8PON Port GPON OLT Equipment

CLI User Manual

Version：V1.0

Catalog

The CLI manual conventions

Command Conventions

The command conventions that may be found in this document are defined as follows.

Convention	Description
Boldface	The keywords of a command line are in **boldface**.
Italic	Command arguments are in *italics*.
[ ]	Items (keywords or arguments) in brackets [ ] are optional.
(x | y | ...)	Optional items are grouped in braces and separated by vertical bars. One item is selected.
[x | y | ...]	Optional items are grouped in brackets and separated by vertical bars. One item is selected or no item is selected.
<x-y>	One number from x to y can be selected
$	A line starting with the $ sign is comments.

Keyword Operation Conventions

Convention	Description
String with < >	It is key name. For example, <Enter>, <Tab>, <Backspace>, <a>, <?> etc, it means to press the key button
<Key 1 + Key 2>	It means to press the key at same time. For example < Ctrl+Alt+A> means to press “Ctrl”, “Alt”, “A” button together.
<Key 1 , Key 2>	It means to press the first button, then release, and presss the second button. For example < Alt, F> means to press “Alt” first, then release “Alt” buttion, and then press “A” button.

Symbol Conventions

The symbols that may be found in this document are defined as follows.:

This warning symbol means danger. You are in a situation that could cause bodily injury or broke the equipment. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents by making quick guide based on this guide.

 Indicates a hazard with a high level of risk, which if not avoided, it will result in death or serious injury on human body.

 Provides additional information to emphasize or supplement important points of the main text.

Terms Conventions

OLT： It is the 8PON port Optical Line Terminal, included the switch and uplink port. **PON：** It stand for PON protocol process module and PON port to connect with ONU side.

Prompt

CLI is case – sensitive.

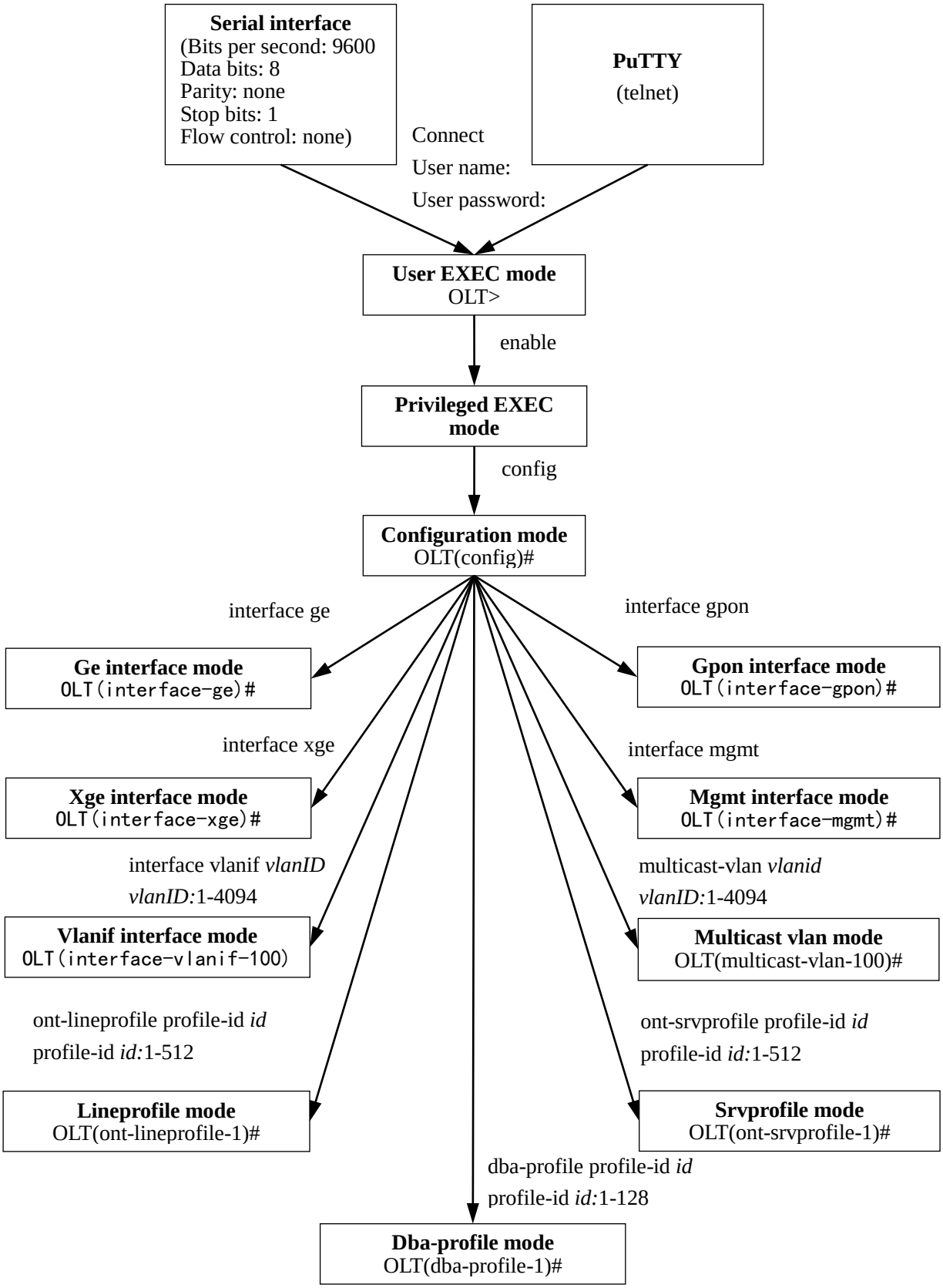
1. Configuration Mode

You can configure and manage the OLT with the CLI via a management network environment or the console.

The The The CLI provides the following command modes：

- User EXEC Mode, when you log in the OLT, the CLI will start with User ECEC Mode.
  Ther are some basic command on this EXEC mode.
  The system prompt as： OLT>
- Privileged EXEC Mode, it called Enabble View Mode or Privileged EXEC Mode. You can enter into privileged EXEC Mode with the **enable** comman.
  The system prompt will changes from OLT> to OLT#
- Configuration Mode, it called Configuration Mode or Global Configuration Mode. You can enter in Configuration Mode with the **conf terminal** command.
  The system prompt will changes from OLT# to ： OLT(config)#
- GE interface Mode, enter the **interface ge** command, the system prompt will be changed from OLT(config)# to OLT(interface-ge)#
- XGE interface Mode, enter the **interface xge** command, the system prompt will be changed from OLT(config)# to OLT(interface-xge)#
- GPON interface Mode, enter the **interface gpon** command, the system prompt will be changed from OLT(config)# to OLT(interface-gpon)#
- VLANIF interface Mode, enter the **interface vlanif** *vlanID* command, the system prompt will be changed from OLT(config)# to OLT(interface-vlanif-20)#
  (VLAN 20 is an example)
- MGMT interface Mode, enter the **interface mgmt** command, the system prompt will be changed from OLT(config)# to OLT(interface-mgmt)#
- Dba-profile Mode, enter the **dba-profile profile-id** *id* command, the system prompt will be changed from OLT(config)# to OLT(dba-profile-1)#
- Lineprofile Mode, enter the **ont-lineprofile profile-id** *id* command, the system prompt will be changed from OLT(config)# to OLT(ont-lineprofile-1)#
- Srvprofile Mode, enter the **ont-srvprofile profile-id** *id* command, the system prompt will be changed from OLT(config)# to OLT(ont-srvprofile-1)#
- Multicast-vlan Mode, enter the **multicast-vlan** *vlanid* command, the system prompt will be changed from OLT(config)# to OLT(multicast-vlan-100)#
  (VLAN 100 is an example)

Command Modes Overview



1.1 enable

【Command】	**enable**
【View Mode】	User EXEC mode
【Parameter】	No
【Description】	From User EXEC mode to Privileged EXEC Mode
【Example】	OLT > enable OLT #

1.2 config

【Command】	**config**
【View Mode】	Privileged EXEC Mode
【Parameter】	No
【Description】	From Privileged EXEC Mode to Configuration mode
【Example】	OLT # config OLT (config)#

1.3 interface

【Command】	**interface ge** **interface xge** **interface gpon** **interface vlanif *vlanid*** **interface mgmt**
【View Mode】	Configuration mode
【Parameter】	Vlanid: VLAN ID. <U><1~4094>
【Description】	From Configuration mode to Interface Mode (Included XGE, GE, GPON, VLAN If, Mgnt
【Example】	OLT(config)# interface ge OLT(interface-ge)# OLT(config)# interface xge OLT(interface-xge)# OLT(config)# interface gpon OLT(interface-gpon)# OLT(config)# interface vlanif 100 OLT(interface-vlanif-100)# OLT(config)# interface mgmt OLT(interface-mgmt)#

1.4 dba-profile

【Command】	**dba-profile profile-id *id***
【View Mode】	Configuration mode
【Parameter】	Id: Profile ID. <U><1~128>
【Description】	From Configuration mode to DBA Mode
【Example】	OLT(config)# dba-profile profile-id 1 OLT(dba-profile-1)#

1.5 ont-lineprofile

【Command】	**ont-lineprofile profile-id *id***
【View Mode】	Configuration mode
【Parameter】	Id: Profile ID. <U><1~128>
【Description】	From Configuration mode to Ont-lineprofile Mode
【Example】	OLT(config)# ont-lineprofile profile-id 1 OLT(ont-lineprofile-1)#

1.6 ont-srvprofile

【Command】	**ont-srvprofile profile-id *id***
【View Mode】	Configuration mode
【Parameter】	Id: Profile ID. <U><1~128>
【Description】	From Configuration mode to **Ont-srvprofile** Mode
【Example】	OLT(config)# ont-srvprofile profile-id 1 OLT(ont-srvprofile-1)#

1.7 multicast-vlan

【Command】	**multicast-vlan *vlanid***
【View Mode】	Configuration mode
【Parameter】	vlanID： <U><1~4094>
【Description】	From Configuration mode to **multicast-vlan** Mode
【Example】	OLT(config)# multicast-vlan 100 OLT(multicast-vlan-100)#

1.8 exit

【Command】	**exit**
【View Mode】	Any Mode
【Parameter】	None
【Description】	Exit from current mode, return to up level mode
【Example】	OLT(multicast-vlan-100)# exit OLT(config)#

2. Equipment upgrade

For the system enhancement and stability, new software may be released. Using this software, OLT can be upgraded without any hardware change. You can simply upgrade your system software with the provided functionality via CLI.

2.1 load

【Command】	**load packetfile ftp** *server-ip-address user-name user-password filename*
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*server-ip-address*：ip address of the ftp Server *user-name*：User Name of login ftp *user-password*：Password of login ftp *filename*：The filename to use for OLT upgrade
【Description】	The command is used for upgrade the OLT to new version, root account is necessary.
【Example】	

OLT Application Software Upgrade:

File name is 8pon port_FW_V1.0.2_150914_1603.img，ftp Server IP Address is 192.168.1.16，ftp user name is amdin，password is admin. Reboot the OLT after the OLT display 'upgrade OK'.

```
OLT(config)# load packetfile ftp 192.168.1.16 admin admin 8pon port
_FW_V1.0.2_150914_1603.img
Broadcast message from root:
Upgrade is in process.
File [8pon port _FW_V1.0.2_150914_1603.img] download ..... OK
File [8pon port _FW_V1.0.2_150914_1603.img] upgrade  ..... OK
```

OLT Kernel Software Upgrade:

Filename is 8pon port_Kernel_150914_1605.img，ftp Server IP Address is 192.168.1.16，ftp

User Name is amdin， password is admin. Reboot the OLT after the OLT display ‘upgrade OK’. OLT(config)# load packetfile ftp 192.168.1.16 admin admin 8pon port_Kernel_150914 _1605.img Broadcast message from root: Upgrade is in process. File [8pon port_Kernel_150914_1605.img] download ..... OK File [8pon port_Kernel_150914_1605.img] upgrade ..... OK

2.2 show version

【Command】	**show version**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	The command is used for check information of the OLT hardware, software and kernel.
【Example】	
Show information of OLT OLT(config)# show version ---------- Local Configuration Command ---------- <cr> - Please press ENTER to execute command OLT(config)# show version Hardware version : V1.1 Firmware version : V1.0.2 (Oct 8 2015 13:35:52) Kernel version : V539 (Mon Sep 14 16:05:47 CST 2015)	

2.3 show progress

【Command】	**show progress load**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	None
【Description】	The command is used check the process of the OLT load, copy, and backup.
【Example】	
OLT(config)# show progress load	

```
--------------------------------------------------------------------------------
 Transmit Protocal      : FTP
 FTP Server             : 192.168.1.16
 FTP User Name          : admin
 FTP Password           : admin
 Transmit FileName      : config
 Transmit Action        : Put
 Transmit Status        : Success
 Transmit Progress      : 100%
--------------------------------------------------------------------------------
 Load Operation         : Null
 Load FileName          : config
--------------------------------------------------------------------------------
```

3. Equipment management

3.1 reboot

【Command】	**reboot**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	None
【Description】	To reboot the OLT, need root account for this operation.
【Example】	

Reboot OLT

OLT# reboot

Please check whether data has saved, the unsaved data will lose if reboot syst
em. Are you sure to reboot system? (y/n)[n]:y

3.2 ip address

【Command】	**ip address** *ip-addr ip-mask* **no ip address**
【View Mode】	Vlanif Mode，MGMT Mode
【Parameter】	*ip-addr*：IP Address *ip-mask*：subnet mask
【Description】	**ip address** is used to configure the IP address and subnet mask of VLAN interface, to let the realize the layer3 message transfer.
【Example】	

