

EPON OLT Products User Manual

FD1204S/FD1208S/FD1216S/ FD8000-L116

---Command Line Operation

Version: V3.0

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About This Manual

This manual is applicable to C-Data FD1204、FD1208S、FD1216S、FD8000-L116 EPON OLT products cli command operation, Is the user through cli command config EPON OLT equipment should read the information before guidelines.

The related documents for EPON OLT device are:

《FD1204S/FD1208S/FD1216S/FD8000-L116 User Manual-Device Install Guide》

《FD1204S/FD1208S/FD1216S/FD8000-L116 User Manual-Quick Configuration Guide》

《FD1204S/FD1208S/FD1216S/FD8000-L116 User Manual-EMS Configuration Guide》

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1. Read Instructions

Document Scope

Reading Object	Product	Products Software Version	
C-DATA Employees, FTTX Operation&Maintenance Engineer, C-DATA Customer's Technical Engineer	Cdata EPON OLT (FD1204S/FD1208S /FD1216S/ FD8000-L116)	V1.4.X	
Compiling Department	C-Data Product Management Center Technical Support Department	Document Version	V1.3

Revision History

Date	Version	Description	Author
2017-12-7	V1.1	The OLT version is switched to the V1.2.X, cli command line have been changed.update command line operation fully.	Technical Support Department
2018-7-26	V1.2	1. The OLT version is switched to the V1.3.X version, the command line changes, and the command line manual (including template configuration, routing configuration, etc.) is fully updated. 2.Add FD8000-L116 config instruction	Technical Support Department
2019-9-18	V1.3	The OLT version is switched to the V1.4.X version, the command line changes, and the command line manual is fully updated (including OLT RIP configuration, ONU wan configuration, voip configuration, etc.)	Technical Support Department

Conventions for Command Line

Format	Specification
Boldface	Key words of command line will be in boldface(unchanged)
Italics	Parameters of command line will be in italics(replace with actual value)
[]	Parameters in[]is optional

(x y ...)	One of parameters in()should be chosen
[x y ...]	None or one of parameters in[]should be chosen
<x-y>	One number from x to y should be chosen
\$	The next line behind\$ is annotation

Conventions for Keyboard Operation

Format	Specification
Characters within angle brackets	Represents button's name, like <Enter>, <Tab>, <Backspace>, <a>, <?>
<button1+button2>	Press button1 and button2 at the same time, like <Ctrl+Alt+A> means pressing button of "Ctrl", "Alt", "A" at the same time.
<button1,button2>	Press button1 first, release button1, then press button2, like <Alt,F> means pressing "Alt" button first, release "Alt", then press "F" button

Conventions for symbols

This manual adopts the following highly visible symbols to get users attention when operating, and the explanation of these symbols are as follows:



Watch-out: The matters needs attention in operating, improper operations probably will cause loss of data and damage of device



Warning: Annotation behind this symbol needs special attention, improper operations probably will cause harm to health



Tips: Provide more clear and understandable explanations and descriptions in operating

Conventions for Words

OLT: Represents the system of FD1204S or FD1216S or FD1208S or F8000-L116 includes main switch processing module and uplink ports connected with uplink devices like switch.

PON: Represents PON protocol processing module and PON ports connected with ONU.

Precautions

- The command line described in the document is case sensitive in OLT.
- If we meet a command that cannot be inputted or is prompted for error, we can input "?" to see the latter command format.
- Input incomplete commands can be completed by pressing the "Tab" key.
- FD1204S、FD1208S、FD1216S are Pizza-Box OLT, only have one card, so, if we want to enter PON mode, need input interface epon 0/0
- FD8000-L116 is Plug-in card OLT, has four PON card, so the command for entering PON mode



is OLT(config)# interface epon 0/<SlotID> ,SlotID is Slot Number,range is 1-4, for example,the command for entering slot 1 is OLT(config)# interface epon 0/1

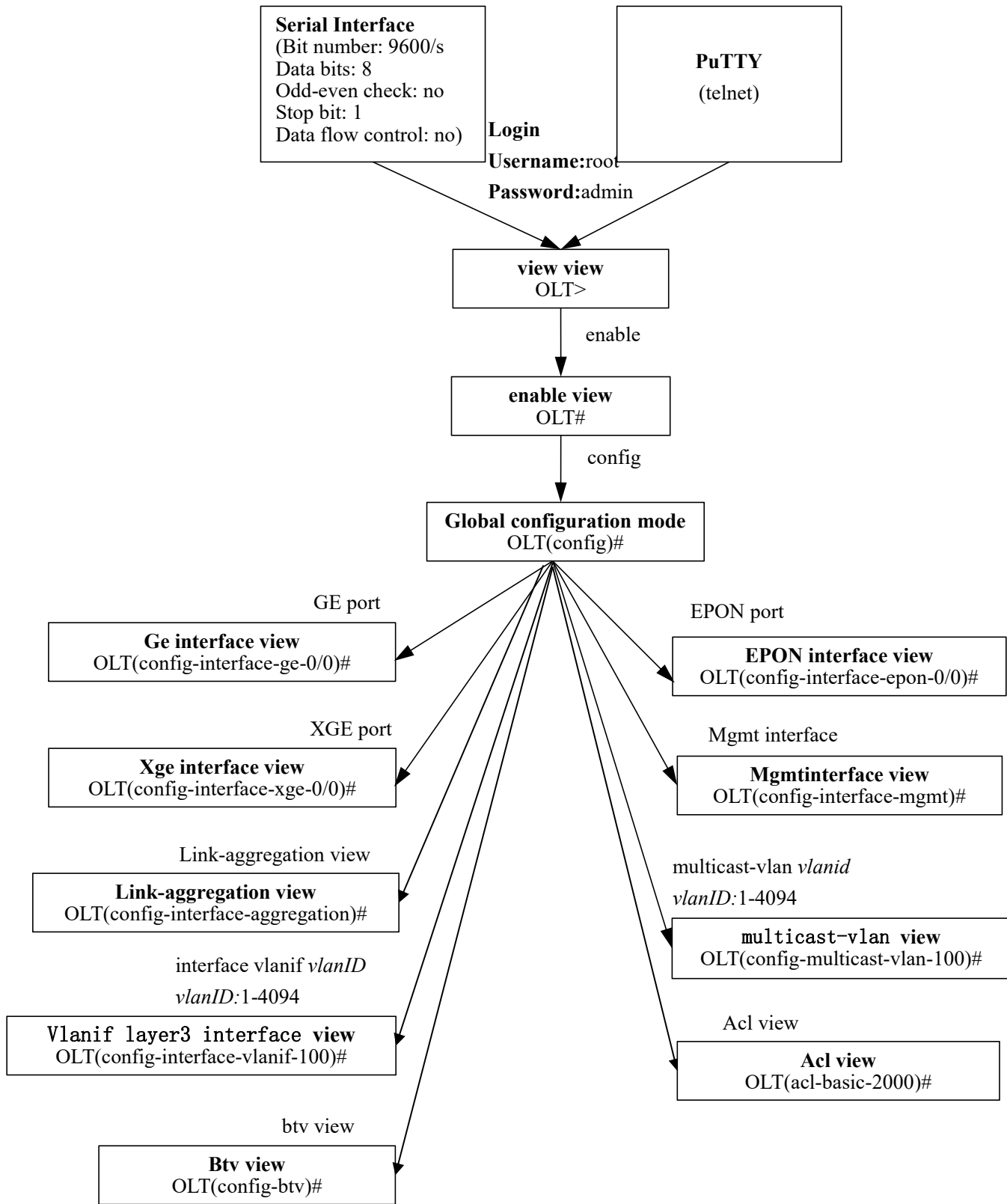
2. Command Line Interface View Introduce

View and view switching

Specification:This command line environment includes several views as follows:

- **view view :** refers to view view or user mode in the below user will enter after inputting password,in which mode only simple commands can be processed.
This view shows like: OLT>
- **enable view :** refers to enable view or privileged mode in the below user will enter after inputting enable in view mode,this mode has higher authorities.
This view shows like: OLT#
- **config view :** refers to config view or global configuration mode in the below user will enter after inputting config in enable view.
This view shows like: OLT(config)#
- **ge interface view :** refers to ge/gigabit interface view/mode user will enter after inputting interface ge 0/0 in config view.
This view shows like: OLT(config-interface-ge-0/0)#
- **Xge interface view :** refers to xge/10-gigabit interface view/mode user will enter after inputting interface xge 0/0 in config view.
This view shows like: OLT(config-interface-xge-0/0)#
- **EPON interface view :** refers to EPON interface view/mode user will enter after inputting interface EPON 0/0 in config view.
This view shows like: OLT(config-interface-epon-0/0)#
- **Vlanif three-layer interface view :** User will enter this view after inputting interface vlanif *vlanID* in config view.
This view shows like: OLT(config-interface-vlanif-100)#
- **Management interface MGMT view:** User will enter this view after inputting interface mgmt in config view.
This view shows like: OLT(config-interface-mgmt)#
- **multicast-vlan view :** User will enter this view after inputting multicast-vlan *vlanid* in config view.
This view shows like: OLT(config-multicast-vlan-100)#
- **link-aggregation view :** User will enter this view after inputting interface link-aggregation in config view.
This view shows like: OLT(config-interface-aggregation)#

2.1. Command Line View Overview



2.1.1. Enter Enable View



Command	OLT> enable
Description	Enter enable view from view mode

【 Example 】

Example: Enter enable view from view mode

```
OLT>enable
OLT#
```

2.1.2. Enter Config View

Command	OLT# config
Description	Enter config view from enable mode

【 Example 】

Example: Enter enable view from view mode.

```
OLT#config
OLT(config)#
```

2.1.3. Enter Interface View

Command	OLT(config)# interface epon <FrameID/SlotID> OLT(config)# interface ge <FrameID/SlotID> OLT(config)# interface link-aggregation OLT(config)# interface mgmt OLT(config)# interface vlanif <vlan id> OLT(config)# interface xge <FrameID/SlotID>
view	Config view
Description	Enter epon/ge/link-aggregation/mgmt/vlanif/xge view from config mode
<vlan id>	VLAN ID value,the range is 1-4094
<FrameID/SlotID>	Device frame id/slot id,default as 0/0, FD8000-L116 the Frame default is 0,slot need check insert board to input id,the range is 1-4

【 Example 】

Example 1: Enter vlanif view from config mode

```
OLT(config)#interface vlanif 100
OLT(config-interface-vlanif-100)#
```

Example 2: Enter ge view from config mode

```
OLT(config)#interface ge 0/0

OLT(config-interface-ge-0/0)#exit
```

Example 3: Enter epon view from config mode

```
OLT(config)#interface epon 0/0

OLT(config-interface-epon-0/0)#
```

2.1.4. Enter ACL View

Command	OLT(config)# acl <acl id>
view	Config view
Description	Enter acl view from config mode
<acl id>	<2000-2999>basic acl/ <3000-4999>advanced acl/ <5000-5999>link acl <8000-8199>PON side acl <9000-9499> ONT side acl

【 Example 】

Example 1: Enter basic acl view from config mode

```
OLT(config)#acl 2000
ACL ID Create OK!

OLT(acl-basic-2000)#
```

Example 2: Enter advanced acl view from config mode

```
OLT(config)#acl 3000
ACL ID Create OK!

OLT(acl-adv-3000)#
```

Example 3: Enter link acl view from config mode

```
OLT(config)# acl 5000
ACL ID Create OK!

OLT(acl-link-5000)#
```

Example 4: Enter pon side acl view from config mode

```
OLT(config)#acl 8000

OLT(acl-pon-8000)#
```

Example 5: Enter ONT side acl view from config mode

```
OLT(config)# acl 9000
ACL ID Create OK!

OLT(acl-onu-9000)#
```

2.1.5. Enter Multicast-vlan View

Command	OLT(config)# multicast-vlan <multicast-vlan id>
view	Config view
Description	Enter multicast-vlan view from config mode
<multicast-vlan ID>	Multicast vlan ID,the range is 1-4094.

【Example】

Example 1: Enter multicast-vlan view from config mode

```
OLT(config)#multicast-vlan 100

OLT(config-multicast-vlan-100)#
```

2.1.6. Exit Arbitrary View

Command	OLT(config)# exit
Desceiption	Exit current view to previous view.

【Example】

Example 1: Exit config view to enable view.

```
OLT(config)#exit

OLT#
```

3. OLT Device Upgrade Management

3.1. Upgrade OLT software

Command	OLT(config)# load packetfile ftp <server-ip> <user-name> <user-password> tftp <server-ip> <file-name>
view	Enable view、 config view
Description	This command is used for upgrade olt software version and kernel



	version,it should be use in root account.
<ftp-server-ip>	The ip address of ftp server
<user-name>	The user name which had set in ftp server
<user-password> >	The user password which had set in ftp server
<file-name>	The name of the OLT software to be downloaded.

【 Example 】

Example 1 : Upgrade olt software,its file name is New16Port_FW_V1.0.2_150914_1603.img,the ip address of ftp server is 192.168.1.16,ftp user name is admin,ftp user password is admin.After the olt displays“upgrade OK”,reboot the olt.

```
OLT(config)#load packetfile ftp 192.168.1.16 admin admin New16Port_FW_V1.0.2_150914_1603.img
Broadcast message from root:
Upgrade is in process.
File[New16Port_FW_V1.0.2_150914_1603.img]download.....OK
File[New16Port_FW_V1.0.2_150914_1603.img]upgrade.....OK
```

Example 2 : Upgrade the kernel of olt,its file name is New16Port_Kernel_150914_1605.img,the ip address of ftp server is 192.168.1.16,ftp user name is admin,ftp user password is admin.After the olt displays“upgrade OK”,reboot the olt.

```
OLT(config)#load packetfile ftp 192.168.1.16 admin admin New16Port_Kernel_150914_1605.img
Broadcast message from root:
Upgrade is in process.
File[New16Port_Kernel_150914_1605.img]download.....OK
File[New16Port_Kernel_150914_1605.img]upgrade.....OK
```

3.2. Check OLT Software and Hardware Version

Command	OLT(config)# show version
view	enable view or config view
Description	This command can check the OLT hardware 、 software and kernel version information.

【 Example 】

Example1: Check OLT firmware version.

```
OLT(config)# show version
Hardware version : V1.0B1
Firmware version : V1R03B002 (Mon, 07 Jan 2019 11:43:21 +0800)
```

```

Kernel version   : V1.0.0_190107 (Mon, 07 Jan 2019 11:33:47 +0800)
Web version      : V1.1.0_181125 (Sun, 25 Nov 2018 11:26:18 +0800)

OLT(config)#
    
```

3.3. Show the progress of current load/copy/backup in olt

Command	OLT(config)# show progress load
view	Enable view,config view
Description	This command is used when the device is performing load,copy,and backup operations,if you need to see the progress of the current operation and understand the status of the operation.

【Example】

Example 1: Check the status of load progress

```

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
-----
    
```

3.4. Delete Loaded Files

Command	OLT(config)# file delete [file-name]
View	config view
Description	This command is used to delete a single file in the file system. You can use this command to delete a file that was previously loaded or unused by the load file command. The files to be deleted can be stored in the flash or cf card. Use this command with caution. Once the file is deleted, it will not be recoverable.
[file-name]	Name of the OLT software to be deleted

【Example】

Example 1: Delete all files

```
OLT(config)# file delete
  ERROR: Not any user files!

OLT(config)#
```

3.5. Enable/disable web

Command	OLT(config)# web server enable disable
View	config view
Description	This command is used to enable or disable the WEB function. The web can be opened only if the web is enabled.

【Example】

Example 1: Enable web.

```
OLT(config)# web server enable
  Enable web server successful!

OLT(config)#
```

3.6. Uninstall the Installed Web

Command	OLT(config)# web server enable disable
View	config view
Description	This command is used to uninstall the installed WEB function.

【Example】

Example 1: Uninstall the installed WEB function.

```
OLT(config)# web uninstall
  Uninstall web server successful!

OLT(config)#
```

4. OLT Device Management

4.1. OLT Reboot

Command	OLT(config)# reboot
view	Enable view or config view

Description	This command is used for reboot OLT,only the root user group has this permission.
--------------------	---

【Example】

Example1: reboot OLT

<pre>OLT#reboot Please check whether data has saved,the unsaved data will lose if reboot system.Are you sure to reboot system?(y/n)[n]:y</pre>
--

4.2. Config OLT Reset Button

Command	OLT(config)# reset key action set reboot factory
View	Config view
Description	This command is used to control the reset button through the CLI to restore the OLT to the factory default or reset. After the setting is completed, press the reset button, the OLT will resume the factory or restart.

【Example】

Example 1: Set the OLT reset button to restore the factory.

<pre>OLT(config)# reset key action set factory Reset key action set factory reset successful! OLT(config)#</pre>

4.3. Config OLT Outband Manager IP

4.3.1. Config OLT Outband Manager IP Address

Command	OLT(config-interface-mgmt)# ip address <ip-address> {<ip-address-mask> <length of mask>}
View	Mgmt view
Description	The IP address command is used for configure IP addresses and subnet masks of management interfaces.You can visit OLT by this IP address.
<ip-address>	IP address.The IP address is divided into five categories,and the user can choose the appropriate IP subnet according to the actual situation.The host address part is all 0 or all 1 has special function,which cannot be used as the general IP address.
<ip-address-ma	Subnet mask.Format for X.X.X.X



<code>sk></code>	
<code><length of mask></code>	length of subnet mask,the range is 0-32

【Example】

Example 1: Config the ip address of mgmt interface as 192.168.5.63,the length of subnet mask is 24.

```
OLT(config-interface-mgmt)#ip address 192.168.5.63 24
OLT(config-interface-mgmt)#
```

4.3.2. Config OLT Outband Manager IP Description

Command	OLT(config-interface-mgmt)# <i>description description-information</i>
View	Mgmt view
Description	This command is used for name the OLT out-of-band management IP for user management.
<i>description-information</i>	Named name, the name length ranges from 1-128.

【Example】

Example 1: Config the ip address of mgmt interface name as test.

```
OLT(config-interface-mgmt)# description test
Set interface description successfully!
OLT(config-interface-mgmt)#
```

4.3.3. Delete OLT Outband Manager IP Configuration

Command	OLT(config-interface-mgmt)# <i>no (description ip address)</i>
View	Mgmt view
Description	This command is used for delete name or address of the OLT out-of-band management IP.

【Example】

Example 1: Delete the ip address of mgmt interface name.

```
OLT(config-interface-mgmt)# no description
Delete interface description successfully!
OLT(config-interface-mgmt)#
```



4.3.4. Config Switch OLT Outband Manager IP

Command	OLT(config-interface-mgmt)# (no) shutdown
View	Mgmt view
Description	This command is used for enable/disable the OLT out-of-band management IP.

【Example】

Example 1: Enable the ip address of mgmt interface.

```
OLT(config-interface-mgmt)# no shutdown

OLT(config-interface-mgmt)#
```

4.3.5. Show MGMT IP Address

Command	OLT(config)# show interface mgmt
view	Config view
Description	This command is used for query the ip address,mac address,the Maximum Transmit Unit and etc info of mgmt interface.

【Example】

Example 1: Show the ip address,mac address,the Maximum Transmit Unit and etc info of mgmt interface

```
OLT(config)#show interface mgmt
Description:Outband management interface
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.5.63,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:19
Recive 96006 packets,10423985 bytes
Transmit 10753 packets,783785 bytes

OLT(config)#
```

4.3.6. Exit to Config View

Command	OLT(config-interface-mgmt)# exit
View	Mgmt view
Description	This command is used for Exit from mgmt view to config view

【Example】

Example 1: Exit from mgmt view to config view.

```
OLT(config-interface-mgmt)# exit

OLT(config)#
```

4.3.7. Exit to View

Command	OLT(config-interface-mgmt)# end
View	Mgmt view
Description	This command is used for exit from mgmt view to view.

【Example】

Example 1: Exit from mgmt view to view.

```
OLT(config-interface-mgmt)# end

OLT>
```

4.4. Config OLT Inband Vlanif IP

4.4.1. Config OLT Inband Vlanif Address

Command	OLT(config-interface-vlanif-100)# ip address <ip-address> {<ip-address-mask> <length of mask>}
view	Vlanif view
Description	The IP address command is used for configure the IP address and subnet mask of the VLAN interface.This command is used when the IP packet in the VLAN is required to participate in the three-tier forwarding.After the IP address of the configuration interface and the subnet mask are successful,the IP packet in the VLAN is forwarded by this ip in three layers.
<ip-address>	IP address.The IP address is divided into five categories,and the user can choose the appropriate IP subnet according to the actual situation.The host address part is all 0 or all 1 has special function,which cannot be used as the general IP address.
<ip-address-mask>	Subnet mask.Format for X.X.X.X
<length of mask>	length of subnet mask the range is 0-32

【Example】

Example 1 : Config the ip address of vlanif interface as 192.168.100.1,subnet mask is 255.255.255.0.

```
OLT(config-interface-vlanif-100)#ip address 192.168.100.1 255.255.255.0

OLT(config-interface-vlanif-100)#
```

4.4.2. Config OLT Inband Manager IP Description

Command	OLT(config-interface-vlanif-100)# description <i>description-information</i>
View	Vlanif view
Description	This command is used for name the OLT inband management IP for user management.
<i>description-information</i>	Named name, the name length ranges from 1-128.

【Example】

Example 1: Config the vlanif-100 interface name as test.

```
OLT(config-interface-vlanif-100)# description test
Set interface description successfully!

OLT(config-interface-vlanif-100)#
```

4.4.3. Config OLT DHCP-Client Option 60

Command	OLT(config-interface-vlanif-100)# dhcp-client (enable disable option60 <i>option60</i> release renew)
View	Vlanif view
Description	This command is used for configure the option60 information carried by the DHCP-Client when sending request packets. When the upstream device is configured with the DHCP Layer 3 relay function, you can use this command to configure the option60 information of the interface to match the configuration of the upstream device.
<i>Option60</i>	The option60 information carried in the DHCP packets sent by the interface when the IP address is obtained through DHCP. Length is 1-32

【Example】

Example 1: Enable dhcp-client.



```
OLT(config-interface-vlanif-100)# dhcp-client enable

OLT(config-interface-vlanif-100)#
```

4.4.4. Delete OLT Inband Manager IP Configuration

Command	OLT(config-interface-vlanif-100)# no (description ip address dhcp-client option60)
View	vlanif view
Description	This command is used for delete name,address or dhcp-client of the OLT out-of-band management IP.

【Example】

Example 1: Delete the ip address of vlanif interface name.

```
OLT(config-interface-vlanif-100)# no description
Delete interface description successfully!

OLT(config-interface-vlanif-100)#
```

4.4.5. Config Switch OLT Outband Manager IP

Command	OLT(config-interface-vlanif-100)# (no) shutdown
View	vlanif view
Description	This command is used for enable/disable the OLT inband management IP.

【Example】

Example 1: Enable the ip address of vlanif interface.

```
OLT(config-interface-vlanif-100)# shutdown

OLT(config-interface-vlanif-100)#
```

4.4.6. Show Vlanif IP Address

Command	OLT(config)# show interface vlanif <vlan-interface-number>
view	Config view
Description	This command is used for query the ip address,mac address,the Maximum Transmit Unit and etc info of vlanif interface.

<vlan-interface-number>	The id of vlanif interface,its range is 1-4094
--------------------------------------	--

【 Example 】

Example 1: Show the ip address,mac address,the Maximum Transmit Unit and etc info of vlanif interface

```
OLT(config)#show interface vlanif 100
Description:Inband interface vlanif100
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.100.1,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:1A
Recive 0 packets,0 bytes
Transmit 0 packets,0 bytes

OLT(config)#
```

Example 2:Show the information of all the vlanif interface

```
OLT(config)#show interface vlanif
Description:Inband interface vlanif100
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.100.1,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:1A
Recive 0 packets,0 bytes
Transmit 0 packets,0 bytes

Description:Inband interface vlanif200
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.6.66,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:1A
Recive 0 packets,0 bytes
Transmit 0 packets,0 bytes

OLT(config)#
```

4.4.7. Exit to Config View

Command	OLT(config-interface-vlanif-100)# exit
View	vlanif view
Description	This command is used for Exit from vlanif view to config view

【 Example 】

Example 1: Exit from vlanif view to config view.

```
OLT(config-interface-vlanif-100)# exit
```



```
OLT(config)#
```

4.4.8. Exit to View

Command	OLT(config-interface-vlanif-100)# end
View	vlanif view
Description	This command is used for exit from vlanif view to view.

【Example】

Example 1: Exit from vlanif view to view.

```
OLT(config-interface-vlanif-100)# end

OLT>
```

4.4.9. Clear Statistics Interface Vlanif

Command	OLT(config)# clear statistics interface vlanif <i>vlan-interface-number</i>
View	Config view
Description	This command is used for clear statistics interface vlanif.

【Example】

Example 1: Clear statistics interface vlanif.

```
OLT(config)# clear statistics interface vlanif 100

OLT(config)#
```

4.5. Show OLT Detail Information

Command	OLT(config)# show device
view	Enable view,config view
Description	This command is used for Show the device model/mac address/SN/vendor name and etc info of olt.

【Example】

Example 1: Show the device info of olt.

```
OLT(config)#show device
-----
Device model:epon
```



```
Device MAC address:E0:56:43:A9:B4:19
Device serial-number:AF1701-16080003
Device vendor name:XPON
-----
OLT(config)#
```

4.6. Config OLT User Logout Time

Command	OLT(config)# exec-timeout <time>
view	enable view,config view
Description	This command is used for configure the user login timeout,which will automatically log out when the user does not do anything with the device at the set time.The default is 300 seconds.
<time>	The time of timeout,its unit is second.

【 Example 】

Example 1: Config the timeout time as 36000s.

```
OLT(config)#exec-timeout 36000
OLT(config)#
```

4.7. Show OLT User Logout Time

Command	OLT(config)# show exec-timeout
view	Enable view,config view
Description	This command is used for show the user timeout time.

【 Example 】

Example 1: show the user timeout time

```
OLT#show exec-timeout
Timeout:36000s
OLT#
```

4.8. Logout System

Command	OLT(config)# logout
view	View view,enable view,config view

Description	This command is used for logout current system
--------------------	--

【Example】

Example 1: Logout the system.

```
OLT#logout

>>User name:
```

4.9. Exit OLT Current View Mode

Command	OLT(config)# end
view	Enable view,config view
Description	This command is used for enter view mode from current view.

【Example】

Example 1: Exit config view to view mode

```
OLT(config)#end

OLT>
```

4.10. Config OLT DNS server IP Address

Command	OLT(config)# dns server <ip-addr>
view	Config view
Description	This command is used for configure the ip address of DNS server.
<ip-addr>	IP address,format for X.X.X.X

【Example】

Example 1: Config the ip address of olt’s DNS server as 192.168.5.1

```
OLT(config)#dns server 192.168.5.1

OLT(config)#
```

4.11. Delete OLT DNS Server IP Address

Command	OLT(config)# no dns server <ip-addr>
view	Config view

Description	This command is used for delete the ip address of DNS server.when there is no parameter after dns server,it is used for delete the primary and secondary dns server.
<ip-addr>	IP address,format for X.X.X.X

【 Example 】

Example 1: Remove the DNS server's IP address 192.168.5.1 in olt

```
OLT(config)#no dns server 192.168.5.1

OLT(config)#
```

4.12. Show OLT DNS Server IP Address

Command	OLT(config)# show dns server
view	Config view
Description	This command is used for show ip address of DNS server.

【 Example 】

Example 1: Show the ip address of the DNS server.

```
OLT(config)#show dns server
IPv4 Dns Servers:
Domain-server IpAddress
1 192.168.5.1

OLT(config)
```

4.13. Config OLT Hostname

Command	OLT(config)# sysname <name>
view	Config view
Description	This command is used for set the olt's sysname which is show in command windows.
<name>	Olt's name,support 1-16 strings.

【 Example 】

Example 1: Config the olt's sysname as test.

```
OLT(config)#sysname test

test(config)#
```

4.14. Enable/disable PON laser control

Command	OLT(config)# pon laser-control on off
View	Config view
Description	This command is used to enable/disable PON laser control of the OLT.

【Example】

Example 1: Enable/disable PON laser control of the OLT.

```
OLT(config)# pon laser-control on

OLT(config)#
```

4.15. Config a Remote System Host

Command	OLT(config)# telnet ip-address host-name tcp-port
View	config view
Description	This command is used to config a remote system host.

【Example】

Example 1: Config the IP of the remote host and enter its terminal.

```
OLT(config)# telnet 192.168.5.68

*****
**  GPON OLT Integrated Operating System.          **
**  Device Model      : df1234s                    **
**  Hardware version : V3.0                        **
**  Firmware version : V1.0.6_190909               **
**  BuildDate         : Mon, 09 Sep 2019 11:08:59 +0800 **
**  Mac Address       : E0:56:B2:00:00:01          **
*****

>>User name:
```

4.16. Config Terminal Output Printing

Command	OLT(config)# vtty output <global> show-all show-more
View	config view
Description	This command is used when the terminal has more output prints, show-all is full print, and show-more is part of the print.

【Example】

Example 1: Config the terminal to output full print.

```
OLT(config)# vty output show-all

OLT(config)#
```

5. OLT Status Monitor

5.1. Show OLT Fan Working Status

Command	OLT(config)# show fan
view	enable view,config view
Description	This command is used for show the working status of fan.

【Example】

Example 1: Show the working status of fan

```
OLT#show fan
-----
FAN[1]status:Normal(7200RPM)
FAN[2]status:Normal(7020RPM)
FAN[3]status:Normal(7140RPM)
-----

OLT#
```

5.2. Show OLT Working Temperature

Command	OLT(config)# show temperature
view	enable view,config view
Description	This command is used for show the real time working temperature of olt

【Example】

Example 1: Show the real time working temperature of olt

```
OLT#show temperature
The temperature of the board:45.0(C)

OLT#
```

5.3. Show OLT Memory Usage

Command	OLT(config)# show memory
view	enable view,config view
Description	This command is used for show the memory usage of OLT.

【 Example 】

Example 1: Show the memory usage of OLT.

```
OLT#show memory
-----
Total memory:242MB
Free memory:124MB
Utilization:49%
-----
OLT#
```

5.4. Config OLT System Time

Command	OLT(config)# time <time>
view	config view
Description	This command is used for Set the system time of olt
<time>	Time,format for YYYY/MM/DD-HH:MM:SS

【 Example 】

Example 1: Set the system time of olt

```
OLT(config)#time 2019/01/08-13:44:00
OLT(config)#
```

5.5. Show OLT System Time

Command	OLT(config)# show time
view	enable view,config view
Description	This command is used for show the system time of olt.

【 Example 】

Example 1: show the system time of olt.

```
OLT(config)# show time
2019-01-08 13:44:06 +00:00
```

```
OLT(config)#
```

5.6. Show OLT Boot Time and Running Time

Command	OLT(config)# show uptime
view	enable view,config view
Description	This command is used for show the up time and boot time of the olt

【 Example 】

Example 1: Show the up time and boot time of the olt

```
OLT# show uptime
System up time   : 0 day 20 hour 47 minute 8 second
System boot time : Mon Jan  7 16:57:59 2019

OLT#
```

5.7. Config OLT NTP Time and Server

Command	OLT(config)# ntp-service unicast-service {<ip-addr> <domain name>}
view	config view
Description	This command is used for set the ip address of the NTP server.
<ip-addr>	Ip address of NTP server,format for X.X.X.X
<domain name>	The domain name of NTP server

【 Example 】

Example 1: Set the NTP server's ip address as 202.120.2.101

```
OLT(config)#ntp-service unicast-service 202.120.2.101

OLT(config)#
```

5.8. Delete NTP Time and Server

Command	OLT(config)# no ntp-service unicast-service {<ip-addr> <domain name>}
view	Config view
Description	This command is used for Delete the NTP server
<ip-addr>	IP address of NTP server,format for X.X.X.X

<domain name>	The domain name of NTP server
----------------------------	-------------------------------

【Example】

Example 1: Delete the NTP server's ip address 202.120.2.101

```
OLT(config)#no ntp-service unicast-service 202.120.2.101

OLT(config)#
```

5.9. Show NTP Server Session Information

Command	OLT(config)# show ntp-service session
View	Config view
Description	This command is used for show the session info of the NTP server

【Example】

Example 1: Show the session info of the NTP server

```
OLT(config)#show ntp-service session
clock source:202.120.2.101
clock stratum:0
clock status:configured
reference clock ID:0.0.0.0
reach:0
current poll:64 secs
now:0
offset:+0.000000ms
delay:0.000000
disper:0.000000

OLT(config)#
```

5.10. Config OLT System Timezone

Command	OLT(config)# timezone {gmt+/gmt} -<timezone>
View	Config view
Description	This command is used for set the system timezone of the olt.GMT+represents the eastern time zone,which means local time is faster than Greenwich mean time,and GMT-means the west time zone,which means local time is slower than Greenwich mean time.
<timezone>	The time of timezone,format for hh:mm.The max value of eastern timezone is 18:00,and the max value of west timezone is 18:00.



【 Example 】

Example 1: Set the system timezone of the olt as gmt+08:00

```
OLT(config)#timezone gmt+08:00

OLT(config)#
```

5.11. Show OLT System Current Timezone

Command	OLT(config)# show timezone
View	Config view
Description	This command is used for show the system current timezone of the olt

【 Example 】

Example 1: Show the system current timezone of the olt

```
OLT(config)#show timezone
The current time zone:GMT+08:00

OLT(config)#
```

5.12. Config OLT System Temperature Threshold

Command	OLT(config)# temperature threshold high-temperature value
View	config view
Description	This command is used to configure the temperature threshold of the OLT system. If the real-time temperature is higher than the configured system temperature threshold, the alarm will be reported. The default is 80°C.
<i>time</i>	Loop detection interval, ranging from 5 to 300, in seconds.

【 Example 】

Example 1: Set the maximum OLT system temperature threshold to 40°C.

```
OLT(config)# temperature threshold high-temperature 40

OLT(config)#
```

5.13. Show OLT System Temperature Threshold

Command	OLT(config)# show temperature threshold
----------------	--

View	config view
Description	This command is used to view the temperature threshold of the OLT system.

【Example】

Example 1: View the OLT system temperature threshold.

```
OLT(config)# show temperature threshold
The temperature high-threshold of the system : 80(C)

OLT(config)#
```

5.14. Show OLT Local MAC Address Information

Command	OLT(config)# show location <mac-addr>
view	config view
Description	This command is used for show the local mac address info of the olt
<mac-addr>	Mac address,format for xx:xx:xx:xx:xx:xx

【Example】

Example 1: Show the local mac E0:56:43:A9:B4:1A info of the olt.

```
OLT(config)#show location E0:56:43:A9:B4:1A
-----
Total:2
-----
MAC VLAN Port MAC-Type
-----
E0:56:43:A9:B4:1A 100 cpu static
E0:56:43:A9:B4:1A 200 cpu static
-----

OLT(config)#
```

5.15. Show OLT CPU Usage

Command	OLT(config)# show cpu
View	Config view
Description	This command is used for show the cpu status of the olt.

【Example】

Example 1: Show the cpu status of the olt

```

OLT(config)#show cpu
-----
Utilization:54%
Load Average(1min):8.11
Load Average(5min):8.38
Load Average(15min):8.39
-----

OLT(config)#
    
```

5.16. Show OLT History Input Command

Command	OLT(config)# show history
View	enable view,config view
Description	This command is used for show the command input history information of the olt

【Example】

Example 1: Show the command input history information of the olt

```

OLT(config)#show history
enable
config
exec-timeout 36000
exit
show dns server
show cpu

OLT(config)#
    
```

5.17. Enable/disable loop detection for the OLT system

Command	OLT(config)# loopback-detection enable disable
View	config view
Description	This command is used to enable/disable loop detection of the system.

【Example】

Example 1: Enable loop detection of the system.

```

OLT(config)# loopback-detection enable

OLT(config)#
    
```

5.18. Config the loop detection interval of the OLT system

Command	OLT(config)# loopback-detection interval-time <i>time</i>
View	config view
Description	This command is used to configure the loop detection interval of the OLT system.
<i>time</i>	Loop detection interval, ranging from 5 to 300, in seconds.

【Example】

Example 1: Set the loop detection interval of the OLT system to 30 seconds.

```
OLT(config)# loopback-detection interval-time 30

OLT(config)#
```

5.19. View the loop detection status of the OLT system

Command	OLT(config)# show loopback-detection
View	config view
Description	This command is used to view the loop detection status of the OLT system.

【Example】

Example 1: View the loop detection status of the OLT system.

```
OLT(config)# show loopback-detection
-----
System loopback-detection is running
Detection interval time is 30 seconds

Port          Enable Per-vlan Control Loopback-status
ge0/0/1       dis    dis    dis    undetected
ge0/0/2       dis    dis    dis    undetected
ge0/0/3       dis    dis    dis    undetected
ge0/0/4       dis    dis    dis    undetected
ge0/0/5       dis    dis    dis    undetected
ge0/0/6       dis    dis    dis    undetected
ge0/0/7       dis    dis    dis    undetected
ge0/0/8       dis    dis    dis    undetected
xge0/0/1      dis    dis    dis    undetected
xge0/0/2      dis    dis    dis    undetected
pon0/0/1      dis    dis    dis    undetected
pon0/0/2      dis    dis    dis    undetected
pon0/0/3      dis    dis    dis    undetected
pon0/0/4      dis    dis    dis    undetected
```



pon0/0/5	dis	dis	dis	undetected
pon0/0/6	dis	dis	dis	undetected
pon0/0/7	dis	dis	dis	undetected
pon0/0/8	dis	dis	dis	undetected
pon0/0/9	dis	dis	dis	undetected
pon0/0/10	dis	dis	dis	undetected
pon0/0/11	dis	dis	dis	undetected
pon0/0/12	dis	dis	dis	undetected
pon0/0/13	dis	dis	dis	undetected
pon0/0/14	dis	dis	dis	undetected
pon0/0/15	dis	dis	dis	undetected
pon0/0/16	dis	dis	dis	undetected

OLT(config)#				

5.20. Config the Maximum Recorded Value of Performance Statistics

Command	OLT(config)# statistics max-record <15min record-number of 15min> <24hour record-number of 24hour >
View	config view
Description	This command is used to configure the maximum recorded value of OLT performance statistics.
<i>record-number of 15min</i>	Config the maximum recorded value of the performance statistics function with a time interval of 15 minutes, ranging from 1-96.
<i>record-number of 24hour</i>	Config the maximum recorded value of the performance statistics function with a 24-hour interval, ranging from 1-7.

【Example】

Example 1: The maximum statistical value of the performance statistics function with a configuration interval of 24 hours is 6.

```
OLT(config)# statistics max-record 24hour 6

OLT(config)#
```

5.21. Show the Maximum Recorded Value of Performance Statistics

Command	OLT(config)# show statistics max-record
View	config view
Description	This command is used to view the maximum recorded value of OLT performance statistics.

【Example】

Example 1: View the maximum recorded value of performance statistics.

```
OLT(config)# show statistics max-record
Port statistics max record: 96(15min), 6(24hour)

OLT(config)#
```

6. OLT Configuration Manage

6.1. Auto-backup OLT Configuration

Command	OLT(config)# auto-backup server (alarm configuration log) (ftp server-ip-address user-name password tftp server-ip-address)
View	config view
Description	Auto-backup of OLT configuration files.When the time for automatic backup is reached, OLT prints the autobackup configuration successfully prompting the backup successfully.
<i>server-ip-address</i>	ftp/tftp Server ip address
<i>user-name</i>	ftp/tftp user name
<i>password</i>	ftp/tftp password

【Example】

Example1: Auto-backup OLT configuration, ftp server IP address is 192.168.5.183, ftp user name is amdin and password is admin.

```
OLT(config)# auto-backup server configuration ftp 192.168.5.183 admin admin

OLT(config)#
```

6.2. Autoback OLT Time Configuration

Command	OLT(config)# auto-backup period (alarm configuration log) (disable enable interver backup-period time backup-time)
----------------	--

View	config view
Description	Config time about the Auto-backup of OLT configuration files.
<i>backup-period</i>	Backup cycle, value range is 1-10, unit is days
<i>backup-time</i>	Backup time.Format is HH:MM

【 Example 】

Example1: Auto-backup OLT configuration interval is one day ,time is 10:00.

```
OLT(config)# auto-backup period alarm interval 1 time 10:00

OLT(config)#
```

6.3. Backup OLT Configuration

Command	OLT(config)# backup configuration ftp <server-ip-address> <user-name> <user-password> <filename>
view	enable view,config view
Description	Backup the config file of the olt
<server-ip-address>	IP address of the ftp server
<user-name>	ftp user name
<user-password>	ftp user password
<filename>	The name of the backup configuration file,set it by yourself,does not require a file format.

【 Example 】

Example 1: Backup the device config file,the ftp user name is admin,password is admin,set the backup file's name as config.

```
OLT(config)#backup configuration ftp 192.168.1.16 admin admin config
Start backup configuration files
The backup is successful

OLT(config)#
```

6.4. Download OLT Configuration

Command	OLT(config)# load configuration format <txt gz> <ftp
----------------	--



	<i>server-ip-address user-name user-password tftp server-ip-address > filename</i>
View	Enable view,config view
Description	Download the configuration of the olt
<i>server-ip-addresses</i>	IP address of the ftp/tftp server
<i>user-name</i>	ftp user name
<i>user-password</i>	ftp user password
<i>filename</i>	The name of the configuration file to be downloaded,set it by yourself,does not require a file format.

【 Example 】

Example 1 : Download the configuration file,the ftp user name is admin,password is admin,set the file's name as config.

```
OLT(config)# load configuration format txt tftp 192.168.5.184 test
The new configuration file will overwrite the old one
Are you sure to load new configuration file? (y/n):y
Start loading configuration
The loading is successful!

OLT(config)#
```

6.5. Show OLT Current Configuration

Command	OLT(config)# <i>show current-config</i>
View	Enable view,config view
Description	This command is used for show the real time configuration file.This command is used when the user completes a set of configurations and verifies that the configuration is correct and needs to query the currently effective configuration command.

【 Example 】

Example 1: Show current configuration

```
OLT(config)#show current-config
Current configuration:
!
spanning-tree enable
spanning-tree timer max-age 6
spanning-tree timer forward-delay 30
```



```
spanning-tree timer hello 1
spanning-tree priority 4096
!
interface ge
spanning-tree edged-port 1 enable
spanning-tree priority 1 16
spanning-tree cost 1 1600
spanning-tree mcheck 1 enable
exit
```

6.6. Auto-save OLT Configuration

Command	OLT(config)#autosave {{ interval (on off configuration interval) (time configuration time on off)}}
View	Config view
Description	This command is used for automatically save the configuration file for the current device.The time to configure autosave must be configured with the autosave interval turned off.When the autosave is successful, OLT automatically prints the autosave configuration done!

【 Example 】

Example 1: The time of autosave OLT configuration is 06:20.

```
OLT(config)# autosave time configuration 06:20

OLT(config)#
```

6.7. Save OLT Configuration

Command	OLT(config)#save
View	enable view,config view
Description	This command is used for save the olt current configuration

【 Example 】

Example 1: Save the olt current configuration

```
OLT(config)#save
The percentage of saved data is:0%
The percentage of saved data is:4%
The percentage of saved data is:9%
The percentage of saved data is:13%
The percentage of saved data is:18%
The percentage of saved data is:22%
```



```

The percentage of saved data is:27%
The percentage of saved data is:31%
The percentage of saved data is:36%
The percentage of saved data is:40%
The percentage of saved data is:45%
The percentage of saved data is:68%
The percentage of saved data is:81%
The percentage of saved data is:95%
The percentage of saved data is:100%
OLT(config)#
    
```

6.8. Erase OLT Configuration

Command	OLT(config)# erase saved-config
View	Enable view,config view
Description	This command is used for erase the configuration,and after executing the command,reboot the OLT,and OLT will restore factory Settings.

【Example】

Example 1: Erase the saved-config

```

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

Successfully restored factory configuration!
    
```

6.9. Show OLT Auto-back

Command	OLT(config)# show auto-backup (period server) (alarm log configuration) config
View	Config view
Description	This command is used for show olt auto-backup time or server configuration.

【Example】

Example1: Show auto-backup server configuration.

```

OLT(config)# show auto-backup server configuration
Trans mode : FTP
IP address : 192.168.5.183
User name : admin
    
```

```
OLT(config)#
```

6.10. Show autosave configuration

Command	OLT(config)# show autosave configuration
View	Config view
Description	This command is used for show olt autosave configuration.

【Example】

Example1: Show olt autosave configuration.

```
OLT(config)# show autosave configuration
System autosave interval switch: off
Autosave interval: 10 minutes

System autosave time switch: on
Autosave time: 06:20

OLT(config)#
```

6.11. Show OLT Saved-config

Command	OLT(config)# show saved-config
View	enable view,config view
Description	This command is used for show saved-config

【Example】

Example 1: show saved-config

```
OLT(config)#show saved-config
#Saving user:root
#Saving time:2017-03-20 19:00:02+0800
spanning-tree enable
spanning-tree timer max-age 6
spanning-tree timer forward-delay 30
spanning-tree timer hello 1
spanning-tree priority 4096
interface ge
spanning-tree edged-port 1 enable
spanning-tree priority 1 16
spanning-tree cost 1 1600
```



```
spanning-tree mcheck 1 enable
exit
```

7. OLT Login User Manage

7.1. Add OLT New Login Username and Password

Command	OLT(config)# user add <user-name> <user-password> {admin/guest/root}
View	Config view
Description	This command is used for add new users,new user passwords,and the new user groups are root,admin,and guest respectively. Root:the user has all the permissions for the device. Admin:users have configuration,view permissions,no restart,upgrade permissions. Guest:the user has the view configuration,backup permission.
<user-name>	New user name
<user-password> >	New user password
admin/guest/ root	The permissions of the new user,there are root/admin/guest respectively.

【 Example 】

Example 1: Create an admin user,its name is test,password is test.

```
OLT(config)#user add test test admin
OLT(config)#
```

7.2. Delete OLT Login User

Command	OLT(config)# user delete <name>
View	Config view
Descripton	This command is used for delete the user.caution:the root user cannot be delete.
<name>	The user name to be delete

【 Example 】

Example 1: Delete the user test.

```
OLT(config)#user delete test
OLT(config)#
```

7.3. Change OLT Login User Password

Command	OLT(config)# user password <user-name> <user-password>
View	Config view
Description	This command is used for change the password of the existing user.
<user-name>	The user name of the password to be changed.
<user-password> >	New password

【 Example 】

Example 1: Change the user password to 123456

```
OLT(config)#user password test 123456
OLT(config)#
```

7.4. Show OLT Exist Username

Command	OLT(config)# show user
View	Config view
Description	This command is used for show all of the users which had been created in olt

【 Example 】

Example 1: Show all of the users which had been created in olt

```
OLT(config)#show user
-----
User Group
-----
root root
yao guest
test admin
-----
OLT(config)#
```

7.5. Show OLT Login User Information

Command	OLT(config)# show client
----------------	---------------------------------

View	Config view
Description	This command is used for show the information of online user

【Example】

Example 1: show the information of online user

```
OLT(config)#show client
ID Access-Type User-Name IP-Address Login-Time
-----
>32 Telnet root 192.168.5.67 03:52:47
46 Telnet root 192.168.5.20 00:07:45

OLT(config)#
```

7.6. Kill OLT Online User

Command	OLT(config)# client kick-off <client-id>
View	Config view
Description	This command is used for kick the other online user off
<client-id>	Login user ID,the range can be 1-4294967295.This ID can be viewed through the show client command.

【Example】

Example 1: Kick the client 44 off.

```
OLT#client kick-off 44
The user has been kicked off successfully
OLT#
```

7.7. Config the specified address segment to log in to the OLT

Command	OLT(config)# (no) ip access-list deny permit <ip-address wildcard-bits any host ip-address>
View	Config view
Description	This command is used to configure this parameter when a setting is required to allow access to the device at the specified address. You can control the users who log in to the device using telnet or ssh by setting the address range of the device to access the device based on the security policy. Delete using no.
ip-address	IP address to be configured, in the format x.x.x.x



<i>wildcard-bits</i>	Inverse mask configuration, 0 is the match, 1 is ignored
----------------------	--

【Example】

Example 1: Config an access device that allows the host address to be 192.168.5.184.

```
OLT(config)# ip access-list permit host 192.168.5.184

OLT(config)#
```

Example 2: Delete the configuration of the ip access table.

```
OLT(config)# no ip access-list
Delete Access List Successful!

OLT(config)#
```

7.8. View IP access table configuration

Command	OLT(config)# no ip access-list deny permit <ip-address wildcard-bits any host ip-address>
View	Config view
Description	This command is used to view the configuration of the specified address segment of the login OLT.
<i>ip-address</i>	IP address to be configured, in the format x.x.x.x
<i>wildcard-bits</i>	Inverse mask configuration, 0 is the match, 1 is ignored

【Example】

Example 1: View IP access table configuration.

```
OLT(config)# show ip access-list
ip access list
    permit 192.168.5.184

OLT(config)#
```

8. OLT SNMP Config

8.1. SNMP Enable and Disable

Command	OLT(config)# snmp-agent {enable disable}
View	config view
Description	The EMS can manager the olt,only if the snmp agent function is enabled.EMS can not manager the olt while this function is disabled.

enable disable	disable: Disable the SNMP agent feature enable e: Enable the SNMP agent feature
-------------------------	--

【 Example 】

Example 1: Disable the SNMP agent feature

```
OLT(config)#snmp-agent disable
OLT(config)#
```

Example 2:Enable the SNMP agent feature

```
OLT(config)#snmp-agent enable
OLT(config)#
```

8.2. Show OLT Snmp Agent Status

Command	OLT(config)# show snmp-agent status
View	Config view
Description	This command is used for show the feature status of snmp agent

【 Example 】

Example 1: Show the feature status of snmp agent

```
OLT(config)#show snmp-agent status
Snmp agent status:Enable

OLT(config)#
```

8.3. Config OLT SNMP Community

Command	OLT(config)# snmp-agent community read<community-name>
View	Config view
Description	This command is used for config the read community name of SNMP
<community-name>	The name of read community and supports 1-32 characters.Generally set to public.

【 Example 】

Example 1: Set the snmp agent read community’s name as public

```
OLT(config)#snmp-agent community read public
```

8.4. Show OLT SNMP Read Community

Command	OLT(config)# show snmp-agent community read
----------------	--



View	Config view
Description	This command is used for show the snmp agent read community.

【Example】

Example 1: Show the snmp agent read community.

```
OLT(config)#show snmp-agent community read
-----
Community-Name VACM-Name View-Name
-----
public default all
-----

OLT(config)#
```

8.5. Config OLT SNMP Write Community

Command	OLT(config)# snmp-agent community write <community-name>
View	Config view
Description	This command is used for config the write community name of SNMP
<community-name>	The name of write community and supports 1-32 characters.Generally set to private.

【Example】

Example 1: Set the snmp agent write community’s name as private

```
OLT(config)#snmp-agent community write private
OLT(config)#
```

8.6. Show SNMP Write Community

Command	OLT(config)# show snmp-agent community read
View	Config view
Description	This command is used for show SNMP agent write community

【Example】

Example 1: Show SNMP agent write community

```
OLT(config)#show snmp-agent community write
-----
Community-Name VACM-Name View-Name
-----
private default all
```




```
-----
OLT(config)#
```

8.7. Config OLT SNMP Community Group with Authentication

Command	OLT(config)#snmp-agent group v3<group-name>authentication {[notify-view<none all>][read-view<none all>][write-view<none all>]}
View	Config view
Description	This command is used for set secure based snmp agent group carrying with authentication
<group-name>	Group name,it supports 1-32 characters
notify-view	Specifies the notification view corresponding to the group name.
read-view	Set the read-only view corresponding to the group name
write-view	Set the read/write view corresponding to group name
none	Mismatch view
all	Match all the view

【Example】

Example 1: Set secure based snmp agent group carrying with authentication,group name is test,corresponding to all the notification view.

```
OLT(config)#snmp-agent group v3 test authentication notify-view all

OLT(config)#
```

8.8. Config OLT SNMP Community Group with Unauth

Command	OLT(config)#snmp-agent group v3<group-name>noauth {[notify-view <none all>][read-view <none all>][write-view <none all>]}
View	Config view
Description	This command is used for Set secure mode based SNMP agent group without authentication
<group-name>	Group name,it supports 1-32 characters

notify-view	Specifies the notification view corresponding to the group name.
read-view	Set the read-only view corresponding to the group name
write-view	Set the read/write view corresponding to group name
none	Mismatch view
all	Match all the view

【 Example 】

Example1: Set secure mode based SNMP agent group without authentication, group name is test, corresponding to all the read-view.

```
OLT(config)#snmp-agent group v3 test noauth read-view all
OLT(config)#
```

8.9. Config OLT SNMP Community Group with Privacy

Command	OLT(config)# snmp-agent group v3<group-name>privacy {[notify-view <none all>][read-view <none all>][write-view <none all>]}
View	Config view
Description	This command is used for configure a group of secure mode based SNMP agent which carries with hidden property.
<group-name>	Group name, it supports 1-32 characters
notify-view	Specifies the notification view corresponding to the group name.
read-view	Set the read-only view corresponding to the group name
write-view	Set the read/write view corresponding to group name
none	Mismatch view
all	Match all the view

【 Example 】

Example 1: Set secure mode based SNMP agent group carrying with hidden property, group name is test, corresponding to all the write-view.

```
OLT(config)#snmp-agent group v3 test privacy write-view all
OLT(config)#
```

8.10. Config OLT SNMP Agent Description



Command	OLT(config)# snmp-agent sys-info description <description>
View	Config view
Description	This command is used for configure SNMP agent system description info
<description>	Description info,it supports 1-100 characters,the default value is description.

【Example】

Example 1: Configure the SNMP agent system description info as test

```
OLT(config)#snmp-agent sys-info description test

OLT(config)#
```

8.11. Configure SNMP Agent Location Information

Command	OLT(config)# snmp-agent sys-info location <location>
View	config view
Description	This command is used for configure SNMP agent system location info
<location>	Description info,it supports 1-100 characters.The default value is location

【Example】

Example 1: Configure SNMP agent system location info as test1

```
OLT(config)#snmp-agent sys-info location test1

OLT(config)#
```

8.12. Configure SNMP Agent Contact Information

Command	OLT(config)# snmp-agent sys-info contact <contact>
View	Config view
Description	This command is used for configure snmp agent contact info
<contact>	Description info,it supports 1-100 characters.The default value is contact

【Example】

Example 1: Configure SNMP agent contact info as test2

```
OLT(config)#snmp-agent sys-info contact test2
```



```
OLT(config)#
```

8.13. Configure Snmp Agent System Name

Command	OLT(config)# snmp-agent sys-info name <name>
View	Config view
Description	This command is used for config snmp agent system name
<name>	Description info,it supports 1-100 characters.The default value is name

【 Example 】

Example 1: Configure the snmp agent system name as test3

```
OLT(config)#snmp-agent sys-info name test3
OLT(config)#
```

8.14. Show SNMP Agent System Info

Command	OLT(config)# show snmp-agent sys-info
View	Config view
Description	This command is used for show snmp agent system info

【 Example 】

Example 1: Show snmp agent system info

```
OLT(config)#show snmp-agent sys-info
The name of this managed node:
test3

The description of this managed node:
test

The contact person for this managed node:
test2

The physical location of this node:
test1

OLT(config)#
```

8.15. Config SNMP Trap IP

Command	OLT(config)#snmp-agent trap <host-name> <ip-addr> <port> <community-name>
View	Config view
Description	This command is used for configure the alarm receive ip of snmp agent
<host-name>	Description info,it supports 1-32 characters
<ip-addr>	Alarm receive ip
<port>	Receive the alarm port number,the range is 1-65535.
<community-name>	Community name,it supports 1-32 characters.

【 Example 】

Example 1: Configure the snmp agent alarm receive ip as 192.168.5.185,host is test,port number is 563,community name is public.

```
OLT(config)#snmp-agent trap test 192.168.5.185 563 public
OLT(config)#
```

8.16. Show SNMP Trap IP Infor

Command	OLT(config)#show snmp-agent trap
View	Config view
Description	This command is used for show SNMP agent alarm receive ip info

【 Example 】

Example 1: Show SNMP agent alarm receive ip info

```
OLT(config)#show snmp-agent trap
-----
Index Host-Name IP-Address Port Community-Name
-----
1 test 192.168.5.185 563 public
-----
OLT(config)#
```

8.17. Config SNMP Access User&Auth Mode &Password

Command	OLT(config)#snmp-agent usm-user v3 <user-name> <group-id> authentication-mode md5 <md5-password> privacy-mode des56
----------------	--



	<des56-password>
View	Config view
Description	This command is used for mapping the snmp agent access entity user to secure group,and configure authentication mode and password meanwhile.The authentication mode is optional parameter. Caution:it is need to create a group of secure mode based snmp agent.
<user-name>	Entity access user name
<group-id>	Group id which is based on user secure mode.
<md5-password >	User authentication password,its length is 8-64 characters.
<des56-passwor d>	56 bits DES encrypted password,its length is 8-64 characters.

【 Example 】

Example 1: Set SNMP agent entity access user as test1,mapping it to group test which is based on secure mode,authentication mode is md5,the password is 12345678,the privacy mode is des56 and its password is 11111111

```
OLT(config)#snmp-agent usm-user v3 test1 test authentication-mode md5 12345678
privacy-mode des56 11111111

OLT(config)#
```

8.18. Show SNMP Access User

Command	OLT(config)# show snmp-agent usm-user <user>
View	config view
Description	This command is used for show SNMP agent entity access user
<user>	Name of entity access user,it supports 1-64 characters.it's optional,without this parameter it will show all the entity access user info,if it is added it will show the specified entity access user info.

【 Example 】

Example 1: Show all the entity access user info

```
OLT(config)#show snmp-agent usm-user
User name:test
Group name:test
Authentication mode:md5
Authentication key:12345678
```



```

Privacy mode:des56
Privacy key:12345678

User name:test1
Group name:test
Authentication mode:md5
Authentication key:12345678
Privacy mode:des56
Privacy key:11111111

Total number:2

OLT(config)#
    
```

Example 2: Show SNMP agent entity access user“test”info.

```

OLT(config)#show snmp-agent usm-user test
User name:test
Group name:test
Authentication mode:md5
Authentication key:12345678
Privacy mode:des56
Privacy key:12345678
    
```

9. Config OLT PPPoE Agent 代理配置

9.1. PPPoE Agent Enable and Disable

Command	OLT(config)# pppoe agent enable/disable
View	Config view
Description	Enable/Disable pppoe agent.
enable/disable	disable: disable pppoe agent. enable: enable pppoe agent.

【Example】

Example 1: Disable pppoe agent.

```

OLT(config)# pppoe agent disable
OLT(config)#
    
```

9.2. Config PPPoE Forward Policy

Command	OLT(config)# pppoe agent policy (keep drop replace)
----------------	--

View	Config view
Description	This command is used to configure the forwarding policy of request packets.
keep	Forward pppoe message as it is
drop	Discard pppoe packets directly
replace	Replace the original pppoe message and then forward it

【Example】

Example 1: Configure the forwarding policy of pppoe to forward according to the original forwarding policy.

```
OLT(config)# pppoe agent policy keep

OLT(config)#
```

9.3. Config PPPoE Fill Format

Command	OLT(config)# pppoe agent format <type1 type2 type3 type4 type5>
View	Config view
Description	This command is used to configure the fill mode of the pppoe option.
<type1 type2 type3 type4 type5 type6 type7 type8>	type1: represents UNI+ONU MAC type2: represents UNI+OLT MAC type3: represents ONU+ONU MAC type4: represents ONU+OLT MAC type5: represents PON+OLT MAC

【Example】

Example 1: Configure the fill mode of the pppoe option to UNI+ONU MAC

```
OLT(config)# pppoe agent format type1

OLT(config)#
```

9.4. Show the Configuration of the PPPoE Agent.

Command	OLT(config)# show pppoe agent config
View	Config view



Description	This command is used to view the configuration of the pppoe agent.
--------------------	--

【Example】

Example 1: Show the configuration of the PPPoE agent.

```
OLT(config)# show pppoe agent config
pppoe agent enable
pppoeplus policy: keep
pppoeplus option82 format: type1

OLT(config)#
```

10. OLT Uplink Port Configuration

10.1. OLT Uplink Basic Function Configuration

10.1.1. Disable Uplink Port

Command	OLT(config-interface-ge-0/0)# shutdown <port-list>
View	XGE view or GE view
Description	This command is used for disable the specified ge port.
<port-list>	The port list to be configured,format for 1,3-5,8.

【Example】

Example 1: Disable the uplink port ge1-ge3 of olt.

```
OLT(config-interface-ge-0/0)#shutdown 1-3

OLT(config-interface-ge-0/0)#
```

Example 2:Disable the uplink port ge5 and ge7 of olt.

```
OLT(config-interface-ge-0/0)#shutdown 5,7

OLT(config-interface-ge-0/0)#
```

10.1.2. Enable Uplink Port

Command	OLT(config-interface-ge-0/0)# no shutdown <port-list>
View	XGE view or GE view

Description	This command is used for enable the specified ge port.
<port-list>	The port list to be configured,format for 1,3-5,8.

【 Example 】

Example 1: Enable the uplink port ge1-ge3 of olt.

```
OLT(config-interface-ge-0/0)#no shutdown 1-3

OLT(config-interface-ge-0/0)#
```

Example 2:Enable the uplink port ge5 and ge7 of olt.

```
OLT(config-interface-ge-0/0)#no shutdown 5,7

OLT(config-interface-ge-0/0)#
```

10.1.3. Config Uplink Port Name

Command	OLT(config-interface-ge-0/0)# port-name <port-id> <name>
View	XGE view or GE view
Description	This command is used for name the ge port,it is convenient for user to manager.
<port-id>	The port id to be set,range for 1-8.
<name>	The port name to be set

【 Example 】

Example 1: Set the port name of ge1 as test.

```
OLT(config-interface-ge-0/0)#port-name 1 test

OLT(config-interface-ge-0/0)#
```

10.1.4. Delete Uplink Port Name

Command	OLT(config-interface-ge-0/0)# no port-name <port-id>
View	XGE view or GE view
Description	This command is used for restore the name of ge port to the default value.
<port-id>	The port id to be set,range for 1-8.

【 Example 】

Example 1: Restore the name of ge1 to default value.

```
OLT(config-interface-ge-0/0)#no port-name 1

OLT(config-interface-ge-0/0)#
```

10.1.5. Config Uplink Electric Port Auto-negotiation

Command	OLT(config-interface-ge-0/0)# auto-neg <port-list> {enable disable}
View	GE view
Description	This command is used for enable disable the auto-negotiation mode of Ethernet port.In the case of enabled,the Ethernet port will automatically negotiate port rate and duplex mode with the docking port,and the system will display as auto-negotiation,with the port rate up to 1000M in this mode.In the case of disabled,the rate and working mode of the port is the default value of the system or the set value(that is,mandatory).
<port-list>	The port list to be set,format for 5,6-7,8.Port 1-4 is uplink optical port,it does not support auto-negotiation.
enable disable	Enable:Enable the function of port auto-negotiation Disable:Disable the function of port auto-negotiation

【 Example 】

Example 1: Enable the function of ge5 auto-negotiation

```
OLT(config-interface-ge-0/0)#auto-neg 5 enable

OLT(config-interface-ge-0/0)#
```

Example 2:Disable the function of ge5 auto-negotiation

```
OLT(config-interface-ge-0/0)#auto-neg 5 disable

OLT(config-interface-ge-0/0)#
```

10.1.6. Config Uplink Electric Port Duplex Mode

Command	OLT(config-interface-ge-0/0)# duplex <port-list> {full/half}
View	GE view
Description	This command is used for set the duplex mode of the Ethernet port.it will work in manual setting mode like full or half duplex.the default is full duplex.
<port-list>	The port list to be set,format for 5,6-7,8.Port 1-4 is uplink optical



	port,it does not support duplex mode setting.the default duplex mode of optical port and electrical port both are full duplex.
full/half	full:Full duplex half:Half duplex

【Example】

Example 1: Set the duplex mode of uplink port ge5 as half duplex.

```
OLT(config-interface-ge-0/0)#duplex 5 half
OLT(config-interface-ge-0/0)#
```

10.1.7. Config Uplink Electric Port Speed

Command	OLT(config-interface-ge-0/0)# speed <port-list> {10/100}
View	GE view
Description	This command is used for set the Ethernet port rate that will make the port work in manual setting rate.
<port-list>	The port list to be set,format for 5,6-7,8.Port 1-4 is uplink optical port,it does not support the rate setting.the default rate of optical port and electric port both are 1000M.
10/100	10:10Mbps 100:100Mbps Caution:1000Mbps only support auto-negotiation.

【Example】

Example 1: Set the rate of ge5 as 100Mbps.

```
OLT(config-interface-ge-0/0)#speed 5 100
OLT(config-interface-ge-0/0)#
```

10.1.8. Config Uplink Port Max-frame

Command	OLT(config-interface-ge-0/0)# frame-max <port-list> <Maximum-frame-size>
View	XGE view or GE view
Description	The frame-max command is used for set the maximum frame length for port transfers.The system default maximum frame length is 1526.
<port-list>	The port list to be set,format for 5,6-7,8.

<Maximum-frame-size>	The range of mtu : 328~16360.Particularly,the frame upper limit of pon port supports 2048.
-----------------------------------	--

【Example】

Example 1: Set the mtu of ge1 as 2000.

```
OLT(config-interface-ge-0/0)# frame-max 1 2000

OLT(config-interface-ge-0/0)#
```

10.1.9. Delete Uplink Port Maximum-frame

Command	OLT(config-interface-ge-0/0)# no frame-max <port-list>
View	XGE view or GE view
Description	This command is used for reset the default value of the maximum frame value to 1526.
<port-list>	The port list to be set,format for 5,6-7,8.

【Example】

Example 1: Reset the mtu value of GE1 port to default 1526.

```
OLT(config-interface-ge-0/0)#no frame-max 1

OLT(config-interface-ge-0/0)#
```

10.1.10. Config Uplink Port Flow-control Function

Command	OLT(config-interface-ge-0/0)# flow-control <port-list>{enable disable}
View	XGE view or GE view
Description	This command is used for enable or disable the flow-control function of the Ethernet port.
<port-list>	The port list to be set,format for 5,6-7,8.
{enable disable}	enable:Enable the flow-control disable:Disable the flow-control

【Example】

Example 1: Enable the flow-control function of port GE5.

```
OLT(config-interface-ge-0/0)#flow-control 5 enable

OLT(config-interface-ge-0/0)#
```



10.1.11. Config Uplink Port MAC Address Learning Function

Command	OLT(config-interface-ge-0/0)# mac-address learning port <port-list> {enable disable}
View	XGE view or GE view
Description	This command is used for enable or disable the learning mac function of GE port.
<port-list>	The port list to be set,the range for 1-16,format for 5,6-7,8.
{enable disable } }	Enable:Enable GE port's learning mac function. Disable:Disable GE port's learning mac function.

