EPON OLT CLI User Manual

Contents

1 Overview

1.1 Introduction

This manual is applicable to Cortina Based EPON OLT products , This document is for those who perform all tasks for the EPON OLT once it has been successfully installed. Users of this Guide should understand EPON technology and have experience configuring EPON devices.

Cortina-Based OLT system could support inband and outband network management mode and EMS network management based on SNMP.

The user can use several different network interfaces to do network management, such as those listed below:

- SNMP Management
- CLI Management

This manual introduce CLI configuration function of EPON OLT.

In the initial setup step of OLT, there are two ways based on CLI management to login system:

- Terminal Emulation of CONSOLE port (RJ-45)
- Telnet of management port (RJ-45)

1.2 Command Explanations in each Section

Commands are usually presented in the following ways:

- Tables for specific functions or features that include important parameters
- Specific commands that are part of examples
- A table at the end of each Section that includes all commands and descriptions of all parameters.

1.3 Command Presentation in Examples

When a command is presented in an example, it follows the exact syntax and parameter values that match the

example configuration. If a command is very long, a (->) is used to note the command continues on the next line.

1.4 Command Syntax

The syntax rules for a Command and its parameters use the following conventions throughout this document:

- Blackface letter indicates command itself or command keyword
- "< >" The text inside it is the required parameters
- [] = Optional The text inside it is the optional parameters
- | = Option (OR) The multiple items which are divided are multi-select required parameters, indicating that must select one of them.
- "<x-y>" Valus rang from x to y. One is selected.

1.5 Editing Functions, Keystrokes, and Abbreviations

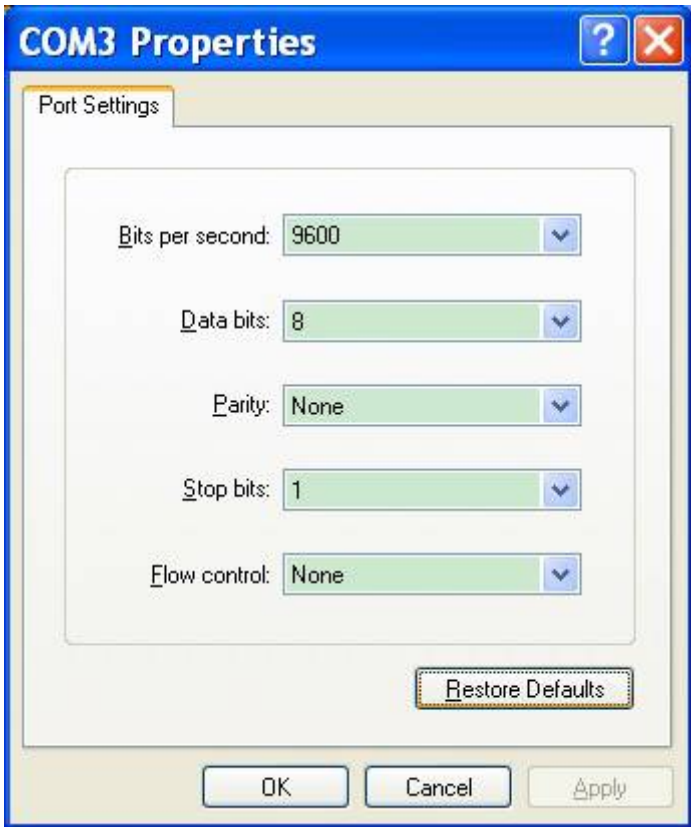
The product supports line editing, line recall, and abbreviations, so that command line input and editing can be done very quickly once command syntax and the line editing commands are learned.

Action	Key Sequence
Move cursor within command line	left and right arrow
Delete character to left of cursor	[Delete] or [Backspace]
Clear command line	[Ctrl/U]
Recall previous command in command history	CTRL/P or up arrow
Recall next command in command history	CTRL/N or down arrow
Automatically complete a partially entered command keyword	[Tab] or [Ctrl/I]

2 Cofiguration Preparation

2.1 Console Port Connection

There is a Console port in the front panel of Switch Control Card .The command line configuration interface is enabled via console port connecting to the NMS's superior terminal. Super terminal's basic configuration is as follows:



2.2 Network Connection

EPON OLT support inband management (CAT5 connect to ge1-ge8 port) and outband management
(CAT4 cable to management port).After Telnet to CLI interface ,we can manage the GEPON products.

Defualt outband(inband) network management IP:192.168.1.100

3 CLI Command Mode

OLT CLI use the layered command structure （Command mode） . Every command mode provides subset of CLI command. The available CLI command depends on those command modes which have been activated currently.

3.1 User Login EPON CLI System

System provide two login accounts default as follows:

Username	Password
admin	admin
guest	Null

After you log in successfully, the following interface pops up :

```
admin login

Username:admin
Password:*****

Entry level 2(manager) successfully!

epon#

------------------------------------------------------------------------
guest login

Username:guest

Entry level 1(visitor)

epon>
```

3.2 CLI Command Help

When the command lines shows : epon> or epon#, user can input the configuration command to mange or inquire the configuration information .

OLT CLI command provides various help and shortcut keys. Next table lists main shortcut keys of obtaining help and methods in CLI command.

CLI command Help

Method	**Function**
Type "?" in any CLI command level	Show all available commands
Partial command+"？"	Show the initial command list of the specific character string(There is no space between the command and the question mark)
Command+Space +"？"	Show the completer syntax and the brief instruction of command
Partial command +<tab>	System will automatically complete the command or keyword
Ctrl-P" or the up arrow key ↑	Invoke the executed command previously.

For example 1:

```
epon#?
 auth                - configure authentication mode for Olt
 igmp-snooping       - configure IGMP Snooping
 logout              - exit the CLI system
 mac-address         - ctrl-card dynamic mac address table management
 mirror              - configure switch mirror
 olt                 - configure OLT
 ping                - test that a remote host is reachable
 reset               - reset the values
 rmon                - configure RMON
 rstp                - rapid spanning tree protocol configuration
 show                - show system configuration
 swmode              - set basic switch mode
 swport              - enter switch port config mode
 system              - configure systerm
 tracert             - trace the route to host
 trunk               - enter trunk config mode
 vlan                - enter vlan config mode
```

For example 2:

```
epon# s?
swmode          swport          system          show
epon# s
```

For example 3:

```
epon#show + [ ? ]
 auth                - show olt auth mode
 igmp-snooping       - show igmp snooping configurations
```

```
 mac-address            - mac-address
 mirror                 - show switch mirror configurations
 olt                    - show olt's configuration
 qinq                   - show QinQ configuration
 rmon                   - show RMON
 rstp                   - Display RSTP information
 running-config         - show current running-configuration
 startup-config         - show current startup-configuration
 swmode                 - show swmode
 swport                 - display port attribute information
 system                 - show system configuration
 trunk                  - show trunk configuration
 vlan                   - show vlan configuration
```

3.3 Configure Terminal

The command mode allows the user to change equipment configuration. The changed configuration can be saved into OLT flash memory and used when system is started next time.

Configuration mode allows distributing and modifying each port separately for the specific parameters (Optical Line Terminal).

For example1: epon# swport ge1
System prompt is epon(GE-1)#

For example2: epon# olt 1
System prompt is epon(olt-1)#

ONU configuration mode is the sub-mode of configuration command mode of olt, and is used to configure the logical port parameters of ONU
For example: epon(olt-1)# onu 60
System prompt is epon(olt-1/onu-60)#

4 System Management

4.1 Change system user and password

Command Grammar	epon#**system user** ***<old-password>*** ***<new-user>*** ***<new-password>*** ***<comfirm-password>***
Function	Change system user and password
<old-password>	Old password
<new-user>	New username
<new-password>	New password
<comfirm-password>	Comfirm password

4.2 configure system hostname

Command Grammar	epon# **system hostname** ***<hostname>***
Function	configure system hostname
<hostname>	System hostname

【 Example 】

Example 1 ： setting OLT hostname is OLT

```
epon# system hostname OLT
OLT#
```

4.3 System Configuration File

Backup OLT Configuration File

Command Grammar	epon# **system configurations backup olt** ***<tftp-server>***
Function	Backup OLT configuration File to PC, firstly, the tftp server should be ready.
<tftp-server>	Tftp server ip address, eg: 192.168.1.130

【 Example 】

Example 1 ： Backup OLT configuration file to PC ：

```
epon# system configurations backup olt 192.168.2.133
Backup olt configurations file to host 192.168.2.133.
Remote filename: olt_cfg_backup_20000101055726.tar.gz.

epon#
```

Restore OLT configuration from PC

Command Grammar	epon# **system configurations download olt** ***<tftp-server>*** ***<filename>***
Function	Restore OLT configuration from PC, firstly, the tftp server and configurefile should be ready.
<tftp-server>	Tftp server ip address, eg: 192.168.1.130
<filename>	The Configuration File. eg: olt_cfg_backup_20000101055726.tar.gz

【 Example 】

Example 1 ： Restore OLT configuration from PC：

```
epon# system configurations download olt 192.168.2.130
olt_cfg_backup_20000101063321.tar.gz
Download olt configurations file from host 192.168.2.130.
```

```
epon#
```

Backup ONU Configuration File

Command Grammar	epon#**system configurations backup onu *<tftp-server>***
Function	Backup ONU configuration File to PC, firstly, the tftp server should be ready.
<tftp-server>	Tftp server ip address, eg: 192.168.1.130

【 Example 】

Example 1 ： Backup ONU Configuratin to PC：

```
epon# system configurations backup onu 192.168.2.130
Backup onu configurations file to host 192.168.2.130.
 Remote filename: onu_cfg_backup_20000101060207.tar.gz.

epon#
```

Restore ONU Configuration File from PC

Command Grammar	epon#**system configurations download onu *<tftp-server>* *<filename>***
Function	Restore ONU configuration from PC, firstly, the tftp server and configurefile should be ready.
<tftp-server>	Tftp server ip address, eg: 192.168.1.130
<filename>	The Configuration File. eg: olt_cfg_backup_20000101055726.tar.gz

【 Example 】

Example 1 ： Restore ONU configuration from PC ：

```
epon# system configurations download onu 192.168.2.130
onu_cfg_backup_20000101060207.tar.gz
 Download onu configurations file from host 192.168.2.130.

epon#
```

Backup OLT/ONU Configuration File automatically

Command Grammar	epon# **system configurations auto-backup** ***<admin>,<backup-type>, <interval>,<server>***
Function	Backup OLT/ONU configuration File to PC automatically, firstly, the tftp server should be ready.
<admin>	Disable: close auto-backup function Enable:open auto-backup function
<backup-type>	<olt | onu | all >
<interval>	Auto-backup interval,<1-365> day
<server>	Tftp server ip address, eg: 192.168.1.130

4.4 Configuration Management

Factory Default Configuration

Command Grammar	epon# **system default**
Function	Set the device back to factory default congfiguration 。 Remark ： the device would reboot。

Save Configuration

Command Grammar	epon# **system save** ***<all> or <olt>***
Function	Save device configuration 。
<all>	Take this parameter will save all device， include all olt and all onu.
<olt>	Take this parameter only save olt configuration.

Show current running- configuration

Command Grammar	epon#**show running-config** ***<all> ,<auth>, <olt>,<onu> or <swith>***
Function	show current running-configuration
all	show current all running-configuration Include OLT and ONU
auth	show current auth running-configuration
olt	show OLT running-configuration
onu	show ONU running-configuration
swith	show current swith running-configuration

Show current startup-configuration

Command Grammar	epon#**show startup-config** ***<all> ,<auth>, <olt>,<onu> or <swith>***
Fuction	show current startup-configuration
all	show current all startup-configuration
auth	show current auth startup-configuration
olt	show olt startup-configuration
onu	show onu startup-configuration
swith	show current switch startup-configuration

Reboot System

Command Grammar	epon# **system reboot**
Function	Reboot OLT.