To configure an IP address 192.168.100.123 for VLAN 100 interface, subnet mask is 255.255.255.0。 OLT(interface-vlanif-100)# ip address 192.168.100.123 255.255.255.0 To configure an IP address 192.1.105.123 for outband management interface, subnet mask is 255.255.255.0。 OLT(interface-mgmt)# ip address 192.168.1.105 255.255.255.0

3.3 show interface mgmt

【Command】	**show interface mgmt**
【View Mode】	Configuration mode
【Parameter】	*None*
【Description】	It is used to check the outband management IP, MTU and MAC address.
【Example】	
OLT(config)# show interface mgmt Description : mgmt interface The Maximum Transmit Unit is 1500 bytes Internet Address is 192.168.1.105, netmask 255.255.255.0 Hardware address is XX:XX:XX:00:00:01 Receive 4340 packets, 4479715 bytes Transmit 1539 packets, 101742 bytes	

3.4 show interface vlanif

【Command】	**show interface vlanif** （**all** | **vlan-id** *vlan-id*）
【View Mode】	Configuration mode
【Parameter】	*all*: Show all VLAN interface informaion *vlan-id*: Show the information of that VALN iD , from 1~4094
【Description】	It is used to check the VLAN interface information.
【Example】	
Show vlanif 10 information OLT(config)# show interface vlanif vlan-id 100 Description : vlan[100] management interface The Maximum Transmit Unit is 1500 bytes Internet Address is 192.168.100.123, netmask 255.255.255.0 Hardware address is XX:XX:XX:00:00:02 Recive 105 packets, 5292 bytes	

Transmit 35 packets, 1866 bytes

Show all vlanif interface information
OLT(config)# show interface vlanif all

Interface	IP Address	Netmask
vlanif[100]	192.168.100.123	255.255.255.0
vlanif[200]	192.168.101.123	255.255.255.0

3.5 show device info

【Command】	**show device info**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	Check the information of the OLT Device model Device MAC address Device serial-number Device vendor name
【Example】	

OLT(config)# show device info

Device model : 8pon port
Device MAC address : XX:XX:XX:00:00:01
Device serial-number :
Device vendor name :
---

4. Operation Status Monitor

4.1 show fan

【Command】	**show fan**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To show the status of the fan

【Example】	
OLT# show fan ---------- FAN[1] status: Normal (7207RPM) FAN[2] status: Normal (7060RPM) FAN[3] status: Normal (7265RPM) FAN[4] status: Normal (7207RPM) ----------	

4.2 show temperature

【Command】	**show temperature**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To display the temperature of device
【Example】	
OLT(config)# show temperature The temperature of the board: 36.5(C)	

4.3 show memory

【Command】	**show memory**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To show the CPU load
【Example】	
OLT# show memory ---------- Total memory : 502MB Free memory : 435MB Used percent : 5% ----------	

4.4 show version

【Command】	**show version**
【View Mode】	Privileged EXEC Mode, Configuration mode

【Parameter】	*None*
【Description】	To show the version of hardware and software
【Example】	
OLT(config)# show version Hardware version : V1.1 Firmware version : V1.0.2 (Oct 8 2015 13:35:52) Kernel version : V539 (Mon Sep 14 16:05:47 CST 2015)	

4.5 time

【Command】	**time** *time*
【View Mode】	Configuration mode
【Parameter】	*time*：System time, format：YYYY/MM/DD-HH:MM:SS
【Description】	To set system time and date.
【Example】	
OLT(config)# time 2015/10/10-17:12:00	

4.6 show time

【Command】	**show time**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To show system time and date.
【Example】	
OLT(config)# show time Sat Jan 1 08:28:31 2000	

4.7 show uptime

【Command】	**show uptime**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*

【Description】	To show system boot time and how long it have run
【Example】	
OLT(config)# show uptime System up time : 0 day 0 hour 55 minute 14 second System boot time : Fri Oct 9 23:13:07 2015	

5. Configuration Management

5.1 backup

【Command】	**backup configuration ftp** *server-ip-address user-name user-password filename*
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*server-ip-address*：ip address of ftp server *user-name*：ftp user name *user-password*：ftp password *filename*： A name for your backup file
【Description】	To back up the OLT configuration in a file
【Example】	
File name is config, ftp Server IP is 192.168.1.16, ftp username is amdin, password is admin。 OLT(config)# backup configuration ftp 192.168.1.16 admin admin config Start backup configuration files The backup is successful	

5.2 load configuration

【Command】	**load configuration ftp** *server-ip-address user-name user-password filename*
【View Mode】	Configuration mode
【Parameter】	*server-ip-address*：ip address of ftp server *user-name*：ftp user name *user-password*：ftp password *filename*： The file name of the configuration you want load to the OLT
【Description】	To load the configuration file to the OLT
【Example】	
Configuration file name is 'config', ftp Server IP is 192.168.1.16, ftp username is amdin, password is admin。	

```
OLT(config)# load configuration ftp 192.168.1.16 admin admin config
 The new configuration file will overwrite the old one
 Are you sure to load new
configuration file? (y/n)[n]:y
Broadcast message from root:
 Start loading configuration
 The loading is successful
 Note: The configuration file will take effect after reboot
```

5.3 show current-config

【Command】	**show current-config**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To check the running configuration. When you do some configuration, you can use this command to check if the command have come into operation.
【Example】	

5.4 save

【Command】	**save**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To save the current configuration.
【Example】	

```
OLT(config)# save
Save configuration starting ...
The percentage of saved data is: 0%
The percentage of saved data is: 14%
The percentage of saved data is: 28%
The percentage of saved data is: 42%
The percentage of saved data is: 57%
The percentage of saved data is: 71%
The percentage of saved data is: 85%
The percentage of saved data is: 100%
Save configuration completed!
```

5.5 erase saved-config

【Command】	**erase saved-config**
【View Mode】	Privileged EXEC Mode, Configuration mode
【Parameter】	*None*
【Description】	To erase the configuration file, the OLT will beboot after the configuration be delete.
【Example】	

OLT# erase saved-config
This command will clear the active board data that has been saved
Please rememb
er to backup the system configuration data
Are you sure to continue? (y/n)[n]: y

Successfully restored factory configuration!

5.6 show saved-config

【Command】	**show saved-config**
【View Mode】	Configuration mode
【Parameter】	*None*
【Description】	To check the saved configuration.
【Example】	

OLT(config)# show saved-config
#Saving user: root
#Saving time: 2000-01-01 05:33:19+0000
No DBA profile configurations
No line profile configurations
No service profile configurations

No ONT authenticated
interface mgmt
ip address 192.168.1.105 255.255.255.0
exit

6.Account Management

6.1 user add

【Command】	**user add** *name group*
【View Mode】	Configuration mode
【Parameter】	*name*：User name for a new user *group*：The group of the new user, there are root、admin and guest for choice.
【Description】	The command is used to creates a system account. There are root、admin and guest level for choice. Root: Full right. Admin: Right except reboot and upgrade. Guest: Only check the configuration and do configuration back up.
【Example】	
Create a new guest account, user name is admin, password is admin OLT(config)# user add admin guest Enter new password for user admin: Confirm new password for user admin:	

6.2 user delete

【Command】	**user delete** *name*
【View Mode】	Configuration mode
【Parameter】	*name*：User name will be delete
【Description】	The command is used to delete a system account. The root account can't be deleted.
【Example】	
To delete an exist account named admin. OLT(config)# user delete admin	

6.3 user group

【Command】	**user group** *name group*
【View Mode】	Configuration mode
【Parameter】	*Name:* The account need to change group.

	group： The group for that account
【Description】	The command is used to change the account to another group.
【Example】	
Change xxxxxx accout to admin group. OLT(config)# user group XXXXX admin	

6.4 user password

【Command】	**user password** *name*
【View Mode】	Configuration mode
【Parameter】	*Name:* The accounat need to change password.
【Description】	The command is used to change the account password
【Example】	
Change account admin password to admin OLT(config)# user password admin Enter new password for user admin: Confirm new password for user admin:	

6.5 show user

【Command】	**show user**
【View Mode】	Configuration mode
【Parameter】	*None*
【Description】	The command is used to show all account
【Example】	
OLT(config)# show user --- User Group --- root root admin admin admin admin ---	

7. Port Configuration

7.1 shutdown

【Command】	**shutdown** *port-list*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-list*：The port number that you want to configure.
【Description】	The command is used to shut down the specified port
【Example】	
Shut down the ge1 port OLT(interface-ge)# shutdown 1	

7.2 no shutdown

【Command】	**no shutdown** *port-list*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-list:* The port number that you want to configure.
【Description】	The command is used to open the specified port
【Example】	
Enable the ge1 port OLT(interface-ge)# no shutdown 1	

7.3 show port state

【Command】	**show port state all** **show port state** *port-id*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-id*：Specified port number
【Description】	The command is used to show port information of the specified port.
【Example】	
Check the information of the OLT ge1 OLT(interface-ge)# show port state 1 ge1 information summary : current port state : enable current link state : DOWN The Maximum Transmit Unit is 1500 Link speed is autonegotiation(1000 MBps) link duplex is autonegotiation(FULL) Flow-control is supported broadcasts stormcontrol 0(pps)	

multicasts stormcontrol 0(pps)
unicasts stormcontrol 0(pps)
native-vlan is 300
Port link-type: Access
Tagged VLAN ID : none
Untagged VLAN ID :
300,
statistics from last clean(maybe the statistics would overflow):
Input(total):0 bytes
Input:unicast 0, broadcasts 0, multicasts 0, errors 0
Output(total):0 bytes
Output:unicast 0, broadcasts 0, multicasts 0, errors 0

Check the all GE port

OLT(interface-ge)# show port state all

Port	Optic Status	Pvid	Auto Nego	Speed /Mbps	Dup lex	Flow Ctrl	Learn	Enable	Link	Mtu
ge1	normal	100	enable	1000	full	off	enable	enable	on	1500
ge2	normal	1	enable	1000	full	on	enable	enable	off	1500
ge3	normal	1	enable	1000	full	off	enable	enable	on	1500
ge4	absence	1	enable	1000	full	on	enable	enable	off	1500
ge5	absence	1	enable	1000	full	on	enable	enable	off	1500
ge6	absence	1	enable	1000	full	on	enable	enable	off	1500
ge7	absence	1	enable	1000	full	on	enable	enable	off	1500
ge8	absence	1	enable	1000	full	on	enable	enable	off	1500
ge9	-	1	enable	1000	full	on	enable	enable	off	1500
ge10	-	1	enable	1000	full	on	enable	enable	off	1500
ge11	-	1	enable	1000	full	on	enable	enable	off	1500
ge12	-	1	enable	1000	full	on	enable	enable	off	1500
ge13	-	1	enable	1000	full	on	enable	enable	off	1500
ge14	-	1	enable	1000	full	on	enable	enable	off	1500
ge15	-	1	enable	1000	full	on	enable	enable	off	1500
ge16	-	1	enable	1000	full	on	enable	enable	off	1500

7.4 show port ddm-info

【Command】	**show port ddm-info** *port-id*
【View Mode】	GPON Mode
【Parameter】	*port-id*：Specified port number
【Description】	The command is used to show Digital Diagnostic Monitoring of specified PON port. You can use the command to get the PON module information of temperature, voltge, bias-current, Tx power, Rx power.
【Example】	

Check the information of PON1

```
OLT(interface-gpon)# show port ddm-info 1
  Temperature(C)                  : 44.6
  Supply Voltage(V)               : 3.36
  TX Bias current(mA)             : 13
  TX power(dBm)                   : 5.29
  RX power(dBm)                   : -40.00
```

7.5 show port vlan

【Command】	**show port vlan** *port-id*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-id*：Specified port number
【Description】	The command is used to show VLAN information.
【Example】	

Check VLAN configuration of ge1

```
OLT(interface-ge)# show port vlan 1
--------------------------------------------------------------------------------
  Port: ge1      Native-Vlan: 1      Mode: Access
--------------------------------------------------------------------------------
  Tagged-Vlan:
  -
--------------------------------------------------------------------------------
  Untagged-Vlan:
       1
--------------------------------------------------------------------------------
```

7.6 auto-neg

【Command】	**auto-neg** *port-list switch*
【View Mode】	GE Mode
【Parameter】	*port-list*：The port list that want to configure *switch*： To enable or disable the port status of Auto-Negotiation
【Description】	To enable or disable the port status of Auto-Negotiation.
【Example】	
OLT(interface-ge)# auto-neg 1 enable	

7.7 duplex

【Command】	**duplex** *port-list duplex*
【View Mode】	GE Mode, XGE Mode
【Parameter】	*port-list*：The port list that want to configure *duplex*： Half-duplex or full-duplex
【Description】	To enable or disable the port half Ethernet operates in either half-duplex or full mode
【Example】	
OLT(interface-ge)# duplex 1 full	

7.8 speed

【Command】	**speed** *port-list speed*
【View Mode】	GE Mode
【Parameter】	*port-list*：The port list that want to configure *speed*： Sets the transmit rate, 10/100/1000 Mbps.
【Description】	To set the transmit rate of an Ethernet port
【Example】	
Set ge1 port transmit rate to 100Mbit/s OLT(interface-ge)# speed 1 100	

7.9 flow-control

【Command】	**flow-control** *port-list* **no flow-control** *port-list*

【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-list*： The port list that want to configure
【Description】	To enable or disable flow control on specified port
【Example】	
OLT(interface-gpon)# flow-control 1	