【 Example 】

Example 1: Enable GE1 port's learning mac function.

```
OLT(config-interface-ge-0/0)#mac-address learning port 1 enable

OLT(config-interface-ge-0/0)#
```

10.1.12. Show OLT Uplink Port Property and Statuses

Command	OLT(config-interface-ge-0/0)# show port state {<port-id> all}
View	XGE view or GE view
Description	This command is used for show the status info of GE port.
{<port-id> all}	Port-ID:Port id to be show,range for 1-8 All:Show the info of all the port

【 Example 】

Example 1: Show property and status of all the GE port.

```
OLT(config-interface-ge-0/0)# show port state all

-----
Port      Optic   Pvid   Auto   Speed  Dup   Flow   Learn   Enable
Link  Frame
          Status          Nego          /Mbps   lex      Ctrl
Max
-----
ge0/0/1  absence 1  enable 1000  full  on   enable  enable  off  1526
ge0/0/2  absence 1  enable 1000  full  on   enable  enable  off  1526
ge0/0/3  absence 1  enable 1000  full  on   enable  enable  off  1526
ge0/0/4  absence 1  enable 1000  full  on   enable  enable  off  1526
```

ge0/0/5	-	1	enable	1000	full	off	enable	enable	off	1526
ge0/0/6	-	1	enable	1000	full	off	enable	enable	off	1526
ge0/0/7	-	1	enable	100	full	off	enable	enable	off	1526
ge0/0/8	-	1	enable	1000	full	off	enable	enable	off	1526

Example 2:Show property and status of GE1.

```

OLT(config-interface-ge-0/0)# show port state 1
-----
Port name                : ge0/0/1
Current port state       : enable
Current link state       : DOWN
The maximum frame size   : 1526
Link speed                : autonegotiation(1000 Mbps)
Link duplex              : autonegotiation(FULL)
Flow-control             : on
Maximum number of learned l2 entries : unlimited
Broadcasts stormcontrol  : 150(pps)
Unknow multicasts stormcontrol : disable
Unknow unicasts stormcontrol : 150(pps)
-----
Native-vlan: 1    Link-type: Access    Priority: 0

Untagged VLAN ID :
1
-----
Statistics 15 minute status : disable
Statistics 24 hour status   : disable

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
-----
    
```

10.1.13. Show OLT Uplink Port Optical Power Information

Command	OLT(config-interface-ge-0/0)# show ddm-info <port-id>
View	GE view
Description	This command is used for show optical power info of optical GE port



<port-id>	Port id to be set,range for 1-4
------------------------	---------------------------------

【Example】

Example 1: Show the optical power info of optical port GE1.

```

OLT(config-interface-ge-0/0)#show ddm-info 1
-----
Temperature(C):37.6
Supply Voltage(V):3.32
TX Bias current(mA):32
TX power(dBm):-4.03
RX power(dBm):-15.49
-----

OLT(config-interface-ge-0/0)#
    
```

10.2. Uplink Port Mirror Manage

10.2.1. Config Uplink Port Mirror Function

Command	OLT(config-interface-ge-0/0)# mirror src-port <src-port-id> dst-port {ge/xge } <F/S/P> { all/egress/ingress}
View	XGE view or GE view
Description	This command is used for set the mirror function of the Ethernet port.When it is needed to copy the flow of a port to output in another port,or used to flow monitoring and network fault diagnosis,use this command.when the mirror function of the Ethernet port is set successfully,the message of specified direction in mirror source port will be completely copied to the destination mirror port.
<src-port-id>	The port list to be set,the range for 1-8
ge/xge	ge:Giga GE port xge:10gigabit XGE port
<F/S/P>	Destination mirror port id,range for 0/0/1-0/0/8.
all/egress/ingress	all:Mirror source port Tx and Rx two-way message.Tx and Rx message of mirror source is completely copied and output to destination mirror port. egress:Mirror source port Tx message.Completely copy and output the Tx message of mirror source port to the mirror destination port. ingress:Mirror source port Rx message.Completely copy and output the Rx message of mirror source port to mirror destination port.

【Example】



Example 1: Mirror both the ingress and egress message of the port GE3 to the port GE5.

```
OLT(config-interface-ge-0/0)#mirror src-port 3 dst-port ge 0/0/5 all

OLT(config-interface-ge-0/0)#
```

10.2.2. Delete Uplink Port Mirror Function

Command	OLT(config-interface-ge-0/0)#no mirror src-port<src-port-id>
View	XGE view or GE view
Description	This command is used for delete the mirror function configuration of the Ethernet port
<src-port-id>	Mirror source port id

【Example】

Example 1: Delete port GE3 mirror function configuration.

```
OLT(config-interface-ge-0/0)#no mirror src-port 3

OLT(config-interface-ge-0/0)#
```

10.2.3. Show Uplink Port Mirror Configuration

Command	OLT(config-interface-ge-0/0)#show mirror
View	XGE view or GE view
Description	This command is used for show the Ethernet port mirror function configuration info.

【Example】

Example 1: Show the GE port mirror function configuration info.

```
OLT(config-interface-ge-0/0)#show mirror
-----
Destination port:ge0/0/5

Source port Ingress Egress
ge0/0/3 Yes Yes
-----

OLT(config-interface-ge-0/0)#
```

10.3. Uplink Port Performance Statistics Function

10.3.1. Config Uplink Port Performance Statistics Threshold

Command	OLT(config-interface-ge-0/0)# statistics port <port-list> threshold <type> <upper-threshold> <lower-threshold>
View	XGE view or GE view
Description	This command is used for set the performance statistics threshold of GE port
<port-list>	The port list to be set,format for 5,6-7,8.
<type-ID>	Range for 1-64,among which: 1:rx-octets:Byte of receive message 2:rx-frames:Frame of receive message 3:rx-bcasts:Received broadcast message 4:rx-mcasts:Received multicast message 5:rx-64octets:The received message with 64 Bytes 6:rx-65to127octets:The received message with 65-127 Bytes 7:rx-128to255octets:The received message with 128-255 Bytes 8:rx-256to511octets:The received message with 256-511 Bytes 9:rx-512to1023octets:The received message with 512-1023 Bytes 10:rx-1024to1518octets:The received message with 1024-1518 Bytes 13:rx-oversizes:Oversize received packet 20:rx-discards:The discard received message 23:tx-octets:The Byte of transmit message 24:tx-frames:Transmitted frame 25:tx-bcasts:Transmitted broadcast packet 26:tx-mcasts:Transmitted multicast packet 27:tx-64octets:Transmitted packet with 64 bytes 28:tx-65to127octets:Transmitted packet with 65-127 bytes 29:tx-128to255octets:Transmitted packet with 128-255 bytes 30:tx-256to511octets:Transmitted packet with 256-511 bytes 31:tx-512to1023octets:Transmitted packet with 512-1023 bytes 32:tx-1024to1518octets:Transmitted packet with 1024-1518 bytes 35:tx-oversizes:The oversize transmitted message 42:tx-discards:The discard transmitted message
<upper-threshold>	The upper limit of threshold,range for 0-4294967295
<lower-threshold>	The lower limit of threshold,range for 0-4294967295

【Example】

Example 1 : Set the received frame quantities of GE1 port statistics,upper limit for 50000,lower limit for 500.

```
OLT(config-interface-ge-0/0)#statistics port 1 threshold 35 50000 500
```



```
OLT(config-interface-ge-0/0)#
```

10.3.2. Show Uplink Port Performance Statistics Threshold

Configuration

Command	OLT(config-interface-ge-0/0)# show statistics port <port-id> threshold
View	XGE view or GE view
Description	This command is used for show the configuration of GE port performance statistics threshold
<port-id>	Port id to be show,range for 1-8

【Example】

Example 1: Show the configuration of GE1 performance statistics threshold

```
OLT(config-interface-ge-0/0)#show statistics port 1 threshold
TX oversize frames:upper:50000 lower:500

OLT(config-interface-ge-0/0)#
```

10.3.3. Clear Uplink Port Performance Statistics Infor

Command	OLT(config-interface-ge-0/0)# reset statistics port <port-ID>
View	XGE view or GE view
Description	This command is used for clear the performance statistics info of GE port
<port-id>	Port id to be show,range for 1-8

【Example】

Example 1: Clear the performance statistics info of GE1 port

```
OLT(config-interface-ge-0/0)#reset statistics port 1

OLT(config-interface-ge-0/0)#
```

10.3.4. Config Uplink Port Performance Statistics Period

15minutes

Command	OLT(config-interface-ge-0/0)# statistics port <port-list> 15min {enable disable}
----------------	---

View	XGE view or GE view
Description	This command is used for enable or disable 15 minutes time interval function of GE port performance statistics
<port-list>	Port list to be set,format for 1,6-7,8
enable disable	enable:Enable 15 minutes time interval performance statistics disable:Disable 15 minutes time interval performance statistics

【Example】

Example 1: Enable port GE1 15 minutes time interval performance statistics

```
OLT(config-interface-ge-0/0)#statistics port 1 15min enable
OLT(config-interface-ge-0/0)#
```

10.3.5. Config Uplink Port Performance Statistics Period 24H

Command	OLT(config-interface-ge-0/0)# statistics port<port-list> 24hour {enable disable}
View	XGE view or GE view
Description	This command is used for enable or disable 24 hours time interval function of GE port performance statistics
<port-list>	Port list to be set,format for 1,6-7,8
{enable disable }	enable:Enable 24 hours time interval performance statistics disable:Disable 24 hours time interval performance statistics

【Example】

Example 1: Enable port GE1 24 hours time interval performance statistics

```
OLT(config-interface-ge-0/0)#statistics port 1 24hour enable
OLT(config-interface-ge-0/0)#
```

10.3.6. Show Uplink Port Current 15min Performance Statistics

Command	OLT(config-interface-ge-0/0)# show statistics port <port-id> current-15min
View	XGE view or GE view
Description	This command is used for show the GE port performance statistics for current 15 minutes



<port-id>	Port id to be show,range for 1-8
------------------------	----------------------------------

【Example】

Example 1: Show the port GE1 performance statistics for current 15 minutes

```

OLT(config-interface-ge-0/0)# show statistics port 1 current-15min
-----
Start time of this interval          : 2019-01-08 16:29:00+00:00
Total elapsed seconds in this interval : 2
-----
                                RX          TX
octets                          : 4751    : 64
frames                           : 54     : 1
unicast frames                   : 0     : 0
broadcast frames                 : 35    : 0
multicast frames                 : 19    : 1
discard frames                   : 49    : 0
error frames                     : 0     : 0
oversize frames                  : 0     : 0
frames 64 octets                  : 14    : 1
frames 65 to 127 octets          : 35    : 0
frames 128 to 255 octets         : 5     : 0
frames 256 to 511 octets         : 0     : 0
frames 512 to 1023 octets        : 0     : 0
frames 1024 to 1518 octets       : 0     : 0
-----
OLT(config-interface-ge-0/0)#
    
```

10.3.7. Show Uplink Port Current 24Hs Performance Statistics

Command	OLT(config-interface-ge-0/0)# show statistics port <port-id> current-24hour
View	XGE view or GE view
Description	This command is used for show the GE port performance statistics for current 24 hour
<port-id>	Port id to be show,range for 1-8

【Example】

Example 1: Show the port GE1 performance statistics for current 24 hours.

```

OLT(config-interface-ge-0/0)# show statistics port 1 current-24hour
-----
Start time of this interval          : 2019-01-08 16:32:27+00:00
    
```

```

Total elapsed seconds in this interval      : 5
-----
                                         RX          TX
octets                                     : 0          : 0
frames                                     : 0          : 0
unicast frames                             : 0          : 0
broadcast frames                           : 0          : 0
multicast frames                           : 0          : 0
discard frames                             : 0          : 0
error frames                               : 0          : 0
oversize frames                             : 0          : 0
frames 64 octets                           : 0          : 0
frames 65 to 127 octets                     : 0          : 0
frames 128 to 255 octets                    : 0          : 0
frames 256 to 511 octets                   : 0          : 0
frames 512 to 1023 octets                  : 0          : 0
frames 1024 to 1518 octets                 : 0          : 0
-----
OLT(config-interface-ge-0/0)#
    
```

10.3.8. Show Uplink Port History 15min Performance Statistics

Command	OLT(config-interface-ge-0/0)# show statistics port <port-id> historic-15min <interval-number>
View	XGE view or GE view
Description	This command is used for show the GE port the past 15min performance statistics info
<port-id>	Port id to be show,range for 1-8
<interval-number>	Interval number,range for 1-96.That means time=15min*interval number.

【Example】

Example 1: Show the port GE7 the past 15min performance statistics info

```

OLT(config-interface-ge-0/0)# show statistics port 7 historic-15min 1
-----
Start time of this interval                : 2019-01-08 16:29:00+00:00
Interval number of historical 15 minutes   : 1
The data for this interval is valid
Total monitored seconds in the historic interval : 900
-----
                                         RX          TX
    
```

octets	: 2830116	: 1472
frames	: 26332	: 23
unicast frames	: 4	: 0
broadcast frames	: 18668	: 0
multicast frames	: 7660	: 23
discard frames	: 24325	: 0
error frames	: 0	: 0
oversize frames	: 0	: 0
frames 64 octets	: 2830	: 23
frames 65 to 127 octets	: 18068	: 0
frames 128 to 255 octets	: 4521	: 0
frames 256 to 511 octets	: 555	: 0
frames 512 to 1023 octets	: 357	: 0
frames 1024 to 1518 octets	: 1	: 0

OLT(config-interface-ge-0/0)#		

10.3.9. Show Uplink Port History 24H Performance Statistics

Command	OLT(config-interface-ge-0/0)# show statistics port <port-id> historic-24hour <interval-number>
View	XGE view or GE view
Description	This command is used for show the GE port the past 24 hours performance statistics info
<port-id>	Port id to be show,range for 1-8
<interval-number>	Interval number,range for 1-7.That means time=24h*interval number

【Example】

Example 1: Show the port GE1 the past 24 hours performance statistics info

<pre>OLT(config-interface-ge-0/0)#show statistics port 5 historic-24hour 1 The data for this interval is invalid! OLT(config-interface-ge-0/0)#</pre>
--

10.4. Uplink Port Storm Control Function

10.4.1. Config Uplink Port Broadcast Storm Control Function

Command	OLT(config-interface-ge-0/0)# traffic-suppress <port-id> broadcast {enable disable} pps <value>
View	XGE view or GE view
Description	This command is used for enable or disable the broadcast storm suppression function and set the pulse value per second of the GE port.Preventing such information from occupying excessive network resources,resulting in network congestion.
<port-id>	Port id to be set,range for 1-8
{enable disable } }	enable:Enable GE port broadcast storm suppression function disable:Disable GE port broadcast storm suppression function
<value>	The number of pulses per second,range for 1-1488100,unit for pps

【 Example 】

Example 1: Enable GE1 broadcast storm suppression function and set the number of pulses per second as 14000pps.

```
OLT(config-interface-ge-0/0)#traffic-suppress 1 broadcast enable pps 14000
OLT(config-interface-ge-0/0)#
```

10.4.2. Config Uplink Port Unknown Multicast Storm Control Function

Command	OLT(config-interface-ge-0/0)# traffic-suppress <port-id> unknown-multicast {enable disable} pps <value>
View	XGE view or GE view
Description	This command is used for enable or disable the unknown multicast storm suppression function and pulse value per second of the GE port.Preventing such information from occupying excessive network resources,resulting in network congestion.
<port-id>	Port id to be set,range for 1-8
{enable disable } }	enable:Enable GE port broadcast storm suppression function disable:Disable GE port broadcast storm suppression function
<value>	The number of pulses per second,range for 1-1488100,unit for pps

【 Example 】

Example 1: Enable GE1 unknown multicast storm suppression function and set the number of pulses per second as 14000pps.


```
OLT(config-interface-ge-0/0)#traffic-suppress 1 unknown-multicast enable pps 14000
OLT(config-interface-ge-0/0)#
```

10.4.3. Config Uplink Port Unknown Unicast Storm Control

Command	OLT(config-interface-ge-0/0)# traffic-suppress <port-id> unknown-unicast {enable disable} pps <value>
view	XGE view or GE view
Description	This command is used for enable or disable the unknown unicast storm suppression function and pulse value per second of the GE port.Preventing such information from occupying excessive network resources,resulting in network congestion.
<port-id>	Port id to be set,range for 1-8
{enable disable }	enable:Enable GE port broadcast storm suppression function disable:Disable GE port broadcast storm suppression function
<value>	The number of pulses per second,range for 1-1488100,unit for pps

【Example】

Example 1: Enable GE1 unknown unicast storm suppression function and set the number of pulses per second as 14000pps.

```
OLT(config-interface-ge-0/0)#traffic-suppress 1 unknown-unicast enable pps 14000
OLT(config-interface-ge-0/0)#
```

10.5. Uplink Port Rate Limit Function

10.5.1. Config Uplink Port Upstream and Downstream Rate Limit

Command	OLT(config-interface-ge-0/0)# port-rate <port-list> {egress/ingress} <rate>
view	XGE view or GE view
Description	This command is used for configure a rate limit for the port,with a rate limit on the downlink or uplink direction of the port.
<port-list>	Port list to be set,format for 1,6-7,8
egress/ingress	Egress:downlink Ingress:uplink
<rate>	Rate,range for 64-10240000,unit is Kbps.The default value without



	rate limit.
--	-------------

【Example】

Example 1: The GE1 port downstream rate limits as 102400

OLT(config-interface-ge-0/0)#port-rate 1 egress 102400
OLT(config-interface-ge-0/0)#

10.5.2. Delete Uplink Port Upstream and Downstream Rate Limit

Command	OLT(config-interface-ge-0/0)#no port-rate <port-list> {egress/ingress}
View	XGE view or GE view
Description	This command is used for delete the upstream and downstream rate limit of GE port
<port-list>	Port list to be set,format for 1,6-7,8
egress/ingress	Egress:downlink Ingress:uplink
<rate>	Rate,range for 64-10240000,unit is Kbps.

【Example】

Example 1: Delete the downstream rate limit of port GE1.

OLT(config-interface-ge-0/0)#no port-rate 1 egress
OLT(config-interface-ge-0/0)#

10.5.3. Show Uplink Port Upstream and Downstream Rate Limit

Configuration

Command	OLT(config-interface-ge-0/0)#show port-rate <port-list>
View	XGE view or GE view
Description	This command is used for show the upstream and downstream rate limitation info of GE port
<port-list>	Port list to be set,format for 1,6-7,8

【Example】

Example 1: Show the upstream and downstream rate limitation info of port GE1.

OLT(config-interface-ge-0/0)#show port-rate 1
Traffic shaping:



```
-----
port egress ingress
ge0/0/1 123000 0

OLT(config-interface-ge-0/0)#
```

10.6. Uplink Port Isolate Function

10.6.1. Config Uplink Port Isolate

Command	OLT(config-interface-ge-0/0)# isolate <port-list>{ enable disable }
View	XGE view or GE view
Description	This command is used for enable or disable the function of GE port isolation. When port isolation is enabled, the port can not communicate with other ports. By default, it is disabled.
<port-list>	Port list to be set, format for 1,6-7,8
{enable disable } }	Enable: enable the port isolation Disable: disable the port isolation

【 Example 】

Example 1: Enable the port isolation of GE1.

```
OLT(config-interface-ge-0/0)#isolate 1 enable

OLT(config-interface-ge-0/0)#
```

10.6.2. Show Uplink Port Isolation Configuration Infor

Command	OLT(config-interface-ge-0/0)# show port isolate
View	XGE view or GE view
Description	This command is used for show the GE port isolation configuration info

【 Example 】

Example 1: Show the GE port isolation configuration info

```
OLT(config-interface-ge-0/0)#show port isolate
Isolate among pon port:
pon0/0/1 pon0/0/2 pon0/0/3 pon0/0/4 pon0/0/5
pon0/0/6 pon0/0/7 pon0/0/8 pon0/0/9 pon0/0/10
pon0/0/11 pon0/0/12 pon0/0/13 pon0/0/14 pon0/0/15
pon0/0/16
```

```
Isolate among uplink port:
ge0/0/1

OLT(config-interface-ge-0/0)#
```

10.7. Uplink Port RSTP Function

10.7.1. Config Uplink Port RSTP Cost

Command	OLT(config-interface-ge-0/0)# spanning-tree cost <port-id> <cost>
View	XGE view or GE view
Description	This command is used for set RSTP cost of the GE port. When there are several link and are not root port between two device, the optimal path is decided by port cost.
<port-id>	Port id to be set, range for 1-8
<cost>	Cost value, range for 1-200000000.

【Example】

Example 1: Set the GE1 port RSTP cost as 2000.

```
OLT(config-interface-ge-0/0)#spanning-tree cost 1 2000

OLT(config-interface-ge-0/0)#
```

10.7.2. Config Uplink Port RSTP Edged-port

Command	OLT(config-interface-ge-0/0)# spanning-tree edged-port <port-id> {enable disable}
View	XGE view or GE view
Description	This command is used for set the RSTP edged-port of the GE port. If user specifies a port as edged-port, then when the port migrates forwarding status from congestion status, this port can migrate rapidly doing without waiting for delay time. The user can only set the port which is connected with the terminal as the edged-port. All ports are default to not edged-port.
<port-id>	Port id to be set, range for 1-8
{enable disable }	enable: Set the port as edged-port disable: Set the port as not edged-port

【Example】

Example 1: Set the port GE1 as edged-port.

```
OLT(config-interface-ge-0/0)#spanning-tree edged-port 1 enable

OLT(config-interface-ge-0/0)#
```

10.7.3. Config Uplink Port RSTP Mcheck Property

Command	OLT(config-interface-ge-0/0)# spanning-tree mcheck <port-id>
View	XGE view or GE view
Description	This command is used for set the RSTP mcheck property of GE port.Port mcheck property is used for detected whether the port which is running under STP compatible mode can migrate to RSTP mode.By setting mcheck,you can check whether there is a bridge running STP protocol within the network segment which is connected with current Ethernet port,If yes,RSTP protocol will migrate the protocol running mode of this port to STP mode.
<port-id>	Port id to be set,range for 1-8

【Example】

Example 1: Set the mcheck of GE1.

```
OLT(config-interface-ge-0/0)#spanning-tree mcheck 1

OLT(config-interface-ge-0/0)#
```

10.7.4. Config Uplink Port RSTP Point-to-Point Link Function

Command	OLT(config-interface-ge-0/0)# spanning-tree point-to-point <port-id> {auto/true/false}
View	XGE view or GE view
Description	This command is used for set point-to-point link of GE port spanning tree.If bridge works in RSTP mode,two ports which is connected by p2p link can migrate to forwarding status by sending synchronization message,it reduces the needless transfer delay time,if set this parameter as auto-mode,RSTP protocol can detect whether current Ethernet port has connected with point-to-point link automatically.The user can set by manually whether current Ethernet port connects with the p2p link.The recommendation is auto-mode.
<port-id>	Port id to be set,range for 1-8
auto/true/false	auto:Set the point-to-point link as auto-mode



	true:Connect GE port to point-to-point link false:Disconnect GE port to point-to-point link
--	--

【Example】

Example 1: Set the point-to-point link function of GE1 as true.

```
OLT(config-interface-ge-0/0)#spanning-tree point-to-point 1 true

OLT(config-interface-ge-0/0)#
```

10.7.5. Config Uplink Port RSTP Priority

Command	OLT(config-interface-ge-0/0)# spanning-tree priority <port-id> <port-priority>
View	XGE view or GE view
Description	This command is used for set the RSTP priority of GE port.By setting the priority of the Ethernet port,You can specify that a particular Ethernet port is contained within the spanning tree.Generally,the smaller of the setting value is,the higher of the port priority,this Ethernet port is likely to include in spanning tree.If all the Ethernet port of the bridge adapt to the same index number,the priority of the Ethernet port depends on the index number of the Ethernet port.
<port-id>	Port id to be set,range for 1-8
<port-priority>	Port priority,range for 0-240,step length for 16.the default is 128

【Example】

Example 1: Set the spanning tree priority of the GE1 as 160.

```
OLT(config-interface-ge-0/0)#spanning-tree priority 1 160

OLT(config-interface-ge-0/0)#
```

10.7.6. Delete Uplink Port Configuration of RTSP

Command	OLT(config-interface-ge-0/0)# no spanning-tree (cost priority) port-id
View	XGE view or GE view
Description	This command is used for delete uplink port configuration of RSTP cost and priority. The default of cost value is 20000, and the default of priority is 128
port-id	Port id to be set,range for 1-8



【 Example 】

Example 1: Delete the priority of rstp in unlink port 1 .

```
OLT(config-interface-ge-0/0)# no spanning-tree priority 1

OLT(config-interface-ge-0/0)#
```

10.7.7. Show Uplink Port RSTP Configuration

Command	OLT(config-interface-ge-0/0)# show port spanning-tree <port-id>
View	XGE view or GE view
Description	This command is used for show the RSTP configuration info of the GE port.
<port-id>	Port id to be show,range for 1-8

【 Example 】

Example 1: Show the RSTP configuration info of the port GE1.

```
OLT(config-interface-ge-0/0)#show port spanning-tree 1
-----ge0/0/1 RSTP STATUS:-----
Port STP Mode:RSTP
Port Priority:128
Port Path Cost:20000
Port Edge Admin:NON-Edge
Port Edge Status:NEdge
Port Link Type Admin:Auto
Port Link Type Status:P2P
Port Role:Unknown
Port State:Down
-----

OLT(config-interface-ge-0/0)#
```

10.8. OLT Uplink Port VLAN Config

10.8.1. Config Uplink Port VLAN Mode

Command	OLT(config-interface-ge-0/0)# vlan mode <port-id> {access/hybrid/trunk}
View	XGE view or GE view
Description	This command is used for set the vlan mode of GE port,the default is

	access mode.In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8.
access/hybrid/trunk	Access:This kind of port only belongs to one vlan,generally it is used for connect to computer. Trunk:This kind of ports can allow multi vlan pass,can receive and transfer the message of different vlan.Usually,it is used for connect to the port between switches. Hybrid:This kind of port allows multiple vlan pass,can receive and transfer the message of different vlan.It can be used to connect the port between switch or connect to the PC.

【Example】

Example 1: Set the vlan mode of GE1 as access.

```
OLT(config-interface-ge-0/0)#vlan mode 1 access

OLT(config-interface-ge-0/0)#
```

10.8.2. Config Uplink Port Native-vlan

Command	OLT(config-interface-ge-0/0)# vlan native-vlan <port-list> <vlan-id>
View	XGE view or GE view
Description	This command is used for set native vlan of the GE port.In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-list>	Port list to be set,range for 1-8,format for 1,2-3,4
<vlan-id>	VLAN ID,range for 1-4094.

【Example】

Example 1: Set the native vlan of the GE1 as 10.

```
OLT(config-interface-ge-0/0)#vlan native-vlan 1 10

OLT(config-interface-ge-0/0)#
```

10.8.3. Config Uplink Port Native-vlan Priority

Command	OLT(config-interface-ge-0/0)# vlan native-vlan-priority <port-list> <priority>
View	XGE view or GE view
Description	This command is used for set the native vlan priority of the GE

	port,the default both are 0.
<port-list>	Port list to be set,range for 1-8,format for 1,2-3,4
<priority>	Priority,range for 0-7

【 Example 】

Example 1: Set the native vlan priority of the GE1 port as 1.

```
OLT(config-interface-ge-0/0)#vlan native-vlan-priority 1 1

OLT(config-interface-ge-0/0)#
```

10.8.4. Config Uplink Port Access Mode VLAN

Command	OLT(config-interface-ge-0/0)# vlan access <port-id> <vlan-id>
View	XGE view or GE view
Description	This command is used for set Access vlan of the GE port,the default access vlan both are 1.In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-id>	Port id to be set,range for 1-8
<vlan-id>	Access VLAN ID,range for 1-4094

【 Example 】

Example1:Set the access vlan of the GE port as 100.

```
OLT(config-interface-ge-0/0)#vlan access 1 100

OLT(config-interface-ge-0/0)#
```

10.8.5. Config Uplink Port Hybrid Mode VLAN

Command	OLT(config-interface-ge-0/0)# vlan hybrid <port-id> {tagged untagged} <vlan-list>
View	XGE view or GE view
Description	This command is used for set hybrid vlan of the GE port,In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-id>	Port id to be set,range for 1-8
{tagged untagged}	tagged:Add corresponding vlan tag for the output message untagged:Peel off corresponding vlan tag for output message
<vlan-list>	VLAN ID,range for 1-4094.Format can be 1,11-27,100

【 Example 】

Example 1: Add hybrid vlan of GE1 as 10-15 untagged.

```
OLT(config-interface-ge-0/0)#vlan hybrid 1 untagged 10-15
ge0/0/1:hybrid vlan added,failed:0,success:6

OLT(config-interface-ge-0/0)#
```

Example 2:Add hybrid vlan of GE 1 as 101 tagged.

```
OLT(config-interface-ge-0/0)#vlan hybrid 1 tagged 101
ge0/0/1:hybrid vlan added,failed:0,success:1

OLT(config-interface-ge-0/0)#
```

10.8.6. Delete Uplink Port Hybrid Mode VLAN

Command	OLT(config-interface-ge-0/0)#no vlan hybrid <port-id> {tagged untagged} <vlan-list>
View	XGE view or GE view
Description	This command is used for delete the hybrid vlan of GE port.In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-id>	Port id to be set,range for 1-8
{tagged untagged}	tagged:Add corresponding vlan tag for the output message untagged:Peel off corresponding vlan tag for output message
<vlan-list>	VLAN ID,range for 1-4094.Format can be 1,11-27,100

【 Example 】

Example 1: Delete GE1 hybrid vlan 10-15 tagged.

```
OLT(config-interface-ge)#no vlan hybrid 1 tagged 10-15

OLT(config-interface-ge)#
```

10.8.7. Config Uplink Port Trunk Mode VLAN

Command	OLT(config-interface-ge-0/0)#vlan trunk <port-id> <vlan-list>
View	XGE view or GE view
Description	This command is used for set the trunk vlan of GE port.In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-id>	Port id to be set,range for 1-8

<vlan-list>	VLAN list,range for 1-4094.Format can be 1,11-27,100
--------------------------	--

【Example】

Example 1: Set GE1 trunk vlan as 10-15.

```
OLT(config-interface-ge-0/0)#vlan trunk 1 10-15
ge0/0/1:trunk vlan allowed,failed:0,success:6

OLT(config-interface-ge-0/0)#
```

10.8.8. Delete Uplink Port Trunk Mode VLAN

Command	OLT(config-interface-ge-0/0)#no vlan trunk <port-id> <vlan-list>
View	XGE view or GE view
Description	This command is used for delete the trunk vlan of GE port.In each vlan mode,the message processing way of the port is shown in Appendix 1 .
<port-id>	Port id to be delete,range for 1-8
<vlan-list>	VLAN list,range for 1-4094.Format can be 1,11-27,100

【Example】

Example 1: Delete GE1 trunk vlan 10-15.

```
OLT(config-interface-ge-0/0)#no vlan trunk 1 10-15

OLT(config-interface-ge-0/0)#
```

10.8.9. Config Uplink Port Translate Mode VLAN

Command	OLT(config-interface-ge-0/0)#vlan translate <port-list> <old-vlan> <new-vlan> <new-priority>
View	XGE view or GE view
Description	This command is used for set the translate vlan of GE port.In the direction of upstream,it will transfer the old vlan into new vlan and update to new priority.
<port-list>	Port list to be set,range for 1-8
<old-vlan>	Old vlan id,range for 1-4094
<new-vlan>	New VLAN ID,range for 1-4094
<new-priority>	New vlan priority,range for 0-7

【Example】

Example 1: Translate the GE1's old vlan 10 into new vlan 11 and the new priority translates into 3.

```
OLT(config-interface-ge-0/0)#vlan translate 1 10 11 3

OLT(config-interface-ge-0/0)#
```

10.8.10. Delete Uplink Port Translate Mode VLAN

Command	OLT(config-interface-ge-0/0)#no vlan translate <port-list> <vlan-id>
View	XGE view or GE view
Description	This command is used for delete the translate vlan of GE port.
<port-list>	Port id to be delete,range for 1-8
<vlan-id>	VLAN id,range for 1-4094.

【Example】

Example 1: Delete the GE1 translate vlan 10.

```
OLT(config-interface-ge-0/0)#no vlan translate 1 10

OLT(config-interface-ge-0/0)#
```

10.8.11. Config Uplink Port Protocol VLAN

Command	OLT(config-interface-ge-0/0)#protocol-vlan <protocol-index> {add/delete} port <port-list> <vlan-ID>
View	XGE view or GE view
Description	This command is used for bind a protocol vlan index for the port and port vlan,firstly it's need to create a protocol vlan.
<protocol-index >	Protocol vlan index,range for 1-16
add/delete	add:Add vlan delete>Delete vlan
<port-list>	Port list to be set,format for 1,6-7,8
<vlan-ID>	VLAN ID,range for 1-4094

【Example】

Example 1: Bind GE1 to protocol vlan index 1 and add into vlan 100.

```
OLT(config-interface-ge-0/0)#protocol-vlan 1 add port 1 100
```



```
OLT(config-interface-ge-0/0)#
```

10.8.12. Show OLT Uplink Port VLAN Configuration

Command	OLT(config-interface-ge-0/0)# show port vlan <port-id>
View	XGE view or GE view
Description	This command is used for show the vlan info of GE port.
<port-id>	Port id to be show,range for 1-8

【 Example 】

Example 1: Show vlan info of port GE1.

```
OLT(config-interface-ge-0/0)#show port vlan 1
-----
Port:ge0/0/1 Mode:Access Native-Vlan:1 Priority:0
-----
Tagged-Vlan:
-
-----
Untagged-Vlan:
1
-----

OLT(config-interface-ge-0/0)#
```

10.9. OLT Uplink Port Loopback Detection

10.9.1. Config Uplink port Loopback Detection

Command	OLT(config-interface-ge-0/0)# loopback-detection port-list (enable disable)
View	XGE view or GE view
Description	This command is used for enable or disable loop monitoring of the uplink port. On the access port, if the system finds that the port is monitored by loopback, the port performs the corresponding operation according to the loopback detection action, and reports the trap information to the terminal and deletes the MAC address forwarding entry corresponding to the port. On a trunk or a hybrid port, if the system finds that the port is monitored by loopback, the device only reports traps to the terminal.



<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of GE interfaces is 1-8; the range of XGE interfaces is 1-4.
------------------	---

【Example】

Example 1: Enable uplink port 1 loopback-detection.

```
OLT(config-interface-ge-0/0)# loopback-detection 1 enable

OLT(config-interface-ge-0/0)#
```

10.9.2. Config Uplink port Loopback Detection Control Function

Command	OLT(config-interface-ge-0/0)# loopback-detection <i>port-list</i> control (enable disable)
View	XGE view or GE view
Description	This command is used for enable or disable the loop control monitoring of the uplink port. For a trunk or a hybrid port, when the loopback detection function of the port is enabled at the same time as the loopback detection function, the system performs corresponding operations on the port according to the loopback detection action, and reports the trap information to the terminal and deletes the port. MAC address forwarding entry. If it is a trunk port, it is found that the loop only reports errors. You need to set the port to be controlled. The access port is not required.
<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of GE interfaces is 1-8; the range of XGE interfaces is 1-4.

【Example】

Example 1: Enable uplink port 1 loopback-detection control.

```
OLT(config-interface-ge-0/0)# loopback-detection 1 control enable

OLT(config-interface-ge-0/0)#
```

10.9.3. Config Uplink port Loopback Detection Per-vlan

Command	OLT(config-interface-ge-0/0)# loopback-detection <i>port-list</i> per-vlan (enable disable)
View	XGE view or GE view
Description	This command is used for enable monitoring for all vlans. For trunk ports, loop monitoring and loop controlled monitoring can only monitor the default vlan of the trunk port. Not valid for access port.



<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of GE interfaces is 1-8; the range of XGE interfaces is 1-4.
------------------	---

【Example】

Example 1: Enable uplink port 1 loopback-detection per-vlan.

```
OLT(config-interface-ge-0/0)# loopback-detection 1 per-vlan enable

OLT(config-interface-ge-0/0)#
```

10.10. Config Uplink Port Protocol-vlan

Command	OLT(config-interface-ge-0/0)# protocol-vlan <i>protocol-index</i> (add delete) port <i>port-list</i> <i>vlan-id</i>
View	XGE view or GE view
Description	This command is used for create a protocol index and bind and unbind the uplink port to the established index number and add it to vlan100. To use this command, you must first establish a protocol vlan.
<i>protocol-index</i>	The established protocol index number that needs to be bound. The value ranges from 1 to 16.
<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of GE interfaces is 1-8; the range of XGE interfaces is 1-4.
<i>vlan-id</i>	The vlan to be bound. The range is 1-4094.

【Example】

Example 1: Create an index 1, the mode is Ethernet, and the GE1 port binding protocol is indexed 1 and added to vlan100.

```
OLT(config)# protocol-vlan 1 mode ethernetii etype 0x8100

OLT(config)# interface ge 0/0

OLT(config-interface-ge-0/0)# protocol-vlan 1 add port 1 100

OLT(config-interface-ge-0/0)#
```

11. OLT PON Port Configuration

11.1. OLT PON Port Property Config

11.1.1. Disable PON Port

Command	OLT(config-interface-epon-0/0)#shutdown <port-list>
View	EPON interface view
Description	This command is used for disable the specified pon port.
<port-list>	Port list to be set,range for 1-16,format for 1,3-5,8

【 Example 】

Example 1: Disable pon port 1-3.

```
OLT(config-interface-epon-0/0)#shutdown 1-3

OLT(config-interface-epon-0/0)#
```

Example 2:Disable pon port 5 and 7.

```
OLT(config-interface-epon-0/0)#shutdown 5,7

OLT(config-interface-epon-0/0)#
```

11.1.2. Enable PON Port

Command	OLT(config-interface-epon-0/0)#no shutdown <port-list>
View	EPON interface view
Description	This command is used for enable the specified pon port
<port-list>	Port list to be set,range for 1-16,format for 1,3-5,8

【 Example 】

Example 1: Enable pon port 1-3.

```
OLT(config-interface-epon-0/0)#no shutdown 1-3

OLT(config-interface-epon-0/0)#
```

Example 2:Enable pon port 5 and 7.

```
OLT(config-interface-epon-0/0)#no shutdown 5,7

OLT(config-interface-epon-0/0)#
```

11.1.3. Config PON Port Name

Command	OLT(config-interface-epon-0/0)#port-name <port-id> <name>
----------------	---

View	EPON interface view
Description	This command is used for set the name of pon port which is convenient for user to management
<port-id>	Port id to be set,range for 1-16
<name>	Port name to be set

【Example】

Example 1: Set the name of pon port as test.

```
OLT(config-interface-epon-0/0)#port-name 1 test

OLT(config-interface-epon-0/0)#
```

11.1.4. Delete PON Port Name

Command	OLT(config-interface-epon-0/0)# no port-name <port-id>
View	EPON interface view
Description	This command is used for reset the name of pon port to default value.
<port-id>	Port id to be set,range for 1-16

【Example】

Example 1: Reset the name of pon1 to default value.

```
OLT(config-interface-epon-0/0)#no port-name 1

OLT(config-interface-epon-0/0)#
```

11.1.5. Config PON Port MTU

Command	OLT(config-interface-epon-0/0)# frame-max port-list maximum-frame-size
view	EPON interface view
Description	This command is used for set the frame-max.The maximum transmission unit represents the size of the maximum transmission packet which transfers in the port for each unit time.The default value is 1526.
port-list	Port list to be set,range for 1-16,format for 1,3-5,8
maximum-fram	The range of frame-max is 328~2048.specifically,the frame-max value



<i>e-size</i>	of pon port is 2048.
---------------	----------------------

【Example】

Example 1: Set frame-max value of pon 1 as 1600.

```
OLT(config-interface-epon-0/0)# frame-max 1 1600

OLT(config-interface-epon-0/0)#
```

11.1.6. Delete PON Port Frame-max

Command	OLT(config-interface-epon-0/0)# no frame-max port-list
View	EPON interface view
Description	This command is used for restore the pon port's mtu value as default 1526.
<i>port-list</i>	Port list to be set,range for 1-16,format for 16-7,8

【Example】

Example 1: Restore the frame-max value of pon1 as default 1526.

```
OLT(config-interface-epon-0/0)#no frame-max 1

OLT(config-interface-epon-0/0)#
```

11.1.7. Config PON Port Encrypt Mode and Key-exchange-time

Command	OLT(config-interface-epon-0/0)# port encrypt <port-list> mode {aes-128/disable/triple-churning} key-exchange-time <time>
View	EPON interface view
Description	This command is used for set the encrypt mode and key-exchange-time.The default is not encrypted.
<i><port-list></i>	Port list to be set,range for 1-16,format for 1,6-7,8
<i>aes-128/disable/triple-churning</i>	aes-128:An encrypted mode disable:Disable port encrypting function triple-churning:An encrypted mode
<i><time></i>	Key exchange time,range for 1-708,unit is second.It is optional.

【Example】

Example 1: Set pon 1 encryption mode as aes-128

```
OLT(config-interface-epon-0/0)#port encrypt 1 mode aes-128
```

```
OLT(config-interface-epon-0/0)#
```

11.1.8. Config PON Port Flow-control Function

Command	OLT(config-interface-epon-0/0)# flow-control <port-list> {enable disable}
View	EPON interface view
Description	This command is used for set the flow-control function of pon port.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{enable disable }	enable:Enable flow-control function of pon port disable:Disable flow-control function of pon port

【Example】

Example 1: Enable pon1 flow-control function.

```
OLT(config-interface-epon-0/0)#flow-control 1 enable
OLT(config-interface-epon-0/0)#
```

11.1.9. Config Pon Port MAC Address Learning Function

Command	OLT(config-interface-epon-0/0)# mac-address learning port <port-list> {enable disable}
View	EPON interface view
Description	This command is used for set pon port mac address learning function
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{enable disable }	Enable:Enable pon port mac address learning function Disable:Disable pon port mac address learning function

【Example】

Example 1: Enable pon1 mac address learning function

```
OLT(config-interface-epon-0/0)#mac-address learning port 1 enable
OLT(config-interface-epon-0/0)#
```

11.1.10. Show OLT PON Port Property and Status

Command	OLT(config-interface-epon-0/0)# show port state {<port-id>/all}
View	EPON interface view



Description	This command is used for show the property info of pon port
<port-id>/all	Port-ID:Port id to be show,range for 1-16 All:Show the property info of all the pon port

【Example】

Example 1: Show the property info of all the pon port

```

OLT(config-interface-epon-0/0)#show port state all
-----
F/S P Pvid Flow MAC Enable ONU MTU Link Auto Bandwidth Auth
Ctrl Learn State Isolate Find(Kbps)Mode
-----
0/0 1 1 on en en en 1500 off en 1000000 auto
0/0 2 1 on en en en 1500 off en 1000000 auto
0/0 3 1 on en en en 1500 off en 1000000 loid
0/0 4 1 on en en en 1500 off en 1000000 auto
0/0 5 1 on en en en 1500 off en 1000000 auto
0/0 6 1 on en en en 1500 off en 1000000 auto
0/0 7 1 on en en en 1500 off en 1000000 auto
0/0 8 1 on en en en 1500 off en 1000000 auto
0/0 9 1 on en en en 1500 off en 1000000 auto
0/0 10 1 on en en en 1500 off en 1000000 auto
0/0 11 1 on en en en 1500 off en 1000000 mac
0/0 12 1 on en en en 1500 off en 1000000 auto
0/0 13 1 on en en en 1500 off en 1000000 auto
0/0 14 1 on en en en 1500 off en 1000000 auto
0/0 15 1 on en en en 1500 off en 1000000 auto
0/0 16 1 on en en en 1500 off en 1000000 auto
-----
OLT(config-interface-epon-0/0)#
    
```

Example 2:Show the property info of pon1.

```

OLT(config-interface-epon-0/0)#show port state 1
-----
Frame/Slot:0/0
Port:1
Port Name:pon0/0/1
Enable state:Enable
Encrpyt state:Disable
Key exchange time:-
ONU isolate state:Enable
Optical Module status:Normal
Link state:Down
    
```



```

Auto find:Enable
Auth Mode:auto
Policy Auth:Disable
Available bandwidth:1000000(Kbps)

Native vlan:1
Maximum Transmit Unit:1500
Flow-control:On
Maximum learned I2 entries:unlimited
Broadcast storm control:disable
Unknow multicast storm control:disable
Unknown unicast storm control:disable
Port 15 minute statistics status:enable
Port 24 hour statistics status:enable
-----
OLT(config-interface-epon-0/0)#
    
```

11.1.11. Show OLT PON Port Optical Power Information

Command	OLT(config-interface-epon-0/0)# show port ddm-info <port-id>
View	EPON interface view
Description	This command is used for show configuration info of pon port such as optical power,optical module temperature,voltage,serial number and etc.
<port-id>	Port id to be show,range for 1-16

【Example】

Example 1: Show optical power info of pon1.

```

OLT(config-interface-epon-0/0)#show port ddm-info 1
-----
Temperature(C):41.9
Supply Voltage(V):3.32
TX Bias current(mA):11
TX power(dBm):4.66
RX power(dBm):-
-----
Vendor:T&W
Product name:TW5441H-C3AL
Version:1.0
Serial number:85165803D
-----
    
```

```
OLT(config-interface-epon-0/0)#
```

11.2. Config OLT PON Port Detect ONU Long Laser Function

11.2.1. Config Auto Detect ONU Long Laser Function

Command	OLT(config-interface-epon-0/0)# anti-rogueont auto-detect <port-id> {on/off}
View	EPON interface view
Description	This command is used for enable or disable the function of pon port automatic detecting onu long laser.In the case of enabling,when the onu appears long laser,olt will deliver an alarm info.
<port-id>	Port id to be set,range for 1-16,format for 1,6-7,8
on/off	on:Enable pon port automatic detecting onu long laser off:Disable pon port automatic detecting onu long laser

【Example】

Example 1: Enable pon1 automatic detecting onu long laser

```
OLT(config-interface-epon-0/0)#anti-rogueont auto-detect 1 on

OLT(config-interface-epon-0/0)#
```

11.2.2. Config Manual Detect ONU Long Laser Function

Command	OLT(config-interface-epon-0/0)# anti-rogueont manual-detect <port-id>
View	EPON interface view
Description	This command is used for set the pon port to detect the onu long laser by manually.The pon port start to detect onu long laser after executing this command.
<port-id>	Port id to be set,range for 1-16,format for 1,6-7,8

【Example】

Example 1: Set pon1 manually detecting onu long laser.

```
OLT(config-interface-epon-0/0)#anti-rogueont manual-detect 1

OLT(config-interface-epon-0/0)#
```

11.2.3. Show Detect ONU Long Laser Configuration

Command	OLT(config-interface-epon-0/0)# show anti-rogueont auto-detect <port-id> status
View	EPON interface view
Description	This command is used for show the configuration info that pon port automatically detects onu long laser.
<port-id>	Port id to be set,range for 1-16,format for 1,6-7,8

【Example】

Example 1: Show the configuration info that pon1 automatically detects the onu long laser.

```
OLT(config-interface-epon-0/0)#show anti-rogueont auto-detect 1 status
-----
Detetion switch:off
Detetion interval:15(min)
-----
OLT(config-interface-epon-0/0)#
```

11.3. OLT PON Port RSTP Function

11.3.1. Config OLT PON Port RSTP Cost

Command	OLT(config-interface-epon-0/0)# spanning-tree cost <port-id> <cost>
View	Epon view
Description	This command is used for set RSTP cost of the pon port.When there are several link and are not root port between two device,the optimal path is decided by port cost.
<port-id>	Port id to be set,range for 1-16
<cost>	Cost value,range for 1-200000000.

【Example】

Example 1: Set the PON 1 port RSTP cost as 2000.

```
OLT(config-interface-epon-0/0)#spanning-tree cost 1 2000
OLT(config-interface-epon-0/0)#
```

11.3.2. Config OLT PON Port RSTP Edged-port

Command	OLT(config-interface-epon-0/0)# spanning-tree edged-port <port-id> {enable disable}
----------------	--



View	Epon view
Description	This command is used for set the RSTP edged-port of the pon port.If user specifies a port as edged-port,then when the port migrates forwarding status from congestion status,this port can migrate rapidly doing without waiting for delay time.the user can only set the port which is connected with the terminal as the edged-port.All ports are default to not edged-port.
<port-id>	Port id to be set,range for 1-16
{enable disable }	enable:Set the port as edged-port disable:Set the port as not edged-port

【Example】

Example 1: Set the port PON 1 as edged-port.

```
OLT(config-interface-epon-0/0)#spanning-tree edged-port 1 enable

OLT(config-interface-epon-0/0)#
```

11.3.3. Config OLT PON Port RSTP Mcheck Property

Command	OLT(config-interface-epon-0/0)# spanning-tree mcheck <port-id>
View	Epon view
Description	This command is used for set the RSTP mcheck property of PON port.Port mcheck property is used for detected whether the port which is running under STP compatible mode can migrate to RSTP mode.By setting mcheck,you can check whether there is a bridge running STP protocol within the network segment which is connected with current Ethernet port,If yes,RSTP protocol will migrate the protocol running mode of this port to STP mode.
<port-id>	Port id to be set,range for 1-16

【Example】

Example 1: Set the mcheck of PON 1.

```
OLT(config-interface-epon-0/0)#spanning-tree mcheck 1

OLT(config-interface-epon-0/0)#
```

11.3.4. Config OLT PON Port RSTP Point-to-Point Link Function

Command	OLT(config-interface-epon-0/0)# spanning-tree point-to-point <port-id> {auto/true/false}
----------------	---

View	Epon view
Description	This command is used for set point-to-point link of PON port spanning tree.If bridge works in RSTP mode,two ports which is connected by p2p link can migrate to forwarding status by sending synchronization message,it reduces the needless transfer delay time,if set this parameter as auto-mode,RSTP protocol can detect whether current Ethernet port has connected with point-to-point link automatically.The user can set by manually whether current Ethernet port connects with the p2p link.The recommendation is auto-mode.
<port-id>	Port id to be set,range for 1-16
auto/true/false	auto:Set the point-to-point link as auto-mode true:Connect GE port to point-to-point link false:Disconnect GE port to point-to-point link

【Example】

Example 1: Set the point-to-point link function of PON 1 as true.

```
OLT(config-interface-epon-0/0)#spanning-tree point-to-point 1 true
OLT(config-interface-epon-0/0)#
```

11.3.5. Config OLT PON Port RSTP Priority

Command	OLT(config-interface-epon-0/0)# spanning-tree priority <port-id> <port-priority>
View	Epon view
Description	This command is used for set the RSTP priority of PON port.By setting the priority of the Ethernet port,You can specify that a particular Ethernet port is contained within the spanning tree.Generally,the smaller of the setting value is,the higher of the port priority,this Ethernet port is likely to include in spanning tree.If all the Ethernet port of the bridge adapt to the same index number,the priority of the Ethernet port depends on the index number of the Ethernet port.
<port-id>	Port id to be set,range for 1-16
<port-priority>	Port priority,range for 0-240,step length for 16.the default is 128

【Example】

Example 1: Set the spanning tree priority of the PON 1 as 160.

```
OLT(config-interface-epon-0/0)#spanning-tree priority 1 160
OLT(config-interface-epon-0/0)#
```



11.3.6. Delete OLT PON Port Configuration of RTSP

Command	OLT(config-interface-epon-0/0)# no spanning-tree (cost priority) port-id
View	Epon view
Description	This command is used for delete OLT PON port configuration of RSTP cost and priority. The default of cost value is 20000, and the default of priority is 128
<i>port-id</i>	Port id to be set,range for 1-16

【Example】

Example 1: Delete the priority of rstp in pon port 1 .

```
OLT(config-interface-epon-0/0)# no spanning-tree priority 1
OLT(config-interface-epon-0/0)#
```

11.4. Config OLT PON Port Mirror Function

11.4.1. Config Pon Port Mirror Function

Command	OLT(config-interface-epon-0/0)# mirror src-port <src-port-id> dst-port {ge/xge} <F/S/P> { all/egress/ingress}
View	EPON interface view
Description	This command is used for set the mirror function of the pon port.When it is needed to copy and output the flow of some pon port to other GE port or used to flow detection,network fault diagnosis and data analysis,use this command.When the pon port mirror is set successfully,the specified message of source mirror port will be completely copied to destination mirror port.
<src-port-id>	Source mirror port to be set,range for 1-16
ge/xge	ge:Giga GE port xge:10Giga GE port
<F/S/P>	Destination mirror port id,range for 0/0/1-0/0/8.
all/egress/ingress	all:Tx and Rx double direction message of source mirror port.Completely copy and output the rx and tx message of source mirror port to the destination mirror port.



	<p>egress:The tx message of source mirror port.Completely copy and output the tx message of source mirror port to destination mirror port.</p> <p>ingress:The rx message of source mirror port.Completely copy and output the rx message of source mirror port to destination mirror port.</p>
--	--

【Example】

Example 1: Mirror the egress and ingress message of pon1 to GE5.

```
OLT(config-interface-epon-0/0)#mirror src-port 1 dst-port ge 0/0/5 all

OLT(config-interface-epon-0/0)#
```

11.4.2. Delete PON Port Mirror Function

Description	OLT(config-interface-epon-0/0)# no mirror src-port <src-port-id>
View	EPON interface view
Description	This command is used for cancel the pon port mirror setting.
<src-port-id>	Source mirror port id,range for 1-16

【Example】

Example 1: Cancel pon1 mirror setting.

```
OLT(config-interface-epon-0/0)#no mirror src-port 1

OLT(config-interface-epon-0/0)#
```

11.4.3. Show PON Port Mirror Configuration

Command	OLT(config-interface-epon-0/0)# show mirror
View	EPON interface view
Description	This command is used for show the pon port mirror setting info.

【Example】

Example 1: Show mirror setting info.

```
OLT(config-interface-epon-0/0)#show mirror
-----
Destination port:ge0/0/5

Source port Ingress Egress
ge0/0/2 Yes Yes
pon0/0/1 Yes Yes
```



```
-----
OLT(config-interface-epon-0/0)#
```

11.5. OLT PON Port Performance Statistics Function

11.5.1. Config PON Port Performance Statistics Period 15min

Command	OLT(config-interface-epon-0/0)# statistics port <port-list>15min {enable disable}
View	EPON interface view
Description	This command is used for set time interval of pon port performance statistic as 15min.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{enable disable } }	enable:Enable 15min performance statistics disable:Disable 15min performance statistics

【Example】

Example 1: Enable pon1 15min performance statistics function.

```
OLT(config-interface-epon-0/0)#statistics port 1 15min enable

OLT(config-interface-epon-0/0)#
```

11.5.2. Config PON Port Performance Statistics Period 15H

Command	OLT(config-interface-epon-0/0)# statistics port <port-list> 24hour {enable disable}
View	EPON interface view
Description	This command is used for enable or disable the 24h time interval performance statistics of pon port.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{enable disable } }	enable:Enable 24h performance statistics disable:Disable 24h performance statistics

【Example】

Example 1: Enable pon1 24h time interval performance statistics function.

```
OLT(config-interface-epon-0/0)#statistics port 1 24hour enable

OLT(config-interface-epon-0/0)#
```



11.5.3. Config PON Port Performance Statistics Threshold

Command	OLT(config-interface-epon-0/0)# statistics port <port-list> threshold <type> <upper-threshold>
View	EPON interface view
Description	This command is used for set the threshold of pon port performance statistics.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
<type-ID>	<p>Range can be 1-64,among which:</p> <p>1:rx-octets:Byte of received message</p> <p>2:rx-frames:Frame of received message</p> <p>3:rx-bcasts:The received broadcast message</p> <p>4:rx-mcasts:The received multicast message</p> <p>5:rx-64octets:The received frame packet length for 64 bytes</p> <p>6:rx-65to127octets:The received frame packet length for 65-127 bytes</p> <p>7:rx-128to255octets:The received frame packet length for 128-255 bytes</p> <p>8:rx-256to511octets:The received frame packet length for 256-511 bytes</p> <p>9:rx-512to1023octets:The received frame packet length for 512-1023 bytes</p> <p>10:rx-1024to1518octets:The received frame packet length for 1024-1518 bytes</p> <p>13:rx-oversizes:The oversize received packet</p> <p>20:rx-discards:The discarded message at receiving</p> <p>23:tx-octets:The byte of transmitted message</p> <p>24:tx-frames:The frame of transmitted message</p> <p>25:tx-bcasts:The transmitted broadcast packet</p> <p>26:tx-mcasts:The transmitted multicast packet</p> <p>27:tx-64octets:The transmitted frame packet length for 64 bytes</p> <p>28:tx-65to127octets:The transmitted frame packet length for 65-127 bytes</p> <p>29:tx-128to255octets:The transmitted frame packet length for 128-255 bytes</p> <p>30:tx-256to511octets:The transmitted frame packet length for 256-511 bytes</p> <p>31:tx-512to1023octets:The transmitted frame packet length for 512-1023 bytes</p> <p>32:tx-1024to1518octets:The transmitted frame packet length for 1024-1518 bytes</p>

	35:tx-oversizes:The oversize transmitted packet 42:tx-discards:The discarded packet at transmitting
<upper-threshold d>	Upper limit threshold,range for 0-4294967295
<lower-threshold d>	Lower limit of threshold,range for 0-4294967295

【Example】

Example 1: Set the pon port statistics received frame quantity upper limit and lower limit as 50000 and 500.

```
OLT(config-interface-epon-0/0)#statistics port 1 threshold 35 50000 500
OLT(config-interface-epon-0/0)#
```

11.5.4. Clear PON Port Performance Statistics Infor

Command	OLT(config-interface-epon-0/0)#reset statistics port pon-port <port-id>
View	EPON interface view
Description	This command is used for clear the pon port performance statistics info.The port obtains data from the switching side, and the pon-port obtains data from the PON chip.
<port-id>	Port id to be set,range for 1,6-7.8

【Example】

Example 1: Clear pon1 performance statistics info.

```
OLT(config-interface-epon-0/0)#reset statistics port 1
OLT(config-interface-epon-0/0)#
```

11.5.5. Show PON Port Current 15min Performance Statistics

Command	OLT(config-interface-epon-0/0)#show statistics port <port-id> current-15min
View	EPON interface view
Description	This command is used for show current 15min statistics info of pon port.
<port-id>	Port id to be show,range for 1-16.

【Example】

Example 1: Show current 15min statistics info of pon1.

```

OLT(config-interface-epon-0/0)# show statistics port 1 current-15min
-----
Start time of this interval           : 2019-01-11 18:04:20+00:00
Total elapsed seconds in this interval : 33
-----
                                RX              TX
octets                          : 0          : 241
frames                           : 0          : 2
unicast frames                   : 0          : 0
broadcast frames                 : 0          : 1
multicast frames                 : 0          : 1
discard frames                   : 0          : 0
error frames                     : 0          : 0
oversize frames                  : 0          : 0
frames 64 octets                 : 0          : 0
frames 65 to 127 octets         : 0          : 1
frames 128 to 255 octets        : 0          : 1
frames 256 to 511 octets        : 0          : 0
frames 512 to 1023 octets       : 0          : 0
frames 1024 to 1518 octets      : 0          : 0
-----
OLT(config-interface-epon-0/0)#
    
```

11.5.6. Show PON Port Current 24Hs Performance Statistics

Command	OLT(config-interface-epon-0/0)# show statistics port <port-id> current-24hour
View	EPON interface view
Description	This command is used for show current 24h statistics info of pon port
<port-id>	Port id to be set,range for 1-16

【Example】

Example 1: Show current 24h statistics info of pon 1.

```

OLT(config-interface-epon-0/0)# show statistics port 1 current-24hour
-----
Start time of this interval           : 2019-01-11 18:07:04+00:00
Total elapsed seconds in this interval : 9
-----
                                RX              TX
octets                              : 68         : 0
    
```

frames	: 1	: 0
unicast frames	: 0	: 0
broadcast frames	: 1	: 0
multicast frames	: 0	: 0
discard frames	: 1	: 0
error frames	: 0	: 0
oversize frames	: 0	: 0
frames 64 octets	: 0	: 0
frames 65 to 127 octets	: 1	: 0
frames 128 to 255 octets	: 0	: 0
frames 256 to 511 octets	: 0	: 0
frames 512 to 1023 octets	: 0	: 0
frames 1024 to 1518 octets	: 0	: 0

OLT(config-interface-epon-0/0)#

11.5.7. Show PON Port History 15min Performance Statistics

Command	OLT(config-interface-epon-0/0)# show statistics port <port-id> historic-15min <interval-number>
View	EPON interface view
Description	This command is used for show performance statistics of pon port over the past 15min
<port-id>	Port id to be set,range for 1-16
<interval-number>	Interval number,range for 1-96.Each interval for 15min,so the time=15min*interval number.

【Example】

Example 1: Show the past 15min statistics info of pon1.

<pre> OLT(config-interface-epon-0/0)#show statistics port 1 historic-15min 1 ----- Start time of this interval:2000-01-01 08:59:05+08:00 Interval number of historical 15 minutes:1 The data for this interval is valid Total monitored seconds in the historic interval:900 ----- RX octets:0 RX frames:0 RX unicast frames:0 RX broadcast frames:0 </pre>
--


```

RX multicast frames:0
RX discard frames:0
RX error frames:0
RX oversize frames:0
RX frames 64 octets:0
RX frames 65 to 127 octets:0
RX frames 128 to 255 octets:0
RX frames 256 to 511 octets:0
RX frames 512 to 1023 octets:0
RX frames 1024 to 1518 octets:0
TX octets:0
TX frames:0
TX unicast frames:0
TX broadcast frames:0
TX multicast frames:0
TX discard frames:0
TX error frames:0
TX oversize frames:0
TX frames 64 octets:0
TX frames 65 to 127 octets:0
TX frames 128 to 255 octets:0
TX frames 256 to 511 octets:0
TX frames 512 to 1023 octets:0
TX frames 1024 to 1518 octets:0
-----
OLT(config-interface-epon-0/0)#
    
```

11.5.8. Show PON Port History 24H Performance Statistics

Command	OLT(config-interface-epon-0/0)# show statistics port <port-id> historic-24hour <interval-number>
View	EPON interface view
Description	This command is used for show the performance statistics of PON over the past 24 hours.
<port-id>	Port id to be show,range for 1-16.
<interval-number>	Interval number,range for 1-7.Each interval for 24h,so the time=24h*interval number.

【Example】

Example 1: Show the performance statistics of pon1 over the past 24h.

```

OLT(config-interface-epon-0/0)#show statistics port 1 historic-24hour 1
    
```



```
The data for this interval is invalid!

OLT(config-interface-epon-0/0)#
```

11.5.9. Show PON Port Performance Statistics Threshold

Configuration from Switch side

Command	OLT(config-interface-epon-0/0)# show statistics port <port-id> threshold
View	EPON interface view
Description	This command is used for show the threshold configuration of pon port performance statistics from switch side
<port-id>	Port id to be set,range for 1-16.

【Example】

Example 1: Show threshold configuration of pon1 performance statistics.

```
OLT(config-interface-epon-0/0)#show statistics port 1 threshold
TX oversize frames:upper:50000 lower:500

OLT(config-interface-epon-0/0)#
```

11.5.10. Show PON Port Performance from Pon side

Command	OLT(config-interface-epon-0/0)# show statistics pon-port port-ID
View	EPON interface view
Description	This command is used for show the pon port performance statistics from pon side
port-ID	Port id to be set,range for 1-16.

【Example】

Example 1: Show PON port 9 performance

```
OLT(config-interface-epon-0/0)# show statistics pon-port 9
-----
                RX                TX
-----
bad_sld          : 0                :-
crc8_err         : 0                :-
bcast_regreq     : 0                :-
bcast_crc32      : 0                :-
```

bcast_reg	: -	: 0
bcast_gate	: -	: 3523
good_octets	: 47979	: 2837430
ucast_frames	: 6	: 18
crc_err_frames	: 0	: -
err_frames	: -	: 0
mcast_frames	: 0	: 15583
bcast_frames	: 699	: 20855
oam_frames	: 1778	: 1778
pause_frames	: 0	: 0
ukn_op_frames	: 0	: -
runt_frames	: 0	: -
giant_frames	: 0	: 0
64_frames	: 0	: 0
65_127_frames	: 705	: 35625
128_255_frames	: 0	: 519
256_511_frames	: 0	: 303
512_1023_frames	: 0	: 9
1024_max_frames	: 0	: 0

OLT(config-interface-epon-0/0)#		

11.6. OLT PON Port Storm Control Function

11.6.1. Config PON Port Broadcast Storm Control Function

Command	OLT(config-interface-epon-0/0)# traffic-suppress <port-id> broadcast {enable disable} pps <value>
View	EPON interface view
Description	This command is used for enable or disable broadcast storm suppression function and set the pulse number per second of pon port.Preventing such message from occupying excessive network source to result in network congestion.
<port-id>	Port id to be set,range for 1-16
{enable disable }	Enable:Enable broadcast storm suppression function of pon port disable:Disable broadcast storm suppression function of pon port
<value>	Pulse number per second,range for 1-1488100,unit is pps

【Example】

Example 1: Enable broadcast storm suppression function of pon1 and set the pulse number

as 14000 pps.

```
OLT(config-interface-epon-0/0)#traffic-suppress 1 broadcast enable pps 14000

OLT(config-interface-epon-0/0)#
```

11.6.2. Config PON Port Unknown Multicast Storm Control

Function

Command	OLT(config-interface-epon-0/0)# traffic-suppress <port-id> unknown-multicast {enable disable} pps<value>
View	PON view
Description	This command is used for enable or disable unknown multicast storm suppression function of pon port and set pulse number per second.preventing such message from occupying excessive network source to result in network congestion.
<port-id>	Port id to be set,range for 1-16.
{enable disable }	Enable:Enable unknown multicast storm suppression function of pon port disable:Disable unknown multicast storm suppression function of pon port
<value>	Pulse number per second,range for 1-1488100,unit is pps

【Example】

Example 1: Enable unknown multicast storm suppression function of pon1 and set the pulse number as 14000 pps.

```
OLT(config-interface-epon-0/0)#traffic-suppress 1 unknown-multicast enable pps 14000

OLT(config-interface-epon-0/0)#
```

11.6.3. Config PON Port Unknown Unicast Storm Control

Command	OLT(config-interface-epon-0/0)# traffic-suppress <port-id> unknown-unicast {enable disable} pps <value>
View	EPON interface view
Description	This command is used for enable or disable unknown unicast storm suppression function of pon port and set pulse number per second.preventing such message from occupying excessive network source to result in network congestion.

<port-id>	Port id to be set,range for 1-16.
{enable disable }	Enable:Enable unknown unicast storm suppression function of pon port disable:Disable unknown unicast storm suppression function of pon port
<value>	Pulse number per second,range for 1-1488100,unit is pps

【Example】

Example1:Enable unknown unicast storm suppression function of pon1 and set the pulse number as 14000 pps.

```
OLT(config-interface-epon-0/0)#traffic-suppress 1 unknown-unicast enable pps 14000
OLT(config-interface-epon-0/0)#
```

11.7. OLT PON Port Rate Limit Function

11.7.1. Config PON Port Egress and Ingress Rate Limit

Command	OLT(config-interface-epon-0/0)# port-rate <port-list> {egress/ingress} <rate>
View	EPON interface view
Description	This command is used for set a rate limitation value for egress or ingress message of pon port.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
egress/ingress	Egress:Downstream direction Ingress:Upstream direction
<rate>	Rate,range for 64-10240000,unit is Kbps.Pon port is without limitation by default

【Example】

Example 1: Limit downstream rate of pon1 as 102400Kbps.

```
OLT(config-interface-epon-0/0)#port-rate 1 egress 102400
OLT(config-interface-epon-0/0)#
```

11.7.2. Delete PON Port Egress and Ingress Rate Limit

Command	OLT(config-interface-epon-0/0)# no port-rate <port-list> {egress/ingress}
----------------	--

View	EPON interface view
Description	This command is used for cancel rate limitation of pon port.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{egress/ingress}	Egress:downstream Ingress:upstream
<rate>	Rate,range for 64-10240000,unit is Kbps.Pon port is without limitation by default

【Example】

Example 1: Cancel downstream rate limitation of pon1.

```
OLT(config-interface-epon-0/0)#no port-rate 1 egress
OLT(config-interface-epon-0/0)#
```

11.7.3. Show PON Port Egress and Ingress Rate Limit Configuration

Command	OLT(config-interface-epon-0/0)# show port-rate <port-list>
View	EPON interface view
Description	This command is used for show upstream and downstream rate limited configuration info of pon port
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8

【Example】

Example 1: Show upstream and downstream rate limited configuration of pon1.

```
OLT(config-interface-epon-0/0)#show port-rate 1
Traffic shaping:
-----
port egress ingress
pon0/0/1 0 0
OLT(config-interface-epon-0/0)#
```

11.8. OLT PON Port Isolate Function

11.8.1. Config PON Port Isolate

Command	OLT(config-interface-epon-0/0)# isolate <port-list> {enable disable}
View	EPON interface view

Description	This command is used for enable or disable the isolating function between port to port.The port can not communicate with other port when the isolating function is enabled.The default is enabled.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{enable disable }	Enable:Enable port to port isolating function Disable:Disable port to port isolating function

【Example】

Example 1: Enable isolating function of pon1.

```
OLT(config-interface-epon-0/0)#isolate 1 enable

OLT(config-interface-epon-0/0)#
```

11.8.2. Config PON Port Ont-isolate Function

Command	OLT(config-interface-epon-0/0)# ont-isolate <port-list> {enable disable}
View	EPON interface view
Description	This command is used for enable or disable ont-isolate function of pon port.The ont that located in the same pon port can not communicate with each other when ont-isolate function is enabled.By default it is enabled.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{enable disable }	Enable:Enable ont-isolate function Disable:Disable ont-isolate function

【Example】

Example 1: Disable ont-isolate function of pon1.

```
OLT(config-interface-epon-0/0)#ont-isolate 1 disable

OLT(config-interface-epon-0/0)#
```

11.8.3. Show PON Port Isolation Configuration Info

Command	OLT(config-interface-epon-0/0)# show port isolate
View	EPON interface view
Description	This command is used for show isolating configuration info of pon port.

