatory

Command Example

Distribute the signal tone timeout length configuration.


```
admin\msan#distribute signal tone timeout configuration  
distribute signal tone timeout configuration successfully.  
admin\msan#
```

31.246 Distributing or Erasing the Voice MD5 Authentication Configuration

Command Function

You can use this command to distribute or erase the voice MD5 authentication configuration.

Command Format

```
[ distribute|erase] voice md5 authentication
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	<ul style="list-style-type: none">◆ distribute: Distribute the voice MD5 authentication configuration.◆ erase: Erase the voice MD5 authentication configuration.	Mandatory

Command Example

Distribute the voice MD5 authentication configuration.

```
admin\msan#distribute voice md5 authentication  
distribute voice md5 authentication configuration successfully.  
admin\msan#
```

31.247 Distributing or Erasing the Voice Timer Configuration

Command Function

You can use this command to distribute or erase the voice timer configuration.

Command Format

```
[ distribute|erase] voice timer
```

Parameter Description

Parameter	Description	Attribute
[distribute erase]	<ul style="list-style-type: none">◆ distribute: Distribute the voice timer configuration.◆ erase: Erase the voice timer configuration.	Mandatory

Command Example

Distribute the voice timer configuration.

```
admin\msan#distribute voice timer  
distribute voice timer configuration successfully.  
admin\msan#
```

31.248 Creating an ADSL Line Profile

Command Function

You can use this command to add an ADSL line profile.

Command Format

```
add adslLine profile <name> { id <id> } *1
```

Parameter Description

Parameter	Description	Attribute
[name]	Profile name. The character string contains 0 to 20 bytes.	Mandatory
{ id <id> }	Profile ID. Value range: 0 to 64, or 0xffff.	Mandatory

Command Example

Configure an ADSL profile. Set the profile name to "gygygyy" and profile ID to "4".

```
admin\msan#add adslLine profile gygygyy id 4  
admin\msan#
```


31.249 Configuring the IPT Telephone Number

Command Function

You can use this command to configure the IPT telephone number.

Command Format

```
add ipt telephone number <phoneNumber> type[ a|b|c|d|e|f|g|h]
```

Parameter Description

Parameter	Description	Attribute
<phoneNumber>	Telephone number. The character string contains 0 to 20 bytes.	Mandatory
[a b c d e f g h]	IPT telephone number type. <ul style="list-style-type: none"> ◆ 0: A ◆ 1: B ◆ 2: C ◆ 3: D ◆ 4: E ◆ 5: F ◆ 6: G ◆ 7: H 	Mandatory

Command Example

Set the IPT telephone number to "1234567", and type to "f".

```
admin\msan#add ipt telephone number 1234567 type f
add IPT telephone number configuration successfully(0).
admin\msan#
```

31.250 Adding a Multicast Tag Service

Command Function

You can use this command to add a multicast tag service.

Command Format

```
addmulticast tag cvlan tpid<tpid> vid[ <cvid>|all] cos<cos> rule[ <name>|
null] { qinq tpid<tpid> vid<vid> cos<cos> rule[ <name>|null]}
```

Parameter Description

Parameter	Description	Attribute
<tpid>	CVLAN tag protocol identifier. Value range: 0 to 0xfffe or 0xffff.	Mandatory
vid[<cvid> all]	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Mandatory
cos <cos>	CVLAN priority. Value range: 0 to 7, or 0xffff.	Mandatory
rule[<name> null]	CVLAN rule	Mandatory
{ qinq tpid<tpid> vid<vid> cos <cos> rule[<name> null]}	rule [<name> null]: QINQ rules.	Optional

Command Example

Add a multicast tag service. Set the VLAN mode to tag. For CVLAN, set TPID to 33024, VID to 100, COS to 1 and bound CVLAN rule to rule111; for QINQ outer VLAN, set TPID to 33024, VID to 102, COS to 3, and bound QINQ rule to rule222.