4.5 Sytem update firmware

system update OLt 's firmware

Command Grammar	epon#**system update firmware** ***<firmware>*** **tftp-server** ***<ip>***
Fuction	Sytem update olt's firmware Tftp server and firmware file should be ready
<firmware>	update system firmware
<ip>	tftp server IP address

upgrade all onu(s) by CTCS

Command Grammar	epon#**system update onu** ***<tftp-server>*** ***<file>*** ***<type>***
Fuction	upgrade all onu(s) by CTC Tftp server and firmware file should be ready
<tftp-server>	tftp server IP address
<file>	image name
<type>	device type

4.6 Log Management

Backup Log

Command Grammar	epon#**system log backup** ***<server-ip>***

Function	Backup system log to PC, firstly, tftp server should be ready.
<server-ip>	Tftp server ip address, eg: 192.168.1.130

【 Example 】

Example 1 ： Backup system log to PC：

```
epon# system log backup 192.168.2.130
Backup local log file to host 192.168.2.130 successfully, remote filename:
log_backup_20000101002224.txt!
```

【 Example 】

Example 2 ： Show system all log：

```
epon# show system log all
```

Flush log

Command Grammar	epon#**system log flush**
Function	Flush all system log.

【 Example 】

Example 1 ： Flush system all log：

```
epon# system log flush
Flush log file successfully!
epon#
```

4.7 SNMP Management

SNMP Read Community

Command Grammar	epon# **system snmp community read-only *<community>***

Function	Set SNMP Read Community.
< community >	Read Community， the string's length should not lenger than 16 chars. eg： public 。

SNMP Write Community

Command Grammar	epon# **system snmp community read-write <*community*>**
Function	Set SNMP Write Community .
< community >	Write Community ， the string's length should not lenger than 16 chars. eg： private 。

Trap IP Configuration

Command Grammar	epon#**system snmp trap-ip <*index*> <*ip-addr*>**
Function	Set the SNMP Trap IP Address, could set up to 4 trap ip
<index>	index : 1-4 。
<ip-addr>	IP Address. Eg: 192.168.1.130

4.8 Network Address Management

Command Grammar	epon#**system ipconfig**
Function	Configure the Network Address of inband and outband manage IP.

【 Example 】

Example 1 ： Show command parameter

epon#system ipconfig **//** enter" ？ "
<ip> **- ip address, example: 192.168.0.233**
<netmask> **- netmask address, for example: 255.255.255.0**

<gateway> **- gateway**

Network Parameter Configuration

Command Grammar	epon#**system ipconfig *<ip> <netmask> <gateway>***
Function	Configure inband and outband management IP address netmask gateway 。
< ip>	IP address. eg: 192.168.1.100
<netmask>	Netmask. eg: 255.255.255.0
< gateway >	Gateway. eg: 192.168.1.254

【 Example 】

Example 1 ： Confgiure the manage ip to 192.168.1.100 ， netmask to: 255.255.255.0， gateway to 192.168.1.254 ：

```
epon# system ipconfig 192.168.1.100 255.255.255.0 192.168.1.254
```

Example 2： Show the Network IP address Parameter

```
epon# show system ipconfig
Out band fast-ethernet ip address: 192.168.1.100 , netmask is: 255.255.255.0.
Gateway address is: 192.168.1.1
epon#
```

Management VLAN Configuration

Command Grammar	epon# **system mgmt-vlan *< vid>***
Function	Configure the management vlan id.
< vid>	VLAN ID: 1 ～ 4094

Configure system mtu

Command	epon# **system mtu *<mtu>***

Grammar	
Function	Configure system maximum transmission unit.
<mtu>	Scope:<1518-2047>, unit: byte

4.9 configuration

Configure system time automatically by NTP

Command Grammar	epon# **sys date ntp** ***<admin>*** ***<interval>*** ***<server>*** **or** ***<timezone>***
Function	Configure system time automatically by NTP

Configure system time manually

Command Grammar	epon# **system date manual** ***<time>***
Function	Configure system time manually
<time>	Time format: YYYY.MM.DD-hh:mm:ss

【 Example 】

Example1： manually systime is 2015.12.12 10h:10m:10s

```
epon# system  date  manual 2015.12.12-10:10:10
```

4.10

show system configuration

Show system infor

Command Grammar	epon# **show system infor**
Function	show system infor

【 Example 】

Example1： show device system infor

```
epon# show system infor
Software Version    : 2.2.01s(Jan  9 2015)
Hardware Version    : Unknown
MAC           : e0-67-b3-00-00-00
Serial Number      : Unknown
System Time        :
System Temperature :
FAN[1]          : Normal
FAN[2]          : Normal
FAN[3]          : Normal
```

Show system ipconfig

Command Grammar	epon# **show system ipconfig**
Function	show ipconfig

【 Example 】

Example 1： show system ipconfig

```
epon# show system  ipconfig
Out band fast-ethernet ip address: 192.168.1.100 , netmask is: 255.255.255.0.
Gateway address is: 192.168.1.1
MNGMT-VID : 1
```

Show system log

Command Grammar	epon# **show system log <*all*> or <*tail*>**
Function	show device system log
tail	show the tail of the log file
all	Show the all logs

【 Example 】

Example 1 ： show the tail of the log file

```
epon# show system log tail
01/01/00 00:44:42 Bridge Max Age : 30
01/01/00 00:44:49 Bridge Max Age must be less than or equal to twice the the Bridge
Forwarding Delay minus 1.[1]
01/01/00 00:44:49 Bridge Forwarding Delay : 20
01/01/00 00:44:54 Bridge Max Age must be less than or equal to twice the the Bridge
Forwarding Delay minus 1.
01/01/00 00:44:54 Bridge Forwarding Delay : 20
01/01/00 00:00:22 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 1~4 deregistered.
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 5~8 deregistered.
01/01/00 00:01:15 (cdtDeviceStateSet) Slot 1 olt 5~8 registered.
01/01/00 00:01:29 (cdtDeviceStateSet) Slot 1 olt 1~4 registered.
01/01/00 00:01:40 onu-1-1-25 (llid-0,mac-e0-67-b3-07-24-0c,ctc-30)online...
01/01/00 00:00:22 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 1~4 deregistered.
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 5~8 deregistered.
01/01/00 00:01:15 (cdtDeviceStateSet) Slot 1 olt 1~4 registered.
01/01/00 00:01:29 (cdtDeviceStateSet) Slot 1 olt 5~8 registered.
01/01/00 00:01:37 onu-1-1-25 (llid-0,mac-e0-67-b3-07-24-0c,ctc-30)online...
01/01/00 00:00:22 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:23 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:26 (cdtDeviceStateSet) Slot 1 olt 1~4 deregistered.
01/01/00 00:00:26 (cdtDeviceStateSet) Slot 1 olt 5~8 deregistered.
01/01/00 00:01:16 (cdtDeviceStateSet) Slot 1 olt 1~4 registered.
01/01/00 00:01:30 (cdtDeviceStateSet) Slot 1 olt 5~8 registered.
01/01/00 00:32:14 onu-1-1-25 (llid-0,mac-e0-67-b3-07-24-0c,ctc-30)online...
epon#
```

[1]

Show system memory

Gommand Grammar	epon# **show system memory**
Function	show system memory

【 Example 】

Example1： show system memory

```
epon# show system  memory
          total       used       free     shared    buffers
Mem:      61428      25712      35716          0          0
-/+ buffers:    25712      35716
Swap:          0          0          0
```

Show system mgmt-vlan

Command Grammar	epon# **show system mgmt-vlan**
Function	show system mgmt-vlan

【 Example 】

Example 1: show system mgmt-vlan

```
epon# show  system  mgmt-vlan
system mgmt-vlan : 1
```

Show system snmp

Command Grammar	epon# **show system snmp**
Function	Show system snmp

【 Example 】

Example 1 ： show system snmp

```
epon# show system  snmp
 Read-only community  : public
```

```
Read-write community : private
```

4.11

Configure system ONU template

Enable/Disable system ONU template CATV port

Gommand Grammar	epon# **system onu-template-config-system catv <*admin*>**
Function	enable/disable system ONU template CATV port
<admin>	Enable: Open the system ONU template CATV port Disable: Close the system ONU template CATV port

【 Example 】

Example1： enable system ONU template CATV port

```
epon# system onu-template-config-system catv enable
```

Enable/Disable system ONU template fec function

Gommand Grammar	epon# **system onu-template-config-system ctc fec <*admin*>**
Function	enable/disable system ONU template fec function
<admin>	Enable: Open the system ONU template fec function Disable: Close the system ONU template fec function

【 Example 】

Example1： enable system ONU template fec function

```
epon# system onu-template-config-system ctc fec enable
```

Enable/Disable system ONU template igmp fast-leave function

Gommand Grammar	epon# **system onu-template-config-system ctc igmp fast-leave** ***<state>***
Function	enable/disable system ONU template igmp fast-leave function
<admin>	Enable: Open the system ONU template igmp fast-leave function Disable: Close the system ONU template igmp fast-leave function

【 Example 】

Example1： enable system ONU template igmp fast-leave function

```
epon# system onu-template-config-system ctc igmp fast-leave enable
```

configure system ONU template igmp mode

Gommand Grammar	epon# **system onu-template-config-system ctc igmp mode** ***<mode>***
Function	configure system ONU template igmp mode
<mode>	mode,{igmp-mld-snooping|controllable-igmp-mld|pass-through}

【 Example 】

Example1： setting system ONU template igmp mode is igmp-mld-snooping

```
epon# system onu-template-config-system ctc igmp mode igmp-mld-snooping
```

Enable/Disable system ONU template VOIP port

Gommand Grammar	epon# **system onu-template-config-system pots ctc admin** ***<admin>***
Function	enable/disable system ONU template voip port
<admin>	Enable: Open the system ONU template VOIP port Disable: Close the system ONU template VOIP port

【 Example 】

Example1： enable the system ONU template voip port

```
epon# system onu-template-config-system pots ctc admin enable
```

4.12

Configure user ONU template

Enter user ONU template config mode

Gommand Grammar	epon# **system onu-template-config-user** ***<templateID>***
Function	Enter user onu template config mode
<templateID>	user onu template id :1-255

【 Example 】

Example1： enter user onu template config mode

```
epon# system onu-template-config-user 1
 epon(onu_template-1)#
```

configure user ONU template capacity

Gommand Grammar	epon(onu_template-1)# **config capacity** ***<catvNum> <portNum> <potsNum> <templateName>***
Function	configure user ONU template capacity
<catvNum>	The number of catv port
<portNum>	The number of ethernet port
<potsNum>	The number of voip port
<templateName>	The name of template

【 Example 】

Example1： setting user ONU template capacity is 1 CATV port 、 4 ethernet port and 1 VOIP

port and the name is template1

```
epon(onu_template-1)# config capacity 1 4 1 template1
```

Enable/Disable user ONU template user port

Gommand Grammar	epon(onu_template-1)# **config uni <uniId> ctc admin <*admin*>**
Function	enable/disable user ONU template user port
<uniId>	User port ID :<1-24>
<admin>	Enable: Open the user ONU template user port Disable: Close the user ONU template user port

【 Example 】

Example1： enable the user ONU template user port

```
epon(onu_template-1)# config uni 1 ctc admin enable
```

configure user ONU template egress-policing

Gommand Grammar	epon(onu_template-1)#**config uni <uniId> ctc engress-policing <*max-rate*>**
Function	configure system ONU template egress port rate
<uniId>	User port ID :<1-24>
<max-rate>	0-1000000(kbps)

configure user ONU template ingress-policing

Gommand Grammar	epon(onu_template-1)#**config uni <uniId> ctc ingress-policing <*max-rate*>**
Function	configure system ONU template ingress port rate
<uniId>	User port ID :<1-24>