【Example】



Example1:Show isolating configuration info of pon port

```
OLT(config-interface-epon-0/0)#show port isolate
Isolate among pon port:
pon0/0/1 pon0/0/2 pon0/0/3 pon0/0/4 pon0/0/5
pon0/0/6 pon0/0/7 pon0/0/8 pon0/0/9 pon0/0/10
pon0/0/11 pon0/0/12 pon0/0/13 pon0/0/14 pon0/0/15
pon0/0/16
Isolate among uplink port:
ge0/0/1

OLT(config-interface-epon-0/0)#
```

11.9. OLT PON Port VLAN Config

11.9.1. Config PON Port VLAN Mode

Command	OLT(config-interface-epon-0/0)# vlan mode <port-list> {access/hybrid/trunk}
View	EPON interface view
Description	This command is used for set vlan mode of pon port.The default is access mode.The processing way to message of the port is shown on Appendix 1
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
access/hybrid/trunk	Access:This kind of port only belongs to one vlan,generally it is used for connect to the computer Trunk:This kind of port allows to several vlan passing,it can receive and transmit different vlan message,generally,it is used for connect to the port between Switch. Hybrid:This kind of port allows to several vlan passing,it can receive and transmit different vlan message,generally,it is used for connect to the port between Switch or connect to computer.

【 Example 】

Example 1: Set the vlan mode of pon1 as access.

```
OLT(config-interface-epon-0/0)#vlan mode 1 access

OLT(config-interface-epon-0/0)#
```

11.9.2. Config PON Port Native-vlan

Command	OLT(config-interface-epon-0/0)# vlan native-vlan <port-list>
----------------	---

	<vlan-ID>
View	EPON interface view
Description	This command is used for set native vlan of pon port,the default native vlan is 1.The processing way to message of the port is shown on Appendix 1
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
<vlan-ID>	VLAN ID,range for 1-4094

【Example】

Example 1: Set the native vlan of pon1 as 10.

```
OLT(config-interface-epon-0/0)#vlan native-vlan 1 10
OLT(config-interface-epon-0/0)#
```

11.9.3. Config PON Port Native-vlan Priority

Command	OLT(config-interface-epon-0/0)# vlan native-vlan-priority <port-list> <priority>
View	EPON interface view
Description	This command is used for set the native vlan priority of pon port,the default is 0.
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
<priority>	Priority,range for 0-7

【Example】

Example 1: Set native vlan of pon1 as 1.

```
OLT(config-interface-epon-0/0)#vlan native-vlan-priority 1 1
OLT(config-interface-epon-0/0)#
```

11.9.4. Config PON Port Access Mode VLAN

Command	OLT(config-interface-epon-0/0)# vlan access <port-list> <vlan-id>
View	EPON interface view
Description	This command is used for set access vlan of pon port,the default access vlan is 1.The processing way to message of the port is shown on Appendix 1



<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
<vlan-id>	Access VLAN ID,range for 1-4094

【Example】

Example 1: Set the access vlan of pon1 as 100.

```
OLT(config-interface-epon-0/0)#vlan access 1 100

OLT(config-interface-epon-0/0)#
```

11.9.5. Config PON Port Hybrid Mode VLAN

Command	OLT(config-interface-epon-0/0)# vlan hybrid <port-list> <{tagged untagged}> <vlan-list>
View	PON view
Description	This command is used for set hybrid vlan of pon port.The processing way to message of the port is shown on Appendix 1
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
{tagged untagged}	tagged:Add vlan tag for tx message untagged:Peel off the vlan tag for the tx message
<vlan-list>	VLAN ID,range for 1-4094.format for 1,11-27,100

【Example】

Example 1: Set vlan mode of pon1 as hybrid and add untagged vlan 10-15 to it.

```
OLT(config-interface-epon-0/0)#vlan hybrid 1 untagged 10-15
pon0/0/1:hybrid vlan added,failed:0,success:6

OLT(config-interface-ge-0/0)#
```

Example 2:Set vlan mode of pon1 as hybrid and add vlan 101 tagged to it.

```
OLT(config-interface-epon-0/0)#vlan hybrid 1 tagged 101
pon0/0/1:hybrid vlan added,failed:0,success:1

OLT(config-interface-epon-0/0)#
```

11.9.6. Delete PON Port Hybrid Mode VLAN

Command	OLT(config-interface-epon-0/0)# no vlan hybrid <port-id> <{tagged untagged}> <vlan-list>
View	PON view

Description	This command is used for delete the hybrid vlan of pon port.The processing way to message of the port is shown on Appendix 1
<port-id>	Port ID to be delete,range for 1-16
{tagged untagged}	tagged:Add vlan tag for tx message untagged:Peel off the vlan tag for the tx message
<vlan-list>	VLAN ID,range for 1-4094.format for 1,11-27,100

【Example】

Example 1: Delete hybrid vlan 10-15 tagged of pon1.

```
OLT(config-interface-epon-0/0)#no vlan hybrid 1 tagged 10-15

OLT(config-interface-epon-0/0)#
```

11.9.7. Config PON Port Trunk Mode VLAN

Command	OLT(config-interface-epon-0/0)# vlan trunk <port-list> <vlan-list>
View	EPON interface view
Description	This command is used for set the trunk vlan of pon port.The processing way to message of the port is shown on Appendix 1
<port-list>	Port list to be set,range for 1-16,format for 1,6-7,8
<vlan-list>	VLAN ID,range for 1-4094.Format can be 1,11-27,100

【Example】

Example1:Add trunk vlan 10-15 to pon1.

```
OLT(config-interface-epon-0/0)#vlan trunk 1 10-15
pon0/0/1:trunk vlan allowed,failed:0,success:6

OLT(config-interface-epon-0/0)#
```

11.9.8. Delete PON Port Trunk Mode VLAN

Command	OLT(config-interface-epon-0/0)# no vlan trunk <port-id> <vlan-list>
View	PON view
Description	This command is used for delete the trunk vlan of pon port.The processing way to message of the port is shown on Appendix 1
<port-id>	Port ID to be delete,range for 1-16
<vlan-list>	VLAN ID,range for 1-4094.Format can be 1,11-27,100

【 Example 】

Example 1: Delete trunk vlan 10-15 of pon1.

```
OLT(config-interface-epon-0/0)#no vlan trunk 1 10-15
OLT(config-interface-epon-0/0)#
```

11.9.9. Config PON Port Translate Mode VLAN

Command	OLT(config-interface-epon-0/0)# vlan translate <port-list> <old-vlan> <new-vlan> <new-priority>
View	EPON interface view
Description	This command is used for set translate vlan of pon port.In the upstream direction,it can translate old vlan into new vlan and update new priority
<port-list>	Port list to be set,range for 1-16,format is 1,6-7,8
<old-vlan>	Old VLAN ID,range for 1-4094
<new-vlan>	New VLAN ID,range for 1-4094
<new-priority>	New VLAN priority,range for 0-7

【 Example 】

Example 1: Translate vlan 10 of pon1 into vlan 11 and update the priority as 3.

```
OLT(config-interface-epon-0/0)#vlan translate 1 10 11 3
OLT(config-interface-epon-0/0)#
```

11.9.10. Delete PON Port Translate Mode VLAN

Command	OLT(config-interface-ge-0/0)# no vlan translate <port-list> <vlan-list>
View	PON view
Description	This command is used for delete the translate VLAN of pon port.In the upstream direction,it can translate old vlan into new vlan and update new priority
<port-list>	Port list to be delete,range for 1-16
<vlan-list>	VLAN list to be delete,range for 1-4094

【 Example 】

Example 1: Delete translate vlan 10 of pon1.

```
OLT(config-interface-epon)#no vlan translate 1 10
```

```
OLT(config-interface-epon)#
```

11.9.11. Config PON Port QinQ VLAN

Command	OLT(config-interface-epon-0/0)# vlan qinq <port-list> cvlan-range <start-cvlan> <end-cvlan> <qinq-svlan> <svlan-priority>
View	EPON interface view
Description	This command is used for set qinq vlan of pon port.In upstream direction,it can add a SVLAN for the stream between start-CVLAN and end-CVLAN.It need to create a SVLAN in global mode(config view)
<port-list>	Port list to be set,range for 1-16,format is 1,6-7,8
<start-cvlan>	The inner start vlan,range for 1-4094
<end-cvlan>	The inner end vlan,range for 1-4094
<qinq-svlan>	The outer vlan,range for 1-4094
<svlan-priority>	SVLAN priority,range for 0-7

【 Example 】

Example 1: The qinq setting of pon1:add a svlan 20 for the stream which is between vlan 10-15 and set its priority as 0.

```
OLT(config-interface-epon-0/0)#vlan qinq 1 cvlan-range 10 15 20 0

OLT(config-interface-epon-0/0)#
```

11.9.12. Delete PON Port QinQ VLAN

Command	OLT(config-interface-epon-0/0)# no vlan qinq <port-list> cvlan-range <start-cvlan> <end-cvlan>
View	EPON interface view
Description	This command is used for delete qinq vlan of pon port.In upstream direction,it can add a SVLAN for the stream between start-CVLAN and end-CVLAN.It need to create a SVLAN in global mode(config view)
<port-list>	Port list to be set,range for 1-16,format is 1,6-7,8
<start-cvlan>	The inner start vlan,range for 1-4094
<end-cvlan>	The inner end vlan,range for 1-4094

【 Example 】

Example 1: Delete the qinq setting of pon1.

```
OLT(config-interface-epon-0/0)#no vlan qinq 1 cvlan-range 10 15

OLT(config-interface-epon-0/0)#
```

11.9.13. Config PON Port Aggregation VLAN

Command	OLT(config-interface-epon-0/0)# vlan aggregation pon-port <port-list> cvlan-range <start-cvlan> <end-cvlan> <aggregation-svlan> <svlan-priority>
View	EPON interface view
Description	This command is used for set aggregation vlan of pon port.In upstream direction,it can translate the vlan which range is from start-cvlan to end-cvlan into svlan.
<port-list>	Port list to be set,range for 1-16,format is 1,6-7,8
<start-cvlan>	The inner start vlan,range for 1-4094
<end-cvlan>	The inner end vlan,range for 1-4094
<aggregation-svlan>	SVLAN ID,the vlan after translating,range for 1-4094
<svlan-priority>	Priority of SVLAN,range for 0-7

【Example】

Example 1: Translate the cvlan 10-15 of pon1 upstream direction into svlan 20.

```
OLT(config-interface-epon-0/0)#vlan aggregation pon-port 1 cvlan-range 10 15 20 0

OLT(config-interface-epon-0/0)#
```

11.9.14. Delete PON Port Aggregation VLAN

Command	OLT(config-interface-epon-0/0)# no vlan aggregation all <pon-port port-list all cvlan-range start-cvlan end-cvlan aggregation-svlan> <ont port-list ont-id all cvlan-range start-cvlan end-cvlan aggregation-svlan>
View	EPON interface view
Description	This command is used for delete aggregation vlan of pon port.
port-list	Port list to be set,range for 1-16,format is 1,6-7,8
start-cvlan	The inner start vlan,range for 1-4094

<i>end-cvlan</i>	The inner end vlan,range for 1-4094
<i>aggregation-svlan</i>	SVLAN ID,the vlan after translating,range for 1-4094

【Example】

Example 1: Delete all pon ports aggregation vlan config.

```
OLT(config-interface-epon-0/0)# no vlan aggregation all

OLT(config-interface-epon-0/0)#
```

11.9.15. Config PON Port Protocol VLAN

Command	OLT(config-interface-epon-0/0)# protocol-vlan <protocol-index> {add delete} port <port-list> <vlan-ID>
View	EPON interface view
Description	This command is used for bind a protocol vlan index for port and port vlan.Firstly,it needs to create a protocol-vlan in config view
<protocol-index>	Protocol vlan index,range for 1-16
{add delete}	add:Add vlan delete>Delete vlan
<port-list>	Port list to be set,range for 1-16,format is 1,6-7,8
<vlan-ID>	VLAN ID,range for 1-4094

【Example】

Example 1: Bind pon1 to protocol vlan index 1 and add it into vlan 100.

```
OLT(config-interface-epon-0/0)#protocol-vlan 1 add port 1 100

OLT(config-interface-epon-0/0)#
```

11.9.16. Show OLT PON Port VLAN Configuration

Command	OLT(config-interface-ge-0/0)# show port vlan <port-id>
View	EPON interface view
Description	This command is used for show vlan info od pon port
<port-id>	Port-ID:Port id to be show,range for 1-16

【Example】



Example 1: Show vlan info of pon1.

```

OLT(config-interface-epon-0/0)#show port vlan 1
-----
Port:pon0/0/1 Mode:Access Native-Vlan:1 Priority:0
-----
Tagged-Vlan:
-
-----
Untagged-Vlan:
1
-----

OLT(config-interface-epon-0/0)#
    
```

11.9.17. Show PON Port Translate VLAN Configuration

Command	OLT(config-interface-epon-0/0)# show vlan translate all
View	EPON interface view
Description	This command is used for show vlan translating info of all pon port

【Example】

Example 1: Show VLAN translating info of all the pon port

```

OLT(config-interface-epon-0/0)#show vlan translate all
-----
index port oldvlan newvlan priority mode
-----
1 pon0/0/1 21 30--Translate
2 pon0/0/1 10-12 20 0 QinQ
-----

OLT(config-interface-epon-0/0)#
    
```

11.9.18. Show PON Port Aggregation VLAN Configuration

Command	OLT(config-interface-epon-0/0)# show vlan aggregation pon-port {<port-id>/all}
View	EPON interface view
Description	This command is used for show aggregation vlan info of pon port
<port-id>/all	Port-ID:Port ID to be show,range for 1-16 All:Show aggregation vlan info of all the pon port

【Example】



Example 1: Show aggregation vlan info of all the pon port

```

OLT(config-interface-epon-0/0)#show vlan aggregation pon-port all
-----
index port ontId cvlan svlan priority
-----
1 0/0/1--10-13 20 2
-----

OLT(config-interface-epon-0/0)#
    
```

11.10. OLT PON Port Loopback Detection

11.10.1. Config PON port Loopback Detection

Command	OLT(config-interface-epon-0/0)# loopback-detection port-list (enable disable)
View	EPON view
Description	This command is used for enable or disable loop monitoring of the PON port. On the access port, if the system finds that the port is monitored by loopback, the port performs the corresponding operation according to the loopback detection action, and reports the trap information to the terminal and deletes the MAC address forwarding entry corresponding to the port. On a trunk or a hybrid port, if the system finds that the port is monitored by loopback, the device only reports traps to the terminal.
<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of EPON interfaces is 1-16.

【Example】

Example 1: Enable pon port 1 loopback-detection.

```

OLT(config-interface-epon-0/0)# loopback-detection 1 enable

OLT(config-interface-epon-0/0)#
    
```

11.10.2. Config PON port Loopback Detection Control Function

Command	OLT(config-interface-epon-0/0)# loopback-detection port-list control (enable disable)
View	EPON view
Description	This command is used for enable or disable the loop control

	monitoring of the pon port. For a trunk or a hybrid port, when the loopback detection function of the port is enabled at the same time as the loopback detection function, the system performs corresponding operations on the port according to the loopback detection action, and reports the trap information to the terminal and deletes the port. MAC address forwarding entry. If it is a trunk port, it is found that the loop only reports errors. You need to set the port to be controlled. The access port is not required.
<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of EPON interfaces is 1-16.

【Example】

Example 1: Enable PON port 1 loopback-detection control.

```
OLT(config-interface-epon-0/0)# loopback-detection 1 control enable

OLT(config-interface-epon-0/0)#
```

11.10.3. Config PON port Loopback Detection Per-vlan

Command	OLT(config-interface-epon-0/0)# loopback-detection <i>port-list</i> per-vlan (enable disable)
View	EPON view
Description	This command is used for enable monitoring for all vlans. For trunk ports, loop monitoring and loop controlled monitoring can only monitor the default vlan of the trunk port. Not valid for access port.
<i>port-list</i>	The list of ports to be configured, in the format 1,6-7,8. The range of EPON interfaces is 1-16.

【Example】

Example 1: Enable PON port 1 loopback-detection per-vlan.

```
OLT(config-interface-epon-0/0)# loopback-detection 1 per-vlan enable

OLT(config-interface-epon-0/0)#
```

12. OLT MAC Address Table Manage

12.1. Config OLT MAC-address Black-hole

Command	OLT(config)# mac-address black-hole vlan <vlan-id> <mac-address>
----------------	--



View	Config view
Description	This command is used for specify a black hole mac address table.If source mac address or destination mac address of some message is equal to the mac address in black hole mac address table,the Switch will discard this message.
<vlan-id>	VLAN id,range for 1-4094
<mac-address>	Mac address,format for XX:XX:XX:XX:XX:XX

【 Example 】

Example 1: Add mac 00:00:00:12:34:56 to black hole mac address table of vlan 100

```
OLT(config)#mac-address black-hole vlan 100 00:00:00:12:34:56
OLT(config)#
```

12.2. Delete MAC-Address Black-hole

Command	OLT(config)#no mac-address black-hole vlan <vlan-id> <mac-address>
View	Config view
Description	This command is used for delete black-hole mac address
<vlan-id>	VLAN ID,range for 1-4094.
<mac-address>	Mac address,format for XX:XX:XX:XX:XX:XX

【 Example 】

Example 1: Delete vlan 100 black-hole mac address 00:00:00:12:34:56

```
OLT(config)#no mac-address black-hole vlan 100 00:00:00:12:34:56
OLT(config)#
```

12.3. Config OLT Mac Address Entries limit

Command	OLT(config)#mac-address limit port {epon/ge/xge } F/S <port-list> <number>
View	Config view
Description	This command is used for set the maximum mac address learning entry,when the quantity of mac address is out of this value,OLT will discard the other mac address except the learned mac.

epon/ge/xge	epon:PON port ge:ge uplink port xge:xge 10giga uplink port
F/S	FrameID/SlotID,<0-0>/<0-0>,the value of 1U olt is 0/0
<port-list>	Port list to be set,range for 1-16,format is 1,6-7,8
<number>	The number of mac address,range for 0-8092,zero means without limitation.The default is 0.

【 Example 】

Example 1: Set the maximum learning mac address entry of GE5 as 500

```
OLT(config)#mac-address limit port ge 0/0 5 500

OLT(config)#
```

12.4. Add Static MAC Address Bind Function

Command	OLT(config)# mac-address static port {epon/ge/ xge} F/S/P {lag <manual-group-ID>/<lacp-group-ID>} vlan <vlan-ID> <mac-address>
View	Config view
Description	This command is used for set the static mac address.With this function,the devices needn't mac address learning process,it can transfer the message according to static mac.
epon/ge/xge/lag	epon:Pon port,range for 0/0/1-16 ge:GE uplink port,range for 0/0/1-8 xge:10giga xge uplink port,range for 0/0/1-2 Lag:Port aggregation group,range for 1-8,9-16
F/S/P	FrameID/SlotID/PortID,<0-0>/<0-0>/<1-16>
<manual-group-ID> <lacp-group-ID>	manual-group-ID,range for 1-8 lacp-group-ID,range for 9-16
<vlan-ID>	VLAN ID,range for 1-4094。
<mac-address>	Mac address,format for XX:XX:XX:XX:XX:XX

【 Example 】

Example 1: Bind mac address e0:67:b3:12:eb:f6 with GE5 and vlan 100.

```
OLT(config)#mac-address static port ge 0/0/5 vlan 100 e0:67:b3:12:eb:f6

OLT(config)#
```

Example 2: Bind mac address e0:67:b3:12:eb:f6 with pon1 and vlan 100.

```
OLT(config)#mac-address static port epon 0/0/1 vlan 100 e0:67:b3:12:eb:f7
```

```
OLT(config)#
```

Example 3: Bind mac address e0:67:b3:12:eb:f6 with XGE1 and vlan 100.

```
OLT(config)#mac-address static port xge 0/0/1 vlan 100 e0:67:b3:12:eb:f8
```

```
OLT(config)#
```

Example 4: Bind mac address e0:67:b3:12:eb:f6 with lag1 and vlan 100.

```
OLT(config)#mac-address static port lag 1 vlan 100 e0:67:b3:12:eb:f9
```

```
OLT(config)#
```

12.5. Delete Static MAC Address bind

Command	OLT(config)#no mac-address static port {epon/ge/ xge} F/S/P {lag <manual-group-ID> <lacp-group-ID>} vlan <vlan-ID> <mac-address>
View	Config view
Description	This command used to delete static mac address of olt
epon/ge/xge/lag	epon:Pon port,range for 0/0/1-16 ge:GE uplink port,range for 0/0/1-8 xge:10giga xge uplink port,range for 0/0/1-2 Lag:Port aggregation group,range for 1-8,9-16
F/S/P	FrameID/SlotID/PortID, <0-0>/<0-0>/<1-16> ,
<manual-group-ID> /<lacp-group-ID>	FrameID/SlotID/PortID,<0-0>/<0-0>/<1-16>
<vlan-ID>	manual-group-ID,range for 1-8 lacp-group-ID,range for 9-16
<mac-address>	VLAN ID,range for 1-4094。

【 Example 】

Example 1: No bind the mac address e0:67:b3:12:eb:f6 with the GE5 and vlan 100.

```
OLT(config)#no mac-address static port ge 0/0/5 vlan 100 e0:67:b3:12:eb:f6
```

```
OLT(config)#
```



Example 2:No bind the mac address e0:67:b3:12:eb:f6 with the pon1 and vlan 100.

```
OLT(config)#no mac-address static port epon 0/0/1 vlan 100 e0:67:b3:12:eb:f7
```

```
OLT(config)#
```

Example 3:No bind the mac address e0:67:b3:12:eb:f6 with the XGE1 and vlan 100.

```
OLT(config)#no mac-address static port xge 0/0/1 vlan 100 e0:67:b3:12:eb:f8
```

```
OLT(config)#
```

Example 4:No bind the mac address e0:67:b3:12:eb:f6 with the lag1 and vlan 100.

```
OLT(config)#no mac-address static port lag 1 vlan 100 e0:67:b3:12:eb:f9
```

```
OLT(config)#
```

12.6. Config OLT MAC Address Aging Time

Command	OLT(config)# mac-address timer {<aging-time>/no-aging}
View	Config view
Description	This command is used for set the dynamic table body aging time of the system mac address table.it takes effect immediately after successful setting,system will check the dynamic address by timing,if the system has not transmit or receive any message with specified source mac address during the aging time,this mac address will be deleted from mac address table.Dynamic mac address aging timer can release the source of mac address table to learn new mac address.
{<aging-time>/no-aging}	<aging-time>:mac address aging time,range for 10-1000000,unit is second no-aging:Set mac address without aging time.when it is no need to open mac address aging function,use this parameter

【Example】

Example 1: Set mac address aging time as 1000 second.

```
OLT(config)#mac-address timer 1000
```

```
OLT(config)#
```

12.7. Clear OLT MAC Address Table

Command	OLT(config)# mac-address flush {all/dynamic/black-hole/static}
----------------	---



View	Config view
Description	This command is used for clear the mac address table of olt
{all/dynamic/black-hole/static}	All:All the mac address in the table Dynamic:Dynamic mac address black-hole:Black hole mac address Static:Static mac address

【 Example 】

Example 1: Clear all the mac address in the mac address table.

```
OLT(config)#mac-address flush all

OLT(config)#
```

12.8. Clear OLT Port MAC Address Table

Command	OLT(config)# mac-address flush port {epon/ge/ xge} F/S/P / {lag <manual-group-ID>/<lacp-group-ID>/all/dynamic/ static }
View	Config view
Description	This command is used for clear the MAC address learned by the port of OLT
{epon/ge/xge/l ag}	epon:Pon port,range for 0/0/1-16 ge:GE uplink port,range for 0/0/1-8 xge:10giga xge uplink port,range for 0/0/1-2 Lag:Port aggregation group,range for 1-8,9-16
F/S/P	FrameID/SlotID/PortID, <0-0>/<0-0>/<1-16> ,
<manual-group-ID>/<lacp-group-ID>	FrameID/SlotID/PortID,<0-0>/<0-0>/<1-16>
all/dynamic/sta tic	All:All the mac address in the table Dynamic:Dynamic mac address Static:Static mac address

【 Example 】

Example 1: Clear the MAC address learned by GE1.

```
OLT(config)#mac-address flush port ge 0/0/1 all

OLT(config)#
```

12.9. According OLT VLAN Clear MAC Address Table



Command	OLT(config)# mac-address flush vlan<vlan-ID> {all/black-hole/dynamic/static}
View	Config view
Description	This command is used for clear the mac address learned by the vlan of olt
<vlan-ID>	Vlan id
all/black-hole/dynamic/static	All:All the mac address in the table Dynamic:Dynamic mac address black-hole:Black hole mac address Static:Static mac address

【 Example 】

Example 1: Clear all the mac address learned by vlan 100.

```
OLT(config)#mac-address flush vlan 100 all
OLT(config)#
```

12.10. Show OLT MAC Address Table

Command	OLT(config)# show mac-address all
View	Config view
Description	This command is used for show all the mac address learn by olt

【 Example 】

Example 1: Show all the mac address learned by olt.

```
OLT(config)#show mac-address all
-----
Total:3
-----
MAC VLAN Port MAC-Type
-----
E0:56:43:A9:B4:1A 100 cpu static
E0:56:43:A9:B4:1A 200 cpu static
E0:56:43:A9:B4:1A 1000 cpu static
-----
OLT(config)#
```

12.11. Show OLT MAC Address Black Hole

Command	OLT(config)# show mac-address black-hole
View	Config view
Description	This command is used for show all the black hole mac address of olt

【 Example 】

Example1:Show all the black hole mac address of olt.

```

OLT(config)#show mac-address black-hole
<cr>-Please press ENTER to execute command

OLT(config)#show mac-address black-hole
-----
Total:1
-----
MAC VLAN Port MAC-Type
-----
00:12:13:23:45:32 100 cpu blackhole
-----

OLT(config)#
    
```

12.12. Show OLT Dynamic MAC Address Table

Command	OLT(config)# show mac-address dynamic
View	Config view
Description	This command is used for show all the dynamic mac address learned by olt

【 Example 】

Example 1: Show all the dynamic mac address learned by olt.

```

OLT(config)#show mac-address dynamic
-----
Total:3
-----
MAC VLAN Port MAC-Type
-----
02:02:5C:6E:0F:17 1 ge0/0/5 dynamic
F4:06:69:B3:74:8C 1 ge0/0/5 dynamic
00:0A:C2:22:B0:9D 1 ge0/0/5 dynamic
-----
    
```



```
OLT(config)#
```

12.13. Show MAC Address Table From ONU

Command	OLT(config)# show mac-address ont F/S/P <onu-id>
View	Config view
Description	This command is used for show the mac address learned by onu
F/S/P	FrameID/SlotID/PortID,range for<0-0>/<0-0>/<1-16>
<onu-id>	ONU id,range for 1-64

【Example】

Example 1: Show mac address learned by pon1 ont 4.

```
OLT(config)#show mac-address ont 0/0/1 4
-----
Total:1
-----
MAC VLAN Port ONU-Id MAC-Type
-----
E0:67:B3:0D:0E:01 1 pon0/0/1 4 dynamic
-----
OLT(config)#
```

12.14. Show MAC Address Table From PON Port

Command	OLT(config)# show mac-address port epon F/S/P with-ont-location
View	Config view
Description	This command is used for show the mac address learned by pon port and show the onu id that the mac address had through
F/S/P	FrameID/SlotID/PortID,range for<0-0>/<0-0>/<1-16>
with-ont-location	This parameter is optional,if it is added,it will show the onu id that the mac address had through

【Example】

Example 1: Show the mac address learned by pon1 and show the onu id that the mac address had through

```
OLT(config)#show mac-address port epon 0/0/1 with-ont-location
```

```

-----
Total:1
-----
MAC VLAN Port ONU-Id MAC-Type
-----
E0:67:B3:0D:0E:01 1 pon0/0/1 4 dynamic
-----

OLT(config)#show mac-address port epon 0/0/1
-----
Total:1
-----
MAC VLAN Port MAC-Type
-----
E0:67:B3:0D:0E:01 1 pon0/0/1 dynamic
-----

OLT(config)#
    
```

12.15. Show MAC Address Table From GE Port

Command	OLT(config)# show mac-address port ge <F/S/P>
View	Config view
Description	This command is used for show the mac address learned by GE port.
<F/S/P>	FrameID/SlotID/PortID,range for<0-0>/<0-0>/<1-8>

【Example】

Example 1: Show the mac address learned by GE5

```

OLT(config)#show mac-address port ge 0/0/5
-----
Total:9
-----
MAC VLAN Port MAC-Type
-----
3C:95:09:4F:30:D1 1 ge0/0/5 dynamic
84:5B:12:66:C0:E2 1 ge0/0/5 dynamic
02:02:5C:6E:0F:17 1 ge0/0/5 dynamic
E0:67:B3:46:50:DD 1 ge0/0/5 dynamic
00:E0:FC:09:BC:F9 1 ge0/0/5 dynamic
B8:81:98:78:36:10 1 ge0/0/5 dynamic
00:DB:DF:9C:FA:0E 1 ge0/0/5 dynamic
00:0A:C2:22:B0:9D 1 ge0/0/5 dynamic
    
```

```
6C:3B:6B:32:83:1C 1 ge0/0/5 dynamic
-----
OLT(config)#
```

12.16. Show MAC Address Table From XGE Port

Command	OLT(config)# show mac-address port xge <F/S/P>
View	Config view
Description	This command is used for show the mac address learned by XGE port.
<F/S/P>	FrameID/SlotID/PortID, <0-0>/<0-0>/<1-2>

【Example】

Example 1: Show mac address learned by XGE1.

```
OLT(config)#show mac-address port xge 0/0/1
There is not any MAC address record!

OLT(config)#
```

12.17. Show MAC Address Table From Aggregation Group

Command	OLT(config)# show mac-address port lag {<manual group id> <Lacp group id>}
View	Config view
Description	This command is used for show mac address learned by port aggregation group.
{<Manual group id> <Lacp group id>}	manual-group-ID,range for 1-8 lacp-group-ID,range for 9-16

【Example】

Example 1: Show mac address learned by port link aggregation group 1.

```
OLT(config)#show mac-address port lag 1
There is not any MAC address record!

OLT(config)#
```

12.18. Show OLT Static MAC Address Tables

Command	OLT(config)# show mac-address static
----------------	---

View	Config view
Description	This command is used for show all the static mac address of olt.

【Example】

Example 1: Show all the static mac address of olt.

```
OLT(config)#show mac-address static
-----
Total:3
-----
MAC VLAN Port MAC-Type
-----
E0:56:43:A9:B4:1A 100 cpu static
E0:56:43:A9:B4:1A 200 cpu static
E0:56:43:A9:B4:1A 1000 cpu static
-----
OLT(config)#
```

12.19. Show OLT MAC Address Aging Time Configuration

Command	OLT(config)# show mac-address timer
View	Config view
Description	This command is used for show the mac address aging time of OLT.

【Example】

Example 1: Show mac address aging time of olt.

```
OLT(config)#show mac-address timer
MAC aging time:300s
OLT(config)#
```

12.20. Show MAC Address Table From Specified Vlan

Command	OLT(config)# show mac-address vlan <vlan-id>
View	Config view
Description	This command is used for show the mac address of specified vlan.
<vlan-id>	VLAN ID to be show,range for 1-4094

【Example】

Example 1: Show mac address of vlan 100.



```

OLT(config)#show mac-address vlan 100
-----
Total:2
-----
MAC VLAN Port MAC-Type
-----
E0:56:43:A9:B4:1A 100 cpu static
00:12:13:23:45:32 100 cpu blackhole
-----

OLT(config)#
    
```

13. OLT Global VLAN Configurations

13.1. OLT VLAN Basic Configuration

13.1.1. Create OLT VLAN or VLAN List

Command	OLT(config)# vlan vlan-list
View	Config view
Description	This command is used for create a vlan or a vlan list.
<vlan-list>	ID of vlan,range for 1-4094

【Example】

Example 1: Create vlan 100.

```

OLT(config)#vlan 100
Create vlan successfully:100

OLT(config)#
    
```

Example 2:Create a vlan list 110-120.

```

OLT(config)#vlan 110-120
Create vlan successfully:110-120

OLT(config)#
    
```

13.1.2. Detele OLT VLAN or VLAN List

Command	OLT(config)# no vlan <vlan-list>
----------------	---



View	Config view
Description	This command is used for delete one or batch of vlan
<vlan-list>	VLAN id to be delete,range for 1-4094

【 Example 】

Example 1: Delete vlan 100.

```
OLT(config)#no vlan 100
Delete vlan successfully:100

OLT(config)#
```

Example 2:Delete vlan list 110-120.

```
OLT(config)#no vlan 110-120
Delete vlan successfully:110-120

OLT(config)#
```

13.1.3. Config OLT VLAN or VLAN List Name

Command	OLT(config)# vlan-name <vlan-list> < vlan-name>
View	Config view
Description	This command is used for set the vlan name.
<vlan-name>	Vlan name,length for 1-17 letters

【 Example 】

Example 1: Set the name of vlan 100 as test.

```
OLT(config)#vlan-name 100 test

OLT(config)#
```

Example 2:Set the name of vlan list 100-120 as test.

```
OLT(config)#vlan-name 100-120 test

OLT(config)#
```

13.1.4. Delete VLAN or VLAN List Name

Command	OLT(config)# no vlan-name <vlan-list> <vlan-name>
----------------	--



View	Config view
Description	This command is used for delete the name of vlan.
<vlan-list>	VLAN id to be set,range for 1-4094

【 Example 】

Example 1: Delete the name of vlan 100.

```
OLT(config)#no vlan-name 100

OLT(config)#
```

Example 2:Delete the name of vlan list 100-120.

```
OLT(config)#no vlan-name 100-120

OLT(config)#
```

13.1.5. Show OLT VLAN Configuration

Coammand	OLT(config)# show vlan {all/<vlan-list>}
View	Config view
Description	This command is used for show vlan info.
<vlan-list>	VLAN id to be show,range for 1-4094

【 Example 】

Example 1: Show the info of vlan 100.

```
OLT(config)#show vlan 100

-----
Vlan-ID:100 Vlan-Name:test
Untagged-Ports:-
Tagged-Ports:-
-----

OLT(config)#
```

Example 2:Show info of all the vlan.

```
OLT(config)#show vlan all

-----
Vlan-ID:1 Vlan-Name:vlan1
Untagged-Ports:
ge0/0/1 ge0/0/2 ge0/0/3 ge0/0/4 ge0/0/5
```




```

ge0/0/6 ge0/0/7 ge0/0/8 xge0/0/1 xge0/0/2
pon0/0/1 pon0/0/2 pon0/0/3 pon0/0/4 pon0/0/5
pon0/0/6 pon0/0/7 pon0/0/8 pon0/0/9 pon0/0/10
pon0/0/11 pon0/0/12 pon0/0/13 pon0/0/14 pon0/0/15
pon0/0/16 lag1 lag2 lag3 lag4
lag5 lag6 lag7 lag8 lag1
lag2 lag3 lag4 lag5 lag6
lag7 lag8
Tagged-Ports:-
-----
Vlan-ID:2 Vlan-Name:vlan2
Untagged-Ports:-
Tagged-Ports:-
    
```

13.1.6. Show OLT VLAN Translate Configuraiton

Command	OLT(config)# show vlan translate all
View	Config view
Description	This command is used for show vlan translating list.

【Example】

Example 1: Show translating list of vlan 100.

```

OLT(config)#show vlan translate all
-----
index port oldvlan newvlan priority mode
-----
1 pon0/0/5 800 800--Translate
2 pon0/0/14 2000-2124 38 0 QinQ
3 pon0/0/1 1000 37 0 QinQ
4 pon0/0/14 1000 37 0 QinQ
-----
OLT(config)#
    
```

13.2. Vlanif Configuration

13.2.1. Create or Delete Vlanif Interface

Command	OLT(config)# {no} interface vlanif <vlan-list>
View	Config view
Description	This command is used for create or delete a vlanif interface

<vlan-list>	VLAN id to be set,range for 1-4094
--------------------------	------------------------------------

【Example】

Example 1: Create a interface vlanif 100 and enter the configure view,the precondition is that the vlan 100 had been created.

```
OLT(config)#interface vlanif 100

OLT(config-interface-vlanif-100)#
```

Example 2:Delete the vlanif 100.

```
OLT(config)#no interface vlanif 100

OLT(config)#
```

13.2.2. Create or Delete Vlanif IP Address

Command	OLT(config-interface-vlanif-100)# {no} ip address <Ip address> {<IP address mask length-mask>}
View	Vlanif interface
Description	This command is used for create or delete the ip address of vlanif interface
<Ip address>	IP address of vlanif,format for X.X.X.X
<IP address mask>	IP address mask of vlanif interface,format for X.X.X.X
<length-mask>	Length of net mask,range for 0-32

【Example】

Example 1: Set the ip address and net mask of vlanif interface as 192.168.1.100 and 255.255.255.0

```
OLT(config-interface-vlanif-100)#ip address 192.168.1.100 255.255.255.0

OLT(config-interface-vlanif-100)#
```

Example 2:Delete the ip address of vlanif.

```
OLT(config-interface-vlanif-100)#no ip address

OLT(config-interface-vlanif-100)#
```



13.2.3. Config Vlanif Interface Description

Command	OLT(config-interface-vlanif-100)# description <description information>
View	VLANIF view
Description	This command is used for set the description of vlanif interface
<description information>	The description of vlanif,length for 1-128

【Example】

Example 1: Set the description of vlanif 100 as test.

```
OLT(config)#interface vlanif 100

OLT(config-interface-vlanif-100)#description test
Set interface description successfully!

OLT(config-interface-vlanif-100)#
```

13.2.4. Show Vlanif Interface Detail Information

Command	OLT(config)# show interface vlanif <vlan-id>
View	Config view
Description	This command is used for show the detail info of one or whole vlanif interface
<vlan-id>	VLAN ID to be show

【Example】

Example 1: Show the info of vlanif 100

```
OLT(config)#show interface vlanif 100
Description:Inband interface vlanif100
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.1.100,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:1A
Recive 0 packets,0 bytes
Transmit 0 packets,0 bytes

OLT(config)#
```

Example 2:Show the info of whole vlanif interface.

```

OLT(config)#show interface vlanif
Description:Inband interface vlanif100
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.1.100,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:1A
Recive 0 packets,0 bytes
Transmit 0 packets,0 bytes

Description:Inband interface vlanif1000
The Maximum Transmit Unit is 1500 bytes
Internet Address is 192.168.2.100,netmask 255.255.255.0
Hardware address is E0:56:43:A9:B4:1A
Recive 0 packets,0 bytes
Transmit 0 packets,0 bytes

OLT(config)#
    
```

13.3. VLAN Policy Configuration

13.3.1. Add VLAN Policy Based On Mac address

Command	OLT(config)# mac-vlan <mac-address> <vlan-id> <priority>
View	Config view
Description	This command is used for add mac-vlan,when the ingress message of olt is untagged and the destination mac is equal to the setting mac too,this message will be added a corresponding vlan and priority label. Delete mac-vlan:no mac-vlan<mac-address>/all
<mac-address>	Mac address,format for xx.xx.xx.xx.xx.xx。
<vlan-id>	VLAN id,range for 1-4094.
<priority>	priority

【Example】

Example 1: Add mac-vlan 100 and priority 0 to mac address 13:20:12:08:97:23

```

OLT(config)#mac-vlan 13:20:12:08:97:23 100 0

OLT(config)#
    
```

13.3.2. Show MAC-VLAN Entry



Command	OLT(config)# show mac-vlan all
View	Config view
Description	This command is used for show mac-vlan entry

【Example】

Example 1: Show mac-vlan entry

```
OLT(config)#show mac-vlan all
-----
index mac-address vlan priority
1 13:20:12:08:97:23 100 0
-----
OLT(config)#
```

13.3.3. Add VLAN Policy Based On IP Address

Command	OLT(config)# ip-subnet-vlan <ip-addr> {length-mask mask} <vlan-id> <priority>
View	Config view
Description	This command is used for add ip-subnet-vlan,when the ingress message of olt is untagged and the destination ip address is equal to the setting ip address too,this message will be added a corresponding vlan and priority label. Delete ip-subnet-vlan entry:no ip-subnet-vlan<ip address><length>/<mask>
<ip-addr>	IP address,format for x.x.x.x
<length-mask mask>	length of net mask,range for 0-32 Mask:net mask,format for x.x.x.x
<vlan-id>	VLAN id,range for 1-4094
<priority>	VLAN priority

【Example】

Example 1: Create an ip-subnet-vlan,set ip address as 192.168.5.34,net mask length for 24,vlan for 100,priority for 0.

```
OLT(config)#ip-subnet-vlan 192.168.5.34 24 100 0
OLT(config)#
```

13.3.4. Show IP-Subnet-VLAN Entry

Command	OLT(config)# show ip-subnet-vlan all
View	Config view
Description	This command is used for show the entry of ip-subnet-vlan

【Example】

Example 1: Show all the entry of ip-subnet-vlan.

```
OLT(config)#show ip-subnet-vlan all
-----
ip-address netmask vlan priority
192.168.5.0 255.255.255.0 100 0
-----
OLT(config)#
```

13.3.5. Add VLAN Policy Based On Protocol

Command	OLT(config)# protocol-vlan <protocol-index> {at ipv4 ipv6 } <ethernetii snap> OLT(config)# protocol-vlan <protocol-index> <ipx> {ethernetii snap llc snap} OLT(config)# protocol-vlan <protocol-index> mode {ethernetii snap} etype <ethertype id>
View	Config view
Description	This command is used for create protocol-vlan. Protocol-vlan can be bound to GE port, pon port, xge port, it is used for protocol translation for switch data. Delete the protocol vlan: no protocol-vlan<1-16>/all
<protocol-index> >	protocol-vlan index, range for 1-16
<parameter>	at: appletalk protocol ipv4: IPv4 protocol ipv6: IPv6 protocol ipx: IPx protocol ethernetii: Type of Ethernet protocol snap: Type of snap protocol llc: Type of llc protocol raw: Type of raw protocol



	etype:ethertype
<ethertype id>	The number of ethertype,range for 0x0001-0xffff

【Example】

Example 1: Create a protocol-vlan which index is 1,mode is ethernetii and bind it to GE1 and vlan 100.

```
OLT(config)#protocol-vlan 1 mode ethernetii etype 0x8100

OLT(config)#interface ge 0/0

OLT(config-interface-ge-0/0)#protocol-vlan 1 add port 1 100

OLT(config-interface-ge-0/0)#
```

13.3.6. Show Protocol-vlan Entry

Command	OLT(config)# show protocol-vlan all
View	Config view
Description	This command is used for show all the protocol-vlan entry.

【Example】

Example 1: Show all the protocol-vlan entry.

```
OLT(config)#show protocol-vlan all
-----
index frame ethtype port vlan id
1 ethii unknow(0x8100)ge0/0/1 100
-----

OLT(config)#
```

14. OLT IGMP Configuration

14.1. Config IGMP Fast-leave Function

Command	OLT(config)# igmp fast-leave {on off}
View	Config view
Description	igmp fast-leave off:



	<p>Close igmp-snooping igmp fast-leave function.After executing this command,after the ont receiving igmp leave message of user,it needs to send specific group query message to assure whether the user is online,if the group query message has timeout,but ont still has not receive the user report message,ont will infer the user has offline and renew the local multicast table entry.When the user needn't cut the channel fastly,using this parameter.</p> <p>igmp fast-leave on:</p> <p>Open igmp-snooping igmp fast-leave function.After executing this command,after the ont receiving igmp leave message of user,ont renew the local multicast table immediately according to the igmp leave message with no need of sending specific group query message to assure whether the user has offline.When the user needs to cut the channel fastly,using this parameter.</p>
{on off}	<p>Off:Close igmp-snooping igmp fast-leave function of olt</p> <p>On:Open igmp-snooping igmp fast-leave function of olt</p>

【Example】

Example 1: Open igmp-snooping igmp fast-leave function of olt

```
OLT(config)#igmp fast-leave on

OLT(config)#
```

14.2. Config IGMP Mode

Command	OLT(config)# igmp mode {ctc snooping proxy disable}
View	Config view
Description	This command is used for set the mode of igmp
{ctc snooping proxy disable}	<p>igmp mode ctc:</p> <p>Ctc is a controlled multicast mode.traditional multicast service is uncontrollable,user can join in a multicast group by sending igmp report message,then it can receive the multicast message of the multicast group.Its core idea is to set the limits of authority for the user's accessing to a multicast group.when the user request to join in a multicast group,olt must authenticate to this request,and reject to illegal or ultra vires request.Ctc mode of olt reaches its goal by intercepting the igmp report message which is sent by ont to control the creation of second layer multicast transmission table.After the olt receiving report message of multicast user,olt finds the user's using authority template according to the user vlan.if the multicast group is</p>



not included in the using authority template,olt will intercept this report message and do not generate transmission table,thus the user can not receive the multicast data stream;if the multicast group is included in the using authority template list,and if the list joins in template by view mode,the report message is permitted to pass.if the list joins in template by preview mode,the report message can pass too,but the olt will activate a timer,when it is timeout,the multicast group transmission table will be deleted,the igmp report message will be intercept,the preview function is realized by this way.

Otherwise,ont multicast mode must be set as ctc mode,the command is“ont multicast-mode”,in this mode,when the multicast user has passed the authentication,olt will issue the corresponding extension oam message to maintain the multicast table entry of ont to realize the controlling of multicast service.

igmp mode snooping
Set the igmp mode of multicast vlan as IGMP snooping.IGMP snooping obtains relevant info to maintain the multicast transmission table by monitoring the communication between the user and multicast router.system does not make any process to multicast message of this multicast vlan,just transparent it.

igmp mode proxy:
Set the igmp mode of multicast vlan as IGMP proxy.igmp proxy intercepts the igmp message between user and multicast router and proceeds coherent processing,then transmits it to the upper multicast router.From the view of user,the system is equivalent to multicast server;From the view of upper device,the system is equivalent to multicast user.IGMP proxy mode degrees the multicast protocol message traffic in the network.

igmp mode disable:Close the multicast function

【Example】

Example 1: Set igmp mode as proxy.

```
OLT(config)#igmp mode proxy

OLT(config)#
```

14.3. Config IGMP Proxy Parameter

Command	OLT(config)# igmp proxy { gen_interval gen_response robustness source-ip sp_count sp_interval sp_response }
View	Config view
Description	This command is used for set parameter of IGMP Proxy
<p><gen_interval gen_response robustness source-ip sp_count sp_interval sp_response></p>	<p>gen_interval-General query interval This command is used for set general query interval.system send the gen_interval aiming at all program to assure whether the user is watching a program.If the system has not receive the report message of user,it will be regarded as that there is no user watching this program,and this program data stream will be stopped.it can avoid the bandwidth waste from that the user does not watch program but still receiving the multicast stream.</p> <p>gen_response-General query max response time//This command is used for set general query max response time.</p> <p>robustness-Robustness keyword This command is used for set robustness keyword.According to network stability variation,the user hopes to adjust to robustness keyword,using this command.System uses this robustness keyword to assure the aging time of multicast user after setting.Robustness keyword is a coefficient which is used for enhance the robustness of the system,it directly effects to the length of multicast user aging time,in addition,it effects to the frequency of gen_interval message.If a subnet is likely to occur to packet loss,robustness keyword should be increase to ensure the stability of multicast user.</p> <p>source-ip-Source ip of igmp proxy message This command is used for set the source ip of gen_interval or specific group query message which is sent to user by igmp router.If this ip does not be assigned,system will send the gen_interval query message or specific group message with the default ip.</p> <p>sp_count-igmp specific query count This command is used for set the query counts of igmp specific query.System aims at a specific program and sends N(N is set by this command)times specific igmp query message to assure whether the user is watching this program,if there is no user's feedback report message,system will regard that no user is</p>



	<p>watching this program and the system will not send the program data to user,it can avoid that the user does not watching this program but still receiving the multicast stream,it prevents system from bandwidth waste.</p> <p>sp_interval-Specific query interval This command is used for set specific query interval.system send the specific query message aiming at a specified program to assure whether the user is watching a program.If the system has not receive the report message of user,it will be regarded as that there is no user watching this program,and this program data stream will be stopped.it can avoid the bandwidth waste from that the user does not watch program but still receiving the multicast stream.</p> <p>sp_response-Specific query max response time</p>
--	--

【 Example 】

Example 1: Set igmp proxy specific query count as 1,gen_interval as 250s,gen_response as 10,robustness as 2

```
OLT(config)#igmp proxy sp_count 1

OLT(config)#igmp proxy gen_interval 250

OLT(config)#igmp proxy gen_response 10

OLT(config)#igmp proxy robustness 2

OLT(config)#
```

14.4. Config IGMP Forwarding Policy

Command	OLT(config)# igmp policy {discard pass}
View	Config view
Description	This command is used for set transmission policy of igmp message
{discard pass}	Discard:Discard the unknown igmp protocol message Pass:the igmp protocol message is set as transparent

【 Example 】

Example 1: Discard the unknown igmp protocol message

```
OLT(config)#igmp policy discard
```



OLT(config)#

14.5. Show IGMP Configuration

Command	OLT(config)# show igmp config
View	Config view,btv view,multicast vlan view
Description	This command is used for show igmp config.including igmp state,fast leave state,General query max response time(s),query interval,source ip and etc.

【 Example 】

Example 1: Show igmp config.

```

OLT(config)#show igmp config
-----
Global config:
Igmp mode:Proxy
Igmp policy:Discard
Fast leave:Off
-----
Proxy config:
Robustness count:2
General query max response time(s):10
General query interval(s):125
Specific query interval(ms):1000
Specific query count:2
Specific query max response time(ms):800
Source ip of the proxy:192.168.1.253
-----

OLT(config)#
    
```

14.6. Show IGMP Forwarding Table

Command	OLT(config)# show igmp group {all ip-address vlan}
View	Config view,btv view,multicast vlan view
Description	This command is used for show igmp group.
{all ip-address vlan}	All:show all the igmp group. vlan-id:show igmp group of specified vlan id ip-address:show igmp group of specified channel ip address

【 Example 】

Example 1: Show all the igmp group.

```
OLT(config)#show igmp group all
ERROR:There is not any group address record.

OLT(config)#
```

14.7. Config Multicast VLAN

Command	OLT(config)# multicast-vlan <vlan-id>
View	Config view
Description	This command is used for create multicast vlan and enter multicast vlan mode,"no"command is used for delete it.Multicast vlan is a kind of vlan application,in this mode,user can set relevant parameters of multicast.
<vlan-id>	Multicast vlan id.only after the corresponding vlan is created the multicast vlan can be used.

【 Example 】

Example 1: Create multicast vlan 100 and enter enter multicast vlan mode.

```
OLT(config)#multicast-vlan 100

OLT(multicast-vlan-100)#
```

14.8. Config IGMP Match Group

Command	OLT(config)# igmp match group ip <start-ip> to-ip <end-ip>
View	multicast-vlan view
Description	This command is used for set dynamic program library,this range ip address makes up a channel group,it can set limits of authority for these channel in btw mode.
<start-ip>	Match start ip,it must be multicast ip address
<end-ip>	Match end ip,it must be multicast ip address

【 Example 】

Example 1: Set a dynamic program library:224.1.1.1-224.2.2.2

```
OLT(config-multicast-vlan-100)#igmp match group ip 224.1.1.1 to-ip 224.2.2.2

OLT(config-multicast-vlan-100)#
```



14.9. Show IGMP Match Group

Command	OLT(config)# show igmp match group {vlan-id all}
View	multicast-vlan view,config view
Description	This command is used for show igmp match group
{vlan-id all}	vlan-id:multicast vlan id all:all of the multicast vlan

【Example】

Example 1: Show igmp match group vlan 100

<pre> OLT(config)#show igmp match group vlan 100 Total Match Group:1 ----- MVlan Match Mode Program 100 disable 224.1.1.1-224.2.2.2 ----- OLT(config)# </pre>
--

14.10. Add IGMP Program

Command	OLT(config-multicast-vlan-100)# igmp program add program-index <Program-index> ip <ip-addr>
View	multicast-vlan view
Description	This command is used for add static multicast program.it needs to pre-allocation multicast program library,The authorized user can view or preview the program in the specified multicast vlan.
<Program-index>	Multicast program index
<ip-addr>	multicasst ip address,format is X.X.X.X

【Example】

Example 1: Set static multicast program,and binds it to program index 2.

<pre> OLT(config-multicast-vlan-100)#igmp program add program-index 2 ip 239.1.1.1 OLT(config-multicast-vlan-100)# </pre>
--

14.11. Add Batch IGMP Program

Command	OLT(config-multicast-vlan-100)# igmp program add program-index
----------------	---

	<code><Program-index> batch ip <ip-addr> to-ip <ip-addr></code>
View	multicast-vlan view
Description	This command is used for add static multicast program.If igmp match mode is enabled,it needs to pre-allocation multicast program library,The authorized user can view or preview the program in the specified multicast vlan.
<code><Program-index></code>	igmp program index
<code><ip-addr></code>	It refers to the beginning and ending igmp IP,forming an igmp range.

【Example】

Example 1 : It configures batch static igmp program from 224.1.1.1 to 224.1.1.1.3,and binding program-index 3.

```
OLT(config-multicast-vlan-100)#igmp program add program-index 3 batch ip 224.1.1.1
to-ip 224.1.1.3
OLT(config-multicast-vlan-100)#
```

14.12. Delete IGMP Program

Command	<code>OLT(config-multicast-vlan-100)#igmp program delete {all program-index<Program-index>}</code>
View	multicast-vlan view
Description	This command is used for delete igmp program.When it doesn't want users to watch multicast program,using this command to delete igmp program from program database.Once deleting one program,users will not watch this program.
<code><Program-index></code>	igmp program index
<code><all></code>	all igmp programs

【Example】

Example 1: Delete static igmp program-index 2

```
OLT(config-multicast-vlan-100)#igmp program delete program-index 2
OLT(config-multicast-vlan-100)#
```

14.13. Config IGMP Router-port

Command	<code>OLT(config-multicast-vlan-100)#igmp router-port ge xge <port-id></code>
View	multicast-vlan view
Description	This command is used for configure igmp router-port.For ctc

	mode,users need to configure router-port to realize the below devices forwarding.
<port-id>	ge/xge port number

【 Example 】

Example 1: configure ge5 port as router-port

```
OLT(config-multicast-vlan-100)#igmp router-port ge 0/0/5
OLT(config-multicast-vlan-100)#
```

14.14. Show IGMP Router-port

Command	OLT(config-multicast-vlan-100)# show igmp router-port vlan <vlan-id>
View	multicast-vlan view
Description	This command is used for view IGMP router-port
<vlan-id>	Multicast-vlan id

【 Example 】

Example 1: View multicast-vlan 100 router-port

```
OLT(config-multicast-vlan-100)#show igmp router-port vlan 100
VID:100
Router:ge0/0/5
OLT(config-multicast-vlan-100)#
```

14.15. Configure Unknow-multicast Forwarding Policy

Command	OLT(config-multicast-vlan-100)# igmp multicast-unknown policy {discard transparent}
View	multicast-vlan view
Description	This command is used for configure multicast-unknown service flow suppression policy.If service flow carriers special-purpose multicast-unknown,thus configuring transparent.No special-purpose multicast-unknown occupies bandwidth,thus setting discard.
{discard transparent}	Discard:System discard received multicast-unknown service flow Transparent:System transparent received multicast-unknown service flow.

【 Example 】

Example 1: Configure multicast-unknown policy as discard.

```
OLT(config-multicast-vlan-100)#igmp multicast-unknown policy discard
OLT(config-multicast-vlan-100)#
```


14.16. Show Unknow-multicast Forwarding Policy

Command	OLT(config-multicast-vlan-100)# show igmp multicast-unknown policy vlan <vlan-id>
View	multicast-vlan view
Description	This command is used for view multicast-unknown service flow suppress policy.
<vlan-id>	Multicast-vlan id

【Example】

Example 1: View multicast-unknown service flow suppression policy

```
OLT(config-multicast-vlan-100)#show igmp multicast-unknown policy vlan 100
Unknown multicast policy is discard.
OLT(config-multicast-vlan-100)#
```

14.17. Add IGMP User (Member) in Multicast-vlan

Command	OLT(config-multicast-vlan-100)# igmp member user-index <User-index>
View	Multicast-vlan view
Description	This command is used for add igmp user to multicast-vlan
<User-index>	configured igmp user

【Example】

Example 1: Add igmp user 1 to multicast-vlan 100

```
OLT(config-multicast-vlan-100)#igmp member user-index 1
OLT(config-multicast-vlan-100)#
```

14.18. Show Multicast-vlan Member Configuration

Command	OLT(config-multicast-vlan-100)# show igmp multicast-vlan-member {all vlan-id}
View	Config view and multicast-vlan view
Description	This command is used for view multicast-vlan member
<all vlan-id>	all:view all vlan-id:view the specified vlan-id member

【Example】

Example 1: View all multicast-vlan member

```
OLT(config-multicast-vlan-100)#show igmp multicast-vlan-member all
```



```
Total Mvlan Member:1
-----
User-Index Port ONUId Vlan Authority Mvlan Max-program
1 pon0/0/1 1 100 no-auth 100 8
-----
OLT(config-multicast-vlan-100)#
```

14.19. Config IGMP User Bind Rights Profile

Command	OLT(config-btv)# igmp control {bind/delete} user-index <user-index> profile-index <profile-index>
View	btv view
Description	This command is used for bind igmp user and rights profile.
<User-index>	configured user group,range for 0-4095
<profile-index >	Configured rights profile,range for 1-2000

【 Example 】

Example 1: bind igmp user 1 and rights profile 1

```
OLT(config-btv)#igmp control bind user-index 1 profile-index 1

OLT(config-btv)#
```

14.20. Config IGMP Preview

Command	OLT(config-btv)# igmp preview (auto-reset-time time disable enable reset)
View	Btv view
Description	This command is used for enable multicast preview.Use this command when you need to provide program preview functionality for multicast users.After the function is enabled, the user can preview the program with preview rights, and preview relevant parameters take effect.The igmp preview disable command is used for disable the multicast preview function.Use this command when you need to turn off program preview for all multicast users.After the function is turned off, users cannot preview all programs including those with preview rights, and relevant parameters of preview are invalid.
<i>time</i>	When the number of multicast preview is automatically reset, the system will reset the number of preview for all users once the time is

	reached.Time type is HH:MM:SS,default:4:00:00.Delete multicast preview times automatically reset time with the command: OLT(config-btv)# no igmp preview auto-reset-time
--	---

【Example】

Example1: Enable IGMP preview

	OLT(config-btv)# igmp preview enable OLT(config-btv)#
--	--

14.21. Config IGMP Preview Profile

Command	OLT(config-btv)# igmp preview-profile (add preview-index <i>preview-index</i> <i>duration</i> <i>duration-time</i> <i>interval</i> <i>interval-value</i> <i>count</i> <i>count-value</i> delete (all) <i>preview-index</i> <i>preview-index</i>)
View	Btv view
Description	This command is used for add a preview template for a multicast program.Use this command when you need to adjust the preview function of the program, such as extending the preview time and increasing the number of preview times.After the preview template is successfully added, if the user previews the multicast program that references the preview template, the parameters in the template take effect.
<i>preview-index</i>	IGMP preview index,range for 0-31
<i>duration-time</i>	Maximum preview times.If the user previews the program more than the maximum preview times, the program can not preview again. Range for 10-6000,unit is s.
<i>interval-value</i>	Minimum time interval between two previews.If the time interval between the user’s two preview of program doesn’t reach this time interval, the user can’t preview again temporarily.
<i>count-value</i>	Preview times, range for 1-255

【Example】

Example1: Config IGMP preview index is 1, duration is 10,interval is 50 and count is 5

	OLT(config-btv)# igmp preview-profile add preview-index 1 duration 10 interval 50 count 5 OLT(config-btv)#
--	---

14.22. Modify The Program permissions in IGMP Profile

Command	OLT(config-btv)# igmp profile ((add profile-index <i>profile-index</i>) (delete profile-index <i>profile-index</i>) (profile-index <i>profile-index</i> ((add program-index <i>program-index</i> forbidden preview <i>preview-index</i> <i>preview-index</i> watch) (delete program-index <i>program-index</i>) (modify program-index <i>program-index</i> forbidden preview <i>preview-index</i> <i>preview-index</i> watch))
View	Btv view
Description	This command is used for modify the program permission in IGMP profile. After modified it, the users binded with this profile will accord the new profile to authentication. When modify it, have to creat igmp profile and igmp program index.
<i>Profile-index</i>	IGMP profile index. Range for 1-2000
<i>program-index</i>	IGMP program index. When add the program to profile or modify program permissions according to program index, have to use this parameter. Range for 1-2000
<i>Preview-index</i>	IGMP preview programs index.range for 0-31
<i>forbidden</i>	Set the program permissions to forbidden.
<i>preview</i>	Set the program permissions to preview.
<i>watch</i>	Set the program permissions to watch.

【Example】

Example1: In the IGMP profile 1,add the permissions of program index 1 is forbidden.

```
OLT(config-btv)# igmp profile add profile-index 1
OLT(config-btv)# igmp profile profile-index 1 add program-index 1 forbidden

OLT(config-btv)#
```

14.23. Config IGMP User

Command	OLT(config-btv)# igmp user ((add user-index <i>user-index</i> pon F/S/P ont ont-id vlan eth-uni-port ((auth no-auth) max-program <i>max-program</i>)
View	Btv view
Description	This command is used for config igmp user.
<i>user-index</i>	IGMP program index.Range for 0-4095.



<i>F/S/P</i>	Used to represent OLT frame number/slot number/port number, range for 0/0/1-16
<i>ont-id</i>	Bind ONU id ,range for 1-64
<i>Eth-uni-port</i>	Bind ONU's lan port ,range for 1-24
<i>max-program</i>	Maximum number of user program allowed at the same time , range for 1-32

【Example】

Example1 : Config IGMP user index is 1 ,bind pon port1 onu 1 uni1 ,and at the same time ,maximum number of user program allowed at the same time is 2.

```
OLT(config-btv)# igmp user add user-index 1 pon 0/0/1 ont 1 vlan 1 auth max-program 2
OLT(config-btv)#
```

14.24. Show IGMP Configuration

Command	OLT(config-btv)# show igmp ((control (all user-index user-index)) (group (all ip-address ip-address vlan vlan-id)) (match group (all vlan vlan-id)) (multicast-unknown policy vlan vlan-id)) (multicast-vlan-member (all vlan vlan-id)) (preview (all auto-reset-time preview-index preview-index)) (profile all profile-index profile-index)) (program all program-index program -index)) (router-port vlan vlan-id) (user (all online (all port pon F/S/P ont ont-id)))
View	Btv view
Description	This command is used for show igmp configuration,igmp group configuration,multicast-member,preview configuration and igmp user information.
<i>user-index</i>	IGMP user index,range for 0-4095
<i>F/S/P</i>	Used to represent OLT frame number/slot number/port number,range for 0/0/1-16
<i>ont-id</i>	Need to bind ONTID, range for 1-64
<i>preview-index</i>	IGMP preview index,range for 0-31
<i>program-index</i>	IGMP program index,range for 1-2000

【Example】

Example 1: Show IGMP program table

```
OLT(config-btv)# show igmp program program-index 1
  ERROR : There is not any program record.

OLT(config-btv)#
```

15. STP Configuration

15.1. Global STP Config

Command	OLT(config)# spanning-tree {enable disable}
View	Config view
Description	This command is used for on/off the global STP protocol.All the configuration about STP protocol will make effect only if the STP is enabled in global mode and port.
{enable disable}	Enable:Enable global STP protocol Disable:Disable global STP protocol

【 Example 】

Example 1: Enable STP in global mode.

```
OLT(config)#spanning-tree enable

OLT(config)#
```

15.2. Show STP Configuraiton

Command	OLT(config)# show spanning-tree info
View	Config view
Description	This command is used for show configuration info of STP

【 Example 】

case1:Show configuration info of STP

```
OLT(config)#show spanning-tree info
-----
RSTP switch status:Enable
Bridge ID[PRI-MAC]:32768-e0:56:43:a9:b4:1a
Root Bridge ID[PRI-MAC]:32768-e0:56:43:a9:b4:1a
Bridge max age(s):20
```



```

Bridge hello time(s):2
Bridge forward delay(s):15
Transmit Hold Count:3
Root Path Cost:0
-----
Port Status:
-----
Port Priority Path Edge Link Role State
Cost Status Type
-----
ge0/0/1 128 20000 NEdge P2P Unknown Down
ge0/0/2 128 20000 NEdge P2P Unknown Down
ge0/0/3 128 20000 NEdge P2P Unknown Down
ge0/0/4 128 20000 NEdge P2P Unknown Down
ge0/0/5 128 20000 NEdge P2P Unknown Down
ge0/0/6 128 200000 NEdge P2P Designated Forwarding
ge0/0/7 128 20000 NEdge P2P Unknown Down
ge0/0/8 128 20000 NEdge P2P Unknown Down
xge0/0/1 128 2000 NEdge P2P Unknown Down
xge0/0/2 128 2000 NEdge P2P Unknown Down
lag1 128 20000 NEdge P2P Unknown Down
lag2 128 20000 NEdge P2P Unknown Down
lag3 128 20000 NEdge P2P Unknown Down
lag4 128 20000 NEdge P2P Unknown Down
lag5 128 20000 NEdge P2P Unknown Down
lag6 128 20000 NEdge P2P Unknown Down
lag7 128 20000 NEdge P2P Unknown Down
lag8 128 20000 NEdge P2P Unknown Down
lagL9 128 20000 NEdge P2P Unknown Down
lagL10 128 20000 NEdge P2P Unknown Down
lagL11 128 20000 NEdge P2P Unknown Down
lagL12 128 20000 NEdge P2P Unknown Down
lagL13 128 20000 NEdge P2P Unknown Down
lagL14 128 20000 NEdge P2P Unknown Down
lagL15 128 20000 NEdge P2P Unknown Down
lagL16 128 20000 NEdge P2P Unknown Down
-----
OLT(config)#
    
```

15.3. Config STP Priority

Command	OLT(config)# spanning-tree priority <rstp bridge priority>
----------------	---

View	Config view
Description	This command is used for set priority of specified spanning tree for the device. Whether the device will be select as root bridge depends on the priority of device. When it needs to specify a device as root bridge, use this command to set the priority of device. Whether the device will be selected as root bridge of spanning tree deciding by the priority value.
<rstp bridge priority>	Priority of device. Step size for 4096. The smaller the priority is, the higher class the device. Range for 0-61440, Step size for 4096.

