



Gpon OLT Web User Manual



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Chapter 1 System Description

1.1 Overview

1.1.1 OLT Introduction

The Web management user manual is for the OLTs listed in Table 1-1 and Table 1-2. After you have completed installation, connection and commissioning of the equipment, you can start on configuring various services and functions for the equipment.

Table 1-1 GPON OLT interfaces

Products		4 ports GPON OLT	8 ports GPON OLT	16 ports GPON OLT
Classic	Racks	1U 19 inch standard box	1U 19 inch standard box	1U 19 inch standard box
1G/10G Uplink Port	QTY	6	16	12
	Copper	4*10/100/1000M auto-negotiation	8*10/100/1000M auto-negotiation	8*10/100/1000M auto-negotiation
	SFP (Independent)	2*SFP+ (SFP+ is compatible with 10GE)	6*SFP and 2*SFP+ (SFP+ is compatible with 10GE)	4*SFP+ (SFP+ is compatible with 10GE)
GPON Port	QTY	4	8	16
	Physical Interface	SFP Slots	SFP Slots	SFP Slots
Management Ports		1*10/100BASE-T out-band port (AUX), 1*CONSOLE port		
Management Mode		SNMP, WEB, Telnet and CLI		

Table 1-2 GPON-B Series OLT interfaces

Products		4 ports GPON OLT -B	4 ports GPON OLT-B1	8 ports GPON OLT -B	8 ports GPON OLT -B1
Products		16 ports GPON OLT -B	8 ports GPON OLT -WEO		
Classic	RACKs	1U 19 ⁴ inch standard box	1U 19 ² inch standard box	8	4
	QTY	2*10/100/1000M	6	4*10/100/1000M	N/A
1G/10G Uplink	Copper	4*10/100/1000M	1*10/100/1000M	auto-negotiation	N/A
	Copper	auto-negotiation	auto-negotiation	2*SFP and 2*SFP+ (SFP+)	2*SFP and 2*SFP+ (SFP+)
10G Uplink Port	SFP (Independent)	2*SFP+ (SFP+) is compatible with 10GE	2*SFP+ (SFP+) is compatible with 10GE	2*SFP+ (SFP+) is compatible with 10GE	2*SFP+ (SFP+) is compatible with 10GE
	SFP (Independent)	4*SFP+ (SFP+) is compatible with 10GE	2*SFP+ (SFP+) is compatible with 10GE		
GPON	QTY	4	4	8	8
Port GPON	Physical Interface	SFP Slots	SFP Slots	SFP Slots	SFP Slots
Port Management	Physical Interface	1*SFP/100BASE-T	1*out-band port (AUX)	1*CONSOLE port	
Management Mode	Management Ports	SNMP, WEB, Telnet and CLI			
		1*10/100BASE-T out-band port (AUX), 1*CONSOLE port			

Management Mode	SNMP, WEB, Telnet and CLI
-----------------	---------------------------

1.1.2 OS Requirement

For OLT management, it supports or requires the following operation system.

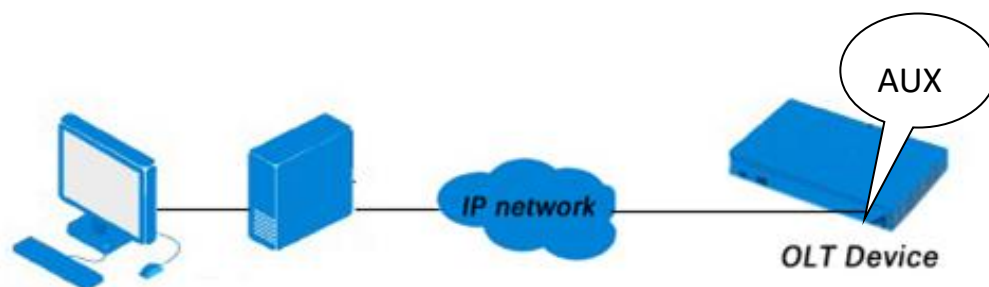
Table 1-2 Operation System requirement

CPU	Memory	DISK	Video Card	Operating System
Frequency above 2GHz	2GB Or above	10GB disk space	65000 color resolving capability 1024*768 and above	Windows2008 Windows XP Windows 7 Windows 8 Windows 10

1.2 Connection

Connect the OLT AUX port to IP network. The OLT default management IP is 192.168.8.200.

Please set your PC IP to 192.168.8.X (e.g.192.168.8.123).

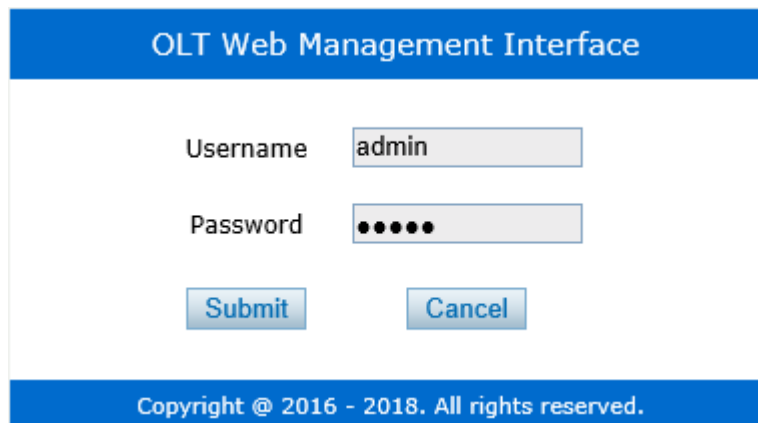


Chapter 2 OLT Information

2.1 Login

Follow the steps to login:

1. Conform "1.2 Connection" to connect;
2. The device default IP address is 192.168.8.200;
3. Open your web browser, type the device IP in address bar;
4. Entry of the username and password will be prompted. Enter the default login User Name and Password. Both the username and password are "Xpon@Olt9417#" by default.