7.10 mirror

【Command】	**mirror src-port** *src-port* **dst-port (ge|xge)** *port-id direction* **no mirror src-port** *src-port direction*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*src-port*： Here is the designates mirrored port, it is source port number *port-id*： port-id here is the monitor port number *direction*： ingress/ egress / all , it is to configure what direction traffic need to monitor. Ingress: Copy the ingress traffic of src-port to the dst-port . Egress: Copy the egress traffic of src-port to the dst-port . All: Copy the ingress traffic of src-port to the dst-port .
【Description】	Port mirroring is the function of monitoring a designated port. Here, one port to monitor is called mirrored (src-port). Traffic transmitted from mirrored port are copied and sent to monitor port (dst-port) so that user can monitor network traffic.
【Example】	
Copy the ingress traffic of ge1 to the ge2 OLT(interface-ge)# mirror src-port 1 dst-port ge 2 ingress	

7.11 show mirror

【Command】	**show mirror**
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	None
【Description】	Shows a configured port mirroring
【Example】	
To display a configured port mirroring on GE Mode OLT(interface-ge)# show mirror --- Admin : Enable	

```
  Destnation Port          : ge2
  Source Ingress Ports     : ge1
  Source Egress Ports      : ge5
--------------------------------------------------------------------------
```

7.12 mtu

【Command】	**mtu** *port-list mtu-value* **no mtu** *port-list*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-list* ： To configure mtu on specified port *mtu-value*： mtu value is 328~16356
【Description】	MTU is the largest packet size that can be sent over a network. Command **mtu** is to set the MTU size, the default is 1500. Command **no mtu** is to set the MTU size to default size.
【Example】	
Set ge1 port mtu size to 2000 OLT(interface-ge)# mtu 1 2000	

7.13 reset port statistic

【Command】	**reset port statistic** *port-id*
【View Mode】	GE Mode, GPON Mode, XGE Mode
【Parameter】	*port-id ： The specified port you want to clean the history statistic information*
【Description】	The command is used to *clean the history statistic information*
【Example】	
Clean the history statistic information of ge1 OLT(interface-ge)# reset port statistic 1	

7.14 show port statistics

【Command】	**show port statistics** *port-id*
【View Mode】	GE Mode, GPON Mode, XGE Mode

【Parameter】	*port-id ： The specified port you want to check statistic information*
【Description】	It is to show traffic statistics of the port. It is useful for the troubleshooting. Total(bytes) is the total traffic , Uncast(pkts) is unicast traffic, Bcast(pkts) is the brocast traffic, Mcast(pkts) is multicast traffic, Err(pkts) is the error traffic.
【Example】	

Check the statics information of port ge9

```
OLT(interface-ge)# show port statistics 9
--------------------------------------------------------------------------
 Direction    Total          Uncast        Bcast         Mcast         Err
              (bytes)        (pkts)        (pkts)        (pkts)        (pkts)
--------------------------------------------------------------------------
 RX           320734         454           2215          1212          0
 TX           35232          456           0             0             0
--------------------------------------------------------------------------
```

7.15 show mac-address

【Command】	**show mac-address all** **show mac-address black-hole** **show mac-address dynamic** **show mac-address port ge** *port-id* **show mac-address port xge** *port-id* **show mac-address port gpon** *port-id* **show mac-address static** **show mac-address timer** **show mac-address vlan** *vlan-id*
【View Mode】	Configuration mode
【Parameter】	**all**：To check all the MAC information in the MAC table **black-hole**：To check the black-hole MAC information in the MAC table **dynamic**：To check the dymamic MAC information in the MAC table **port** *port-id* ：To check the MAC information at specified port in the MAC table **static**：To check the static MAC information in the MAC table **timer**：To check ageing time of the MAC **vlan** *vlan-id*：To check the MAC information of specified vlan id.
【Description】	To show the MAC table
【Example】	

To check the MAC information at ge1 port

```
OLT(config)# show mac-address port ge 1
```

```
---------------------------------------------------------------------------
  Total: 1
---------------------------------------------------------------------------
  MAC                         VLAN     Port     MAC-Type
---------------------------------------------------------------------------
  XX:XX:XX:00:1B:24     1          ge1       static
---------------------------------------------------------------------------
```

To check the static MAC information in the MAC table

```
OLT(config)# show mac-address static
---------------------------------------------------------------------------
  Total: 2
---------------------------------------------------------------------------
  MAC                         VLAN     Port     MAC-Type
---------------------------------------------------------------------------
  XX:XX:XX:00:E2:3B     100       ge1       static
  XX:XX:XX:48:97:0A     100       ge1       static
---------------------------------------------------------------------------
```

7.16 show location

【Command】	**show location** *mac-address*
【View Mode】	Configuration mode
【Parameter】	*mac-address*： MAC address
【Description】	To locate the port of the specified MAC
【Example】	

To display the port information of the MAC 3C:97:0E:FD:0C:69

```
OLT(config)# show location 3C:97:0E:FD:0C:69
---------------------------------------------------------------------------
  MAC                         VLAN     Port     MAC-Type
---------------------------------------------------------------------------
  3C:97:0E:FD:0C:69     100       ge9       dynamic
---------------------------------------------------------------------------
```

7.17 mac-address limit port

【Command】	**mac-address limit port ge** *port-list count* **mac-address limit port gpon** *port-list count* **mac-address limit port xge** *port-list count*
【View Mode】	Configuration mode
【Parameter】	*port-list*：The port you want to set *count*：The number of MAC
【Description】	Limits the number of MAC address, if the MAC address over the limit then discard it.
【Example】	
Limits the max MAC on the ge1 port to the 100 OLT(config)# mac-address limit port ge 1 100	

7.18 mac-address static

【Command】	**mac-address static port** （**ge | gpon | xge**） *port-id* **vlan** *vlanid mac-address* **no mac-address static port** （**ge | gpon | xge**） *port-id* **vlan** *vlanid mac-address*
【View Mode】	Configuration mode
【Parameter】	*port-list*：The port you want to set。 *vlan-id*：The corresponding vlan id of the static MAC *mac-address*：static MAC address
【Description】	To set a static address to the specified port and VLAN
【Example】	
Set xx:xx:xx:00:12:9c at OLT ge1 poet, vlanis 100 OLT(config)# mac-address static port ge 1 vlan 100 xx:xx:xx:00:12:9c	

7.19 mac-address timer

【Command】	**mac-address timer** *aging-time* **mac-address timer no-aging**
【View Mode】	Configuration mode
【Parameter】	*aging-time*：Specifies MAC aging time, the range is from 10 to 1000000S
【Description】	It is used to manage the aging time of the MAC table. The aging timer is used by the OLT to delete inactive dynamic MAC addresses from the

	MAC address table, to prevent the table from becoming full of inactive addresses. An address is considered inactive if no packets are sent to or received from the corresponding node for the duration of the timer. **no-aging：** Set to no aging time Setting the aging timer to none disables the timer. No dynamic MAC addresses are aged out, and the table stops learning new addresses after reaching its maximum capacity.
【Example】	
This example shows how to set the aging time for entries in the MAC address table to 60 seconds OLT(config)# mac-address timer 60	

7.20 mac-address learning

【Command】	**mac-address learning port ge** *port-list switch* **mac-address learning port gpon** *port-list switch* **mac-address learning port xge** *port-list switch*
【View Mode】	Configuration mode
【Parameter】	*port-list:* Interface to set mac-address learning *switch：* enable or disable MAC address learning
【Description】	To enable or disable MAC address learning on an interface.
【Example】	
This example shows how to enable MAC address learning on OLT ge1 OLT(config)# mac-address learning port ge 1 enable	

7.21 mac-address black-hole

【Command】	**mac-address black-hole** *vlan-id mac-address* **no mac-address black-hole** *vlan-id mac-address*
【View Mode】	Configuration mode
【Parameter】	*vlan-id：* The vlan id of the black-hole MAC *mac-address：* Black-hole MAC address
【Description】	To set a black-hole MAC address table, if the source MAC or destination MAC address of packet matched with the black-hole MAC address, the

	OLT will discard the packet.
【Example】	
Add a black-hole MAC address item, black-hole MAC is xx:xx:xx:a5:39:a2, the VLAN is 50 OLT(config)# mac-address black-hole 50 xx:xx:xx:a5:39:a2	

7.22 mac-address flush

【Command】	**mac-address flush all** **mac-address flush black-hole** **mac-address flush dynamic** **mac-address flush port ge** *port-id type* **mac-address flush port gpon** *port-id type* **mac-address flush port xge** *port-id type* **mac-address flush static** **mac-address flush vlan** *vlan-id type*
【View Mode】	Configuration mode
【Parameter】	*port-id*： To set the specified port of MAC flush *type*： MAC address type *vlan-id*： To clean the MAC address of the specified vlan id
【Description】	It is used to clean the all mac address or specified type mac address
【Example】	
To clean all dynamic MAC address at ge1 port OLT(config)# mac-address flush port ge 1 dynamic	

7.23 traffic-suppress

【Command】	**traffic-suppress** *port-id* **broadcast (kbps| pps)** *value* **traffic-suppress** *port-id* **multicast (kbps| pps)** *value* **traffic-suppress** *port-id* **unicast (kbps| pps)** *value* **no traffic-suppress** *port-id* （**unicast** | **multicast** | **broadcast**） **(kbps| pps)** *value*
【View Mode】	GE Mode, GPON Mode, Xge Mode
【Parameter】	*port-id*：Specified port to enable traffic suppress 。 **broadcast**： To control the broadcast traffic **multicast**：To control the multicast traffic

	unicast： To control the unicast traffic **kbps** *value:* Specifies the maximum number of ingress packets per second of the designated type the port will forward. The range is 1 to 1000000, unit is kbps. **pps** *value:* Specifies the maximum number of ingress packets per second of the designated type the port will forward. The range is 1 to 1488100, unit is pps.
【Description】	Allows you to monitor the levels of the incoming broadcast, multicast, and unicast traffic. The traffic storm control circuitry monitors packets that pass from a Layer 2 interface. The circuitry determines if the packet is unicast or broadcast, tracks the current count of packets within the 1-second interval, and filters out subsequent packets when a threshold is reached to avoid the netwok blocking. **no traffic-suppress** is use to shut down this function.
【Example】	
To set the ge1 port broadcast threshold to 1024kbps OLT(interface-ge)# traffic-suppress 1 broadcast kbps 1024 To control the ge1 multicast traffic to 2048bps OLT(interface-ge)# traffic-suppress 1 multicast kbps 2048 To control the ge1 unknow unicast traffic to 10240kbps OLT(interface-ge)# traffic-suppress 1 unicast kbps 10240	

8. VLAN

8.1 vlan

【Command】	**vlan** *vlan-list* **no vlan** *vlan-list*
【View Mode】	Configuration mode
【Parameter】	*vlan-list*： Creat VLAN, specify a VID number, which has a range of 1 to 4094.
【Description】	**vlan** command is used to creates one new VLAN or a group of VLAN
【Example】	
Creats vlan 100	

OLT(config)# vlan 100 Creats vlan 200-220 OLT(config)# vlan 200-220

8.2 show vlan

【Command】	**show vlan all** **show vlan** *vlan-id*
【View Mode】	Configuration mode
【Parameter】	**all**：Specifies all the VLANs on the OLT to display *vlan-id*：Specifies the VID of the VLAN you want to display
【Description】	To display all exist VLAN or one specified VLAN information, such as port and tagged/untagged
【Example】	

Displays vlan 100 information

```
OLT(config)# show vlan 100
--------------------------------------------------------------------------------
  VLAN    Tagged-Ports                          Untagged-Ports
 --------------------------------------------------------------------------------
  100     p1-p8                                  xge1
```

8.3 vlan mode

【Command】	**vlan mode** *port-list mode*
【View Mode】	GE Mode,GPON Mode, XGE Mode
【Parameter】	*port-list*：*Specifies port to set VLAN mode* *mode*：vlan mod, there are access、hybrid、trunk model.
【Description】	access mode: Only untagged traffic will enter the port and be added the native vlan, other traffic will discard. Remove any VLAN information from the frame before it is sent out. Trunk mode: Trunk port receive packet and judge whether there is VLAN information belong the VLAN table of the port, if it is forward, if not belong to discard it. The trunk port to send packet, it comparison of VLAN information with VLAN table, if it is directly transmit, if not equal to discard it. Hybrid Mode: receive packet and judge whether there is VLAN information belong the VLAN table of the port, if it is forward, if not

	belon to discard it. The hybrid port to send packet, it can set tagged or untagged. if untag is the stripping VLAN information, send, if tag is directly send.
【Example】	
Set the OLT ge1 to trunk mode OLT(interface-ge)# vlan mode 1 trunk	

8.4 vlan access

【Command】	**vlan access** *port-list vlan-id*
【View Mode】	GE Mode,GPON Mode, XGE Mode
【Parameter】	*port-list*：*Specifies port to set VLAN* *vlan-id*：Specifies VLAN ID
【Description】	To add access vlan at specified port, the vlan should have created before, and the poer is on access mode.
【Example】	
To add VLAN 100 at ge1 port OLT(interface-ge)# vlan access 1 100	