【Example】

Example 1: Set the priority of spanning tree as 4096.

```
OLT(config)#spanning-tree priority 4096

OLT(config)#
```

15.4. Config STP Bridge Forward-delay Time

Command	OLT(config)# spanning-tree timer forward-delay <timer>
View	Config view
Description	This command is used for set the device forward-delay time of spanning tree. To prevent the device from occurring to temporary loop, it needs to wait for sometime in device status migrating. After setting the forward delay time, status migrate according to this time interval. Range for 4-30s.
<timer>	Status migrate time interval. It relates to the switch network diameter. Generally, the bigger the diameter is, the longer forward delay time should be set. Range for 4-30s. The default value is 15s.

【Example】

Example 1: Set the forward delay time as 20s.

```
OLT(config)#spanning-tree timer forward-delay 20

OLT(config)#
```

15.5. Config STP Bridge Hello Message Send Period Time

Command	OLT(config)# spanning-tree timer hello <time>
----------------	--

View	Config view
Description	This command is used for set transmission period of the spanning tree hello time.Network bridge sends the hello message within a certain time interval,it is used for affirm whether the link is normal.After setting,device will send the hello message to neighbor Switch according to corresponding time interval.
<time>	Hello time interval.The appropriate hello time interval can ensure that the switch can find the link fault in the network in time without taking up too much network resources.Range for 1-2s,the default is 2s.

【 Example 】

Example 1: Set the hello time’s transmission period as 1s.

```
OLT(config)#spanning-tree timer hello 1
OLT(config)#
```

15.6. Config STP Bridge Max-age Time

Command	OLT(config)# spanning-tree timer max-age <time>
View	Config view
Description	This command is used for set max age time.It is used for estimate whether the message is time out.After setting max age time,the device will discard the time out message.range for 6-40s,the default is 20s.
<time>	Max age time

【 Example 】

Example 1: Set the max age time as 6s.

```
OLT(config)#spanning-tree timer max-age 6
OLT(config)#
```

15.7. Config STP BPDU TX Hold Count

Command	OLT(config)# spanning-tree hold-count <hold-count>
View	Config view



Description	BPDU is the message frame exchanged between the switches that run STP.BPDU includes path and priority info of STP,STP determines the root bridge and root bridge path by BPDU.
<hold-count>	BPDU transmission rate,the maximum transmission number of BPDU in each hello time period,range for 1-10,unit is pps.

【 Example 】

Example 1: Set the hold-count as 2 pps.

```
OLT(config)#spanning-tree hold-count 2
OLT(config)#
```

15.8. Config OLT STP Cost

Command	OLT(config)# spanning-tree <link-aggregation group group-id port port-ID> cost <cost>
View	Config view
Description	This command is used for set the cost of GE port spanning tree.when there are multi links between two devices but not the root port,device determines the optimal path by the cost.
<port-id>	Port id to be set
<cost>	Cost value,range for 1-200000000

【 Example 】

Example 1: Set the cost of GE1 spanning tree as 2000.

```
OLT(config)#spanning-tree port ge 0/0/1 cost 2000
OLT(config)#
```

15.9. Config OLT STP Edged-port

Command	OLT(config)# spanning-tree <link-aggregation group group-id port port-ID> edged-port {enable disable}
View	Config view
Description	This command is used for set spanning tree edged-port of GE port.If user specifies a port as edged-port,then the port can rapidly migrate from blocking status to forwarding status without waiting for delay time.User can only set the port which is connected with terminal as edged-port.The default is not edged-port.
<port-id>	Port id to be set

<code>{enable disable}</code> <code>}</code>	enable:Set this port as edged-port disable:Set this port as non-edged-port
---	---

【Example】

Example 1: Set GE1 as edged-port.

```
OLT(config)#spanning-tree port ge 0/0/1 edged-port enable

OLT(config)#
```

15.10. Config OLT STP Mcheck Property

Command	OLT(config)# spanning-tree <link-aggregation group <i>group-id</i> port <i>port-ID</i> > mcheck
View	Config view
Description	This command is used for set mcheck property of GE port spanning tree.Mcheck property is used for detect whether the device which is running in STP compatible mode can transfer to RSTP mode.We can check whether there are any network bridge existing in the network segment connected with current ethernet port.If it is yes,RSTP protocol will transfer the port protocol running mode to STP mode.
<port-id>	Port id to be set,range for 1-8

【Example】

Example 1: Set the mcheck property of GE1.

```
OLT(config)#spanning-tree port ge 0/0/1 mcheck

OLT(config)#
```

15.11. Config OLT STP Point-to-Poing Function

Command	OLT(config)# spanning-tree <link-aggregation group <i>group-id</i> port <i>port-ID</i> > point-to-point {auto/true/false}
View	Config view
Description	This command is used for set P2P function of GE port spanning tree.if the bridge is working in RSTP mode,a couple of port connected by P2P link can migrate to forwarding status by transferring synchronize message which decreases unnecessary transmission delay time.If set it as auto mode,RSTP protocol can detect automatically whether the current ethernet port has connection with P2P link.it can set as manual mode also,but what we suggestion is setting it as auto mode.



<port-id>	Port id to be set,range for 1-8
{auto/true/false}	auto:Auto connect to P2P link true:Connect the GE port with P2P link false:Disconnect the GE port with P2P link

【 Example 】

Example 1: Set the running mode of GE1 P2P link as true.

```
OLT(config)#spanning-tree port ge 0/0/1 point-to-point true

OLT(config)#
```

15.12. Config OLT STP Priority

Command	OLT(config)# spanning-tree <link-aggregation group group-id port port-ID> priority <port-priority>
View	Config view
Description	This command is used for set the priority of GE port.It can include specified ethernet port into spanning tree by setting ethernet port priority,generally,the smaller the value is,the higher the port priority is,and this port is more likely to include into spanning tree.If all the ethernet port of network bridge adopts to the same priority value,the priority of ethernet port is depended on port index number.
<port-id>	Port id to be set,range for 1-8
<port-priority>	Port priority,range for 0-240,step size for 16.The default value is 128.

【 Example 】

Example 1: Set the priority as 160 for GE1 spanning tree.

```
OLT(config)#spanning-tree port ge 0/0/1 priority 160

OLT(config)#
```

15.13. Show OLT Port STP Configuration

Command	OLT(config)# show spanning-tree port {ge xge} <port-id>
view	Config view
Description	This command is used for show spanning tree configuration info of GE port
<port-id>	Port id to be set.

【 Example 】

Example 1: Show spanning tree configuration info of GE1.

```

OLT(config)#show spanning-tree port ge 0/0/1
-----ge0/0/1 RSTP STATUS:-----
Port STP Mode:RSTP
Port Priority:160
Port Path Cost:2000
Port Edge Admin:Edge
Port Edge Status:Edge
Port Link Type Admin:P2P
Port Link Type Status:P2P
Port Role:Unknown
Port State:Down
-----

OLT(config)#
    
```

15.14. Show OLT Link-aggregation Group STP Configuration

Command	OLT(config)# show spanning-tree link-aggregation group <group-id>
View	Config view
Description	This command is used for show configuration info of spanning tree link-aggregation group.
<group-id>	Group id to be set.

【 Example 】

Example 1: show configuration info of spanning tree link-aggregation group1

```

OLT(config)#show spanning-tree link-aggregation group 1
-----lag1 RSTP STATUS:-----
Port STP Mode:RSTP
Port Priority:128
Port Path Cost:20000
Port Edge Admin:NON-Edge
Port Edge Status:NEdge
Port Link Type Admin:Auto
Port Link Type Status:P2P
Port Role:Unknown
Port State:Down
-----
    
```

```
OLT(config)#
```

16. ACL Configuration Manage

16.1. ACL Basic Configuration

16.1.1. Creat ACL

Command	OLT(config)# acl <i>acl-id</i>
View	Config view
Description	This command is used for create a acl.
<i>acl-id</i>	<2000-2999> basic acl <3000-4999> advanced acl <5000-5999> link acl <8000-8199> PON side acl <9000-9499> ONT side acl

【Example】

Example 1: Creat basic acl 2000:

```
OLT(config)# acl 2000
  ACL ID Create OK!

OLT(acl-basic-2000)#
```

Example 2: Creat advanced acl 3000:

```
OLT(config)# acl 3000
  ACL ID Create OK!

OLT(acl-adv-3000)#
```

Example 3: Creat link acl 5000:

```
OLT(config)# acl 5000
  ACL ID Create OK!

OLT(acl-link-5000)#
```

Example 4: Creat PON side acl 8000:

```
OLT(config)# acl 8000

OLT(acl-pon-8000)#
```

Example 5: Creat ONT side acl 9000:

```
OLT(config)# acl 9000
```

```
ACL ID Create OK!

OLT(acl-onu-9000)#
```

16.1.2. Delete ACL

Command	OLT(config)# no acl (acl-id all)
View	Config view
Description	This command is used for delete acl or all acl
(acl-id all)	ACL id to be delete,range for 2000-5999,8000-8199,9000-9499

【 Example 】

Example 1: Delete acl 3000.

```
OLT(config)# no acl 3000
Number of acl: 1, success: 1

OLT(config)#
```

Example 2:Delete all acl.

```
OLT(config)# no acl all
Number of PON ACLs that can be delete: 200, success: 0
Number of ONT ACLs that can be delete: 500, success: 1
Number of acl: 2, success: 2

OLT(config)#
```

16.1.3. Config ACL Name

Command	OLT(acl-adv-3000)# acl name <i>ACL-name</i>
View	basic acl view, advanced acl view, link acl view, PON side acl view, ONT side acl view
Description	This command is used for set the acl name.
<i>ACL-name</i>	ACL name,length for 1-10 letters

【 Example 】

Example 1: Set the name of ACL 3000 as test.

```
OLT(acl-adv-3000)# acl name test

OLT(acl-adv-3000)#
```

16.1.4. Show ACL Configuration



Coammand	OLT(acl-adv-3000)# show current
View	basic acl view, advanced acl view, link acl view, PON side acl view, ONT side acl view
Description	This command is used for show ACL info.

【Example】

Example 1: Show the info of acl 3000.

```
OLT(acl-adv-3000)# show current

Advanced ACL 3000, 1 rules hold
  rule 1 permit icmp

OLT(acl-adv-3000)#
```

16.2. ACL Apply Time-range Cofiguration

ACL time range is distributed into **relative time** and **absolute time**:

Relative time:Periodicity time,for example,from 8:30 to 18:30 every Monday.

Absolute time:From a specific time to another specific time,for example,from 06/08/2006 12:00am to 08/08/2006 18:00.

16.2.1. Config ACL Apply Relative Time-range

Command	OLT(config)# time-range <time-name> <start-time> to <end-time> <days>
View	Config view
Description	This command is used for set the time range of relative time
<time-name>	Time range name,it is quoted when setting ACL rules.
<start-time>	The start time of relative time,format for HH:MM.It determines a time range with the end time,days define the date when the time range take effect,triple parameters determine a time range.
<end-time>	The end time of relative time,format for HH:MM.It determines a time range with the start time,days define the date when the time range take effect,triple parameters determine a time range.

【Example】

Example 1: Set a relative time,names it as worktime,the effective time is from 8:00 to 18:30 every Monday.

```
OLT(config)#time-range worktime 08:00 to 18:30 mon
```



```
OLT(config)#
```

16.2.2. Config ACL Apply Absolute Time-range

Command	OLT(config)# time-range <time-name> from <start-time> to <end-time>
View	Config view
Description	This command is used for set the time range of absolute time.
<time-name>	Name of time range,it is quoted when setting ACL rules.
<start-time>	The start time of absolute time,format for HH:MM YYYY/MM/DD
<end-time>	The end time of absolute time,format for HH:MM YYYY/MM/DD

【Example】

Example 1 : Set an absolute time,names it as test,the effective is from 5/1/2017 8:40 to 12/7/2017 18:00.

```
OLT(config)#time-range test from 8:40 2017/5/1 to 18:00 2017/12/7
OLT(config)#
```

16.2.3. Delete ACL Apply Time-range

Command	OLT(config)## no time-range {time-name/all}
View	Config view
Description	This command is used for delete the time range that had been set
{time-name}	Name of time range,input the name of time range to be deleted,“all” means all the time range that had set.

【Example】

Example 1: Delete the time range named test

```
OLT(config)#no time-range test
OLT(config)#
```

16.2.4. Show ACL Apply Time-range Configuration

Command	OLT(config)## show time-range {time-name/all}
----------------	--



View	Config view
Description	This command is used for show the configured time range
{time-name}	Name of time range,input the name of time range to be deleted, “all” means all the time range that had set.

【Example】

Example 1: Show the time range named test.

```
OLT(config)#show time-range test
Current time is 2017-12-07 11:40 Thursday
Time-range:test(Active)
From 2017-05-01 08:40 to 2017-12-07 18:00

OLT(config)#
```

16.3. Config OLT Basic ACL Function

Command	OLT(acl-basic-2000)#rule <rule-id> {permit deny} source {ip-address any} <sour-wildcard> time-range <name>
View	basic acl view
Description	This command is used for create ACL rule in Acl-basic mode or Acl6-basic mode.when it needs to set rule according to source ip address of message,using this command.We can use packet filter command to filter the message by quoting the ACL rule after setting the acl rule,or uses cooperatively with qos strategy to provide QoS. “no rule”is used for delete acl rule.
<rule-id>	Rule id of ACL,the bigger the id is,the higher the priority.
{permit deny}	Deny:Deny the matched message flow passing Permit:Permit the matched message flow passing
{ip-address any}	ip-address:The source ip segment in ACL rule. any:Match to all source ip address
<sour-wildcard>	wildcard mask:ip address and wildcard mask are used to match the host id,it tells to the device should be match to which bit of an ip address by labeling“0”and“1”.“1”means overlook this bit,“0”means this bit needing to be check.
<name>	Set the effective time range of ACL rule

【Example】

Example 1: In worktime range,specify the GE1 receive the message of 10.10.10.2 only.

```

OLT(config)#time-range worktime 8:00 to 18:00 working-day
OLT(config)#acl 2000
OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range working-day
OLT(acl-basic-2000)#rule 1 deny source any time-range working-day
OLT(acl-basic-2000)#exit
OLT(config)#packet-filter inbound 2000 port ge 0/0 1

OLT(config)#
    
```

16.4. Config OLT Advanced ACL Function

Command	<p>OLT(acl-adv-3000)#</p> <p>When the protocol is TCP,the command based ipv4 for: rule <rule-id> {permit deny} tcp {[soure <ip-address> <sour-wildcard> any] [destination <ip-address> <sour-wildcard> any] [src-port <port-list>] [dest-port <port-list>] [precedence <precedence-value>] [dscp <dscp-value>] [time-range <time-range-name>]}</p> <p>When the protocol is UDP,the command based ipv4 for: rule <rule-id> {permit deny} udp {[soure <ip-address> <sour-wildcard> any] [destination <ip-address> <sour-wildcard> any] [src-port <port-list>] [dest-port <port-list>] [precedence <precedence-value>] [dscp <dscp-value>] [time-range <time-range-name>]}</p> <p>When the protocol is IP,the command based ipv4 for: rule <rule-id> {permit deny} ip {[soure <ip-address> <sour-wildcard> any] [destination <ip-address> <sour-wildcard> any] [precedence <precedence-value>] [dscp <dscp-value>] [time-range <time-range-name>]}</p> <p>When the protocol is ipinip,the command based ipv4 for: rule <rule-id> {permit deny} ipinip {[soure <ip-address> <sour-wildcard> any] [destination <ip-address> <sour-wildcard> any] [precedence <precedence-value>] [dscp <dscp-value>] [time-range <time-range-name>]}</p> <p>When the protocol is icmp,the command based ipv4 for: rule <rule-id> id {permit deny} icmp {[soure <ip-address> <sour-wildcard> any] [destination <ip-address> <sour-wildcard> any] [precedence <precedence-value>] [dscp <dscp-value>] [time-range <time-range-name>]}</p> <p>When the protocol is other protocol,the command based ipv4 for:</p>
----------------	---

<dest-port>	The destination port of TCP or UDP matched by ACL
<src-port>	The source port of TCP or UDP matched by ACL
<!pinip>	ACL matches to ipinip(double ip layer)message.That is to say ip data encapsulation and tunnel,which encapsulates ip within ip,protocol number is 4,it is the same as its definition in RFC 2003.It describes how to obtain the ip datagram and load to another ip datagram.In mobile IP,the new header specifies how the encapsulated datagram is sent to the forwarding address of the mobile node.

【 Example 】

Example 1: Create an advanced ACL and matches it to all icmp message.

```
OLT(acl-adv-3000)#rule 1 permit icmp
```

```
OLT(acl-adv-3000)#
```

Example 2:Delete ACL rule 1.

```
OLT(acl-adv-3000)#no rule 1 all
```

```
OLT(acl-adv-3000)#
```

16.5. Config OLT Link ACL Function

Command	OLT(acl-link-5000)#rule <rule-id> {permit deny} [{cos <cos-value> } [destination <des-mac-address> <mac-addrmac-wildcard>] [source <src-mac-address> <mac-addrmac-wildcard>] [inner-cos <inner-cos-value>] [vlan <vlan-id>] [inner-vlan <inner-vlan-id>] [type <Ethernet-type>] [time-range <time-range-name>]}
View	Link acl view
Description	This command is used for create ACL rule in Acl-link mode.when it needs to set rule according to link layer info such as source mac address/source VLAN ID/second layer protocol type/destination mac address of message and etc,using this command.We can use packet filter command to filter the message by quoting the ACL rule after setting the acl rule,or uses cooperatively with qos strategy to provide QoS. “no rule”is used for delete acl rule.
<rule-id>	Rule id of ACL,the bigger the id is,the higher the priority.
{permit deny}	Deny:Deny the matched message flow passing Permit:Permit the matched message flow passing
<destination>	The destination mac address of message matched by acl



<source>	The source mac address of message matched by acl
<mac-addr>	Mac address
<mac-wildcard>	wildcard mask of mac address:mac address and wildcard mask are used to match the host mac address,it tells to the device should be match to which bit of a mac address by labeling“0”and“1”.“1”means overlook this bit,“0”means this bit needing to be check.
<time-range-name>	The effective time range of acl
<inner-cos-value>	Match the inner vlan cos value of second layer message
<cos-value>	Match the outer vlan cos value of second layer message
<vlan-id>	Match the outer vlan id
<inner-vlan-id>	Match the inner vlan id
<Ethernet-type>	Match ethernet type field

【 Example 】

Example 1: In work time range,specifying the GE1 receives the message from destination mac address 22-22-22-22-22 only.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day
OLT(config)#acl 5000
OLT(acl-link-5000)#rule 2 permit destination 22:22:22:22:22:22 0000-0000-0000
OLT(acl-link-5000)#rule 1 deny destination 22:22:22:22:22:22 FFFF-FFFF-FFFF
OLT(acl-link-5000)#exit
OLT(config)#packet-filter inbound 5000 port ge 0/0 1

OLT(config)#
```

16.6. Config OLT PON ACL Function

Command	OLT(acl-pon-8000)# {[8021p] [dscp] [end] [eth-type] [exit] [ip] [mac] [no] [port] [protocol] [show] [tag-num] [vlan-id]}
View	Pon acl view
Description	This command is used for create ACL rule in pon-acl mode.when it needs to set rule according to link layer info such as source mac address/source VLAN ID/second layer protocol type/destination mac address of message and etc,using this command.We can use packet filter command to filter the message by quoting the ACL rule after

	setting the acl rule,or uses cooperatively with qos strategy to provide QoS. "no rule"is used for delete acl rule.
[8021p]	IEEE 8021p matching
[dscp]	DSCP matching
[end]	End current mode and change to view mode
[eth-type]	Ethernet type matching
[exit]	Exit current mode and down to previous mode
[ip]	IP address matching
[mac]	MAC address matching
[no]	Negate a command or set its defaults
[port]	IP protocol port matching
[protocol]	IP protocol matching
[show]	Show information
[tag-num]	VLAN tag number matching
[vlan-id]	VLAN ID matching

【 Example 】

Example 1: Apply acl 8001 to pon 1 downstream data flow.its function is adding inner vlan 121 for downstream data flow in pon 1 which carries with dst-ip 192.168.1.1 and src-ip 192.168.2.2

```
OLT(config)#acl 8001
OLT(acl-pon-8001)#ip dst-ip 192.168.1.1 src-ip 192.168.2.2
Exit!
OLT(config)#Traffic-modify pon-port 0/0 1 downstream precedence 4 acl 8001
add-inner-vlan 121
```

16.7. Config ONU ACL Function

Command	OLT(acl-onu-9000)#rule {rule-id} match {[cos] [dscp-v4] [dscp-v6] [dst-ip] [dst-mac] [dst-port] [eth-type] [ip-version] [protocol] [src-ip] [src-mac] [src-port] [vlan-id]}
View	Onu acl
Description	This command is used for create ACL rule in pon-acl mode.when it



	needs to set rule according to link layer info such as source mac address/source VLAN ID/second layer protocol type/destination mac address of message and etc,using this command.We can use packet filter command to filter the message by quoting the ACL rule after setting the acl rule,or uses cooperatively with qos strategy to provide QoS. "no rule" is used for delete acl rule.
<rule-id>	Rule id of ACL,the bigger the id is,the higher the priority.
cos	802.1p priority
dscp-v4	DSCPv4
dscp-v6	DSCPv6
dst-ip	Destination IP address
dst-mac	Destination MAC address
dst-port	Destination IP protocol port
eth-type	Ethernet type
ip-version	IP version
protocol	IP protocol
src-ip	Source IP address
src-mac	Source MAC address
src-port	Source IP protocol port
vlan-id	VLAN ID

【Example】

Example 1: Create acl 9000 and set rule 1,apply it to ont 1's eth 1 in pon 1,its function is mapping the flow which carries with dst-ip 192.168.1.3 to queue 0 and marks its priority as 0.

```
OLT(config)#acl 9000
ACL ID Create OK!
OLT(acl-onu-9000)#rule 1 match dst-ip always-match 192.168.1.3
OLT(acl-onu-9000)#exit
OLT(config)#interface epon 0/0
OLT(config-interface-epon-0/0)#ont port classification 1 1 eth 1 acl 9000 rule 1
precedence 4 queue-mapped 0 priority-mark 0

OLT(config)#
```


16.8. Show OLT ACL Configuration

Command	OLT(config)# show acl {acl-id all/detail}
View	Config view
Description	This command is used for show the configuration of acl.
<acl-id>	ACL id to be show
<all>	Show all the acl
<detail>	Detail info

【Example】

Example 1: Show the configuration fo all acl

<pre> OLT(config)#show acl all Basic ACL 2000,0 rules hold Advanced ACL 3000,0 rules hold Link ACL 5000,0 rules hold OLT(config)# </pre>
--

16.9. Modify OLT ACL Rule ID

Command	OLT(configacl-basic-2000)# rule <ruld id> {up/down/move to}
View	basic acl view,adv acl view,Link acl view
Description	acl acl-id down:The rule id is reduced by one without changing the rule content acl acl-id up:Add one for rule id without changing the rule content acl acl-id move to:Modify the value of rule-id to a specify rule id without change the rule content. (the rule which had been bound to the port can not adjust the value of rule id)
<ruld id>	Rule id
{up/down/move to}	down:The rule id is reduced by one without changing the rule content up:Add one for rule id without changing the rule content move to:Modify the value of rule-id to a specified rule id without change the rule content.

【Example】

Example 1: Modify rule 1 as rule 3.

```
OLT(acl-basic-2000)#rule 1 move to 3

OLT(acl-basic-2000)#
```

17. ARP Configuration

17.1. Config ARP age time

Command	OLT(config)# arp age time set <i>time-value</i>
View	Config view
Description	This command is used for set arp dynamic age time. Once this command set successfully, for these arp which have been existed will restart the clock. Aging at new set time.
<i>time-value</i>	Aging time for dynamic arp table,range for 60-300,usit is s.

【Example】

Example1: Config aging time for dynamic arp is 100.

```
OLT(config)# arp age time set 100

OLT(config)#
```

17.2. Config Learned Gratuitous ARP.

Command	OLT(config)# arp gratuitous arp learning (enable disable)
View	Config view
Description	This command is used for enable or disable learn gratuitous arp function. Gratuitous arp message is the device send destination ip is the same as source ip address. It's mainly used for equipment report their own mac address actively, in order to other devices learn arp table.
(enable disable)	enable:enable learn gratuitous arp disable:disable learn gratuitous arp

【Example】

Example1: enable learn gratuitous arp

```
OLT(config)# arp gratuitous arp learning enable

OLT(config)#
```

17.3. Config Send Gratuitous ARP Messages

Command	OLT(config)# arp gratuitous arp send (enable disable time (time-value default))
View	Config view
Description	This command is used for enable or disable gratuitous arp messages to be sent within the vlanif interface periodically. When enable it, the system will send a gratuitous arp to the network side port every 5 minutes. When disable it, the system will not send arp gratuitous periodically. During exist a number of arp gratuitous messages in the network resulted high cpu utilization rate of the device, there is a way to enable send arp gratuitous periodically to reduce cpu utilization rate.
(enable disable time (time-value default))	enable:enable gratuitous arp messages to be sent within the vlanif interface periodically disable:disable gratuitous arp messages to be sent within the vlanif interface periodically time:set the time of sending gratuitous arp messages, range for 1-60,unit is s

【Example】

Example1: enable gratuitous arp messages to be sent within the vlanif interface periodically

```
OLT(config)# arp gratuitous arp send enable

OLT(config)#
```

17.4. Config ARP Proxy within the VLAN

Command	OLT(config)# arp inner-sub-vlan-proxy (enable disable) vlanif (vlan-id all)
View	Config view
Description	This command is used for enable or disable arp proxy within vlan. Arp proxy is device receive arp request message, destination ip address and ip address inner port are in the same segment network, arp proxy within the vlan will take effect at the moment.
(enable disable)	enable:enable arp proxy within vlan disable:disable arp proxy within vlan
(vlan-id all)	vlan-id: vlan-if interface ,range for 1-4094 all: all layer3 virtual interface



【Example】

Example1: enable arp proxy within vlan to all layer3 virtual interface

```
OLT(config)# arp inner-sub-vlan-proxy enable vlanif all

OLT(config)#
```

17.5. Config ARP Mac Address Change Check

Command	OLT(config)# arp mac address change check (enable disable)
View	Config view
Description	This command is used for enable or disable arp mac address change check. After MAC and ip address bind statically, will check mac address used ip address change or not.
(enable disable)	enable:enable arp mac address change check disable:disable arp mac address change check

【Example】

Example1: enable arp mac address change check

```
OLT(config)# arp mac address change check enable

OLT(config)#
```

17.6. Config ARP Proxy Inner the VLAN

Command	OLT(config)# arp proxy (enable disable) vlanif (vlan-id all)
View	Config view
Description	This command is used for enable or disable arp proxy inner the vlan.
(enable disable)	enable:enable arp proxy inner the vlan disable:disable arp proxy inner the vlan
(vlan-id all)	vlan-id: vlan-if interface ,range for 1-4094 all: all layer3 virtual interface

【Example】

Example1: enable arp proxy with vlanif 1217

```
OLT(config)# arp proxy enable vlanif 1217

OLT(config)#
```

17.7. Config ARP quick-update

Command	OLT(config)# arp quick-update (enable disable)
View	Config view
Description	This command is used for enable or disable arp quick-update. The arpquick update is same ip in the same device, if change port or mac address, equipment will update arp corresponding port and mac in native arp without waiting for learning again after arp aging originally.
(enable disable)	enable:enable arp quick-update disable:disable arp quick-update

【Example】

Example1: enable arp quick-update

```
OLT(config)# arp quick-update enable

OLT(config)#
```

17.8. Config OLT Static ARP

Command	OLT(config)# arp static IP-address mac-address vid vlan-id port (ge F/S/P epon F/S/P xge F/S/P lag flame-id slot-id)
View	Config view
Description	This command is used for bind static arp.
<i>IP-address</i>	Config ip address.format is X.X.X.X
<i>mac-address</i>	Config mac address.format is XX:XX:XX:XX:XX:XX
<i>vlan-id</i>	Config VLAN ID ,range for 1-4094
ge F/S/P epon F/S/P xge F/S/P lag flame-id slot-id	ge: GE port, config frame number/slot number/port number, range for <0-0>/<0-0>/<1-8> epon:EPON port, config frame number/slot number/port number, range for<0-0>/<0-0>/<1-16> xge: XGE port, config frame number/slot number/port number, range for <0-0>/<0-0>/<1-2> lag: link aggregation group, config frame number range for<1-8>or slot number range for<9-16>

【Example】

Example1: bind static arp

```
OLT(config)# arp static 192.168.5.188 00:00:00:11:22:33 vid 100 port epon 0/0/1
```

```
OLT(config)#
```

17.9. Unbind OLT static arp

Command	OLT(config)# no arp static (ip-address all)
View	Config view
Description	This command is used for unbind static arp
(ip-address all)	ip-address: unbind ip address with static arp all:unbind all ip addresses with static arp

【Example】

Example1: Unbind static ip with ip address 192.168.5.188

```
OLT(config)# no arp static 192.168.5.188

OLT(config)#
```

17.10. Delete ARP Link Statistics

Command	OLT(config)# reset arp connected route-statistics
View	config view
Description	This command is used to delete ARP link statistics.

【Example】

Example 1: Delete ARP link statistics.

```
OLT(config)# reset arp connected route-statistics

OLT(config)#
```

17.11. Delete Dynamic ARP Configuration

17.11.1. Delete dynamic ARP on a VLANIF interface.

Command	OLT(config)# reset arp dynamic interface vlanif vlan-id
View	config view
Description	This command is used to delete dynamic ARP on a VLANIF interface.

【Example】

Example 1: Delete dynamic ARP on a VLANIF interface 20.

```
OLT(config)# reset arp dynamic interface vlanif 20

OLT(config)#
```

17.11.2. Delete Dynamic ARP for Different IPs

Command	OLT(config)# reset arp dynamic ip <i>ip-address</i>
View	config view
Description	This command is used to delete dynamic ARP for different IPs.

【Example】

Example 1: Delete dynamic ARP with IP address 192.168.10.2

```
OLT(config)# reset arp dynamic ip 192.168.10.2

OLT(config)#
```

17.11.3. Delete Dynamic ARP for Port

Command	OLT(config)# reset arp dynamic port <i>((lag group-ip)) (ge epon xge) F/S/P)</i>
View	config view
Description	This command is used to delete the dynamic ARP of a port.

【Example】

Example 1: Delete the dynamic ARP of the PON1 port.

```
OLT(config)# reset arp dynamic port epon 0/0/1

OLT(config)#
```

17.11.4. Delete all Dynamic ARPs

Command	OLT(config)# reset arp dynamic all
View	config view
Description	This command is used to delete all dynamic ARPs.

【Example】

Example 1: Delete all dynamic ARPs.

```
OLT(config)# reset arp dynamic all

OLT(config)#
```

18. OLT QOS Configuraiton

18.1. Config OLT Global QOS mode

Command	OLT(config)# qos global mode {device-based port-based}
View	Config view
Description	This command is used for set global QOS mode
{device-based port-based}	device-based:device-based QOS port-based:port-based QOS

【Example】

Example 1: Set device-based QOS.

```
OLT(config)#qos global mode device-based
OLT(config)#
```

18.2. Config Traffic Control Based On ACL Rule

18.2.1. Config Packet Filter Based On ACL Rules

Command	OLT(config)# packet-filter {inbound outbound} <acl-id> rule-id <rule-id> port {ge epon xge} <port-id>
View	Config view
Description	This command is used for match the acl rule for the specified port.When it needs to filter the the flow in port by acl rule,using this command. “no packet-filter.....”is used for delete the acl rule in specified port.
{inbound outbound}	inbound:The ingress flow Outbound:The egress flow
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port list

【Example】

Example 1 : In the work time range,specify GE1 can only receive the message from mac address 22-22-22-22-22-22.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day
OLT(config)#acl 2000
OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime
OLT(acl-basic-2000)#rule 1 deny source any time-range worktime
```



```
OLT(acl-basic-2000)#exit
OLT(config)#packet-filter inbound 2000 port ge 0/0 1

OLT(config)#
```

18.2.2. Changes Traffic DSCP Based On ACL Rule

Command	OLT(config)# traffic-dscp {inbound outbound} <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> remark-dscp <remark-dscp-value>
View	Config view
Description	This command is used for match the acl for specified port to re-mark the value of DSCP. “no traffic-dscp.....”is used cancel the acl in specified port.
{inbound outbound}	inbound:The ingress flow Outbound:The egress flow
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port list
<remark-dscp-value>	Remark DSCP value

【 Example 】

Example 1 : In work timme range,re-mark the DSCP value as 43 for the message from 10.10.10.2.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day

OLT(config)#acl 2000

OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime

OLT(acl-basic-2000)#exit

OLT(config)#traffic-dscp inbound 2000 port ge 0/0 1 remark-dscp 43

OLT(config)#
```

18.2.3. Config Traffic Mirror Based On ACL Rule

Command	OLT(config)# traffic-mirror inbound <acl-id> rule-id <rule-id>
----------------	---

	<code>port {ge pon xge} <port-id> to {ge xge} <port-id></code>
View	Config view
Description	This command is used for mirror the acl matched flow for specified port. “no traffic-mirror.....”is used for cancel the acl matched flow mirror in specified port.
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port id

【 Example 】

Example 1: In work time range, mirror the message from GE1 10.10.10.2 to the port 2.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day
OLT(config)#acl 2000
OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime
OLT(acl-basic-2000)#exit
OLT(config)#traffic-mirror inbound 2000 port ge 0/0 1 to ge 0/0 2

OLT(config)#
```

18.2.4. Config Traffic Limit Based On ACL Rule

Command	<code>OLT(config)##traffic-limit {inbound outbound} <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> cir <rate-value> pir <rate-value> exceed {drop remark-dscp}</code>
View	Config view
Description	This command is used for set traffic-limit for specified port by match the acl. “no traffic-limit.....”is used for delete the acl matched traffic-limit in specified port.
{inbound outbound}	inbound:The ingress flow Outbound:The egress flow
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-list>	Port list
{drop remark-dscp}	drop:discard



	remark:Re-mark the DSCP value
--	-------------------------------

【 Example 】

Example 1: In work time range,set the traffic-limit for the ingress direction message from GE1 10.10.10.2.In which the cir is 1M,pir is 100M,and discard the transfinite flow.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day
OLT(config)#acl 2000
OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime
OLT(acl-basic-2000)#exit
OLT(config)#traffic-limit inbound 2000 port ge 0/0/1 cir 1024 pir 102400 exceed drop
OLT(config)#
```

18.2.5. Add Traffic Outer VLAN Based On ACL Rule

Command	OLT(config)## traffic-outervlan inbound <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> vlan <vlan-id>
View	Config view
Description	This command is used for add outer vlan for acl matched folw in specified port. “no traffic-outervlan.....”is used for cancel the command mention above.
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port id
<vlan-id>	Outer vlan id

【 Example 】

Example 1: In work time range,add outer vlan 10 for the message from GE1 10.10.10.2

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day

OLT(config)#acl 2000

OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime

OLT(acl-basic-2000)#exit

OLT(config)#traffic-outervlan inbound 2000 port ge 0/0/1 vlan 10

OLT(config)#
```

18.2.6. Translate Traffic VLAN Based On ACL Rule

Command	OLT(config)# traffic-translate inbound <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> vlan <vlan-id>
View	Config view
Description	This command is used for translate the vlan id of acl matched port's egress or ingress flow into new vlan id.
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port id
<vlan-id>	New vlan id

【Example】

Example 1: Translate the vlan id of the flow in GE5 which had been bound to acl2000 and rule2 into vlan 19.

```
OLT(config)#traffic-translate inbound 2000 rule-id 2 port ge 0/0/5 vlan 19
OLT(config)#
```

18.2.7. Modify Traffic VLAN Priority Based On ACL Rule

Command	OLT(config)# traffic-priority inbound <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> remark-priority <pri-value>
View	Config view
Description	This command is used for set the acl vlan priority for specified port. "no traffic-priority....."is used for cancel the vlan priority on specified port.
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port id
<pri-value>	Priority value

【Example】

Example 1 : In work time range,set the vlan priority as 2 for the message from GE1 10.10.10.2.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day
```

```

OLT(config)#acl 2000

OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime

OLT(acl-basic-2000)#exit

OLT(config)#traffic-priority inbound 2000 port ge 0/0 1 remark-priority 2

OLT(config)#
    
```

18.2.8. Config Traffic Redirect Based On ACL Rule

Command	OLT(config)## traffic-redirect inbound <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> to <ge xge> <port-list>
View	Config view
Description	This command is used for set traffic-redirect for acl matched flow in specified port. “no traffic-redirect” is used for cancel the traffic-redirect. (Redirect the acl matched message in specified port or port list to other port and transfer.After setting,the old port will not transfer the redirect message,but it will be transferred by the new port.In addition,a correct vlan setting in the port is needed)
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-list>	Port list

【 Example 】

Example 1: In work time range,redirect the message from GE1 10.10.10.2 to GE2.

```

OLT(config)#time-range worktime 8:00 to 18:00 working-day
OLT(config)#acl 2000
OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime
OLT(acl-basic-2000)#exit
OLT(config)#traffic-redirect inbound 2000 port ge 0/0 1 to ge 0/0 2

OLT(config)#
    
```

18.2.9. Modify Traffic TOS Value Based On ACL Rule

Command	OLT(config)## traffic-tos {inbound outbound} <acl-id> rule-id <rule-id> port {ge pon xge} <port-id> remark-tos <Tos value>
----------------	---

View	Config view
Description	This command is used for modify the tos value of the acl matched value.
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port list
<Tos value>	Tos vlaue

【 Example 】

Example 1: In work time range,modify the tos value of the message from GE1 10.10.10.2 as 3.

```
OLT(config)#time-range worktime 8:00 to 18:00 working-day

OLT(config)#acl 2000

OLT(acl-basic-2000)#rule 2 permit source 10.10.10.2 0.0.0.0 time-range worktime

OLT(acl-basic-2000)#exit

OLT(config)#traffic-tos inbound 2000 rule-id 2 port ge 0/0 1 remark-tos 3

OLT(config)#
```

18.2.10. Config ACL Action and Bind ACL to PON Port

Command	OLT(config)# traffic-modify pon-port <port-id> {downstream upstream} precedence <precedence-id> acl <acl-id> <action>
View	Config view
Description	This command is used for set the pon-acl matched flow(it uses with pon acl 8000-8199)
<acl-id>	ACL id
<rule-id>	Rule id in acl
<port-id>	Port id
<Precedence-id>	ACL priority,the command with higher priority will execute firstly.
<downstream ups	downstream



tream>	upstream
<action>	<p>8021p:vlan priority deny:Deny corresponding flow passing add-inner-vlan:Add inner vlan for the highest priority acl matched flow in pon port. add-top-vlan:Add outer vlan for the highest priority acl matched flow in pon port. strip-inner-vlan:Peel the inner vlan for the highest priority acl matched flow in pon port. strip-top-vlan:Peel the outer vlan for the highest priority acl matched flow in pon port. swap-inner-vlan:Replace the inner vlan of the highest priority acl matched flow in pon port. swap-top-vlan:Replace the outer vlan of the highest priority acl matched flow in pon port.</p>

【 Example 】

Example 1 : Add outer vlan 1000 for the flow which vlan is 100-200 in pon1 upstream direction.

```

OLT(config)#acl 8000

OLT(acl-pon-8000)#vlan-id top-vid 100 to 200

OLT(acl-pon-8000)#exit

OLT(config)#traffic-modify pon-port 0/0 1 upstream precedence 4 acl 8000
add-top-vlan 1000

OLT(config)#
    
```

18.2.11. Config ACL Action and Bind ACL to ONU

Command	OLT(config)# traffic-modify ont <port-id> <onu-id> <downstream upstream> precedence <precedence-id> acl <acl-id> <action>
View	Config view
Description	The traffic-modify command is used for modify the data of the PON port and the ONU (this command is used together with the pon acl (8000-8199) part)
<acl-id>	ACL id
<rule-id>	Rule id in acl

<port-list>	Port list
<onu-id>	ONU id
<Precedence-id>	ACL priority,the command with higher priority will execute firstly.
<downstream upstream>	downstream upstream
<action>	8021p:vlan priority deny:Deny corresponding flow passing add-inner-vlan:Add inner vlan for the highest priority acl matched flow in pon port. add-top-vlan:Add outer vlan for the highest priority acl matched flow in pon port. strip-inner-vlan:Peel the inner vlan for the highest priority acl matched flow in pon port. strip-top-vlan:Peel the outer vlan for the highest priority acl matched flow in pon port. swap-inner-vlan:Replace the inner vlan of the highest priority acl matched flow in pon port. swap-top-vlan:Replace the outer vlan of the highest priority acl matched flow in pon port.

【 Example 】

Example 1 : Apply the outer vlan 1000 to the data of the uplink data stream vlan of the ONU1 under the PON from 100 to 200.

```
OLT(config)# acl 8000

OLT(acl-pon-8000)# vlan-id top-vid 100 to 200

OLT(acl-pon-8000)# exit

OLT(config)# traffic-modify ont 0/0 1 1 upstream precedence 4 acl 8000 add-top-vlan 1000

OLT(config)#
```

18.2.12. Config statistics on matching ACL Rules

Command	OLT(config)# traffic-statistic <clear-counters> <inbound outbound> <acl-id> rule-id <rule-id> port <ge pon xge> <port-list>
View	Config view

Description	This command is used to configure the flow of incoming data from the port matching the acl rule. Clear-counters are used to clear data statistics;
<acl-id>	ACL id
<rule-id>	ACL rule ID
<port-list>	Port list

【Example】

Example 1: Config statistics on the port data matching the acl2000 rule and view it.

```
OLT(config)# traffic-statistic inbound 2000 port epon 0/0 1

OLT(config)#

OLT(config)# show qos info all port epon 0/0/1

traffic-mirror on epon 0/0/1:
Inbound:
  Matches: acl 2000 rule 1 running
  Packets: 0
  Bytes: 0

OLT(config)#
```

18.2.13. Show ACL Bind Configuration

Command	OLT(config)# show traffic-modify {all pon-port ont}
View	Config view
Description	This command is used for show configuration info of pon-acl traffic-modify
{all ont-pon ont}	all:show all the configuration info of pon-acl pon-port:show pon-acl configuration info of pon port ont:show pon-acl configuration info of onu

【Example】

Example 1: Show all the configuration info of pon-acl

```
OLT(config)#show traffic-modify all
traffic-modify pon-port 0/0 1 upstream precedence 4 acl 8000 add-top-vlan 1000
traffic-modify ont 0/0 1 1 upstream precedence 4 acl 8000 swap-top-vlan 1000

OLT(config)#
```

18.2.14. Show Port Packet-filter Policy Configuration

Command	OLT(config)# show packet-filter {all port}
View	Config view
Description	This command is used for show packet-filter strategy in the port
{all port}	all:Show all the packet filter configuration port:Show packet filter strategy of specified port

【Example】

Example 1: Show all the packet filter configuration

```
OLT(config)#show packet-filter all
-----
inbound acl 2000 rule 1 port ge 0/0 1 running
inbound acl 2000 rule 2 port ge 0/0 1 not running
inbound acl 2000 rule 3 port ge 0/0 1 not running
-----
OLT(config)#
```

18.2.15. Show Port QOS Configuration Information

Command	OLT(config)# show qos-info {all traffic-dscp traffic-tos traffic-limit traffic-mirror traffic-outervlan traffic-priority traffic-redirect traffic-statistic traffic-translate } port {ge pon xge} <port-id>
View	Config view
Description	This command is used for show qos strategy of the port
<all>	All of the qos strategy
<port-list>	Port list

【Example】

Example 1: Show all the QOS strategy of GE1.

```
OLT(config)#show qos-info all port ge 0/0/1

traffic-tos on ge 0/0/1:
Inbound:
Matches:acl 2000 rule 1 running
Remark-tos:3

OLT(config)#
```

18.3. Config OLT QOS Queue

18.3.1. Config OLT QOS Queue Mapping Mode

Command	OLT(config)# qos cosq-map mode {cos diffserv tos}
View	Config view
Description	This command is used for set the mapping mode of system queue
<cos diffserv tos>	<p>Cos:The mapping mode is based on 802.1p</p> <p>diffserv:The mapping mode is based on diffserv</p> <p>Tos:The mapping mode is based on tos</p>

【Example】

Example 1: Set the QOS mapping mode as 802.1p.

```
OLT(config)#qos cosq-map mode cos
OLT(config)#
```

18.3.2. Config QOS Queue Mapping Mode Based On 802.1p

Command	OLT(config)# qos cosq-map cos0 <Queue id> cos1 <Queue id> cos2 <Queue id> cos3 <Queue id> cos4 <Queue id> cos5 <Queue id> cos6 <Queue id> cos7 <Queue id>
View	Config view
Description	This command is used for set the mapping table of system queue and 802.1p
<Queue id>	Queue id,range for 0-7

【Example】

Example 1: Set the mapping table of system queue and 802.1p

```
OLT(config)#qos cosq-map cos0 1 cos1 2 cos2 3 cos3 4 cos4 5 cos5 6 cos6 7 cos7 0
OLT(config)#
OLT(config)#show qos queue-scheduler
Queue scheduler mode:SP
```

```

-----
Queue Scheduler Mode WRR Weight Bandwidth(kbps)
-----
0 SP--
1 SP--
2 SP--
3 SP--
4 SP--
5 SP--
6 SP--
7 SP--
-----

Queue map mode:Cos
-----

Priority Queue
-----
0 1
1 2
2 3
3 4
4 5
5 6
6 7
7 0
-----
    
```

18.3.3. Config OLT QOS Queue Scheduled Mode

Command	OLT(config)# qos queue-scheduler strict-priority OLT(config)#qos queue-scheduler wrr <queue0-weight queue1-weight queue2-weight queue3-weight queue4-weight queue5-weight queue6-weigh tqueue7-weight> OLT(config)#qos queue-scheduler bandwidth queue0 <bandwidth> queue1 <bandwidth> queue2 <bandwidth> cos3 <bandwidth> queue4 <bandwidth> queue5 <bandwidth> queue6<bandwidth> queue7 <bandwidth>
View	Config view
Description	This command is used for set system queue scheduled mode.The message which is sending from the same port is divided into several queue by Queue scheduling,and schedules them between queue and queue,it decides the sending sequence of



	<p>queue.when the user needs to select different queue scheduling mode according to the importance of service,and ensure that the QoS guarantees are still available for important business when the network is blocked,using this command.After setting,the system will send the queue message according to new dispatching mode.</p> <p>System support PQ,WRR,WRR+PQ dispatching mode.when a queue is null,it can switch to next queue immediately and dispatch,which can make full use of bandwidth source.</p>
strict-priority	<p>Strict-priority scheduling,When this mode is applied,the system schedules strictly according to the priority of the queue.Only high priority queue is null,the low priority queue can be scheduled.The disadvantage of the PQ scheduling mode shows as follows:</p> <p>When the blocking is happening,if the high priority queue has some groups existing for a long time,corresponding apply will time out for the reason that the message with low priority can not be scheduled in time.</p>
wrr	<p>Weighted Round Robin.When this mode is applied,it needs to match a weight for each queue(weight means the obtained resource proportion),it takes turns to scheduling according to the weight in queue and assure each queue can obtain definite service.Each queue has the same priority but different weights,the bigger weight it is,the longer scheduling time obtained by this queue.In this way it can assure the lowest priority queue which can obtain definite service at least.avoiding that the message in low priority queue can not obtain service for a long time when adopting the PQ scheduling mode.</p> <p>queue0-weight/queue1-weight/queue2-weight/queue3-weight/queue4-weight/queue5-weight/queue6-weight/queue7-weight: the weight of each queue.system supports 8 queues,the weight's sum of 8 queues is 100.</p>
WRR+PQ	<p>WRR+PQ scheduling mode is a mixture of WRR and PQ scheduling modes.When the scheduling mode is WRR,and the weight value of queue has 0,the queue scheduling mode is PQ+WRR.In this mode,system will schedule the queue with 0 weight first according to PQ mode,and then schedules the queue with non-zero weight according to WRR mode,the priority of PQ queue is higher than WRR queue in the meantime.</p> <p>System default scheduling mode is PQ mode.</p>

【Example】

Example 1: Set the scheduling mode of pon1 as WRR mode,let the messages with various



kinds of priority can be scheduled. The weight of queue 0-7 is 15 15 20 10 10 10 10 10.

```
OLT(config)#qos queue-scheduler port-based epon 0/0 1 wrr 15 15 20 10 10 10 10 10
OLT(config)#
```

18.3.4. Show OLT QOS Queue Schedule Mode

Command	OLT(config)# show qos queue-schedule
View	Config view
Description	This command is used for show system queue-schedule mode.

【Example】

Example 1: Show system queue-schedule mode.

```
OLT(config)#show qos queue-scheduler

Queue scheduler mode:SP

-----
Queue Scheduler Mode WRR Weight Bandwidth(kbps)
-----
0 SP--
1 SP--
2 SP--
3 SP--
4 SP--
5 SP--
6 SP--
7 SP--

-----

Queue map mode:Cos

-----
Priority Queue
-----
0 1
1 2
2 3
3 4
4 5
5 6
6 7
7 0
```

```
OLT(config)#
```

18.4. OLT Port QOS Queue Configuration

18.4.1. Config OLT Port QOS Queue Mapping Mode

Command	OLT(config)# qos cosq-map port-based <epon ge xge> <port-id> mode <cos diffserv tos>
View	Config view
Description	This command is used for set mapping mode of port-based queue
{cos diffserv tos}	Cos:The mapping mode is based on 802.1p diffserv:The mapping mode is based on diffserv Tos:The mapping mode is based on tos

【Example】

Example 1: Set the mapping mode of pon1 queue as 802.1q.

```
OLT(config)#qos global mode port-based

OLT(config)#qos cosq-map port-based cos epon 0/0 1

OLT(config)#
```

18.4.2. Config OLT Port QOS Queue Mapping Mode Based On 802.1p

Command	OLT(config)# qos cosq-map port-based <epon ge xge> <port-id> to-pbits cos cos0 <Queue id> cos1 <Queue id> cos2 <Queue id> cos3 <Queue id> cos4 <Queue id> cos5 <Queue id> cos6 <Queue id> cos7 <Queue id> OLT(config)# qos cosq-map port-based <epon ge xge> <port-id> to-pbits diffserv <dscp-list> <priority> OLT(config)# qos cosq-map port-based <epon ge xge> <port-id> to-pbits tos <tos-list> <priority>
View	Config view
Description	This command is used for set the mapping table between port-based queue and 802.1p



<Queue id>	Queue id,range for 0-7
<dscp-list>	Dscp id,range for 0-63, format as 1,3-5,8
<tos-list>	tos id,range for 0-7, format as 1,3-5,7
<priority>	Priority, range for 0-7

【Example】

Example 1: Set the mapping table between queue and 802.1q

```
OLT(config)# qos cosq-map port-based epon 0/0 1 to-pbits cos cos0 1 cos1 3

OLT(config)# qos cosq-map port-based epon 0/0 1 to-pbits diffserv 1 2

OLT(config)# qos cosq-map port-based epon 0/0 2 to-pbits tos 2 3

OLT(config)#
```

18.4.3. Config OLT Port QOS Queue Schedule Mode

Command	<p>OLT(config)#qos queue-scheduler port-based {epon ge xge} <port-id> strict-priority</p> <p>OLT(config)#qos queue-scheduler port-based {epon ge xge} <port-id> wrr <queue0-weight queue1-weight queue2-weight queue3-weight queue4-weight queue5-weight queue6-weight queue7-weight></p> <p>OLT(config)#qos queue-scheduler bandwidth queue0 <bandwidth> queue1 <bandwidth> queue2 <bandwidth> cos3 <bandwidth> queue4 <bandwidth> queue5 <bandwidth> queue6<bandwidth> queue7 <bandwidth></p>
View	Config view
Description	<p>This command is used for set system queue scheduled mode.The message which is sending from the same port is divided into several queue by Queue scheduling,and schedules them between queue and queue,it decides the sending sequence of queue.when the user needs to select different queue scheduling mode according to the importance of service,and ensure that the QoS guarantees are still available for important business when the network is blocked,using this command.After setting,the system will send the queue message according to new dispatching mode.</p>

	System support PQ,WRR,WRR+PQ dispatching mode.when a queue is null,it can switch to next queue immediately and dispatch,which can make full use of bandwidth source.
strict-priority	<p>Strict-priority scheduling,When this mode is applied,the system schedules strictly according to the priority of the queue.Only high priority queue is null,the low priority queue can be scheduled.The disadvantage of the PQ scheduling mode shows as follows:</p> <p>When the blocking is happening,if the high priority queue has some groups existing for a long time,corresponding apply will time out for the reason that the message with low priority can not be scheduled in time.</p>
wrr	<p>Weighted Round Robin.When this mode is applied,it needs to match a weight for each queue(weight means the obtained resource proportion),it takes turns to scheduling according to the weight in queue and assure each queue can obtain definite service.Each queue has the same priority but different weights,the bigger weight it is,the longer scheduling time obtained by this queue.In this way it can assure the lowest priority queue which can obtain definite service at least.avoiding that the message in low priority queue can not obtain service for a long time when adopting the PQ scheduling mode.</p> <p>queue0-weight/queue1-weight/queue2-weight/queue3-weight/queue4-weight/queue5-weight/queue6-weight/queue7-weight: the weight of each queue.system supports 8 queues,the weight's sum of 8 queues is 100.</p>
WRR+PQ	<p>WRR+PQ scheduling mode is a mixture of WRR and PQ scheduling modes.When the scheduling mode is WRR,and the weight value of queue has 0,the queue scheduling mode is PQ+WRR.In this mode,system will schedule the queue with 0 weight first according to PQ mode,and then schedules the queue with non-zero weight according to WRR mode,the priority of PQ queue is higher than WRR queue in the meantime.</p> <p>System default scheduling mode is PQ mode.</p>

【 Example 】

Example 1: Set the scheduling mode of pon1 as WRR mode,let the messages with various kinds of priority can be scheduled.The weight of queue 0-7 is 15 15 20 10 10 10 10 10.

```
OLT(config)#qos queue-scheduler wrr 15 15 20 10 10 10 10 10
OLT(config)#
```

18.4.4. Show OLT Port QOS Queue Schedule Mode

Command	OLT(config)# show qos queue-schedule port-based {epon ge xge} <port-id>
View	Config view
Description	This command is used for show port-based queue-schedule mode

【Example】

Example 1: Show pon1 queue-schedule mode

```

OLT(config)#show qos queue-scheduler port-based epon 0/0/1

Queue scheduler mode on epon 0/0/1:WRR

-----
Queue Scheduler Mode WRR Weight Bandwidth(kbps)
-----
0 WRR 15-
1 WRR 15-
2 WRR 20-
3 WRR 10-
4 WRR 10-
5 WRR 10-
6 WRR 10-
7 WRR 10-

-----

Queue map mode on epon 0/0/1:Cos

-----
Priority Queue
-----
0 1
1 2
2 3
3 4
4 5
5 6
6 7
7 0

-----

OLT(config)#
    
```

18.5. Config Mapping of DSCP to 802.1p Priority



Command	OLT(config)# dscp-to-pbits <i>dscp-list 802.1p-priority</i>
View	Config view
Description	This command is used for configure mapping of DSCP to 802.1p priority. The access devices depend on 802.1p priority for scheduling. And ip network depends on DSCP priority for scheduling. In order to ensure Qos information will not discard during access devices sending user messages to ip network, so have to configure DSCP and 802.1p priority mapping. It must be configured based on the mapping relationship (diffserv) of the differentiated service model;
<i>dscp-list</i>	User ip messages' DSCP threshold information list, range for 0-63, format:1,3-5
<i>802.1p-priority</i>	Mapping to egress messages' 802.1p priority, range for 0-7

【Example】

Example 1: Configure DSCP list 1 mapping to 802.1p 1

```
OLT(config)# dscp-to-pbits 1 1
OLT(config)#
```

18.6. Config Mapping of Tos to 802.1P Priority

Command	OLT(config)# tos-to-pbits <i>tos-list 802.1p-priority</i>
View	Config view
Description	This command is used to configure the mapping between tos and 802.1p priorities. This command must be configured in qos tos mode.
<i>tos-list</i>	Tos information list, range 0-7, format is 1,3-5
<i>802.1p-priority</i>	The 802.1p priority mapped to the egress packet, ranging from 0 to 7.

【Example】

Example 1: Configure the tos list to map 2 priority to 802.1p 3.

```
OLT(config)# tos-to-pbits 2 3
OLT(config)#
```

19. OLT DHCP Function Configuration

19.1. OLT DHCP-Snooping Function Configuration

19.1.1. Enable or Disable DHCP-Snooping Function

Command	OLT(config)# dhcp-snooping {enable disable}
View	Config view
Description	This command is used for enable or disable dhcp-snooping function,after enabling this function,the functions showing as follows will be opened at the same time: Trust/un-trust port,MAC address detect,DHCP message rate limit in untrust port,port recovery,option82,dynamic ARP detect and ARP fast reply.
{enable disable}	Enable:enable dhcp-snooping function Disable:disable dhcp-snooping function

【Example】

Example 1: Enable dhcp-snooping function

```
OLT(config)#dhcp-snooping enable

OLT(config)#
```

19.1.2. Show DHCP-Snooping Configuration

Command	OLT(config)# show dhcp-snooping configuration
View	Config view
Description	This command is used for show configuration of DHCP-Snooping

【Example】

Example 1: Show configuration of DHCP-Snooping

```
OLT(config)#show dhcp-snooping configuration
-----
DHCP Snooping Configurations
-----

Switch DHCP Snooping status:Enable
DHCP Snooping verification of hwaddr status:Disable
DHCP Snooping option82 status:Disable
DHCP Snooping option82 policy:Keep
DHCP Snooping option82 format:Type1
```

DHCP Snooping database write-delay time:7200(s)

Switch ARP detection status:Disable

Switch ARP reply-fast status:Disable

DHCP Snooping is configured on following vlans:

-

Port Trusted Rate-limit(pps)

ge0/0/1 No 300

ge0/0/2 No 300

ge0/0/3 No 300

ge0/0/4 No 300

ge0/0/5 No 300

ge0/0/6 No 300

ge0/0/7 No 300

ge0/0/8 No 300

xge0/0/1 No 300

xge0/0/2 No 300

pon0/0/1 No 300

pon0/0/2 No 300

pon0/0/3 No 300

pon0/0/4 No 300

pon0/0/5 No 300

pon0/0/6 No 300

pon0/0/7 No 300

pon0/0/8 No 300

pon0/0/9 No 300

pon0/0/10 No 300

pon0/0/11 No 300

pon0/0/12 No 300

pon0/0/13 No 300

pon0/0/14 No 300

pon0/0/15 No 300

pon0/0/16 No 300

lag1 No 300

lag2 No 300

lag3 No 300

lag4 No 300

lag5 No 300

lag6 No 300

lag7 No 300

lag8 No 300

```

lagL9 No 300
lagL10 No 300
lagL11 No 300
lagL12 No 300
lagL13 No 300
lagL14 No 300
lagL15 No 300
lagL16 No 300
-----
OLT(config)#
    
```

19.1.3. Config DHCP-Snooping Monitor VLAN

Command	OLT(config)# dhcp-snooping vlan <vlan-list>
View	Config view
Description	This command is used for add specified monitoring vlan.DHCP message which includes into monitoring vlan will be monitored,DHCP message which does not include into monitoring vlan will be transferred with original shape. “no dhcp-snooping vlan <vlan-list>”is used for delete the specified monitoring vlan.
<vlan-list>	Vlan list

【 Example 】

Example 1: Add monitoring vlan 100,200,300

```

OLT(config)#dhcp-snooping vlan 100,200,300

OLT(config)#
    
```

19.1.4. Config DHCP-Snooping Trust Port

Command	OLT(config)# dhcp-snooping trust port {epon/ge/xge/lag} 0/0 <port id>
View	Config view
Description	This command is used for add dhcp-snooping trust port,trust port can receive all the DHCP message,untrust port can not receive DHCP reply message. “no dhcp-snooping ust port {epon/ge/xge/lag} 0/0 <port id>”is used for delete the trust port.

{epon/ge/xge/lag}	Port type Epon:Pon port Ge:Giga uplink port Xge:10 giga uplink port Lag:link aggregation group
0/0	Frame id/slot id,the default is 0/0
<port-id>	Port list,format for 1,2-3,4

【 Example 】

Example 1: Add GE1 to dhcp-snooping trust port.

```
OLT(config)#dhcp-snooping trust port ge 0/0 1
OLT(config)#
```

19.1.5. Enable or Disable OLT DHCP-Snooping Source MAC

Address Detect

Command	OLT(config)# dhcp-snooping chaddr-check {enable disable}
View	Config view
Description	This command is used for enable or disable dhcp-snooping chaddr-check,check whether the source mac address of dhcp request message received by untrust port is the same with CHADDR field,if yes,checking it,else discarding.
{enable disable}	Enable:open dhcp-snooping chaddr-check Disable:close dhcp-snooping chaddr-check

【 Example 】

Example 1: Enable dhcp-snooping chaddr-check function

```
OLT(config)#dhcp-snooping chaddr-check enable
OLT(config)#
```

19.1.6. Config DHCP-Snooping Request Message Rate Limit

Command	OLT(config)# dhcp-snooping limit-rate <Rate> port {epon/ge/xge/lag} 0/0 <port-id>
View	Config view
Description	This command is used for set rate limitation of dhcp request message received by untrust port,the message will be discard when it out of

	range.Rate limitation can be set in trust port but it will not take effect unless set this port as untrust port.
<Rate>	Rate of dhcp request message,range for 1-2048,unit is pps
{epon/ge/xge/lag}	Port type Epon:Pon port Ge:Giga uplink port Xge:10 giga uplink port Lag:link aggregation group
<port id>	Port list,format for 1,2-3,4

【 Example 】

Example 1: The rate limitation of DHCP request message received by GE6 is 20pps.

```
OLT(config)#dhcp-snooping limit-rate 20 port ge 0/0 6
OLT(config)#
```

19.1.7. Enable or Disable DHCP-Snooping Option82 Function

Command	OLT(config)# dhcp-snooping option82 {enable disable}
View	Config view
Description	This command is used for enable disable dhcp-snooping option82 function.This command inserts option82 information into dhcp request message received by untrust port and peels the option82 information from dhcp reply message received by trust port.
{enable disable}	Enable:Enable dhcp-snooping option82 function Disable:Disable dhcp-snooping option82 function

【 Example 】

Example 1: Enable dhcp-snooping option82 function

```
OLT(config)#dhcp-snooping option82 enable
OLT(config)#
```

19.1.8. Config DHCP-Snooping Option82 Forwarding Policy

Command	OLT(config)# dhcp-snooping option82 policy {keep drop replace}
View	Config view
Description	This command is used for set the option82 forwarding policy of dhcp request message.

keep	Transmit option82 dhcp message according to the original shape
drop	Discard the option82 dhcp message
replace	Replace old option82 in the dhcp message and then transmit

【 Example 】

Example 1: Set the dhcp option82 transmission policy as keep.

```
OLT(config)#dhcp-snooping option82 policy keep

OLT(config)#
```

19.1.9. Config DHCP-Snooping option82 Format

Command	OLT(config)# dhcp-snooping option82 format {type1 type2 type3 type4 type5 type6 type7 type8}
View	Config view
Description	This command is used for set the format of dhcp-snooping option82
<type1 type2 type3 type4 type5 type6 type7 type8>	type1:UNI+ONU MAC type2:UNI+OLT MAC type3:ONU+ONU MAC type4:ONU+OLT MAC type5:PON+OLT MAC type6: ONU MAC+OLT MAC type7: UNI ID+OLT Hostname type8: PON ID ONU ID+EltexLTPX

【 Example 】

Example 1: set the format of dhcp-snooping option82 as type1.

```
OLT(config)#dhcp-snooping option82 format type1

OLT(config)#
```

19.1.10. Config DHCP-Snooping Port Binding Policy

Command	OLT(config)# dhcp-snooping binding<mac address><ip address> <vlan id> <port id>
View	Config view
Description	This command is used for set the binding strategy of dhcp request message
<mac address>	MAC in static binding table,format for AA:BB:CC:DD:EE:FF

<ip address>	IP in static binding table,format for A.B.C.D
<vlan id>	vlan in static binding table,range for<1-4094>
<port id>	Port type Epon:Pon port Ge:Giga uplink port Xge:10 giga uplink port Lag:link aggregation group

【 Example 】

Example 1 : Add a static binding table entry,mac address is 00:0f:1f:c5:10:08,ip is 192.168.1.101,vlan is 100,port id is GE8.

```
OLT(config)#dhcp-snooping binding 00:0f:1f:c5:10:08 192.168.1.101 100 port ge 0/0/8
OLT(config)#
```

19.1.11. Delete DHCP-Snooping Bind-table

Command	OLT(config)# dhcp-snooping bind-table clear {all static dynamic ip-address vlan}
View	Config view
Description	This command is used for clear dhcp-snooping bind-table.
all	Clear all the dhcp-snooping bind-table entry.
static	Clear the static dhcp-snooping bind-table entry.
dynamic	Clear the dynamic dhcp-snooping bind-table entry.
ip-address	Delete the bind-table by specified ip
vlan	Delete the bind-table by specified vlan id

【 Example 】

Example 1: Clear all the dhcp-snooping bind-table entry.

```
OLT(config)#dhcp-snooping bind-table clear all
OLT(config)#
```

19.1.12. Config DHCP-Snooping Bind-table Write-delay Time

Command	OLT(config)# dhcp-snooping bind-table write-delay <Delay time>
View	Config view

Description	This command is used for set dhcp-snooping bind-table write-delay time.After dhcp-snooping binding-table having been updated and waiting for write-delay time,the flash will be written
<Delay time>	Write-delay time,range for 240-86400,unit is second.

【 Example 】

Example 1: When the dhcp-snooping has been updated,the flash will be written after 4min.

```
OLT(config)#dhcp-snooping bind-table write-delay 240

OLT(config)#
```

19.1.13. Config DHCP-Snooping Bind-table Delete-time

Command	OLT(config)# dhcp-snooping bind-table delete-time <time>
View	Config view
Description	This command is used for set dhcp-snooping bind-table dynamic entry delete-time.dynamic table will not be deleted immediately when the lease time is over,but it will be deleted after waiting for the delete-time.
<time>	Dynamic table delay delete-time,range for 1-86400,unit is second

【 Example 】

Example 1: When the lease time is expiration dynamic table will be deleted after 240s latter.

```
OLT(config)#dhcp-snooping bind-table delete-time 240

OLT(config)#
```

19.1.14. Config DHCP-Snooping Bind-table Write-to-flash

Command	OLT(config)# dhcp-snooping bind-table write-to-flash
View	Config view
Description	This command is used for write the dhcp-snooping bind-table to the flash by manually.

【 Example 】

Example 1: Write the dhcp-snooping bind-table to the flash.

```
OLT(config)#dhcp-snooping bind-table write-to-flash

OLT(config)#
```



19.1.15. Save DHCP-Snooping Bind-table to Server

Command	OLT(config)# dhcp-snooping bind-table save-to-tftp <IP address>
View	Config view
Description	This command is used for write the dhcp-snooping bind-table to the flash by manually and save it to the server
<IP address>	The ip address of the TFTP server

【Example】

Example 1: Write the dhcp-snooping bind-table to the flash by manually and save it to the server 192.168.1.1

```
OLT(config)#dhcp-snooping bind-table save-to-tftp 192.168.1.1
OLT(config)#
```

19.1.16. Show DHCP-Snooping Bind-table Entry

Command	OLT(config)# show dhcp-snooping bind-table {all static dynamic ip-address vlan}
View	Config view
Description	This command is used for show dhcp-snooping bind-table according to the type.
all	Show all the dhcp-snooping bind-table entry.
static	Show the static dhcp-snooping bind-table entry.
dynamic	Show the dynamic dhcp-snooping bind-table entry.
ip-address	Show the bind-table by specified ip
vlan	Show the bind-table by specified vlan id

【Example】

Example 1: Show all the dhcp-snooping bind-table entry.