OLT Web Management Interface

Username

Password

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Figure 2.1-1: Login

2.2 Device Information

The OLT ports connection status are shown in the top of the interface, and about the OLT basic information.

OLT Information→Device Information

This part shows the OLT information such as system name, serial number,

hardware version, firmware version, MAC address and system time. The system name can be modified if need.

Device Information

OLT Information
Device Information
 OLT Configuration
 ONU Configuration
 Profile Configuration
 System Configuration

Device Status

PON2 PON4 PON6 PON8 PON10 PON12 PON14 PON16 GE2 GE4 GE6 GE8
 PON1 PON3 PON5 PON7 PON9 PON11 PON13 PON15 GE1 GE3 GE5 GE7 GE9 GE10 GE11 GE12

Device Basic Information

System Name	gpon-olt	Serial Number	
Hardware Version	16 pons gpon olt platform	Software Version	V1.0.2
MAC Address	80:14:A8:C0:D8:A9	Temperature	41°C
System Time	2000 /1 /31 23:17:38	Running Time	0 Days 0 Hours 15 Minutes 39 Seconds
CPU Usage	23%	Memory Usage	21%
License limit	2048 ONUs	License Time	Permanent

Submit Refresh

Figure 2.2-1: Device Information

Chapter 3 OLT Configuration

This section is about the basic service of OLT configuration.

3.1 VLAN

OLT equipment switch engine is fully compliant with the IEEE802.1Q VLAN standard and has the following main features:

- Support Port-based VLAN and IEEE802.1Q VLAN.
- Support full 4K VLAN group, VID range 1~4095.

All switch ports, including uplink ports and downlink ports, support VLAN partition.

VLAN 1 is the system reserved VLAN, it includes all switch ports which are UNTAG mode.

3.1.1 Create VLAN

OLT Configuration→VLAN

In this user interface, you can create new VLAN.

The screenshot displays the OLT Web User Manual interface. On the left is a sidebar with navigation options: OLT Information, OLT Configuration, VLAN (highlighted), Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'New VLAN' and contains a form for creating a new VLAN. The form has two input fields: 'VLAN ID' with the value '233' and a range '(1-4094)', and 'Description' with the value 'vlan233'. Below the form is an 'Add' button. Below the form is a 'VLAN Table' with the following data:

VLAN ID	Description	Edit	Delete
1	default		
10	vlan10		
888	vlan888		
998	vlan998		
999	vlan999		
1688	vlan1688		
3000	vlan3000		
3999	vlan3999		
4000	vlan4000		

Figure 3.1-1: Create New VLAN

3.1.2 VLAN Port

OLT Configuration → VLAN → VLAN Port

Assign the ports to the VLANs that have been created. You can choose the tag or untag VLAN mode.

The screenshot displays the 'Port VLAN Configuration' interface. On the left is a navigation menu with 'VLAN' highlighted. The main area shows the configuration for VLAN ID 233. A table lists 16 ports (GE1-GE16) with radio buttons for 'Forbidden', 'Tag', and 'Untag' settings. A 'Submit' button is located at the bottom right of the table.

Port ID	Forbidden	Tag	Untag
GE1	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
GE2	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE3	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GE4	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE5	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
GE6	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GE7	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE8	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE9	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GE10	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
GE11	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE12	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE13	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE14	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE15	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GE16	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 3.1-2: Add VLAN Port

3.1.3 QinQ/Translation

OLT Configuration → VLAN → QinQ/Translation

In this user interface, VLAN QinQ and VLAN translation can be configured. VLAN QinQ and translation are effective for ingress.

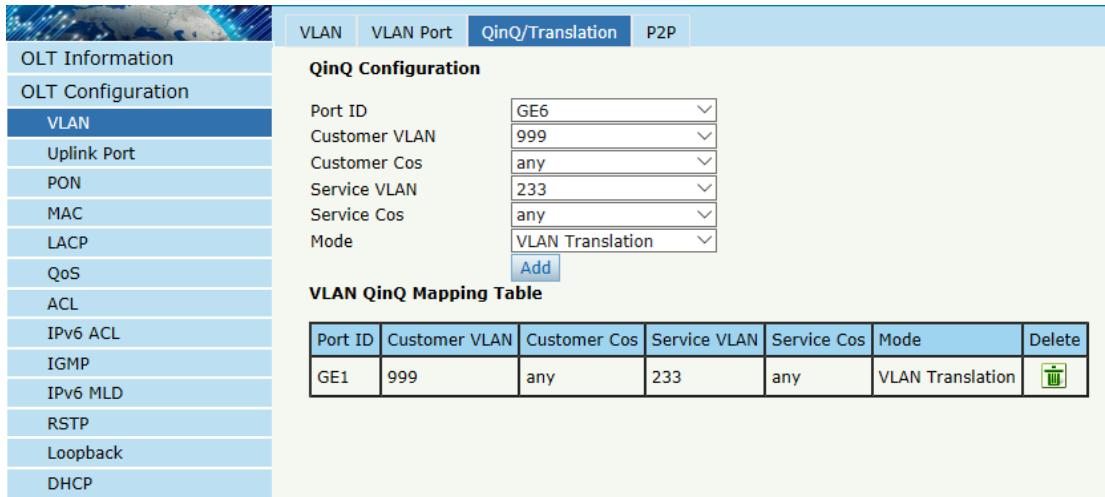


Figure 3.1-3: QinQ/Translation Configuration

3.1.4 P2P

OLT Configuration → VLAN → P2P (GPON OLT Series)

The use of P2P enables ONU to communicate with each other under PON ports.