<max-rate>	0-1000000(kbps)

Enable/Disable user ONU template auto negotiation function

Gommand Grammar	epon(onu_template-1)#**config uni <uniId> ctc auto-nego <*admin*>**
Function	enable/disable user ONU template auto negotiate function
<uniId>	User port ID :<1-24>
<admin>	Enable: Open the user ONU template auto negotiate function Disable: Close the user ONU template auto negotiate function

Enable/Disable user ONU template auto flow control function

Gommand Grammar	epon(onu_template-1)#**config uni <uniId> ctc flow-ctrl <*admin*>**
Function	enable/disable user ONU template flow control function
<uniId>	User port ID :<1-24>
<admin>	Enable: Open the user ONU template flow control function Disable: Close the user ONU template flow control function

Enable/Disable user ONU template auto loop-detec function

Gommand Grammar	epon(onu_template-1)#**config uni <uniId> ctc loop-detect <*admin*>**
Function	enable/disable user ONU template loop detect function
<uniId>	User port ID :<1-24>
<admin>	Enable: Open the user ONU template loop detect function Disable: Close the user ONU template loop detect function

configure user ONU template mac aging-time

Gommand Grammar	epon(onu_template-1)#**config uni <unild> ctc mac-aging-time *<timer>***
Function	configure user ONU template mac aging-time
<unild>	User port ID :<1-24>
<timer>	Mac address aging time： 0-4294967295 second

configure user ONU template statistics function

Gommand Grammar	epon(onu_template-1)#**config uni <unild> ctc statistics *<monitoring-status> <monitoring-period>***
Function	configure user ONU template mac aging-time
<unild>	User port ID :<1-24>
<monitoring-status>	The status of statistics function Enable:open the statistics function Disable:close the statistics function
<monitoring-period>	The period of statistics:<1-4294967295> second

5 Switch control card configuration

5.1 Storm Control

Enable/Disable Storm Control and Configure the Storm Control Parameter

Command Grammar	epon# **swport *<port>* storm-ctrl *<type>* *<enable>* *<rate>***

Function	Enable or Disable Storm Control function and configure the storm control parameter
<type>	By now, support the follow： bcast-mcast-dlf, broadcast multicast dlf broadcast-multicast broadcast-dlf multicast-dlf
<enable>	Enable: Open the storm control function Disable: Close the storm control funcion
<rate>	The control rate : 0-33554431(kbps)

5.2 Port manegemnet

enter switch port config mode

Command Gtammar	epon#**swport *<port>***
Function	enter switch port config mode. Noting: ge1-ge8 is eth port, ge9-ge16 is PON port
<port>	Switch port number ,<ge1-ge16>

【 Example 】

Example 1 ： Enter Sithch port ge1 config mode

```
epon# swport ge1
epon(GE-1)#
```

epon(GE-1)# ? Enter“？” show the current directory ：

admin - enable or disable current port
admit-frame - set port access frame type
auto-nego - enable auto-nego
def-pri - set port default priority
exit - exit current mode
flow-ctrl - set port flow control

learning - configure switch port learning
pvid - configure the PVID
rate-ctrl - configure rate-control
speed - configure the SPEED
storm-ctrl - Configurate storm control, support broadcast | multicast | unknown unicast
vlan - add or del vlan list
Global command:
logout - exit the CLI system
ping - test that a remote host is reachable
show - show system configuration
tracert - trace the route to host

Port parameters

0 Enable current port

Command Grammar	epon(GE-1)# **admin enable**
Function	Configuration current port enable

1 Disable current port

Command Grammar	epon(GE-1)# **admin disable**
Function	Disable current port

2 Set port access frame type

Command Grammar	epon(GE-1)# **admit-frame <*type*>**
Function	set port access frame type
<type>	all： all of packet。 tagged： only receive tag packet

	untagged:only receive untag packet 。

3 Set port default priority

Command Grammar	epon(GE-1)# **def-pri** ***<priority>***
Function	Configure the switch port default pvid, when switch port receive packet witch no tag, it will give the packet default pvid, that is the default 802.1p priority.
<priority>	Config priority ,valaue: <0-7>

4 Set port flow-ctrl function

Command Grammar	epon(GE-1)# **flow-ctrl** ***<admin>***
Funcion	Configurate storm control
<admin>	disable： disable flow-ctrl function enable: enable flow-ctrl function

Configurate the pvid of port

Command Grammar	epon(GE-1)#**pvid** ***<pvid>***
Function	Configurate the pvid of port
<pvid>	**Optional parameters** ： 0-4094。

Configurate auto-nego of port

Command Grammar	epon(GE-1)# **auto-nego**
Function	Configurate auto-nego of port

Configurate the speed of port

Command Grammar	epon(GE-1)#**speed <*speed*> duplex <*duplex*>**
Function	Configurate the speed of port
<speed>	Effective parameter; <10m|100m|1000m>
<duplex>	Optional parameters <full|half>

Add vlan list of port

Command Grammar	epon(GE-1)# **vlan add <*vidlist*> <*tag*>**
Function	Add vlan list port and set up tag mode
<vidlist>	vlan id list,<Combination of 1~4094>
<tag>	Mark way is optional parameters ， Given tag parameters is out of the packet with the tag The tag parameter default is out of the packet without the tag

【 Example 】

Example 1 ： create Vlan2-100 with the TAG TAG, create vlan101-200 without the TAG markup under the exchange ge1 port

```
epon(GE-1)# vlan add 2-100 tag
epon(GE-1)# vlan add 101-200
```

Delete the vlan list of port

Command Grammar	epon(GE-1)# **vlan delete <*vidlist*>**
Function	Delete the vlan list of port
<vidlist>	vlan id list,<Combination of 1~4094>

【 Example 】

Example 1 ： delete vlan 2-200 of ge1 port

```
epon(GE-1)# vlan del  2-200
```

Show swport current configuration information

Command Grammar	epon# **show swport ge1 attribute**
Function	Show swport current configuration information

【 Example 】

Example 1:show swport current configuration of ge1 port information

```
epon# show swport ge1 attribute
                GE-1 STATE
 Link-State        : Link-down
 Admin-State       : Enable
 Flow-Control      : Disable
 Speed-State       : 1000
 Duplex-State      : Full
 Learning          : Disable
 Egress-Rate-Limit  : Disable
 Ingress-Rate-Limit : Disable
 Priority          : 0
 PVID              : 1
```

Configuration ingress-port rate

Command Grammar	epon(GE-1)# **rate-ctrl ingress *<rate>***
Function	Configuration ingress-port rate
<rate>	0-1000000(kps)

Configuration egress-port rate

Command	epon(GE-1)# **rate-ctrl egress *<rate>***

Grammar	
Function	Configuration engress-port rate
<rate>	0-1000000(kps)

5.3 Configure switch mode

Show vlan state

Command Grammar	epon#**show swmode vlan**
Function	Show vlan state

【 Example 】

Example 1 ： show swmode vlan ：

```
epon# show swmode vlan
VLAN  STATUS : Disable
```

Configure vlan enable/disable

Command Grammar	epon# **swmode vlan *<mode>***
Function	Enable/disable the vlan function
<mode>	Enable :enable vlan Disable :disable vlan

5.4 MAC address management

Configure mac-address aging timeout

Command	epon# **mac-address aging *<timeout>***

Grammar	
Function	Configure mac-address management timeout 。
<timeout>	MAC aging time :range ： 0-65535s

Show mac-address aging

Command Grammar	epon# **show mac-address aging**
Function	show mac-address-aging

5.5 Vlan Configuration management

Creat vlan

Command Grammar	epon#**vlan *<vlanid>***
Function	Creat vlan and enter vlan config mode
< *vlanid* >	1-4094

【 Example 】

Example 1 ： Creat vlan100 and enter vlan100 config mode ，

```
epon#vlan 100
epon(vlan-100))#
```

epon(vlan-100) # ? enter“ ？ ” or “help” **showwing the current directory：**

delete - delete vlan list
exit - exit current mode
member - add or delete member-port
lobal command:
logout - exit the CLI system
ping - test that a remote host is reachable
show - show system configuration
tracert - trace the route to host

Add vlan port member

Command Grammar	epon(vlan-100) # **member add <member>** ***<tag>***
Function	add vlan member and set up tag
<member>	ge1-ge16
<tag>	Mark way is optional parameters ， Given tag parameters is out of the packet with the tag The tag parameter default is out of the packet without the tag

【 Example 】

Example 1 ： add ge1,ge2 and ge3 as vlan100 member and set up tag， add ge4 and ge5 as vlan100 member and set up untag：

```
epon(vlan-100)#member add ge1-ge3 tag
epon(vlan-100)#member add ge4-ge5
```

Delete vlan port member

Command Grammar	epon(vlan-100)# **member del** ***<member>***
Function	Delete vlan port member 。
<member>	ge1-ge16。

Delete vlan

Command Grammar	epon(vlan-100)#**delete** ***<vlanList>***
Function	Delete vlan 。
<vlanlistt>	Delete vlan list， Valid values :the combination of 1-4094， Example : delete vlan 10,20,30 delete vlan 100-120 delete vlan 10,100-110,200

Show vlan configuration of vlan

Command Grammar	epon#**show vlan <vlanId>**
Function	Show vlan configuration of vlan
<vlanId>	all： show all current vlan configuration 。 1-4094： show current vlan-id configration。

【 Example 】

Example 1 ： show all currnet vlan configuration ：

```
epon# show vlan all
 ------------------------------------------------
 VLAN ID: 1
Tagged ports:
   none
 Untagged ports:
      ge-9   ge-10  ge-11  ge-12  ge-13  ge-14  ge-15  ge-16
      ge-1   ge-2   ge-3   ge-4   ge-5   ge-6   ge-7   ge-8
 ------------------------------------------------
VLAN ID: 100
Tagged ports:
       ge-1
 Untagged ports:
   none
```

5.6 Rstp configuration management

Enable/disable RSTP configuration

Command Grammar	epon# **rstp <*state*>**
Function	Enable/disable RSTP Function
<state>	enable:enable Rstp Function disable:disable Rstp Function

【 Example 】

Example 1 ： enable Rstp function

```
epon# rstp enable
Enable RSTP successful!
```

Example 2： disable Rstp function

```
epon# rstp disable
Disable RSTP successful!
```

Configure Rstp bridge maxage aging time

Command Grammar	epon# **rstp bridge maxage *<aging>***
Function	Configure Rstp bridge maxage aging time
<aging>	Range: 6-40 **Bridge Max Age must be less than or equal to twice the the Bri dge Forwarding Delay minus 1.**

【 Example 】

Example 1： if the forward delay is a maximum of 15 s, configuring the biggest aging time is 28s

```
epon# rstp bridge maxage 28
Configure RSTP max age successful!
```

Configure Rstp bridge delay time

Command Grammar	epon# **rstp bridge fdelay *<fdelay>***
Function	Configure Rstp bridge fdelay time
<fdelay>	Range: 4-30s

【 Example 】

Example 1:configuring Rstp bridge delay time is 15s

```
epon# rstp bridge fdelay 15
Configure RSTP forward delay successful!
```

Configure Rstp bridge prioprity

Command Grammar	epon# **rstp bridge priority <*prio*>**
Function	Configure Rstp bridge prioprity
<prio>	Range:p0-p65535

【 Example 】

example1： setting Rstp bridge priority is 0

```
epon# rstp  bridge  priority  p0
Configure RSTP bridge priority successful!
```

Configure max counts of Rstp packet per second

Command Grammar	epon# **rstp hold-count <*count*>**
Function	Configure max counts of Rstp packet per second
<count>	Range:1-10