```
OLT(config)#show dhcp-snooping bind-table all
-----
database entries count:1 database entries delete time:240(s)
-----
MacAddress IpAddress Vlan Port Lease(s)Type Status
-----
00:0F:1F:C5:10:08 192.168.1.101 100 ge0/0/8-Static Valid
-----
```

```
OLT(config)#
```

19.1.17. Enable or Disable DHCP-Snooping arp-reply-fast

Command	OLT(config)# dhcp-snooping arp-reply-fast {enable disable}
View	Config view
Description	This command is used for enable or disable arp-reply-fast function.After enabling this function,system accords to dhcp-snooping bind-table to judge whether it will execute arp-reply-fast function.When this function is enabled,detecting the Arp message,if there is record in dhcp-snooping bind-table,arp request message will be replied fast rather than transmit to the upper network,thus reducing arp broadcast message.
{enable disable}	Enable:enable dhcp-snooping arp-reply-fast function Disable:disable dhcp-snooping arp-reply-fast function

【Example】

Example 1: Enable dhcp-snooping arp-reply-fast function

```
OLT(config)#dhcp-snooping arp-reply-fast enable

OLT(config)#
```

19.1.18. Enable or Disable DHCP-Snooping arp-detect Function

Command	OLT(config)# dhcp-snooping arp-detect {enable disable}
View	Config view
Description	This command is used for enable or disable arp-detect function.After enabling this function,system judge whether the user of arp message is legal according to dhcp-snooping bind-table,thus preventing from the illegal arp attack.
{enable disable}	Enable:Enable dhcp-snooping arp-detect function Disable:Disable dhcp-snooping arp-detect function

【Example】

Example 1: Disable dhcp-snooping arp-detect function

```
OLT(config)#dhcp-snooping arp-detect enable

OLT(config)#
```

19.2. OLT DHCP-Relay Function Configuration

19.2.1. Enable or Disable DHCP-Relay Function

Command	OLT(config)# dhcp-relay {enable disable}
View	Config view
Description	This command is used for enable or disable dhcp-relay function.
{enable disable}	Enable:Enable dhcp-relay function Disable:Disable dhcp-relay function

【Example】

Example 1: Enable dhcp-relay function

```
OLT(config)#dhcp-relay enable

OLT(config)#
```

19.2.2. Config DHCP-Relay Vlanif Interface and Server

Command	OLT(config)# dhcp-relay vlanif <vlan-id> server <IP address>
View	Config view
Description	This command is used for set the ip address of DHCP-Relay server
<IP address>	The ip address of dhcp-relay server in vlanif

【Example】

Example 1: Set The ip address of dhcp-relay server in vlanif 100 as 192.168.100.1

```
OLT(config)#dhcp-relay vlanif 100 server 192.168.100.1

OLT(config)#
```

19.2.3. Show DHCP-Relay Configuration

Command	OLT(config)# show dhcp-relay configuration
View	Config view
Description	This command is used for show configuration of dhcp-relay

【Example】

Example 1: Show configuration of dhcp-relay.

```
OLT(config)#show dhcp-relay configuration

-----
Switch DHCP Relay status:Enable
-----
```

```
Vlanif Vlanif-Ip Vlanif-netmask Server-Ip
-----
100--192.168.100.1
-----

OLT(config)#
```

19.3. OLT DHCP-Client Function Configuration

19.3.1. Enable or Disable DHCP-Client Function

Command	OLT(config-interface-vlanif-100)# dhcp-client {enable disable}
View	Vlanif view
Description	This command is used for enable or disable dhcp client function
{enable disable}	Enable:Enable dhcp client function Disable:Disable dhcp-rela function

【Example】

Example 1: Enable dhcp client function in vlanif 100

```
OLT(config-interface-vlanif-100)#dhcp-client enable

OLT(config-interface-vlanif-100)#
```

19.3.2. Config DHCP-Client Manual Renew IP Address

Command	OLT(config-interface-vlanif-100)# dhcp-client renew
View	Vlanif view
Description	This command is used for enable the switch of renew in vlanif interface.It can be used when the vlanif interface needs to obtain the ip address actively,this command will trigger the system sending request message and asks for the dhcp server renewing the lease or renewing the ip address.

【Example】

Example1:Enable the switch of renew in vlanif 100.

```
OLT(config-interface-vlanif-100)#dhcp-client renew

OLT(config-interface-vlanif-100)#
```

19.3.3. Config DHCP-Client Manual Release IP Address

Command	OLT(config-interface-vlanif-100)# dhcp-client release
View	Vlanif view
Description	This command is used for release the ip address of vlanif.Executing this command will trigger the system sending release message to inform the dhcp server to releasing the ip address of vlanif.

【 Example 】

Example 1: Release the ip address of vlanif 100.

```
OLT(config-interface-vlanif-100)#dhcp-client release
```

```
OLT(config-interface-vlanif-100)#
```

19.3.4. Config DHCP-Client Option60

Command	OLT(config-interface-vlanif-100)# dhcp-client option60<option60>
View	Vlanif view
Description	This command is used for set option60 info carrying by the dhcp-client request message.When the uplink device had set a strategy that proceeds dhcp third layer relay according to option60,we can use this command to set option60 in vlanif interface to match the uplink device. “no dhcp-client option60”is used for delete the configuration of option60 and revert to default value.
<option60>	The info of option60

【 Example 】

Example1:Set option60 of dhcp client in vlanif 100 as“test”.

```
OLT(config-interface-vlanif-100)#dhcp-client option60 test
```

```
OLT(config-interface-vlanif-100)#
```

19.3.5. Show DHCP-Client Configuration

Command	OLT(config)# show dhcp-client
View	Config view
Description	This command is used for show the configuration of dhcp-client

【 Example 】

Example 1: Show the configuration of dhcp-client.

```
OLT(config)#show dhcp-client
```




```

-----
Index Name FSM IP/MASK Leased Until Time
-----
1 vlanif100 INIT/--
-----

OLT(config)#
    
```

19.3.6. Show DHCP-Client Option60 Configuration

Command	OLT(config)# show dhcp-client option60
View	Config view
Description	This command is used for show dhcp-client option60 info of each vlanif interface.

【 Example 】

Example 1: Show dhcp-client option60 info of each vlanif interface.

```

OLT(config)#show dhcp-client option60
-----
VLANIF OPTION60
-----
100 test
-----

OLT(config)#
    
```

20. OLT Link Aggregation Function Configuration

20.1. OLT Link-Aggregation Group Basic Function Config

20.1.1. Add or Delete Link-Aggregation Group Member

Command	OLT(config-interface-aggregation)# member {add/delete} {ge xge} 0/0 <port-list> link-aggregation group <group-id>
View	link-aggregation view
Description	Device supports 16 aggregation group,this command is used for add or delete member port in corresponding aggregation group.
<port-list>	Port id
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation



	group
--	--------------

【Example】

Example 1: Add ge1 and ge2 to link-aggregation group 1.

```
OLT(config-interface-aggregation)#member add ge 0/0 1,2 link-aggregation group 1
```

```
OLT(config-interface-aggregation)#
```

Example 2:Delete ge1 and ge2 from link-aggregation group 1.

```
OLT(config-interface-aggregation)#member delete ge 0/0 1,2 link-aggregation group 1
```

```
OLT(config-interface-aggregation)#
```

20.1.2. Enable or Disable Link-Aggregation Group Flow-control

Function

Command	OLT(config-interface-aggregation)# flow-control <group-id> {enable disable}
View	link-aggregation view
Description	This command is used for enable or disable aggregation group flow control function
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Enable the flow control function of aggregation group1

```
OLT(config-interface-aggregation)#flow-control 1 enable
```

```
OLT(config-interface-aggregation)#
```

20.1.3. Config Link-Aggregation Group System Priority

Command	OLT(config-interface-aggregation)# lacp set system priority <priority value>
View	link-aggregation view
Description	This command is used for set system priority
<priority value>	Priority value,range for<0-65535>/default

【Example】

Example 1: Set system priority as 3000.

```
OLT(config-interface-aggregation)#lacp set system priority 3000
```



```
OLT(config-interface-aggregation)#
```

20.1.4. Set Link-Aggregation Group Port Priority

Command	OLT(config-interface-aggregation)# link-aggregation port-priority <ge xge> 0/0 <port-list> <priority value>
View	link-aggregation view
Description	This command is used for set port priority
<port-list>	Port list to be set
<priority value>	Priority value,range for<0-65535>

【 Example 】

Example 1: Set link-aggregation port priority of ge1 as 3000

```
OLT(config-interface-aggregation)#link-aggregation port-priority ge 0/0 1 3000

OLT(config-interface-aggregation)#
```

20.1.5. Show Link-Aggregation Group System Priority

Command	OLT(config-interface-aggregation)# show lacp system priority
View	link-aggregation view
Description	This command is used for show lacp system priority

【 Example 】

Example 1: Show lacp system priority

```
OLT(config-interface-aggregation)#show lacp system priority
lacp system priority value:3000

OLT(config-interface-aggregation)#
```

20.1.6. Show Link-Aggregation Group Priority

Command	OLT(config-interface-aggregation)# show link-aggregation port-priority <ge xge> 0/0 <port-list> <lacp/manual>
View	link-aggregation view
Description	This command is used for show port priority of link-aggregation.
<port-list>	Port list to be set

【 Example 】

Example 1: Show ge1 port priority of link aggregation



```
OLT(config-interface-aggregation)#show link-aggregation port-priority ge 0/0/1 lacp
lacp port priority:32768

OLT(config-interface-aggregation)#
```

20.1.7. Config Link-Aggregation Group Frame-max

Command	OLT(config-interface-aggregation)# frame-max <i>port-list</i> <i>maximum-frame-size</i>
View	link-aggregation view
Description	This command is used for set mtu of link-aggregation
<i>port-list</i>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<i>maximum-frame-size</i>	The value of frame-max,range for 328-16360

【Example】

Example 1: Set the frame-max of link-aggregation group1 as 2000

```
OLT(config-interface-aggregation)# frame-max 1 2000

OLT(config-interface-aggregation)#
```

20.1.8. Config Link-Aggregation Group Unicast Load Balance Mode

Command	OLT(config-interface-aggregation)# link-aggregation group <group-id> unicast balance {dest-ip dest-mac source-dest-ip source-dest-mac source-ip source-mac}
View	link-aggregation view
Description	This command is used for set unicast data balance mode of link aggregation
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<balance>	dest-ip:Load sharing unicast according to destination ip address dest-mac:Load sharing unicast according to destination mac address source-dest-ip:Load sharing unicast according to source and destination ip address source-dest-mac:Load sharing unicast according to source and destination mac address source-ip:Load sharing unicast according to source ip address



	source-mac:Load sharing unicast according to source mac address(default)
--	--

【 Example 】

Example 1: Set the unicast load balance mode of link-aggregation mode as dest-ip.

OLT(config-interface-aggregation)#link-aggregation group 1 unicast balance dest-ip
OLT(config-interface-aggregation)#

20.1.9. Config Link-Aggregation Group Non-unicast Load BalanceMode

Command	OLT(config-interface-aggregation)# link-aggregation group non-unicast balance (dest-mac source-dest-mac source-mac source-port)
View	link-aggregation view
Description	This command is used for set unicast data balance mode of link aggregation
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<balance>	dest-mac:Load sharing non-unicast according to destination mac address source-dest-mac:Load sharing non-unicast according to source and destination mac address source-mac:Load sharing non-unicast according to source mac address(default) Source-port:Load sharing non-unicast according to source port(default)

【 Example 】

Example 1: Set the unicast load balance mode of link-aggregation mode as source-port.

OLT(config-interface-aggregation)#link-aggregation group non-unicast balance source-port
OLT(config-interface-aggregation)#

20.1.10. Config Link-Aggregation Group Name

Command	OLT(config-interface-aggregation)# port-name <group-id> <port name>
View	link-aggregation view
Description	Set the name of link-aggregation group

<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<port name>	Name of aggregation group,length for<1-17>

【Example】

Example 1: Name link-aggregation group1 as test

```
OLT(config-interface-aggregation)#port-name 1 test
OLT(config-interface-aggregation)#
```

20.1.11. Delete Link-Aggregation Group Name

Command	OLT(config-interface-aggregation)# no port-name <group-id>
View	link-aggregation view
Description	Delete the name of link-aggregation group
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Delete name link-aggregation group1.

```
OLT(config-interface-aggregation)# no port-name 1
OLT(config-interface-aggregation)#
```

20.1.12. Delete Link-Aggregation Group Priority

Command	OLT(config-interface-aggregation)# no link-aggregation port-priority <ge xge> F/S/P (lacp manual)
View	link-aggregation view
Description	Delete the priority of link-aggregation group
F/S/P	Frame-number/Slot-number/Port-number,range for 0/0/1-8

【Example】

Example 1: Delete priority link-aggregation group1.

```
OLT(config-interface-aggregation)# no link-aggregation port-priority ge 0/0/1 manual
OLT(config-interface-aggregation)#
```

20.1.13. Delete Link-Aggregation Group Frame-max

Command	OLT(config-interface-aggregation)# no frame-max port-list
View	link-aggregation view
Description	This command is used for delete the maximum frame length of a configured port and restore it to the default value of 1526.
<i>port-list</i>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Delete frame-max link-aggregation group1.

```
OLT(config-interface-aggregation)# no frame-max 1
OLT(config-interface-aggregation)#
```

20.1.14. Clear Link-Aggregation Group Statistics

Command	OLT(config-interface-aggregation)# reset statistics port <group-id>
View	link-aggregation view
Description	This command is used for clear the link-aggregation statistic data
<i><group-id></i>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Clear the statistic data of link-aggregation group 1.

```
OLT(config-interface-aggregation)#reset statistics port 1
OLT(config-interface-aggregation)#
```

20.1.15. Enable or Disable Link-Aggregation Group

Command	OLT(config-interface-aggregation)# {no} shutdown <group-id>
View	link-aggregation view
Description	Open or shutdown link-aggregation group,open by default.
<i><group-id></i>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group



【 Example 】

Example 1: Shutdown link-aggregation group1.

```
OLT(config-interface-aggregation)#shutdown 1

OLT(config-interface-aggregation)#
```

Example 2:Open link-aggregation group1.

```
OLT(config-interface-aggregation)#no shutdown 1

OLT(config-interface-aggregation)#
```

20.2. Link-Aggregation Group STP Configuration

20.2.1. Config Link-Aggregation Group STP Cost

Command	OLT(config-interface-aggregation))#spanning-tree cost <group-id> <cost>
View	link-aggregation view
Description	This command is used for set the spanning tree cost of link-aggregation group.The optimal path is determined by port cost when there are multi links between two device but nor root port in them.
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<cost>	Cost value,range for 1-200000000

【 Example 】

Example 1: Set the spanning tree cost of link-aggregation group1 as 2000.

```
OLT(config-interface-aggregation))#spanning-tree cost 1 2000

OLT(config-interface-aggregation))#
```

20.2.2. Enable or Disable Link-Aggregation Group STP Edged-port

Command	OLT(config-interface-aggregation))#spanning-tree edged-port <group-id> {enable disable}
View	link-aggregation view
Description	This command is used for set the edged-port of the link-aggregation group.If user specifies a port as edged-port,then when the port migrates forwarding status from congestion status,this port can migrate rapidly

	doing without waiting for delay time.the user can only set the port which is connected with the terminal as the edged-port.All ports are default to not edged-port.
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
{enable disable}	enable:Set this port as edged-port disable:Set this port as not edged-port

【Example】

Example 1: Set the edged-port of link aggregation group1.

```
OLT(config-interface-aggregation))#spanning-tree edged-port 1 enable

OLT(config-interface-aggregation))#
```

20.2.3. Config Link-Aggregation Group STP Mcheck Property

Command	OLT(config-interface-aggregation))# spanning-tree mcheck <group-id>
View	link-aggregation view
Description	This command is used for set the RSTP mcheck property of link-aggregation group.Port mcheck property is used for detected whether the port which is running under STP compatible mode can migrate to RSTP mode.By setting mcheck,you can check whether there is a bridge running STP protocol within the network segment which is connected with current Ethernet port,If yes,RSTP protocol will migrate the protocol running mode of this port to STP mode.
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Set mcheck property of link-aggregation group1.

```
OLT(config-interface-aggregation))#spanning-tree mcheck 1

OLT(config-interface-aggregation))#
```

20.2.4. Config Link-Aggregation Group STP Point-to-Point Function

Command	OLT(config-interface-aggregation))# spanning-tree point-to-point <group-id> {auto/true/false}
View	link-aggregation view

Description	This command is used for set point-to-point link of link-aggregation group spanning tree.If bridge works in RSTP mode,two ports which is connected by p2p link can migrate to forwarding status by sending synchronization message,it reduces the needless transfer delay time;if set this parameter as auto-mode,RSTP protocol can detect whether current Ethernet port has connected with point-to-point link automatically.The user can set by manually whether current Ethernet port connects with the p2p link.The recommendation is auto-mode.
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
auto/true/false	auto:Set the point-to-point link as auto-mode true:Connect link-aggregation group to point-to-point link false:Disconnect link-aggregation group to point-to-point link

【 Example 】

Example 1: Set spanning tree point-to-point of link-aggregation as true.

```
OLT(config-interface-aggregation))#spanning-tree point-to-point 1 true

OLT(config-interface-aggregation))#
```

20.2.5. Config Link-Aggregation Group STP Priority

Command	OLT(config-interface-aggregation))# spanning-tree priority <group-id> <port-priority>
View	link-aggregation view
Description	This command is used for set the RSTP priority of link-aggregation group.By setting the priority of the link-aggregation group,You can specify that a particular link-aggregation group is contained within the spanning tree.Generally,the smaller of the setting value is,the higher of the link-aggregation group priority,this link-aggregation group is likely to include in spanning tree.If all the link-aggregation group of the bridge adapt to the same index number,the priority of the link-aggregation group depends on the index number of the link-aggregation group.
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<port-priority>	Priority value,range for 0-240,step length for 16.The default value is 128.

【 Example 】

Example 1: Set spanning tree priority of link-aggregation group 1 as 160.

```
OLT(config-interface-aggregation))#spanning-tree priority 1 160

OLT(config-interface-aggregation))#
```

20.2.6. Delete Link-Aggregation Group STP Configure

Command	OLT(config-interface-aggregation))# no spanning-tree (priority cost) group-id
View	link-aggregationView
Description	This command is used for delete configuration of STP in link-aggregation.
<i>group-id</i>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example1: delete configuration of STP in link-aggregation.

```
OLT(config-interface-aggregation))# no spanning-tree priority 1

OLT(config-interface-aggregation))#
```

20.3. Link-Aggregation Group VLAN Configuration

20.3.1. Config Link-Aggregation Group VLAN Mode

Command	OLT(config-interface-aggregation)# vlan mode <group-id> {access/hybrid/trunk}
View	link-aggregation view
Description	This command is used for set vlan mode of link-aggregation group.The default is access mode.In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
access/hybrid/trunk	Access:This kind of port only belongs to one vlan,generally it is used for connect to computer. Trunk:This kind of ports can allow multi vlan pass,can receive and transfer the message of different vlan.Usually,it is used for connect to the port between switches. Hybrid:This kind of port allows multiple vlan pass,can receive and transfer the message of different vlan.It can be used to connect the

	port between switch or connect to the PC.
--	---

【Example】

Example 1: Set the vlan mode of link-aggregation group 1 as access.

<pre>OLT(config-interface-aggregation)#vlan mode 1 access</pre>
<pre>OLT(config-interface-aggregation)#</pre>

20.3.2. Config Link-Aggregation Group Native-vlan(access)

Command	OLT(config-interface-aggregation)# vlan native-vlan <group-id> <vlan-id>
View	link-aggregation view
Description	This command is used for set Native VLAN of link-aggregation group,the default is 1.In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<vlan-id>	VLAN ID,range for 1-4094.

【Example】

Example 1: Set native vlan of link-aggregation group1 as 10.

<pre>OLT(config-interface-aggregation)#vlan native-vlan 1 10</pre>
<pre>OLT(config-interface-aggregation)#</pre>

20.3.3. Config Link-Aggregation Group Native-vlan Priority

Command	OLT(config-interface-aggregation)# vlan native-vlan-priority <group-id> <priority>
View	link-aggregation view
Description	This command is used for set native vlan priority of link-aggregation group,the default is 0.
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<priority>	Range of priority for 0-7

【Example】

Example 1: Set native vlan priority of link-aggregation group1 as 1.



```
OLT(config-interface-aggregation)#vlan native-vlan-priority 1 1

OLT(config-interface-aggregation)#
```

20.3.4. Config Link-Aggregation Group Access Mode VLAN

Command	OLT(config-interface-aggregation)# vlan access <group-id> <vlan-id>
View	link-aggregation view
Description	This command is used for set Access VLAN of link aggregation,the default is 1..In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<vlan-id>	Access VLAN ID,range for 1-4094

【Example】

Example 1: Set access vlan of link-aggregation group1 as 100.

```
OLT(config-interface-aggregation)#vlan access 1 100

OLT(config-interface-aggregation)#
```

20.3.5. Config Link-Aggregation Group Hybrid Mode VLAN

Command	OLT(config-interface-aggregation)# vlan hybrid <group-id> {tagged untagged} <vlan-list>
View	link-aggregation view
Description	This command is used for set hybrid VLAN of link aggregation,the default is 1..In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
{tagged untagged}	tagged:Add corresponding vlan tag for egress message untagged:Peel off corresponding vlan tag for egress message
<vlan-list>	VLAN ID,range for 1-4094.format is 1,11-27,100

【Example】

Example 1: Add untagged hybrid vlan 10-15 for link-aggregation group1.

```
OLT(config-interface-aggregation)#vlan hybrid 1 untagged 10-15
lag1:hybrid vlan added,failed:0,success:6
```



```

OLT(config-interface-aggregation)#
Example 2:Add tagged hybrid vlan 101 for link-aggregation group1.
OLT(config-interface-aggregation)#vlan hybrid 1 tagged 101
lag1:hybrid vlan added,failed:0,success:1

OLT(config-interface-aggregation)#
    
```

20.3.6. Delete Link-Aggregation Group Hybrid Mode VLAN

Command	OLT(config-interface-aggregation)# no vlan hybrid <group-id> {tagged untagged} <vlan-list>
View	link-aggregation view
Description	This command is used for delete hybrid VLAN of link aggregation,the default is 1..In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
{tagged untagged}	tagged:Add corresponding vlan tag for egress message untagged:Peel off corresponding vlan tag for egress message
<vlan-list>	VLAN ID,range for 1-4094.format is 1,11-27,100

【Example】

Example 1: Delete tagged hybrid vlan 10-15 for link-aggregation group1.

```

OLT(config-interface-ge)#no vlan hybrid 1 tagged 10-15

OLT(config-interface-ge)#
    
```

20.3.7. Config Link-Aggregation Group Trunk Mode VLAN

Command	OLT(config-interface-aggregation)# vlan trunk <group-id> <vlan-list>
View	link-aggregation view
Description	This command is used for delete trunk VLAN of link aggregation,the default is 1..In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<vlan-list>	VLAN ID,range for 1-4094.format is 1,11-27,100



【 Example 】

Example 1: Add trunk vlan 10-15 for link-aggregation group1.

```
OLT(config-interface-aggregation)#vlan trunk 1 10-15
lag1:trunk vlan allowed,failed:0,success:6

OLT(config-interface-aggregation)#
```

20.3.8. Delete Link-Aggregation Group Trunk Mode VLAN

Command	OLT(config-interface-aggregation)# no vlan trunk <group-id> <vlan-list>
View	link-aggregation view
Description	This command is used for delete trunk VLAN of link aggregation,the default is 1..In each vlan mode,the message processing way of the port is showed in Appendix1
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group
<vlan-list>	VLAN ID,range for 1-4094.format is 1,11-27,100

【 Example 】

Example 1: Delete trunk vlan 10 for link-aggregation group1.

```
OLT(config-interface-aggregation)#no vlan trunk 1 10

OLT(config-interface-aggregation)#
```

20.4. Show Link-Aggregation Group Information

20.4.1. Show Link-Aggregation Group VLAN Information

Command	OLT(config-interface-aggregation)# show port vlan <group-id>
View	link-aggregation view
Description	This command is used for show vlan info of link-aggregation group
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【 Example 】

Example 1: Show vlan info of link-aggregation group1

```
OLT(config-interface-aggregation)#show port vlan 1
-----
```

```

Port:lag1 Mode:Access Native-Vlan:1 Priority:0
-----
Tagged-Vlan:
-
-----
Untagged-Vlan:
1
-----

OLT(config-interface-aggregation)#
    
```

20.4.2. Show Link-Aggregation Group STP Information

Command	OLT(config-interface-aggregation)# show port spanning-tree <group-id>
View	link-aggregation view
Description	This command is used for show spanning tree info of link-aggregation group
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example1:Show spanning tree info of link-aggregation group 1.

```

OLT(config-interface-aggregation)#show port spanning-tree 1
-----lag1 RSTP STATUS:-----
Port STP Mode:RSTP
Port Priority:128
Port Path Cost:20000
Port Edge Admin:NON-Edge
Port Edge Status:NEdge
Port Link Type Admin:Auto
Port Link Type Status:P2P
Port Role:Unknown
Port State:Down
-----

OLT(config-interface-aggregation)#
    
```

20.4.3. Show Link-Aggregation Group Port Status

Command	OLT(config-interface-aggregation)# show port state <group-id>
View	link-aggregation view



Description	This command is used for show port state of link-aggregation group
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Show port state of link-aggregation group1.

```

OLT(config-interface-aggregation)#show port state 1
-----
Port name:test
Current port state:enable
Current link state:DOWN
The maximum transmit unit:1500
Link speed:autonegotiation(1000 Mbps)
Link duplex:autonegotiation(FULL)
Flow-control:supported
-----
Native-vlan:1 Link-type:Access Priority:0

Untagged VLAN ID:
1
-----

OLT(config-interface-aggregation)#
    
```

20.4.4. Show Link-Aggregation Group STP Information Statistics

Information

Command	OLT(config-interface-aggregation)# show statistics port <group-id>
View	link-aggregation view
Description	This command is used for show statistic info of link-aggregation group
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Show statistic info of link-aggregation group1.

```

OLT(config-interface-aggregation)#show statistics port 1
member ge0/0/1 statistics:
-----
Direction Total Uncast Bcast Mcast Err
(bytes)(pkts)(pkts)(pkts)(pkts)
    
```



```

-----
RX 0 0 0 0
TX 0 0 0 0
-----
link-aggregation group 1 statistics:
-----
Direction Total Uncast Bcast Mcast Err
(bytes)(pkts)(pkts)(pkts)(pkts)
-----
RX 0 0 0 0
TX 0 0 0 0
-----

OLT(config-interface-aggregation)#
    
```

20.4.5. Show Link-Aggregation Group Config Information

Command	OLT(config-interface-aggregation)# show link-aggregation group <group-id>
View	link-aggregation view
Description	This command is used for show link-aggregation group matching state
<group-id>	Group id,1-8 is static aggregation group,9-16 is dynamic aggregation group

【Example】

Example 1: Show matching state of link aggregation group1.

```

OLT(config-interface-aggregation)#show link-aggregation group 1

Lag Lag Select Unselect Load Master
ID Type Ports Ports Balance Port
1 Manual-ge0/0/1,dest-ip-

OLT(config-interface-aggregation)#
    
```

21. OLT Routing Function

21.1. Add or Delete Static Route

Command	OLT(config)# [no] ip route-static <ip-addr> <IP address mask> <Gateway address>
View	Config view



Description	This command is used for add or delete static route of olt,it can set a strip of static route only.
<no>	Delete the command
<ip-addr>	IP address.IP address is divided into 5 types,user can select a suitable ip subnet according to the use case,the ip address with 32bits 0 or 32bits 1 has special function,so it can not use as general ip address,format for X.X.X.X
<IP address mask>	Subnet mask,format for X.X.X.X
<Gateway address>	Gateway address,format for X.X.X.X

【Example】

Example 1: Set a strip of static route of olt,gateway is 192.168.2.253.

```
OLT(config)#ip route-static 0.0.0.0 0.0.0.0 192.168.5.253

Successfully add static routing entries!
OLT(config)#
```

Example 2:Delete a static route.

```
OLT(config)#no ip route-static 192.168.3.0 255.255.255.0 192.168.5.1

Successfully Del static routing entries!

OLT(config)#
```

21.2. Config Route ID

Command	OLT(config)# (no) router-id ip-address
View	Config view
Description	This command is used to configure or delete the route ID of the RIP.
ip-address	IP address ,format is x.x.x.x

【Example】

Example 1: Config route-id ip.

```
OLT(config)# router-id 192.168.20.12

OLT(config)#
```

21.3. Show IP Route Information

Command	OLT(config)# show ip route
View	Config view
Description	This command is used for show ip route info

【Example】

Example 1: Show ip route info

```
OLT(config)#show ip route
Flags:U-use,M-Mutipath,E-ECMP
Destination/Mask Proto Pre Cost NextHop Interface flag
192.168.1.0/24 Direct 1 0*vlanIf2
0.0.0.0/0 Static 2 2 192.168.5.253 vlanIf0 U
192.168.3.0/24 Static 2 2 192.168.5.1 vlanIf0 U

OLT(config)#
```

21.4. Show IP Routing-table Information

Command	OLT(config)# show ip routing-table all
View	Config view
Description	This command is used for show ip routing-table info

【Example】

Example 1: Show ip routing-table info

```
OLT(config)#show ip routing-table all
Flags:U-use,M-Mutipath,E-ECMP
Destination/Mask Proto Pre Cost NextHop Interface flag
192.168.1.0/24 Direct 1 0*vlanIf2 U
0.0.0.0/0 Static 2 2 192.168.5.253 vlanIf0 U
192.168.3.0/24 Static 2 2 192.168.5.1 vlanIf0 U

OLT(config)#
```

21.5. Config OLT RIP function

21.5.1. Enable/Disable RIP

Command	OLT(config)# (no) router rip
----------------	--

View	config view
Description	This command is used to enable the RIP function and enter the router mode or disable the RIP function.

【Example】

Example 1: Enable the RIP function and enter the router mode.

```
OLT(config)# router rip
OLT(config-router)#
```

21.5.2. Config the default route for importing RIP.

Command	OLT(config-router)# (no) default-information originate (metric <i>metric-value</i>)
View	router view
Description	This command is used to enable or disable the import of default routes in RIP.
<i>metric-value</i>	The metric value to be configured, in the range of 0 to 16.

【Example】

Example 1: Enable the import of the default route and set the metric value in RIP.

```
OLT(config-router)# default-information originate metric 2
OLT(config-router)#
```

21.5.3. Config the default metric value of the RIP for importing routes.

Command	OLT(config-router)# (no) default-metric <i>default-metric</i>
View	router view
Description	This command is used to configure or delete the default metric value of the RIP of the imported route.
<i>default-metric</i>	The metric value to be configured, in the range of 1 to 16.

【Example】

Example 1: Configure the default metric value of the RIP for importing routes.

```
OLT(config-router)# default-metric 1
```

```
OLT(config-router)#
```

Example 2: Delete the default metric value of the imported RIP in batches.

```
OLT(config-router)# no default-metric

OLT(config-router)#
```

21.5.4. Configure the management distance of RIP

Command	OLT(config-router)# (no) distance <i>distance-value ip-source-prefix access-list-name</i>
View	router view
Description	This command is used to configure or delete the management distance of RIP and change the priority of RIP. The default RIP is 120.
<i>distance-value</i>	The administrative distance value to be configured, ranging from 1 to 255.
<i>ip-source-prefix</i>	Source IP prefix in the format x.x.x.x/M
<i>access-list-name</i>	Access list name

【Example】

Example 1: Config the management distance of RIP.

```
OLT(config-router)# distance 1 192.168.12.1/24 test

OLT(config-router)#
```

21.5.5. Config a specified neighbor route for RIP

Command	OLT(config-router)# (no) neighbor <i>ip-address</i>
View	router view
Description	This command is used to configure or delete the specified neighbor route of RIP.
<i>ip-address</i>	Specifies the IP address of the neighbor in the format x.x.x.x

【Example】

Example 1: Configure a specified neighbor route for RIP.

```
OLT(config-router)# neighbor 192.168.50.2
```



```
OLT(config-router)#
```

21.5.6. Config the RIP function on the specified network segment interface

Command	OLT(config-router)# (no) network (<i>ip-address network-number</i>)/ <i>length-mask</i>
View	router view
Description	This command is used to configure or delete the RIP function on the specified network segment interface.
<i>(ip-address network-number)</i>	Specifies the IP address/network number of the network segment interface in the format x.x.x.x
<i>length-mask</i>	Specifies the subnet mask length of the interface on the network segment, in the range of 0 to 32.

【Example】

Example 1: Config the RIP function on the specified network segment interface.

```
OLT(config-router)# network 192.168.20.12/24
OLT(config-router)#
```

21.5.7. Config the RIP function on the VLANIF interface

Command	OLT(config-router)# (no) network vlanif <i>vlan-id</i>
View	router view
Description	This command is used to configure or delete the RIP function of the specified VLANIF interface.
<i>vlan-id</i>	The VLAN ID of the VLANIF interface to be configured, in the range of 1-4094.

【Example】

Example 1: Configure the RIP function of vlanif interface 200.

```
OLT(config-router)# network vlanif 200
OLT(config-router)#
```

21.5.8. Config RIP metrics

Command	OLT(config-router)# (no) offset-list <i>access-list-name</i> in out <i>metric-value</i> <i>interface-name</i>
View	router view
Description	This command is used to configure or delete the metrics of RIP.
<i>access-list-name</i>	Access list name to be modified
<i>metric-value</i>	The metric value to be modified, ranging from 0 to 16.
<i>interface-name</i>	Specify the interface name

【 Example 】

Example 1: The metric for the entry update of the configuration test list is 3.

```
OLT(config-router)# offset-list test in 3

OLT(config-router)#
```

21.5.9. Config the passive interface of RIP

Command	OLT(config-router)# (no) passive-interface <i>vlanif (vlan-list all)</i>
View	router view
Description	This command is used to enable or disable the passive interface of RIP.
<i>(vlan-list all)</i>	Vlan-list: vlan id of the <i>vlanif</i> interface to be configured, in the range of 1-4094 All: Configure all <i>vlanif</i> interfaces.

【 Example 】

Example 1: Enable the passive interface of RIP.

```
OLT(config-router)# passive-interface vlanif all

OLT(config-router)#
```

21.5.10. Config import routes in RIP

Command	OLT(config-router)# (no) redistribute (babel bgp connected isis kernal ospf pim static) <i>metric</i> <i>metric-value</i> route-map <i>pointer-to-route-map-entries</i>
View	router view
Description	This command is used to enable or disable the import of routes



	in RIP.
babel bgp connected isis kernel ospf pim static	Babel: babel routing protocol Bgp: Border Gateway Mind Connected: Direct routing Isis: intermediate system to intermediate system routing Kernel: Kernel routing (not installed via zebra RIB) Ospf: Develop shortest path first Pim: Protocol Independent Multicast Static: Static route
<i>metric-value</i>	The metric value to be configured, in the range of 0 to 16.
<i>pointer-to-route-map-entries</i>	Pointer to a route map entry

【 Example 】

Example 1: Enable the import of routes into RIP.

```
OLT(config-router)# redistribute ospf metric 2

OLT(config-router)#
```

21.5.11. Config RIP static routes

Command	OLT(config-router)# (no) route <i>ip-address/mask</i>
View	router view
Description	This command is used to enable or disable RIP static routes.
<i>ip-address/mask</i>	IP address and mask in the format x.x.x.x/m

【 Example 】

Example 1: Configure a static route in RIP.

```
OLT(config-router)# route 192.168.12.10/24

OLT(config-router)#
```

21.5.12. Config the timer time of RIP

Command	OLT(config-router)# (no) time basic <i>update-time timeout garbage-collect</i>
View	router view
Description	This command is used to set the RIP timer time.
<i>update-time</i>	The update time to be configured. The default is 30s, and the

	value ranges from 5 to 16777215.
<i>timeout</i>	The aging timeout period to be configured is 180s by default. The value ranges from 5 to 16777215.
<i>garbage-collect</i>	Recycle time to be configured. The default is 120s, and the value ranges from 5 to 16777215.

【Example】

Example 1 : Set the update time of the RIP timer to 50s, the timeout time to 200s, and the garbage-collect time to 150s.

```
OLT(config-router)# timers basic 50 200 150

OLT(config-router)#
```

21.5.13. Config the version of RIP

Command	OLT(config-router)# (no) version id
View	router view
Description	This command is used to configure the version of RIP and delete it with no.
<i>id</i>	The RIP version to be configured, in the range of 1-2.

【Example】

Example 1 : Set the RIP version to 1.

```
OLT(config-router)# version 1

OLT(config-router)#
```

21.5.14. Create/delete the key of the RIPv2 keychain

Command	OLT(config-keychain)# key key-id
View	keychain view
Description	This command is used to create the key of the RIPv2 keychain or delete the key of the RIP authentication keychain.
<i>key-id</i>	Key-id to be configured, in the range 0-2147483647

【Example】

Example 1 : Configure the key of the RIPv2 keychain and enter the key management interface.

```
OLT(config-keychain)# key 123
```



```
OLT(config-keychain-key)#
```

Example 2: Delete the key of the RIPv2 keychain.

```
OLT(config-keychain)# no key 123
```

```
OLT(config-keychain)#
```

21.5.15. Create/delete an authentication key for the RIPv2 keychain

Command	OLT(config-keychain-key)# (no) key-string auth-string
View	Keychain-key view
Description	This command is used to create an authentication key for the RIPv2 keychain or to delete the authentication key of the RIPv2 authentication keychain.
<i>auth-string</i>	Configure a simple key string

【Example】

Example 1: Configure the authentication key for the RIPv2 keychain.

```
OLT(config-keychain-key)# no accept-lifetime
```

```
OLT(config-keychain-key)#
```

Example 2: Delete the authentication key of the RIPv2 keychain.

```
OLT(config-keychain-key)# no key-string
```

```
OLT(config-keychain-key)#
```

21.5.16. Create/delete the receive lifetime of the RIPv2 keychain

Command	OLT(config-keychain-key)# (no) accept-lifetime start-time end-time
View	key view
Description	This command is used to set or delete the receive lifetime of the RIPv2 keychain.
<i>start-time</i>	Configuration method: 1.HH:MM:SS date<1-31> month<Jan-Dec> year<1993-2035> 2.HH:MM:SS month<Jan-Dec> date<1-31> year<1993-2035>
<i>end-time</i>	Configuration method: 1.HH:MM:SS date<1-31> month<Jan-Dec> year<1993-2035> 2.HH:MM:SS month<Jan-Dec> date<1-31> year<1993-2035>

	3.duration: duration, in the range of 1 to 217483646, in seconds 4.infinite: never expires
--	---

【Example】

Example 1: Configure the receive lifetime of the RIPv2 keychain.

```
OLT(config-keychain-key)# accept-lifetime 11:22:00 1 Aug 2019 12:00:00 3 Aug 2019
OLT(config-keychain-key)#
```

Example 2: Delete the receive lifetime of the RIPv2 keychain.

```
OLT(config-keychain-key)# no accept-lifetime
OLT(config-keychain-key)#
```

21.5.17. Create/delete the transmit lifetime of the RIPv2 keychain

Command	OLT(config-keychain-key)# (no) accept-lifetime <i>start-time end-time</i>
View	key view
Description	This command is used to set or delete the transmission lifetime of the RIPv2 keychain.
<i>start-time</i>	Configuration method: 1.HH:MM:SS date<1-31> month<Jan-Dec> year<1993-2035> 2.HH:MM:SS month<Jan-Dec> date<1-31> year<1993-2035>
<i>end-time</i>	Configuration method: 1.HH:MM:SS date<1-31> month<Jan-Dec> year<1993-2035> 2.HH:MM:SS month<Jan-Dec> date<1-31> year<1993-2035> 3.duration: duration, in the range of 1 to 217483646, in seconds 4.infinite: never expires

【Example】

Example 1: Configure the transmit lifetime of the RIPv2 keychain.

```
OLT(config-keychain-key)# send-lifetime 14:05:00 10 Aug 2019 duration 21600
OLT(config-keychain-key)#
```

Example 2: Delete the transmission lifetime of the RIPv2 keychain.

```
OLT(config-keychain-key)# no send-lifetime
OLT(config-keychain-key)#
```

21.6. Config the RIP function of the vlanif interface



21.6.1. Config the authentication mode and parameters of RIP

Command	OLT(config-interface-vlanif-100)# ip rip authentication ((key-chain name-of-key-chain) (mode md5 text) (string authentication-string))
View	vlanif view
Description	This command is used to configure the RIP authentication mode and parameters of the vlanif interface.
<i>name-of-key-chain</i>	Configure the name of the RIP authentication keychain on the vlanif interface.
md5 text	Enable the RIP authentication mode of the vlanif interface: md5 is cipher text encryption, and text is plain text encryption.
<i>authentication-string</i>	Configure the RIP simple authentication key string for the vlanif interface.

【 Example 】

Example 1: Configure the RIP authentication mode of the vlanif interface to 100 as cipher text encryption.

```
OLT(config-interface-vlanif-100)# ip rip authentication mode md5
OLT(config-interface-vlanif-100)#
```

21.6.2. Enable RIP to Send/Receive Messages

Command	OLT(config-interface-vlanif-100)# ip rip (send receive) version version-id
View	vlanif view
Description	This command is used to enable the function of sending/receiving packets on the vlanif interface.
<i>version-id</i>	Configure the version number of the RIP of the vlanif interface.

【 Example 】

Example 1: Enable the RIP packet with the vlanif interface set to 100.

```
OLT(config-interface-vlanif-100)# ip rip send version 1
OLT(config-interface-vlanif-100)#
```

21.6.3. Config the split horizon function of RIP

Command	OLT(config-interface-vlanif-100)# ip rip split-horizon poisoned-reverse
View	vlanif view
Description	This command is used to enable the split horizon function of RIP route update packets on the vlanif interface.

【Example】

Example 1: Enable the horizontal split function of RIP route update packets with the vlanif interface being 100.

```
OLT(config-interface-vlanif-100)# ip rip split-horizon poisoned-reverse

OLT(config-interface-vlanif-100)#
```

21.6.4. Delete RIP configuration

Command	OLT(config-interface-vlanif-100)# no ip rip ((authentication ((key-chain <i>name-of-key-chain</i>) (mode md5 text) (string authentication-string)))) ((send receive) version <i>version-id</i>) (split-horizon poisoned-reverse)
View	vlanif view
Description	This command is used to delete the RIP authentication mode of the vlanif interface, the function of receiving/sending packets, and the horizontal split function of routing updates.
<i>name-of-key-chain</i>	Configure the name of the RIP authentication keychain on the vlanif interface.
md5 text	Enable the RIP authentication mode of the vlanif interface: md5 is cipher text encryption, and text is plain text encryption.
<i>authentication-string</i>	Configure a RIP simple authentication key string for the vlanif interface.
<i>version-id</i>	Configure the version number of the RIP of the vlanif interface.

【Example】

Example 1: Remove the RIP authentication mode, send packet function, and split horizon function of the vlanif interface to 100.

```
OLT(config-interface-vlanif-100)# no ip rip authentication mode md5

OLT(config-interface-vlanif-100)# no ip rip send version 1
```

```
OLT(config-interface-vlanif-100)# no ip rip split-horizon poisoned-reverse

OLT(config-interface-vlanif-100)#
```

22. OLT Profile Configuration

22.1. OLT DBA Profile Configurations

22.1.1. Create DBA Profile

Command	OLT(config)# dba-profile {profile-id <profile-id> profile-name <profile-name>}
View	Config view
Description	This command is used for add a dba-profile and enter dba-profile editing view.The deployment and control of uplink Bandwidth of ONU is realized through the Dynamic Bandwidth Allocation technology.dba-profile defines the uplink bandwidth of onu.Device adjusts the allocation of uplink bandwidth automatically according to the burst need of uplink services,which increases the uplink bandwidth service efficiency of pon system.When the default dba-profile can not satisfy the service needing and needs to create a new dba profile according to the real time service needing,using this command.“no”command is used for delete dba profile.
<profile-id>	dba profile id.System allocates a mini idle profile number if it is not specified by system.Proile 0 is the default profile.Onu with autoauth will match profile 0 automatically.
<profile-name>	DBA profile name.If it is not specified,system will adopt the default name“dba-profile_id”.

【 Example 】

Example 1: Create a new dba profile 10.

```
OLT(config)#dba-profile profile-id 10

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

Example 2: Delete dba-profile id 10.

```
OLT(config)# no dba-profile profile-id 10

OLT(config)#
```

22.1.2. Config DBA Profile Bandwith

Command	<p>OLT(config-dba-profile-10)#type1 fix<fixed bandwidth> OLT(config-dba-profile-10)#type2 assure<assure bandwidth> OLT(config-dba-profile-10)#type3 assure<assure bandwidth> max <max bandwidth> OLT(config-dba-profile-10)#type4 max <max bandwidth> OLT(config-dba-profile-10)#type5 fix <fixed bandwidth> assure <assure bandwidth> max <max bandwidth></p>
View	DBA profile view
Description	This command is used for configure the type of DBA control bandwidth and the size of the bandwidth.
<type1>	Fix bandwidth.It is reserved to specified onu or the specific service of onu,this bandwidth can not be used by other onu even if the onu has not uplink service stream.It is mainly used in the service with hypersensitive qos,such as TDM,VoIP and etc.
<type2>	Assure bandwidth.It assures that onu can obtain a specified bandwidth when it is in need.Device's dba mechanism could allocate the surplus bandwidth to other onu's service when the real time service stream of onu can not reach the assure bandwidth.its realtime performance is worse than fixed bandwidth for the reason that it needs to control the allocation of bandwidth according to dba mechanism.
<type3>	Type3 includes assure bandwidth and max bandwidth.Type3 is a combination bandwidth type which assures the user has a certain bandwidth and it commits that the user has a certain bandwidth to preempt.But the sum of assure bandwidth can not exceed the max bandwidth.This kind of bandwidth is mainly used in voip and iptv service.
<type4>	Max bandwidth.The upper limit of bandwidth that the onu can obtain.It is mainly used in internet service.
<type5>	Type5 includes fixed bandwidth and assure bandwidth and max bandwidth..Type5 is a combination bandwidth type.The sum of fix bandwidth and assure bandwidth can not exceed the max bandwidth.
<fix>	Fix bandwidth.This part of bandwidth is allocated to the user firmly,other user can not preempt it even if it is in idle state.
<assure>	Assure bandwidth.If it is in idle other user can preempt it.
<max>	Max bandwidth.the max available bandwidth for the user. The sum of assure bandwidth in type3 can not exceed the max

	bandwidth. The sum of fix bandwidth and assure bandwidth in type5 can not exceed the max bandwidth.
--	--

【 Example 】

Example 1: Set the type of profile 10 as type5,fix bandwidth is 5Mbps,assure bandwidth is 10Mbps,max bandwidth is 30Mbps.

```
OLT(config-dba-profile-10)#type5 fix 5120 assure 10240 max 30720

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

22.1.3. Commit DBA Profile Config

Command	OLT(config-dba-profile-10)# commit
View	DBA pprofile view
Description	This command is used for commit the current dba profile setting.All the parameter will take effect only after the command is committed.

【 Example 】

Example 1: Commit the current dba profile setting.

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

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

22.1.4. Show OLT DBA Profile Information

Command	OLT(config)# show dba-profile {all profile-id <profile-id> profile-name <profile-name>}
View	Config view
Description	This command is used for show dba profile info.dba profile describes the flow parameter of the link,onu allocates the bandwidth automatically by binding dba profile which can increase the bandwidth utilization.
<profile-id>	Profile id to be show.
<profile-name>	Profile name to be show.



【 Example 】

Example 1: Show all the dba profile.

```

OLT(config)#show dba-profile all
-----
Profile Profile Type Fix Assure Max Bind
ID Name(kbps)(kbps)(kbps)times
-----
0 dba-profile_0 4 0 0 1000000 1
1 dba-profile_1 4 0 0 1000000 0
2 dba-profile_2 4 0 0 1000000 0
10 dba-profile_10 5 5120 10240 30720 0
-----
Total:4
OLT(config)#
    
```

22.2. ont-lineprofile Configuraton

22.2.1. Create ont-lineprofile

Command	OLT(config)# ont-lineprofile epon {profile-id <profile-id> profile-name <profile-name>}
View	Config view
Description	This command is used for create a new ont-lineprofile and enter the correspo hip between llid and dba profile.
<profile-id>	Profile id of ont-lineprofile.When it is unspecified,the system will match a minimum idle number.ont-lineprofile 0 is default profile.Autoauth’s onu will match ont-lineprofile 0 automatically.
<profile-name>	Ont-lineprofile name.the default name is“ont-lineprofile_name”

【 Example 】

Example 1: Create and enter ont-lineprofile 10.

```

OLT(config)#ont-lineprofile epon profile-id 10

OLT(config-epon-lineprofile-10)#
    
```

22.2.2. Bind DBA Profile in ont-lineprofile

Command	OLT(config-epon-lineprofile-10)# llid <llid-id> dba-profile-id <profile-id>
View	ont-lineprofile view

Description	This command is used for bind dba profile.
<profile-id>	dba profile id.When it is unspecified,the system will match a minimum idle number.dba profile 0 is default profile.Autoauth's onu will match dba profile 0 automatically.

【Example】

Example 1: Bind dba profile 10 to ont-lineprofile 10.

OLT(config-epon-lineprofile-10)#lld 1 dba-profile-id 10
OLT(config-epon-lineprofile-10)#

22.2.3. Config FEC Function in ont-lineprofile

Command	OLT(config-epon-lineprofile-10)#fec {enable disable}
View	ont-lineprofile view
Description	This command is used for enable or disable FEC.

【Example】

Example 1: Enable FEC in ont-lineprofile 10.

OLT(config-epon-lineprofile-10)#fec enable
OLT(config-epon-lineprofile-10)#

22.2.4. Config Data Encryption in ont-lineprofile

Command	OLT(config-epon-lineprofile-10)#lld <lld-id> encrypt {enable disable}
View	ont-lineprofile view
Description	This command is used for enable or disable data encryption.

【Example】

Example 1: Enable data encryption in ont-lineprofile 10.

OLT(config-epon-lineprofile-10)#lld 1 encrypt enable
OLT(config-epon-lineprofile-10)#

22.2.5. Config ONU-Car in ont-lineprofile

Command	OLT(config-epon-lineprofile-10)#lld <lld-id> ont-car <profile-id>
----------------	---



View	ont-lineprofile view
Description	This command is used for bind ont-car and the it is used in conjunction with traffic-profile command in config view.
<profile-id>	ont-car id,ont-car is created by traffic-profile command in config view.

【 Example 】

Example 1: Bind ont-car 10 in ont-lineprfile 10.

```
OLT(config-epon-lineprofile-10)#llid 1 ont-car 10

OLT(config-epon-lineprofile-10)#
```

22.2.6. Config queue thresholds for DBA queue sets

Command	OLT(config-epon-lineprofile-10)# (no) dba-threshold queue-set-index (q1 value q2 value q3 value q4 value q5 value q6 value q7 value q8 value)
View	Lineprofile view
Description	This command is used to configure the queue threshold of the DBA queue set in the ONT line profile. Use this command when you need to configure the queue threshold of the DBA queue set in the ONT line profile.
<i>queue-set-index</i>	DBA queue set index value, ranging from 1-4
<i>value</i>	Queue threshold, in the range 0-65535

【 Example 】

Example 1: In line template 10, the queue threshold for setting DBA queue set 1 is 512.

```
OLT(config-epon-lineprofile-10)# dba-threshold 1 q1 512

OLT(config-epon-lineprofile-10)#
```

22.2.7. Commit ont-lineprofile Configuration

Command	OLT(config-epon-lineprofile-10)#commit
View	ont-lineprofile view
Description	This command is used for commit the current ont-lineprofile setting.All the parameter will take effect only after the command is committed.

【 Example 】

Example 1: Commit current ont-lineprofile setting.

```
OLT(config-epon-lineprofile-10)#commit

OLT(config-epon-lineprofile-10)#
```

22.2.8. Show OLT ont-lineprofile Information

Command	OLT(config)# show ont-lineprofile {all profile-id <profile-id> profile-name <profile-name>}
View	Config view
Description	This command is used for show ont-lineprofile info.
<profile-id>	Ont-lineprofile id to be show.
<profile-name>	Ont-lineprofile name to be show.

【 Example 】

Example 1: Show ont-lineprofile 10 info.

```
OLT(config)#show ont-lineprofile epon profile-id 10
-----
Profile-ID:10
Profile-name:lineprofile_10
Binding times:0
-----
FEC switch:Disable
Encrypt type:Off
DBA Profile-ID:0
Traffic profile ID:-
DBA-threshold:
-----
Queue-set-index Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8
-----
1-----
2-----
3-----
4-----
-----

OLT(config)#
```



22.3. ont-srvprofile Configuration

22.3.1. Create ont-srvprofile

Command	OLT(config)# ont-srvprofile epon {profile-id <profile-id> profile-name <profile-name>}
View	Config view
Description	This command is used for create ont-srvprofile or enter the created ont-srvprofile editing view.The association attribute of ont service can be set in ont-srvprofile.It needs to bind epon ont-srvprofile for ont when it is added to olt,if the ont-srvprofile is not specified,the system will bind the default ont-srvprofile to ont automatically.
<profile-id>	ont-srvprofile id.When it is not specified,system will allocate a minimum idle profile number automatically.the autoauth onu will be matched the ont-srvprofile 0.
<profile-name>	Ont-srvprofile name.The default name is ont-srvprofile_id.

【 Example 】

Example 1: Create ont-srvprofile 10 and enter its editing view.

```
OLT(config)#ont-srvprofile epon profile-id 10

OLT(config-epon-srvprofile-10)#
```

22.3.2. Config ONU Capability in ont-srvprofile

Command	OLT(config-epon-srvprofile-10)# ont-port eth <number> catv <number> pots <number>
View	Ont-srvprofile view
Description	This command is used for set the ont-srvprofile capability set.it can set the number of each kind of port.The config-capability of ont port must be the same with ont real capability.
<number>	The number of ont’s port. Eth:ethernet port Pots:voice port Catv:coaxial cable port

【 Example 】

Example 1: Set ont capability of ont-profile 10,ethernet port is adaptive and 1 pots port.

```
OLT(config-epon-srvprofile-10)#ont-port eth adaptive pots 1

OLT(config-epon-srvprofile-10)#
```

22.3.3. Config ONU Port Native-vlan in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port native-vlan eth <port-list> <vlan id> priority <value>
View	Ont-srvprofile view
Description	This command is used for set ONU eth port native-vlan
<port-list>	Port list to be set
<vlan id>	Native-vlan id
<value>	vlan priority,range for 0-7,the default is 0.

【Example】

Example 1: Set the native-vlan of eth1 in ont-srvprofile 10 as 100 and its priority is 0.

```
OLT(config-epon-srvprofile-10)#port native-vlan eth 1 100 priority 0

OLT(config-epon-srvprofile-10)#
```

22.3.4. Config ONU Port VLAN in ont-srvprofile

Command	OLT(config-epon-srvprofile-10)# port vlan eth <port-list> <vlan id> <priority value>
View	Ont-srvprofile view
Description	This command is used for add ont port to the specified vlan in ont-srvprofile.
<port-list>	Port list to be set.
<vlan id>	Vlan id
<value>	vlan priority,range for 0-7,the default is 0.

【Example】

Example 1: Add eth1 to vlan 100 in ont-srvprofile 10.

```
OLT(config-epon-srvprofile-10)#port vlan eth 1 100 1

OLT(config-epon-srvprofile-10)#
```



22.3.5. Config ONU VLAN Mode in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port vlan eth <port-list> <vlan mode>
View	Ont-srvprofile view
Description	This command is used for set vlan mode of the ONU port.
<vlan mode>	The mode of vlan are as follows: Transparent,translation,vlan-pool

【Example】

Example 1: Set vlan mode of eth 1 as vlan-pool 1 in ont-srvprofile 10,the vlan of eth 1 will be allocated by vlan-pool 1.

```
OLT(config-epon-srvprofile-10)#port vlan eth 1 vlan-pool 1

OLT(config-epon-srvprofile-10)#
```

22.3.6. Config ONU Port Multicast VLAN in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port multicast-vlan eth <port-list> <vlan id>
View	Ont-srvprofile view
Description	This command is used for set multicast vlan of ont’s port
<vlan id>	Multicast valn id

【Example】

Example 1: Set multicast-vlan of eth1 as 100.

```
OLT(config-epon-srvprofile-10)#port multicast-vlan eth 1 100

OLT(config-epon-srvprofile-10)#
```

22.3.7. Config ONU Port Downstream Rate limit in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port eth 1 ds-policing {unconcern <profile id>}
View	Ont-srvprofile view
Description	This command is used for set downstream rate limitation of ont

	port
unconcern	There is no rate limitation with downstream
<Profile ID>	traffic-profile id,it must be created in config view before it is called.

【 Example 】

Example 1: Set eth1 downstream rate limitation,match eth1 to traffic-profile 20.

```
OLT(config-epon-srvprofile-10)#port eth 1 ds-policing 20
```

```
OLT(config-epon-srvprofile-10)#
```

22.3.8. Config ONU Port Upstream Rate limit in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port eth 1 up-policing {unconcern <profile id>}
View	Ont-srvprofile view
Description	This command is used for set upstream rate limitation of ont port
unconcern	There is no rate limitation with downstream
<Profile ID>	traffic-profile id,it must be created in config view before it is called.

【 Example 】

Example 1: Set eth1 upstream rate limitation,match eth1 to traffic-profile 20.

```
OLT(config-epon-srvprofile-10)#port eth 1 up-policing 20
```

```
OLT(config-epon-srvprofile-10)#
```

22.3.9. Config ONU Port MAC Count Limit in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port eth <port-list> max-mac-count {unlimited <max mac count>}
View	Ont-srvprofile view
Description	This command is used for set max-mac-count of ont port.
unlimited	There is no rate limitation with mac address.



<max mac count>	The max mac address number,range for 1-64.
------------------------------	--

【 Example 】

Example 1: Set max-mac-count of eth1 as 10 entries.

```
OLT(config-epon-srvprofile-10)#port eth 1 max-mac-count 10

OLT(config-epon-srvprofile-10)#
```

22.3.10. Config ONU Port IGMP Number in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port eth <port-list> group-num-max <max group num>
View	Ont-srvprofile view
Description	This command is used for set multicast group-num-max of ont port
<Max group num>	The max multicast group number,range for 0-255

【 Example 】

Example 1: Set the max multicast group number of eth1 as 20.

```
OLT(config-epon-srvprofile-10)#port eth 1 group-num-max 20

OLT(config-epon-srvprofile-10)#
```

22.3.11. Config ONU Port IGMP VLAN Process Mode in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# port eth <port-list> multicast-tagstrip {tag untag translation}
View	Ont-srvprofile view
Description	This command is used for set vlan processing mode of ont port's multicast stream.
tag untag translation	Tag:Add VLAN tag Untag:Peel off VLAN tag translation: translate vlan

【 Example 】

Example 1: Set multicast vlan processing mode of eth1 as tag mode in ont-srvprofile.

```
OLT(config-epon-srvprofile-10)#port eth 1 multicast-tagstrip tag
```



```
OLT(config-epon-srvprofile-10)#
```

22.3.12. Config ONU IGMP Fast-leave Function in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# multicast fast-leave {enable disable}
View	Ont-srvprofile view
Description	This command is used for set ONU multicast fast-leave
{enable disable}	Enable:enable multicast fast-leave Disable:disable multicast fast-leave

【Example】

Example 1: Enable multicast fast-leave

```
OLT(config-epon-srvprofile-10)#multicast fast-leave enable

OLT(config-epon-srvprofile-10)#
```

22.3.13. Enable or Disable ONU Loop Detect Function in ont-lineprofile

Command	OLT(config-epon-srvprofile-10)# ring check { auto-shutdown no-recovery} enable disable
View	Ont-srvprofile view
Description	This command is used for set ring check function
{enable disable}	Enable:enable ring check function Disable:disable ring check function

【Example】

Example 1: Enable ring check function in ont-srvprofile 10.

```
OLT(config-epon-srvprofile-10)#ring check enable

OLT(config-epon-srvprofile-10)#
```

22.3.14. Show ont-srvprofile Current Configuration

Command	OLT(config-epon-srvprofile-10)# show ont-srvprofile current
----------------	--



View	Ont-srvprofile view
Description	This command is used for show current configuration of ont-srvprofile

【Example】

Example 1: Show current configuration of ont-srvprofile

```

OLT(config-epon-srvprofile-10)#show ont-srvprofile current
-----
Profile-ID:10
-----
Port-type Port-number
-----
ETH adaptive
POTS 0
CATV 0
-----
Multicast fast leave switch:Enable
Ring check switch:Enable
-----
Port Port Up-traffic Down-traffic MAC-learn Classification
type ID CAR-ID CAR-ID count
-----
ETH 1 20 20 10 None
ETH 2 Unconcern Unconcern Unlimited None
ETH 3 Unconcern Unconcern Unlimited None
ETH 4 Unconcern Unconcern Unlimited None
ETH 5 Unconcern Unconcern Unlimited None
ETH 6 Unconcern Unconcern Unlimited None
ETH 7 Unconcern Unconcern Unlimited None
ETH 8 Unconcern Unconcern Unlimited None
-----
Port Port Multicast Multicast Multicast Multicast
type ID S-VLAN C-VLAN tag-strip group-num
-----
ETH 1--Tag 20
ETH 2--Tag 64
ETH 3--Tag 64
ETH 4--Tag 64
ETH 5--Tag 64
ETH 6--Tag 64
ETH 7--Tag 64
ETH 8--Tag 64
    
```

```

-----
Port Port Service-type Index N-VLAN N-PRI S-VLAN S-PRI C-VLAN C-PRI
type ID
-----
ETH 1 Transparent-----
ETH 2 Transparent-----
ETH 3 Transparent-----
ETH 4 Transparent-----
ETH 5 Transparent-----
ETH 6 Transparent-----
    
```

22.3.15. Commit ont-srvprofile Configuration

Command	OLT(config-epon-srvprofile-10)# commit
View	Ont-srvprofile view
Description	This command is used for commit the current ont-srvprofile setting.All the parameter will take effect only after the command is committed.

【Example】

Example 1: Commit current ont-srvprofile setting

```

OLT(config-epon-srvprofile-10)#commit

OLT(config-epon-srvprofile-10)#
    
```

22.4. ont-slaprofile Configuration

22.4.1. Creat ont-slaprofile

Command	OLT(config)# ont-slaprofile profile-id <profile-id > profile-name <profile-name>
View	SLA profile view
Description	This command is used to add the SLA (Service Level Agreement) template and enter the SLA template configuration mode.
<profile-id >	SLA template number. If not specified, the system automatically assigns the smallest idle template number. Template 0 is the default template for the system.
<profile-name>	SLA template name. If not specified, the system automatically adopts

	the default name "sla_x", where "x" is the number of the SLA template.
--	--

【Example】

Example 1: Create a new sla template with id 1. The template name is named by default and enters the sla template configuration mode.

```
OLT(config)# ont-slaprofile profile-id 1

OLT(sla-1)#
```

22.4.2. Config the Cycle Length of the SLA Template.

Command	OLT(sla-1)# cycle-length <cycle-length>
View	SLA profile view
Description	This command is used to configure the period length of an SLA template.
<cycle-length>	Period length, in the range of 200-16777215, default is 25000

【Example】

Example 1: Configure the SLA template id1 to be 2048.

```
OLT(sla-1)# cycle-length 2048

OLT(sla-1)#
```

22.4.3. Config the Number of Services for the SLA Profile

Command	OLT(sla-1)# services-num <number-of-service>
View	SLA profile view
Description	This command is used to configure the number of services in the SLA profile. The template supports eight service SLAs, and the priority increases as the SLA number increases.
<number-of-service>	Number of services, ranging from 1-8

【Example】

Example 1: Set the number of services of the SLA template id1 to 2.

```
OLT(sla-1)# services-num 2

OLT(sla-1)#
```

22.4.4. Config the Service Parameters of the SLA Profile.

Command	OLT(sla-1)# service <service-id> fix 0 <fixed-packets-size> <fixed-bandwidth> guarante <guaranteed-bandwidth> best-effort <best-effort-bandwidth> wrr-weight <wrr-weight>
View	SLA profile view
Description	This command is used to configure the number of services in the SLA profile. The template supports eight service SLAs, and the priority increases as the SLA number increases.
<service-id>	Service index value, ranging from 1 to 8.
0 <fixed-packets-size>	Fixed packet size of the specified service, in the range of 64-2000, unit is bytes.
<fixed-bandwidth>	Specifies the fixed bandwidth of the service, in the range of 0-999936, unit is kbps.
<guaranteed-bandwidth>	Specifies the guaranteed bandwidth of the service, in the range of 0-999936, unit is kbps.
<best-effort-bandwidth>	Specifies the best-effort bandwidth of the service, ranging from 0 to 999936,unit is kbps
<wrr-weight>	The weight of the specified service, ranging from 0 to 100.

【Example】

Example 1: Configure the service parameters of the SLA template id1.

```
OLT(sla-1)# service 1 fix 1024 102400 guarante 102400 best-effort 102400 wrr-weight 0
OLT(sla-1)#
```

22.4.5. Commit ont-slaprofile Configuration

Command	OLT(sla-1)# commit
View	SLA profile view
Description	This command is used to submit the configuration of the current SLA template. After the configuration is successful, all parameter configurations of the service template take effect.

【Example】

Example 1: Commit the current SLA template configuration

```
OLT(sla-1)# commit
```

```
OLT(sla-1)#
```

22.4.6. Show ont-slaprofile Current Configuration

Command	OLT(config)# show traffic-profile {all profile-id <Profile ID> profile-name <Profile name>}
View	SLA profile view
Description	This command is used to view traffic template parameters.
<Profile ID>	ID of the traffic profile, ranging from 1 to 256.
<Profile name>	Name of the traffic profile, in the range of 1 to 16.

【Example】

Example 1 : Show the configuration of all current traffic templates

```
OLT(sla-1)# show ont-slaprofile current
-----
Profile-ID      : 1
-----
Cycle length (TQ)                : 25000
Number of services                : 2
Fixed packet size of service 1 (Bytes)      : 1024
Fixed bandwidth of service 1 (kbps)        : 102400
Guaranteed bandwidth of service 1 (kbps)   : 102400
Best effort bandwidth of service 1 (kbps)  : 102400
WRR weight of service 1              : 0
Fixed packet size of service 2 (Bytes)     : 0
Fixed bandwidth of service 2 (kbps)       : 0
Guaranteed bandwidth of service 2 (kbps)   : 0
Best effort bandwidth of service 2 (kbps)  : 0
WRR weight of service 2              : 0
-----
OLT(sla-1)#
```

22.5. OLT traffic-profile Configuration

22.5.1. Create traffic-profile

Command	OLT(config)# traffic-profile profile-id <profile id> profile-name <profile name> cir <parameter> pir <parameter> cbs
----------------	---

	<code><parameter> pbs <parameter></code>
View	Config view
Description	This command is used for create traffic-profile and set traffic-profile parameters to coordinate with rate limitation.
<Profile ID>	traffic-profile id,range for 1-256
<profile name>	traffic-profile name,range for 1-16
cir	Committed Information Rate,range for 64-10240000,unit is kbps
pir	Peek Information Rate,range for 64-10240000,unit is kbps
cbs	Committed Burst Size,range for 2000-10240000,unit is byte
pbs	Peek Burst Size,range for 2000-10240000,uni is byte

【 Example 】

Example 1: Create traffic profile 10,name it as test1,set cir as 128,pir as 256,cbs as 2000,pbs as 3000.