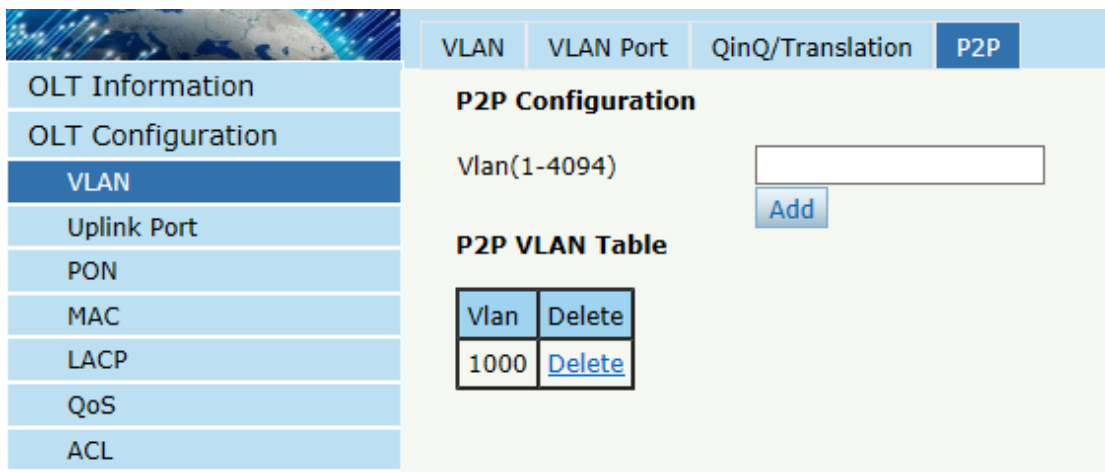


Figure 3.1-4: GPON OLT Series P2P Configuration

OLT Configuration → PON → Configuration (GPON OLT -B Series)

OLT Information	Optical Information	Traffic Statistics	Configuration	Range	Protect	
OLT Configuration	PON Configuration					
VLAN	Submit Refresh					
Uplink Port	Port ID	Description	Admin Status	Isolate	ONU P2P	Storm(0)
PON						Broadcast
MAC	PON1	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	512
LACP	PON2	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	512
QoS						0
ACL						0

Figure 3.1-5: GPON OLT -B Series P2P Configuration

3.2 Uplink Port

GE ports traffic statistics and basic configuration setting.

3.2.1 Information

OLT Configuration → Uplink Port → Information

This user interface displays traffic statistics of uplink ports.

OLT Information	Information	Configuration													
OLT Configuration	Traffic Statistics														
VLAN	Clear Counters Refresh														
Uplink Port	Port ID	Link Status	Speed	Rx Bytes	Rx Packets				Tx Bytes	Tx Packets				Collisions	Errors
PON					Packets	Unicast	Broadcast	Multicast		Packets	Unicast	Broadcast	Multicast		
MAC	GE1	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
LACP	GE2	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
QoS	GE3	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
ACL	GE4	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
IPv6 ACL	GE5	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
IGMP	GE6	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
IPv6 MLD	GE7	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
RSTP	GE8	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
Loopback	GE9	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
DHCP	GE10	Up	1000M Full	1867309702	5288884	2189914	2559025	539945	1718357518	3336155	2477902	707930	150323	0	0
DHCPv6	GE11	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
IPv6 SLAAC	GE12	Up	1000M Full	4273288450	30683208	30145371	243944	293893	4521727387	32967058	29956070	2316045	694943	0	0
Route	GE13	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
IPv6 Route	GE14	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
ONU Configuration	GE15	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
Profile Configuration	GE16	Up	1000M Full	200911799	2139662	64490	1943483	131689	140174987	1985620	104141	1257375	624104	0	0
System Configuration															

Figure3.2-1: GE Traffic Statistics

3.2.2 Configuration

OLT Configuration → Uplink Port → Information

This user interface is used to configure port related functions and characteristic parameters of uplink port, such as port attributes, PVID, flow control, rate limit, storm inhibition, port isolation and so on.

Port ID	Description	Admin Status	Speed	Flow Control	Isolate	PVID	Storm(0 64-1000000fps)			Rate(0 64-1000000kbps)		MAC Limit(0-16384)
							Broadcast	Multicast	Unicast	Ingress	Egress	
GE1		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE2		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE3		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE4		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE5		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE6		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE7		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE8		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE9		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE10		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	3000	512	0	512	0	0	0
GE11		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE12		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	3000	512	0	512	0	0	0
GE13		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE14		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE15		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	512	0	512	0	0	0
GE16		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	3000	512	0	512	0	0	0

Figure3.2-2: Uplink Ports Configuration

Illustrations of each parameter:

Parameters	Illustration
Port ID	GE port has two types, fiber SFP (GE1 to GE8) and copper (GE9 to GE16).
Description	Descriptions or remarks of port.
Admin Status	Active or inactive status of port. It is Enabled by default.
Speed	Configuring Port Rate.
Flow Control	Enable or disable flow control function of uplink port to control congestion. It is disabled by default.
Isolate	Port isolation with each other.
PVID	Default VLAN ID of the port.