8.5 vlan trunk

【Command】	**vlan trunk** *port-list* **allowed** *vlan-list* **no vlan trunk** *port-list* **allowed** *vlan-list*
【View Mode】	GE Mode,GPON Mode, XGE Mode
【Parameter】	*port-list*：*Specifies port to set VLAN* *vlan-id*：Specifies VLAN ID
【Description】	To add trunk vlan at specified port, the vlan should have created before, and the port is on trunk mode.
【Example】	
Add trunk vlan 100，200,300 to ge1 OLT(interface-ge)# vlan trunk 1 allowed 100,200,300 ge1 : trunk allowed vlan: Fail: 0, Success: 3	

8.6 vlan hybrid

【Command】	**vlan hybrid** *port-list* **(tagged | untagged)** *vlan-list* **no vlan hybrid** *port-list* **(tagged | untagged)** *vlan-list*
【View Mode】	GE Mode,GPON Mode, XGE Mode
【Parameter】	*port-list*：*Specifies port to set VLAN* *vlan-list*：Specifies VLAN ID list **tagged | untagged –**To set the port send packet with tag or without tag.
【Description】	To add hybrid vlan at specified port, the vlan should have created before, and the port is on hybrid mode.
【Example】	
To add ge1 hybrid vlan 100 in tagged and vlan1000 in untagged at ge1 port. OLT(interface-ge)# vlan hybrid 1 tagged 100 ge1 : hybrid add tag vlan: Fail: 0, Success: 1 OLT(interface-ge)# vlan hybrid 1 untagged 1000 ge1 : hybrid add untag vlan: Fail: 0, Success: 1	

8.7 vlan native-vlan

【Command】	**vlan native-vlan** *port-list vlan-id*
【View Mode】	GE Mode,GPON Mode, XGE Mode
【Parameter】	*port-list*：*Specifies port to set VLAN* *vlan-id*：Specifies VLAN ID
【Description】	To add native vlan at specified port, the packet ingress will add the native vlan, for the exgress packed, if the vlan information equal the native vlan id it will strip the tag, if not, the packet will discard.
【Example】	
To set the ge1 port in native vlan 100 OLT(interface-ge)# vlan native-vlan 1 100	

8.8 show port vlan

【Command】	**show port vlan** *port-id*
【View Mode】	GE Mode,GPON Mode, XGE Mode
【Parameter】	*port-id*：*Specifies port to set VLAN*

【Description】	To show the port vlan information
【Example】	

OLT(interface-ge)# show port vlan 1

Port: ge1 Native-Vlan: 100 Mode: Hybrid

Tagged-Vlan:

-

Untagged-Vlan:

1,100,1000

8.9 interface vlanif

【Command】	**interface vlanif** *vlan-id*
【View Mode】	Configuration mode
【Parameter】	*vlan-id*：VLAN ID, s*pecifies a VLAN*
【Description】	To create VLANIF interface and enter the VLANIF Mode. You can set the IP address to this virtual level 3 interface.
【Example】	

When you have created a VLAN 100, you can create a VLANIF interface for vlan 100, and enter the interface to configure it.

OLT(config)# interface vlanif 100

OLT(interface-vlanif-100)#

8.10 show interface vlanif

【Command】	**show interface vlanif** （**all**	**vlan-id** *vlan-id*）
【View Mode】	Configuration mode
【Parameter】	*vlan-id*：VLAN ID, s*pecifies a VLAN*
【Description】	To check VLANIF interface information.
【Example】	

Displays vlanif interface information of vlan 100

OLT(config)# show interface vlanif vlan-id 100

Description : vlan[100] management interface

The Maximum Transmit Unit is 1500 bytes

Internet Address is 192.168.100.123, netmask 255.255.255.0
Hardware address is XX:XX:XX:00:00:02
Recive 105 packets, 5292 bytes
Transmit 35 packets, 1866 bytes

Display all information of the vlanif
OLT(config)# show interface vlanif all

Interface	IP Address	Netmask
vlanif[100]	192.168.100.123	255.255.255.0
vlanif[200]	192.168.101.123	255.255.255.0

9. Multicast Module

9.1 igmp-snooping

【Command】	**igmp-snooping enable** **igmp-snooping disable**
【View Mode】	Configuration mode
【Parameter】	**enable**：To enable the OLT's igmp-snooping function **disable**：To disable the OLT's igmp-snooping function
【Description】	IGMP Snooping（Internet Group Management Protocol Snooping. IGMP snooping allows the OLT to control the flow of multicast packets from its ports. It enables the OLT to forward packets of multicast groups to only ports that have host nodes that want to join the multicast groups.
【Example】	
Enables igmp-snooping OLT(config)# igmp-snooping enable	

9.2 igmp-snooping fast-leave

【Command】	**igmp-snooping fast-leave** *switch*
【View Mode】	Configuration mode
【Parameter】	*switch*：igmp-snooping fast leave function on or off, on means enable, off means disable.
【Description】	on：To enable igmp-snooping fast leave function. When ONT received a

	IGMP leave message, it will update the multicast forwarding entry table immediately. It do not have query process. If you want set a leave latency as 0, you can enable it. off：To disable igmp-snooping fast leave function. ONT will sent group-specific query message upon receipt message from a host. If ONT do not receive the report from host, ONT judge the host offline and update the multicast forwarding table.
【Example】	
To enable OLTigmp-snooping fast-leave OLT(config)# igmp-snooping fast-leave on	

9.3 igmp-snooping host-aging-time

【Command】	**igmp-snooping host-aging-time** *time*
【View Mode】	Configuration mode
【Parameter】	*time*： To specify the aging time for multicast group member
【Description】	Use the igmp-snooping host-aging-time command to configure the port aging time of the multicast group members. This command is used to set the aging time of the multicast group member so that the refresh frequency can be controlled. When the group members change frequently, the aging time should be comparatively short, and vice versa.
【Example】	
Set the aging time to 300 seconds. OLT(config)# igmp-snooping host-aging-time 300	

9.4 igmp-snooping router-aging-time

【Command】	**igmp-snooping router-aging-time** *time*
【View Mode】	Configuration mode
【Parameter】	*time*： To specify the aging time for multicast router port
【Description】	Use the igmp-snooping router-aging-time command to configure the port aging time of the multicast group router. This command is used to set the aging time of the multicast group router. When the OLT do not receiver IGMP General Query packet or PIM Hello packet of some port, the port will delete them form the table.

【Example】	
Set the multicast router port aging time to 300 seconds. OLT(config)# igmp-snooping router-aging-time 300	

9.5 igmp-snooping querier

【Command】	**igmp-snooping querier enable** **igmp-snooping querier disable**
【View Mode】	Configuration mode
【Parameter】	**enable：** To active igmp snooping querier **disable：** To deactivate igmp snooping querier
【Description】	Multicast routers are an essential part of IP multicasting. They send out queries to the network nodes to determine group memberships, route the multicast packets across networks, and maintain lists of the multicast groups and the ports where group members are located. IGMP snooping querier can be used in place of multicast routers in situations where IP multicasting is restricted to a single LAN, without the need for routing. This feature enables the OLT to mimic a multicast router by sending out general IGMP queries to the host nodes.
【Example】	
OLT(config)# igmp-snooping querier enable	

9.6 igmp-snooping querier interval

【Command】	**igmp-snooping querier interval** *time*
【View Mode】	Configuration mode
【Parameter】	**interval** *time：* Specifies an IGMP snooping query interval in the unit of second
【Description】	The IGMP snooping querier periodically sends General Query messages to trigger memebership report messages from a host that wants to receiver IP multicast traffic.
【Example】	
Set the igmp snooping query interval time to 60 second OLT(config)# igmp-snooping querier interval 60	

9.7 igmp-snooping querier max-response-time

【Command】	**igmp-snooping querier max-response-time** *time*
【View Mode】	Configuration mode
【Parameter】	**max-response-time** *time*： Specifices *a m*aximum response time
【Description】	Membership query messages include the maximum response time field. This field specifes the maximum time allowed before sending a responding report. The maximum query response time allows a router to quickly detect that there are no more hosts interested in receiving multicast traffic. To get the network to converge faster, use the command and set a low response time value, so that the clients will respond immediately with a report as a response to the IGMP Querie.
【Example】	
Set the igmp snooping query response time to 10 second OLT(config)# igmp-snooping querier max-response-time 10	

9.8 igmp-snooping querier source-ip

【Command】	**igmp-snooping querier source-ip** *source_ip*
【View Mode】	Configuration mode
【Parameter】	*source_ip*： Specified an IP address as the source IP address to be carried in the IGMP queries sent by the device
【Description】	Use the igmp-snooping general-query source-ip ip-address command to specify an IP address as the source IP address of IGMP queries. When a level 2 device received the IGMP Query message from souce ip 0.0.0.0 , it will not set it to a dynamic router port, that will influence the creating multicast forwarding table and cause the traffic blocking. If an IP address is assigned to a VLAN, which has IGMP querier enabled on it, then the IGMP Snooping querier uses the VLAN's IP address as the Source IP Address in IGMP queries, it will avoid the 0.0.0.0 issue.
【Example】	
To configure the igmp snooping querier ip to 192.168.1.1 OLT(config)# igmp-snooping querier source-ip 192.168.1.1	

9.9 show igmp-snooping config

【Command】	**show igmp-snooping config**
【View Mode】	Configuration mode

【Parameter】	*None*
【Description】	To display the igmp snooping information, include igmp snooping status, fast leave status, aging time, igmp snooping querier status, response time, interval time and source ip
【Example】	

Check the igmp snooping configuration.

```
OLT(config)# show igmp-snooping config
--------------------------------------------------------------------------
  Snooping switch                        : Disable
  Fast leave                             : Off
  Host aging time(s)                     : 260
  Router aging time(s)                   : 130
--------------------------------------------------------------------------
  Query switch                           : Enable
  Max response time(s)                   : 10
  Query interval(s)                      : 60
  Source ip of the query                 : 192.168.1.1
--------------------------------------------------------------------------
```

9.10 show igmp-snooping group

【Command】	**show igmp-snooping group** （**all** | **ip-address** *ip-address* | **static** | **vlan** *vlan-id*）
【View Mode】	Configuration mode
【Parameter】	**all** : all multicast group information **ip-address** *ip-address*: Specifies a multicast source by its IP address. **static:** **vlan** *vlan-id*: Specifies a multicast VLAN
【Description】	To display the multicast group information
【Example】	

Check OLT multicast group information

```
OLT(config)# show igmp-snooping  group  all
Total Groups:2
--------------------------------------------------------------------------
Index:1
 IP  address:224.2.2.2
 Mac address:xx:xx:xx:02:02:02
 vlan      :100
 RouterPort: NONE
 MemberPort: ge13
```

```
Index:2
 IP  address:239.255.255.250
 Mac address:xx:xx:xx:7f:ff:fa
 vlan      :100
 RouterPort: NONE
 MemberPort: ge13

--------------------------------------------------------------------------------
```

9.11 multicast-vlan

【Command】	**multicast-vlan** *vlan-id* **no multicast-vlan** *vlan-id*
【View Mode】	Configuration mode
【Parameter】	**vlan** *vlan-id*: Specifies a multicast VLAN, before you use a VLAN ID for multicast vlan you should creat that VLAN first.
【Description】	Use multicast-vlan to configure a multicast VLAN and enter multicast VLAN view mode. The multicast Vlan is one of the application of VLAN, you can configure the multicast parameter under this mode.
【Example】	
Configures VLAN 100 as a multicast VLAN and enter its view OLT(config)# multicast-vlan 100 OLT(multicast-vlan-100)#	

9.12 show multicast-vlan

【Command】	**show multicast-vlan** （**all** | **vlan-id** *vlan-id*）
【View Mode】	Configuration mode
【Parameter】	**vlan** *vlan-id*: Specifies a multicast VLAN **all：** To show information of all multicast VLAN
【Description】	Use the command to display information about multicast VLAN.
【Example】	

9.13 port

【Command】	**port** （**ge**	**gpon**	**xge**） *port-id* **no port** （**ge**	**gpon**	**xge**） *port-id*
【View Mode】	Multicast-vlan Mode
【Parameter】	*port-id*：Specified port to be added to the multicast VLAN
【Description】	Uses the command to add the OLT port to the specified multicast VLAN. no port is used for delete port from multicast vlan
【Example】	
Adds ge1 port to multicast vlan100 OLT(multicast-vlan-100)# port ge 1	

9.14 multicast-unknown

【Command】	**multicast-unknown policy** (**discard** | **transparent**)
【View Mode】	Configuration mode
【Parameter】	**discard**：dropping unknown multicast data **transparent**：transparent unknown multicast data。
【Description】	Uses the command to control unknow , if the multicast data is useful unknow traffic then set transparent, if not set discard.
【Example】	
Configure the unknow multicast data transparent OLT(config)# multicast-unknown policy transparent	

10.RSTP

10.1 spanning-tree

【Command】	**spanning-tree** （**enable**	**disable**）
【View Mode】	Configuration mode
【Parameter】	**enable**：Active the STP protocol **disable**：Deactive the STP protocol

【Description】	The command is used to active/deactive global STP, only when STP have enabled you can configure the stp function
【Example】	
Active the STP function OLT(config)# spanning-tree enable	

10.2 spanning-tree priority

【Command】	**spanning-tree priority** *priority*
【View Mode】	Configuration mode
【Parameter】	*Priority:* Specifies a priority number for the switch. The range is 0 to 61440, in increments of 4096, more small number gets more hight priority.
【Description】	Use this command to assign the switch a priority number. The device that has the lowest priority number in the spanning tree can becomes the root bridge. If two or more devices have the same priority value, the device with the numerically lowest MAC address becomes the root bridge. The range is 0 to 61,440, in increments of 4,096. The priority value can be set only in increments of 4,096.
【Example】	
This example sets the priority value of the OLT to 4096 OLT(config)# spanning-tree priority 4096	