```
OLT(config)#traffic-profile profile-id 10 profile-name test1 cir 128 pir 256 cbs 2000 pbs 3000

OLT(config)#
```

22.5.2. Modify traffic-profile

Command	<code>OLT(config)#traffic-profile modify {profile Id profile name} {cir pir cbs pbs}</code>
View	Config view
Description	This command is used for modify the traffic-profile.
<Profile ID>	Profile id,range for 1-256
<profile name>	Profile name,range for 1-16
cir	Committed Information Rate,range for 64-10240000,unit is kbps
pir	Peek Information Rate,range for 64-10240000,unit is kbps
cbs	Committed Burst Size,range for 2000-10240000,unit is byte
pbs	Peek Burst Size,range for 2000-10240000,uni is byte

【Example】

Example 1: Modify cir as 150 in traffic-profile 10.

```
OLT(config)#traffic-profile modify profile-id 10 cir 150

OLT(config)#
```

22.5.3. Show OLT traffic-profile Information

Command	OLT(config)#show traffic-profile all profile id profile name
View	Config view
Description	This command is used for show traffic-profile info
<Profile ID>	Profile id,range for 1-256
<Profile name>	Profile name,range for 1-16

【Example】

Example 1: Show all of traffic-profile info.

```
OLT(config)#show traffic-profile all
-----
ID Profile-name CIR(kbps)PIR(kbps)CBS(bytes)PBS(bytes)Bind
-----
10 test1 150 256 2000 3000 0
20 test 222 222 2000 2000 2
-----
Total:2

OLT(config)#
```

22.6. Config Alarm Profile

22.6.1. Creat Low Alarm Profile

Command	OLT(config)# alarm-profile epon profile-id profile-id profile-name profile-name (rx-crcerrors-alarm rx-discards-alarm rx-dropevents-alarm rx-errors-alarm rx-fragments-alarm rx-jabbers-alarm rx-oversize-s-alarm rx-undersizes-alarm tx-crcerrors-alarm tx-discards-alarm tx-dropevents-alarm tx-errors-alarm tx-fragments-alarm tx-jabbers-alarm tx-oversizes-alarm tx-undersizes-alarm)
----------------	---

	<i>Threshold Restore-threshold</i>
View	Config view
Description	This command is used for ONU bind to alarm profile. In the alarm profile, config a series of alarm parameter used for minitor onu performance. After set successfully, ONU will cite recoresponding parameters in alarm profile to minitor the ports performance.
<i>profile-id</i>	Alarm profile id. Range for 1-50. The default alarm id is 0, in it the alarm parameter values are all disable.
<i>profile-name</i>	Alarm profile name, length for 1-16
rx-crcerrors-alarm	Upstream CRC error messages are reported when the number of messages exceeds the set alarm threshold
rx-discards-alarm	Upstream discard messages are reported when the number of messages exceeds the set alarm threshold
rx-dropevents-alarm	Upstream drop messages are reported when the number of messages exceeds the set alarm threshold
rx-errors-alarm	Upstream error messages are reported when the number of messages exceeds the set alarm threshold
rx-fragments-alarm	Upstream fragments messages are reported when the number of messages exceeds the set alarm threshold
rx-jabbers-alarm	Upstream jabbers messages are reported when the number of messages exceeds the set alarm threshold
rx-oversizes-alarm	Upstream oversize messages are reported when the number of messages exceeds the set alarm threshold
rx-undersizes-alarm	Upstream undersize messages are reported when the number of messages exceeds the set alarm threshold
tx-crcerrors-alarm	Downstream CRC error messages are reported when the number of messages exceeds the set alarm threshold
tx-discards-alarm	Downstream discard messages are reported when the number of messages exceeds the set alarm threshold
tx-dropevents-alarm	Downstream drop messages are reported when the number of messages exceeds the set alarm threshold
tx-errors-alarm	Downstream error messages are reported when the number of messages exceeds the set alarm threshold

tx-fragments-alarm	Downstream fragments messages are reported when the number of messages exceeds the set alarm threshold
tx-jabbers-alarm	Downstream jabbers messages are reported when the number of messages exceeds the set alarm threshold
tx-oversizes-alarm	Downstream oversize messages are reported when the number of messages exceeds the set alarm threshold
tx-undersizes-alarm	Downstream undersize messages are reported when the number of messages exceeds the set alarm threshold
<i>Threshold</i>	The threshold value,range for 0-4294967294
<i>Restore-threshold</i>	The restore threshold,range for 0-4294967294

【Example】

Example1: Create a new alarm profile 1,named test.And set upstream crc errors threshold is 100 and the restore threshold is 50.

```
OLT(config)# alarm-profile epon profile-id 1 profile-name test rx-crcerrors-alarm 100 50

OLT(config)#
```

22.6.2. Creat High Alarm Profile

Command	OLT(config)# alarm-profile epon profile-id <i>profile-id</i> pofile-name <i>profile-name</i> (rx-crcerrors-warning rx-discards-warning rx-dropevents-wa rning rx-errors-warning rx-fragments-warning rx-jabbers-w arning rx-oversizes-warning rx-undersizes-warning tx-crcerr ors-warning tx-discards-warning tx-dropevents-warning tx- errors-warning tx-fragments-warning tx-jabbers-warning tx -oversizes-warning tx-undersizes-warning) <i>Threshold</i> <i>Restore-threshold</i>
View	config view
Description	This command is used for ONU bind to alarm profile. In the alarm profile, config a series of alarm parameter used for minitor onu performance. After set successfully, ONU will cite recoresponding parameters in alarm profile to minitor the ports performance.
<i>profile-id</i>	Alarm profile id. Range for 1-50. The default alarm id is 0, in it the alarm parameter values are all disable.
<i>profile-name</i>	Alarm profile name, length for 1-16



rx-crcerrors-warning	Upstream CRC error messages are reported when the number of messages exceeds the set alarm threshold
rx-discards-warning	Upstream discard messages are reported when the number of messages exceeds the set alarm threshold
rx-dropevents-warning	Upstream drop messages are reported when the number of messages exceeds the set alarm threshold
rx-errors-warning	Upstream error messages are reported when the number of messages exceeds the set alarm threshold
rx-fragments-warning	Upstream fragments messages are reported when the number of messages exceeds the set alarm threshold
rx-jabbers-warning	Upstream jabbers messages are reported when the number of messages exceeds the set alarm threshold
rx-oversizes-warning	Upstream oversize messages are reported when the number of messages exceeds the set alarm threshold
rx-undersizes-warning	Upstream undersize messages are reported when the number of messages exceeds the set alarm threshold
tx-crcerrors-warning	Downstream CRC error messages are reported when the number of messages exceeds the set alarm threshold
tx-discards-warning	Downstream discard messages are reported when the number of messages exceeds the set alarm threshold
tx-dropevents-warning	Downstream drop messages are reported when the number of messages exceeds the set alarm threshold
tx-errors-warning	Downstream error messages are reported when the number of messages exceeds the set alarm threshold
tx-fragments-warning	Downstream fragments messages are reported when the number of messages exceeds the set alarm threshold
tx-jabbers-warning	Downstream jabbers messages are reported when the number of messages exceeds the set alarm threshold
tx-oversizes-warning	Downstream oversize messages are reported when the number of messages exceeds the set alarm threshold
tx-undersizes-warning	Downstream undersize messages are reported when the number of messages exceeds the set alarm threshold
<i>Threshold</i>	The threshold value,range for 0-4294967294
<i>Restore-threshold</i>	The restore threshold,range for 0-4294967294

【Example】

Example1 : Create a new alarm profile 2,named test2. And set upstream discard messages threshold is 20 and the restore threshold is 10.

```
OLT(config)# alarm-profile epon profile-id 2 profile-name test2 rx-discards-warning 20
10

OLT(config)#
```

22.6.3. Show Alarm Profile

Command	OLT(config)# show alarm-profile epon (all profile-id <i>profile-id</i> pofile-name <i>profile-name</i>) bound-info
View	Config view
Description	This command is used for show alarm profile which has been created.
<i>profile-id</i>	Alarm profile id,range for 0-50
<i>profile-name</i>	Alarm profile name, length range for 1-16

【Example】

Example1 : Show alarm profile id 1

```
OLT(config)# show alarm-profile epon profile-id 1

-----
Profile-ID      : 1
Profile-name    : test
Binding times   : 0
-----

<Drop events alarm/warning>:
  Transmitted drop events alarm:           disable
  Transmitted drop events warning:         disable
  Received drop events alarm:              disable
  Received drop events warning:            disable

<CRC error alarm/warning>:
  Transmitted CRC error frames alarm:       disable
  Transmitted CRC error frames warning:     disable
  Received CRC error frames alarm threshold: 100
  Received CRC error frames alarm restore threshold: 50
  Received CRC error frames warning:        disable

<Undersize frames alarm/warning>:
  Transmitted undersize frames alarm:       disable
  Transmitted undersize frames warning:     disable
```

Received undersize frames alarm:	disable
Received undersize frames warning:	disable
<Oversize frames alarm/warning>:	
Transmitted oversize frames alarm:	disable
Transmitted oversize frames warning:	disable
Received oversize frames alarm:	disable
Received oversize frames warning:	disable
<Fragments alarm/warning>:	
Transmitted fragments alarm:	disable
Transmitted fragments warning:	disable
Received fragments alarm:	disable
Received fragments warning:	disable
<Jabbers alarm/warning>:	
Transmitted jabbers alarm:	disable
Transmitted jabbers warning:	disable
Received jabbers alarm:	disable
Received jabbers warning:	disable
<Discards alarm/warning>:	
Transmitted discards alarm:	disable
Transmitted discards warning:	disable
Received discards alarm:	disable
Received discards warning:	disable
<Errors alarm/warning>:	
Transmitted errors alarm:	disable
Transmitted errors warning:	disable
Received errors alarm:	disable
Received errors warning:	disable

OLT(config)#	

22.6.4. Delete Alarm Profile

Command	OLT(config)# no alarm-profile epon (profile-id profile-id pofile-name profile-name)
View	config view
Description	This command is used for delete alarm profile.
<i>profile-id</i>	Alarm profile id. Range for 1-50. The default alarm id is 0, in it the alarm parameter values are all disable.
<i>profile-name</i>	Alarm profile name, length for 1-16



【Example】

Example1: Delete alarm profile id 1

```
OLT(config)# no alarm-profile epon profile-id 1

OLT(config)#
```

22.7. Optical-alarm-profile Configuration

22.7.1. Creat Optical Low Alarm Template

Command	OLT(config)# optical-alarm-profile profile-id profile-id pofile-name profile-name (bias-high-alarm bias-low-alarm rx-power-high-alarm rx-power-low-alarm temperature-high-alarm temperature-low-alarm tx-power-high-alarm tx-power-low-alarm voltage-high-alarm voltage-low-alarm) Threshold Restore-threshold
View	Config view
Description	This command is used to create a low alarm template for an optical module. Use this command when you need to adjust certain parameters of the optical module alarm template.
<Profile ID>	ID of the optical module template, ranging from 0 to 50.
<profile name>	Name of the optical module template, ranging from 1 to 24.
bias-high-alarm	Bias current threshold alarm upper limit value, ranging from 0 to 100, in mA
bias-low-alarm	Bias current threshold alarm lower limit value, ranging from 0 to 100, in mA
rx-power-high-alarm	Received optical power threshold alarm upper limit, in the range of -99-100, in dBm
rx-power-low-alarm	Received optical power threshold alarm upper limit, in the range of -99-100, in dBm
temperature-high-alarm	Upper limit of temperature threshold alarm, ranging from -99 to 300, unit: °C
temperature-low-alarm	Lower threshold of the temperature threshold alarm, ranging from -99 to 300.unit: °C
tx-power-high-alarm	Upper limit of the transmitted optical power threshold alarm, in the range of -99-100, in dBm

tx-power-low-alarm	The lower limit of the transmitted optical power threshold alarm, in the range of -99-100, in dBm
voltage-high-alarm	The upper limit of the power supply voltage threshold warning, the value range is 0-100, the unit is V
voltage-low-alarm	Supply voltage threshold warning lower limit, the value range is 0-100, the unit is V
<i>Threshold</i>	Threshold
<i>Restore-threshold</i>	Restore threshold

【Example】

Example 1: Create an optical module with a low alarm profile id of 1, name test, set the bias current threshold to 150 mA, and restore the threshold to 100 mA.

```
OLT(config)# optical-alarm-profile profile-id 1 profile-name test bias-high-alarm 150 100

OLT(config)#
```

22.7.2. Creat Optical High Alarm Template

Command	OLT(config)# optical-warning-profile profile-id <i>profile-id</i> pofile-name <i>profile-name</i> (bias-high-warning bias-low-warning rx-power-high-warning rx-power-low-warning temperature-high-warning temperature-low-warning tx-power-high-warning tx-power-low-warning voltage-high-warning voltage-low-warning) <i>Threshold</i> <i>Restore-threshold</i>
View	Config view
Description	This command is used to create a high alarm template for an optical module. Use this command when you need to adjust certain parameters of the optical module alarm template.
<Profile ID>	ID of the optical module template, ranging from 0 to 50.
<profile name>	Name of the optical module template, ranging from 1 to 24.
bias-high-warning	Bias current threshold warning upper limit value, ranging from 0 to 100, in mA
bias-low-warning	Bias current threshold warning lower limit value, ranging from 0 to 100, in mA
rx-power-high-warni	Received optical power threshold warning upper limit, in the

ng	range of -99-100, in dBm
rx-power-low-warning	Received optical power threshold warning upper limit, in the range of -99-100, in dBm
temperature-high-warning	Upper limit of temperature threshold warning, ranging from -99 to 300, unit: °C
temperature-low-warning	Lower threshold of the temperature threshold warning, ranging from -99 to 300. unit: °C
tx-power-high-warning	Upper limit of the transmitted optical power threshold warning, in the range of -99-100, in dBm
tx-power-low-warning	The lower limit of the transmitted optical power threshold warning, in the range of -99-100, in dBm
voltage-high-warning	The upper limit of the power supply voltage threshold warning, the value range is 0-100, the unit is V
voltage-low-warning	Supply voltage threshold warning lower limit, the value range is 0-100, the unit is V
<i>Threshold</i>	Threshold
<i>Restore-threshold</i>	Restore threshold

【Example】

Example 1: The low alarm profile id of the optical module is 2, and the name is test2. The alarm threshold is set to 200 V and the recovery threshold is 100 V.

```
OLT(config)# optical-alarm-profile profile-id 2 profile-name test2
temperature-high-warning 200 100

OLT(config)#
```

22.7.3. Show Optical-alarm-profile

Command	OLT(config)# show optical-alarm-profile {all profile-id <Profile ID> profile-name <Profile name> bound-info}
View	Config view
Description	This command is used to view the parameters of the optical module alarm template and the binding status.
<Profile ID>	ID of the alarm template of the optical module, ranging from 0 to 50.

<Profile name>	Name of the alarm template of the optical module. The value ranges from 1 to 24.
-----------------------------	--

【Example】

Example 1 :View the configuration of all current optical module templates.

```
OLT(config)# show optical-alarm-profile all
-----
Profile-ID  Profile-name                               Binding times
-----
0          optical-alarm-profile_0                     0
1          test                                       0
2          test2                                      0
-----
Total: 3
OLT(config)#
```

22.8. OLT VLAN Pool Configuration

22.8.1. Create VLAN Pool

Command	OLT(config)# vlan-pool add <vlan pool id> start-vid <vlan id> end-vid <vlan-id> <no-reused reused>
View	Config view
Description	This command is used for create vlan-pool.
<VLAN pool ID>	Vlan-pool id,range for 1-128

【Example】

Example 1: Create vlan-pool 1,its range is start-vid 100 to end-vid 200.

```
OLT(config)#vlan-pool add 1 start-vid 100 end-vid 200
OLT(config)#
```

22.8.2. Modify VLAN Pool

Command	OLT(config)# vlan-pool modify <vlan pool id> start-vid <vlan id> end-vid <vlan-id>
View	Config view

Description	This command is used for modify the parameter of vlan-pool
<vlan pool id>	Vlan-pool id,range for 1-128

【Example】

Example 1: Modify vlan-pool 1,its range is start-vid 100 to end-vid 300.

```
OLT(config)#vlan-pool modify 1 start-vid 200 end-vid 300

OLT(config)#
```

22.8.3. Delete VLAN Pool

Command	OLT(config)# no vlan-pool <vlan pool id>
View	Config view
Description	This command is used for delete vlan-pool.
<vlan pool id>	Vlan-pool id,range for 1-128

【Example】

Example 1: Delete vlan-pool 1.

```
OLT(config)#no vlan-pool 1

OLT(config)#
```

22.8.4. Show OLT VLAN Pool Information

Command	OLT(config)# show vlan-pool {all <vlan pool id>}
View	Config view
Description	This command is used for show configuration info of vlan-pool.
<vlan pool id>	Vlan-pool id,range for 1-128

【Example】

Example 1: Show configuration info of all the vlan-pool.

```
OLT(config)#show vlan-pool all

-----
VLAN-Pool Start-VID End-VID
-----
1 200 300
-----
```

```
OLT(config)#
```

23. ONU Management

23.1. ONU Authentication Management

23.1.1. Enable or Disable ONU Autofind Function

Command	OLT(config-interface-epon-0/0)# ont autofind <port-id> {enable disable}
View	EPON interface view
Description	This command is used for enable or disable ont autofind function in pon port
<port-id>	Pon port id,range for 1-16
{enable disable}	Enable Disable

【Example】

Example 1: Disable ont autofind function in pon 1.

```
OLT(config-interface-epon-0/0)#ont autofind 1 disable

OLT(config-interface-epon-0/0)#
```

23.1.2. Show Autofind ONU

Command	OLT(config-interface-epon-0/0)# show ont autofind <port-id> {all mac llid}
View	EPON interface view
Description	This command is used for show basic info of autofind ont.when adding ont,it can show mac address,autofind time and etc info of unauthentication ont.
<port-id>	Pon port id,range for 1-16
{all mac llid}	All:Show all the autofind ont in the pon port. Mac:Show the autofind ont according to the mac address in the pon port. Llid:Show the autofind ont according to the llid in the pon port.

【Example】

Example 1: Show all the autofind ont in pon 1.

```

OLT(config-interface-epon-0/0)#show ont autofind 1 all
-----
Index MAC Autofind-Time
-----
1 E0:67:B3:AA:BB:0C 2000-01-01 00:01:37
2 00:01:62:45:66:05 2000-01-01 08:02:24
3 00:01:62:45:99:07 2000-01-01 08:02:25
-----
Total:3 Total:3
-----
-----
OLT(config-interface-epon-0/0)#
    
```

23.1.3. Aging time configuration of offline ONT

Command	OLT(config)# ont auto-aging (time scan-interval interval default) (switch on off)
View	Config view
Description	This command is used to set the automatic aging time for ONT registration.
<i>interval</i>	Set the automatic aging interval of the ONT, in the range of 1-180, in days.
default	Time default time is 30 days Scan-interval scan interval default time is 7 days
on off	Enables/disables the automatic aging time of ONT registration. Automatically clear long-time offline ONUs and automatically overwrite long-time offline ONUs after 64

【Example】

Example 1: Enable the automatic aging time of the ONT registration and set the automatic aging time of the ONT to 20 days.

```

OLT(config)# ont auto-aging switch on

OLT(config)# ont auto-aging time 20

OLT(config)#
    
```



23.1.4. Config the ONT registration migration detection switch

Command	OLT(config)# ont moving-check enable disable
View	config view
Description	This command is used to configure the ONT registration migration detection switch.

【Example】

Example 1: Enable ONT registration migration detection.

```
OLT(config)# ont moving-check enable

OLT(config)#
```

23.1.5. MAC Address Method Authenticated ONU And Bind Profile

Command	OLT(config-interface-epon-0/0)# ont add <port-id> <onu-id> mac-auth <mac-address> {ont-lineprofile-id<profile-id> ont-lineprofile-name<profile-name>} {ont-srvprofile-id <profile-id> ont-srvprofile-name<profile-name>}
View	EPON interface view
Description	This command is used for authenticate onu by mac-auth and bind the ont-lineprofile and ont-srvprofile.olt will check whether the mac reported by ont is the same with the setting mac,if yes,ont will online normally.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<mac-address>	Mac address of ont,format for xx:xx:xx:xx:xx:xx
<profile-id>	Profile id,0-512
<profile-name>	Profile name,it supports 1-16 strings.

【Example】

Example 1: Add an ont in pon1 and bind it to ont-lineprofile 5 and ont-srvprofile 5.

```
OLT(config-interface-epon-0/0)#ont add 1 9 mac-auth 11:11:11:11:11:11
ont-lineprofile-id 5 ont-srvprofile-id 5

OLT(config-interface-epon-0/0)#
```

23.1.6. Loid Method Authenticated ONU and Bind Profile

Command	OLT(config-interface-epon-0/0)#ont add <port-id> <onu-id> loid-auth <loid> { ont-lineprofile-id <profile-id> ont-lineprofile-name } {<profile-name> ont-srvprofile-id <profile-id> ont-srvprofile-name <profile-name> } { always once-aging once-no-aging}
View	epon view
Description	This command is used for authenticate onu by loid-auth and bind the ont-lineprofile and ont-srvprofile.olt will check whether the loid reported by ont is the same with the setting loid,if yes,ont will online normally.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<loid>	Loid of ont,it supports 1-24 strings
<profile-id>	Profile id,0-512
<profile-name>	Profile name,it supports 1-16 strings.
{always once-aging once-no-aging}	Always:ont can be authenticated at any time once-aging:ont only can be authenticated for once time within the allotted time,ont will be cleared once it is offline. once-no-aging:no limitation in authentication time for ont,but it will be cleared once it is offline.

【 Example 】

Example 1: Add an ont in pon1 and bind it to ont-lineprofile 5 and ont-srvprofile 5.

```
OLT(config-interface-epon-0/0)#ont add 1 10 loid-auth loid ont-lineprofile-id 5
ont-srvprofile-id 5 always

OLT(config-interface-epon-0/0)#
```

23.1.7. Loid+Password Method Authenticated ONU and Bind Profile

Command	OLT(config-interface-epon-0/0)#ont add <port-id> <onu-id> loid-auth <loid> password <password> { ont-lineprofile-id <profile-id> ont-lineprofile-name <profile-name> } {ont-srvprofile-id <profile-id> ont-srvprofile-name <profile-name> } { always once-aging once-no-aging}
----------------	---

View	EPON interface view
Description	This command is used for authenticate onu by loid-auth and password-auth and bind the ont-lineprofile and ont-srvprofile.olt will check whether the loid and password reported by ont is the same with the setting loid and password,if yes,ont will online normally.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<loid>	Loid of ont,it supports 1-24 strings
<password>	password of ont,it supports 1-12 strings
<profile-id>	Profile id,0-1024
<profile-name>	Profile name,it supports 1-16 strings.
always once-aging once-no-aging	Always:ont can be authenticated at any time once-aging:ont only can be authenticated for once time within the allotted time,ont will be cleared once it is offline. once-no-aging:no limitation in authentication time for ont,but it will be cleared once it is offline.

【 Example 】

Example 1: Add an ont in pon1 and bind it to ont-lineprofile 5 and ont-srvprofile 5.

```
OLT(config-interface-epon-0/0)#ont add 1 10 loid-auth test password-auth test
ont-lineprofile-id 5 ont-srvprofile-id 5 always

OLT(config-interface-epon-0/0)#
```

23.1.8. Config ONU Authmode

Command	OLT(config-interface-epon-0/0)# ont authmode <port-id><auth-mode>
View	epon view
Description	This command is used for set ont authmode in pon port.
<port-id>	Pon port id,range for 1-16
<auth-mode>	Adaptive:Adaptive policy authenticated Auto:All ont will be authenticated by mac address unconditional Loid:authenticate ont by loid Loid-password:authenticate ont by loid+password Mac:authenticate ont by mac address

	Mac-or-loid:authenticate ont by mac address or loid Mac-or-loid-password:authenticate ont by mac address or loid+password
--	--

【 Example 】

Example 1: Set the authmode of pon 1 as mac.

```
OLT(config-interface-epon-0/0)#ont authmode 1 mac
OLT(config-interface-epon-0/0)#
```

23.1.9. Change ONU Bind Profile

Command	OLT(config-interface-epon-0/0)#ont modify <port-id> {<onu-id> <onu-list>} {ont-lineprofile-id <profile-id> ont-lineprofile-name <profile-name> ont-srvprofile-id <profile-id> ont-srvprofile-name <profile-name>}
View	EPON interface view
Description	This command is used for modify the bound ont-lineprofile and ont-srvprofile of ont.
<port-id>	Pon port id,range for 1-16
<onu-id> <onu-list>	Onu-id:ont id to be modified,range for 1-64 Onu-list:ont list to be modified,format for 1,3-5,8
<profile-id>	profile id,range for 0-512
<profile-name>	Profile name,it supports 1-16 strings.

【 Example 】

Example 1: Modify the ont-lineprofile of ont 1 in pon 1 as ont-lineprofile 5

```
OLT(config-interface-epon-0/0)#ont modify 1 1 ont-lineprofile-id 5
OLT(config-interface-epon-0/0)#
```

Example 2:Modify the ont-lineprofile and ont-srvprofile of ont 1 in pon 1 as ont-lineprofile 5 and ont-srvprofile 5.

```
OLT(config-interface-epon-0/0)#ont modify 1 1 ont-lineprofile-id 5 ont-srvprofile-id 5
OLT(config-interface-epon-0/0)#
```

23.1.10. Config Pre-binding ONU Profile

Command	OLT(config-interface-epon-0/0)#ont predetermine <port-id> {<onu-id > <onu-list>} { ont-lineprofile-id <profile-id> ont-lineprofile-name <profile-id>} {ont-srvprofile-id <profile-name> ont-srvprofile-name <profile-name>}
View	EPON interface view
Description	This command is used for predetermine the ont-lineprofile and ont-srvprofile for unregister ont in pon port,these profile will be applied to ont once it is online.
<port-id>	Pon port id,range for 1-16
<onu-id> <onu-list>	Onu-id:ont id,range for 1-64 Onu-list:ont list,format for 1,3-5,8
<profile-id>	profile id,range for 0-512
<profile-name>	Profile name,it supports 1-16 strings.

【Example】

Example 1: Predetermine the ont-lineprofile 5 and ont-srvprofile 5 for ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont predetermine 1 1 ont-lineprofile-id 5
ont-srvprofile-id 5

OLT(config-interface-epon-0/0)#
```

23.1.11. Confirm Autofind ONU

Command	OLT(config-interface-epon-0/0)#ont confirm <port-id> {all mac-auth <mac-address> loid-auth <loid>} {password-auth <password>} {ont-lineprofile-id <profile-id> ont-lineprofile-name <profile-name> ont-srvprofile-id <profile-id> ont-srvprofile-name <profile-name>}
View	epon view
Description	This command is used for confirm the discovered ont.If ont autofind is enable,olt will obtain the register info of ont after accessing the ont to olt,at this time,ont is in'autofind'state.ont will turn into working state and can be configured after confirming.Batch of ont registration is supported.
<port-id>	Pon port id,range for 1-16
<mac-address>	Mac address of ont,format is xx:xx:xx:xx:xx:xx

<loid>	Loid of ont,it supports 1-24 strings
<password>	password of ont,it supports 1-12 strings
<profile-id>	Profile id,0-512
<profile-name>	Profile name,it supports 1-16 strings.

【 Example 】

Example 1: Authenticate all the autofind ont in pon1 according to mac address.

```
OLT(config-interface-epon-0/0)#ont confirm 1 all mac-auth
Number of ONUs that can be added:0,success:0

OLT(config-interface-epon-0/0)#
```

Example 2:Authenticate all the autofind ont in pon1 according to loid “test” .

```
OLT(config-interface-epon-0/0)#ont confirm 1 loid-auth test
Add port 1 ONU 1 successfully.

OLT(config-interface-epon-0/0)#
```

23.1.12. Cancel Autofind ONU

Command	OLT(config-interface-epon-0/0)#ont cancel <port-id> {<mac-address> all}
View	epon view
Description	This command is used for cancel the autofind ont
<port-id>	Pon port id,range for 1-16
<mac-address>	Mac saddress of ont,format is xx:xx:xx:xx:xx:xx
all	All the autofind ont in corresponding pon port

【 Example 】

Example 1: Cancel the autofind ont in pon1,its mac address is E0:67:B3:12:11:8A.

```
OLT(config-interface-epon-0/0)#ont cancel 1 E0:67:B3:12:11:8A

OLT(config-interface-epon-0/0)#
```

23.1.13. Re-register ONU

Command	OLT(config-interface-epon-0/0)#ont re-register <port-id>
----------------	---

	{<onu-id> all}
View	epon view
Description	This command is used for re-register the specified ont or all the ont in corresponding pon port.
<port-id>	Pon port id,range for 1-16
{<onu-id> all}	onu-id:ont id to be re-register,range for 1-64 All:re-register all the ont in pon port

【 Example 】

Example 1: Re-register onu1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont re-register 1 1
2000-01-08 02:02:49 PON 0/0/1 ONU 1 onu is offline
2000-01-08 02:02:49 PON 0/0/1 pon port link down
2000-01-08 02:02:56 PON 0/0/1 ONU 1 onu is online
2000-01-08 02:02:56 PON 0/0/1 pon port link up

OLT(config-interface-epon-0/0)#
```

23.1.14. Modify ONU Authmode

Command	OLT(config-interface-epon-0/0)#ont modify <port-id> <onu-id> auth-type {mac-auth <mac-address> loid-auth <loid>} {password-auth <password>}
View	Config view
Description	This command is used for modify ont authmode
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<mac-address>	Mac address of ont,format is xx:xx:xx:xx:xx:xx
<loid>	Loid of ont,it supports 1-24 strings
<password>	password of ont,it supports 1-12 strings

【 Example 】

Example 1: Modify the auth-type of onu 1 as mac-auth in pon1,its mac is 11:11:11:11:11:11.

```
OLT(config-interface-epon-0/0)#ont modify 1 1 auth-type mac-auth 11:11:11:11:11:11

OLT(config-interface-epon-0/0)#
```

Example 2: Modify the auth-type of onu 1 as loid-auth in pon1, its loid is test.

```
OLT(config-interface-epon-0/0)#ont modify 1 1 auth-type loid-auth test

OLT(config-interface-epon-0/0)#
```

Example 3: Modify the auth-type of onu 1 as loid-password in pon1, its loid is test, password is test1.

```
OLT(config-interface-epon-0/0)#ont modify 1 1 auth-type loid-auth test password-auth test1

OLT(config-interface-epon-0/0)#
```

23.1.15. Config ONU Black-list

Command	OLT(config-interface-epon-0/0)# ont black-list add <i>port-id</i> (<i>mac-address</i> all)
View	EPON interface view
Description	This command is used for add the ONT of the specified PON port to the blacklist, and then the blacklist ONT authentication is unsuccessful.
<i>port-id</i>	Pon port id, range for 1-16
<i>mac-address</i>	Mac address of blacklist ont, format for xx:xx:xx:xx:xx:xx
all	All of the blacklist ont in the pon port

【Example】

Example 1: Config ONU black-list in pon port 5.

```
OLT(config-interface-epon-0/0)# ont black-list add 5 E0:67:B3:12:04:67

2000-01-08 04:13:49 PON 0/0/5 ONU 11 onu is offline

OLT(config-interface-epon-0/0)# 2000-01-08 04:13:49 PON 0/0/5 ONU 11 onu optical down
2000-01-08 04:13:49 PON 0/0/5 pon port link down

OLT(config-interface-epon-0/0)# 2000-01-08 04:13:55 PON 0/0/5 ONU 255 onu mac auth fails
```

23.1.16. Delete Black-list Auth ONU



Command	OLT(config-interface-epon-0/0)#ont blacklist del <port-id> {<mac-address> all}
View	EPON interface view
Description	This command is used for delete the blacklist ont in specified pon port.
<port-id>	Pon port id,range for 1-16
<mac-address>	Mac address of blacklist ont,format for xx:xx:xx:xx:xx:xx
all	All of the blacklist ont in the pon port

【Example】

Example 1: Delete all the blacklist ont in pon 1.

```
OLT(config-interface-epon-0/0)#ont black-list del 1 all
Number of ONUs that can be delete:1,success:1

OLT(config-interface-epon-0/0)#
```

23.1.17. Delete Authentication ONU

Command	OLT(config-interface-epon-0/0)# ont delete <port-id> {<onu-id> all}
View	EPON interface view
Description	This command is used for delete the ont in pon port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
all	Delete all ont in pon port

【Example】

Example 1: Delete all ont in pon1.

```
OLT(config-interface-epon-0/0)# ont delete 1 all

This command will delete all the ONUs in port.Are you sure to execute this
command?(y/n):y 2000-01-04 11:32:30 ONU 0/0 1 1 is offline

Number of ONUs that can be delete:1,success:1

OLT(config-interface-epon-0/0)#2000-01-04 11:32:30 PON 0/0/1 ONU 1 onu is offline
```



23.1.18. Show ONU BlackList Authenticated Config

Command	OLT(config-interface-epon-0/0)# show ont black-list {<port-id> all}
View	EPON interface view
Description	This command is used for show black-list ont in specified pon port
<port-id>	Pon port id,range for 1-16

【Example】

Example 1: Show all the black-list ont in pon 1.

```
OLT(config-interface-epon-0/0)#show ONU black-list 1 all
-----
Index MAC Try-Count Last-Auth-Time
-----
1 12:12:12:12:12:12 0 1900-01-00 00:00:00
-----
Total:1
OLT(config-interface-epon)#
```

23.1.19. Show ONU Black List

Command	OLT(config-interface-epon-0/0)# show ont black-list port-id all
View	Epon view
Description	This command is used for show ONU which have added black list.
port-id	Pon port id,range for 1-16

【Example】

Example 1: Show PON9, a list of ONU blacklists that have been added.

```
OLT(config-interface-epon-0/0)# show ont black-list 9 all
-----
Index  F/S  P   MAC
-----
1      0/0  9   E0:67:B3:12:04:99
-----
Total: 1
OLT(config-interface-epon-0/0)#
```

23.1.20. Show ONU Predetermine Information



Command	OLT(config-interface-epon-0/0)# show ont predetermine <i>port-id</i>
View	Epon view
Description	This command is used for show ONU predetermine information.
<i>port-id</i>	Pon port id,range for 1-16

【Example】

Example 1: Show PON9 predetermine information.

```

OLT(config-interface-epon-0/0)# show ont predetermine 9
-----
 F/S  P  ONT   Line profile  Server profile
          ID           ID
-----
 0/0  9  4     10           10
-----
OLT(config-interface-epon-0/0)#
    
```

23.1.21. Show ONU registration statistics

Command	OLT(config-interface-epon-0/0)# show ont register-statistics <i>port-id</i> all
View	Epon view
Description	This command is used for show ONU registration statistics
<i>port-id</i>	Pon port id,range for 1-16

【Example】

Example 1: Show the onu registration statistics of all pon ports.

```

OLT(config-interface-epon-0/0)# show ont register-statistics all
-----
 F/S  P  Autofind  Authenticated  Online
-----
 0/0  1  0         4              1
 0/0  2  0         0              0
 0/0  3  0         4              0
 0/0  4  0         0              0
 0/0  5  0         0              0
 0/0  6  0         0              0
 0/0  7  0         0              0
 0/0  8  0         0              0
    
```

0/0	9	0	5	0
0/0	10	0	0	0
0/0	11	0	0	0
0/0	12	0	0	0
0/0	13	0	0	0
0/0	14	0	0	0
0/0	15	0	2	0
0/0	16	0	0	0

Total:	0	15	1	
OLT(config-interface-epon-0/0)#				

23.1.22. Delete the user template of the predetermine ONU

Command	OLT(config-interface-epon-0/0)# no ont predetermine <port-id> <onu-id >
View	epon view
Description	This command is used for delete the user template of the predetermine ONU.
<port-id>	Pon port id,range for 1-16
< onu-id >	onu-id:ont id to be show,range for 1-64.

【Example】

Example 1: Delete PON7 ONU1 predetermine template.

OLT(config-interface-epon-0/0)# no ont predetermine 7 1
OLT(config-interface-epon-0/0)#

23.1.23. Show ONU Registered Status and Information

Command	OLT(config-interface-epon-0/0)# show ont info <port-id><{onu-id}> all}
View	EPON interface view
Description	This command is used for show ont state info(including current state,relative configuration of ont) Port:The pon port id that the ont had registered in ONU ID:the setting ont id MAC:Mac address of ont



	<p>Control flag:</p> <p>Active:Ont is in active state.Only if the ont is in active state the ont can register in olt.</p> <p>Deactive:Ont is in deactive state.When ont is in deactive state,we can active the ont by“ont active”command.</p> <p>Run state:The running sigh of ont,it includes“online”,“offline”,“online”state indicates that ont has registered in olt normally.</p> <p>Config state:This state can describe whether the config state is in normal.it includes 3 kinds of state:</p> <p>Initial:Ont is in configuration issuing or recovering state</p> <p>Failed:Failed to issue or recover the configuration</p> <p>Success:Success to issue or recover the configuration</p>
<port-id>	Pon port id,range for 1-16
{<onu-id> all}	onu-id:ont id to be show,range for 1-64。 All:Show all of the ont state in current pon port

【Example】

Example1:Show all of the ont state in pon 1.

```
OLT(config-interface-epon-0/0)#show ont info 1 all
-----
F/S P ONU MAC Control Run Config Match Desc
ID flag state state state
-----
0/0 1 1 E0:67:B3:00:00:09 active online success match
0/0 1 2 00:13:25:00:00:01 active offline initial initial
0/0 1 3 E0:67:B3:1B:8F:35 active offline initial initial
0/0 1 4 00:13:25:01:02:01 active offline initial initial
-----
Total:4,online 1

OLT(config-interface-epon-0/0)#
```

23.1.24. Check the aging time configuration of the ONU

Command	OLT(config)# show ont auto-aging info
View	epon view
Description	This command is used to view the aging time configuration of the ONU.

【Example】



Example 1: Check the aging time configuration of the ONU.

```
OLT(config)# show ont auto-aging info

Auto-aging switch: ON

Auto-aging time: 20 day(s)

Auto-aging scan-interval: 7 day(s)

OLT(config)#
```

23.1.25. Check the ONU registration migration detection status

Command	OLT(config)# show ont moving-check
View	epon view
Description	This command is used to view the ONU registration migration detection status.

【Example】

Example 1: Check the ONU registration migration detection status configuration.

```
OLT(config)# show ont moving-check
ONT moving check : enable

OLT(config)#
```

23.2. Policy-auth ONU and Batch Delivery Configuration

Manage

23.2.1. Enable or Disable Global Policy-auth ONU

Command	OLT(config)# ont policy-auth {enable disable}
View	config view
Description	This command is used for enable or disable the global ONU policy authentication function. The default policy adopted by the OLT is that the ONU defaults to match the line profile 0 and the service profile. The OLT supports the following methods to match different ONUs, and then match different configurations for different ONUs.
{enable disable}	Enable:Enable policy-auth of ont



}	Disable:Disable policy-auth of ont
---	------------------------------------

【Example】

Example 1: Enable global ONU policy authentication.

OLT(config)# ont policy-auth enable
OLT(config)#

23.2.2. Enable or Disable Policy-auth ONU Under PON Port

Command	OLT(config-interface-epon-0/0)#ont policy-auth <port-id> {enable disable}
View	EPON interface view
Description	This command is used for enable or disable policy-auth of ont under OLT PON port.
<port-id>	Pon port id,range for 1-16
{enable disable } }	Enable:Enable policy-auth of ont Disable:Disable policy-auth of ont

【Example】

Example 1: Enable policy-auth of ont in pon1

OLT(config-interface-epon-0/0)#ont policy-auth 1 enable
OLT(config-interface-epon-0/0)#

23.2.3. Config Policy-auth ONU Mode

Command	OLT(config)# ont policy-auth mode {all model-auth model-swver-auth model-vendor-hwver-auth vendor-auth} to {loid-auth loid-password-auth mac-auth} {always once-no-aging}
View	Config view
Description	This command is used for configure the ONU policy authentication mode. Mainly configures what the ONU is based on to match the policy. The ONU is based on what is registered, and the number of times the policy action is executed.
<all model-auth	All: The object that executes the policy is all online ONUs. Model-auth : Match different strategies model-swver-auth according

<p> model-swver-auth model-vendor-hwver-auth vendor-auth ></p>	<p>to different model ids: match different strategies according to different model id and software version</p> <p>Model-vendor-hwver-auth: Match different strategies according to different model id, software version and hardware version</p> <p>Vendor-auth : match different strategies based on different vendor ids</p>
<p><loid-auth loid-password-auth mac-auth> <always once-no-aging></p>	<p>Mac-auth: onu is registered based on mac address</p> <p>Loid-auth: onu is registered based on loid id</p> <p>Loid-password-auth: onu is registered based on loid id and password</p> <p>Always: the action of executing the policy is always executed</p> <p>Once-no-aging: the action of executing the policy is executed only once</p>

【Example】

Example 1: Configure the ONU to match the policy by model id, register based on mac address, and always execute the policy.

```
OLT(config)# ont policy-auth mode model-auth to mac-auth always

OLT(config)#
```

23.2.4. Config Policy-auth ONU Mode and Batch Delivery

Configuration Match Mode

<p>Command</p>	<p>OLT(config)# ont policy-auth {all model-auth model-swver-auth model-vendor-hwver-auth vendor-auth }</p> <p><parameter> { ont-lineprofile-id <profile-id> ont-lineprofile-name <profile-id>} {ont-srvprofile-id <profile-name> ont-srvprofile-name <profile-name>}</p>
<p>View</p>	<p>Config view</p>
<p>Description</p>	<p>This command is used for configure the matching policy of the ONU, configure specific parameters to match the policy, and configure line profiles and service templates that match the ONUs of the policy.</p>
<p><all model-auth model-swver-auth model-vendor-hwver-auth vendor-auth ></p>	<p>All: The object that executes the policy is all online ONUs.</p> <p>Model-auth : Match different strategies model-swver-auth according to different model ids: match different strategies according to different model id and software version</p> <p>Model-vendor-hwver-auth: Match different strategies according to different model id, software version and hardware version</p> <p>Vendor-auth : match different strategies based on different vendor ids</p>



<code><ont-lineprofile-id ont-lineprofile-name></code>	Configure the line profile id or name matching the online ONU that matches the policy.
<code><ont-srvprofile-id ont-srvprofile-name></code>	Configure the service template id or name matching the online ONU that matches the policy.

【 Example 】

Example 1 : Configure the ONU on the line that has the model id of 0x31303053 to automatically match the line profile 10 and the service profile 10.

```
OLT(config)# ont policy-auth policy model-auth 0x31303053 ont-lineprofile-id 10
ont-srvprofile-id 10

OLT(config)#
```

Example 2: The ONU of the PON1 with the model id of 0x31303053 is configured based on the mac address authentication. The line-up always matches the line profile 10 and the service profile 10 automatically. All the configurations required are as follows:

```
OLT(config)# ont policy-auth enable

OLT(config)# ont policy-auth mode model-auth to mac-auth always

OLT(config)# ont policy-auth policy model-auth 0x31303053 ont-lineprofile-id 10
ont-srvprofile-id 10

OLT(config)# interface epon 0/0

OLT(config-interface-epon-0/0)# ont policy-auth 1 enable

OLT(config-interface-epon-0/0)# ont authmode 1 adaptive

OLT(config-interface-epon-0/0)# ont autofind 1 enable
```

23.2.5. Show Policy-auth ONT Configuration Information

Command	OLT(config)# show ont policy-auth
View	Config view
Description	This command is used for view the configuration of the current ONU policy authentication of the OLT.

【 Example 】

Example 1: Check the configuration of the current ONU policy authentication of the OLT.

```

OLT(config)# show ont policy-auth
-----
Policy-auth Switch : enable
Policy-auth Mode   : model-auth
Target auth Mode   : mac-auth
Time Mode          : always
-----

OLT(config)#
    
```

23.3. ONU Basic Function Management

23.3.1. Active ONU

Command	OLT(config-interface-epon-0/0)#ont activate <port-id> {<onu-id> all}
View	EPON interface view
Description	This command is used for active the ont with disactive state.Ont will work in normal only when it is in active state.ont is in active state by default.
<port-id>	Pon port id,range for 1-16
<onu-id> all	Ont id,range for 1-64 All:all of the ont

【Example】

Example 1: Active the ont 1 in pon 1.

```

OLT(config-interface-epon-0/0)#ont activate 1 1

OLT(config-interface-epon-0/0)#
    
```

23.3.2. Deactive ONU

Command	OLT(config-interface-epon-0/0)#ont deactivate <port-id> {<onu-id> all}
View	EPON interface view
Description	This command is used for disactive the ont with active state.Ont will work in normal only when it is in active state.ont is in active state by default.

<port-id>	Pon port id,range for 1-16
{<onu-id> all}	Ont id,range for 1-64 All:all of the ont

【Example】

Example 1: Disactive the ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont deactivate 1 1

OLT(config-interface-epon-0/0)#
```

23.3.3. Reboot ONU

Command	OLT(config-interface-epon-0/0)#ont reboot <port-id> {<onu-id> all}
View	EPON interface view
Description	This command is used for reboot the specified ont or all of the ont.
<port-id>	Pon port id,range for 1-16
{<onu-id> all}	Ont id,range for 1-64 All:all of the ont

【Example】

Example 1: Reboot the ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont reboot 1 1

OLT(config-interface-epon-0/0)#
```

23.3.4. Restore the ONU to factory settings

Command	OLT(config-interface-epon-0/0)# ont default-setting <port-id> <onu-id> all
View	EPON interface view
Description	This command is used for restore the factory settings of the specified or all ONUs under the pon port.
<port-id>	Pon port id,range for 1-16
{<onu-id> all}	Ont id,range for 1-64 All:all of the ont

【Example】

Example 1: Restore all ONUs under PON1 to factory settings

```
OLT(config-interface-epon-0/0)# ont default-setting 1 all
Number of ONUs that can be restore default: 0, success: 0

OLT(config-interface-epon-0/0)#
```

23.3.5. ONU Remote Manage IP Function Config

Command	OLT(config-interface-epon-0/0)#ont ipconfig <port-id> <onu-id > ip-address <ip-address> mask <mask> gateway <gateway-ip> manage-vlan <vlan-id> priority <priority>
View	EPON interface view
Description	This command is used for set the management ip,netmask,gateway,manage vlan and priority and etc.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<ip-address>	Manage ip,format for xx:xx:xx:xx:xx:xx
<mask>	Netmask,format for xx:xx:xx:xx:xx:xx
<gateway-ip>	Gateway ip,format for xx:xx:xx:xx:xx:xx
<vlan-id>	vlan id.range for 1-4094
<priority>	Priority,range for 0-7

【Example】

Example 1 : Set the parameters of ont 1 in pon 1,set its management ip as 192.168.101.1,netmask as 255.255.255.0,gateway ip is 192.168.101.254,management vlan as 101,priority as 0.

```
OLT(config-interface-epon-0/0)#ont ipconfig 1 1 ip-address 192.168.101.1 mask
255.255.255.0 gateway 192.168.101.254 manage-vlan 101 priority 0

OLT(config-interface-epon-0/0)#
```

23.3.6. ONU Upstream Rate Limit Function Config

Command	OLT(config-interface-epon-0/0)#ont sla <port-id> <onu-id > upstream {assure <assured-bandwidth> fix <fixed-bandwidth> max <max-bandwidth>}
----------------	--

View	EPON interface view
Description	This command is used for set upstream rate limitation of ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<assured-bandwidth>	Assure-bandwidth,range for 1-1000000,unit is kpbs
<fixed-bandwidth>	Fixed-bandwidth,range for 1-1000000,unit is kpbs
<max-bandwidth>	Max-bandwidth,range for 512-1000000,unit is kpbs

【Example】

Example 1: Set the fixed-bandwidth of ont 1 in pon1 as 100000kpbs

```
OLT(config-interface-epon-0/0)#ont sla 1 1 upstream fix 100000
OLT(config-interface-epon-0/0)#
```

23.3.7. ONU Downstream Rate Limit Function Config

Command	OLT(config-interface-epon-0/0)#ont sla <port-id> <onu-id > downstream max <max-bandwidth>
View	EPON interface view
Description	This command is used for set downstream rate limitation of ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<max-bandwidth>	Max-bandwidth,range for 64-1000000,unit is kpbs

【Example】

Example 1: Set the max-bandwidth of ont 1 in pon1 as 100000kpbs

```
OLT(config-interface-epon-0/0)#ont sla 1 1 downstream max 100000
OLT(config-interface-epon-0/0)#
```

23.3.8. ONU MAC Aging Time Config



Command	OLT(config-interface-epon-0/0)# ont mac-aging <port-id> <onu-id> aging-time <aging-time>
View	EPON interface view
Description	This command is used for set mac-aging time of specified ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range fro 1-64
<aging-time>	Mac-aging time,range for 0-36000."0"means without aging.

【 Example 】

Example 1: Set the mac-aging time of onu 4 in pon 1 as 12s.

```
OLT(config-interface-epon-0/0)#ont mac-aging 1 4 aging-time 12

OLT(config-interface-epon-0/0)#
```

23.3.9. Add ONU Description Information

Command	OLT(config-interface-epon-0/0)# ont description <port-id> <onu-id> <description>
View	EPON interface view
Description	This command is used for add description for ontt
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<description>	Description info of ont,it supports 1-64 strings.

【 Example 】

Example 1: Add description “test” for ont 1 in pon1.

```
OLT(config-interface-epon-0/0)#ont description 1 1 test

OLT(config-interface-epon-0/0)#
```

23.3.10. ONU Encryption Function Config

Command	OLT(config-interface-epon-0/0)# ont encrypt <port-id> <onu-id> {enable disable}
View	EPON interface view



Description	This command is used for set encryption function of ont.the message between specified pon port and specified ont will be encrypted after executing this command.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
{enable disable } }	Enable:enable the encryption function Disable:disable the encryption function

【 Example 】

Example 1: Enable the encryption function of onu 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont encrypt 1 1 enable
OLT(config-interface-epon-0/0)#
```

23.3.11. Enable or Disable ONU FEC Function

Command	OLT(config-interface-epon-0/0)#ont fec <port-id> <onu-id> {enable disable}
View	EPON interface view
Description	This command is used for enable or disable FEC function of specified ont in pon port.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
{enable disable } }	Enable:enable FEC function Disable:disable FEC function

【 Example 】

Example 1: enable FEC function of ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont fec 1 1 enable
OLT(config-interface-epon-0/0)#
```

23.3.12. ONU Service-sla Function Config

Command	OLT(config-interface-epon-0/0)#ont service-sla <port-id> {all <onu-id>} {profile-id <profile-id> profile-name <profile-name>}
----------------	---



View	EPON interface view
Description	This command is used for bind ont-slaprofile to ont.Firstly,it needs to create a n ont-slaprofile in config view.
<port-id>	Pon port id,range for 1-16
{all <onu-id>}	Ont id,range for 1-64 All:all of the ont
<profile-id>	Profile id,range for 0-256
<profile-name>	profile name,it supports 1-16 strings

【 Example 】

Example 1: Bind ont-slaprofile 5 to ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont service-sla 1 1 profile-id 5

OLT(config-interface-epon-0/0)#
```

23.3.13. ONU SNMP Function Config

Command	OLT(config-interface-epon-0/0)# ont snmp-config <port-id> <onu-id> v2c <readgroup> <writegroup> <trap-ip> <snmp-port> { <trap-port> <security-name> }
View	EPON interface view
Description	This command is used for set snmp parameters of ONU
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<readgroup>	read group,it supports 1-32 strings
<writegroup>	write group,it supports 1-32 strings
<trap-ip>	Trap ip,format for xx:xx:xx:xx:xx:xx
<snmp-port>	Snmp port,range for 1-65535
<trap-port>	Trap port,range for 1-65535
<security-name >	Security-name,it supports 1-32 strings

【 Example 】



Example 1 : Set snmp parameters of ONU,Set read group as public,write group as private,trap ip as 192.168.5.200,snmp port is 23,trap port is 161,security name is test.

```
OLT(config-interface-epon-0/0)#ont snmp-config 1 1 v2c public private 192.168.5.200
23 161 test
```

```
OLT(config-interface-epon-0/0)#
```

23.3.14. Enable or Disable ONU Tx Optical Power Supply

Command	OLT(config-interface-epon-0/0)# ont tx-power-supply <port-id> <onu-id all> {enable/disable} <disable-time> forever}
View	EPON interface view
Description	This command is used for set the tx-power-supply limitation of specified ont and its shining time.
<port-id>	Pon port id,range for 1-16
<ont-id>	Ont id,range fro 1-64
{enable disable } }	Enable:ont shine in normal Disable:ont unshining
<disable-time> forever	<disable-time>:unshining time of ont,range for 1-65534s Forever:make onu unshining forever

【 Example 】

Example 1: Set ont 3 in pon 1 un-shining for 3s.

```
OLT(config-interface-epon-0/0)#ont tx-power-supply 1 3 disable 3
OLT(config-interface-epon-0/0)#
2000-01-01 00:07:06 PON 0/0/1 ONU 3 onu is offline
2000-01-01 00:07:10 PON 0/0/1 ONU 3 onu is online
```

23.3.15. Show ONU ipconfig(Remote Manage IP Address)

Command	OLT(config-interface-epon-0/0)# show ont ipconfig <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show ont ipconfig,it includes manage ip,gateway,manage vlan and etc.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64



【Example】

Example 1: Show ipconfig of ont 1 in pon 1.

```

OLT(config-interface-epon-0/0)#show ont ipconfig 1 1
-----
Frame/Slot:0/0
Port:1
ONU-ID:1
IP:192.168.1.1
Subnet mask:255.255.255.0
Gateway:192.168.1.100
Manage VLAN:100
Manage priority:5
-----

OLT(config-interface-epon-0/0)#
    
```

23.3.16. Show ONU SNMP Configuration

Command	OLT(config-interface-epon-0/0)# show ont snmp-config <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show snmp configuration of ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【Example】

Example 1: Show snmp configuration of ont 1 in pon 1.

```

OLT(config-interface-epon-0/0)#show ont snmp-config 1 1
-----
Frame/Slot:0/0
Port:1
ONU-ID:1
Version:v2c
Read group name:public
Write group name:private
Destination IP:192.168.5.200
Snmp port:162
Trap port:162
SNMP body name:
-----
    
```




```
OLT(config-interface-epon-0/0)#
```

23.3.17. Show ONU Capability Information

Command	OLT(config-interface-epon-0/0)# show ont capability <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show ont capability info,including ont port type,number and etc.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【Example】

Example 1: Show ont 3 capability info in pon 1.

```
OLT(config-interface-epon-0/0)#show ont capability 1 3
-----
Frame/Slot:0/0
Port:1
ONU-ID:3
Type:SFU
Number of uplink PON ports:1
Number of ETH ports:4(4FE+0GE)
Number of POTS ports:0
Number of CATV ports:1
Number of uplink queues:8
MAX number of uplink queues:8
Number of downlink queues:8
MAX number of downlink queues:8
Number of LLID:1
Fast leave ability:non-fast-leave in snooping mode
fast-leave in snooping mode
non-fast-leave in CTC mode
fast-leave in CTC mode
non-fast-leave in MLD snooping mode
fast-leave in MLD snooping mode
-----
OLT(config-interface-epon-0/0)#
```

23.3.18. Show ONU Configured Capability

Command	OLT(config-interface-epon-0/0)#show ont config-capability <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show ont config-capability.It can check whether the ability is matched according to compare config-capability with capability.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【 Example 】

Example 1: Show config-capability of ont 3 in pon 1.

```
OLT(config-interface-epon-0/0)#show ont config-capability 1 3
-----
Frame/Slot:0/0
Port:1
ONU-ID:3
Number of ETH ports:adaptive
Number of POTS ports:adaptive
Number of CATV ports:adaptive
-----
OLT(config-interface-epon-0/0)#
```

23.3.19. Show ONU Optital Power Information

Command	OLT(config-interface-epon-0/0)#show ont optical-info <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show optical info of ont in pon port.Generally,it is used for routine maintenance and troubleshooting of ont,it can show optical info of ont to check whether the optical module is in normal.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【 Example 】

Example 1: Show optical info of ont 3 in pon 3.

```
OLT(config-interface-epon-0/0)#show ont optical-info 1 3
```



```

-----
Frame/Slot:0/0
Port:1
ONU-ID:3
ONU-MAC:E0:67:B3:31:85:8A
Voltage(V):3.34
Tx optical power(dBm):1.72
Rx optical power(dBm):-3.73
Laser bias current(mA):18.20
Temperature(C):45.07
-----

OLT(config-interface-epon-0/0)#
    
```

23.3.20. Show ONU Firmware Version

Command	OLT(config-interface-epon-0/0)# show ont version <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show ont version info,it can show software,hardware,vendor and etc info of ont.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【Example】

Example 1: Show version info of ont 3 in pon 1.

```

OLT(config-interface-epon-0/0)#show ont version 1 3
-----
Frame/Slot:0/0
Port:1
ONU-ID:3
Vendor-ID:PON
OUI Version:CTC3.0
ONU model:572R(0x35373252)
Extended model:GT832T_R
ONU mac address:E0:67:B3:31:85:8A
ONU hardware version:V1.2
ONU software version:V2.1.5.b3
ONU chipset vendor ID:RL
ONU chipset model:9603
ONU chipset revision:01
ONU chipset version/date:00.00.07
    
```



```
ONU firmware version:0x56322e312e352e623320202d
-----
```

23.3.21. Show ONU SNMP Config parameters

Command	OLT(config-interface-epon-0/0)# show ont snmp-config <i>port-id</i> <i>onu-id</i>
View	epon view
Description	This command is used for show ONU SNMP config parameters.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64

【Example】

Example1: Show PON9 ONU4 SNMPconfig parameters.

```
OLT(config-interface-epon-0/0)# show ont snmp-config 9 4
-----
Frame/Slot      : 0/0
Port            : 9
ONT-ID          : 4
Version         : v2c
Read group name : public
Write group name: private
Destination IP  : 192.168.1.123
Snmpport       : 161
Trap port       : 162
SNMP body name  :
-----
OLT(config-interface-epon-0/0)#
```

23.3.22. Show Basic Information about all ONUs on the pon port

Command	OLT(config-interface-epon-0/0)# show ont basic-info <i>port-id</i> all
View	Epon view
Description	This command is used for show basic informations about all ONUs on the pon port, It can query the ONU number, MAC address, type, ranging distance, startup time, and model number.
<i>port-id</i>	Pon port id,range for 1-16

【Example】

Example1: Show all ONUs basic information under pon 9

```

OLT(config-interface-epon-0/0)# show ont basic-info 9 all
-----
  F/S  P  ONT MAC              Type  Distance  Up           Extended
      ID              (m)      Time        Model
-----
  0/0  9  1  E0:67:B3:3B:07:32 --
  0/0  9  2  E0:67:B3:00:00:01 --
  0/0  9  3  00:12:D6:6F:7D:0A --
  0/0  9  4  E0:FA:07:F5:03:FD  HGU    24          0:01:17:23
FD600_111GW_HR630
-----
  Total: 4, online 1

OLT(config-interface-epon-0/0)#
    
```

23.3.23. Show the ONU binding Rate Limit Template Information

Command	OLT(config-interface-epon-0/0)# <i>show ont service-sla port-id ont-id</i>
View	Epon view
Description	This command is used for show the ONU binding the rate limit template information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show the PON9 ONU4 binding the rate limit template information.

```

OLT(config-interface-epon-0/0)# show ont service-sla 9 4
-----
  Frame/Slot      : 0/0
  Port            : 9
  ONT-ID          : 4
  Profile-ID      : 5
  Profile-name    : sla_5
-----
  Cycle length (TQ)                : 25000
  Number of services                : 1
  Fixed packet size of service 1 (Bytes) : 1500
  Fixed bandwidth of service 1 (kbps)   : 124416
  Guaranteed bandwidth of service 1 (kbps) : 299776
    
```



```
Best effort bandwidth of service 1 (kbps)      : 399872
WRR weight of service 1                       : 0
-----
OLT(config-interface-epon-0/0)#
```

23.3.24. Show the ONU speed limit template information

Command	OLT(config-interface-epon-0/0)# show ont sla port-id onu-id upstream downstream
View	Epon view
Description	This command is used for show the ONU speed limit template information.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show the PON9 ONU4 upstream speed limit template information.

```
OLT(config-interface-epon-0/0)# show ont sla 9 4 upstream
-----
Frame/Slot      : 0/0
Port            : 9
ONT-ID         : 4
-----
Line profile ID   : 0
Line profile Name : lineprofile_0
-----
DBA profile ID   : 0
DBA profile Name : lineprofile_0
-----
Fix(kbps)      Assure(kbps)  Max(kbps)
-----
0              0              1000000
-----
OLT(config-interface-epon-0/0)#
```

23.3.25. Show the Reason for the Offline of all ONUs under the PON

Port



Command	OLT(config-interface-epon-0/0)# show ont offline-list port-id all
View	Epon view
Description	This command is used for show the reason for the offline of all ONUs under the PON port.
<i>port-id</i>	Pon port id,range for 1-16

【Example】

Example 1: Show the reason for the offline of the PON1.

```

OLT(config-interface-epon-0/0)# show ont offline-list 1 all
The current time   : 2000-01-04 07:03:55
-----
Ont  id : 1  Mac : E0:67:B3:33:A7:88
Seq  Up Time           Down Time           Down Reason
-----
Ont  id : 2  Mac : E0:67:B3:1E:F3:D1
Seq  Up Time           Down Time           Down Reason
1    2000-01-04 06:35:01  2000-01-04 06:49:02  losi
2    2000-01-04 04:18:44  2000-01-04 05:48:35  dying-gasp
-----
OLT(config-interface-epon-0/0)#
    
```

23.3.26. Show the Reason of ONU Offline under the PON Port

Command	OLT(config-interface-epon-0/0)# show ont up-down-log port-id ont-id
View	Epon View
Description	This command is used for show the reason of ONU offline under the pon port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show PON 7 ONU1 the reason of offline.

```

OLT(config-interface-epon-0/0)# show ont up-down-log 7 1
The current time   : 2000-01-03 06:36:18
-----
Seq  Up Time           Down Time           Down Reason
1    2000-01-03 06:34:10
    
```



```
2    2000-01-03 05:30:06  2000-01-03 06:33:18  dying-gasp
OLT(config-interface-epon-0/0)#
```

23.3.27. Delete ONU Encrypt Feature

Command	OLT(config-interface-epon-0/0)# no ont encrypt <i>port-id ont-id</i>
View	epon view
Description	This command is used for delete ONU encrypt feature.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example1: Delete PON 7 ONU1 encrypt feature.

```
OLT(config-interface-epon-0/0)# no ont encrypt 7 1
Restore to the profile configuration successfully

OLT(config-interface-epon-0/0)#
```

23.3.28. Delete ONU FEC Feature

Command	OLT(config-interface-epon-0/0)# no ont fec <i>port-id ont-id</i>
View	epon view
Description	This command is used for delete the FEC (Forward Error Correction) function of the specified ONU under the pon port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example1: Delete PON7 ONU1 FEC feature

```
OLT(config-interface-epon-0/0)# no ont fec 7 1
Restore to the profile configuration successfully

OLT(config-interface-epon-0/0)#
```

23.3.29. Delete ONU Remote Management IP config

Command	OLT(config-interface-epon-0/0)# no ont ipconfig <i>port-id ont-id</i>
View	epon view
Description	This command is used for delete the remote management IP of the specified ONU under the pon port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Delete PON7 ONU1 remote management ip config

```
OLT(config-interface-epon-0/0)# no ont ipconfig 7 1

OLT(config-interface-epon-0/0)#
```

23.3.30. Delete SLA Template Bount to ONU

Command	OLT(config-interface-epon-0/0)# no ont service-sla <i>port-id ont-id</i>
View	epon view
Description	This command is used for delete the sla template bound to the ONU.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example1: Delete PON7 ONU1 sla template bound to ONU.

```
OLT(config-interface-epon-0/0)# no ont service-sla 7 1

OLT(config-interface-epon-0/0)#
```

23.3.31. Delete ONU Rate Limit Function Config

Command	OLT(config-interface-epon-0/0)# no ont sla <i>port-id ont-id upstream downstream</i>
View	epon view
Description	This command is used for delete the ONU rate limit function config.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64



【Example】

Example1: Delete PON7 ONU1 downstream rate limit config.

```
OLT(config-interface-epon-0/0)# no ont sla 7 1 downstream

OLT(config-interface-epon-0/0)#
```

23.3.32. Delete ONU SNMP Function Config

Command	OLT(config-interface-epon-0/0)# no ont snmp-config port-id onu-id
View	epon view
Description	This command is used for delete the ONU snmp function config.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example1: Delete PON7 ONU1 snmp config.

```
OLT(config-interface-epon-0/0)# no ont snmp-config 7 1

OLT(config-interface-epon-0/0)#
```

23.4. ONU Port VLAN Configuration(Non-template Mode)

23.4.1. ONU Port Native-vlan(access) Configs

Command	OLT(config-interface-epon-0/0)# ont port native-vlan <port-id> <onu-id> eth <eth-port-id> vlan <vlan-id> priority <priority>
View	EPON interface view
Description	This command is used for set native vlan of ont port.Caution:a corresponding vlan must be set in ont port firstly by the command of“ont port vlan”.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<vlan-id>	Vlan id,range for 1-4094
<priority>	Priority,range for 0-7

【 Example 】

Example1:Set the native vlan of ont 1 eth 1 in pon 1 as 100,and set its priority as 3.

```
OLT(config-interface-epon-0/0)#ont port native-vlan 1 1 eth 1 vlan 100 priority 3

OLT(config-interface-epon-0/0)#
```

23.4.2. ONU Port Vlan Config

Command	OLT(config-interface-epon-0/0)#ont port vlan <port-id> <onu-id> eth <eth-port-id> <vlan-id> priority <priority>
View	EPON interface view
Description	This command is used for set ont port vlan.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<vlan-id>	Vlan id,range for 1-4094
<priority>	Priority,range for 0-7

【 Example 】

Example 1: Set the port vlan of ont 1 eth 1 in pon 1 as 100,and set its priority as 5.

```
OLT(config-interface-epon-0/0)#ont port vlan 1 1 eth 1 100 5

OLT(config-interface-epon-0/0)#
```

23.4.3. ONU Port Translation Mode VLAN Config

Command	OLT(config-interface-epon-0/0)#ont port vlan <port-id> <onu-id> eth <eth-port-id> translation <service-vlan-id> <priority> <customer-vlan-id> <priority>
View	EPON interface view
Description	This command is used for set vlan translation of ont port,it translates the service vlan to customer vlan in downstream direction.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64



<eth-port-id>	eth port id,range for 1-24
<service-vlan-id >	service vlan id,range for 1-4094
<customer-vlan-id>	Customer vlan id,range for 1-4094
<priority>	Priority,range for 0-7

【Example】

Example 1: Set vlan mode of ont 1 eth 1 in pon 1 as translation and translate its service vlan 12 to customer vlan 13.

```
OLT(config-interface-epon-0/0)#ont port vlan 1 1 eth 1 translation 12 user-vlan 13

OLT(config-interface-epon-0/0)#
```

23.4.4. ONU Port VLAN Pool Function Config

Command	OLT(config-interface-epon-0/0)#ont port vlan <port-id> <onu-id> eth <eth-port-id> vlan-pool <vlan-pool-id>
View	EPON interface view
Description	This command is used for set vlan-pool of ont port.it needs to create a vlan-pool in config view firstly.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<vlan-pool-id>	Vlan-pool id,range for 1-128

【Example】

Example 1: Bind vlan-pool 2 to ont 1 eth 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont port vlan 1 1 eth 1 vlan-pool 2

OLT(config-interface-epon-0/0)#
```

23.4.5. ONU Port Transparent Mode VLAN Config

Command	OLT(config-interface-epon-0/0)#ont port vlan <port-id> <onu-id> eth <eth-port-id> transparent
----------------	---



View	EPON interface view
Description	This command is used for set vlan transparent mode of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24

【 Example 】

Example 1: Set vlan mode of ont 1 eth 1 in pon 1 as transparent.