Broadcast	Broadcast storm inhibition.
Multicast	Multicast storm inhibition.
Unknown Unicast	Unknown unicast storm inhibition.
Ingress Rate	Port ingress rate.
Egress Rate	Port egress rate.
MAC limit	Number of MAC address can be learnt in the port.

3.3 PON

3.3.1 Information

OLT Configuration→PON→Information

This user interface is used to displays parameters of PON port, such as PON module port current temperature, Voltage, current, transmit power.

	Information	Traffic Statistics	Configuration	Range
OLT Information	Optical Transceiver			
OLT Configuration				
VLAN				
Uplink Port				
PON				
MAC				
LACP				
QoS				
ACL				
IPv6 ACL				
IGMP				
IPv6 MLD				
RSTP				
Loopback				
DHCP				
DHCPv6				
IPv6 SLAAC				
Route				
IPv6 Route				
ONU Configuration				
Profile Configuration				
System Configuration				

Port ID	Temperature(Degree)	Voltage(V)	Bias Current(mA)	Transmit Power(dBm)
PON1	47.055	3.292	14.250	7.757
PON2	0.000	0.000	0.000	0.000
PON3	0.000	0.000	0.000	0.000
PON4	0.000	0.000	0.000	0.000
PON5	0.000	0.000	0.000	0.000
PON6	0.000	0.000	0.000	0.000
PON7	0.000	0.000	0.000	0.000
PON8	0.000	0.000	0.000	0.000

Figure3.3-1: PON Information

3.3.2 Traffic Statistics

OLT Configuration→PON→Traffic Statistics

Information Traffic Statistics Configuration Range									
OLT Information	Traffic Statistics								
OLT Configuration	Clear Counters Refresh								
VLAN									
Uplink Port									
PON									
MAC									
LACP									
QoS									
ACL									
IPv6 ACL									
IGMP									
IPv6 MLD									
RSTP									
Loopback									
DHCP									
DHCPv6									
IPv6 SLAAC									
Route									
IPv6 Route									
ONU Configuration									
Profile Configuration									
System Configuration									

Interface	Rx Packets			Tx Packets			Collisions	Errors
	Packets	Broadcast	Multicast	Packets	Broadcast	Multicast		
PON1	0	0	0	0	0	0	0	0
PON2	0	0	0	0	0	0	0	0
PON3	0	0	0	0	0	0	0	0
PON4	0	0	0	0	0	0	0	0
PON5	0	0	0	0	0	0	0	0
PON6	0	0	0	0	0	0	0	0
PON7	0	0	0	0	0	0	0	0
PON8	0	0	0	0	0	0	0	0

Figure3.3-2: Traffic Statistics

3.3.3 Configuration

OLT Configuration → PON → Configuration

This user interface is used to configure port status.

The screenshot displays the 'PON Configuration' page in the OLT web interface. The left sidebar contains a menu with 'PON' highlighted. The main content area features a 'PON Configuration' section with 'Submit' and 'Refresh' buttons. Below these buttons is a table listing ports and their administrative status.

Port ID	Admin Status
PON1	<input checked="" type="checkbox"/>
PON2	<input checked="" type="checkbox"/>
PON3	<input checked="" type="checkbox"/>
PON4	<input checked="" type="checkbox"/>
PON5	<input checked="" type="checkbox"/>
PON6	<input checked="" type="checkbox"/>
PON7	<input checked="" type="checkbox"/>
PON8	<input checked="" type="checkbox"/>

Figure3.3-3: PON configuration

3.3.4 Range

OLT Configuration→PON→Range

When ONU is more than 20km away from OLT, you need to configure PON distance range. The difference between minimum and maximum should not be more than 20km. The unit is 100m.

For example, ONU is 25km away from OLT, the minimum is 50 and the maximum is 250.

The screenshot displays the 'PON Range Configuration' interface. On the left is a vertical navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, **PON**, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The 'PON' item is highlighted. The main content area is titled 'PON Range Configuration' and contains two buttons: 'Submit' and 'Refresh'. Below these buttons is a table with the following structure:

Port ID	min(100m)	max(100m)
PON1	0	200
PON2	0	200
PON3	0	200
PON4	0	200
PON5	0	200
PON6	0	200
PON7	0	200
PON8	0	200

Figure3.3-4: PON Range Configuration

3.4 MAC

In this section, you can check MAC address table of OLT, set MAC aging time and add MAC address manually.

3.4.1 MAC Table

OLT Configuration→MAC→MAC Table

This table displays MAC addresses that OLT has learnt at PON ports and GE ports.

MAC Table **PON MAC Table** **Configuration**

MAC Address Table

Port ID: ALL
mac numbers: 22

[Clean](#) [Refresh](#)

VLAN ID	MAC	Type	Physical Port
3000	94:C6:91:91:CE:EB	Dynamic	GE10
3000	F4:4D:30:F2:27:89	Dynamic	GE10
3000	80:14:A8:67:32:98	Dynamic	GE10
3000	FC:AA:14:2E:F3:D1	Dynamic	GE10
10	80:14:A8:23:D6:F7	Static	CPU
3000	F4:4D:30:9F:47:5C	Dynamic	GE10
3000	00:90:4C:06:A5:73	Dynamic	GE10
3000	80:14:A8:23:D6:F7	Static	CPU
3000	80:14:A8:C4:1E:5B	Dynamic	GE16
4000	80:14:A8:AC:26:17	Dynamic	GE12
4000	80:14:A8:23:D6:F7	Static	CPU
3000	80:14:A8:AC:26:17	Dynamic	GE12
3000	F4:4D:30:4E:45:D0	Dynamic	GE10
888	80:14:A8:C4:1E:5B	Dynamic	GE16
888	80:14:A8:23:D6:F7	Static	CPU
3000	80:14:A8:8C:FE:A7	Dynamic	GE10
3000	00:AD:BE:EF:00:01	Dynamic	GE10
3000	00:8D:5C:51:33:50	Dynamic	GE12
3000	9C:5C:8E:6F:D9:0E	Dynamic	GE10
3000	80:14:A8:67:3A:80	Dynamic	GE10
3000	80:14:A8:67:2A:5C	Dynamic	GE10
3000	00:0C:29:51:FD:03	Dynamic	GE10

Figure3.4-1: MAC Address Table

3.4.2 PON MAC Table

OLT Configuration → **MAC** → **PON MAC Table**

This table displays MAC addresses that OLT has learnt at PON ports.