【 Example 】

Example 1： Configure transmit 10 hold-counts of Rstp per second

```
epon# rstp hold-count 10
Configure RSTP transmit holle packet limit successful!
```

Configure Rstp port piority

Commad Grammar	epon# **rstp port <*protid*> priority <*prio*>**
Function	Configure Rstp port priority
<protid>	Range ； ge1-ge16
<prio>	Value :p0,p16,p32,p48,p64,p80,p96,p112,p128,p144,p160,p176,p192,p208,p224,p240

【 Example 】

Example 1 ： setting ge1 port priority is 0

```
epon# rstp port priority ge1 p0
GE(1)'s priority configuration successful!
```

Configure Rstp port path-cost

Command Grammar	epon# **rstp port** ***<protid>*** **path-cost** ***<pathcost>***
Function	Configure Rstp port path-cost
<protid>	Port
<pathcost>	Port path cost

【 Example 】

Example 1 ： setting ge1 path-cost of Rstp is 2000

```
epon# rstp port ge1 path-cost 2000
GE(1)'s path cost configuration successful!
```

Configure Rstp edge-port

Command Grammar	epon# **rstp port** ***<protid>*** **edgecfg** ***<edge>***
Function	Configure Rstp edge-port
<protid>	Switch port
<edge>	edge: edge none-edge:none edge auto： Automatic negotiation Note: the edge of the port don't need after discarding - learning - forwarding steps, and direct conversion to the forwarding state, the rest of the ports need to pass the above process

【 Example 】

Example 1 ： setting ge1 is edge of Rstp

```
epon# rstp port  ge1  edgecfg  edge
 GE(1)'s edge attribute configuration successful!
```

Example 2： setting ge1 is auto configuration

```
epon# rstp port  ge1  edgecfg  auto
 GE(1)'s edge attribute configuration successful!
```

Configure Rstp p2p port

Command Grammar	epon#**rstp port <*protid*> p2pcfg <*p2p*>**
Function	Configure Rstp p2p port
<protid>	Switch port
<p2p>	Shared p2p :p2p port auto： Automatic negotiation Note: p2p port to allow rapid transition to the forwarding state, shard port need through discarding - learning - forwarding steps forward to transition to the state

【 Example 】

Example： setting ge1 port is p2p port

```
epon# rstp port  ge1 p2pcfg  p2p
GE(1)'s link type configuration successful!
```

Configure Rstp protocol version check

Command Grammar	epon#**rstp port <*protid*> p2pcfg mcheck**
Function	Configure Rstp protocol version checlk
<protid>	Switch port

【 Example 】

Example:1 Configure Rstp protocol version check

```
epon# rstp port  ge1 mcheck
GE(1) force version successful!
```

Show Rstp information

Command Grammar	epon#**show rstp** ***<protid>***
Function	Show Rstp information
<protid>	Switch port

【 Example 】

Example 1： show Rstp information

```
epon# show  rstp
RSTP Bridge Status:
 RSTP Setting        :Enable
 Bridge ID [PRI-MAC]  :1-e0:67:b3:00:00:00
 Bridge Hello Time    :2 sec
Bridge Max Age       :25 sec
Bridge Forward Delay :15 sec
 Transmit Hold Count  :10
 Root Bridge ID       :1-e0:67:b3:00:00:00
 Root Path Cost       :0
RSTP Port Status:
GE Mode Pri PathCost  EdgeC EdgeO P2pC   P2pO   State      Role
 1  RSTP 1   2000     Auto  Edge  P2P    P2P    LinkDown   UNKNOWN
 2  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 3  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 4  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 5  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 6  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 7  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 8  RSTP 128 20000    Auto  NEdge Auto   P2P    LinkDown   UNKNOWN
 Total 8 RSTP ports dumped.
```

5.7 Trunk configuration managemnet

Enter trunk config mode

Command	epon# **trunk** ***<tid>***

Grammar	
Function	Enter trunk config mode
<tid>	Range:1-4

【 Example 】

Example 1 ： enter trunk 1 config mode view

```
epon# trunk  1
epon(trunk-1)#
```

Add port of trunk member

Command Grammar	epon(trunk-1)# **member add <*member*>**
Function	Add trunk's member
<member>	Porttlist

【 Example 】

Example 1 :add ge1-ge2 port of trunk 1 member

```
epon(trunk-1)# member  add  ge1-ge2
```

Delete port of trunk member

Command Grammar	epon(trunk-1)# **member del <*member*>**
Function	Delete port of trunk member
<member>	Portlist

【 Example 】

Example1： delete ge1-ge2 of trunk 1 member

```
epon(trunk-1)# member del ge1-ge2
```

Delete trunklist configuraion

Command Grammar	epon(trunk-1)# **delete <*trunkList*>**
Function	Delete trunklist configuration
<trunklist>	Range: 1-4

【 Example 】

Example1： delete list 1-2 configuration of trunklist

```
epon(trunk-1)# delete  1-2
```

Show trunk information

Command Grammar	epon# **show trunk <*trunkid*>**
Function	Show trunk information
<trunkid>	all： all of trunklist 。 1-4 ： Specify the trunk group information

【 Example 】

Example 1： show all trunklist information

```
epon# show trunk  all
TRUNK-1 Member PORTS:
        GE-1
        GE-2
TRUNK-2 Member PORTS:
        GE-3
        GE-4
```

5.8 Rmon network monitoring and configuration

0 clear all ports statistics

Command Grammar	epon# **rmon statistics clear-all**
Function	Clear all ports statistics

1 Delete the specified port configuration information

Command Grammar	epon# **rmon statistics clear** ***<port>***
Function	Delete the specified port configuration information
<port>	Interface, refer to above 2.3

【 Example 】

Example1： Delete the statistics RMON statistics from the GE1 interface

```
epon# rmon  statistics  clear ge1
```

rmon history configration

0 Add rmon history configration

Command Grammar	epon# **rmon history add** ***<port> <entry-number> <buckets-number> <interval> <owner>***
Function	Rmon history configration
<port>	Switch port
<entry-number>	History index ， range:1-65535
<buckets-number>	History Record number ， range 1-65535
<interval>	The time interval of history
<owner>	Belongs to user

【 Example 】

Example 1： configue ge1 port rmon 's index is 1 ， inteval is 5 ,buckets-number is 5, owner is user1

```
epon# rmon  history  add  ge1  1 5 5 user1
```

1 Delete rmon history configuration

Command Grammar	epon# **rmon history del < *entry-number>***
Function	Delete rmon history configuration
<entry-number>	History infdex,range:1-65535

rmon event configuration

0 add rmon event configuration

Command Grammar	epon#**rmon event add *<entry-number>* *<description>* *<type>* *<owner>***
Function	Add rmon event configuration
<entry-number>	Event index， range ： 1-65535
<description>	Description information
<type>	none ； no log and no trap log ： Record the log information trap： Record the trap information log-trap:Record the log and trap information
<owner >	Belongs to user

【 Example 】

Example 1： add rmon event 100

```
epon# rmon  event  add  100  rmon-event log yx
```

1 delete rmon event

Command	epon#**rmon event del *<entry-number>***

Grammar	
Function	Delete rmon event
<entry-number>	Range:1-65535

【 Example 】

Example 1 ： delete rmon event 100

```
epon# rmon  even del 100
```

rmon alarm configuration

add rmon alarm configuration

Command Grammar	epon#**rmon alarm add** ***<entry-number> <alarm-variable> <interval> <type> <rising-value> <rising-event> <falling-value> <falling-event> <owner>***
Function	Add rmon alarm
<entry-number>	Range:1-65535
<alarm-variable>	Oid ,snmp oid
<interval>	Sampling interval
<type >	delta: Refers to two time interval only absolute: Refers to achieve value within a specified period
<rising-value>	Range:2147483648 - +2147483647
<rising-event>	Rising event
<falling-value>	range ： 2147483648 - +2147483647
<falling-event>	Falling event
<Owner>	owner

【 Example 】

Example 1： add alarm comfiguration that oid is 1.3.6.1.2.1.16.1.1.1.4.1 ,***interval*** 5s ***rising-value*** 40000 ， Rissing-event is 1， ***falling-event*** 20000 ， falling-event is 1 ***,type is absolute***

```
epon# rmon alarm add 1 1.3.6.1.2.1.16.1.1.1.4.1 5 absolute 40000 1 20000 1 yx
```

Delete rmon alarm configuration

Command Grammar	epon#**rmon alarm del<*entry-number*>**
Function	Delete rmon alarm configuration
<entry-number>	Event index， range:1-65535

【 Example 】

Example1： delete rmon alarm 1

```
epon# rmon alarm del 1
```

Show rmon statistics information

Command Grammar	epon# **show rmon statistics <*port*>**
Function	Show rmon port statistics information
<port>	Device port

【 Example 】

Example 1： show rmon statistics ge1

```
pon# show rmon  statistics ge1
                GE-1 Statistics:
       etherStatsOctets       : 0          , etherStatsPkts        : 0
        etherStatsBroadcastPkts : 0          , etherStatsMulticastPkts : 0
        etherStatsUndersizePkts : 0          , etherStatsOversizePkts  : 0
       etherStatsFragments     : 0          , etherStatsJabbers      : 0
        etherStatsCRCAlignErrors: 0          , etherStatsCollisions    : 0
        etherStatsDropEvents    : 0
       Packets received according to length:
       64      : 0          , 65-127   : 0        , 128-255   : 0
        256-511 : 0          , 512-1023 : 0        , 1024-1518 : 0
```

Show rmon history information

Command Grammar	epon# **show rmon history** ***<port>***
Function	Show rmon history information about port
<port>	Switch port

【 Example 】

Example 1： show rmom history ge1

```
show rmon history ge1
      HistoryControlEntry 100 owned by yx is VALID
        Samples interface    : GE-1
        Sampling interval    : 5(sec) with 5 buckets max
        Sampled values of record 1 :
          dropevents        : 0          , octets             : 0
          packets           : 0          , broadcast packets    : 0
          multicast packets  : 0          , CRC alignment errors  : 0
          undersize packets  : 0          , oversize packets     : 0
          fragments         : 0          , jabbers            : 0
          collisions        : 0          , utilization        : 0
        Sampled values of record 2 :
          dropevents        : 0          , octets             : 0
          packets           : 0          , broadcast packets    : 0
          multicast packets  : 0          , CRC alignment errors  : 0
```

show rmon event information

Command Grammar	epon# **show rmon event** ***<entry-number>***
Function	Show rmon event information
<entry-number>	Event entry-number， 0 means all of event

【 Example 】

Example 1 ： show rmon event 1 information

```
epon# show rmon event 1
      EventEntry 1 owned by log is VALID
      Description : log
       Will cause log when triggered.
```

Show rmon eventlog information

Command Grammar	epon# **show rmon eventlog** ***<entry-number>***
Function	Show rmon eventlog information
<entry-number>	Event entry-number ,0 means all of eventlog

【 Example 】

Example 1： show rmon eventlog 1

```
epon# show rmon eventlog 1
      logEntry 1 is VALID.
       Generates eventLog 1.1 at 01/01/00 00:31:25
       Description : The alarm formula defined in prialarmEntry 1,
          less than(or =) 4000 with alarm value 0. Alarm sample type is delta.
       Generates eventLog 1.2 at 01/01/00 03:13:25
       Description : The alarm formula defined in prialarmEntry 2,
          less than(or =) 20000 with alarm value 0. Alarm sample type is absolute.
```

Show rmon alarm information

Command Grammar	epon#**show rmon alarm** ***<entry-number>***
Function	Show rmon alarm information
<entry-number>	Alarm entry-number, 0 means all of alarm