```
OLT(config-interface-epon-0/0)#ont port vlan 1 1 eth 1 transparent
```

```
OLT(config-interface-epon-0/0)#
```

23.4.6. Show ONU Port VLAN Configuration

Command	OLT(config-interface-epon-0/0)# show ont port vlan <port-id> <onu-id> eth <onu-port id>
View	EPON interface view
Description	This command is used for show specified eth port vlan of ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<onu-port id>	Eth port id,range for 1-24

【 Example 】

Example 1: Show eth 1 port vlan of ont 2 in pon 1.

```
OLT(config-interface-epon-0/0)#show ont port vlan 1 2 eth 1
```

```
-----  
Frame/Slot:0/0
```

```
Port:1
```

```
ONU ID:2
```

```
Port ID:1  
-----
```

```
Service Profile ID:0
```

```
Service Profile name:srvprofile_0  
-----
```

```
Service-type Index N-VLAN N-PRI S-VLAN S-PRI C-VLAN C-PRI  
-----
```

```
Transparent-----
```

```
-----
OLT(config-interface-epon-0/0)#
```

23.4.7. Show Real-time Information about the ONU Ethernet Port

Command	OLT(config-interface-epon-0/0)# show ont port vlan remote <port-id> <ONU-id> eth <ONU-port id>
View	Epon view
Description	This command is used for show real-time information about the onu ethernet port.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<ONU-port id>	Eth port id,range for 1-24

【Example】

Example 1: Show real-time information about the PON1 ONU3 ETH1.

```
OLT(config-interface-epon-0/0)# show ont port vlan remote 1 3 eth 1
-----
Frame/Slot          : 0/0
Port                 : 1
ONT ID               : 3
Port ID              : 1
-----
VLAN type            : Transparent
-----
OLT(config-interface-epon-0/0)#
```

23.4.8. Delete VLAN that has been Added to an ONU Port

Command	OLT(config-interface-epon-0/0)# no ont port vlan <port-id> <onu-id> eth <eth-port-id> <vlan-id> vlan-pool
View	Epon view
Description	This command is used for delete vlan that has been added to an ONU port.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64



<eth-port-id>	Eth port id,range for 1-24
<vlan-id>	Vlan id, range for 1-4094

【Example】

Example 1: Delete the vlan that has been added to the PON7 ONU1 ETH1.

```
OLT(config-interface-epon-0/0)# no ont port vlan 7 1 eth 1 10

OLT(config-interface-epon-0/0)#
```

23.5. ONU Port Management

23.5.1. Enable or Disable ONU Port

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> operational-state {on/off}
View	EPON interface view
Description	This command is used for enable or disable ont port.ont port can communicate normally when it is in enabling state,else it can't.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
{on/off}	On:enable eth port Off:disable eth port

【Example】

Example 1: Disable ont 1 eth 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 operational-state off

OLT(config-interface-epon-0/0)#
```

23.5.2. ONU Port Isolate Function Config

Command	OLT(config-interface-epon-0/0)#ont port-isolate <port-id> <onu-id> {enable disable}
View	EPON interface view

Description	This command is used for enable or disable ont port isolation function.If it is enabled,port to port of ont can not communicate,else they can communicate with each other.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
{enable disable } }	Enable:enable ont port isolation function Disable:disable ont port isolation function

【 Example 】

Example 1: enable ont 1 port isolation function in pon 1.

```
OLT(config-interface-epon-0/0)#ont port-isolate 1 1 enable

OLT(config-interface-epon-0/0)#
```

23.5.3. ONU PON Port Performance Statistics Config

Command	OLT(config-interface-epon-0/0)# ont statistics port-id ((onu-id eth eth-port-id) (all eth all)) enable/disable period period
View	EPON interface view
Description	This command is used for set performance statistics of ont’s pon port and set its statistic period.
port-id	Pon port id,range for 1-16
onu-id	Ont id,range for 1-64
eth-port-id	Eth id of ONU , range for 1-24
enable/disable	Enable:enable ont’s pon port performance statistic function Disable:disable ont’s pon port performance statistic function
period	The period of performance statistic,range for 1-864000,unit is second.

【 Example 】

Example 1: Enable the performance statistic of ont1’s pon port in pon 1 and set its period as 100s.

```
OLT(config-interface-epon-0/0)#ont statistics 1 1 pon enable period 100

OLT(config-interface-epon-0/0)#
```

23.5.4. ONU ETH Port Performance Statistics Config



Command	OLT(config-interface-epon-0/0)# ont statistics port-id ((onu-id eth eth-port-id) (all eth all)) enable/disable period period
View	EPON interface view
Description	This command is used for set performance statistics of ont's eth port and set its statistic period.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64
<i>eth-port-id</i>	eth port id,range for 1-24
enable disable	Enable:enable ont's eth port performance statistic function Disable:disable ont's eth port performance statistic function
<i>period</i>	The period of performance statistic,range for 1-864000,unit is second.

【Example】

Example 1: Enable the performance statistic of ont1's eth 1 in pon 1 and set its period as 100s.

```
OLT(config-interface-epon-0/0)#ont statistics 1 1 eth 1 enable period 100
OLT(config-interface-epon-0/0)#
```

23.5.5. ONU CATV Port Enable or Disable

Command	OLT(config-interface-epon-0/0)# ont port attribute <port-id> <onu-id> catv <catv-port-id> operational-status {on/off}
View	EPON interface view
Description	This command is used for enable or disable CATV port of ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<catv-port-id>	CATV port id,value is 1
{on/off}	On:enable CATV port Off:disable CATV port

【Example】

Example1:Enable CATV port of ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 catv 1 operational-state on
```



```
OLT(config-interface-epon-0/0)#
```

23.5.6. ONU Port Auto-negotiation Function Config

Command	OLT(config-interface-epon-0/0)# ont port attribute <port-id> <onu-id> eth <eth-port-id> auto-neg {restart}
View	EPON interface view
Description	This command is used to
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
restart	Optional parameter,it is used for reset the autonegotiation function

【 Example 】

Example 1: Reset the autonegotiation function of ont 1 eth 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 auto-neg restart

OLT(config-interface-epon-0/0)#
```

23.5.7. ONU Port Downstream Rate Limit Config

Command	OLT(config-interface-epon-0/0)# ont port attribute <port-id> <onu-id> eth <eth-port-id> ds-policing {unconcern cir <cir-bandwidth> pir <pir-bandwidth>}
View	EPON interface view
Description	This command is used for set downstream rate limitation of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
Unconcern	It means that there is no limitation in this eth port.
<cir-bandwidth >	Committed Information Rate,range for 64-1024000,unit is kbps
<pir-bandwidth >	Peak Information Rate,range for 64-1024000,unit is kbps

【Example】

Example 1 : Set downstream rate limitation of ont 1 eth 1 in pon 1,cir is 10000kpbs,pir is 100000kpbs.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 ds-policing cir 10000 pir 100000

OLT(config-interface-epon-0/0)#
```

23.5.8. ONU Port Upstream Rate Limit Config

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> up-policing {unconcern cir <cir-bandwidth> cbs <cbs> ebs <ebs>}
View	EPON interface view
Description	This command is used for set upstream rate limitation of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
Unconcern	It means that there is no limitation in this eth port.
<cir-bandwidth >	Committed Information Rate,range for 64-1024000,unit is kbps
<cbs>	Committed Burst Size,range for 64-1024000,unit is kbps
<ebs>	Excess Burst Size,range for 2000-1024000,unit is kbps

【Example】

Example 1 : Set upstream rate limitation of ont 1 eth 1 in pon 1,cir is 10000kpbs,cbs is 1234kpbs,ebs is 2345kpbs.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 up-policing cir 10000 cbs 1234 ebs 2345

OLT(config-interface-epon-0/0)#
```

23.5.9. Enable or Disable ONU Port Flow Control Function

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> flow-control {on/off}
----------------	--



View	EPON interface view
Description	This command is used for enable or disable flow control of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
{on/off}	On:enable flow control of ont port Off:disable flow control of ont port

【 Example 】

Example 1: enable flow control of ont 1 eth 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 flow-control on

OLT(config-interface-epon-0/0)#
```

23.5.10. Clear ONU Port Learned MAC

Command	OLT(config-interface-epon-0/0)# ont port learned-mac-clear <port-id> <onu-id> eth <eth-port-id>
View	EPON interface view
Description	This command is used for clear the learned mac of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24

【 Example 】

Example 1: Clear the learned mac of ont 1 eth 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont port learned-mac-clear 1 1 eth 1

OLT(config-interface-epon-0/0)#
```

23.5.11. Clear Performance Statistics of the ONU Port

Command	OLT(config-interface-epon-0/0)# reset statistics ont-pon <i>port-id</i> <i>ont-id ont-eth port-id ont-id eth ont-port-id</i>
View	epon view



Description	This command is used for clear performance statistics of onu port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>ont-port-id</i>	eth port id,range for 1-24

【Example】

Example 1: Clear performance statistics of PON 9 ONU 4.

```
OLT(config-interface-epon-0/0)# reset statistics ont-pon 9 4

OLT(config-interface-epon-0/0)#
```

23.5.12. ONU Port MAC Count Limit Function Config

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> max-mac-count {<max-mac-count> no-learning unlimited}
View	EPON interface view
Description	This command is used for limit the learned mac count of ont port.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
{<max-mac-count> no-learning unlimited}	Max-mac-count:range for 1-254 No-learning:no learning mac address Unlimited:unlimit the count of learned mac address

【Example】

Example 1: Limit the learned mac address count of ont 1 eth 1 in pon 1 as 100 entries.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 max-mac-count 100

OLT(config-interface-epon-0/0)#
```

23.5.13. ONU Port Multicast Group Number Limit Config

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> multicast-max-group-num <number>
View	EPON interface view



Description	This command is used for limit the multicast group number of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<number>	Max multicast group number,range for 0-255

【Example】

Example 1: Limit the multicast group number of ont 1 eth 1 in pon 1 as 5 entries.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 multicast-max-group-num 5

OLT(config-interface-epon-0/0)#
```

23.5.14. ONU Port Multicast VLAN Process Mode Config

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> multicast-tagstrip {tag untag translation} {<service-vlan><customer-vlan>}
View	EPON interface view
Description	This command is used for set the multicast vlan mode of ont eth port.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
{tag untag translation}	Tag:no peeling off multicast VLAN tag Untag:peel off multicast VLAN tag Translation:translates the multicast vlan
<service-vlan>	Server-side VLAN,range for 1-4094
<customer-vlan >	Customer VLAN,range for 1-4094

【Example】

Example 1: Set the multicast vlan mode of ont 1 eth 1 in pon 1 as tag.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 multicast-tagstrip untag

OLT(config-interface-epon-0/0)#
```



Example 2: Set the multicast vlan mode of ont 1 eth 1 in pon 1 as translation, translate the server-side vlan 10 to customer vlan 11.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 multicast-tagstrip translation
10 11

OLT(config-interface-epon-0/0)#
```

23.5.15. ONU Port Speed and Duplex Mode Config

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> speed <speed> dulepx {full/half}
View	EPON interface view
Description	This command is used for set the speed and duplex mode of ont port.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<speed>	10: 10Mb/s 100: 100Mb/s 1000: 1000Mb/s
full/half	Full:full duplex Half:half duplex

【Example】

Example 1: Set the speed of ont 1 eth 1 in pon 1 as 1000Mbps,and set its duplex mode as full.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 speed 1000 dulepx full

OLT(config-interface-epon-0/0)#
```

23.5.16. ONU Port Storm-ctrl Function Config

Command	OLT(config-interface-epon-0/0)#ont port attribute <port-id> <onu-id> eth <eth-port-id> xstorm-ctrl admin {disable/enable} type {all bcmc bcuc broadcast mcuc multicast unicast} rate<rate>
View	EPON interface view
Description	This command is used for set strom-ctrl function of ont port and



	set its rate limitation
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
{disable enable}	Disable:disable storm-ctrl function Enable:enable storm-ctrl function
all bcmc bcuc broadcast mcuc multicast unicast	All:all of the broadcast message,multicast message,and unicast message Bcmc:broadcast message and multicast message Bcuc:broadcast message and unicast message Broadcast:broadcast message Mcuc:multicast message and unicast message Multicast:multicast message Unicast:unknown unicast message
<rate>	Rate,range for 8-16777215,unit is kbps

【 Example 】

Example 1 : Enable the storm-ctrl function of ont 1 eth 1 in pon 1,and set its unknown unicast rate limitation as 5000kbps.

```
OLT(config-interface-epon-0/0)#ont port attribute 1 1 eth 1 storm-ctrl admin enable type unicast rate 5000

OLT(config-interface-epon-0/0)#
```

23.5.17. Enable or Disable ONU Port Loop Detect Function

Command	OLT(config-interface-epon-0/0)#ont ring check <port-id> <onu-id> {enable disable}
View	EPON interface view
Description	This command is used for enable or disable the ring check of specified ont in pon port.After enabling this function,the olt will alarm if there is a ring in ont.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
{enable disable } }	Enable Disable

【 Example 】

Example 1: Enable ring check of ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont ring check 1 1 enable

OLT(config-interface-epon-0/0)#
```

23.5.18. Enable or Disable ONU Port Loop Detected

Auto-shutdown Function

Command	OLT(config-interface-epon-0/0)#ont ring check <port-id> <onu-id> auto-shutdown {enable disable}
View	EPON interface view
Description	This command is used for enable or disable auto-shutdown eth port when ring occurs in ont.After executing this command,if ont has a ring,ont will shutdown the port to prevent the ring from affecting the upper network.the default is“enable”
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
{enable disable }	Enable Disable

【 Example 】

Example 1: Enable auto-shutdown eth port of ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont ring check 1 1 auto-shutdown enable

OLT(config-interface-epon-0/0)#
```

23.5.19. ONU Port Upstream classification/mapping/priority-mark

Rule Config

Command	OLT(config-interface-epon-0/0)#ont port classification <port-id> <onu-id > eth <eth-port-id> acl <acl-id> rule <rule-id> { precedence <precedence> queue-mapped <queue-id> priority-mark <priority> no-priority-mark }
View	EPON interface view
Description	This command is used for set upstream

	classification/mapping/priority-mark rule of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<acl-id>	Acl id,range for 9000-9499
<rule-id>	Rule id,range for 1-8
<precedence>	Priority,range for 0-255
<queue-id>	Queue id,range for 0-7
<priority> no-priority-mark	<priority>:priority mark,range for 0-7 no-priority-mark

【 Example 】

Example 1: Map the ont 1 eth 1 in pon 1 to acl 9000 and rule 1.

```
OLT(config-interface-epon-0/0)#ont port classification 1 1 eth 1 acl 9000 rule 1

OLT(config-interface-epon-0/0)#
```

23.5.20. Show ONU Port Performance State

Command	OLT(config-interface-epon-0/0)# show ont statistics <port-id> <onu-id> eth <eth-port-id> status
View	EPON interface view
Description	This command is used for show performance statistics of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24

【 Example 】

Example 1: Show performance statistics of ont 1 eth 1 in pon 1.

```
OLT(config-interface-epon-0/0)#show ont statistics 1 1 eth 1 status
-----
S/P:0/1
ONU ID:1
Port ID:UNI1
```



```

Statistics status:Disable
Statistics period:0
-----
OLT(config-interface-epon-0/0)#
    
```

23.5.21. Show ONU Port Performance Statistics

Command	OLT(config-interface-epon-0/0)# show statistics <ont-pon port-id onu-id ont-eth port-id onu-id eth eth-id > current history
View	epon view
Description	This command is used for show ONU port performance statistics.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64
<i>eth-id</i>	eth port id,range for 1-24

【Example】

Example 1: Show PON11 ONU6 pon port performance statistics currently.

```

OLT(config-interface-epon-0/0)# show statistics ont-pon 11 6 current
Downstream DropEvents           : 0
Downstream Octets                : 0
Downstream Frames                : 0
Downstream Broadcast Frames      : 0
Downstream Multicast Frames      : 0
Downstream CRC errored frames    : 0
Downstream Undersize Frames      : 0
Downstream Oversize Frames       : 0
Downstream Fragments             : 0
Downstream Jabbers               : 0
Downstream Frames 64 octets      : 0
Downstream Frames 65 to 127 octets : 0
Downstream Frames 128 to 255 octets : 0
Downstream Frames 256 to 511 octets : 0
Downstream Frames 512 to 1023 octets : 0
Downstream Frames 1024 to 1518 octets : 0
Downstream Discard Frames        : 0
Downstream error Frames          : 0

Upstream DropEvents              : 0
Upstream Octets                   : 0
    
```

```

Upstream Frames : 0
Upstream Broadcast Frames : 0
Upstream Multicast Frames : 0
Upstream CRC errored frames : 0
Upstream Undersize Frames : 0
Upstream Oversize Frames : 0
Upstream Fragments : 0
Upstream Jabbers : 0
Upstream Frames 64 octets : 0
Upstream Frames 65 to 127 octets : 0
Upstream Frames 128 to 255 octets : 0
Upstream Frames 256 to 511 octets : 0
Upstream Frames 512 to 1023 octets : 0
Upstream Frames 1024 to 1518 octets : 0
Upstream Discard Frames : 0
Upstream error Frames : 0

Status Change times : 0

OLT(config-interface-epon-0/0)#
    
```

23.5.22. Show the service flow classification/mapping/priority marking information of the ONU port.

Command	OLT(config-interface-epon-0/0)# show ont port classification <i>port-id ont-id eth eth-port-id</i> all
View	epon view
Description	This command is used for show the service flow classification/mapping/priority marking information of the ONU port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>eth-port-id</i>	eth port id,range for 1-24

【Example】

Example 1: Show PON1 ONU3 eth1 classification rule.

```

OLT(config-interface-epon-0/0)# show ont port classification 1 3 eth 1
ERROR: There is no ACL bound to current ONT port.

OLT(config-interface-epon-0/0)#
    
```



23.5.23. Show the MAC address learned on the ONU port

Command	OLT(config-interface-epon-0/0)# show ont port learned-mac port-id ont-id eth eth-port-id
View	epon view
Description	This command is used for show the mac address learned on the ONU port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>eth-port-id</i>	eth port id,range for 1-24

【Example】

Example 1: Show PON1 ONU3 eth1 learned mac address.

```
OLT(config-interface-epon-0/0)# show ont port learned-mac 1 3 eth 1
There is not any MAC address record!

OLT(config-interface-epon-0/0)#
```

23.5.24. Show the Policy Information of the ONU Ethernet Port

Command	OLT(config-interface-epon-0/0)# show ont port attribute <port-id> <onu-id> eth <eth-id> policing
View	epon view
Description	This command is used for show the policy information of the ONU Ethernet port.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-id>	eth port id,range for 1-24

【Example】

Example 1: Show PON9 ONU5 eth1 policy information.

```
OLT(config-interface-epon-0/0)# show ont port attribute 9 5 eth 1 policing
-----
Frame/Slot          : 0/0
Port                 : 9
ONT ID               : 5
```



```

Port ID                : 1
-----
UP policing            : un concern
-----
DN policing            : un concern
-----

OLT(config-interface-epon-0/0)#
    
```

23.5.25. Show the Storm Control Config of the ONU Ethernet Port

Command	OLT(config-interface-epon-0/0)# show ont storm-ctrl <port-id> <onu-id> eth <eth-id>
View	epon view
Description	This command is used for show the storm control config of the ONU ethernet port.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64
<eth-id>	eth port id,range for 1-24

【Example】

Example 1: Show PON1 ONU13 eth1 storm control config.

```

OLT(config-interface-epon-0/0)# show ont port storm-ctrl 1 3 eth 1
-----
Frame/Slot            : 0/0
Port                  : 1
ONT-ID                : 3
Port ID               : 1
Flow control switch  : disable
-----

OLT(config-interface-epon-0/0)#
    
```

23.5.26. Show ONU Port Attribute(Configuration)

Command	OLT(config-interface-epon-0/0)# show ont port attribute <port-id> <onu-id> eth all
View	EPON interface view
Description	This command is used for show ont port attribute

<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
all	All the eth port

【Example】

Example 1: Show all the eth port attribute of ont 3 in pon 3.

```

OLT(config-interface-epon-0/0)#show ont port attribute 3 3 eth all
-----
ONU ONU Auto-neg Speed Duplex Port Flow Mac
port(Mbps)switch control Limit
-----
3 1 Enable Auto Auto on off unlimited
3 2 Enable Auto Auto on off unlimited
3 3 Enable Auto Auto on off unlimited
3 4 Enable Auto Auto on off unlimited
3 5 Enable Auto Auto on off unlimited
3 6 Enable Auto Auto on off unlimited
3 7 Enable Auto Auto on off unlimited
3 8 Enable Auto Auto on off unlimited
-----

OLT(config-interface-epon-0/0)#
    
```

23.5.27. Show ONU CATV Port Status

Command	OLT(config-interface-epon-0/0)# show ont port state <port-id> <onu-id> {eth catv<onu-portid>}
View	EPON interface view
Description	This command is used for show state of ont’s eth port and catv port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<ONU-portid>	Port id of eth or catv

【Example】

Example 1: Show all eth port state of ont 2 in pon 1.

```

OLT(config-interface-epon-0/0)#show ont port state 1 2 eth all
-----
Port Type Port-switch Link Flow-cONUrol Auto-neg Max-MAC
    
```

```

-----
1 eth on on off enable unlimit
2 eth on off off enable unlimit
3 eth on off off enable unlimit
4 eth on off off enable unlimit
-----

OLT(config-interface-epon-0/0)#
    
```

23.5.28. Show ONU Port Learned MAC Address Information

Command	OLT(config-interface-epon-0/0)# show ont port learned-mac <port-id> <onu-id> eth <eth-id>
View	EPON interface view
Description	This command is used for show learned-mac address of ont port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
all	All the eth port

【Example】

Example 1: Show learned-mac address of ont3's all eth port in pon 3.

```

OLT(config-interface-epon-0/0)#show ont port learned-mac 1 5 eth 1
-----
Index MAC
-----
1 F0:DE:F1:62:C5:97
2 74:D0:2B:A1:F1:84
3 E0:67:B3:00:57:3E
4 5C:FF:35:0D:D8:C5
5 EC:6C:9F:05:49:79
6 20:6A:8A:54:6C:7D
-----

OLT(config-interface-epon)#
    
```

23.5.29. Show ONU PON Port Performance Statistics

Command	OLT(config-interface-epon-0/0)# show ont statistics <port-id> <onu-id> pon status
----------------	--



View	EPON interface view
Description	This command is used for show performance statistics of ont's pon port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【Example】

Example 1: Show performance statistics of ont 1's pon port in pon 1.

```
OLT(config-interface-epon-0/0)#show ont statistics 1 1 pon status
-----
S/P:0/1
ONU ID:1
Port ID:PON1
Statistics status:Disable
Statistics period:0
-----
OLT(config-interface-epon-0/0)#
```

23.5.30. Delete the Configured Bandwidth Rate Limit of ONU Port

Command	OLT(config-interface-epon-0/0)# no ont port attribute <port-id> <onu-id> eth <eth-port-id> up-policing ds-policing
View	epon view
Description	This command is used for delete the configured bandwidth rate limit of the ONU port.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24

【Example】

Example 1: Delete the upstream bandwidth rate limit of PON7 ONU1.

```
OLT(config-interface-epon-0/0)# no ont port attribute 7 1 eth 1 up-policing
Restore to the profile configuration successfully

OLT(config-interface-epon-0/0)#
```

23.5.31. Delete the Number of Learned MAC Addresses Restricted



by the ONU Port

Command	OLT(config-interface-epon-0/0)# no ont port attribute <port-id> <onu-id> eth <eth-port-id> max-mac-ount
View	Epon view
Description	This command is used for delete the number of learned MAC addresses restricted by the ONU port.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24

【Example】

Example 1: delete the number of learned MAC addresses restricted by PON7 ONU1.

```
OLT(config-interface-epon-0/0)# no ont port attribute 7 1 eth 1 max-mac-count
Restore to the profile configuration successfully

OLT(config-interface-epon-0/0)#
```

23.5.32. Delete the Maximum Number of Multicast Groups

Restricted by the ONU Port

Command	OLT(config-interface-epon-0/0)# no ont port attribute <port-id> <onu-id> eth <eth-port-id> multicast-max-group-num
View	epon view
Description	This command is used for delete the maximum number of multicast groups restricted by the ONU port.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24

【Example】

Example 1: Delete PON7 ONU1 ETH1 the maximum number of multicast groups restricted

```
OLT(config-interface-epon-0/0)# no ont port attribute 7 1 eth 1
multicast-max-group-num
Restore to the profile configuration successfully

OLT(config-interface-epon-0/0)#
```

23.5.33. Delete the Processing Mode of the Multicast Stream VLAN on the ONU Port

Command	OLT(config-interface-epon-0/0)# no ont port attribute <port-id> <onu-id> eth <eth-port-id> multicast-tagstrip translation <service-vlan>
View	epon view
Description	This command is used for delete the processing mode of the multicast stream VLAN on the ONU port.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<service-vlan>	Service VLAN, range for 1-4094

【Example】

Example 1: Delete PON7 ONU1 ETH1 the conversion mode of multicast stream VLAN100.

```
OLT(config-interface-epon-0/0)# no ont port attribute 7 1 eth 1 multicast-tagstrip translation 100

OLT(config-interface-epon-0/0)#
```

23.5.34. Delete the Rules of ONU Port for the Upstream Service Flow

Command	OLT(config-interface-epon-0/0)# no ont port classification <port-id> <onu-id> eth <eth-port-id> acl <acl-id> rule <rule-id>
View	epon view
Description	This command is used for delete the rules of the ONU port for the upstream service flow.
<port-id>	Pon port id,range for 1-16
< onu-id >	Ont id,range for 1-64
<eth-port-id>	eth port id,range for 1-24
<acl-id>	Acl id, range for 9000-9499
<rule-id>	Rule id, range for 1-8

【Example】

Example 1: Delete PON7 ONU1 ETH1 ACL9000 rule1.

```
OLT(config-interface-epon-0/0)# no ont port classification 7 1 eth 1 acl 9000 rule 1
ERROR: The acl has not been installed before

OLT(config-interface-epon-0/0)#
```

23.6. ONU WIFI Config

23.6.1. Enable or Disable WIFI

Command	OLT(config-interface-epon-0/0)# ont wifi port-id ont-id admin enable disable
View	epon view
Description	This command is used for enable/disable onu wifi.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Enable PON 7 ONU 2 wifi

```
OLT(config-interface-epon-0/0)# ont wifi 7 2 admin enable

OLT(config-interface-epon-0/0)#
```

23.6.2. Config Maximum Number of Wireless SSID User accesses

Command	OLT(config-interface-epon-0/0)# ont wifi port-id ont-id ssid ontwifi-ssid-id max-user-count max-access-number
View	epon view
Description	This command is used for config ONU WIFI the maximum number of wireless ssid user accesses.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>ontwifi-ssid-id</i>	Ssid index, range for 1-4
<i>max-access-number</i>	Maximum number of user accesses, range for 0-128,default as 10.

【Example】

Example 1: Config PON 7 ONU 2 maximum user accesses of wireless ssid is 100

```
OLT(config-interface-epon-0/0)# ont wifi 7 2 ssid 1 max-user-count 100
```

```
OLT(config-interface-epon-0/0)#
```

23.6.3. Config Wireless SSID

Command	OLT(config-interface-epon-0/0)# ont wifi <i>port-id ont-id ssid ontwifi-ssid-id admin (enable broadcast-admin enable disable SSID-Name (none wep wpa wpa2 wpa_wpa2 ENCRYPTKEY) disable)</i>
View	epon view
Description	This command is used for config the ONU WIFI wireless ssid parameter.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>ontwifi-ssid-id</i>	Ssid index, range for 1-4
<i>SSID-Name</i>	Ssid name, range for 1-32
none wep wpa wpa2 wpa_wpa2	Wireless encryption method
<i>ENCRYPTKEY</i>	Encryption key, supporting 1-64 characters length.

【Example】

Example 1: Set the maximum number of wifi ssid users with PON7 port ONU id 2 to 100.

```
OLT(config-interface-epon-0/0)# ont wifi 7 2 ssid 1 admin enable broadcast-admin enable HGW-1211C8 wpa 123
```

```
OLT(config-interface-epon-0/0)#
```

23.6.4. Config WIFI Properties

Command	OLT(config-interface-epon-0/0)# ont wifi attribute <i>port-id ont-id channel-id wifi-channel-id wlan-standard (802.11b 802.11g 802.11n 802.11b/g 802.11b/g/n) channel-bandwidth (forty-minus forty-plus twenty) txpower-mode (energy noclip standard)</i>
View	epon view
Description	This command is used for config wifi properties, such as wifi



	channel,bandwidth,etc.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>wifi-channel-id</i>	Config wireless network working channel, range for 0-13.
forty-minus forty-plus twenty	The channel width occupied when setting up wireless data transmission: Twenty: 20MHz, channel selection 0-13 Forty-minus: 40MHz-, channel selection 1-9 Forty-plus: 40MHz+, channel selection 5-12
energy noclip standard	Set the transmit power: energy is energy saving; noclip is through the wall (maximum power); standard is standard (default).

【Example】

Example 1: Set the wifi attribute of the PON9 port ONU id to 4.

```
OLT(config-interface-epon-0/0)# ont wifi attribute 9 4 channel-id 6 wlan-standard 802.11n channel-bandwidth twenty txpower-mode standard
```

```
OLT(config-interface-epon-0/0)#
```

23.6.5. WIFI Factory Reset

Command	OLT(config-interface-epon-0/0)# ont wifi default-setting <i>port-id ont-id</i>
View	epon view
Description	This command is used for WIFI factory reset.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Config pon 9 onu 4 wifi to factory reset.

```
OLT(config-interface-epon-0/0)# ont wifi default-setting 9 4
```

```
OLT(config-interface-epon-0/0)#
```

23.6.6. Show Wireless SSID Information

Command	OLT(config-interface-epon-0/0)# show ont wifi <i>port-id ont-id ssid all ssid-index</i>
----------------	--



View	epon view
Description	This command is used for show wireless ssid information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
all ssid-index	All: all SSID; Ssid-index: ssid index, range for 1-4

【Example】

Example 1: Show PON9 ONU 4 WIFI ssid information

```

OLT(config-interface-epon-0/0)# show ont wifi 11 1 ssid all
-----
 Ssid Name           Admin   BcastAdmin  EncryptMode  EncryptKey
MaxUsers
-----
 1    testwifi         enable   enable      wpa2         12345678
10
 2      AP-1111          disable  disable     enable       none
10
 3      AP-2222          disable  disable     enable       none
10
 4      AP-3333          disable  disable     enable       none
10
-----
OLT(config-interface-epon-0/0)#
    
```

23.6.7. Show WIFI Information

Command	OLT(config-interface-epon-0/0)# show ont wifi info port-id ont-id
View	epon view
Description	This command is used for show ONU wifi information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show PON9 ONU 4 wifi information.

```

OLT(config-interface-epon-0/0)# show ont wifi info 9 4
-----
Frame/Slot      : 0/0
Port            : 9
    
```

```

ONT-ID          : 4
Wifi state      : enable
Channel ID      : 0
Wlan Standard   : 802.11b/g/n
Channel Bandwidth : 40MHz+
TxPower Mode    : noclip
-----
OLT(config-interface-epon-0/0)#
    
```

23.6.8. Show WIFI Version

Command	OLT(config-interface-epon-0/0)# show ont wifi version port-id ont-id
View	epon view
Description	This command is used for show wifi version information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show PON9 ONU 4 wifi version

```

OLT(config-interface-epon-0/0)# show ont wifi version 9 4
-----
Frame/Slot      : 0/0
Port            : 9
ONT-ID          : 4
Wifi hardware Ver : V1.0.0
Wifi software Ver : V2.1.11
-----
OLT(config-interface-epon-0/0)#
    
```

23.7. ONU IGMP Function Configuration(Non-template Mode)

23.7.1. ONU IGMP Mode Config

Command	OLT(config-interface-epon-0/0)# ont multicast-mode <port-id> <onu-id> <mode>
View	EPON interface view



Description	This command is used for set multicast mode of ont
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<mode>	Ctc:controllable multicast mode transparent igmp-snooping

【Example】

Example 1: Set the multicast mode of ont 4 in pon 1 as snooping mode.

```
OLT(config-interface-epon-0/0)#ont multicast-mode 1 4 igmp-snooping

OLT(config-interface-epon-0/0)#
```

23.7.2. ONU Ffast-leave Function Config

Command	OLT(config-interface-epon-0/0)#ont multicast fast-leave <port-id> <onu-id> {enable disable}
View	EPON interface view
Description	This command is used for set ont multicast fast-leave.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
{enable disable } }	Enable:enable multicast fast-leave Disable:disable multicast fast-leave

【Example】

Example 1: Enable multicast fast-leave in pon 1 onu 4.

```
OLT(config-interface-epon-0/0)#ont multicast fast-leave 1 4 enable

OLT(config-interface-epon-0/0)#
```

23.7.3. Config the multicast VLAN of the ONU port

Command	OLT(config-interface-epon-0/0)# ont port multicast-vlan port-id ont-id eth ont-port-list vlan-id
View	epon view
Description	This command is used for configure the multicast VLAN of an ONT

	port. Use this command when you need to divide an ONT port into a specified multicast VLAN. You need to configure the ONT port multicast mode in epon mode before executing this command.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>ont-port-list</i>	Pon port id,range for 1-16
<i>vlan-id</i>	Ont id,range for 1-64

【Example】

Example 1: Add the multicast vlan 100 to the pon1 ONU1 Eth port 1

```
OLT(config-interface-epon-0/0)# ont port multicast-vlan 1 1 eth 1 100

OLT(config-interface-epon-0/0)#
```

23.7.4. Show ONU Multicast-group Record

Command	OLT(config-interface-epon-0/0)# show ont multicast-group <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show multicast-group of ont.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【Example】

Example 1: Show multicast-group of ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#show ont multicast-group 1 1
ERROR:There is not any onu group record

OLT(config-interface-epon-0/0)#
```

23.7.5. Show ONU IGMP Mode

Command	OLT(config-interface-epon-0/0)# show ont multicast-mode <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show multicast-mode of ont.

<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【Example】

Example 1: Show multicast-mode of ont 3 in pon 3.

```
OLT(config-interface-epon-0/0)#show ont multicast-mode 3 3
-----
Frame/Slot:0/0
Port:3
ONU-ID:3
Multicast mode:Transparent
-----
OLT(config-interface-epon-0/0)#
```

23.7.6. Show ONU Port IGMP VLAN Tagstrip Mode

Command	OLT(config-interface-epon-0/0)# show ont port attribute <port-id> <onu-id> eth <eth-id> multicast-tagstrip
View	EPON interface view
Description	This command is used for show multicast-tagstrip mode of ont eth port
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-id>	Eth port id,range for 1-24

【Example】

Example 1: Show multicast-tagstrip mode of ont 3 eth 1 in pon 3.

```
OLT(config-interface-epon-0/0)#show ont port attribute 3 3 eth 1 multicast-tagstrip
-----
Frame/Slot:0/0
Port:3
ONU ID:3
Port ID:1
-----
Service Profile ID:0
Service Profile name:srvprofile_0
-----
Tag strip mode:tag
```



```
-----
OLT(config-interface-epon-0/0)#
```

23.7.7. Show ONU Port Multicast VLAN

Command	OLT(config-interface-epon-0/0)# show ont port multicast-vlan <i>port-id onu-id eth eth-id</i>
View	epon view
Description	This command is used for show ONU port multicast vlan.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64
<i>eth-id</i>	Eth port id,range for 1-24

【Example】

Example 1: Show PON 1 ONU3 ETH1 multicast-vlan mde.

```
OLT(config-interface-epon-0/0)# show ont port multicast-vlan 1 3 eth 1
-----
Frame/Slot      : 0/0
Port            : 1
ONT-ID          : 3
Port ID         : 1
Multicast vlan  : 100,
-----
OLT(config-interface-epon-0/0)#
```

23.7.8. Disable the Multicast Fast Leave Function of the ONU

Command	OLT(config-interface-epon-0/0)# no ont multicast fast-leave <i>port-id ont-id</i>
View	epon view
Description	This command is used for disable the multicast fast leave function of the ONU.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Disable PON7 ONU1 multicast fast-leave function.

```
OLT(config-interface-epon-0/0)# no ont multicast fast-leave 7 1
Restore to the profile configuration successfully

OLT(config-interface-epon-0/0)#
```

23.7.9. Delete the Multicast VLAN of the ONU Port

Command	OLT(config-interface-epon-0/0)# no ont multicast-vlan <i>port-id ont-id eth eth-portid vlan-id</i>
View	epon view
Description	This command is used for delete the multicast vlan of the ONU port.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>eth-portid</i>	Eth port id,range for 1-24
<i>vlan-id</i>	Multicast vlan id,range for 1-4094

【Example】

Example 1: Delete the multicast vlan of PON7 ONU1 eth1.

```
OLT(config-interface-epon-0/0)# no ont port multicast-vlan 7 1 eth 1 100

OLT(config-interface-epon-0/0)#
```

23.8. ONU Upgrade Management

23.8.1. Transfer ONU Firmware to OLT

Command	OLT(config)# load file {ftp <ip-address> <ftp-user-name> <ftp-user-password> < FILE-NAME>} {tftp <ip-address> < FILE-NAME>}
View	Config view
Description	This command is used for transfer the upgrade file of the ONU to the OLT.
ftp	Use the ftp protocol to transfer ONU upgrade files to the OLT.
<ip-address>	IP address of ftp or tftp server, format X.X.X.X
<ftp-user-name>	User name of the ftp server, ranging from 1 to 32 characters.

>	
<ftp-user-password>	Access password of the ftp server, ranging from 1 to 32 characters.
< FILE-NAME >	The name of the upgrade file of the ONU, ranging from 1 to 64 characters. The extension of the ONT upgrade file is required.
tftp	Transfer the ONT upgrade file to the OLT using the tftp protocol.

【Example】

Example 1: Use the ftp method to transfer the ONT upgrade file 111.tar to the OLT.

```
OLT(config)# load file ftp 192.168.5.111 test test 111.tar
OLT(config)#
```

23.8.2. Batch Upgrade ONU

Command	OLT(config)# ont load select {all model < MODEL-ID >}
View	Config view
Description	This command is used for configure the OLT to upgrade the ONUs in batches.
all	Configure to upgrade all ONUs
< MODEL-ID >	Configure batch upgrade of ONUs based on the model id of the ONU.

【Example】

Example 1: Configure the ONUs in batches according to the model id 0x31303053 of the ONU.

```
OLT(config)# ont load select model 0x31303053
Number of ONTs that can be selected: 0, success: 0

OLT(config)#
```

23.8.3. Start or Stop Batch Upgrade ONU

Command	OLT(config)# ont load start <FILENAME >commit-mode {auto manual} OLT(config)# ont load stop
View	Config view
Description	This command is used for start or stop the ONU batch upgrade.

load start	Configure to upgrade all ONUs
<FILENAME >	Configure the ONU upgrade file name for starting batch upgrade.
commit-mode	Select the new upgrade file to take effect mode. When not input, the default is ONU auto take effect in next time reboot.
auto	The effective mode of the ONU loading policy is that the graceful reset takes effect. That is, after loading the file to the ONU according to the loading policy, the ONU decides whether to restart immediately according to its own related settings to make the loading take effect (for example, whether there is an emergency call). The ONU waits for up to four hours, and when it is exceeded, it is forced to restart.
manual	After the loading is completed, the ONU is manually restarted to make the loading take effect.
load stop	Delete the ONU load data. This parameter is enabled when you want to delete all load tasks and data on the ONU immediately.

【 Example 】

Example 1: Start the ONU to use the 111.tar upgrade file for batch upgrade. After the upgrade, it will automatically restart to make the upgrade take effect.

```
OLT(config)# ont load start 111.tar commit-mode auto
OLT(config)
```

23.8.4. Show ONU Upgrade Configuration Information

Command	OLT(config)# show ont load info
View	Config view
Description	This command is used for view the configuration information of the ONU upgrade that needs to be upgraded.

【 Example 】

Example 1: Check the ONU upgrade information configured on the OLT.

```
OLT(config)# show ont load info
-----
File name      :
Load state    : stop
Commit mode   : auto
-----
```

OLT(config)#

23.8.5. Show ONU Upgrade Progress

Command	OLT(config)# show ont load select
View	Config view
Description	This command is used for check the progress of the ONU upgrade.

【Example】

Example 1: Check the progress of the ONU upgrade under the OLT.

```

OLT(config)# show ont load select
-----
 F/S PON ONT ID   State      Progress
-----
 0/0 3   1       waiting   0%
-----
Total: 1, waiting: 1, fail: 0, success: 0, loading: 0, cancel: 0
OLT(config)#
    
```

23.8.6. Separately Upgrade ONU Under PON Port

Command	OLT(config)# show ont load select
View	EPON interface view
Description	This command is used for select an ONU that needs to be upgraded separately under the PON port.
<port-id>	Specifies the PON port number where the ONU is located. The value is 1-16.
<onu-id>	The ONU id to be upgraded, in the range of 1-64.
all	Configure all ONU upgrades to the specified PON port.
< MODEL-ID >	Configure the ONU for the specified PON port to upgrade the ONU according to the model id.

【Example】

Example 1: Select the first ONU under the PON1 port to be upgraded.

```

OLT(config-interface-epon-0/0)# ont load select 1 1
Number of ONUs that can be added: 1, success: 1
    
```



```
OLT(config-interface-epon-0/0)#
```

23.8.7. Active and Commit ONU New Firmware

Command	OLT(config-interface-epon-0/0)# ont load commit <port-id> {<onu-id> all}
View	EPON interface view
Description	This command is used for activate the image of the ONU. After the ONU is upgraded, the command will be executed. After the ONU restarts, the new mirror software will be run. Otherwise, the ONU will only run the software image before the upgrade.
<port-id>	Specifies the PON port number where the ONU is located. The value is 1-16
<onu-id>	The ONU id of the new software to be activated, in the range of 1-64.
all	Activate new software for all ONUs under the specified PON port.

【Example】

Example 1: Activate the software image of the first ONU under the PON1 port.

```
OLT(config-interface-epon-0/0)# ont load commit 1 1
Number of ONUs that can be commit: 1, success: 1

OLT(config-interface-epon-0/0)#
```

23.8.8. Delete the ONU that Needs to be Upgraded

Command	OLT(config-interface-epon-0/0)# no ont load select port-id ont-id
View	epon view
Description	This command is used for delete the ONU that needs to be upgraded.
port-id	Pon port id,range for 1-16
ont-id	Ont id,range for 1-64

【Example】

Example 1: Delete the PON7 ONU1 that needs to be upgraded.

```
OLT(config-interface-epon-0/0)# no ont load select 7 1
Number of ONTs that can be deleted: 1, success: 1
```



```
OLT(config-interface-epon-0/0)#
```

23.9. Home Gateway Upgrade

Command	OLT(config-interface-epon-0/0)# ont wifi upgrade <i>port-id ont-id file-name file-type (config image) server-ip server-ip-address server-port server-port user-name password clear-flag (yes no)</i>
View	Epon View
Discription	This command is used for upgrade the home gateway.
<i>port-id</i>	Specifies the PON port number where the ONU is located. The value is 1-16
<i>ont-id</i>	The ONU id of the new software to be activated, in the range of 1-64.
<i>file-name</i>	File name, range for 1-32.
config image	File type: image is firmware, configis configuration file.
<i>server-ip-address</i>	Upgrade's server ip address format is x.x.x.x
<i>server-port</i>	Upgrade's server application port, range for 1-65535.
<i>user-name</i>	User name, range for 1-32.
<i>password</i>	Password, range for 1-16.
yes no	Whether to clear the original configuration.

【Example】

Example 1: Upgrade PON port 1 ONU id 1 home gateway;

```
OLT(config-interface-epon-0/0)# ont wifi upgrade 1 1 upgrade.img file-type image
server-ip 192.168.1.11 server-port 21 admin admin clear-flag no

OLT(config-interface-epon-0/0)#
```

23.10. ONU Alarm Management

23.10.1. ONU Opitcal Bias Current Alarm Function Config

Command	OLT(config-interface-epon-0/0)# ont alarm optical <port-id> <onu-id> { bias-high-alarm bias-high-warning bias-low-alarm bias-low-warnin g } { enable disable } <threshold><restore-threshold>
View	EPON interface view

Description	This command is used for enable or disable bias current alarm of specified ont and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
bias-high-alarm bias-high-warning bias-low-alarm bias-low-warning	bias-high-alarm:bias current overtops the highest alarm threshold. bias-high-warning:warning the high bias current bias-low-alarm:alarming the bias current lower than threshold bias-low-warning:warning the low bias current
{enable disable}	Enable Disable
<threshold>	The alarm threshold,range for 0-10000,unit is mA
<restore-threshold>	The alarm restored threshold,range for 0-10000,unit is mA

【Example】

Example 1 : Enable the bias current alarm of ont 1 in pon 1,set its alarm threshold as 50,restore-threshold as 45.

```
OLT(config-interface-epon-0/0)#ont alarm optical 1 1 bias-high-alarm enable 50 45
OLT(config-interface-epon-0/0)#
```

23.10.2. ONU Optical Voltage Alarm Function Config

Command	OLT(config-interface-epon-0/0)# ont alarm optical <port-id> <onu-id> {voltage-high-alarm voltage-high-warning voltage-low-alarm voltage-low-warning}{enable disable} <threshold><restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable voltage alarm of specified ont and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
voltage-high-alarm	voltage-high-alarm:voltage overtops the alarm threshold voltage-high-warning:warning the higher voltage

voltage-high-warning voltage-low-alarm voltage-low-warning	voltage-low-alarm:alarming the voltage is lower than threshold voltage-low-warning:warning the lower voltage
{enable disable }	Enable Disable
<threshold>	The alarm threshold,range for 0.00-100.00,unit is V
<restore-threshold>	The alarm restored threshold,range for 0.00-100.00,unit is V

【Example】

Example 1: Enable the voltage alarm of ont 1 in pon 1,set its range of threshold as 1-5V.

```
OLT(config-interface-epon-0/0)#ont alarm optical 1 1 voltage-high-alarm enable 1 5
OLT(config-interface-epon-0/0)#
```

23.10.3. ONU Optical Power Alarm Function Config

Command	OLT(config-interface-epon-0/0)# ont alarm optical <port-id> <onu-id> {rx-power-high-alarm rx-power-high-warning rx-power-low-alarm rx-power-low-warning tx-power-high-alarm tx-power-high-warning tx-power-low-alarm tx-power-low-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable optical power alarm of specified ont and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
rx-power-high-alarm rx-power-high-warning rx-power-low-alarm rx-power-low-w	rx-power-high-alarm:rx-power overtops the alarm threshold rx-power-high-warning:warning the high rx-power rx-power-low-alarm:rx-power is lower than alarm threshold rx-power-low-warning:warning the low rx-power tx-power-high-alarm:tx-power overtops the alarm threshold tx-power-high-warning:warning the high tx-power tx-power-low-alarm:tx-power is lower than alarm threshold



arning tx-power-high-a larm tx-power-high- warning tx-power-low-al arm tx-power-low-w arning	tx-power-low-warning:warning the low tx-power
{enable disable }	Enable Disable
<threshold>	The alarm threshold,range for(-99)-100.00,unit is dbm
<restore-thresh old>	The alarm restored threshold,range for(-99)-100.00,unit is dbm

【 Example 】

Example 1 : Enable the rx-power alarm of ont 1 in pon 1,set itsalarm threshold as-3,restore-threshold as-4.

```
OLT(config-interface-epon-0/0)#ont alarm optical 1 1 rx-power-high-alarm enable-3-4
OLT(config-interface-epon-0/0)#
```

23.10.4. ONU Optical Temperature Alarm Function Config

Command	OLT(config-interface-epon-0/0)#ont alarm optical <port-id> <onu-id> {temperature-high-alarm temperature-high-warning temperature-l ow-alarm temperature-low-warning{enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable temperature alarm of specified ont and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
temperature-hi gh-alarm temperature-hi gh-warning	temperature-high-alarm:temperature overtops the alarm threshold temperature-high-warning:warning high temperature but not reaching the alarm threshold temperature-low-alarm:temperature is lower than alarm threshold

temperature-low-alarm temperature-low-warning	temperature-low-warning:warning low temperature but not reaching the alarm threshold
{enable disable}	Enable Disable
<threshold>	The alarm threshold,range for(-99)-300,unit is °C
<restore-threshold>	The alarm restored threshold,range for(-99)-300,unit is °C

【 Example 】

Example 1 : Enable the temperature alarm of ont 1 in pon 1,set its alarm threshold as 55 °C ,restore-threshold as 45 °C .

```
OLT(config-interface-epon-0/0)#ont alarm optical 1 1 temperature-high-alarm enable 55 45

OLT(config-interface-epon-0/0)#
```

23.10.5. ONU Port CRC Checkout Alarm Function Config

Command	OLT(config-interface-epon-0/0)# ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-crcerrors-alarm rx-crcerrors-warning tx-crcerrors-alarm tx-crcerrors-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable error message CRC checkout alarm of specified ont port and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont’s pon port Eth:ont’s ethernet port
<eth-port-id>	Ont’s ethernet port id,range for 1-24
rx-crcerrors-alarm rx-crcerrors-warning tx-crcerrors-alarm tx-crcerrors-warning	rx-crcerrors-alarm:receive the crc checkout message error alarm rx-crcerrors-warning:receive the crc checkout message error warning tx-crcerrors-alarm:transmit the crc checkout message error alarm tx-crcerrors-warning:transmit the crc checkout message error warning

g	
{enable disable } }	enable disable
<threshold>	The alarm threshold,range for 0-4294967294
<restore-thresh old>	The alarm restore threshold,range for 0-4294967294

【Example】

Example 1: Enable the crc checkout alarm of eth1 in pon 1 ont 1,set its alarm threshold as 234,restore-threshold as 150.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 pon rx-crcerrors-alarm enable 234
150

OLT(config-interface-epon-0/0)#
```

23.10.6. ONU Port Dropping Message Alarm Function Config

Command	OLT(config-interface-epon-0/0)#ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-discards-alarm rx-discards-warning tx-discards-alarm tx-discards-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable dropping message alarm of specified ont port and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont’s pon port Eth:ont’s ethernet port
<eth-port-id>	Ont’s ethernet port id,range for 1-24
rx-discards-alar m rx-discards- warning tx-disc ards-alarm tx-d iscards-warning	rx-discards-alarm:receive the alarm of discarded message rx-discards-warning:receive the warning of discarded message tx-discards-alarm:transmit the alarm of discarded message tx-discards-warning:transmit the warning of discarded message
{enable disable }	enable disable



<threshold>	The alarm threshold,range for 0-4294967294
<restore-thresh old>	The alarm restored threshold,range for 0-4294967294

【Example】

Example 1: Enable and receive the alarm of discarded message of eth1 in pon 1 ont 1,set its alarm threshold as 200,restore-threshold as 150.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-discards-alarm enable 200
150

OLT(config-interface-epon-0/0)#
```

23.10.7. ONU Port Dropevents Alarm Function Config

Command	OLT(config-interface-epon-0/0)#ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-dropevents-alarm rx-dropevents-warning tx-dropevents-alarm tx-dropevents-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable dropevents alarm of specified ont port and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont’s pon port Eth:ont’s ethernet port
<eth-port-id>	Ont’s ethernet port id,range for 1-24
rx-dropevents-a larm rx-dropev ents-warning tx -dropevents-ala rm tx-dropeven ts-warning	rx-dropevents-alarm:receive the alarm of drop event rx-dropevents-warning:receive the warning of drop event tx-dropevents-alarm:transmit the alarm of drop event tx-dropevents-alarm:transmit the warning of drop event
{enable disabl e}	enable disable
<threshold>	The alarm threshold,range for 0-4294967294
<restore-thresh	The alarm stored threshold,range for 0-4294967294



old>	
------	--

【 Example 】

Example 1: Enable and receive the alarm of dropevents of eth1 in pon 1 ont 1,set its alarm threshold as 123,restore-threshold as 100.

<pre>OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-dropevents-alarm enable 123 100 OLT(config-interface-epon-0/0)#</pre>
--

23.10.8. ONU Port Error Message Alarm Function Config

Command	OLT(config-interface-epon-0/0)# ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-errors-alarm rx-errors-warning tx-errors-alarm tx-errors-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable error message alarm of specified ont port and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont’s pon port Eth:ont’s ethernet port
<eth-port-id>	Ont’s ethernet port id,range for 1-24
rx-errors-alarm rx-errors-warning tx-errors-alarm tx-errors-warning	rx-errors-alarm:receive the alarm of error message rx-errors-warning:receive the warning of error message tx-errors-alarm:transmit the alarm of error message tx-errors-warning:transmit the warning of error message
{enable disable}	enable disable
<threshold>	The alarm threshold,range for 0-4294967294
<restore-threshold>	The alarm restored threshold,range for 0-4294967294

【 Example 】

Example 1: Enable and receive the alarm of error message of eth1 in pon 1 ont 1,set its



alarm threshold as 123,restore-threshold as 100.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-errors-alarm enable 123 100

OLT(config-interface-epon-0/0)#
```

23.10.9. ONU Port Message Fragment Alarm Function Config

Command	OLT(config-interface-epon-0/0)#ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-fragments-alarm rx-fragments-warning tx-fragments-alarm tx-fragments-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable message fragment alarm of specified ont port and set its alarm threshold
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont's pon port Eth:ont's ethernet port
<eth-port-id>	Ont's ethernet port id,range for 1-24
rx-fragments-alarm rx-fragments-warning tx-fragments-alarm tx-fragments-warning	rx-fragments-alarm:receive the alarm of message fragment rx-fragments-warning:receive the warning of message fragment tx-fragments-alarm:transmit the alarm of message fragment tx-fragments-warning:transmit the warning of error message
{enable disable}	enable disable
<threshold>	The alarm threshold,range for 0-4294967294
<restore-threshold>	The alarm restored threshold,range for 0-4294967294

【Example】

Example 1: Enable and receive the alarm of message fragment of eth1 in pon 1 ont 1,set its alarm threshold as 123,restore-threshold as 100.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-fragments-alarm enable 123 100

OLT(config-interface-epon-0/0)#
```



23.10.10. ONU Port Message Jabber(time out) Alarm Function

Config

Command	OLT(config-interface-epon-0/0)#ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-jabbers-alarm rx-jabbers-warning tx-jabbers-alarm tx-jabbers-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable message jabber alarm of specified ont port and set its alarm threshold,it means when the message has crc error and it is out of the range,it will alarm.
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont's pon port Eth:ont's ethernet port
<eth-port-id>	Ont's ethernet port id,range for 1-24
rx-jabbers-alarm rx-jabbers-warning tx-jabbers-alarm tx-jabbers-warning	rx-jabbers-alarm:receive the alarm of message jabber rx-jabbers-warning:receive the warning of message jabber tx-jabbers-alarm:transmit the alarm of message jabber tx-jabbers-warning:transmit the warning of message jabber
{enable disable}	enable disable
<threshold>	The alarm threshold,range for 0-4294967294
<restore-threshold>	The alarm restored threshold,range for 0-4294967294

【Example】

Example 1: Enable and receive the alarm of message jabber of eth1 in pon 1 ont 1,set its alarm threshold as 1518,restore-threshold as 1500.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-jabbers-alarm enable 1518 1500
```

```
OLT(config-interface-epon-0/0)#
```

23.10.11. ONU Port Oversize Message Alarm Function Config



Command	OLT(config-interface-epon-0/0)#ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-oversizes-alarm rx-oversizes-warning tx-oversizes-alarm tx-oversizes-warning} {enable disable} <threshold> <restore-threshold>
View	EPON interface view
Description	This command is used for enable or disable oversize message alarm of specified ont port and set its alarm threshold,it means crc of message is correct but the size of it is over range,it will alarm.
<port-id>	Pon port id,range for 1-16
<onu-id>	Onu-id:ont id,range for 1-64
{pon eth}	Pon:ont's pon port Eth:ont's ethernet port
<eth-port-id>	Ont's ethernet port id,range for 1-24
rx-oversizes-alarm rx-oversizes-warning tx-oversizes-alarm tx-oversizes-warning	rx-oversizes-alarm:receive the alarm of oversize message rx-oversizes-warning:receive the warning of oversize message tx-oversizes-alarm:transmit the alarm of oversize message tx-oversizes-warning:transmit the warning of oversize message
{enable disable}	enable disable
<threshold>	The lowest alarm threshold,range for 0-4294967294
<restore-threshold>	The highest alarm threshold,range for 0-4294967294

【Example】

Example 1: Enable and receive the alarm of oversize message of eth1 in pon 1 ont 1,set its alarm threshold as 1518,restore-threshold as 1500.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-oversizes-alarm enable 1518 1500

OLT(config-interface-epon-0/0)#
```

23.10.12. ONU Port Ultra Short Message Alarm Function Config

Command	OLT(config-interface-epon-0/0)#ont alarm port <port-id> <onu-id> {pon eth} <eth-port-id> {rx-undersizes-alarm
----------------	---

	<code>rx-undersizes-warning tx-undersizes-alarm tx-undersizes-warning</code> <code>{enable disable} <threshold> <restore-threshold></code>
View	EPON interface view
Description	This command is used for enable or disable ultra short message alarm of specified ont port and set its alarm threshold
<code><port-id></code>	Pon port id,range for 1-16
<code><onu-id></code>	Onu-id:ont id,range for 1-64
<code>{pon eth}</code>	Pon:ont's pon port Eth:ont's ethernet port
<code><eth-port-id></code>	Ont's ethernet port id,range for 1-24
<code>rx-undersizes-alarm rx-undersizes-warning tx-undersizes-alarm tx-undersizes-warning</code>	rx-undersizes-alarm:receive the alarm of ultra short message rx-undersizes-warning:receive the warning of ultra short message tx-undersizes-alarm:transmit the alarm of ultra short message tx-undersizes-alarm:transmit the warning of ultra short message
<code>{enable disable }</code>	enable disable
<code><threshold></code>	The alarm threshold,range for 0-4294967294
<code><restore-threshold></code>	The alarm restored threshold,range for 0-4294967294

【Example】

Example 1: Enable and receive the alarm of ultra short message of eth1 in pon 1 ont 1,set its alarm threshold as 60,restore-threshold as 61.

```
OLT(config-interface-epon-0/0)#ont alarm port 1 1 eth 1 rx-undersizes-alarm enable 60
61

OLT(config-interface-epon-0/0)#
```

23.10.13. ONU CATV Alarm Threshold Config

Command	<code>OLT(config-interface-epon-0/0)# ont catv alarm port-id onu-id</code> <code>(rx-power-alarm HIGH-THRESHOLD LOW-THRESHOLD)</code> <code> (tx-voltage-alarm HIGH-THRESHOLD LOW-THRESHOLD)</code> <code> (voltage-alarm HIGH-THRESHOLD LOW-THRESHOLD)</code> <code> (temperature-alarm HIGH-THRESHOLD LOW-THRESHOLD)</code>
----------------	---

View	epon view
Discription	This command is used for config the ONU catv alarm threshold.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Onu-id:ont id,range for 1-64
rx-power-alarm <i>HIGH-THRESHOLD</i> <i>LOW-THRESHOLD</i>	Receive optical power alarm: High alarm threshold, range for -99.0-100.0, unit is dBm Low alarm threshold, range for -99.0-100.0, unit is dBm
tx-voltage-alarm <i>HIGH-THRESHOLD</i> <i>LOW-THRESHOLD</i>	Output level alarm : High alarm threshold, range for 0.0-100.0, unit is dBuV Low alarm threshold, range for 0.0-100.0, unit is dBuV
voltage-alarm <i>HIGH-THRESHOLD</i> <i>LOW-THRESHOLD</i>	Voltage alarm : High alarm threshold, range for 0.0-100.0, unit is V Low alarm threshold, range for 0.0-100.0, unit is V
temperature-alarm <i>HIGH-THRESHOLD</i> <i>LOW-THRESHOLD</i>	Working temperature alarm : High alarm threshold, range for -99.0-300.0, unit is °C Low alarm threshold, range for -99.0-300.0, unit is °C

【Example】

Example 1: Configure a high alarm threshold of 70 dBm for the ONU11CATV receiving power of the PON5 port and a low alarm threshold of 0 dBm.

```
OLT(config-interface-epon-0/0)# ont catv alarm 5 11 rx-power-alarm 70 0
OLT(config-interface-epon-0/0)#
```

23.10.14. ONU CATV Output Gain Control Config

Command	OLT(config-interface-epon-0/0)# ont catv gain-control <i>port-id onu-id type (agc AGC-Up-Value AGC-Range) (mgc MGC-Tx-Attenuation)</i>
View	Epon view
Discription	This command is used for config output gain control of the ONU catv.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Onu-id:ont id,range for 1-64
agc <i>AGC-Up-Value</i> <i>AGC-Range</i>	Automatic gain control: Upper limit of input optical power in AGC mode, range -6.0-2.0 dBm Input optical power range value in AGC mode, range 0.0-8.0 dBm

<p>mgc <i>MGC-Tx-Attenuation</i></p>	<p>Manual gain control: Output level attenuation value, range 0.0-15.0 dBm</p>
---	--

【Example】

Example 1: Config the onu catv output gain control numbered 11 in the agc mode under the PON5 port.

```
OLT(config-interface-epon-0/0)# ont catv gain-control 5 11 type agc 1 2

OLT(config-interface-epon-0/0)#
```

23.10.15. Enable or Disable ONU Dying-gasp Alarm Function

Command	OLT(config-interface-epon-0/0)# ont alarm dying-gasp <port-id> {enable disable}
View	EPON interface view
Description	This command is used for enable or disable dying-gasp alarm of specified ont
<port-id>	Pon port id,range for 1-16
{enable disable }	Enable:enable dying-gasp alarm of onu Disable:disable dying-gasp alarm of onu

【Example】

Example 1: Enable dying-gasp alarm of onu 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont alarm dying-gasp 1 enable

OLT(config-interface-epon-0/0)#
```

23.10.16. Bind Alarm-config to ONU

Command	OLT(config-interface-epon-0/0)# ont alarm-config <port-id> {all <onu-id>} {profile-id <profile-id> profile-name<profile-name>}
View	EPON interface view
Description	This command is used for bind the alarm-config to ont.but first of all,the alarm-profile should be created in config view.
<port-id>	Pon port id,range for 1-16
all <onu-id>	All:all of the ont onu-id:Onu-id:ont id,range for 1-64

<profile-id>	Profile id,range for 1-50
<profile-name>	Profile name,it supports 1-16 strings

【Example】

Example 1: Bind alarm-profile 5 to ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont alarm-config 1 1 profile-id 5

OLT(config-interface-epon-0/0)#
```

23.10.17. Bind Optical-alarm-config to ONU

Command	OLT(config-interface-epon-0/0)#ont optical-alarm-config <port-id> {all <onu-id>} {profile-id <profile-id> profile-name<profile-name>}
View	EPON interface view
Description	This command is used for bind the optical-alarm-config to ont.but first of all,the alarm-profile should be created in config view.
<port-id>	Pon port id,range for 1-16
all <onu-id>	All:all of the ont onu-id:Onu-id:ont id,range for 1-64
<profile-id>	Profile id,range for 1-50
<profile-name>	Profile name,it supports 1-24 strings

【Example】

Example 1: Bind optical-alarm-profile 5 to ont 1 in pon 1.

```
OLT(config-interface-epon-0/0)#ont optical-alarm-profile 1 1 profile-id 5

OLT(config-interface-epon-0/0)#
```

23.10.18. Show ONU Dying-gasp Alarm Config Status

Command	OLT(config-interface-epon-0/0)#show ont alarm dying-gasp {<port-id> all}
View	EPON interface view
Description	This command is used for show configured state of ont dying-gasp alarm
{<port-id> all}	port-id:Pon port id,range for 1-16

	All:all the pon ports
--	-----------------------

【 Example 】

Example 1: Show ont alarm dying-gasp of all the pon port

```

OLT(config-interface-epon-0/0)#show ont alarm dying-gasp all
-----
F/S P State
-----
0/0 1 enable
0/0 2 enable
0/0 3 enable
0/0 4 enable
0/0 5 enable
0/0 6 enable
0/0 7 enable
0/0 8 enable
0/0 9 enable
0/0 10 enable
0/0 11 enable
0/0 12 enable
0/0 13 enable
0/0 14 enable
0/0 15 enable
0/0 16 enable
-----
OLT(config-interface-epon-0/0)#
    
```

23.10.19. Show ONU Optical power Alarm Config Status

Command	OLT(config-interface-epon-0/0)# show ont alarm optical <port-id> <onu-id>
View	EPON interface view
Description	This command is used for show the configured state of optical alarm and temperature alarm and voltage alarm and etc.
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【 Example 】

Example 1: Show the configured state of optical alarm in pon 1 ont 1.

```

OLT(config-interface-epon-0/0)#show ont alarm optical 1 1
-----
Rx optical power high alarm:disable
Rx optical power low alarm:disable
Rx optical power high warning:disable
Rx optical power low warning:disable
Tx optical power high alarm:disable
Tx optical power low alarm:disable
Tx optical power high warning:disable
Tx optical power low warning:disable
Bias current high alarm:disable
Bias current low alarm:disable
Bias current high warning:disable
Bias current low warning:disable
Supply voltage high alarm:disable
Supply voltage low alarm:disable
Supply voltage high warning:disable
Supply voltage low warning:disable
Temperature high alarm:disable
Temperature low alarm:disable
Temperature high warning:disable
Temperature low warning:disable
-----
OLT(config-interface-epon-0/0)#
    
```

23.10.20. Show ONU ETH Port Alarm Config Status

Command	OLT(config-interface-epon-0/0)# show ont alarm port <port-id> <onu-id> eth <eth-port-id>
View	EPON interface view
Description	This command is used for show configured state of ont eth port alarm
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64
<eth-port-id>	Eth port id,range for 1-24

【 Example 】

Example 1: Show eth port alarm’s configured state of ont 1 eth 1 in pon 1.

```

OLT(config-interface-epon-0/0)#show ont alarm port 1 1 eth 1
-----
    
```

```

F/S P ONU-ID ONU-Port Alarm/Warning State Threshold Restore-Threshold
-----
0/0 1 1 1 tx-dropevents-alarm disable--
0/0 1 1 1 rx-dropevents-alarm disable--
0/0 1 1 1 tx-crcerrors-alarm disable--
0/0 1 1 1 rx-crcerrors-alarm disable--
0/0 1 1 1 tx-undersizes-alarm disable--
0/0 1 1 1 rx-undersizes-alarm disable--
0/0 1 1 1 tx-oversizes-alarm disable--
0/0 1 1 1 rx-oversizes-alarm disable--
0/0 1 1 1 tx-fragments-alarm disable--
0/0 1 1 1 rx-fragments-alarm disable--
0/0 1 1 1 tx-jabbers-alarm disable--
0/0 1 1 1 rx-jabbers-alarm disable--
0/0 1 1 1 tx-discards-alarm disable--
0/0 1 1 1 rx-discards-alarm disable--
0/0 1 1 1 tx-errors-alarm disable--
0/0 1 1 1 rx-errors-alarm disable--
0/0 1 1 1 tx-dropevents-warning disable--
0/0 1 1 1 rx-dropevents-warning disable--
0/0 1 1 1 tx-crcerrors-warning disable--
0/0 1 1 1 rx-crcerrors-warning disable--
0/0 1 1 1 tx-undersizes-warning disable--
0/0 1 1 1 rx-undersizes-warning disable--
0/0 1 1 1 tx-oversizes-warning disable--
0/0 1 1 1 rx-oversizes-warning disable--
0/0 1 1 1 tx-fragments-warning disable--
0/0 1 1 1 rx-fragments-warning disable--
0/0 1 1 1 tx-jabbers-warning disable--
0/0 1 1 1 rx-jabbers-warning disable--
0/0 1 1 1 tx-discards-warning disable--
0/0 1 1 1 rx-discards-warning disable--
0/0 1 1 1 tx-errors-warning disable--
0/0 1 1 1 rx-errors-warning disable--
-----
OLT(config-interface-epon-0/0)#
    
```