10.3 spanning-tree timer forward-delay

【Command】	**spanning-tree timer forward-delay** *time*
【View Mode】	Configuration mode
【Parameter】	*time*：forward Delay in second, <4~30>
【Description】	Use this command to set the forward delay value. The forward delay sets the time (in seconds) to control how fast a port changes its spanning tree state when moving towards the forwarding state. This value determines the maximum time taken to transition from discarding to learning and from learning to forwarding. The range is 4 to 30 second.
【Example】	
Sets OLT forward-delay time to 20 second OLT(config)# spanning-tree timer forward-delay 20	

10.4 spanning-tree timer hello

【Command】	**spanning-tree timer hello** *time*
【View Mode】	Configuration mode
【Parameter】	*time*：hello time interval in second, range 1 to 2 second
【Description】	Use this command to set the hello-time. This sets the time in seconds between the transmission of switch spanning tree configuration information.
【Example】	
Sets OLT hello time to 1 second OLT(config)# spanning-tree timer hello 1	

10.5 spanning-tree timer max-age

【Command】	**spanning-tree timer max-age** *time*
【View Mode】	Configuration mode
【Parameter】	*time*： <6-40> The maximum time, in seconds.
【Description】	Use this command to set the max-age. This sets the maximum age, in seconds, that dynamic spanning tree configuration information is stored in the switch before it is discarded. Range is 6 to 40 second.
【Example】	
Max-age is the maximum time in seconds for which a message is considered valid. Configure this value sufficiently high, so that a frame generated by the root bridge can be propagated to the leaf nodes without exceeding the max-age.Sets OLT hello time to 1 S The forward delay, max-age, and hello time parameters should be set according to the following formulae, as specified in IEEE Standard 802.1d: 2 x (forward delay - 1.0 seconds) >= max-age max-age >= 2 x (hello time + 1.0 seconds) Example is to set the max-age to 6 second. OLT(config)# spanning-tree timer max-age 6	

10.6 spanning-tree edged-port

【Command】	**spanning-tree edged-port** *port-id switch*

【View Mode】	GE Mode, XGE Mode
【Parameter】	*port-id*：Specifies the port id *switch*：To configure the port as a edged-port or not. Value：enable、disable。
【Description】	Use this command to set a port as an edge-port. Use this command on a switch port connected to a LAN that has no other bridges attached. If a BPDU is received on the port that indicates that another bridge is connected to the LAN, then the port is no longer treated as an edge port.
【Example】	
Sets ge 1 as a edged-port OLT(interface-ge)# spanning-tree edged-port 1 enable	

10.7 spanning-tree cost

【Command】	**spanning-tree cost** *port-id cost*
【View Mode】	GE Mode, XGE Mode
【Parameter】	*port-id*：Specifies the port id *cost*：More lower the path cost value, more good of the network connection. Range is 1 to 200000000。
【Description】	Use this command to set the cost of a path for the specified port. This value then combines with others along the path to the root bridge in order to determine the total cost path value from the particular port, to the root bridge. The lower the numeric value, the higher the priority of the path. This applies when the port is the root port.
【Example】	
Sets ge 1 port path-cost to 500 OLT(interface-ge)# spanning-tree cost 1 500	

10.8 spanning-tree mcheck

【Command】	**spanning-tree mcheck** *port-id switch*
【View Mode】	GE Mode, XGE Mode
【Parameter】	*port-id*：Specifies the port id

	switch： value is enable、disable, to active or deactive the mcheck
【Description】	Use this command to set the port to run mcheck operation. If the port connect with the STP device, the port will move to STP compatible mode.
【Example】	
To active the mcheck mode of the ge1 port OLT(interface-ge)# spanning-tree mcheck 1 enable	

10.9 spanning-tree point-to-point

【Command】	**spanning-tree point-to-point** *port-id mode*
【View Mode】	GE Mode, XGE Mode
【Parameter】	*port-id*：Specifies the port id *mode*：Sets the mode of RSTP, value is true, false, auto
【Description】	Use this command to set the specified port is a point to point link or not.
【Example】	
Set1 ge 1 port point-to-point to true OLT(interface-ge)# spanning-tree point-to-point 1 true	

10.10 spanning-tree priority

【Command】	**spanning-tree priority** *port-id priority*
【View Mode】	GE Mode, XGE Mode
【Parameter】	*port-id*：Specifies the port id *priority*：<0-240>, in increments of 16. The port priority, which will be rounded down to a multiple of 16.
【Description】	Use this command to set the port priority for specified port. A lower priority value indicates a greater likelihood of the port becoming part of the active topology.
【Example】	
Configure ge1 port the port priority to 16 OLT(interface-ge)# spanning-tree priority 1 16	

11.DBA Profile Configuration

11.1 dba-profile

【Command】	**dba-profile** (**profile-id** *profile-id* | **profile-name** *profile-name*) **no dba-profile** (**profile-id** *profile-id* | **profile-name** *profile-name*)
【View Mode】	Configuration mode
【Parameter】	**profile-id** *profile-id*：Id for the DBA profile, the system will automatically assigned a id to the profile with name "dba-profile_x" if you do not give a id, "x" is the sequence number as id.
【Description】	Use this command to creat DBA（Dynamic Bandwidth Assignment）profile. OLT uses the DBA for the upstream bandwidth allocation. There are some default profiles. If the default profile can not meet business requirement, you can creat a DBA profile based on your business. If you need to delete a DBA profile , use **no dba-profile** command.
【Example】	
To creat a DBA profile with ID 10 at default name rule OLT(config)# dba-profile profile-id 10	

11.2 type

【Command】	**type1 fix** *fix* **type2 assure** *assure* **type3 assure** *assure* **max** *max* **type4 max** *max* **type5 fix** *fix* **assure** *assure* **max** *max*
【View Mode】	dba-profile Mode
【Parameter】	The system supports five DBA profile types, namely, type1 (fixed bandwidth), type2 (assured bandwidth), type3 (assured bandwidth+maximum bandwidth), type4 (maximum bandwidth), and type5 (fixed bandwidth+assured bandwidth+maximum bandwidth). **type1** This fixed bandwidth is provisioned for the specified ONU or business, the bandwidth is occupied fully even no business in use, the bandwith can not use by other ONU. It suit for hight priority and services sensitive to delay business, such as TDM and VOIP. 。 **type2** This assured bandwidth is guaranteed bandwidth type to assure the ONU can get bandwidth it need. When the ONU do not need using such more bandwitdth it will release and use by other ONU business. It is dynamic allocation. It mainly used for video services and data serves

	of higher priorities. **type3** This is combination of assured bandwidth and maximum bandwidth. Users are allowed to preempt the bandwidth on condition that the users' assured bandwidth is guaranteed. However, the total bandwidth cannot exceed the maximum bandwidth. It mainly used for Voip and IPTV business. **type4** This is maximum bandwidth type and mainly used for data service, such as Internet and service of low priority. It have not bandwidth guarantee but it has eligibility in best effort bandwidth sharing. **type5** This is mixed type. It reserved fix bandwidth to monopolize it. It also assured bandwidth and maximum bandwidth. **fix** *fix* It is the fix bandwidth. It is provisioned for user. Other user can not use them. **assure** *assure* *It is guranted bandwidth.* **max** *max* *It is maximum bandwidth* The maximum bandwidth value should be same or more than the sum of a fixed bandwidth and assured bandwidth value. Maximumu BW>= fixed B/W + assured B/W
【Description】	Use the command to create a DBA profile. The OLT dynamically allocates bandwidth to uplink interfaces of ONUs according to the parameters in the DBA profile. By configuring a DBA profile, you can set the bandwidth allocation mode and bandwidth parameters uniformly. The ONT reports the status of the queues associated with the service scheduler to the OLT. Based on the bandwidth demand, the OLT Dynamic Bandwidth Allocation (DBA) engine allocates upstream transmit opportunities to the service scheduler, resulting in one or more ONT upstream queues with the opportunity to send data up the PON.
【Example】	
To set dba profile 10 as the type 5 , fixed bandwidth 5Mbit/s, assured bandwidth 10Mbit/s, manimum bandwidth 30Mbit/s OLT(dba-profile-10)# type5 fix 5120 assure 10240 max 30720	

11.3 show dba-profile

【Command】	**show dba-profile** (**all** | **profile-id** *profile-id* | **profile-name** *profile-name*)
【View Mode】	Configuration mode
【Parameter】	**all**：Displays all the DBA profile information **profile-id** *profile-id*： To display the DBA profile of specified ID

	profile-name *profile-name*：To display the specified DBA profile
【Description】	Uses the command to check the DBA profile information
【Example】	

Displays all DBA profile

```
OLT(config)# show dba-profile all
-------------------------------------------------------------------------
  Profile   Profile                Type   Fix          Assure       Max          Bind
  ID        Name                          (kbps)       (kbps)       (kbps)       times
-------------------------------------------------------------------------
  10        dba-profile_10         5      2048         2048         10240        0
  20        dba-profile_20         2      0            128          0            0
-------------------------------------------------------------------------
  Total: 2
```

Displays DBA profile of ID 10

```
OLT(config)# show dba-profile profile-id 10
-------------------------------------------------------------------------
  Profile ID      :  10
  Profile Name    :  dba-profile_10
  Type            :  5
  Fix(kbps)       :  2048
  Assure(kbps)    :  2048
  Max(kbps)       :  10240
  Bind Times      :  0
-------------------------------------------------------------------------
```

11.4 commit

【Command】	**show dba-profile** (**all** | **profile-id** *profile-id* | **profile-name** *profile-name*)
【View Mode】	dba-profile Mode
【Parameter】	None
【Description】	Uses the command to apply the DBA profile
【Example】	

To apply the current DBA profile

```
OLT(dba-profile-10)# commit
```

12. ONT Lineprofiel Configuration

12.1 ont-lineprofile

【Command】	**ont-lineprofile (profile-id** *profile-id* **| profile-name** *profile-name***)** **no ont-lineprofile (profile-id** *profile-id* **| profile-name** *profile-name***)**
【View Mode】	Configuration mode
【Parameter】	*profile-id*： *Creates or enter for a specified* GPON ONT line profile, ID is the unique identify number of the line profile. If no assigned the ID ,the system will automatically assigned an id to the profile *profile-name*：A name for the GPON ONT line profile.
【Description】	A line profile describes binding between the T-CONT and the DBA profile, the QoS mode of the service flow, and mapping between the GEM port and the ONU-side service. This command is to create the ONT line profile.
【Example】	
To creat the GPON ONT line profile with ID 10. OLT(config)# ont-lineprofile profile-id 10 OLT(ont-lineprofile-10)#	

12.2 tcont

【Command】	**tcont** *tcont-list* （**dba-profile-id** *dba-profile-id* | **dba-profile-name** *dba-profile-name*） **no tcont** *tcont-list*
【View Mode】	lineprofile Mode
【Parameter】	*tcont-list*：T-CONT list, support "," and "-" *dba-profile-id*：DBA profile ID。 *dba-profile-name*：DBA profile name
【Description】	In the line profile mode, bind T-CONT 4 to DBA profile. A T-CONT is bound to a DBA profile for dynamic bandwidth allocation, improving upstream bandwidth utilization. undo tcont command is used to delete the T-CONT
【Example】	
Creats tcont1 under line profile 10 and bind with DBA profile 10 OLT(ont-lineprofile-10)# tcont 1 dba-profile-id 10	

12.3 gem add

【Command】	**gem add** *gem-id* **tcont** *tcont-id*
【View Mode】	lineprofile Mode
【Parameter】	*gem-id*：GEM ID *tcont-id*：tcont ID
【Description】	Use the command to configure the GEM port and TCONT bound, creat GEM port.
【Example】	
To creat the gem 1 in line profile 10 and bind with tcont 1 OLT(ont-lineprofile-10)# gem add 1 tcont 1	

12.4 gem delete

【Command】	**gem add** *gem-id* **tcont** *tcont-id*
【View Mode】	lineprofile Mode
【Parameter】	*gem-id*：GEM ID
【Description】	Use the command to delete the GEM
【Example】	
To delete GEM 1 of line profile 10 OLT(ont-lineprofile-10)# gem delete 1	

12.5 mapping-mode

【Command】	**mapping-mode** （**priority** | **vlan** | **vlan-priority**）
【View Mode】	lineprofile Mode
【Parameter】	**priority**：To use 802.1p priority mapping mode **vlan**：To use VLAN mapping mode **vlan-priority**：To use vlan+802.1p maping mode
【Description】	Uses the command to configure the mapping mode of the ONT line profile. It configure the mapping mode from the GEM port to ONU-side service. VLAN is default mapping mode.
【Example】	
To configure line profile 10 with vlan mapping mode	

```
OLT(ont-lineprofile-10)# mapping-mode vlan
```

12.6 gem mapping

【Command】	**gem mapping** *gem-id mapping-id* [**vlan-id** *vlan-id* | **priority** *priority*] **no gem mapping** *gem-id mapping-id*
【View Mode】	lineprofile Mode
【Parameter】	*gem-id*：GEM ID *mapping-id*：mapping ID *vlan-id*：vlan ID *priority*：To configure a priority with the gem-id
【Description】	The command is used to map the GEM port and ont side service. The service flow of user VLAN will map to GEM port in the ONT line profile
【Example】	
To configure the gem 1、mapping 1、vlan 100 mapping OLT(ont-lineprofile-10)# gem mapping 1 1 vlan-id 100	