【 Example 】

Example 1 ： show all of alarm of rmon information

```
epon# show rmon  alarm  0
     AlarmEntry 1 owned by yx is VALID
       Samples type        : absolute
       Variable formula    : 1.3.6.1.2.1.16.1.1.1.4.15<etherStatsOctets.15>
       Sampling interval   : 10(sec)
       Rising threshold    : 40000(linked with event 1)
       Falling threshold   : 20000(linked with event 1)
       When startup enables : risingOrFallingAlarm
       Latest value        : 0
```

5.9 Mirror port configuration management

Enable/disable mirror fuction

Command Grammar	epon# **mirror admin** ***<admin>***
Function	Enable/disable mirror function 。
<admin>	enable:enable mirror fuction disable: disable mirror fuction

【 Example 】

Example 1： enable mirror function

```
epon# mirror  admin  enable
     Set switch mirror enable successful !
```

Example 2： disable mirror function

```
epon# mirror  admin  disable
     Set switch mirror disable successful !
```

Configure mirror source_port

Command Grammar	epon# **mirror source_port** ***<port> <type>***
Function	Configure mirror source_port
<port>	Switch port
<type>	none: soure_port have no set egress: the packet of out_flow ingress: the packet of in_flow full ： packet both of out_flow and in_flow

【 Example 】

Example 1： configure ge1 ingress mirror

```
epon# mirror  source_port  ge1  ingress
      Set switch mirror source port: 1 successful!
```

Example 2： configure soure_port ge2 egress mirror

```
epon# mirror  source_port  ge2  egress
      Set switch mirror source port: 2 successful!
```

Example 3， configure ge3 both of out_packet and in_packet

```
epon# mirror  source_port  ge3 full
      Set switch mirror source port: 3 successful!
```

Configure mirror dest_port

Command Grammar	epon# **mirror dest_port** ***<port>***
Function	Configure mirror dest_port
<port>	Switch port

【 Example 】

Example 1： configure dest_port ge8

```
epon# mirror  dest_port  ge8
   Set switch mirror destnation port: 8 successful
```

Show mirror information

Command Grammar	epon# **show mirror**
Function	Show mirror information

【 Example 】

Example 1 ： show mirror information

```
epon# show mirror
=================== SWITHC MIRROR CONFIG ====================
 Admin            : enable
 destnationPort   : ge8
 sourceIngressPorts : ge2 ge3
```

```
sourceEgressPorts  : ge1 ge3
sourceVlan         :
```

5.10

Igmp-snooping monitoring and configuration

Enable/disable igmp snooping function

Command Grammar	epon# **igmp-snooping admin** ***<admin>***
Function	Enable/disable igmp snooping function
<admin>	<disable|enable>

Enable/disable igmp snooping fast-leave function

Command Grammar	epon# **igmp-snooping fast-leave** ***<admin>***
Function	Enable/disable the igmp snooping fast-leave function
<admin>	<disable|enable>

Enable/disable igmp snooping drop-unknown function

Command Grammar	epon# **igmp-snooping drop-unknown** ***<admin>***
Function	Enable/disable the igmp snooping drop-unknown function
<admin>	<disable|enable>

Configure igmp snooping host-aging-time

Command Grammar	epon# **igmp-snooping host-aging-time** ***<aging>***
Function	configure IGMP Snooping host aging time

<aging>	Aging time:<1~3000>s

Enable/disable igmp snooping querier function

Command Grammar	epon# **igmp-snooping querier** ***<admin>***
Function	Enable/disable the igmp snooping querier function
<admin>	<disable|enable>

Configure igmp snooping querier query interval

Command Grammar	epon# **igmp-snooping querier interval** ***<time>***
Function	configure igmp query interval
<time>	Query interval： <2~3000>S

Configure igmp snooping querier max-response-time

Command Grammar	epon# **igmp-snooping querier max-response-time** ***<time>***
Function	configure igmp query max rsp time
<time>	Query interval： <1~25>S

Configure igmp snooping querier source_ip

Command Grammar	epon# **igmp-snooping querier source_ip** ***<source_ip>***
Function	configure igmp query source ip
<source_ip>	<X.X.X.X>

Configure igmp snooping querier router-aging-time

Command Grammar	epon# **igmp-snooping router-aging-time** ***<aging>***

Function	configure IGMP Snooping router aging time
<aging>	<1~3000>S

add/delet igmp-snooping static port

Command Grammar	epon# **igmp-snooping static** ***<operation>*** ***<multicast_ip>*** ***<vlan>*** ***<port>***
Function	add or delete static igmp port
<operation>	operation, <add|del>
<multicast_ip>	multicast ip address, <x.x.x.x>
<vlan>	vlan id, <1~4095>
<port>	port, <ge1-ge8, pon1-pon8>

5.11

clear all learned mac address

Command Grammar	epon#**reset mac-address-table**
Function	clear all learned mac address

6 OLT Management

6.1 OLT basic configure management

Enter OLT Management

Command Grammar	epon#**olt** ***<oltID>***
Function	Enter olt configure mode
<oltID>	Pon ID : 1-8。

【 Example 】

Example 1 ： enter olt's first pon configure mode ：

```
epon#olt 1
epon(olt-1)#
```

```
epon(olt-1)# ?
acl                 - configure olt level acl
admin               - enable or disable this PON
alarm               - enable or disable the message of Alarm!
exit                - exit current mode
mac-address-table   - configure mac-address-table
offline-onu         - add or delete offline onu
onu                 - configure onu
optical             - olt optical diagnose
p2p                 - configure p2p
packet-filter       - enable or disable packet filter
qinq                - configure QinQ
tpid                - configure olt default tpid
Global command:
logout              - exit the CLI system
ping                - test that a remote host is reachable
show                - show system configuration
tracert             - trace the route to host
```

Enable/disable OLT port

Command Grammar	epon(olt-1)#**admin *<enable | disable>***
Function	enable/disabke OLT PON port. Default status is enable.
<eable>	Enbale OLT PON port 1 。
<disable>	Disable OLT PON port 1 。

Long light checking Function

Configuration all of onu about long light checking Function

Command Grammar	epon(olt-1)# **optical lao**
Function	ON optical tests under all the ONU, ONU luminous fault to kick off

Configure the specified onu about long checking fuction

Command Grammar	epon(olt-1)# **optical lol *<llid_1> <llid_2> <llid_3>***
Function	Light tests specified under the PON ONU, luminous fault to kick off

Configure p2p Function

Command Grammar	epon(olt-1)# **p2p *<enable | disable>***
Function	Enabel/disable OLT P2P function, when enable this function,each onu register to this pon can reach each other without uplink swicht
<eable>	Enabel P2P
<disable>	Disable P2P

Configure out-tpid Function

Command Grammar	epon(olt-1)# **tpid out-tpid *<tpid>***
Function	Configure acl default tpid
<tpid>	0x8100, 0x9100, 0x88a8

6.2 OLT ACL Configure

Delete One ACL

Command Grammar	epon(olt-1)# **acl *<aclId>* delete**
Function	Delete the aclid's acl
<aclId>	Acl id number : <1-30>

【 Example 】

Example 1 ： delege olt 1 acl 1：

```
epon(olt-1)# acl 1 delete
Delete ACL 1 successfuly.
```

Delete Current OLT All ACL

Command Grammar	epon(olt-1)#**acl delete**
Function	Delete current olt's all acl

【 Example 】

Example 1 ： delete olt1's all acl ：

```
epon(olt-1)# acl delete
Delete ACL 1 successfuly.
```

Add OLT ACL

Command Grammar	epon(olt-1)#**acl** ***<aclId>*** **rule** ***<direction> <precedence> matching "matching string" action "action string"***
Function	Add one acl in current olt
<aclId>	value ： <1-40>
<direction>	Acl direction ： <upstream|downstream>
<precedence>	Acl priority ： <4-7>
matching string	String to match, fomat is ： "proto=12 dst-port=34". Support the parameters as blow: [dst-mac|src-mac] <xx:xx:xx:xx:xx:xx> [tag-num] <0|1|2|more> [top-vid|inner-vid] <vid|vidL-vidH>, vid:1~4094 [top-8021p|inner-8021p] <8021p|8021pL-8021pH>, 8021p:0~7 [eth-type] <0~65535> [dscp] <0~63> [proto] <0~65535> [dst-ip|src-ip] <x.x.x.x> [dst-port|src-port] <0~65535>
action string	Acton string, format as "8021p 7 dscp 63". Support the parameters as blow ： [cos] <0~7> [8021p] <0~7> [dscp] <0~63> [fwd] <deny> [rate] cir <> cbs <> pir <> pbs <> [top-vlan | inner-vlan] <pop | push vid <1~4094> | swap vid <1~4094>

【 Example 】

Example 1 ： Filtering the upstream frame of destination MAC address is 00:00:00:00:00:02

```
epon(olt-1)# acl 1 r u 4 m "dst-mac=00:00:00:00:00:02" a "fwd deny"
```

Example 2 ： Filtering the downstream of destination MAC address is 00:00:00:00:00:01, tagged is with external VLAN 4094：

```
epon(olt-1)# acl 2 r d 4 m "dst-mac=00:00:00:00:00:01" a "top-vlan push vid 4094"
```

Example 3 ： Filtering the upstream frame with vlan 100, tagged it with external VLAN 200：

```
epon(olt-1)# acl 3 r u 4 m "top-vid=100" a "top-vlan push vid 200"
```

Example 4 ： Filtering the upstream frame of destination IP address is 198.19.1.2, tagged it with external vlan 1000 ：

```
epon(olt-1)# acl 1 r u 4 m "dst-ip=198.19.1.2" a "top-vlan push vid 1000"
```

Example 5 ： Filtering the upstream frame of destionation port is port-2, tagged it with external vlan 1000 ：

```
epon(olt-1)# acl 1 r u 4 m "dst-port=2" a "top-vlan push vid 1000"
```

6.3 OLT MAC Management

Configure OLT MACAge Time

Command Grammar	epon(olt-1)# **mac-address-table aging-time *<aging-time>***
Function	Configure current olt's mac age time
<aging-time>	Age time: <0~65535> sec, when configure age time to 0, the mac will not ageout

【 Example 】

Example 1 ： configure current olt's age time to 200s：

```
epon(olt-1)# mac-address-table aging-time 200
Set slot 1 olt 1 bridge cfg successfully!
```

Flush current olt's mac table list

Command Grammar	epon(olt-1)# **mac-address-table flush**
Function	Flush current olt's mac table list

Enable OLT MAC Learening function

Command Grammar	epon(olt-1)# **mac-address-table learning enable**
Function	Enable current olt's mac learning function

Disable OLT MAC Learning Function

Command Grammar	epon(olt-1)# **mac-address-table learning disable**
Function	Disable current olt's mac learning function

Enable MAC Move

Command Grammar	epon(olt-1)# **mac-address-table move enable**
Function	Enable mac move

Disable MAC Move

Command Grammar	epon(olt-1)# **mac-address-table move disable**
Function	Disable mac move

6.4 OLT Auth

Disable OLT Auth

Command Grammar	epon# **auth disable**
Function	Disable auth function, when the olt auth is disable, onu will register

	automatically.