```
admin\msan#add multicast tag cvlan tpid 33024 vid 100 cos 1 rule rule111 qinq tp 33024 vid
102 cos 3 rule rule222
admin\msan#
```

31.251 Adding a Multicast Translation Service

Command Function

You can use this command to add a multicast translation service.

Command Format

```
addmulticast translation cvlan tpid<tpid> vid<vid> cos[ <cos>|null]
outvlan tpid<tpid> vid<vid> cos[ <cos>|null] rule[ <name>|null] { qinq tpid
<tpid> vid<vid> cos<cos> rule[ <name>|null]} *1
```


Parameter Description

Parameter	Description	Attribute
<tpid>	CVLAN tag protocol identifier. Value range: 0 to 0xffff or 0xfffff.	Mandatory
vid<cvid>	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Mandatory
cos[<cos> null]	CVLAN priority. Value range: 0 to 7, or 0xffff.	Mandatory
rule[<name> null]	CVLAN rule	Mandatory
{ qinq tpid<tpid> vid<vid> cos <cos> rule[<name> null] }	rule [<name> null]: QINQ rules.	Optional

Command Example

Add a multicast translation service. Set the VLAN mode to translation. For CVLAN, set TPID to 33024, VID to 20 and COS to 4; for translation VLAN, set TPID to 33024, VID to 30, COS to 4, and bound CVLAN rule to null. For QINQ outer VLAN, set TPID to 33024, VID to 300, COS to 7. and bound QINQ rule to null.

```
admin\msan#add multicast translation cvlan tpid 33024 vid 20 cos 4 outvlan tpid 33024 vid
30 cos 4 rule null qinq tpid 33024 vid 300 cos 7 rule null
Vlan profile ghghg(id:1) add service(id:1) success.
admin\msan#
```

31.252 Adding a Multicast Transparent Transmission Service

Command Function

You can use this command to add a multicast transparent transmission service.

Command Format

```
addmulticast transparent cvlan tpid<tpid> vid[ <vid> |all] cos[ <cos> |null]
rule[ <name> |null] \{ qinq tpid<tpid> vid<vid> cos <cos> rule[ <name> |null] }
* 1
```


Parameter Description

Parameter	Description	Attribute
<tpid>	CVLAN tag protocol identifier. Value range: 0 to 0xfffe or 0xffff.	Mandatory
vid<cvid>	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Mandatory
cos[<cos> null]	CVLAN priority. Value range: 0 to 7, or 0xffff.	Mandatory
rule[<name> null]	CVLAN rule	Mandatory
{ qinq tpid <tpid> vid <vid> cos <cos> rule[<name> null] }	rule [<name> null]: QINQ rules.	Optional

Command Example

Add a multicast transparent transmission service. Set the VLAN mode to translation. For CVLAN, set TPID to 33024, VID to 400 and COS to 3 and bound CVLAN rule to null. For QINQ outer VLAN, set TPID to 33024, VID to 304, COS to 5. and bound QINQ rule to null.

```
admin\msan#add multicast transparent cvlan tpid 33024 vid 400 cos 3 rule null qinq tpid  
33024 vid 304 cos 5 rule null  
admin\msan#
```

31.253 Configuring the POTS Telephone Number

Command Function

You can use this command to configure the POTS telephone number.

Command Format

```
add pots telephone number <phoneNumber> type[ a|b|c|d|e|f|g|h]
```


Parameter Description

Parameter	Description	Attribute
<code>number <phoneNumber></code>	Telephone number. The character string contains 0 to 20 bytes. The character type includes numbers "0" to "9", letters "A", "B", "C", "D", "a", "b", "c", "d", and symbols "*", "#".	Mandatory
<code>type[a b c d e f g h]</code>	POTS telephone number type. <ul style="list-style-type: none"> ◆ 0: A ◆ 1: B ◆ 2: C ◆ 3: D ◆ 4: E ◆ 5: F ◆ 6: G ◆ 7: H 	Mandatory

Command Example

Set the POTS telephone number to "98989898", and type to "a".