The screenshot shows the web interface for the PON MAC Table. On the left is a navigation menu with items like OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC (selected), LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main area has three tabs: MAC Table, PON MAC Table (selected), and Configuration. Under the PON MAC Table tab, it says 'PON MAC Address Table: 0 macs'. There is a 'Pon ID' dropdown menu with 'ALL' selected. Below that are 'Clean' and 'Refresh' buttons. At the bottom, a table header is shown with columns: Index, VLAN ID, MAC, Type, Pon:Onu, and Gemport Index:Id.

Figure3.4-2: PON MAC Table

3.4.3 Configuration

OLT Configuration → MAC → Configuration

The default MAC aging time of OLT is 300s, user can change the value between 10~1000000s. Also, user can add MAC address to the OLT manually.

	MAC Table	PON MAC Table	Configuration
OLT Information	MAC Aging Configuration		
OLT Configuration	Automated Aging	Enable	▼
VLAN	Aging Time	300	(10-1000000s)
Uplink Port	<input type="button" value="Submit"/>		
PON	Add MAC Address		
MAC	VLAN ID	1	▼
LACP	MAC Address		(HH:HH:HH:HH:HH:HH)
QoS	Type	<input checked="" type="radio"/> Static <input type="radio"/> Dynamic	
ACL	Port ID	GE1	▼
IPv6 ACL	<input type="button" value="Add"/> <input type="button" value="Delete"/>		
IGMP			
IPv6 MLD			
RSTP			
Loopback			
DHCP			
DHCPv6			
IPv6 SLAAC			
Route			
IPv6 Route			
ONU Configuration			
Profile Configuration			
System Configuration			

Figure 3.4-1: MAC Configuration

3.5 LACP

3.5.1 Static LACP

OLT Configuration→LACP→Static LACP

To assign and configure an uplink physical interface to a channel group, select load balance for LACP function. When a traffic link can't be used suddenly, the traffic link will switch to another link automatically. The group range is from 1 to 4. Each group can add 4 ports maximally. Only GE ports can be added in the channel groups.

The screenshot shows the 'Static LACP' configuration page. On the left is a navigation menu with items like 'OLT Information', 'VLAN', 'Uplink Port', 'LACP', 'Dynamic LACP', 'QoS', 'ACL', 'IGMP', 'RSTP', 'Loopback', 'DHCP', 'DHCPv6', 'Route', 'IPv6 Route', 'ONU Configuration', 'Profile Configuration', and 'System Configuration'. The main content area is titled 'Static LACP' and contains a 'Channel Group Configuration' section. This section has a 'Channel Group ID' dropdown set to '1' and a 'Load Balance' dropdown set to 'smac'. Below these are checkboxes for ports GE1 through GE16, with GE7 and GE8 checked. A 'Submit' button is present. At the bottom, a 'Channel Group Table' displays the following data:

Group ID	Load Balance	Ports	Delete
1	smac	GE7 GE8	

Figure 3.5-1: Create Static LACP

3.5.2 Dynamic LACP

OLT Configuration → LACP → Dynamic LACP

This page displays dynamic LACP information. Only the port which is linkup can be shown in the table. OLT can detect how many devices the uplink ports connected to. If the ports are connected to the same device, they will be in a channel group, otherwise in different channel group.