Add/Delete/Show Whitelist

Add white member

Command Grammar	epon# **auth whitelist add *<oltID> onu <onu>***
Function	Add white member. It will enable the Auth function when first add black member
<oltID>	Pon ID : 1-8
<onu>	ONU-MAC ， format： 00-01-02-AB-CD-EF

Example 1 ： add oun witch MAC 00-1b-62-48-5b-09 to whitelist ：

```
epon# auth whitelist add 1 onu 00-1b-62-48-5b-09
Add ONU (00-1b-62-48-5b-09) to slot 1 PON 1 whitelist successfully.
```

Delete white member

Command Grammar	epon# **auth whitelist delete *<oltID> <onu>***
Function	Delete white member
<oltID>	Pon ID : 1-8
<onu>	ONU-MAC ， format： 00-01-02-AB-CD-EF。

【 Example 】

Example 1 ： move onu with MAC 00-1b-62-48-5b-09 out from whitelist ：

```
epon# auth whitelist delete 1 onu 00-1b-62-48-5b-09
01/01/00 01:47:59 onu-1-1-1 (ctc-30) offline...
Delete ONU (00-1b-62-48-5b-09) from slot 0 PON 1 whitelist successfully.
```

Show whitelist

Command Grammar	epon# **show auth whitelist**
Function	Show whitelist

【 Example 】

Example 1 ： show whitelist：

```
epon# show auth whitelist
whitelist onu mac:
pon-1   00-1b-62-48-5b-09
pon-2   00-13-25-00-dd-01
Total is 2.
```

Add/Delete/Show Blacklist

Add black member

Command Grammar	epon# **auth blacklist add <*oltID*> onu <onu>**
Function	Add black member. It will enable the Auth function when first add black member
<oltID>	Pon ID : 1-8
<onu>	ONU-MAC ， format： 00-01-02-AB-CD-EF。

【 Example 】

Example 1 ： add a black member that mac is 00-1b-62-48-5b-09 ：

```
epon# auth blacklist add 1 onu 00-1b-62-48-5b-09
01/01/00 02:15:41 onu-1-1-1 (ctc-30) offline...
Add ONU (00-1b-62-48-5b-09) to slot 1 PON 1 blacklist successfully.
```

Delete Black Member

Command Grammar	epon# **auth blacklist delete <*oltID*> onu <*onu*>**
Function	Delete black member
<oltID>	Pon ID : 1-8
<onu>	ONU-MAC ， format： 00-01-02-AB-CD-EF

【 Example 】

Example 1 ： move onu with MAC 00-1b-62-48-5b-09 out from blacklist ：

```
epon# auth blacklist delete 1 onu 00-1b-62-48-5b-09
Delete ONU (00-1b-62-48-5b-09) from slot 1 PON 1 blacklist successfully.
```

Show blacklist

Command Grammar	epon# **show auth blacklist**
Function	Show blacklist

【 Example 】

Example 1 ： show blacklist：

```
epon# show auth blacklist
 blacklist onu mac:
 pon-1   00-1b-62-48-5b-09
 pon-2   00-13-25-00-dd-01
Total is 2.
```

OLT hybrid Auth Mode Configure

Enable hybrid auth mode

Command Grammar	epon# **auth ctc-mode hybrid**
Function	enable hybrid auth mode

【 Example 】

Example 1 ： enable hybrd auth mode：

```
epon# auth ctc-mode hybrid
Set slot 1 hybrid-auth mode successfully.
```

OLT LOID Auth Mode Configure

Enable loid auth mode

Command Grammar	epon# **auth ctc-mode loid**
Function	enable LOID auth mode

【 Example 】

Example 1 ： enable loid auth mode

```
epon# auth ctc-mode loid
Set slot 1 loid-auth mode successfully.
```

Add loid account

Command Grammar	epon# **auth ctc-mode add-loid <*loid*> password <*password*>**
Function	Add LOID account
<loid>	{MAX 24 Chars}
<password>	{MAX 12 Chars}

【 Example 】

Example 1 ： add one loid account, name: cdt, password:cdt：

```
epon# auth ctc-auth loid add cdt password cdt
```

Delete loid account

Command Grammar	epon# **auth ctc-mode delete-loid <*loid*> password <*password*>**
Function	Delete LOID account
<loid>	{MAX 24 Chars}
<password>	{MAX 12 Chars}

【 Example 】

Example 1 ： delete a loid account ：

```
epon(olt-8)# auth ctc-auth loid delete cdt password cdt
```

OLT MAC Auth Mode Configure

Command Grammar	epon# **auth ctc-mode mac**
Function	Enable OLT MAC Auth Mode

6.5 Configure packet_filter of OLT PON port

Packet_filter of OLT PON port about DHCP function

Command Grammar	epon(olt-1)# **packet-filter dhcp <*admin*>**
Function	Filter upstream flow about dhcp servers packet
<admin>	enable:enable packet-filter dhcp disable： disable packet-filter dhcp

【 Example 】

Example 1： enable dhcp packet_fil ter function of olt

```
epon(olt-1)# packet-filter  dhcp enable
```

EOC MME packet-filter function

Command Grammar	epon(olt-1)# **packet-filter eoc_mme <*admin*>**
Function	EOC MME packet filter
<admin>	enable:enable eoc_mme function disable： disable eoc_mme function

【 Example 】

Example 1 ： enable eoc_mme packet-filter function

```
epon(olt-1)# packet-filter eoc_mme enable
```

Netbios packet-filter function

Command Grammar	epon(olt-1)# **packet-filter netbios <*admin*>**
Function	netbios packet filter
<admin>	enable:enable netbios function disable： disable netbios function

【 Example 】

Example 1 ： enable netbios packet-filter function

```
epon(olt-1)# packet-filter netbios enable
```

8306_rtk_loopback packet-filter function

Command Grammar	epon(olt-1)# **packet-filter 8306_rtk_loopback <*admin*>**
Function	8306_rtk_loopback packet filter
<admin>	enable:enable 8306_rtk_loopback function disable： disable 8306_rtk_loopback function

【 Example 】

Example 1 ： enable 8306_rtk_loopback packet-filter function

```
epon(olt-1)# packet-filter 8306_rtk_loopback enable
```

6.6 Configure trap alarm and message alarm function of ONU

Configure message alarm about ONU off the electricity

Command Grammar	epon(olt-1)# **alarm onuDyingGasp <*admin*>**
Function	ONU off the electricity ,it can print GASP message on the console
<admin>	enable: enable message fuction 。 disable： disable message function 。

【 Example 】

Example 1： Configure GASP message function， ONU off the electricity ,it can print GASP message on the console

```
epon(olt-1)# alarm onuDyingGasp enable
```

Configure trap alarm about ONU off the electricity

Command Grammar	epon(olt-1)# **alarm onuDyingGaspTrap <*admin*>**
Function	ONU off the electricity,it can send trap message about GASP
<admin>	enable:enable send trap of onu Dying Gasp! disable： disable send trap of onu Dying Gasp!。

【 Example 】

Example 1： after ONU off the electricit ， TRAP alarm will be sended to SNMP management software

```
epon(olt-1)# alarm  onuDyingGaspTrap   enable
```

6.7 Configure QinQ function

Add QinQ configuration

Command Grammar	epon(olt-1)# **qinq enable <*qinq-vid*> raw-vlan-id-inbound <*vlan-list*>**
Function	Configure QinQ function
<qinq-vid>	Outbound vlan
<vlan-list>	inbound vlan list

【 Example 】

Example 1： setting QinQ configuration that inbound vlan_list is 50-90 and setting outbound vlan is 100

```
epon(olt-1)# qinq enable  100 raw-vlan-id-inbound   50-90
```

Delete QinQ configuration

Command Grammar	epon(olt-1)# **qinq disable <*qinq-vid*>**
Function	delete QinQ f configuration
<qinq-vid>	Outbond vlan

【 Example 】

Example 1： delete QinQ configuration that and setting outbound vlan is 100

```
epon(olt-1)# qinq disable 100
```

6.8 Configure offline ONU

Add offline ONU and bind the template with ONU

Command Grammar	epon#**offline-onu add *<onuID> <onuMAC> <templateID>***
Function	Add offline ONU and bind the template with ONU. Template just can only bind the offline ONU that no-bind with any template before. If offline ONU have binded template before, you need to delet the template.
<onuID>	onuID will be used when ONU online
<onuMAC>	ONU mac address
<templateID>	When ONU online in the first time, OLT will set the ONU configuration by template

delete offline ONU

Command Grammar	epon(olt-1)# **offline-onu del <onuID>**
Function	delete offline ONU. It must to delete offline ONU in OLT list before binding a new template with ONU
<onuID>	Outbond vlan

6.9 Show olt configuration information

Show olt attribute information

Command Grammar	epon#**show olt *<oltID>* attribute**
Function	Show olt attribute information
<oltID>	Pon port ID， range:1-8。

【 Example 】

Example1： show olt attribute information ：

```
epon(olt-1)# show olt 1 attribute
Slot 1 olt 1 attributes:
 Fw Version       : 4.2.7.58
 Cfg Version      : 1.7.3.14
 Loader Version   : cefabeba
LLID Support      : 64
 LLID Registered  : 3
  LLID Online     : 3
```

Show olt optical information

Command Grammar	epon#**show olt *<oltID>* optical**
Function	Show olt optical information 。
<oltID>	Pon port ID， range:1-8

【 Example 】

Example1： show olt optical information

```
epon# show olt 1 optical
Slot 1 olt 1 optical informations:
 Temperature     :  45.28 (C)
  Voltage        :  2.30 (V)
  Current        :  1.23 (mA)
  Tx Power       : -6.45 (dBM)
  Rx Power       :  0.00 (dBM)
```

Show olt online-onu information

Command Grammar	epon#**show olt *<oltID>* online-onu**
Function	Show olt online-onu information 。
<oltID>	Pon port ID， range:1-8。

【 Example 】

Example1： show olt online-onu information ：

```
epon(olt-1)# show olt 1 online-onu
onuId       mac          type      CTC-Ver   distance
onu-03   e0:67:b3:00:00:06   2.0          30       6m
onu-10   00:a1:02:01:30:d8    2.0          20       6m
onu-11   e0:67:b3:07:d4:78   2.0          21       6m
```

Show olt acl information

Command Grammar	epon#**show olt *<oltID>* acl**
Function	Show olt acl information。
<oltID>	Pon port ID， range:1-8。

【 Example 】

Example1： show olt acl information：

```
epon(olt-1)# show olt 1 acl
 ================== SLOT 1 OLT 1 ACL  1 ==================
 Direction      : upstream
  Precedence     : 4
  Matching string : "dscp=63 "
 Action string   : "dscp=0 "
```

Show olt auth mode information

Command	epon# **show auth mode**

Grammar	
Function	Show olt auth mode information

【 Example 】

Example1： show olt auth mode information ：

```
epon# show auth mode
Slot 1 current auth-mode is disable.
```

Show olt port staus information

Command Grammar	epon(olt-1)# **show olt <*oltId*>admin**
Function	Show olt port staus information
<oltId>	Pon port ID， range:1-8

【 Example 】

Example1:show olt port staus

```
epon(olt-1)# show olt 1  admin
 Slot 1 olt 1 admin status: Enable.
```

Show olt alarm information

Command Grammar	epon(olt-1)# **show olt <*oltId*> alarm**
Function	Show olt alarm information
<oltId>	Pon port ID， range:1-8。

【 Example 】

Example1： show olt ararm information

```
epon# show olt 1  alarm
Onu Power Alarm        : Disable
Onu Power Alarm Trap    : Disable
```

Show olt learning-mac information

Command Grammar	epon(olt-1)# **show olt <*oltId*> mac-address-table < *onu*>**
Function	Show olt learning-mac information
<oltId>	Pon port ID， range:1-8。
<onu>	**Don't pick up parameters:show mac address of all port** With parameters :show mac address of specified port

【 Example 】

Example1： show mac address of all port 。

```
epon# show olt 5 mac-address-table
============== SLOT 1 OLT 5 MAC Address Table ==============
Index    MAC Address          ONU     VID     Aging(s)
 1       3C:97:0E:FD:0C:69    02      0       3234

===========    1 MAC Address Table Entries Found ===========
```

Show olt p2p information

Command Grammar	epon# **show olt <*oltId*> p2p**
Function	Pon port ID， range:1-8。
<oltId>	Pon port ID， range:1-8。 。

【 Example 】

Example1： show olt p2p information

```
epon# show olt 1  p2p
Slot 1 olt 1 p2p status: Enable
```

Show olt packet-filter information

Command Grammar	epon# **show olt <*oltId*> packet-filter <*type*>**
Function	Show olt packet-filter information

<oltId>	Pon port ID， range:1-8。

【 Example 】

Example1： show olt packet-filter information

```
epon# show olt 1 packet-filter  dhcp
=================== SLOT 1 OLT 1 Packet Filter===================
DHCP : enable
```

Show olt tpid out-tpid

Command Grammar	epon#**show olt <*oltid*> tpid out-tpid**
Function	Show olt tpid out-tpid
<oltId>	Pon port ID， range:1-8。

7 ONU Management

7.1 Show ONU Basic Information

Show Online ONU

Command Grammar	epon# **show olt 7 online-onu**
Function	Use this command in any mode can check to the specified PON port of the Online-ONU.