```
admin\msan#add pots telephone number 98989898 type a
add POTS telephone number configuration successfully().
admin\msan#
```

31.254 Creating a PVC Profile

Command Function

You can use this command to create a PVC profile.

Command Format

```
add pvc profile <name> { id <id> }
```

Parameter Description

Parameter	Description	Attribute
<code><name></code>	Profile name. The character string contains 0 to 20 bytes.	Mandatory
<code>{ id <id> }</code>	Profile ID. Value range: 0 to 128, or 0xffff.	Mandatory

Command Example

Configure a PVC profile. Set the profile name to "pvcmoban" and profile ID to "3".

```
admin\msan#add pvc profile pvcmoban id 3
admin\msan#
```

31.255 Adding a Unicast Tag Service

Command Function

You can use this command to add a unicast tag service.

Command Format

```
add unicast tag cvlan tpid <tpid> vid <vid> cos <cos> rule[ <name> | null] { qinq
tpid <tpid> vid <vid> cos <cos> rule[ <name> | null] } *
```

Parameter Description

Parameter	Description	Attribute
<tpid>	CVLAN tag protocol identifier. Value range: 0 to 0xffff or 0xfffff.	Mandatory
vid <cvid>	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Mandatory
cos[<cos> null]	CVLAN priority. Value range: 0 to 7, or 0xffff.	Mandatory
rule[<name> null]	CVLAN rule	Mandatory
{ qinq tpid <tpid> vid <vid> cos <cos> rule[<name> null] }	rule [<name> null]: QINQ rules.	Optional

Command Example

Add a new unicast Tag service. Set the VLAN mode to tag. For CVLAN, set TPID to 33024, VID to 111, COS to 5, and the bound CVLAN rule to null. For QINQ outer VLAN, set TPID to 33024, VID to 112, COS to 4, and the bound QINQ rule to null.

```
admin\msan#add unicast tag cvlan tpid 33024 vid 111 cos 5 rule null qinq tpid 33024 vid
112 cos 4 rule null
admin\msan#
```


31.256 Adding a Unicast Translation Service

Command Function

You can use this command to add a unicast translation service.

Command Format

```
add unicast translation cvlan tpid<tpid> vid<vid> cos[ <cos>|null] outvlan
tpid<tpid> vid<vid> cos[ <cos>|null] rule[ <name>|null] { qinq tpid<tpid>
vid<vid> cos<cos> rule[ <name>|null] } *1
```

Parameter Description

Parameter	Description	Attribute
<tpid>	CVLAN tag protocol identifier. Value range: 0 to 0xffff or 0xfffff.	Mandatory
vid<cvid>	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Mandatory
cos[<cos> null]	CVLAN priority. Value range: 0 to 7, or 0xfffff.	Mandatory
rule[<name> null]	CVLAN rule	Mandatory
{ qinq tpid<tpid> vid<vid> cos<cos> rule[<name> null] }	rule [<name> null]: QINQ rules.	Optional

Command Example

Add a unicast translation service. Set the VLAN mode to translation. For CVLAN, set TPID to 33024, VID to 333 and COS to 3; for translation VLAN, set TPID to 33024, VID to 888, COS to 3, and bound CVLAN rule to null.

```
admin\msan#add unicast translation cvlan tpid 33024 vid 333 cos 3 outvlan tpid 33024 vid
888 cos 3 rule null
admin\msan#
```

31.257 Adding a Unicast Transparent Transmission Service

Command Function

You can use this command to add a unicast transparent transmission service.

Command Format

```
add unicast transparent cvlan tpid<tpid> vid[ <vid>|all] cos[ <cos>|null]
rule[ <name>|null] { qinq tpid<tpid> vid<vid> cos<cos> rule[ <name>|null] }
* 1
```

Parameter Description

Parameter	Description	Attribute
<tpid>	CVLAN tag protocol identifier. Value range: 0 to 0xffff or 0xfffff.	Mandatory
vid<cvid>	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Mandatory
cos[<cos> null]	CVLAN priority. Value range: 0 to 7, or 0xffff.	Mandatory
rule[<name> null]	CVLAN rule	Mandatory
{ qinq tpid<tpid> vid<vid> cos<cos> rule[<name> null]}	rule [<name> null]: QINQ rules.	Optional

Command Example

Add a unicast transparent transmission service. Set the VLAN mode to translation. For CVLAN, set TPID to 33024, VID to 190 and COS to 3 and bound CVLAN rule to null.