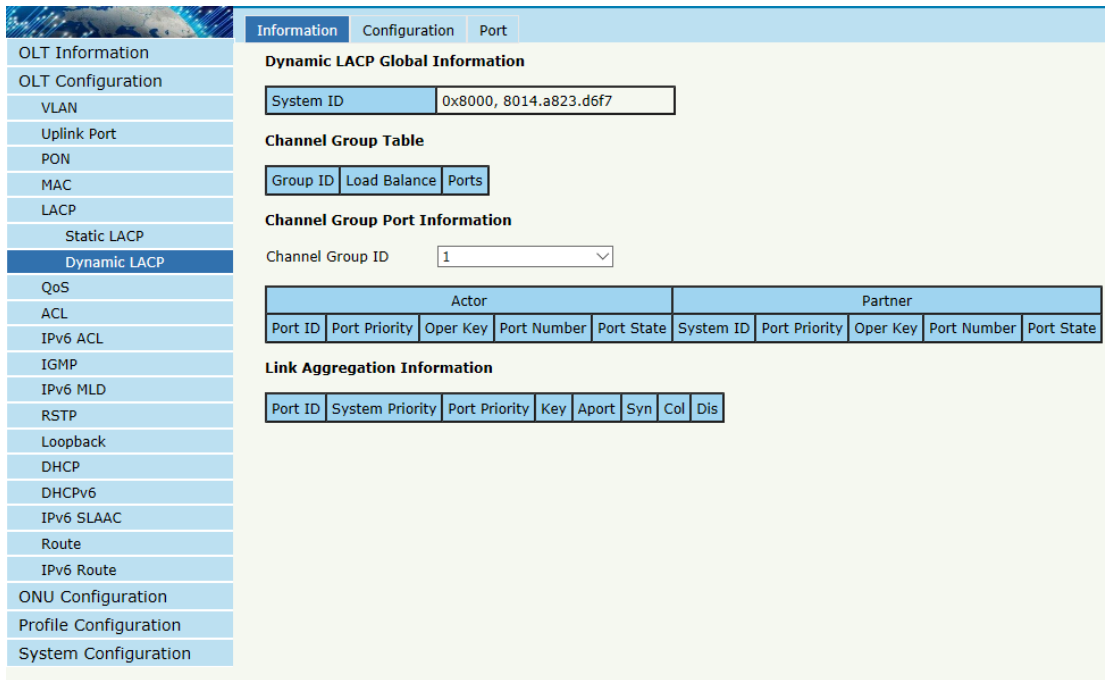


Figure 3.5-2: Dynamic LACP Information

3.6 QoS

OLT Configuration → QOS

When bandwidth is not enough or there is congestion in the network, queue scheduling can make sure high priority data traffic passes through the device firstly. Traffic will map to queues according to their priorities and transmit in the queues.

OLT supports eight queues altogether. Queue scheduling mode includes strict priority (SP), weighted round robin (WRR) and hybrid mode (SP-WRR).

Strict priority scheduling guarantees high priority traffic occupy as much as bandwidth. The lower priority traffics pass though only when there is remaining bandwidth.

QoS Mode	Q0(1-127)	Q1(1-127)	Q2(1-127)	Q3(1-127)	Q4(0-127)	Q5(0-127)	Q6(0-127)	Q7(0-127)
Strict-WRR	1	2	3	10	100	120	127	0

Figure 3.6-1: QoS Configuration

3.7 ACL

In order to filter data packages, network equipment need to setup a series of rules for identifying what need to be filtered. Only matched with the rules the data packages can be filtered. ACL can achieve this function. Matched conditions of ACL rules can be source address, destination address, Ethernet type, VLAN, protocol port, and so on. These ACL rules also can be used in other situations, such as classification of stream in QoS. An ACL rule may contain one or several sub-rules, which have different matched conditions.

This device supports the following types of ACL.

3.7.1 IP Filter

OLT Configuration→ACL→IP Filter

The filter is basic on the IP address, including source IP address and destination IP address.

The screenshot displays the 'IP Filter' configuration page. The sidebar on the left lists various configuration options, with 'ACL' selected. The main area is titled 'Access List IP Configuration' and includes the following fields:

- Access List ID: [] (1000-1999)
- Filter Action: Deny Permit
- Source IP: [] Mask []
- Source Port: [] (0-65535)
- Destination IP: [] Mask []
- Destination Port: [] (0-65535)
- Protocol: TCP [] (0-255)
- DSCP: [] (0-63)

An 'Add' button is located below the configuration fields. Below the configuration area is a table titled 'Access Lists Configured' with the following data:

List ID	Source IP	Source Port	Destination IP	Destination Port	Protocol	DSCP	Filter Action	Delete
1000		4/ffff		14/ffff	17/ff	14	Deny	

Figure 3.7-1: IP Filter

3.7.2 MAC Filter

OLT Configuration → ACL → MAC Filter

The filter is basic on the MAC address, including source MAC address and destination MAC address.

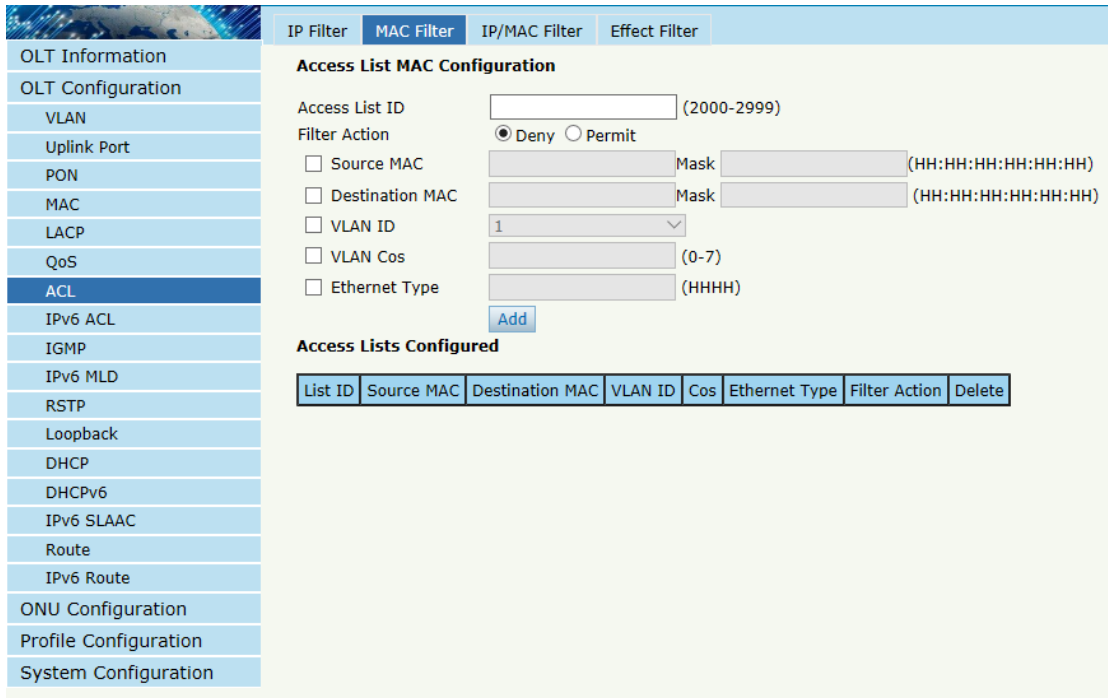


Figure 3.7-2: MAC Filter

3.7.3 IP/MAC Filter

OLT Configuration → ACL → IP/MAC Filter

This filter mix the IP address and MAC address, include source MAC address and destination MAC address, source IP address and destination IP address.