23.10.21. Show ONU PON Port Alarm Config Status

Command	OLT(config-interface-epon-0/0)# show ont alarm port <port-id> <onu-id> pon
View	EPON interface view



Description	This command is used for show configured state of ont pon port alarm
<port-id>	Pon port id,range for 1-16
<onu-id>	Ont id,range for 1-64

【 Example 】

Example 1: Show configured state of ont 1’s pon port alarm in pon 1.

```
OLT(config-interface-epon-0/0)#show ont alarm port 1 1 pon
-----
F/S P ONU-ID Alarm/Warning State Threshold Restore-Threshold
-----
0/0 1 1 rx-dropevents-alarm disable--
0/0 1 1 tx-dropevents-alarm disable--
0/0 1 1 rx-crcerrors-alarm disable--
0/0 1 1 tx-crcerrors-alarm disable--
0/0 1 1 rx-undersizes-alarm disable--
0/0 1 1 tx-undersizes-alarm disable--
0/0 1 1 rx-oversizes-alarm disable--
0/0 1 1 tx-oversizes-alarm disable--
0/0 1 1 rx-fragments-alarm disable--
0/0 1 1 tx-fragments-alarm disable--
0/0 1 1 rx-jabbers-alarm disable--
0/0 1 1 tx-jabbers-alarm disable--
0/0 1 1 rx-discards-alarm disable--
0/0 1 1 tx-discards-alarm disable--
0/0 1 1 rx-errors-alarm disable--
0/0 1 1 tx-errors-alarm disable--
0/0 1 1 rx-dropevents-warning disable--
0/0 1 1 tx-dropevents-warning disable--
0/0 1 1 rx-crcerrors-warning disable--
0/0 1 1 tx-crcerrors-warning disable--
0/0 1 1 rx-undersizes-warning disable--
0/0 1 1 tx-undersizes-warning disable--
0/0 1 1 rx-ossversizes-warning disable--
0/0 1 1 tx-oversizes-warning disable--
0/0 1 1 rx-fragments-warning disable--
0/0 1 1 tx-fragments-warning disable--
0/0 1 1 rx-jabbers-warning disable--
0/0 1 1 tx-jabbers-warning disable--
0/0 1 1 rx-discards-warning disable--
0/0 1 1 tx-discards-warning disable--
0/0 1 1 rx-errors-warning disable--
```



```
0/0 1 1 tx-errors-warning disable--
-----

OLT(config-interface-epon-0/0)#
```

23.10.22. Show ONU CATV Output Gain Control Information

Command	OLT(config-interface-epon-0/0)# show ont catv gain-control-info <i>port-id ont-id</i>
View	epon view
Description	This command is used for show ONU CATV output gain control information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show PON9 ONU5 catv output gain control information.

```
OLT(config-interface-epon-0/0)# show ont catv gain-control-info 9 5
-----
Frame/Slot      : 0/0
Port            : 9
ONT-ID         : 5
Gain Control Type : AGC
AGC Up Value    : -4.00(dBm)
AGC Range      : 7.00(dBm)
-----

OLT(config-interface-epon-0/0)#
```

23.10.23. Show the ONU CATV Alarm Threshold Information.

Command	OLT(config-interface-epon-0/0)# show ont catv alarm-threshold-info <i>port-id ont-id</i>
View	epon view
Description	This command is used for show the ONU CATV alarm threshold information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: show PON9 ONU5 CATV alarm threshold information.

```

OLT(config-interface-epon-0/0)# show ont catv alarm-threshold-info 9 5
-----
Frame/Slot          : 0/0
Port                : 9
ONT-ID              : 5
Alarm Threshold Low   High
Rx Power(dBm)       -18.00  0.00
Tx Voltage(dBuV)    60.00  95.00
Voltage(V)          10.80  13.20
Temperature(C)      -10.00  90.00
-----
OLT(config-interface-epon-0/0)#
    
```

23.10.24. Show the Optical Alarm Template Information of the ONU

Command	OLT(config-interface-epon-0/0)# show ont optical-alarm-profile <i>port-id ont-id</i>
View	epon view
Description	This command is used for show the optical alarm template information of the ONU.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show PON9 ONU5 optical alarm template information.

```

OLT(config-interface-epon-0/0)# show ont optical-alarm-profile 9 5
-----
Frame/Slot          : 0/0
Port                : 9
ONT-ID              : 5
Profile-ID          : 1
Profile-name        : RX
-----
Rx optical power high alarm threshold (dBm)          : 0.00
Rx optical power high alarm restore threshold (dBm)  : -3.00
Rx optical power low alarm                          : disable
Rx optical power high warning                       : disable
    
```



```

Rx optical power low warning           : disable
Tx optical power high alarm            : disable
Tx optical power low alarm             : disable
Tx optical power high warning          : disable
Tx optical power low warning           : disable
Bias current high alarm                : disable
Bias current low alarm                 : disable
Bias current high warning              : disable
Bias current low warning               : disable
Supply voltage high alarm              : disable
Supply voltage low alarm               : disable
Supply voltage high warning            : disable
Supply voltage low warning             : disable
Temperature high alarm                 : disable
Temperature low alarm                  : disable
Temperature high warning               : disable
Temperature low warning                : disable
-----
-----

OLT(config-interface-epon-0/0)#
    
```

23.10.25. Show ONU Alarm Template Information

Command	OLT(config-interface-epon-0/0)# show ont alarm-config <i>port-id ont-id</i>
View	epon view
Description	This command is used for show ONU alarm config information.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64

【Example】

Example 1: Show PON9 ONU4 alarm template information.

```

OLT(config-interface-epon-0/0)# show ont alarm-config 9 4
-----
Frame/Slot      : 0/0
Port            : 9
ONT-ID          : 4
Profile-ID      : 1
Profile-name    : test1
-----
    
```



<Drop events alarm/warning>:	
Transmitted drop events alarm:	disable
Transmitted drop events warning:	disable
Received drop events alarm:	disable
Received drop events warning:	disable
<CRC error alarm/warning>:	
Transmitted CRC error frames alarm:	disable
Transmitted CRC error frames warning:	disable
Received CRC error frames alarm threshold:	500
Received CRC error frames alarm restore threshold:	20000
Received CRC error frames warning:	disable
<Undersize frames alarm/warning>:	
Transmitted undersize frames alarm:	disable
Transmitted undersize frames warning:	disable
Received undersize frames alarm:	disable
Received undersize frames warning:	disable
<Oversize frames alarm/warning>:	
Transmitted oversize frames alarm:	disable
Transmitted oversize frames warning:	disable
Received oversize frames alarm:	disable
Received oversize frames warning:	disable
<Fragments alarm/warning>:	
Transmitted fragments alarm:	disable
Transmitted fragments warning:	disable
Received fragments alarm:	disable
Received fragments warning:	disable
<Jabbers alarm/warning>:	
Transmitted jabbers alarm:	disable
Transmitted jabbers warning:	disable
Received jabbers alarm:	disable
Received jabbers warning:	disable
<Discards alarm/warning>:	
Transmitted discards alarm:	disable
Transmitted discards warning:	disable
Received discards alarm:	disable
Received discards warning:	disable
<Errors alarm/warning>	
Transmitted errors alarm:	disable
Transmitted errors warning:	disable
Received errors alarm:	disable
Received errors warning:	disable

OLT(config-interface-epon-0/0)#	



23.10.26. Delete an Alarm Template bound to ONU

Command	OLT(config-interface-epon-0/0)# no ont alarm-config <i>port-id onu-id</i>
View	epon view
Description	This command is used for delete alarm template bound to ONU.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64

【Example】

Example 1: Delete PON7 ONU1 has been bound alarm template.

```
OLT(config-interface-epon-0/0)# no ont alarm-config 7 1

OLT(config-interface-epon-0/0)#
```

23.10.27. Delete the optical alarm template bound to the ONU

Command	OLT(config-interface-epon-0/0)# no ont optical-alarm-profile <i>port-id onu-id</i>
View	epon view
Description	This command is used for delete optical alarm template bound to ONU.
<i>port-id</i>	Pon port id,range for 1-16
<i>onu-id</i>	Ont id,range for 1-64

【Example】

Example 1: Delete the optical alarm template bound to PON7 ONU1.

```
OLT(config-interface-epon-0/0)# no ont optical-alarm-profile 7 1

OLT(config-interface-epon-0/0)#
```

23.11. ONU WAN Management

23.11.1. Config parameters for the ONU WAN service

Command	OLT(config-interface-epon-0/0)# ont wan config <i>port-id ont-id</i> WANNAME vlan (enable vlan-id priority disable) connection-mode (bridge route) service-type (internet ip-mode
----------------	--



	(dhcp static pppoe) mgmt tr069 vod voip) mtu <i>mtu-value</i> bind-if (<i>bind-portlist</i> not-bind)
View	Epon view
Description	This command is used for add or modify the ONU wan configuration.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
WANNNAME	ONU WAN name, Support length is 1-32 characters
<i>vlan-id</i>	Add the Vlan id , range for 1-4094
<i>priority</i>	priority, range for 0-7
internet mgmt tr069 vod voip	Internet: Internet service Mgmt: Tr-069: Vod:Video on demand service, also known as interactive TV on demand system; Voip:IP-based voice service;
<i>mtu-value</i>	MTU value, range for 64-1500
<i>bind-portlist</i>	Ssid range for 1-4, ONU LAN port is 5-8, format is 1,3-5,8

【Example】

Example 1: Add a bridge wan to the ONU with PON7 ONUid 1. Enable vlan100, route mode, DHCP access, MTU set to 1500, and bind ONU LAN1 port.

```
OLT(config-interface-epon-0/0)# ont wan config 7 1 1 vlan enable 100 0
connection-mode route service-type internet dhcp mtu 1500 bind-if 5

OLT(config-interface-epon-0/0)#
```

23.11.2. Clear ONU WAN Config

Command	OLT(config-interface-epon-0/0)# ont wan clear <i>port-id ont-id (WANNNAME all)</i>
View	Epon view
Description	This command is used for clear the ONU wan config.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64



<i>WANNAME</i> all	WANNAME: ONU WAN name, Support length is 1-32 characters All: All wan that has been created
---------------------	--

【Example】

Example 1: Clear PON port 7 ONU id 2 wan config

```
OLT(config-interface-epon-0/0)# ont wan clear 7 2 all

OLT(config-interface-epon-0/0)#

OLT(config-interface-epon-0/0)# show ont wan status 7 2 all
ONT wan is not exist!

OLT(config-interface-epon-0/0)#
```

23.11.3. Show ONU WAN Name information

Command	OLT(config-interface-epon-0/0)# <i>show ont wan name port-id ont-id WANNAME</i>
View	Epon View
Discription	This command is used for show ONU WAN name information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
<i>WANNAME</i>	ONU WAN name, Support length is 1-32 characters

【Example】

Example 1: Show PON port 7 ONU id 2 Wan name information.

```
OLT(config-interface-epon-0/0)# show ont wan name 7 2 1_INTERNET_R_VID_507
-----
Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 2
WAN-Name       : 1_INTERNET_R_VID_507
Connection Mode : route
IP Mode        : Static
IP Addr        : 192.168.5.145
IP Mask        : 255.255.255.0
Default IPGW   : 192.168.5.1
Primary DNS    : 192.168.5.1
Secondary DNS  : 114.114.114.114
Mtu            : 1500
VLAN ID        : 507
```

```
802.1P          : 0
Service Type    : Internet
Bind Interface   : SSID-1 LAN1
-----
OLT(config-interface-epon-0/0)#
```

23.11.4. Show ONU WAN State Information

Command	OLT(config-interface-epon-0/0)# show ont wan state port-id ont-id (WANNAME all)
View	Epon View
Discription	This command is used for show ONU WAN state information.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
WANNAME all	WANNAME: ONU WAN name, Support length is 1-32 characters All: All wan that has been created

【Example】

Example 1: Show PON port 7 ONU id 2 Wan state information.

```
OLT(config-interface-epon-0/0)# show ont wan status 7 2 all
-----
Index wanName          IpMode          IPAddr          Mask
-----
1      1_INTERNET_R_VID_507      static          192.168. 5.145
255.255.255. 0
-----
Index  DefGw          PrimaryDNS          SecondaryDNS          Status
-----
1      192.168. 5. 1    192.168. 5. 1      114.114.114.114      Connect
-----
OLT(config-interface-epon-0/0)#
```

23.12. ONU voice service management

23.12.1. Config Parameters for the Fax/Modem Service

Command	OLT(config-interface-epon-0/0)# ont voip fax-modem port-id ont-id (t30 t38) (auto-vbd negotiation)
----------------	---

View	EPON interface view
Description	This command is used for configure the parameter configuration of the fax/modem service of the ONU voice module.
<i>port-id</i>	Pon port id,range for 1-16
<i>ont-id</i>	Ont id,range for 1-64
(t30 t38)	T30: voice service transparent transmission mode T38: t38 mode
(auto-vbd negotiation)	Auto-vbd: Automatic voice bandwidth data Negotiation: Negotiation

【Example】

Example 1 : Configure the voice fax/modem parameter of the PON11 port ONU1 as t30 negotiation mode.

```
OLT(config-interface-epon-0/0)# ont voip fax-modem 11 1 t30 negotiation

OLT(config-interface-epon-0/0)#
```

23.12.2. Config Global Parameters of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip global-config ((dhcp-mode port-id ont-id) (pppoe-mode port-id ont-id (chap auto pap) username password) (static-mode port-id ont-id ip-address netmask default-gateway)) (stacking tag transparent) voice-cvlan voice-svlan voice-priority)
View	EPON interface view
Description	This command is used for configure the global parameter configuration of the ONU voice module.
<i>port-id</i>	Pon port id,range for 1-16.
<i>ont-id</i>	Ont id,range for 1-64.
<i>voice-cvlan</i>	Voice service cvlan,range for 0-4094.
<i>voice-svlan</i>	Voice service svlan,currently svlan support single layer vlan.The default is 0.
<i>voice-priority</i>	Voice service priority,range for 0-7.

【Example】

Example 1 : Configure the voice global parameter of the PON11 port ONU1 as DHCP and



vlan100 transparently.

```
OLT(config-interface-epon-0/0)# ont voip global-config dhcp-mode 11 1 transparent
100 100 0

OLT(config-interface-epon-0/0)#
```

23.12.3. Config Parameters of the H.248 Protocol of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip h248-config <i>port-id ont-id MGPortNo MGCIp MGCComPortNo (device-name domain-name ip-addr) MID Backup-MGCIp Backup-MGCComPortNo (china-ctc closed) Heartbeat-cycle Heartbeat-count</i>
View	EPON interface view
Description	This command is used for configure the parameters of the H248 protocol of the ONU voice module.
<i>port-id</i>	Pon port id,range for 1-16.
<i>ont-id</i>	Ont id,range for 1-64.
<i>MGPortNo</i>	Port number of the media gateway, range for 1024-65535
<i>MGCIp</i>	IP address of the main softswitch platform, formatted as X.X.X.X
<i>MGCComPortNo</i>	Port number of the active softswitch platform, range for 1024-65535
(device-name domain-name ip-addr)	The registration method is selected: device-name is registered according to the device name; domain-name is registered according to the domain name; ip-addr is registered according to the IP address.
<i>MID</i>	The MG identifier, the global unique identifier used by the MG to register with the softswitch platform, supports 1-64 characters.
<i>Backup-MGCIp</i>	IP address of the alternate softswitch platform in the format x.x.x.x
<i>Backup-MGCComPortNo</i>	Port number of the standby software for the platform, in the range of 1024-65535
(china-ctc closed)	Link detection mode; China-ctc: H.248 - China Telecom standard Notify command, default is china-ctc; closed: closed.
<i>Heartbeat-cycle</i>	Heartbeat cycle, default is 60s
<i>Heartbeat-count</i>	Heartbeat detection times, the default is 3 times

【 Example 】

Example 1 : Configure the H.248 protocol configuration parameters of the voice module of the PON11 port ONU1.

```
OLT(config-interface-epon-0/0)# ont voip h248-config 11 1 1024 192.168.10.12 1024
device-name aaa 192.168.2.2 1024 china-ctc 100 5

OLT(config-interface-epon-0/0)#
```

23.12.4. Config Parameters for H.248 RTP TID of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip h248-rtp-tid <i>port-id ont-id number-of-RTP-TID PREFIX RTP-TID-Digit-Begin (alignment no-alignment) RTP-TID-Digit-Length</i>
View	EPON interface view
Description	This command is used for configure the H.248 RTP TID parameters of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>number-of-RTP-TID</i>	Number of RTP-TID,range for 1-10
<i>PREFIX</i>	Prefix of RTP-TID,support length for 1-16
<i>RTP-TID-Digit-Begin</i>	The starting value of the digital part of RTP-TID,range for 0-99999999
(alignment no-alignment)	Digital partial alignment: alignment: alignment; no-alignment: not aligned
<i>RTP-TID-Digit-Length</i>	The number of digits in the RTP-TID digital part, ranging from 1 to 8. Note that the number of alignment digits is greater than or equal to the starting digit. For example, if the RTP-TID starting value is 555, the alignment digit is greater than or equal to 3.

【 Example 】

Example1 : Configure the H.248-RTP-TID parameter of the voice module of the PON11 port ONU1.

```
OLT(config-interface-epon-0/0)# ont voip h248-rtp-tid 11 1 1 aaa 1024 alignment 1

OLT(config-interface-epon-0/0)#
```



23.12.5. Config Parameters for H.248 User TID of the ONU Voice

Module

Command	OLT(config-interface-epon-0/0)# ont voip h248-user-tid <i>port-id ont-id pots ONT-Pots-Number User-Tid</i>
View	EPON interface view
Description	This command is used for configure the H.248 User TID parameter of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ONT-Pots-Number</i>	Number of ONT pots ,range for 1-2
<i>User-Tid</i>	Name User-TID,support length 1-32

【Example】

Example1: Configure the H.248-User-TID parameter of the voice module of the PON11 port ONU1.

```
OLT(config-interface-epon-0/0)# ont voip h248-user-tid 11 1 pots 1 1
OLT(config-interface-epon-0/0)#
```

23.12.6. Config Thread Operation of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip iad-operation <i>port-id ont-id (log-off re-registration reset)</i>
View	EPON interface view
Description	This command is used for configure the thread operation of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
(log-off re-registration reset)	Log-off: logout from the softswitch platform; Re-registration: re-registration of the softswitch platform; Reset: reset, only reset the voice module;

【Example】



Example1 : The thread operation of the voice module of the ONU1 of the PON11 port is configured to reset only the voice module.

```
OLT(config-interface-epon-0/0)# ont voip iad-operation 11 1 reset

OLT(config-interface-epon-0/0)#
```

23.12.7. Config Switch for VOIP Ports of ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip pots-admin <i>port-id ont-id pots ONT-Pots-Port-ID (enable disable)</i>
View	EPON interface view
Description	This command is used for configure the management of the VOIP module of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ONT-Pots-Port-ID</i>	Port id of ONTvoice port, range for 1-2

【Example】

Example1: Enable VOIP port 1 of the voice module of PON11 port ONU1.

```
OLT(config-interface-epon-0/0)# ont voip pots-admin 11 1 pots 1 enable

OLT(config-interface-epon-0/0)#
```

23.12.8. Config Parameters for SIP Protocol of ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip sip-config <i>port-id ont-id <MGPortNo> <SIP-Proxy-serverIP> <SIP-Proxy-Server-ComPortNo> <Backup-SIP-Proxy-ServerIP> <Backup-SIP-Proxy-Server-ComPortNo> <Sip-Register-ServerIP> <SIP-Register-Server-ComPortNo> <Backup-SIP-Register-ServerIP><Backup-SIP-Register-Server-ComPort No> <OutBand-ServerIP> <OutBand-Server-ComPortNo> <SIP-Register-Interval> (enable disable) <Heartbeat-cycle seconds> <Heartbeat-count></i>
View	EPON interface view
Description	This command is used for configure the voice parameters of the ONU voice module under the SIP protocol.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64



<MGPortNo>	The port number of the media gateway,range for 1024-65535
<SIP-Proxy-server IP>	The IP address of the primary SIP proxy server, in the format X.X.X.X
<SIP-Proxy-Server -ComPortNo>	Port number of the primary SIP proxy server,range for 1024-65535
<Backup-SIP-Prox y-ServerIP>	IP address of the alternate SIP proxy server,format as x.x.x.x
<Backup-SIP-Prox y-Server-ComPort No>	The port number of the alternate SIP proxy server,range for 1024-65535
<Sip-Register-Ser verIP>	The IP address of the primary SIP registration server,format as X.X.X.X
<SIP-Register-Ser ver-ComPortNo>	The port number of the primary SIP registration server,range for 1024-65535
<Backup-SIP-Regi ster-ServerIP>	IP address of the standby SIP registration server,format as X.X.X.X
<Backup-SIP-Regi ster-Server-Comp ortNo>	The port number of the standby SIP registration server,range for 1024-65535
<OutBand-Server IP>	The IP address of the outgoing server,format as x.x.x.x
<OutBand-Server -ComPortNo>	The port number of the outgoing server,range for 1024-65535
<SIP-Register-Int erval>	Register refresh cycle , the unit is s.The default is 3600s
<Heartbeat-cycle seconds>	Heartbeat cycle, the unit is s,range for 为 10-600, The default is 60s
<Heartbeat-coun t>	Number of heartbeats,range for 1-10, The default is 3.

【Example】

Example1 : Enable the parameters of the SIP protocol of the voice module of the PON11 port ONU1.

```
OLT(config-interface-epon-0/0)# ont voip sip-config 11 1 1024 192.168.2.12 1024
192.168.3.12 1024 1.1.1.1 1024 192.168.3.22 1024 192.168.2.22 1024 10 enable 10 2
```



```
OLT(config-interface-epon-0/0)#
```

23.12.9. Config Parameters for User SIP Protocol of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# ont voip sip-user-config <i>port-id ont-id pots ont-pots-port-id user-account user-name user-password</i>
View	EPON interface view
Description	This command is used for configure the user parameters of the SIP protocol of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ont-pots-port-id</i>	ONU POTS port, range for1-2
<i>user-account</i>	User phone number,support 1-16 characters
<i>user-name</i>	SIP port user. Support for 1-32 characters
<i>user-password</i>	SIPport password. Support for 1-16 characters

【Example】

Example1 : Configure the user parameters of the SIP protocol of the voice module of the PON5 port ONU1.

```
OLT(config-interface-epon-0/0)# ont voip sip-user-config 5 1 pots 1 555 test test
OLT(config-interface-epon-0/0)#
```

23.12.10. Show Basic Information about the ONU Voice Module.

Command	OLT(config-interface-epon-0/0)# show ont voip iad-info <i>port-id ont-id</i>
View	Epon view
Description	This command is used for show information about the voice protocol, software version, and number of ports currently supported by the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Show PON7 ONU7 voice module.

```

OLT(config-interface-epon-0/0)# show ont voip iad-info 7 7
-----
Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 7
iad mac-address : E0:67:B3:00:00:BB
protocolSupported : SIP
software-version : V1.0.1
software-time   : 20180417111656
voip-pots-num   : 2
-----

OLT(config-interface-epon-0/0)#
    
```

23.12.11. Show the POTS Port Status of the ONU Voice Module User.

Command	OLT(config-interface-epon-0/0)# show ont voip pots-status <i>port-id ont-id pots ont-pots-port-id</i>
View	Epon view
Description	This command is used for show the POTS port status of the ONU voice module user.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ONT-Pots-Port-ID</i>	ONU POTS port, range for1-2

【Example】

Example 1: Show the POTS port status of the voice module user of the PON7 port ONU7.

```

OLT(config-interface-epon-0/0)# show ont voip pots-status 7 7 pots 1
-----
Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 1
POTS-ID        : 1
Admin-state     : Disable
IADPots-State   : Notactivated
IADPots-ServiceState : Endlocal
IADPots-CodeMode : Unknown
-----

OLT(config-interface-epon-0/0)#
    
```

23.12.12. Show the Parameters of the Fax/Modem Service.

Command	OLT(config-interface-epon-0/0)# show ont voip fax-modem port-id ont-id
View	Epon view
Description	This command is used for show the parameter configuration of the fax/modem service of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Show fax/modem service parameters of PON7 port ONU7.

```

OLT(config-interface-epon-0/0)# show ont voip fax-modem 7 7
-----
Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 7
FaxModem-Mode  : T30
FaxModem-Control : Nego
-----
OLT(config-interface-epon-0/0)#
    
```

23.12.13. Show Global Parameters of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip global-config port-id ont-id
View	Epon view
Description	This command is used for show global parameters of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: show global parameters of the PON7 ONU7 voice module.

```

OLT(config-interface-epon-0/0)# show ont voip global-config 7 7
-----
Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 7
    
```

```
Voice ip mode          : static
Ip address            : 0.0.0.0
Netmask               : 0.0.0.0
Default gateway      : 0.0.0.0
Voice tag-mode       : transparent
Cvlan                 : 0
Svlan                 : 0
Priority               : 0
-----
OLT(config-interface-epon-0/0)#
```

23.12.14. Show the Parameters of the H.248 Protocol of the ONU

Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip h248-config <i>port-id ont-id</i>
View	Epon view
Description	This command is used for show the parameters of the H.248 protocol of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Show the parameters of the H.248 protocol of the PON7 ONU7 voice module.

```
OLT(config-interface-epon-0/0)# show ont voip h248-config 7 7
-----
Frame/Slot          : 0/0
Port                 : 7
ONT-ID              : 7
H248Param-MGPortNum : 2944
H248Param-MGCIP     : 0.0.0.0
H248Param-MgcComPortNo : 2944
H248Param-ActiveMGC : active
H248Param-regMode   : ip Address
H248Param-mid       :
H248Param-MGCBackupIP : 0.0.0.0
H248Param-MGCBackupComPortNo : 2944
H248Param-Heartbeatmode :
H248Param-Heartbeatcycle : 90
H248Param-Heartbeatcount : 0
```

```
-----
OLT(config-interface-epon-0/0)#
```

23.12.15. Show the Parameters of the H.248 RTP TID of the ONU

Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip h248-rtp-tid <i>port-id ont-id</i>
View	Epon view
Description	This command is used for show the parameter configuration under the H.248 RTP TID of the ONU voice module. But not to the onu query, for the query olt local configuration. Query RTP TID number, prefix, alignment and number of bits and other information.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Show the parameter configuration under H.248 RTP TID of the PON7 ONU7 voice module.

```
OLT(config-interface-epon-0/0)# show ont voip h248-rtp-tid 7 7
-----
Frame/Slot           : 0/0
Port                 : 7
ONT-ID               : 7
H248RtpTid-num      : 1
H248RtpTid-prefix   : test
H248RtpTid-digit    : 1
H248RtpTid-mode     : no-alignment
H248RtpTid-length   : 8
-----
OLT(config-interface-epon-0/0)#
```

23.12.16. Show the Parameters of the H.248-rtp-tid-info of the ONU

Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip h248-rtp-tid-info <i>port-id ont-id</i>
----------------	--



View	Epon view
Description	This command is used for show the parameter configuration under H.248-rtp-tid-info of the ONU voice module, and query the RTP TID name.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Show the parameter configuration of H.248-rtp-tid-info on the PON7 ONU7 voice module.

```

OLT(config-interface-epon-0/0)# show ont voip h248-rtp-tid-info 7 7
-----
Frame/Slot           : 0/0
Port                 : 7
ONT-ID               : 7
H248RtpTid-num      : 0
H248RtpTid-firstname : RTP/00000
-----
OLT(config-interface-epon-0/0)#
    
```

23.12.17. Show the H.248 User TID Parameters of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip h248-user-tid <i>port-id ont-id pots ONT-Pots-Number</i>
View	Epon view
Description	This command is used for shw the H.248 User TID parameters of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ONT-Pots-Number</i>	ONU POTS port, range for1-2

【Example】

Example 1: Show the H.248-User-TID parameter of the voice module of the PON7 ONU7.

```

OLT(config-interface-epon-0/0)# show ont voip h248-user-tid 7 7 pots 1
-----
    
```




```

Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 7
POTS-ID        : 1
H248-UserTid   : AG58900
-----
OLT(config-interface-epon-0/0)#
    
```

23.12.18. Show the Running Status of the IAD under the H.248

Protocol of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip iad-status port-id ont-id
View	Epon view
Description	This command is used for show the running status of the IAD under the H.248 protocol of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ONT-Pots-Number</i>	ONU POTS port, range for1-2

【Example】

Example 1:Show the running status of the IAD under the H.248 protocol of the voice module of the PON7 ONU7.

```

OLT(config-interface-epon-0/0)# show ont voip iad-status 7 7
-----
Frame/Slot      : 0/0
Port            : 7
ONT-ID         : 7
iad state       : re-registration
-----
OLT(config-interface-epon-0/0)#
    
```

23.12.19. Show the Parameters of the SIP Protocol of the ONU Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip sip-config <i>port-id ont-id</i>
View	Epon view
Description	This command is used for show the parameters of the SIP protocol of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Show the parameters of the SIP protocol of the voice module of the PON7 ONU7.

```

OLT(config-interface-epon-0/0)# show ont voip sip-config 7 7
-----
Frame/Slot           : 0/0
Port                 : 7
ONT-ID               : 7
SipConfig-MGPortNo   : 5060
SipConfig-proxyIp    : 192.168.2.201
SipConfig-proxyPortNo : 5060
SipConfig-activeSipProxyServer : 192.168.2.201
SipConfig-outBoundIp : 192.168.2.201
SipConfig-outBoundPort : 5060
SipConfig-regIp      : 192.168.2.201
SipConfig-regPortNo  : 5060
SipConfig-regInterval : 3600s
SipConfig-backupProxyIp : 0.0.0.0
SipConfig-backupProxyPort : 5060
SipConfig-backupRegIp : 0.0.0.0
SipConfig-backupRegPort : 5060
SipConfig-Heartbeatmode : enable
SipConfig-Heartbeatcycle : 60
SipConfig-Heartbeatcount : 3
-----
OLT(config-interface-epon-0/0)#
    
```

23.12.20. Show the User Parameters of the SIP Protocol of the ONU

Voice Module

Command	OLT(config-interface-epon-0/0)# show ont voip sip-user-config <i>port-id ont-id pots ONT-Pots-Number</i>
----------------	---



View	Epon view
Description	This command is used for show the user parameters of the SIP protocol of the ONU voice module.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64
<i>ONT-Pots-Number</i>	ONU POTS port, range for1-2

【Example】

Example 1: Show the user parameters of the SIP protocol of the voice module of the PON7 ONU7.

```

OLT(config-interface-epon-0/0)# show ont voip sip-user-config 7 7 pots 1
-----
Frame/Slot          : 0/0
Port                 : 7
ONT-ID              : 7
POTS-ID             : 1
SipUser-account     : 897
SipUser-user        : 897
SipUser-password    : 123456
-----
OLT(config-interface-epon-0/0)#
    
```

23.13. Config the DBA Queue Set of the ONU

23.13.1. Config Queue Thresholds for DBA Queue Sets

Command	OLT(config-interface-epon-0/0)# ont dba-threshold <i>port-id ont-id Queue-set-index (q1 Threshold q2 Threshold q3 Threshold q4 Threshold q5 Threshold q6 Threshold q7 Threshold q8 Threshold)</i>
View	Epon view
Description	This command is used for configure the queue threshold of the DBA queue set in the ONT line profile. Use this command when you need to configure the queue threshold of the DBA queue set in the ONT line profile.
<i>port-id</i>	PON port id,range for 1-16

<i>ont-id</i>	ONT id,range for 1-64
<i>Queue-set-index</i>	DBA queue set index,range for 1-4
q1 q2 q3 q4 q5 q6 q7 q8	DBA queue
<i>Threshold</i>	Threshold,range for 0-65535

【Example】

Example 1: Config the threshold bit 100 of DBA queue 1 of ONT1 on the PON5 interface.

```
OLT(config-interface-epon-0/0)# ont dba-threshold 5 1 1 q1 100
```

```
OLT(config-interface-epon-0/0)#
```

23.13.2. Delete queue thresholds for DBA queue sets

Command	OLT(config-interface-epon-0/0)# no ont dba-threshold <i>port-id ont-id</i>
View	Epon view
Description	This command is used for delete queue threshold for DBA queue sets.
<i>port-id</i>	PON port id,range for 1-16
<i>ont-id</i>	ONT id,range for 1-64

【Example】

Example 1: Delete the DBA queue sets of PON7 ONU1.

```
OLT(config-interface-epon-0/0)# no ont dba-threshold 7 1
```

Restore to the profile configuration successfully

```
OLT(config-interface-epon-0/0)#
```

24. OLT Log Management and Query

24.1. Add Syslog Record Server

Command	OLT(config)# loghost add <ip-address> <hostname>
View	Config view
Description	This command is used for add log server.Device will generate lots of log info when it is in running,but the storage space of device is limited,when it needs to set log server to collect the log info,using

	this command.After successful adding the log server,some of important log info of device will be recorded in this host by Syslog mechanism
<ip-address>	IP address of syslog server
<Hostname>	Name of syslog server.It used to distinct with other syslog server and uniquely identify the syslog server.

【 Example 】

Example 1: Add syslog server,its ip is 192.168.1.223,server name is log.

```
OLT(config)#loghost add 192.168.1.223 log
OLT(config)#
```

24.2. Delete Syslog Record Server

Command	OLT(config)# loghost delete ip <ip-address> name <hostname>
View	Config view
Description	This command is used for delete syslog server.when the syslog server is unnecessary or its ip address has been changed,this command can delete the log server.after that,we can add new log server or reset the old log server's ip.
<ip-address>	IP address of syslog server
<Hostname>	Name of syslog server.It used to distinct with other syslog server and uniquely identify the syslog server.

【 Example 】

Example 1: Delete the syslog server,its ip is 192.168.2.245,server name is test.

```
OLT(config)#loghost delete ip 192.168.2.245 name test
Delete syslog host succeeded!
OLT(config)#
```

24.3. Enable or Disable Syslog Record to Server

Command	OLT(config)# loghost operlog {enable disable}
----------------	--



View	Config view
Description	This command is used for set the switch of whether the olt log will transmit to log server.
{enable disable } }	Enable:olt log will transmit to log server Disable:olt log will not transmit to log server

【 Example 】

Example 1: olt log won't transmit to log server

```
OLT(config)#loghost operlog disable

OLT(config)#
```

24.4. Enable or Disable Alarmlog Record to Server

Command	OLT(config)# loghost alarmlog {enable disable}
View	Config view
Description	This command is used for set the switch of whether the alarmlog of olt will transmit to log server.
{enable disable } }	Enable:alarmlog of olt will transmit to log server. Disable:alarmlog of olt won't transmit to log server.

【 Example 】

Example 1: Set alarmlog of olt won't transmit to log server.

```
OLT(config)#loghost alarmlog disable

OLT(config)#
```

24.5. Active Syslog Record server

Command	OLT(config)# loghost activate ip<ip-address> name <hostname>
View	Config view
Description	This command is used for active the host of log server.When setting the control level of log host info output or it needs to active the switch of log output,using this command.System will report the log to the corresponding host only after the log host is active successfully.
<ip-address>	IP address of syslog server
<Hostname>	Name of syslog server.It used to distinct with other syslog server and



	uniquely identify the syslog server.
--	--------------------------------------

【 Example 】

Example 1: Active the syslog server,its ip is 192.168.2.223,server name is loghost.

```
OLT(config)#loghost activate ip 192.168.2.223 name loghost
Activate syslog host succeeded!

OLT(config)#
```

24.6. Deactive Syslog Record Server

Command	OLT(config)# loghost deactivate ip <ip-address> name <hostname>
View	Config view
Description	This command is used for deactive the host of log server.When an active log host is standing off and it needs to change the state of this log host,using this command.After setting,system won't report the log info to the log host.
<ip-address>	IP address of syslog server
<Hostname>	Name of syslog server.It used to distinct with other syslog server and uniquely identify the syslog server.

【 Example 】

Example 1: Deactive the syslog server,its ip is 192.168.2.223,server name is loghost.

```
OLT(config)#loghost deactivate ip 192.168.2.223 name loghost
Deactivate syslog host succeeded!

OLT(config)#
```

24.7. Show Syslog Record Server Config Status

Command	OLT(config)# show loghost list
View	Config view
Description	This command is used for show the configuration info of loghost.including host ip address,host name,host state and etc.

【 Example 】

Example 1: Show the configuration info of loghost

```
OLT(config)#show loghost list
-----
IP address Host name Terminal state
192.168.2.223 loghost active
-----
OLT(config)#
```

24.8. Backup OLT Log

Command	OLT(config)# backup log ftp <server-ip-address> <user-name> <user-password> <filename>
View	Enable view,config view
Description	This command is used for save the log to ftp server by manually.
<server-ip-address>	IP address of ftp server
<user-name>	User name of ftp server
<user-password>	Password of ftp server
<filename>	The name of the backup log

【Example】

Example 1 : Save the log to ftp server 192.168.1.223,user name is admin,password is admin,file name is log.

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

24.9. Erase OLT Log

Command	OLT(config)# erase log
View	Config view
Description	This command is used for delete the log of olt

【Example】

Example 1: Erase the log of olt.

```
OLT(config)#erase log
```



```
OLT(config)#
```

24.10. Show OLT Log

Command	OLT(config)# show log
View	enable view,config view
Description	Show all the log of olt

【Example】

Example 1: Show all the log of olt

```
OLT(config)#show log
2000/01/03 11:39:16[root@Console:13]logoff
2000/01/03 11:44:05[root@192.168.5.70:43]logoff
2000/01/03 12:33:20[root@192.168.5.70:43]logon via Telnet successfully
2000/01/03 12:33:21[192.168.5.70@root]cmd:enable
2000/01/03 12:33:22[192.168.5.70@root]cmd:config
2000/01/03 12:33:31[192.168.5.70@root]cmd:interface link-aggregation
2000/01/03 12:38:54[root@192.168.5.70:43]logoff
OLT(config)#
```

25. OLT Alarm Management and Query

25.1. Clear Specified Active Alarm Entry

Command	OLT(config)# alarm active clear <alarm-raising-number>
View	Config view
Description	This command is used for clear the specified active alarm entry
<alarm-raising-number>	Clear the active alarm according to alarm-raising-number.range for 1-4294967295.alarm-raising-number needs to use the follow command to show its detail info: alarm output detail on show alarm active all

【Example】

Example 1: Clear active alarm 2.

```
OLT(config)#alarm active clear 2
OLT(config)#
```

25.2. Clear Active Alarm by Specified Alarmlevel

Command	OLT(config)# alarm active clear alarmlevel<1-4>
View	Config view
Description	This command is used for clear active alarm by specified alarmlevel
<1-4>	1- Critical 2- major 3- minor 4- warning

【Example】

Example 1: Clear the warning active alarm

OLT(config)#alarm active clear alarmlevel 4
OLT(config)#

25.3. Clear Active Alarm by Specified Board

Command	OLT(config)# alarm active clear alarmparameter board <F/S>
View	Config view
Description	This command is used for clear active alarm by specified board.
<F/S>	Frame/slot:the default is 0/0

【Example】

Example 1: Clear active alarm in 0/0.

OLT(config)#alarm active clear alarmparameter board 0/0
OLT(config)#

25.4. Clear Active Alarm by Specified GE Port

Command	OLT(config)# alarm active clear alarmparameter ge <F/S/P>
View	Config view
Description	This command is used for clear active alarm by specified GE port
<F/S/P>	Frame/slot/ge port id,range for 0/0/1–0/0/8



【 Example 】

Example 1: Clear the active alarm of ge1.

```
OLT(config)#alarm active clear alarmparameter ge 0/0/1

OLT(config)#
```

25.5. Clear Active Alarm by Specified PON Port

Command	OLT(config)# alarm active clear alarmparameter pon <F/S/P>
View	Config view
Description	This command is used for clear active alarm by specified pon port
<F/S/P>	Frame/slot/pon port id,range for 0/0/1–0/0/16

【 Example 】

Example 1: Clear the active alarm of pon 1.

```
OLT(config)#alarm active clear alarmparameter pon 0/0/1

OLT(config)#
```

25.6. Clear Active Alarm by Specified XGE Port

Command	OLT(config)# alarm active clear alarmparameter xge <F/S/P>
View	Config view
Description	This command is used for clear active alarm by specified XGE port
<F/S/P>	Frame/slot/xge port id,range for 0/0/1–0/0/2

【 Example 】

Example 1: Clear the active alarm of xge 1.

```
OLT(config)#alarm active clear alarmparameter xge 0/0/1

OLT(config)#
```

25.7. Config Alarmlevel for Specified Alarm

Command	OLT(config)# alarm alarmlevel<alarm-id> <1-4>
View	Config view
Description	This command is used for set alarmlevel for specified alarm



<alarm-id>	alarm-raising-number.range for 1-4294967295
<0-4>	0- Default 1- critical 2- major 3- minor 4- warning

【Example】

Example 1: Set the alarmlevel of 102th alarm as 1(critical).

```
OLT(config)#alarm alarmlevel 102 1
OLT(config)#
```

25.8. Enable and Config Alarm Jitter-interval Time

Command	OLT(config)# alarm jitter-interval<interval>
View	Config view
Description	This command is used for enable and set alarm jitter-interval.When this command is executed,alarm of the system will wait for a jitter-interval and then report it to network management,if the alarm state has recover during a jitter-interval,this alarm won't be reported to network management.
<interval>	alarm interval,range for 1-60,unit is second.

【Example】

Example 1: Set alarm jitter-interval as 3s.

```
OLT(config)#alarm jitter-interval 3
OLT(config)#
```

25.9. Enable or Disable Alarm Jitter-proof Function

Command	OLT(config)# alarm jitter-proof (disable enable)
View	Config view
Description	This command is used for turn on/off alarm jitter-proof function.
<switch>	Enable:turn on function Disable: turn off function

【Example】

Example 1: Turn off alarm jitter-proof function

```
OLT(config)#alarm jitter-proof disable
OLT(config)#
```

25.10. Enable or Disable Specified Alarm Record Output

Command	OLT(config)# alarm output alarmid <alarm-id> {enable disable}
View	Config view
Description	This command is enable and disable the specified alarm record output. When state is "enable", permitting the specified alarm record reporting to EMS. When state is "disable", denying the specified alarm record reporting to EMS.
<alarm-id>	alarm ID, the value range is 1-4294967294.
{enable disable } }	Enable: turn on function Disable: turn off function

【Example】

Example 1: Disable the 102 alarm record output.

```
OLT(config)#alarm output alarmid 102 disable
OLT(config)#
```

25.11. Enable or Disable Specified Level Alarm Output

Command	OLT(config)# alarm output alarmlevel <alarmlevel> {enable disable}
View	Config view
Description	This command is enable or disable the specified level alarm record output. When state is "enable", permitting the specified level alarm record reporting to EMS. When state is "disable", denying the specified level alarm record reporting to EMS.
<alarm-level>	1- Critical 2- Major 3- Minor 4- Warning
{enable disable } }	Enable: turn on function Disable: turn off function

【Example】

Example 1: Disable level 4 alarm output.

```
OLT(config)#alarm output alarmlevel 4 disable
OLT(config)#
```



25.12. Enable or Disable All Alarms Output

Command	OLT(config)# alarm output all {enable disable}
View	Config view
Description	This command is enable or disable all alarm output. When state is "enable", permitting all alarms reporting to EMS. When state is "disable", denying all alarms reporting to EMS.
{enable disable } }	Enable: turn on function Disable: turn off function

【Example】

Example 1: Disable all alarms output.

```
OLT(config)#alarm output all disable
OLT(config)#
```

25.13. Enable or Disable Detail Alarm Output

Command	OLT(config)# alarm output detail {enable disable}
View	Config view
Description	This command is used for turn on or off alarm detail input function. When state is "on", outputting detail alarm information. When state is "off", outputting simple alarm information.
{enable disable } }	on: enable off: disable

【Example】

Example 1: Turn off alarm output detail information function.

```
OLT(config)#alarm output detail disable
OLT(config)#
```

25.14. Show Specified Active Alarm Record

Command	OLT(config)# show alarm active alarmid <alarm-id>
View	Config view
Description	This command is use to view the specified active alarm record.
<alarm-id>	Alarm-ID, the value range is 1-4294967294.

【Example】

Example 1: View active alarm record of alarm-id 204.

```

OLT(config)#show alarm active alarmid 204
ALARM 15 Major 204 2000-01-02 02:22:51
ALARM NAME:pon port link down
INSTANCE:PON FrameID:0,SlotID:0,PortID:3
REPEAT TIME:1
FIRST OCCUR:2000-01-02 02:22:51
LAST OCCUR:2000-01-02 02:22:51
DESCRIPTION:
total number:1
OLT(config)#
    
```

25.15. Show Active Alarm Logs by Specified Level

Command	OLT(config)# show alarm active alarmlevel <1-4>
View	Config view
Description	This command is used for view active alarm logs of the specified level.
<1-4>	1- Critical 2- major 3- minor 4- warning

【Example】

Example 1: View active alarm logs of level 2.

```

OLT(config)#show alarm active alarmlevel 2
ALARM 15 Major 204 2000-01-02 02:22:51
ALARM NAME:pon port link down
INSTANCE:PON FrameID:0,SlotID:0,PortID:3
REPEAT TIME:1
FIRST OCCUR:2000-01-02 02:22:51
LAST OCCUR:2000-01-02 02:22:51
DESCRIPTION:
total number:1
OLT(config)#
    
```

25.16. Show Active Alarm Logs by Specified Board

Command	OLT(config)# show alarm active alarmparameter board <F/S>
View	Config view
Description	This command is used for view active alarm logs of the specified board.

<F/S>	Card slot number,the value is 0/0.
--------------------	------------------------------------

【Example】

Example 1: View active alarm logs of board 0/0.

```
OLT(config)#show alarm active alarmparameter board 0/0
ALARM 15 Major 204 2000-01-02 02:22:51
ALARM NAME:pon port link down
INSTANCE:PON FrameID:0,SlotID:0,PortID:3
REPEAT TIME:1
FIRST OCCUR:2000-01-02 02:22:51
LAST OCCUR:2000-01-02 02:22:51
DESCRIPTION:
total number:1
OLT(config)#
```

25.17. Show Active Alarm Logs by Specified GE Port

Command	OLT(config)# show alarm active alarmparameter ge <F/S/P>
View	Config view
Description	This command is use to view active alarm logs of the specified GE port.
<F/S/P>	GE port number,the value range is 0/0/1–0/0/8.

【Example】

Example 1: View active alarm logs of ge8 port.

```
OLT(config)#show alarm active alarmparameter ge 0/0/8
ALARM 18 Critical 203 2000-01-02 02:48:48
ALARM NAME:sni port link down
INSTANCE:GE FrameID:0,SlotID:0,PortID:8
REPEAT TIME:1
FIRST OCCUR:2000-01-02 02:48:48
LAST OCCUR:2000-01-02 02:48:48
DESCRIPTION:
total number:1
OLT(config)#
```

25.18. Show Active Alarm Logs by Specified PON Port

Command	OLT(config)# show alarm active alarmparameter pon <F/S/P>
View	Config view
Description	This command is used for view active alarm logs of the specified PON

	port.
<F/S/P>	Pon port number,the value range is 0/0/1–0/0/16.

【 Example 】

Example 1: View active alarm logs of pon 3 port

```
OLT(config)#show alarm active alarmparameter pon 0/0/3
ALARM 15 Major 204 2000-01-02 02:22:51
ALARM NAME:pon port link down
INSTANCE:PON FrameID:0,SlotID:0,PortID:3
REPEAT TIME:1
FIRST OCCUR:2000-01-02 02:22:51
LAST OCCUR:2000-01-02 02:22:51
DESCRIPTION:
total number:1
OLT(config)#
```

25.19. Show Active Alarm Logs by Specified XGE Port

Command	OLT(config)# show alarm active alarmparameter xge <F/S/P>
View	Config view
Description	This command is used for view active alarm logs of the specified XGE port.
<F/S/P>	Card slot number,the value range is 0/0/1–0/0/2.

【 Example 】

Example 1: View active alarm logs of xge1 port.

```
OLT(config)#show alarm active alarmparameter xge 0/0/1
ALARM 26 Critical 131082 2000-01-02 04:18:33
ALARM NAME:The sni port is unplugged
INSTANCE:XGE FrameID:0,SlotID:0,PortID:1
REPEAT TIME:1
FIRST OCCUR:2000-01-02 04:18:33
LAST OCCUR:2000-01-02 04:18:33
DESCRIPTION:
total number:1
OLT(config)#
```

25.20. Show All Active Alarm Log

Command	OLT(config)# show alarm active all
View	Config view



Description	This command is used for view all alarm active logs.
--------------------	--

【Example】

Example 1: View all alarm active logs.

```

OLT(config)#show alarm active all
ALARM 28 Critical 131082 2000-01-02 04:18:53
ALARM NAME:The sni port is unplugged
INSTANCE:XGE FrameID:0,SlotID:0,PortID:2
DESCRIPTION:
ALARM 26 Critical 131082 2000-01-02 04:18:33
ALARM NAME:The sni port is unplugged
INSTANCE:XGE FrameID:0,SlotID:0,PortID:1
DESCRIPTION:
ALARM 23 Critical 203 2000-01-02 04:17:40
ALARM NAME:sni port link down
INSTANCE:GE FrameID:0,SlotID:0,PortID:5
DESCRIPTION:
ALARM 18 Critical 203 2000-01-02 02:48:48
ALARM NAME:sni port link down
INSTANCE:GE FrameID:0,SlotID:0,PortID:8
DESCRIPTION:
ALARM 15 Major 204 2000-01-02 02:22:51
ALARM NAME:pon port link down
INSTANCE:PON FrameID:0,SlotID:0,PortID:3
DESCRIPTION:
total number:5
OLT(config)#
    
```

25.21. Show Specified Alarm History Record

Command	OLT(config)# show alarm history alarmid <alarm-id>
View	Config view
Description	This command is used for view the specified alarm history records
<alarm-id>	Alarm ID,the value range is 1-4294967294.

【Example】

Example 1: View alarm history records of alarm-ID 204.

```

OLT(config)#show alarm history alarmid 204
ALARM 35 Cleared 204 2000-01-02 07:05:07
ALARM NAME:pon port link up
INSTANCE:PON FrameID:0,SlotID:0,PortID:1
DESCRIPTION:
ALARM 34 Major 204 2000-01-02 07:02:33
    
```



```
ALARM NAME:pon port link down
INSTANCE:PON FrameID:0,SlotID:0,PortID:1
DESCRIPTION:
ALARM 32 Cleared 204 2000-01-02 07:01:39
ALARM NAME:pon port link up
INSTANCE:PON FrameID:0,SlotID:0,PortID:1
DESCRIPTION:
```

25.22. Show Alarm History Record by Specified Level

Command	OLT(config)# show alarm history alarmlevel<1-4>
View	Config view
Description	This command is used for view alarm history records of the specified level.
<1-4>	1- Critical 2- major 3- minor 4- warning

【Example】

Example 1: View alarm history records of level 4.

```
OLT(config)#show alarm history alarmlevel 4
ALARM 38 Cleared 401 2000-01-02 07:07:06
ALARM NAME:uni link up
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
ALARM 37 Warning 401 2000-01-02 07:06:57
ALARM NAME:uni link down
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
ALARM 30 Cleared 401 2000-01-02 05:57:49
ALARM NAME:uni link up
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:3,SlotID:0,Uni:1
DESCRIPTION:
```

25.23. Show Alarm History Record by Specified Board

Command	OLT(config)# show alarm history alarmparameter board <F/S>
View	Config view
Description	This command is used for view alarm history records of the specified board.



<F/S>	Card slot number,the value is 0/0.
--------------------	------------------------------------

【Example】

Example 1: View alarm history records of board 0/0.

```
OLT(config)#show alarm history alarmparameter board 0/0
ALARM 38 Cleared 401 2000-01-02 07:07:06
ALARM NAME:uni link up
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
ALARM 37 Warning 401 2000-01-02 07:06:57
ALARM NAME:uni link down
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
ALARM 36 Critical 403 2000-01-02 07:05:47
ALARM NAME:Onu ethernet port autoNegotiation failure
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:5,SlotID:0,Uni:1
DESCRIPTION:
```

25.24. Show Alarm History Record by Specified GE Port

Command	OLT(config)# show alarm history alarmparameter ge <F/S/P>
View	Config view
Description	This command is used for view alarm history records of the specified GE port
<F/S/P>	GE port number,the value range is 0/0/1–0/0/8.

【Example】

Example 1: View alarm history records of ge8 port.

```
OLT(config)#show alarm history alarmparameter ge 0/0/8
ALARM 18 Critical 203 2000-01-02 02:48:48
ALARM NAME:sni port link down
INSTANCE:GE FrameID:0,SlotID:0,PortID:8
DESCRIPTION:
ALARM 17 Cleared 203 2000-01-02 02:48:05
ALARM NAME:sni port link up
INSTANCE:GE FrameID:0,SlotID:0,PortID:8
DESCRIPTION:
```

25.25. Show Alarm History Record by Specified PON Port

Command	OLT(config)# show alarm history alarmparameter pon <F/S/P>
View	Config view

Description	This command is used for view alarm history records of the specified PON port.
<F/S/P>	Pon port number,the value range is 0/0/1–0/0/16.

【Example】

Example 1: View alarm history records of pon1 port.

```
OLT(config)#show alarm history alarmparameter pon 0/0/1
ALARM 40 Cleared 401 2000-01-02 23:42:34
ALARM NAME:uni link up
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
ALARM 39 Warning 401 2000-01-02 23:42:31
ALARM NAME:uni link down
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
```

25.26. Show Alarm History Record by Specified XGE Port

Command	OLT(config)# show alarm history alarmparameter xge <F/S/P>
View	Config view
Description	This command is used for view alarm history records of the specified XGE port.
<F/S/P>	Card slot number,the value range is 0/0/1–0/0/2.

【Example】

Example 1: View alarm history records of xge1 port.

```
OLT(config)#show alarm history alarmparameter xge 0/0/1
ALARM 26 Critical 131082 2000-01-02 04:18:33
ALARM NAME:The sni port is unplugged
INSTANCE:XGE FrameID:0,SlotID:0,PortID:1
DESCRIPTION:
ALARM 25 Cleared 131082 2000-01-02 04:18:15
ALARM NAME:The sni port is plugged
INSTANCE:XGE FrameID:0,SlotID:0,PortID:1
DESCRIPTION:
```

25.27. Show All Alarm History Record

Command	OLT(config)# show alarm history all
View	Config view

Description	This command is use to view all alarm history records.
--------------------	--

【Example】

Example 1: View all alarm history records.

```
OLT(config)#show alarm history all
ALARM 40 Cleared 401 2000-01-02 23:42:34
ALARM NAME:uni link up
INSTANCE:FramelD:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
ALARM 39 Warning 401 2000-01-02 23:42:31
ALARM NAME:uni link down
INSTANCE:FramelD:0,SlotID:0,PortID:1,OnuID:4,SlotID:0,Uni:1
DESCRIPTION:
```

25.28. Show Alarm Jitter-proof Interval Time

Command	OLT(config)# show alarm jitter
View	Config view
Description	This command is used for view alarm jitter-proof interval.

【Example】

Example 1: View OLT’s alarm jitter-proof interval

```
OLT(config)#show alarm jitter
Jitter-Interval:5s
OLT(config)#
```

25.29. Show Alarm Basic Information

Command	OLT(config)# show alarm list
View	Config view
Description	This command is used for view alarm basic information.

【Example】

Example 1: View OLT’s alarm basic information.

```
OLT(config)#show alarm list
-----
AlarmId Output Level Def Level Name
102 Yes Major Major The board reset
104 Yes Warning Warning The temperature is abnormal
105 Yes Major Major The fan is abnormal
107 Yes Major Major The device power fault
201 Yes Critical Critical Pon port loopback link
202 Yes Major Major Pon los alarm raise
```



203	Yes	Critical	Critical	sni port link down
204	Yes	Major	Major	pon port link down
205	Yes	Warning	Warning	The number of register llid is exceeded
206	Yes	Major	Major	long luminescence
301	Yes	Major	Major	onu critical event
302	Yes	Warning	Warning	onu exchange key fails
303	Yes	Critical	Critical	onu oam timeout
304	Yes	Major	Major	onu mac auth fails
305	Yes	Minor	Minor	the RX received power of the epon optical port is lower than the lower threshold
306	Yes	Minor	Minor	the RX received power of the epon optical port is higher than the higher threshold
307	Yes	Minor	Minor	the TX output power of the epon optical port is lower than the lower threshold
308	Yes	Minor	Minor	the TX output power of the epon optical port is higher than the higher threshold
310	Yes	Warning	Warning	onu power down
311	Yes	Minor	Minor	the downstream BER is higher than threshold
312	Yes	Minor	Minor	the downstream FER is higher than threshold
313	Yes	Minor	Minor	the upstream BER is higher than threshold
314	Yes	Minor	Minor	the upstream FER is higher than threshold
315	Yes	Major	Major	The performance statistics upper crossed
316	Yes	Major	Major	The performance statistics lower crossed
317	Yes	Minor	Minor	the temperature of the optical module is higher than the higher threshold
318	Yes	Minor	Minor	the temperature of the optical module is lower than the lower threshold
319	Yes	Minor	Minor	the voltage of the optical module is higher than the higher threshold
320	Yes	Minor	Minor	the voltage of the optical module is lower than the lower threshold
321	Yes	Warning	Warning	onu optical down
401	Yes	Warning	Warning	uni link down
402	Yes	Minor	Minor	loopback of onu port is detected
403	Yes	Critical	Critical	Onu ethernet port autoNegotiation failure
131082	Yes	Critical	Critical	The sni port is unplugged
131083	Yes	Critical	Critical	Sni port loopback link

OLT(config)#				

26. OLT Event Management and Query

26.1. Config Event Level

Command	OLT(config)# event eventlevel <event-id> <0-4>
View	Config view
Description	This command is used for configure the specified event level.
<event-id>	Event ID,only on behalf of one event alarm
<0-4>	0- Default 1- critical 2- major 3- Minor 4- Warning

【 Example 】

Example 1: Configure event level 3 for event ID 10001

```
OLT(config)#event eventlevel 10001 3
OLT(config)#
```

26.2. Enable or Disable All Events Output

Command	OLT(config)# event output all {enable disable}
View	Config view
Description	This command is used for configure all event output in the CLI.When state is“enable”,all events can output in the CLI,or it can’t be
{enable disable } }	Enable:turn on function Disable:turn off function

【 Example 】

Example 1: Turn off all events output function.

```
OLT(config)#event output all disable
OLT(config)#
```

26.3. Enable or Disable Detail Event Output

Command	OLT(config)# event output detail {on off}
View	Config view
Description	This command is used for set the switch of event output detail function.When state is“on”,events can all output detail in the CLI.When state is“off”,thus outputting simple event information.
{on off}	on: enable off: disable

【 Example 】

Example 1: Turn on event output detail function.

```
OLT(config)#event output detail on
OLT(config)#
```

26.4. Enable or Disable Specified Event Output

Command	OLT(config)# event output eventid <eventid> {enable disable}
View	Config view
Description	This command is used for permit or deny the output of the specified event. When state is “enable”, permitting the output of the specified event in the terminal; when state is “disable”, denying the output of the specified event in the terminal.
<eventid>	Event ID, the value range is 1-4294967294.
{enable disable }	Enable: turn on function Disable: turn off function

【 Example 】

Example 1: Permit event 10001 output in the terminal.

```
OLT(config)#event output eventid 10001 enable
OLT(config)#
```

26.5. Enable or Disable Specified Level Event Output

Command	OLT(config)# event output eventlevel <eventlevel> {enable disable}
View	Config view
Description	This command is used for permit or deny the output of the specified level event. When state is “enable”, permitting the specified level event output in the terminal; when state is “disable”, denying the specified level event output in the terminal.
<eventlevel>	1- Critical 2- Major 3- Minor 4- Warning
{enable disable }	Enable: turn on function Disable: turn off function

【 Example 】

Example 1: Permit the event output of the level 3.

```
OLT(config)#event output eventlevel 3 enable
```

OLT(config)#

26.6. Show All Event History Record

Command	OLT(config)# show event history all
View	Config view
Description	This command is used for view all event history records.

【 Example 】

Example 1: View all event history event records.

```
OLT(config)#show event history all
EVENT 13 Warning 13002 2000-01-02 07:05:56
EVENT NAME:onu is offline
INSTANCE:FramelD:0,SlotID:0,PortID:1,OnuID:5
EVENT 12 Warning 13001 2000-01-02 07:05:43
EVENT NAME:onu is online
INSTANCE:FramelD:0,SlotID:0,PortID:1,OnuID:5
```

26.7. Show Specified Event History Record

Command	OLT(config)# show event history eventid <eventid>
View	Config view
Description	This command is used for view history record of the specified event.
<eventid>	Event ID,the value range is 1-4294967294.

【 Example 】

Example 1: View history record of event 13002.

```
OLT(config)#show event history eventid 13002
EVENT 14 Warning 13002 2000-01-03 05:27:27
EVENT NAME:onu is offline
INSTANCE:FramelD:0,SlotID:0,PortID:1,OnuID:4
DESCRIPTION:E067B312118A00012770
EVENT 13 Warning 13002 2000-01-02 07:05:56
EVENT NAME:onu is offline
INSTANCE:FramelD:0,SlotID:0,PortID:1,OnuID:5
DESCRIPTION:E067B300000100012770
```

26.8. Show Specified Level Event History Record

Command	OLT(config)# show event history eventlevel <eventlevel>
View	Config view



Description	This command is used for view history record of the specified level event.
<eventlevel>	1- Critical 2- Major 3- Minor 4- Warning

【 Example 】

Example 1: View history records of event level 4.

```
OLT(config)#show event history event level 4
EVENT 14 Warning 13002 2000-01-03 05:27:27
EVENT NAME:onu is offline
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4
DESCRIPTION:E067B312118A00012770
EVENT 13 Warning 13002 2000-01-02 07:05:56
EVENT NAME:onu is offline
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:5
DESCRIPTION:E067B300000100012770
```

26.9. Show Event History Record by Specified Board

Command	OLT(config)# show event history eventparameter board <F/S>
View	Config view
Description	This command is used for view the history records of the specified board
<F/S>	Board number,the value is 0/0.

【 Example 】

Example 1: View the event history records of the specified board 0/0.

```
OLT(config)#show event history eventparameter board 0/0
EVENT 14 Warning 13002 2000-01-03 05:27:27
EVENT NAME:onu is offline
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:4
DESCRIPTION:E067B312118A00012770
EVENT 13 Warning 13002 2000-01-02 07:05:56
EVENT NAME:onu is offline
INSTANCE:FrameID:0,SlotID:0,PortID:1,OnuID:5
DESCRIPTION:E067B300000100012770
```

26.10. Show Event History Record by Specified GE Port

Command	OLT(config)# show event history eventparameter ge <F/S/P>
----------------	--



View	Config view
Description	This command is used for view the event history record of the specified GE port.
<F/S/P>	GE port number,the value range is 0/0/1–0/0/8.

【Example】

Example 1: View the event history record of the specified ge8 port.

```
OLT(config)#show event history eventparameter ge 0/0/8
total number:0
OLT(config)#
```

26.11. Show Event History Record by Specified PON Port

Command	OLT(config)# show event history eventparameter pon <F/S/P>
View	Config view
Description	This command is used for view the event history records of the specified PON port
<F/S/P>	Pon port number,the value range is 0/0/1–0/0/16.

【Example】

Example 1: View the event history records of the pon1 port.

```
OLT(config)#show event history eventparameter pon 0/0/3
EVENT 7 Warning 13002 2000-01-02 02:22:51
EVENT NAME:onu is offline
INSTANCE:FrameID:0,SlotID:0,PortID:3,OnuID:2
DESCRIPTION:E067B301010100012770
EVENT 6 Warning 13001 2000-01-02 02:22:40
EVENT NAME:onu is online
INSTANCE:FrameID:0,SlotID:0,PortID:3,OnuID:2
DESCRIPTION:E067B301010100012708
```

26.12. Show Event History Record by Specified XGE Port

Command	OLT(config)# show event history eventparameter xge<F/S/P>
View	Config view
Description	This command is used for view the event history records of the specified XGE port
<F/S/P>	Slot number,the value range is 0/0/1-0/0/2.

【Example】



Example 1: View the event history records of xge1 port.

```
OLT(config)#show event history eventparameter xge 0/0/2
total number:0
OLT(config)#
```

26.13. Show Event Basic Information

Command	OLT(config)# show event list
View	Config view
Description	This command is used for view the basic information of the event.

【Example】

Example 1: view the basic information of the event

```
OLT(config)#show event list
-----
EventId Output Level Def Level Name
10001 Yes Minor Warning The device reset
13001 Yes Warning Warning onu is online
13002 Yes Warning Warning onu is offline
-----
OLT(config)#
```

27. Device Diagnostic Management

27.1. Ping Diagnostic Test

Command	OLT(config)# ping {<destination-ip> <hostname>}
View	Any view
Description	This command is used for testing network accessibility between device and target host.
<destination-ip> >	Destination IP address. There are five kinds of IP address, user can choose suitable IP address according to factual circumstance. Host IP address is not all 0 or 1, format for x.x.x.x.
<hostname>	Destination hostname

【Example】

Example 1: Ping destination IP address 192.168.5.50

```
OLT(config)#ping 192.168.5.50
PING 192.168.5.50(192.168.5.50):56 data bytes
64 bytes from 192.168.5.50:seq=0 ttl=64 time=0.449 ms
```

```
64 bytes from 192.168.5.50:seq=1 ttl=64 time=0.379 ms
64 bytes from 192.168.5.50:seq=2 ttl=64 time=0.365 ms
64 bytes from 192.168.5.50:seq=3 ttl=64 time=0.612 ms
---192.168.5.50 ping statistics---
4 packets transmitted,4 packets received,0%packet loss
round-trip min/avg/max=0.365/0.451/0.612 ms
OLT(config)#
```

25.2 Traceroute Diagnostic Test

Command	OLT(config)# traceroute {<destination-ip> <hostname>} hops <hops-id> timeout <time-id> tll <tll-id>
View	Any view
Description	Through traceroute,you can know about data packet transmission path from this host to the other end host
<Destination-IP> >	Destination IP address.There are five kinds of IP address,user can choose suitable IP address according to factual circumstance.Host IP address is not all 0 or 1,format for x.x.x.x.
<Hostname>	Destination hostname
<hops-id>	Passed max router numbers that data messages arrive final host
<time-id>	Wait for the time(unit millisecond)specified by timeout for each response
<tll-id>	Data packet Time-To-Live

【Example】

Example 1: traceroute destination IP address 192.168.5.50

```
OLT(config)#traceroute 192.168.5.50
traceroute to 192.168.5.50(192.168.5.50),30 hops max,38 byte packets
1 192.168.5.50 0.954 ms 0.473 ms 0.189 ms
OLT(config)#
```

Appendix 1

The processing of messages in different VLAN modes is as follows:

VLAN mode	Actions(in the inbound direction)		Actions(in the outbound direction)
	Untagged frame	Tagged frame	



Access	Tag the frame with the native VLAN tag.	<ul style="list-style-type: none"> Drop the frame if its VLAN id is the same as the native VLAN id. Drop the frame if its VLAN id is different from the native VLAN id 	Remove the native VLAN tag and send the frame
Trunk	Tag the frame with native VLAN tag.	<ul style="list-style-type: none"> Receive the frame if its VLAN is carried on the port Drop the frame if its VLAN is not carried on the port. 	<ul style="list-style-type: none"> Send the frame and removing the tag if the frame is the same as native VLAN id. Send the frame without removing the tag if its VLAN is carried on the port but is different from the native VLAN.
Hybrid			Send the frame if its VLAN is carried on the port. The frame is sent with the VLAN tag removed or intact depending on your configuration with the VLAN hybrid command.

Concluding Remarks

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