```
admin\msan#add unicast transparent cvlan tpid 33024 vid 190 cos 3 rule null
admin\msan#
```

31.258 Adding a VLAN Service

Command Function

You can use this command to add VLAN services individually or in a batch manner.

Command Format

```
add vlan service{[ type] [ unicast|multicast]}*1{[ mode] [ tag|transparent|
translation]}*1{[ tpid] <tpid>}*1{[ vid] <vid>}*1{[ cos] <cos>}*1{[ crule]
<rulename>}*1{[ qrule] <rulename>}*1{[ interface] <ifStr>}*1
```


Parameter Description

Parameter	Description	Attribute
{[type] [unicast multicast]}	Service type. ◆ Unicast ◆ Multicast	Mandatory
{[mode] [tag transparent translation]}	VLAN mode. ◆ Tag ◆ Transparent ◆ Translation	Mandatory
{[tpid] <tpid>}	CVLAN tag protocol identifier. Value range: 0 to 0xfffe or 0xffff.	Optional
{[vid] <vid>}	CVLAN ID. Value range: 1 to 4095, or 0xffff (NULL).	Optional
{[cos] <cos>}	CVLAN priority. Value range: 0 to 7, or 0xffff.	Optional
{[crule] <rulename>}	CVLAN rule	Optional
{[qrule] <rulename>}	rule [<name> null]: QINQ rules.	Optional
{[interface] <ifStr>}	Port number	Mandatory

Command Example

Configure the unicast transparent transmission service for Port 1 of ONU1 in Slot 8.
Set VID to 100, and COS to 2.

```
admin\msan#add vlan service type unicast mode transparent vid 100 cos 2 interface 8/1/1
admin\msan#
```

31.259 Binding a Line Profile to a Port

Command Function

You can use this command to bind an line profile to a port.

Command Format

```
attach adslLine profile[ id|name] <idOrName> interface <ifStr>
```


Parameter Description

Parameter	Description	Attribute
[id name] <idOrName>	<ul style="list-style-type: none"> ◆ Profile ID. Value range: 0 to 128 or 0xffff. ◆ Profile name. The character string contains 0 to 20 bytes. 	Mandatory
interface <ifStr>	Port number	Mandatory

Command Example

Bind an ADSL profile named "adslggg" to Port 1 in Slot 1.

```
admin\msan#attach adsl line profile name adslggg interface 1/1
admin\msan#
```

31.260 Binding Traffic Policy to PVC

Command Function

You can use this command to bind the traffic policy to PVC.

Command Format

```
attach policy interface <interface> pvc <pvc> { up <upPIId> <upRIId> down
<downPIId> <downRIId>} * 8
```

Parameter Description

Parameter	Description	Attribute
<interface>	Port number	Mandatory
<pvc>	PVC number	Mandatory
{ up <upPIId><upRIId>down <downPIId><downRIId>}	<ul style="list-style-type: none"> ◆ <upPIId>: Uplink traffic policy ID. Value range: 0 to 1023. ◆ <upRIId>: Uplink rule ID. Value range: 0 to 1023. ◆ <downPIId>: Downlink traffic policy ID. Value range: 0 to 1023. ◆ <downRIId>: Downlink rule ID. Value range: 0 to 1023. 	Optional

Command Example

Bind a PVC traffic policy profile to Port 2 in Slot 1. The uplink traffic policy ID is 100, the uplink rule ID is 102, the downlink traffic policy ID is 103, and the downlink rule ID is 104.

```
admin\msan#attach policy interface 1/2 pvc 1 up 100 102 down 103 104
admin\msan#
```

31.261 Binding a PVC Profile to a Port

Command Function

You can use this command to bind a PVC profile to a port.

Command Format

```
attach pvc profile [ id|name] <idOrName> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name	Mandatory
<idOrName>	Profile name	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Bind a PVC profile whose profile ID is "2" to Port 1 in Slot 1.

```
admin\msan#attach pvc profile id 2 interface 1/1
admin\msan#
```

31.262 Binding a Rate Limiting Profile to a Port

Command Function

You can use this command to bind a rate limiting profile to a port.