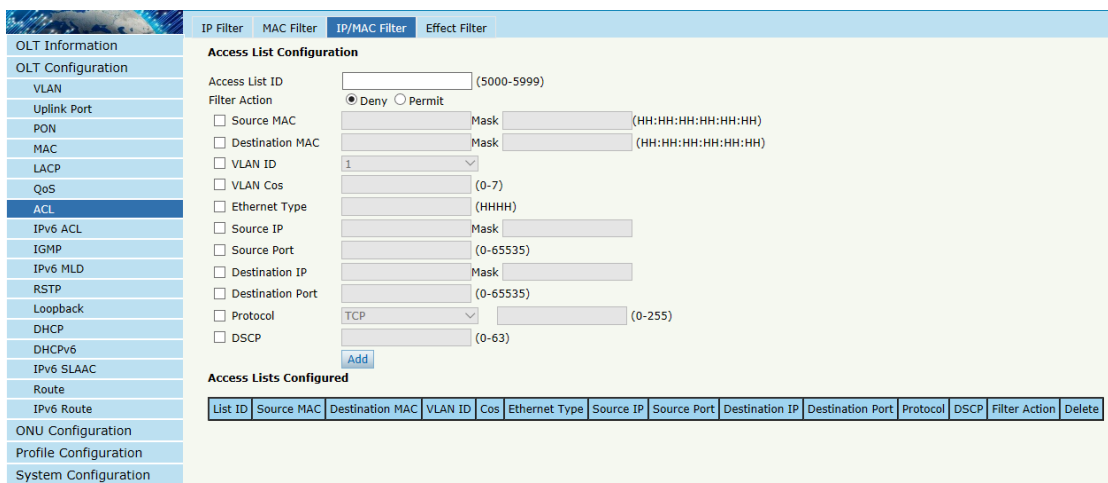


Figure 3.7-3: IP/MAC Filter

3.7.4 Effect Filter

OLT Configuration → ACL → Effect Filter

Bind the access list to the ports then it can take effect. Each access list can be bound several ports.



Figure 3.7-4: Bind Security Filter

3.8 IPv6 ACL

This part is about IPv6 security configuration of OLT. IPv6 ACL can permit or deny data passing or accessing by IPv6 packets.

3.8.1 IPv6 Filter

OLT Configuration → IPv6 ACL → IPv6 Filter

The filter is based on the IPv6 address, including source IPv6 address and destination IPv6 address.

IPv6 Filter | IPv6/MAC Filter | IPv6 Effect Filter

Access List IPv6 Configuration

Access List ID: (1000-1999)

Filter Action: Deny Permit

Source IPv6: Prefixlen:

Source Port: (0-65535)

Destination IPv6: Prefixlen:

Destination Port: (0-65535)

Protocol: (0-255)

DSCP: (0-63)

Access Lists Configured

List ID	Source IPv6	Source Port	Destination IPv6	Destination Port	Protocol	DSCP	Filter Action	Delete

Figure 3.8-1: IPv6 Filter

3.8.2 IPv6/MAC Filter

OLT Configuration → IPv6 ACL → IPv6/MAC Filter

This filter mixes IPv6 address, MAC address and other parameters, including source IPv6 address and destination IPv6 address, source MAC address and destination MAC address, VLAN, Ethernet type, protocol, TCP/UDP port, and so on.

IPv6 Filter | **IPv6/MAC Filter** | IPv6 Effect Filter

Access List Configuration

Access List ID: (5000-5999)

Filter Action: Deny Permit

Source MAC: Mask: (HH:HH:HH:HH:HH:HH)

Destination MAC: Mask: (HH:HH:HH:HH:HH:HH)

VLAN ID: (0-7)

VLAN Cos: (0-7)

Ethernet Type: (HHHH)

Source IPv6: Prefixlen:

Source Port: (0-65535)

Destination IPv6: Prefixlen:

Destination Port: (0-65535)

Protocol: (0-255)

DSCP: (0-63)

Access Lists Configured

List ID	Source MAC	Destination MAC	VLAN ID	VLAN Cos	Ethernet Type	Source IPv6	Source Port	Destination IPv6	Destination Port	Protocol	DSCP	Filter Action	Delete

Figure 3.8-2: IPv6/MAC Filter

3.8.3 IPv6 Effect Filter

OLT Configuration → IPv6 ACL → IPv6 Effect Filter

Bind access list to ports so that the ACL rules can take effect. Each access list can be bound to several ports.