12.7 show ont-lineprofile

【Command】	**show ont-lineprofile** (**all** | **profile-id** *profile-id* | **profile-name** *profile-name*)
【View Mode】	Configuration mode
【Parameter】	**all**：Displays all the line profile information **profile-id** *profile-id*：To display the line profile of specified ID **profile-name** *profile-name*：To display the specified line profile
【Description】	The command is used to display the line profile information.
【Example】	

Displays the all line profile

```
OLT(config)# show ont-lineprofile all
------------------------------------------------------------------------------
  Profile-ID  Profile-name                                        Binding times
------------------------------------------------------------------------------
  10          dba-profile_10                                     0
  100         dba-profile_100                                    0
------------------------------------------------------------------------------
  Total: 2
```

12.8 show ont-lineprofile current

【Command】	**show ont-lineprofile current**
【View Mode】	lineprofile Mode
【Parameter】	
【Description】	Show not issued by the line template information
【Example】	

Show not issued by the line template 10 configuration information

```
OLT(ont-lineprofile-10)# show ont-lineprofile current
------------------------------------------------------------------------------
  Profile-ID       : 10
  Profile-name     : dba-profile_10
  Binding times : 0
 ------------------------------------------------------------------------------
  Mapping mode     : VLAN
 ------------------------------------------------------------------------------
  <T-CONT    1>         DBA-Profile ID : 10
    <Gem ID    1>
      Mapping-ID    VLAN    Priority
      1             100     -
------------------------------------------------------------------------------
```

13.ONT-srvprofile configuration

13.1 ont-srvprofile

【Command】	**ont-srvprofile (profile-id** *profile-id* **| profile-name** *profile-name***)** **no ont-srvprofile (profile-id** *profile-id* **| profile-name** *profile-name***)**
【View Mode】	Configuration mode
【Parameter】	profile-id profile-id：Id for the service profile, the system will automatically assigned a id to the profile with name “srv-profile_x” if you do not give a id, “x” is the sequence number as id.
【Description】	Use this command to creat service profile. A service profile provides the service configuration channel for the ONT that is managed by using optical network terminal managemnt and control interface (OMCI). You

	can configure the capability set of ONT port to adaptive. Then the system automatically adapts to the ONT according to the actual capability of the online ONT.
【Example】	
Creats the service profile 10 for the ONT OLT(config)# ont-srvprofile profile-id 10 OLT(ont-srvprofile-10)#	

13.2 ont-port

【Command】	**ont-port** (**eth** *eth* | **pots** *pots*)
【View Mode】	srvprofile Mode
【Parameter】	**eth** *eth*：The number of the Ethernet port on ONT **pots** *pots*：The number of the voice port on ONT
【Description】	Uses the command to configure the capacity of the ONT.
【Example】	
To configure the ONT service profile 10, the ONT have 4 eth ports and 1 telephone POTS OLT(ont-srvprofile-10)# ont-port eth 4 pots 1	

13.3 port vlan

【Command】	**port vlan eth** *port-list* **native-vlan** *vlan-id* **port vlan eth** *port-list* **q-in-q** *vlan-id* **user-vlan** *vlan-id* **port vlan eth** *port-list* **translation** *vlan-id* **user-vlan** *vlan-id* **port vlan eth** *port-list* **transparent** **port vlan eth** *port-list* **vlan** *vlan-id* **no port vlan eth** *port-list* **vlan** *vlan-id*
【View Mode】	srvprofile Mode
【Parameter】	**eth** *port-list*：The list of ONT port that need to configure a VLAN. It is useful for batch configuration. **native-vlan** *vlan-id*： native vlan of the ONT port。 **q-in-q** *vlan-id* **user-vlan** *vlan-id*： **q-in-q** *vlan-id* is the outer vlan, **user-vlan** *vlan-id* is the inner vlan. **translation** *vlan-id* **user-vlan** *vlan-id*： **user-vlan** *vlan-id* is user side vlan **vlan** *vlan-id*： To add the ONT port to specified VLAN

【Description】	Uses the **port vlan** command to configure the port vlan of the ONT uni port in GPON ONT service profile, assigned the port to specified VLAN. The **no port vlan** command is used to delete the port vlan of the ONT service profile.
【Example】	

Adds eth1 to vlan 10 in ONT srvprofile 10

```
OLT(ont-srvprofile-10)# port vlan eth 1 vlan 10
```

In ONT srvprofile 10, to set ONT uni port 2 to QinQ vlan 100, the user vlan is 10

```
OLT(ont-srvprofile-10)# port vlan eth 2 q-in-q 100 user-vlan 10
```

In ONT srvprofile 10, to set ONT uni port 2 working as transparent

```
OLT(ont-srvprofile-10)# port vlan eth 2 transparent
```

In ONT srvprofile 10, to set ONT uni port 1 working as VLAN translation , the vlan 100 will translate to user vlan 200

```
OLT(ont-srvprofile-10)# port vlan eth 1 translation 100 user-vlan 200
```

13.4 show ont-srvprofile

【Command】	**show ont-srvprofile** (**all** | **profile-id** *profile-id* | **profile-name** *profile-name*)
【View Mode】	Configuration mode
【Parameter】	**all**：To display all GPON ONT srv-profile information, include profile ID, name, and number of bound times. **profile-id** *profile-id*：To display the specified ID srv-profile **profile-name** *profile-name*：To display the specified name srv-profile
【Description】	To check the ONT srv-profile information
【Example】	

Displays all ONT srv-profile

```
OLT(config)# show ont-srvprofile    all
------------------------------------------------------------------------------
  Profile-ID    Profile-name                                        Binding times
------------------------------------------------------------------------------
  10                srvprofile_10                                     0
------------------------------------------------------------------------------
  Total: 1
```

Display srv-profile of ID 10

```
OLT(config)# show ont-srvprofile profile-id 10
------------------------------------------------------------------------------
  Profile-ID       : 10
  Profile-name     : srvprofile_10
  Binding times : 0
------------------------------------------------------------------------------
  Port-type              Port-number
  ------------------------------------------------------------------------------
  ETH                    4
  POTS                   0
------------------------------------------------------------------------------
  MAC learning switch : Enable
  MAC aging time(s)      : 300
------------------------------------------------------------------------------
  Port    Port Service-type Index Native S-VLAN S-PRI C-VLAN C-PRI ENCAP S-PRI
  type          ID                                                        VLAN
POLICY
  ------------------------------------------------------------------------------
  ETH     1       Translation   1       1         100       -       200       -       -       -
  ETH     2       Transparent   -       -         -         -       -         -       -       -
  ETH     3       Transparent   -       -         -         -       -         -       -       -
  ETH     4       Transparent   -       -         -         -       -         -       -       -
------------------------------------------------------------------------------
```

13.5 show ont-srvprofile current

【Command】	**show ont-srvprofile current**
【View Mode】	Srvprofile Mode
【Parameter】	
【Description】	To check the ont srv-profile that is applyed
【Example】	

```
OLT(ont-srvprofile-10)# show ont-srvprofile current
------------------------------------------------------------------------------
  Profile-ID       : 10
  Profile-name     : srvprofile_10
  Binding times : 0
 ------------------------------------------------------------------------------
  Port-type              Port-number
```

```
  ------------------------------------------------------------------------
  ETH                     4
  POTS                    0
 ------------------------------------------------------------------------
  MAC learning switch : Enable
  MAC aging time(s)     : 300
 ------------------------------------------------------------------------
  Port    Port Service-type Index Native S-VLAN S-PRI C-VLAN C-PRI ENCAP S-PRI
  type         ID                                                        VLAN
POLICY
  ------------------------------------------------------------------------
  ETH     1       Translation  1        1          100       -        200       -        -        -
  ETH     2       Transparent  -        -          -         -        -         -        -        -
  ETH     3       Transparent  -        -          -         -        -         -        -        -
  ETH     4       Transparent  -        -          -         -        -         -        -        -
------------------------------------------------------------------------
```

13.6 mac-learning

【Command】	**mac-learning** *switch*
【View Mode】	Srvprofile Mode
【Parameter】	
【Description】	**mac-learning** *switch* MAC Address lerarning active or deactive. MAC addresses learning let the ONT automatically add the MAC of client device to the MAC table and dropped from it when they are not in use. If address was not accessed during a specified interval called “MAC aging-time”, its registered MAC address will be deleted from the table. If you deactive MAC address learning, the ONT will not learning the MAC address dymanic.
【Example】	Uses the command to active or deactive the MAC address learning.
To active the MAC address learning in srvprofile 10. OLT(ont-srvprofile-10)# mac-learning enable	

13.7 mac-aging

【Command】	**mac-aging** (*aging-time* | **no-aging**)
【View Mode】	Srvprofile Mode

【Parameter】	**mac-aging** *aging-time*：aging time in seconds (default value is 300 s), range is from 10 to 1000000s **mac-aging no-aging**：No limit of aging time
【Description】	Sets the maximum amount of time a dynamically "learned". MAC address remains in the MAC table.
【Example】	
Sets the maximum amount of time to 200 second OLT(ont-srvprofile-10)# mac-aging 200	

13.8 commit

【Command】	**commit**
【View Mode】	Srvprofile Mode
【Parameter】	
【Description】	Uses the command to submit the configuration of the srvprofile. The configuration will come into operation after this command.
【Example】	
OLT(ont-srvprofile-10)# commit	

14.ONT Management

14.1 ont add

【Command】	**ont add** *port-id ont-id* **sn-auth** *sn-value* **ont-lineprofile-id** *ont-lineprofile-id* **ont-srvprofile-id** *ont-srvprofile-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*：To add the ONT on the specified GPON Port. *ont-id*： To specified an identify number to ONT **sn-auth** *sn-value*：*To assign SN as an authentication security method of ONT* **ont-lineprofile-id** *ont-lineprofile-id*：To assign the ONT line profile **ont-srvprofile-id** *ont-srvprofile-id*：To assign the ONT srv profile

【Description】	Uses the command to add ONT and configure it. It mainly used for offline ONT, the configuration is saved in the srv-profiel, when the ONT online, the configuration will assign to the ONT.
【Example】	
To add an ONT under GPON OLT PON port 1, ONT ID is 2, use SN for authorization, SN is DB25B34BB8D5, binding with line profile 10 and svr-profiel 10 OLT(interface-gpon)# ont add 1 2 sn-auth DB25B34BB8D5 ont-lineprofile-id 10 ont-srvprofile-id 10	

14.2 ont confirm

【Command】	**ont confirm** *port-id* **sn-auth** *sn-value* **ont-lineprofile-id** *ont-lineprofile-id* **ont-srvprofile-id** *ont-srvprofile-id* **ont confirm** *port-id* **all sn-auth ont-lineprofile-id** *ont-lineprofile-id* **ont-srvprofile-id** *ont-srvprofile-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*：The PON port number of the ONT that you want to confirm **all**：To confirm the all ONT that be found automatic under specified PON port in batch **sn-auth** *sn-value*：To use SN as authorization key **ont-lineprofile-id** *ont-lineprofile-id*：To asign the ONT line profile ID **ont-srvprofile-id** *ont-srvprofile-id*：To assign the ONT srvprofile ID
【Description】	Whe the OLT enable the auto discovery function of the ONT, the OLT can get the information of the ONT. Use the **ont confirm** command to confirm the auto-discovered ONT.
【Example】	
To confirm all the auto discovered ONT of OLT PON 1, and bind the line profile 10 and srvprofile 10 OLT(interface-gpon)# ont confirm 1 all sn-auth ont-lineprofile-id 10 ont-srvprofile ile-id 10 Number of ONTs that can be added: 2, success: 2	

14.3 ont cancel

【Command】	**ont cancel** *port-id* (**all** | **sn** *sn-value*)
【View Mode】	Gpon Mode
【Parameter】	*port-id*：The PON port number of the ONT that you want to cancel

	all：To cancel all ONT that be found automatic under specified PON port in batch **sn** *sn-value*：The SN of the ONT that you want to cancel
【Description】	Use the **ont confirm** command to cancel the auto-discovered ONT.
【Example】	
To cancel the auto-discover ONT of PON port 1 OLT(interface-gpon)# ont cancel 1 all	

14.4 ont delete

【Command】	**ont delete** *port-id* (**all** | *ont-id*)
【View Mode】	Gpon Mode
【Parameter】	*port-id*：The PON port number of the ONT that you want to delete **all**：To delete all ONT that be found automatic under specified PON port in batch **sn** *sn-value*：The SN of the ONT that you want to delete
【Description】	Use the **ont confirm** command to delete the auto-discovered ONT.
【Example】	
To delete the ONT with ID 2 of PON port 1 OLT(interface-gpon)# ont delete 1 2 To delete all ONT under PON port 1 OLT(interface-gpon)# ont delete 1 all This command will delete all the ONT in port. Are you sure to execute this co mmand? (y/n)[n]:y Number of ONTs that can be delete: 1, success: 1	

14.5 ont description

【Command】	**ont description** *port-id ont-id describe-value*
【View Mode】	Gpon Mode
【Parameter】	*port-id*：The PON port number of the ONT that you want to add description. *ont-id*： The identify number of the ONT you want to add description. *describe-value*：ONT describe information
【Description】	Use the command to add description of ONT, it is useful for ONT management.