【 Example 】

Example1： show online-onu

```
epon# show olt 7 online-onu
 onuId        mac          type       CTC-Ver    distance
 onu-12    e0:67:b3:00:00:04   2.0          30       6m
 onu-13    e0:67:b3:00:00:14   2.0          30       6m
 onu-14    e0:67:b3:07:14:04   2.0          30       6m
 onu-23    e0:67:b3:07:18:02   2.0          30       6m
```

Show ONU Version

Command Grammar	epon# **show olt 7 onu <*onuid*> ctc sn**
Function	Show online-onu version.
<onuid>	Designate online-onu onuid with value range from 1-64.

【 Example 】

Example1： show onu version

```
epon# show olt 7 onu 12 ctc sn
 onu model      : 0x3131326d
onu base-MAC    : e0-67-b3-00-00-04
 onu hardware Ver: V1.0
 onu software Ver: V2.0.2
```

Show ONU Capabilities

Command Grammar	epon# **show olt 7 onu <*onuid*> ctc capabilities**
Function	Show online-onu capabilities.
<onuid>	Designate online-onu onuid with value range from 1-64.

Show ONU Optical

Command Grammar	epon# **show olt 7 onu <*onuid*> ctc optical**
Function	Show online-onu optical.
<onuid>	Designate online-onu onuid with value range from 1-64.

7.2 ONU Management Mode

Command Grammar	epon(olt-7)#**onu <*onuid*>**
Function	enter ONU management mode to configure ONU.
<onuid>	designate onuid with valid value 1-64.

【 Example 】

Example1： enter onu 1 managemnet mode：

```
epon(olt-7)#onu 1
epon(olt-7/onu-1)#
```

epon(olt-7/onu-1)# input ”?” to show the following directory:

catv - enable or disable CATV
ctc - CTC configuration mode
default - restore to default setting
deregister - deregister current onu
exit - exit current mode
info - onu device user information
link - enter link configure mode
pon - configure onu PON
pots - configure VOIP port
protect - enable or disable to isolate the uni(s)
save - save current ONU configuration
uni - configure UNI
Global command:
logout - exit the CLI system
ping - test that a remote host is reachable
show - show system configuration
tracert - trace the route to host

7.3 ONU Basic Operation and Management

Reboot ONU

Command Grammar	epon(olt-7/onu-1)# **ctc reboot**

Function	reboot ONU.

Deregister ONU

Command Grammar	epon(olt-7/onu-1)# **deregister**
Function	deregister ONU.

Configure ONU FEC

Command Grammar	epon(olt-7/onu-1)# **ctc fec** ***<oper>***
Function	Configure ONU fec.
<oper>	value <enable/disable> enable： enable ONU FEC function disable ： disable ONU FEC function

Restore ONU to Default Settings

Command Grammar	epon(olt-7/onu-1)#**default**
Function	restore ONU to default settings.

【 Notes 】

This command will delete all configuration of the ONU, restored to the factory default configuration, and will automatically restart ONU.

Configure ONU Sys Management IP

Command Grammar	epon(olt-2/onu-4)#**ctc mng-ip** ***<ip>*** ***<netmask>*** ***<gateway>*** ***<CVLAN>*** ***<SVLAN>***
Function	configure onu sys management ip.
Parameters	<ip> - example: 192.168.12.122

	<netmask> - example: 255.255.255.0 <gateway> - example: 192.168.0.1 <CVLAN> - 0-4094 <SVLAN> - 0-4094

Save Current ONU Configuration

Command Grammar	epon(olt-7/onu-1)# **save**
Function	Save current onu configuration.

upgrade ONU software

Command Grammar	epon(olt-7/onu-1)# **ctc upgrade *<tftp-server>* *<image-file>***
Function	Upgrade ONU software versions
<tftp-server>	Tftp server Ip
<image-file>	File name

7.4 Configure ONU IGMP

ONU IGMP Global Configuration

clear-all-multicast-ctrl-group

Command Grammar	epon(olt-7/onu-1)# **ctc igmp clear-all-multicast-ctrl-group**
Function	clear all multicast ctrl group.

Configure ONU IGMP fast-leave

Command Grammar	epon(olt-7/onu-1)# **ctc igmp fast-leave *<oper>***

Function	Configure ONU igmp fast-leave function.
<oper>	value <enable/disable> enable： enable igmp fast-leave disable ： disable igmp fast-leave

Configure ONU IGMP Mode

Command Grammar	epon(olt-7/onu-1)#**ctc igmp mode < *mode* >**
Function	configure ONU igmp mode.
<mode>	valid value ： < gmp-mld-snooping controllable-igmp-mld igmp-snooping-only controllable-igmp pass-through> Some of the parameters may not support, the default is gmp-mld-snooping.

Configure ONU UNI Port IGMP

configure igmp group

Command Grammar	epon(olt-5/onu-7/uni-1)# **ctc igmp max-group *<groups>***
Function	configure igmp group.
<groups>	designate number of igmp groups with valid value <0-255>.

Configure igmp vlan

Command Grammar	epon(olt-5/onu-7/uni-1)# **ctc igmp vlan-list < *vlanTagList*>**
Function	configure igmp vlan.
<vlanTagList>	valid value ： 1-4094， or null

Configure vlan tag

Command Grammar	epon(olt-5/onu-7/uni-1)# **ctc igmp tag-handle *<oper>***
Function	configure igmp vlan tag or untag.

< *Parameters* >	value ： not-strip-vlan-tag strip-vlan-tag switch

7.5 Enter ONU Link Mode

enter ONU link mode

Command Grammar	epon(olt-7/onu-1)#**link *<linkID>***
Function	enter ONU link mode.
<linkID>	valid value ： <1-8>

Configure ONU Link Upstream SLA

Command Grammar	epon(olt-7/onu-1/link-1)# **sla upstream *<fix> <cir> <pir> <weight>***
Function	configure ONU LINK upstream speed limit.
<fix>	valid value ： <0~950000>Kbps
<cir>	valid value ： <1~950000>Kbps
<pir>	valid value ： <512~1000000>Kbps
<weight>	valid value ： <1~20>

Configure ONU Link Downstream SLA

Command Grammar	epon(olt-7/onu-1/link-1)# **sla downstream *<pir> <burst> <weight>***
Function	configure ONU LINK downstream speed limit.
<pir>	valid value ： <512~1000000>Kbps
<burst>	valid value ： <128~16383>*256Byte
<weight>	valid value ： <0~15>

Configure ONU Link Acl

Command Grammar	epon(olt-7/onu-1/link-1)#**acl** ***<Aclid>*** **rule** ***<direction>*** ***<precedence>*** **matching** ***<matching string>*** **action** ***<action string>***
Function	configure ONU link acl rule.
<aclid>	valid value： 1-8
<direction>	parameters： upstream downstream
<precedence	valid value： <4-7>
<matching string>	parameters： [dst-mac] <xx:xx:xx:xx:xx:xx>. [src-mac] <xx:xx:xx:xx:xx:xx>. [tag-num] <0 | 1 | 2 | more>. [top-vid] <vid | vidL-vidH>, vid:1~4094. [inner-vid] <vid | vidL-vidH>, vid:1~4094. [top-8021p] <8021p | 8021pL-8021pH>, 8021p:0~7. [inner-8021p] <8021p | 8021pL-8021pH>, 8021p:0~7. [eth-type] <0~65535>. [dscp] <0~63>. [proto] <0~65535>. [dst-ip] <x.x.x.x>. [src-ip] <x.x.x.x>. [dst-port] <0~65535>. [src-port] <0~65535>.
<actionstring>	parameters： [cos] <0~7>. [8021p] <0~7>. [dscp] <0~63>. [fwd] deny. [rate] cir <cir> cbs <cbs> pir <pir> pbs <pbs>, cir, pir: <0~1000000>Kpbs. cbs, pbs: <0~4095>KB [top-vlan] pop. [top-vlan] push vid <1~4094>. [top-vlan] swap vid <1~4094>. [inner-vlan] pop. [inner-vlan] push vid <1~4094>. [inner-vlan] swap vid <1~4094>.

【 Example 】

Example1： configure ONU link acl 1 rule

```
epon(olt-7/onu-1/link-1)#acl 1 rule upstream 4 matching dst-mac=00:11:11:11:11:11 action fwd=deny
```

7.6 enable/disable ONU port isolate function

Command Grammar	epon(olt-7/onu-1)# **protect** ***<admin>***
Function	Enable/disable ONU port isolate function.
< admin>	<enable | disable>

7.7 Configure ONU pon statistics

Command Grammar	epon(olt-7/onu-1)# **pon ctc statistics** ***<monitoring-status>*** ***<monitoring-period>***
Function	Configure ONU pon statistics
< monitoring-status>	<disable | enable>
< monitoring-period>	1-4294967295 second

7.8 Enable/disable ONU CATV port

Command Grammar	epon(olt-7/onu-1)# **catv** ***<state>***
Function	Enable/disable ONU CATV port
< admin>	<enable | disable>

7.9 Enter ONU Uni Port Management Mode

Command Grammar	epon(olt-7/onu-1)# **uni** ***<uni>***
Function	enter the ONU uniport management mode to configure the ONU uni parameter.
< uni>	designate ONU uni port with valid value <1-24>.

【 Example 】

Example1： enter the ONU uni port 1 management mode ：

```
epon(olt-7/onu-1)#uni 1
epon(olt-7/onu-1/uni-1)#
```

epon(olt-7/onu-1/uni-1)# ？ input ”?” to show the following directory:

```
      ctc                - ctc management mode
exit               - exit current mode
    Global command:
debug              - debug
disable            - entry guest level
logout             - exit the CLI system
show               - show system configuration
```

Configure ONU Uni Port Parameters

Show ONU Uni port information

Command Gramma	epon(olt-7/onu-1/uni-1)# **show olt 7 onu 1 uni 1 ctc attribute**
Function	Using the command in any mode,can display the current ONU uni port parameter properties.

【 Example 】

Example1： show ONU uni port 1 information ：

```
epon(olt-7/onu-1/uni-1)> show olt 7 onu 1 uni 1 ctc attribute
        ONU-7/1 UNI-1 Attibute
  Link-State        : linkUp
  Admin-State       : Enable
  FlowCtrl-State    : Enable
```

```
AutoNego-State     : Enable
Ingress-Rate       : 0 kps
Egress-Rate        : 0 kps
```

configure ONU Uni port storm control

Command Gramma	epon(olt-7/onu-1/uni-1)# **storm-ctrl *<type>* *<admin>* *<rate>***
Function	Configure ONU Uni port storm control
<type>	<none|broadcast|multicast|broadcast-multicast|unknown-uc| broadcast-unknown-uc|multicast-unknown-uc|bc-mc-unknown-uc>
<admin>	<enable|disable>
<rate>	[0-16777215], unit(bps)

enable or disable ONU Uni port

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc admin *<oper>***
Function	enable or disable ONU current port
<oper>	value <enable | disable>： enable： enable ONU port disable： disable ONU port

configure ONU Uni port auto-nego

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc auto-nego *<oper>***
Function	enable or disable ONU uni port auto-nego
<oper>	value <enable | disable>： enable: enable ONU uni port auto-nego disable: disable ONU uni port auto-nego

configure ONU Uni port flow-ctrl

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc flow-ctrl *<oper>***
Function	enable or disable ONU uni port flow-ctrl.