Command Format

```
attach rate-limit profile [ name | id ] <name_or_id> interface <if_list>
```

Parameter Description

Parameter	Description	Attribute
[name id]	Profile name or ID	Mandatory
<name_or_id>	Profile name or ID	Mandatory
interface <if_list>	Slot number/port number	Mandatory

Command Example

Bind a rate limiting profile whose profile ID is "2" to Port 1 in Slot 1.

```
admin\msan#attach rate-limit profile id 2 interface 1/1
admin\msan#
```

31.263 Binding a VLAN Profile to a Port

Command Function

You can use this command to bind a VLAN profile to a port.

Command Format

```
attach vlan profile <name> interface <ifStr> { pvc <pvcindex> } * 1
```

Parameter Description

Parameter	Description	Attribute
<name>	Profile name	Mandatory
interface <ifStr>	Slot number/port number	Mandatory
pvc <pvcindex>	PVC index	Optional

Command Example

Bind a VLAN profile named "aaa" to PVC 1 of Port 1 in Slot 1.

```
admin\msan#attach vlan profile aaa interface 1/1 pvc 1
admin\msan#
```


31.264 Deleting a VLAN Service

Command Function

You can use this command to delete a VLAN service.

Command Format

```
clear vlan service interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Delete the VLAN service from Port 1 in Slot 1.

```
admin\msan#clear vlan service interface 1/1
admin\msan#
```

31.265 Deleting an ADSL Line Profile

Command Function

You can use this command to delete an ADSL line profile.

Command Format

```
delete adslLine profile [ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Delete an ADSL line profile whose profile ID is "1".


```
admin\msan#delete adslLine profile id 1
admin\msan#
```

31.266 Deleting an Alarm Profile

Command Function

You can use this command to delete an alarm profile.

Command Format

```
delete alarm profile [ id | name ] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Delete an alarm profile whose profile ID is "1".

```
admin\msan#delete alarm profile id 1
admin\msan#
```

31.267 Deleting a PVC Profile

Command Function

You can use this command to delete a PVC profile.

Command Format

```
delete pvc profile [ id | name ] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Delete a PVC profile whose profile ID is "1".

```
admin\msan#delete pvc profile id 1
admin\msan#
```

31.268 Deleting a Port Rate Limiting Profile

Command Function

You can use this command to delete a port rate limiting profile.

Command Format

```
delete rate-limit profile [ id|name] <id_or_name>
```

Parameter Description

Parameter	Description	Attribute
[id name]	Profile ID or profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Delete a port rate limiting profile whose profile ID is "1".

```
admin\msan#delete rate-limit profile id 1
admin\msan#
```

31.269 Deleting Services in a VLAN Service Profile

Command Function

You can use this command to delete the service in a VLAN service profile.

Command Format

```
delete vlan service profile <name> service <serviceid>
```


Parameter Description

Parameter	Description	Attribute
<name>	Profile name	Mandatory
<serviceid>	Service ID	Mandatory

Command Example

Delete the first service from the VLAN service profile named "aaa".

```
admin\msan#delete vlan service profile aaa service 1
admin\msan#
```

31.270 Unbinding Traffic Policy from PVC

Command Function

You can use this command to unbind the traffic policy to PVC.

Command Format

```
detach policy interface <interface> pvc <pvc>
```

Parameter Description

Parameter	Description	Attribute
<interface>	Slot number/port number	Mandatory
pvc <pvc>	PVC number	Optional

Command Example

Unbind the traffic policy from PVC 1 of Port 1 in Slot 1.

```
admin\msan#detach policy interface 1/1 pvc 1
admin\msan#
```


31.271 Unbinding the Port Rate Limiting Profile from a Port

Command Function

You can use this command to unbind the port rate limiting profile from a port.

Command Format

```
detach rate-limit-profile interface <if_list>
```

Parameter Description

Parameter	Description	Attribute
interface <if_list>	Slot number/port number	Mandatory

Command Example

Unbind the port rate limiting profile from Port 1 in Slot 1.

```
admin\msan#detach rate-limit-profile interface 1/1
admin\msan#
```

31.272 Unbinding a VLAN Profile from a Port

Command Function

You can use this command to unbind a VLAN profile from a port.