【Example】	
To add description “admin” to the ONT ID 1 under PON Port 1 OLT(interface-gpon)# ont description 1 1 admin	

14.6 ont autofind

【Command】	**ont autofind** *port-id switch*
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number of the ONT that you want to active auto discover ONT function. *switch*： ONT auto-discover enable or disable
【Description】	Use the command to enable/disable the auto-discover ONT function.
【Example】	
To enable auto-discover ONT function on PON port 1 OLT(interface-gpon)# ont autofind 1 enable	

14.7 ont active

【Command】	**ont active** *port-id* (**all** | *ont-id*)
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number of the ONT that you want to active. **all**： To active all the ONT of specified PON port *ont-id*： To active the specified ONT
【Description】	Use the command to active the ONT.
【Example】	
To active ONT 1 under PON port 1 OLT(interface-gpon)# ont activate 1 1 To active all ONT of PON port 1。 OLT(interface-gpon)# ont activate 1 all Number of ONTs that can be activated: 1, success: 1	

14.8 ont deactive

【Command】	**ont deactive** *port-id* (**all** | *ont-id*)

【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number of the ONT that you want to deactive. **all**： To deactive all the ONT of specified PON port *ont-id*： To deactive the specified ONT
【Description】	Use the command to deactive the ONT.
【Example】	
To deactive ONT 1 under PON port 1 OLT(interface-gpon)# ont deactivate 1 1 To deactive all ONT of PON port 1。 OLT(interface-gpon)# ont deactivate 1 all Number of ONTs that can be deactivated: 1, success: 1	

14.9 ont modify

【Command】	**ont modify** *port-id ont-id* **ont-lineprofile-id** *ont-lineprofile-id* **ont-srvprofile-id** *ont-srvprofile-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number of the ONT that you want to modify. *ont-id*： To modify the specified ONT *ont-lineprofile-id*： The line profile you want to used on this ONT *ont-srvprofile-id*： The srv profile you want to used on this ONT
【Description】	Use the command to bind with new line profile and srv-profile on ONT.
【Example】	
To change the ONT 1 under PON port 2 srv-profile to srv profile 200 OLT(interface-gpon)# ont modify 2 1 ont-srvprofile-id 200	

14.10 ont reboot

【Command】	**ont reboot** *port-id* （**all** | *ont-id*）
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number of the ONT that you want to reboot. **all** *:* to reboot all the ont of specified PON port *ont-id*： To reboot the specified ONT
【Description】	Use the command to reboot ONT.
【Example】	

To reboot the ONT 1 under PON port 2.

```
OLT(interface-gpon)# ont reboot 2 1
```

14.11 show ont info

【Command】	**show ont info** *port-id* (*ont-id* | **all**)
【View Mode】	Gpon Mode
【Parameter】	*port-id*：The PON port number of the ONT that you want to display. **all** *:* to display all the ont of specified PON port *ont-id*：To display the specified ONT
【Description】	Use the command to diplay the ONT information below: Port：The PON port that the ONT connected ONT ID： The ID of the specified ONT SN： SN of the ONT Control flag：(active or deactive) active：ONT is in active status, the ONT can permit online or offline after active. deactive：ONT is in deactive status, use active command to active the ONT. Run state：ONT operation status, “online” or “offline” status. Config state：Configuration status, it shows if the configuration download to ONT success, “initial”、 “failed”、“Success”. initial：The configuration in download processing failed：Failed of download configuration Success：Successed getting configuration.
【Example】	

To display all ont information of PON port 1

```
OLT(interface-gpon)# show ont info 2 all
------------------------------------------------------------------------------
  Port    ONT     SN                  Control     Run          Config     Match
            ID                        flag        state        state      state
------------------------------------------------------------------------------
  2       1       HWTC568DA228  Active      Online     Success     Match
------------------------------------------------------------------------------
  Total: 1, online 1
```

To display information of ONT 1 under PON port 1

```
OLT(interface-gpon)# show ont info 1   1
------------------------------------------------------------------------------
  PORT-ID                 : 1
  ONT-ID                  : 1
```

```
  Control flag           : Active
  Run state              : Online
  Config state           : Success
  Match state            : Mismatch
  ONT distance(m)        : 271331472
  SN                     : HWTC56A96228 (4857544356A96228)
  Description            :
------------------------------------------------------------------------------
  Line profile ID : 20
------------------------------------------------------------------------------
  Profile-ID       : 20
  Profile-name     : dba-profile_20
  Binding times : 1
------------------------------------------------------------------------------
  Mapping mode     : VLAN
------------------------------------------------------------------------------

  Service profile ID : 10
------------------------------------------------------------------------------
  Profile-ID       : 10
  Profile-name     : srvprofile_10
  Binding times : 1
Press any key to continue (Q to quit)

[01/01/00 01:01:01]: Pon 1 onu C000 is not regist.

------------------------------------------------------------------------------
  Port-type            Port-number
  ------------------------------------------------------------------------
  ETH                  0
  POTS                 0
------------------------------------------------------------------------------
  MAC learning switch : Enable
  MAC aging time(s)      : 300
------------------------------------------------------------------------------
```

14.12 show ont autofind

【Command】	**show ont autofind** *port-id* (**all** | **sn** *sn-value*)
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number you want to check ONT **sn** *sn-value*： To check ONT by specified SN **all**： To checkall auto-discover ONT at specified PON port
【Description】	To check information of auto-discover ONT. You can use the command to check the ONT SN, password when you add ONT on OLT.
【Example】	

To display all information of auto-discover ONT on PON1 port

```
OLT(interface-gpon)# show ont autofind 1 all
------------------------------------------------------------------------------
  Index   SN                  Password       Autofind-Time
------------------------------------------------------------------------------
  2       HWTC17D81536   -                   2000-01-01 02:44:58
  3       DB25B34BB8D5   1234567890          2000-01-01 02:44:58
  4       HWTC56A8E428   -                   2000-01-01 02:43:28
------------------------------------------------------------------------------
  Total: 3
```

14.13 show ont capability

【Command】	**show ont capability** *port-id ont-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number you want to check ONT capacity *ont-id*： The ID of ONT you want to check capacity
【Description】	To check capacity information of ONT, such as UNI port type and quantity.
【Example】	

To check capacity of ONT 1 on PON port 1

```
OLT(interface-gpon)# show ont capability 1 1
------------------------------------------------------------------------------
  ONT-ID                                 : 1
  Equipment ID                           : MA5671
  Number of uplink PON ports             : 1
  Number of POTS ports                   : 0
  Number of ETH ports                    : 4 (GE:4, FE:0)
  Number of GEM ports                    : 32
```

Number of Traffic Schedulers : 32 Number of T-CONTs : 8 ----------

14.14 show ont config-capability

【Command】	**show ont config-capability** *port-id ont-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number you want to check ONT capacity *ont-id*： The ID of ONT you want to check capacity
【Description】	To check user configure capacity information of ONT, such as UNI port type and quantity.
【Example】	
To check user configure capacity of ONT 1 on PON port 1 OLT(interface-gpon)# show ont config-capability 1 1 ---------- ONT-ID : 1 Equipment ID : MA5671 Number of uplink PON ports : 1 Number of POTS ports : 0 Number of ETH ports : 4 Number of GEM ports : 1 Number of Traffic Schedulers : 1 Number of T-CONTs : 1 ----------	

14.15 show ont optical-info

【Command】	**show ont optical-info** *port-id ont-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number you want to check ONT optical information *ont-id*： The ID of ONT you want to check optical information
【Description】	To check optical information of ONT
【Example】	

To check optical informaion of ONT 1 on PON port 1

```
OLT(interface-gpon)# show ont optical-info 1 1
------------------------------------------------------------------------------
  Voltage(V)                          : 3.26
  Tx optical power(dBm)               : 2.1400
  Rx optical power(dBm)               : -9.7280
  Laser bias current(uA)              : 25000.00
  Temperature(C)                      : 39.00
------------------------------------------------------------------------------
```

14.16 show ont version

【Command】	**show ont version** *port-id ont-id*
【View Mode】	Gpon Mode
【Parameter】	*port-id*： The PON port number you want to check ONT version *ont-id*： The ID of ONT you want to check version
【Description】	To check version of ONT
【Example】	

To check version of ONT 1 on PON port 1

```
OLT(interface-gpon)# show ont version 1 1
------------------------------------------------------------------------------
  Port                                : 1
  ONT-ID                              : 1
  Vendor-ID                           : HWTC
  ONT Version                         : CE4.A
  Product-ID                          : 206
  Equipment-ID                        : MA5671
  Main Software Version               : V8R313C00S102
  Standby Software Version            : V8R313C00S102
------------------------------------------------------------------------------
```

15. log management

15.1 loghost add

【Command】	**loghost add** *ip-addr host-name*
【View Mode】	Configuration mode
【Parameter】	*ip-addr*：IP address of syslog server *host-name*：Hostname of syslog server
【Description】	Syslog is a logging feature that gives administrators a way to centrally log and analyze configuration events and system error messages.Uses the command to add a syslog server to save log information.
【Example】	
Add syslog server, IP address is 192.168.1.223, named log. OLT(config)# loghost add 192.168.1.223 log Successfully add syslog host!	

15.2 loghost delete

【Command】	**loghost delete** (**ip-addr** *ip-addr* **host-name** *host-name*)
【View Mode】	Configuration mode
【Parameter】	*ip-addr*：IP address of syslog server *host-name*：Hostname of syslog server
【Description】	To delete a syslog server
【Example】	
To delet a syslog server OLT(config)# loghost delete ip-addr 192.168.1.223 Successfully delete syslog host!	

15.3 loghost activate

【Command】	**loghost activate** (**ip-addr** *ip-addr* **host-name** *host-name*)
【View Mode】	Configuration mode
【Parameter】	*ip-addr*：IP address of syslog server *host-name*：Hostname of syslog server
【Description】	To active a syslog server
【Example】	
To active syslog server 192.168.1.223 OLT(config)# loghost activate ip-addr 192.168.1.223 Successfully activate syslog host!	

15.4 loghost deactivate

【Command】	**loghost activate** (**ip-addr** *ip-addr* **host-name** *host-name*)
【View Mode】	Configuration mode
【Parameter】	*ip-addr*：IP address of syslog server *host-name*：Hostname of syslog server
【Description】	To deactive a syslog server
【Example】	
To deactive syslog server 192.168.1.223 OLT(config)# loghost activate ip-addr 192.168.1.223 Successfully deactivate syslog host!	

15.5 show loghost list

【Command】	**show loghost list**
【View Mode】	Configuration mode
【Parameter】	No
【Description】	To check syslog server configuration informaion
【Example】	
To check all syslog server infromaiton OLT(config)# show loghost list ---------- IP address Host name Terminal state 192.168.1.223 log inactive ----------	

15.6 syslog priority

【Command】	**syslog priority** *severity*
【View Mode】	Configuration mode
【Parameter】	*severity*： Level of syslog output

	Level 5： critical informaion Level 4： error information or more serious Level 3： warning information or more serious Level 2： notice information or more serious Level 1： debug information or more serious
【Description】	To configure syslog messages depending on severity level. The output takes place regardless of a priority which part of system has generated the message
【Example】	
To configure the syslog priority serverity to notice。 OLT(config)# syslog priority notice	

15.7 show syslog priority severity

【Command】	**show syslog priority severity**
【View Mode】	Configuration mode
【Parameter】	
【Description】	To check the syslog output level
【Example】	
To check the syslog level OLT(config)# show syslog priority severity Syslog priority severity: notice	

15.8 backup log

【Command】	**backup log ftp** *server-ip-address user-name user-password filename*
【View Mode】	Configuration mode
【Parameter】	*server-ip-address*： IP address of ftp server *user-name*： ftp user name *user-password*： ftp password *filename*： File to save the log
【Description】	Uses the command to save the log in the ftp server
【Example】	
To save log in ftp server, ftp server ip is 192.168.1.223, user name: admin, password: admin, the name of file is log	

OLT(config)# backup log ftp 192.168.1.223 admin admin logback Start backup log files The backup is successful

15.9 terminal alarm-event severity

【Command】	**terminal alarm-event severity** *severity*
【View Mode】	Configuration mode
【Parameter】	*severity*： Level of syslog output Level 5：critical informaion Level 4：error information or more serious Level 3：warning information or more serious Level 2：notice information or more serious Level 1：debug information or more serious
【Description】	Uses the command to set the display level of syslog, only the specified level or more serious level will display on terminal.
【Example】	
To set syslog temainal display level to notice OLT(config)# terminal alarm-event severity notice	

15.10 show terminal alarm-event severity

【Command】	**show terminal alarm-event severity**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	Uses the command to check the terminal display level of syslog
【Example】	
To check the terminal display level of syslog OLT(config)# show terminal alarm-event severity Terminal alarm-event priority severity: notice	

15.11 terminal debugging

【Command】	**terminal debugging** **no terminal debugging**
【View Mode】	Configuration mode

【Parameter】	None
【Description】	Uses the command to output the debugging information on terminal. It is useful for troubleshooting.
【Example】	
To enable dsplaying the debug message on terminal. OLT(config)# terminal debugging Current terminal debugging is on	

15.12 show terminal debugging

【Command】	**show terminal debugging**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	Uses the command to check the terminal debugging status on or off.
【Example】	
To check the terminal debugging status OLT(config)# show terminal debugging Current terminal debugging is ON.	