<oper>	value <enable | disable>： enable： enable ONU uni port flow-ctrl disable： disable ONU uni port flow-ctrl

Configure ONU Uni port Egress Rate

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc egress-policing < *max-rate>***
Function	configure ONU uni port egress rate 。
< max-rate>	designate max traffic ouput rate with value<0~1000000>kbps， a value of 0 indicates no speed limit.

Configure ONU Uni port ingress Rate

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc ingress-policing < *max-rate>***
Function	configure ONU uni port ingress rate.
< max-rate>	designate max traffic input rate with value<0~1000000>kbps， a value of 0 indicates no speed limit

Configure ONU Uni port MAC agine-time

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc mac-aging-time *<timer>***
Function	configure ONU uni port MAC aging-time.
< timer >	designate the MACs aging-time with value 0-4294967295 ， a value of 0 indicates the MAC address is not aging 。

configure ONU Uni port statistics

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc statistics *<monitoring-status>* *<monitoring-period>***
Function	Configure statistics monitoring status and period.
<monitoring-status>	designate statistics monitoring status with value <enable | disable> enable: enable statistics monitoring disable: disable statistics monitoring
<monitoring-period>	designate statistics monitoring status with value <1-4294967295>second

Configure ONU Uni Port Vlan Mode

Configure ONU Uni port VLAN aggregation mode （ Our company does not support ONU）

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc vlan-mode aggregation *<tpid>* *<cos>* *<default-vlan>* aggregation-list（Matching）**
Function	configure the ONU uni port VLAN for aggregation mode.
<tpid >	designate vlan tpid， the default is 0x8100.
<cos>	designate vlan cos， valid value <0-7>.
<vlan>	designate ONU uni port aggregation mode vlan ， valid value <1-4094>， the default is 1.
Aggregation-list	designate ONU uni port aggregation vlan list， maximum support 4.

【 Example 】

Example1： For the ONU uni port configuration VLAN mode for aggregation, 100 for default-vlan

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode aggregation 0x8100 7 100
```

Configure ONU Uni port VLAN tag mode

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc vlan-mode tag *<tpid>* *<cos>* *<vlan>***
Function	configure the ONU uni port VLAN for tag mode.
<tpid >	designate vlan tpid， the default is 0x8100.
<cos>	designate vlan cos， valid value <0-7>.
<vlan>	designate ONU uni port tag mode vlan ， valid value <1-4094>， the default is 1

【 Example 】

Example1： For the ONU uni port configuration VLAN mode for tag, 100 for VLAN

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode tag 0x8100 7 100
```

Configure ONU Uni port VLAN trunk mode

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc vlan-mode trunk *<tpid>* *<cos>* *<default-vlan>* vlan-list（Matching）**
Function	configure the ONU uni port VLAN for trunk mode.
<tpid >	designate vlan tpid， the default is 0x8100
<cos>	designate vlan cos， valid value <0-7>.
<vlan>	designate ONU uni port trunk mode vlan， valid value <1-4094>， the default is 1.
Vlan-list	Optional configuration, configuration can be through the VLAN list, the maximum support 60 VLAN number.

【 Example 】

Example1： For the ONU uni port configuration VLAN model for trunk, 100 for default-vlan, 200,2050 for vlan-list

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode trunk 0x8100 7 100 vlan-list 200,2050
```

Configure ONU Uni port VLAN translation mode

Command Gramma	epon(olt-7/onu-1/uni-1)#**ctc vlan-mode translation *<tpid>* *<cos>* *<default-vlan>* translate-list**
Function	configure the ONU uni port VLAN for translation mode.
<tpid >	designate vlan tpid， the default is 0x8100.
<cos>	designate vlan cos， valid value <0-7>.
<vlan>	designate ONU uni port translation mode vlan， valid value <1-4094>， the default is 1.
translation-list	The specified uni port list of VLAN, maximum support 8 conversion list.

【 Example 】

Example1： For the ONU uni port configuration mode of VLAN translation, default-vlan 100, translation-list 200-300 300-400

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode trunk 0x8100 7 100 translation-list 200-300,300-400
```

Configure ONU Uni port VLAN transparent mode

Command	epon(olt-7/onu-1/uni-1)#**ctc vlan-mode transparent**

Gramma	
Function	configure the ONU uni port VLAN for transparent mode.

【 Example 】

Example1： For the ONU uni port configuration VLAN mode for transparent

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode transparent
```

【 Description 】

Different VLAN mode to deal with different frame types.

0 Transparent Mode ：

Frame Direction	**Frame Type**	**Approach**
Upstream	Untag frame	Untag frame does not make any change, forwarding.
	Tag frame	Tag frame does not make any changes (original VLAN TAG), forwarding.
Downstream	Untag frame	Untag frame does not make any change, forwarding.
	Tag frame	Tag frame does not make any changes (original VLAN TAG), forwarding.

1 Tag Mode：

Frame Direction	**Frame Type**	**Approach**
Upstream	Untag frame	Switch frames on port's default VLAN(VPID),forwarding.
	Tag frame	Discard the frame
Downstream	Untag frame	Discard the frame
	Tag frame	If the Downstream Tag frame VLAN ID equal to the configuration of the VID， According to VID forwarded to the appropriate UNI port, and stripping the tag; If the downstream Tag frame VLAN ID is not equal to the configuration of the VID, then the frame is discarded

2 Translation Mode ：

Frame Direction	**Frame Type**	**Approach**
Upstream	Untag frame	Switch frames on port's default VLAN(VPID),forwarding.
	Tag frame	Tag frame VLAN ID in the configuration of the VID conversion list, forwarding; Tag frame VLAN ID is not in the configuration of the VID conversion list, frame discarding.

Downstream	Untag frame	Discard the frame
	Tag frame	Tag frame VLAN ID corresponds to the entry in the corresponding port of the VLAN Translation list (equal to the input VID configuration) ， According to the table to convert the VID to a corresponding VID (VID output), forwarding; If the VLAN ID in the corresponding port of the VLAN Translation list without a corresponding entry, discarding; If the TAG frame with VLAN ID as the "default VLAN", after the VLAN label forwarding is stripped down;

3 Trunk Mode：

Frame Direction	**Frame Type**	**Approach**
Upstream	Untag frame	Switch frames on port's default VLAN(VPID),forwarding.
	Tag frame	Tag frame VLAN ID belongs to the port "allowed by VLAN", forwarding; Tag frame VLAN ID does not belong to the port of the "permitted by VLAN," is discarded
Downstream	Untag frame	Discard the frame
	Tag frame	Tag frame VLAN ID belongs to the port "allowed by VLAN", forwarding; Tag frame VLAN ID belongs to the port "allowed by VLAN", forwarding; If the Tag frame VLAN does not belong to the port of the "permitted by VLAN," is discarded.

Show ONU Uni port vlan configuration

Command Gramma	epon(olt-7/onu-1/uni-1)#show olt 7 onu 1 uni 1 ctc vlan-mode
Function	Show ONU uni port vlan configuration

【 Example 】

Example1： Show ONU uni port vlan configuration ：

```
epon(olt-7/onu-1/uni-1)> show olt 7 onu 1 uni 1 ctc vlan-mode
VLAN    MODE: translate
Default VLAN: TPID-0x8100, COS-6, VID-3
Traslate List:
        2000<->3000
        2050<->3050
```

7.10

Enter ONU VOIP Port Management Mode

Command Grammar	epon(olt-7/onu-1)# **pots <*pots*>**
Function	enter the ONU voip port management mode to configure the ONU uni parameter.
< pots>	designate ONU voip port with valid value <1-2>.

【 Example 】

Example1： enter the ONU VOIP port 1 management mode ：

```
epon(olt-7/onu-1)#pots 1
epon(olt-7/onu-1/pots-1)#
```

epon(olt-7/onu-1/pots-1)# ？ input ”?” to show the following directory:

ctc - ctc management mode
exit - exit current mode
Global command:
logout - exit the CLI system
ping - test that a remote host is reachable
show - show system configuration
tracert - trace the route to host

Configure ONU VOIP Port Parameters

Show ONU VOIP port work status

Command Gramma	epon(olt-7/onu-1/pots-1)# **show olt 7 onu 1 pot 1 ctc status**
Function	Using the command in any mode,can display the current ONU VOIP port parameter properties.

【 Example 】

Example1： show ONU VOIP port 1 work status

```
epon(olt-7/onu-1/pots-1)# show olt 7 onu 1 pot 1 ctc status
                ONU-7/1 POTS-1 Attibute
Admin-State             : Disable
IADPots-State           : Registering
IADPots-ServiceState    : Endlocal
IADPots-CodeMode              : G711A
```

Enable/disable the ONU VOIP port

Command Gramma	epon(olt-7/onu-1/pots-1)# **ctc admin <*admin*>**
Function	Enable or disable the onu voip port
< admin>	<enable | disable>： enable open the voip port disable close the voip port

【 Example 】

Example1： enable the ONU1 VOIP port 1

```
epon(olt-7/onu-1/pots-1)# ctc admin enable
```

Configure the VOIP port H.248 user TID

Command Gramma	epon(olt-7/onu-1/pots-1)# **ctc h248-user-tid <*User-TID*>**
Function	Configure the VOIP port h.248 user TID
< User-TID>	String, length :32 chars

【 Example 】

Example1： configure ONU 1 VOIP 1 H.248 user TID is 100

```
epon(olt-7/onu-1/pots-1)# ctc h248-user-tid 100
```

Configure the VOIP port sip user parameter

Command Gramma	epon(olt-7/onu-1/pots-1)# **ctc sip-user-config *<user-account> <user-name> <user-password>***
Function	Configure ONU voip port SIPuser parameter
< user-account>	The number of user ， string length:16 chars
<user-name>	User name ， string length:32 chars
<user-password>	User password， string length:32 chars

【 Example 】

Example1： add a user in onu 1 voip port 1, the name is 222, the password is 222

```
epon(olt-7/onu-1/pots-1)# ctc sip-user-config 1 222 222
```

8 Equipment diagnosis information

8.1 Ping command test

Command Grammar	epon# **ping *<host>***
Function	Test equipment and network can reach the target host
<host>	Host ip address

【 Example 】

Example1： device ip: 192.168.1.100， host ip 192.168.1.234 host and device are The direct connection

```
epon(GE-1)# ping 192.168.1.234
PING 192.168.1.234 (192.168.1.234): 56 data bytes
64 bytes from 192.168.1.234: seq=0 ttl=64 time=8.559 ms
64 bytes from 192.168.1.234: seq=1 ttl=64 time=0.746 ms
64 bytes from 192.168.1.234: seq=2 ttl=64 time=0.561 ms
64 bytes from 192.168.1.234: seq=3 ttl=64 time=0.650 ms
```

8.2 Tracert checking the device the path of the host

Command Grammar	epon# **tracert** ***<host>***
Function	Check the device the path of the host
<host>	Host ip address

【 Example 】

Example1： checking the device the path of the host 。

```
epon(GE-1)# tracert 192.168.1.234
traceroute to 192.168.1.234 (192.168.1.234), 10 hops max, 38 byte packets
 1  192.168.1.234 (192.168.1.234)  4.698 ms  0.060 ms  0.069 ms
```

Including Remarks