Command Format

```
detach vlan profile interface <ifStr> { pvc <pvcindex> } *1
```

Parameter Description

Parameter	Description	Attribute
interface <if_list>	Slot number/port number	Mandatory
pvc <pvcindex>	PVC number	Optional

Command Example

Unbind a VLAN profile from Port 1 in Slot 1.

```
admin\msan#detach vlan profile interface 1/1 pvc 1
admin\msan#
```

31.273 Entering a VLAN Profile

Command Function

You can use this command to enter a VLAN profile.

Command Format

```
enter vlan profile <name>
```

Parameter Description

Parameter	Description	Attribute
<name>	Profile name	Mandatory

Command Example

Entering a VLAN profile named "aaa".

```
admin\msan#enter vlan profile aaa
admin\msan#
```

31.274 Refreshing an ADSL Line Profile

Command Function

You can use this command to refresh an ADSL line profile.

Command Format

```
flush adslLine profile[ id|name] <idOrName>
```


Parameter Description

Parameter	Description	Attribute
profile[id name]	Profile ID or profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Refresh the ADSL line profile whose profile ID is "1".

```
admin\msan#flush adslLine profile id 1
admin\msan#
```

31.275 Refreshing a PVC Profile

Command Function

You can use this command to refresh a PVC profile.

Command Format

```
flush pvc profile[ id|name] <idOrName>
```

Parameter Description

Parameter	Description	Attribute
profile[id name]	Profile ID or profile name	Mandatory
<idOrName>	Specified profile ID or profile name	Mandatory

Command Example

Refresh a PVC profile whose profile ID is "1".

```
admin\msan#flush pvc profile id 1
admin\msan#
```


31.276 Viewing Binding Information about the Alarm Profile

Command Function

You can use this command to view binding information of the the alarm profile.

Command Format

```
show alarm profile attach interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Query the binding information about the alarm profile of Port 1 in Slot 1.

```
admin\msan#show alarm profile attach interface 1/1
admin\msan#
```

31.277 Viewing Incoming Call Simulation Status

Command Function

You can use this command to view the incoming call simulation status.

Command Format

```
show call in simulation status interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Query the incoming call simulation status of Port 1 in Slot 1.


```
admin\msan#show call in simulation status interface 1/1
admin\msan#
```

31.278 Viewing Outgoing Call Simulation Status

Command Function

You can use this command to view the outgoing call simulation status.

Command Format

```
show call out simulation status interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Query the outgoing call simulation status of Port 1 in Slot 1.

```
admin\msan#show call out simulation status interface 1/1
admin\msan#
```

31.279 Viewing the Call Statistics Information

Command Function

You can use this command to view the call statistics information.

Command Format

```
show call statistics information
```

Parameter Description

None

Command Example

View the call statistics information.


```
admin\msan#show call statistics information
Call Statistics Information
-----
Voice Jitter Delay(ms): 0 Transport Delay(ms): 0
Packets Loss Ratio(%): 0 Up Stream Rate(Kbps): 0
Down Stream Rate(Kbps): 0
get call statistics info successfully.
admin\msan#
```

31.280 Viewing the DSP Channel Status

Command Function

You can use this command to view the DSP channel status.

Command Format

```
show dsp channels status
```

Parameter Description

None

Command Example

View the DSP channel status.

```
admin\msan#show dsp channels status
DSP Channels Status
-----
Channel   Status
-----  -
get dsp channels status successfully.
admin\msan#
```

31.281 Viewing a DSP Configuration Profile.

Command Function

You can use this command to view a DSP configuration profile.

Command Format

```
show dsp profile [ id|name|all] { <IDorName> } * 1
```

Parameter Description

Parameter	Description	Attribute
[id name all]	Profile ID, profile name or all profiles	Mandatory
<IDorName>	Specified profile ID or profile name	Mandatory

Command Example

Query a DSP configuration profile whose ID is "1".