16 dhcp-snooping configuration

16.1 dhcp-snooping arp-detect

【Command】	**dhcp-snooping arp-detect enable** **dhcp-snooping arp-detect disable**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	**dhcp-snooping arp-detect enable:** When enabled, system will check legality of the user who sends ARP message according to DHCP snooping so as to avoid ARP attacks **dhcp-snooping arp-detect disable:** Disable ARP detection function
【Example】	
Enable ARP detection function: OLT(config)# dhcp-snooping arp-detect enable	

16.2 dhcp-snooping arp-reply-fast

【Command】	Enable ARP fast reply function: **dhcp-snooping arp-reply-fast enable** Disable ARP fast reply function: **dhcp-snooping arp-reply-fast disable**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	**dhcp-snooping arp-reply-fast enable:** When enabled, system will choose to make fast ARP reply according to DHCP snooping table, when this function is enable, system will snoop ARP message, if system can find relative records of the ARP message in DHCP snooping table, system will fast reply the ARP request instead of broadcasting the message to uplink network so that ARP broadcasting message will be reduced **dhcp-snooping arp-reply-fast disable:** Disable ARP fast reply function
【Example】	
enable ARP fast reply function: OLT(config)# dhcp-snooping arp-reply-fast enable	

16.3 dhcp-snooping bind-table clear

【Command】	Delete entries of DHCP snooping binding list according to type: **dhcp-snooping bind-table clear (all | static | dynamic | ip-address|vlan)**
【View Mode】	Configuration mode
【Parameter】	all:Delete all entries in snooping binding list static: Delete static entries in snooping binding list dynamic: Delete dynamic entries in snooping binding list ip-address: Delete entries with specified IP in snooping binding list Vlan:Delete snooping entries in specified VLAN
【Description】	Delete entries of snooping binding list
【Example】	
Delete all entries of snooping binding list: OLT(config)# dhcp-snooping bind-table clear all	

16.4 dhcp-snooping bind-table write-delay

【Command】	**dhcp-snooping bind-table write-delay** *time*
【View Mode】	Configuration mode

【Parameter】	*time:* Write delay time
【Description】	Configure delay time of writing into flash for DHCP snooping binding table. When DHCP snooping binding table is changed, system will wait for the configurated time then write the table entries into flash
【Example】	
Configure that DHCP snooping binding table will be updated after 4 seconds when the table is changed: OLT(config)# dhcp-snooping bind-table wtite-delay 4	

16.5 dhcp-snooping bind-table delete-time

【Command】	**dhcp-snooping bind-table delete-time** *time*
【View Mode】	Configuration mode
【Parameter】	*time*:Delete time of dynamic entries
【Description】	Configure delete time of dynamic entries in DHCP snooping binding table. Dynamic entries will be deleted after the delete-time when lease time is over instead of being deleted right away in the end of lease time.
【Example】	
Configure that dynamic entries will be deleted after 240 seconds when lease time is over: OLT(config)# dhcp-snooping bind-table delete-time 240	

16.6 dhcp-snooping bind-table write-to-flash

【Command】	**dhcp-snooping bind-table write-to-flash**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	Write DHCP snooping binding table into flash manually
【Example】	
Write DHCP snooping binding list into flash manually: OLT(config)# dhcp-snooping bind-table write-to-flash	

16.7 dhcp-snooping bind-table save-to-tftp

【Command】	**dhcp-snooping bind-table save-to-tftp** *ip*
【View Mode】	Configuration mode
【Parameter】	*ip*: IP address of TFTP server which binding entries will be saved to
【Description】	Write DHCP snooping binding table into flash manually and upload the table to TFTP server:
【Example】	

Write DHCP snooping binding list into flash manually and upload the list to TFTP server with IP address 192.168.1.1: OLT(config)# dhcp-snooping bind-table save-to-tftp 192.168.1.1

16.8 show dhcp-snooping bind-table

【Command】	**show dhcp-snooping bind-table (all | static | dynamic | ip | vlan)**
【View Mode】	Configuration mode
【Parameter】	all:view all entries in snooping binding table static: view static entries in snooping binding table dynamic: view dynamic entries in snooping binding table ip-address: view entries with specified IP in snooping binding table Vlan:view snooping entries in specified VLAN
【Description】	View entries of DHCP snooping binding table
【Example】	

View all information of DHCP snooping binding table:

```
OLT(config)# show dhcp-snooping bind-table all
--------------------------------------------------------------------------------
 database entries count: 5              database entries delete time: 300(s)
--------------------------------------------------------------------------------
      MacAddress       IpAddress         Vlan    Port    Lease(s)   Type          Status
 --------------------------------------------------------------------------------
 00:50:BA:50:73:27    192.168.12.5       1       ge13     594       Dynamic       Valid
 00:50:BA:50:73:26    192.168.12.4       1       ge13     594       Dynamic       Valid
 00:50:BA:50:73:25    192.168.12.3       1       ge13     594       Dynamic       Valid
 20:89:84:2A:1A:91    192.168.12.2       1       ge13     541       Dynamic       Valid
 00:0F:1F:C5:10:08    192.168.1.101      100     ge10     -         Static        Valid
```

16.9 dhcp-snooping binding

【Command】	**dhcp-snooping binding** mac ip vlan **port (ge | EPON| xge | lag)**port-id
【View Mode】	Configuration mode
【Parameter】	mac:MAC address of static binding entry ip: IP address of static binding entry vlan: VLAN of static binding entry port-id: Port ID of static binding entry
【Description】	dhcp-snooping binding: Binding policy configuration based on request message
【Example】	

Add one static binding entry with MAC address 00:0f:1f:c5:10:08, IP address 192.168.1.101, VLAN 100 and port ge10:

```
OLT(config)#  dhcp-snooping binding mac 00:0f:1f:c5:10:08 ip 192.168.1.101 vlan100 port
```

ge 10

16.10 dhcp-snooping chaddr-check

【Command】	**dhcp-snooping chaddr-check enable** **dhcp-snooping chaddr-check disable**
【View Mode】	Configuration mode
【Parameter】	port-list: Add specified port list
【Description】	**dhcp-snooping chaddr-check enable:** When enabled, system will check whether the MAC address of DHCP request message from untrust port is the same as CHADDR field, snoop the message if it is the same, discard the message if not **dhcp-snooping chaddr-check disable:** Disable MAC address detection of untrust port
【Example】	
Disable MAC address detection of untrust port: OLT(config)# dhcp-snooping chaddr-check disable	

16.11 dhcp-snooping enable

【Command】	**dhcp-snooping enable**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	dhcp-snooping enable: When enabled, trust/untrust port function, MAC address detection function, rate limit function of DHCP message from untrust port, port recovery function, option82 function, ARP dynamic monitoring function and ARP quick response function will be enabled
【Example】	
Enable DHCP-SNOOPING function: OLT(config)# dhcp-snooping enable	

16.12 dhcp-snooping disable

【Command】	**dhcp-snooping disable**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	Disable DHCP-SNOOPING function: When disabled, trust/untrust port function, MAC address detection function, rate limit function of DHCP message from untrust port, port recovery function, option82 function, ARP dynamic monitoring function and ARP quick response function will be disabled
【Example】	

Disable DHCP-SNOOPING function: OLT(config)# dhcp-snooping disable

16.13 dhcp-snooping limit-rate

【Command】	**dhcp-snooping limit-rate** rate **port** （**ge** | **gon** 丨 **xge** | **lag**） port-list
【View Mode】	Configuration mode
【Parameter】	*rate:* Limit the rate of DHCP request message *port-list: Port that needs to be configure*
【Description】	Configure receiving rate of DHCP request message from untrust port, message over the limit-rate will be discarded. Rate limit of trust port can be configure but will not take effect.
【Example】	
Limit the receiving rate of DHCP message from port GE6 and GE9 as 20pps, rate limit for port xGE1 as 100pps and rate limit for port gpon 2-8 as 50pps: OLT(config)# dhcp-snooping limit-rate 20 port ge 6,9 OLT(config)# dhcp-snooping limit-rate 100 port xge 1 OLT(config)# dhcp-snooping limit-rate 100 port gpon 2-8	

16.14 dhcp-snooping opton82

【Command】	**dhcp-snooping opton82 enable** **dhcp-snooping opton82 disable**
【View Mode】	Configuration mode
【Parameter】	None
【Description】	When enabled, system will add Option82 information in DHCP request message from untrust port and strip the Option82 information of DHCP reponse message from trust port
【Example】	
Enabel DHCP option82 function: OLT(config)# dhcp-snooping option82 enable	

16.15 dhcp-snooping option82 policy

【Command】	**dhcp-snooping option82 policy (keep|drop|replace)**
【View Mode】	Configuration mode
【Parameter】	keep: Forward DHCP message with Option82 field without changing drop: Discard DHCP message with Option82 field replace: Replace Option82 field in DHCP message then forward the message
【Description】	dhcp-snooping option82 policy: Opton82 forwarding policy configuration based request message

【Example】	
Configurete DHCP forwarding policy as the original forwarding policy: OLT(config)# dhcp-snooping option82 policy keep	

16.16 (no) dhcp-snooping trust port

【Command】	**dhcp-snooping trust port (ge | xge | EPON| lag)** port-list **no dhcp-snooping trust port (ge | xge| EPON | lag)**port-list
【View Mode】	Configuration mode
【Parameter】	port-list: Add specified port list
【Description】	dhcp-snooping trust port : Configure trust ge port, which can receive all DHCP messages no dhcp-snooping trust port: Configure untrust port, which can not receive DHCP response message
【Example】	
Configure port GE10, GE12, xGE1 and gpon3-5 as tust port, GE1-GE5, xGE2, gpon2, gpon 5 as untrust prot: OLT(config)# dhcp-snooping trust port ge 10,12 OLT(config)# dhcp-snooping trust port xge 1 OLT(config)# dhcp-snooping trust port gpon 3-5 OLT(config)# no dhcp_snooping trust port ge 1-5 OLT(config)# no dhcp_snooping trust port xge 2 OLT(config)# no dhcp_snooping trust port gpon 2,5	

16.17 (no)dhcp-snooping vlan

【Command】	dhcp-snooping vlan vlan-list no dhcp-snooping vlan vlan-list
【View Mode】	Configuration mode
【Parameter】	vlan-list: Add specified VLAN list
【Description】	dhcp-snooping vlan: Add specified snooping VLAN, DHCP message in the snooping VLAN range will be snooped, and DHCP message out of the snooping VLAN range will be forwarded without changing any thing. no dhcp-snooping vlanvlan-list: Delete specified snooping VLAN
【Example】	
Add snooping VLAN 100, 200, 300 OLT(config)# dhcp-snooping vlan 100,200-300	

16.18 show dhcp-snooping configuration

【Command】	**show dhcp-snooping configuration**

【View Mode】	Configuration mode
【Parameter】	None
【Description】	View dhcp-snooping configuration
【Example】	
View dhcp-snooping configuration: OLT(config)# show dhcp-snooping configuration	

17 Traffic profile configuration

17.1 traffic-profile

【Command】	**traffic-profile** (**profile-id** *profile-id* | **profile-name** *profile-name*|**cir** cir|**pir** pir|**cbs** cbs|**pbs** pbs) **no traffic-profile** (**profile-id** *profile-id* | **profile-name** *profile-name*)
【View Mode】	Configuration mode
【Parameter】	Profile-id: show the traffic profile id, which can be used later when you need to bind the traffic profile. Profile-name: Show the traffic profile name, which can be modified when you need to bind the traffic profile. Cir: To show and modify the guaranteed bandwidth, the effect of bandwidth is to ensure that the traffic rate can reach its guaranteed bandwidth when the traffic is congested. The default minimum configuration is 64kbps, and the unit is kpbs. Pir: The maximum bandwidth is shown and modified, and the maximum bandwidth is only a limited effect. The limit of the traffic can not exceed its maximum bandwidth. The default minimum configuration is 128kbps, and the unit is kpbs. Cbs: Show and modify the guarantee burst length, that is the instantaneous ability to pass the promise burst traffic, the default minimum configuration is 2000bytes, the unit is byte. Pbs: Show and modify peak burst length, peak burst size, the default minimum configuration is 2000bytes, the unit is byte.
【Description】	The traffic profile on GPON OLT is mainly applied to the ONU port for the port speed limit. Applying to an ACL for speed limits for a particular message.
【Example】	

Create a traffic profile,profile ID is 123,profile name is test,cir is 10240,pir is 409600,cbs is 20000,pbs is 20001 OLT(config)# traffic-profile profile-id 123 profile-name test cir 10240 pir 409600 cbs 20000 pbs 20001

17.2 modify

【Command】	**traffic-profile** (modify|**profile-id** *profile-id* | **profile-name** *profile-name*|**cir** cir|**pir** pir|**cbs** cbs|**pbs** pbs)
【View Mode】	Configuration mode
【Parameter】	Profile-id: show the traffic profile id, which can be used later when you need to bind the traffic profile. Profile-name: Show the traffic profile name, which can be modified when you need to bind the traffic profile. Cir: To show and modify the guaranteed bandwidth, the effect of bandwidth is to ensure that the traffic rate can reach its guaranteed bandwidth when the traffic is congested. The default minimum configuration is 64kbps, and the unit is kpbs. Pir: The maximum bandwidth is shown and modified, and the maximum bandwidth is only a limited effect. The limit of the traffic can not exceed its maximum bandwidth. The default minimum configuration is 128kbps, and the unit is kpbs. Cbs: Show and modify the guarantee burst length, that is the instantaneous ability to pass the promise burst traffic, the default minimum configuration is 2000bytes, the unit is byte. Pbs: Show and modify peak burst length, peak burst size, the default minimum configuration is 2000bytes, the unit is byte.
【Description】	Modify the traffic profile information,include profile name,cir,pir,cbs,and pbs information.
【Example】	
Modify traffic profile 123 name to test1 OLT(config)# traffic-profile modify profile-id 123 profile-name test1	

Including Remarks

Thanks to the use our company Products!