```
admin\msan#show dsp profile id 1
admin\msan#
```

31.282 Viewing Fax Parameter Configuration

Command Function

You can use this command to view fax parameter configuration.

Command Format

```
show fax parameter
```

Parameter Description

None

Command Example

Query fax parameter configuration.

```
admin\msan#show fax parameter
Fax Parameters Configuration
-----
Fax Mode:                               T.30
Transparent Fax Event Notify:           Enable
ANS Notify:                             Disable
Fax Event Notify Type:                   Only V21
```



```
VBD Enable:                Disable
Encode Mode:                Default
Tx Packet Interval(ms): 20
Rx Packet Interval(ms): 20
SDP Media Type:             Single
Media Control Mode:         Auto VBD
get fax parameter configuration successfully.
admin\msan#
```

31.283 Viewing the MGC Configuration

Command Function

You can use this command to view the MGC configuration.

Command Format

```
show mgc configuration
```

Parameter Description

None

Command Example

Query the MGC configuration.

```
admin\msan#show mgc configuration
Softswitch Platform Configuration
-----
Primary MGC Address:  Primary MGC Port:      0
Secondary MGC Address: Secondary MGC Port:    0
Heartbeat:             Initiative
Heartbeat Interval(s): 30
Heartbeat Timeouts:    3
Heartbeat Format:       Notify
get MGC configuration successfully.
admin\msan#
```


31.284 Viewing the NGN User Port Status

Command Function

You can use this command to view the NGN user port status.

Command Format

```
show ngn user port status interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Query the NGN user port status of Port 1 in Slot 1.

```
admin\msan#show ngn user port status interface 1/1
admin\msan#
```

31.285 Starting an Incoming Call Simulation

Command Function

You can use this command to start an incoming call simulation.

Command Format

```
start call in simulation timeout <simTimeout> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
timeout <simTimeout>	Timeout duration	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Start an incoming call simulation for Port 1 in Slot 1. The timeout duration is 80s.


```
admin\msan#start call in simulation timeout 80 interface 1/1
admin\msan#
```

31.286 Starting an Outgoing Call Simulation

Command Function

You can use this command to start an outgoing call simulation.

Command Format

```
start call out simulation timeout <simTimeout> telephone number
<startNumber> step <numberStep> interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
timeout <simTimeout>	Timeout duration	Mandatory
<startNumber>	Starting telephone number	Mandatory
<numberStep>	Telephone number step	Mandatory
interface <ifStr>	Slot number/port number	Mandatory

Command Example

Start an outgoing call simulation for Port 1 in Slot 1. The timeout duration is 80s, starting telephone number is 111, and starting telephone number step is 2.

```
admin\msan#start call out simulation timeout 80 telephone number 111 step 2 interface 1/1
admin\msan#
```

31.287 Ending an Incoming Call Simulation

Command Function

You can use this command to end an incoming call simulation.

Command Format

```
stop call in simulation interface <ifStr>
```


Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

End an incoming call simulation for Port 1 in Slot 1.

```
admin\msan#stop call in simulation interface 1/1
admin\msan#
```

31.288 Ending an Outgoing Call Simulation

Command Function

You can use this command to end an outgoing call simulation.

Command Format

```
stop call out simulation interface <ifStr>
```

Parameter Description

Parameter	Description	Attribute
interface <ifStr>	Slot number/port number	Mandatory

Command Example

End an outgoing call simulation for Port 1 in Slot 1.

```
admin\msan#stop call out simulation interface 1/1
admin\msan#
```


Product Documentation Customer Satisfaction Survey

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Documentation Name	
Code and Version	

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1. How often do you use the documentation?

☐ Frequently ☐ Rarely ☐ Never ☐ Other (please specify) _____

2. When do you use the documentation?

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3. What is the percentage of the operations on the product for which you can get instruction from the documentation?

☐ 100% ☐ 80% ☐ 50% ☐ 0% ☐ Other (please specify) _____

4. Are you satisfied with the promptness with which we update the documentation?

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1. Is the information organized and presented clearly?

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3. Are any contents in the documentation inconsistent with the product?

4. Is the information complete in the documentation?

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☐ No (Please specify) _____

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