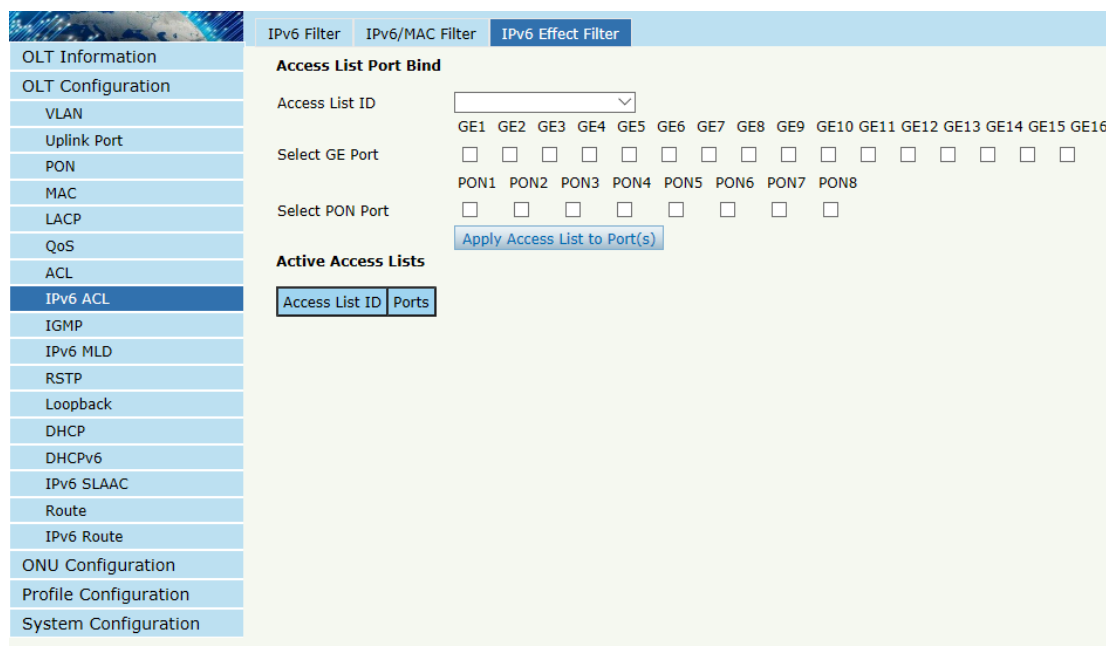


Figure 3.8-3: Bind IPv6 Security Filter

3.9 IGMP

3.9.1 Group Member

OLT Configuration → IGMP → Group Member

When there is a multicast group produced, the group will display in this table.

The screenshot displays the 'IGMP Group Member' configuration page. The sidebar menu on the left includes options like 'OLT Information', 'VLAN', 'IGMP', and 'System Configuration'. The main content area features a 'Group Member' tab, a 'Refresh' button, and a table with the following data:

Group VLAN ID	IP Address	Port ID	Type	User VLAN ID
233	239.22.2.2	PON1	Static	233

Figure 3.9-1: Group Member

3.9.2 Global

OLT Configuration → IGMP → Global

IGMP basic configuration mainly contains parameters of query packet. When IGMP status is enabled, OLT works at IGMP snooping mode. IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to "listen in" on the IGMP conversation between hosts and routers. By listening to these conversations, the switch maintains a map of which devices need which IP multicast streams. Multicasts may be filtered from the ports which do not need them and thus controls which ports receive specific multicast traffic. When IGMP status is disabled, OLT works at

transparent mode.


	Group Member	Global	Port	Port User VLAN	Port Mrouter	Mvlan	Static Group
OLT Information	IGMP Configuration						
OLT Configuration	IGMP Status <input type="text" value="Enable"/>						
VLAN	Last Member Query Interval <input type="text" value="1"/> (1-255s)						
Uplink Port	Last Member Query Count <input type="text" value="2"/> (1-255)						
PON	Last Member Query Response <input type="text" value="1"/> (1-255s)						
MAC	General Query Packet <input type="radio"/> Disable <input checked="" type="radio"/> Enable						
LACP	General Query Interval <input type="text" value="125"/> (10-255s)						
QoS	Query Source IP <input type="text" value="1.1.1.1"/>						
ACL	<input type="button" value="Submit"/> <input type="button" value="Reset"/>						
IPv6 ACL							
IGMP							
IPv6 MLD							
RSTP							
Loopback							
DHCP							
DHCPv6							
IPv6 SLAAC							
Route							
IPv6 Route							
ONU Configuration							
Profile Configuration							
System Configuration							

Figure 3.9-2: IGMP Global

3.9.3 Port

OLT Configuration → IGMP → Port

This configuration is used to set the maximum number of multicast groups, filter and fast leave mode.



The screenshot shows the 'IGMP Port Configuration' page in the OLT Web User Manual. The page has a navigation menu on the left with options like OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, Static LACP, Dynamic LACP, QoS, ACL, IPv6 ACL, IGMP (selected), IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'IGMP Port Configuration' and includes 'Submit' and 'Reset' buttons. Below these buttons is a table with the following data:

Port ID	Fast Leave	Filter	Group Limit(0-1024)
GE1	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE2	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE3	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE4	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE5	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE6	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE7	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE8	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE9	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE10	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE11	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE12	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE13	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE14	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE15	<input type="checkbox"/>	<input type="checkbox"/>	1024
GE16	<input type="checkbox"/>	<input type="checkbox"/>	1024
PON1	<input type="checkbox"/>	<input type="checkbox"/>	1024
PON2	<input type="checkbox"/>	<input type="checkbox"/>	1024

Figure 3.9-3: IGMP Port

3.9.4 Port User VLAN

OLT Configuration → IGMP → Port User VLAN

This configuration is used to configure IGMP VLAN for OLT. Generally, PON ports should be configured, and user VLAN and group VLAN are the same. If user VLAN and group VLAN are different, multicast VLAN will be translated.

The screenshot displays the 'IGMP Port User VLAN' configuration page. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, **IGMP**, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'User VLAN Configuration' and includes three dropdown menus: 'Port ID' (set to GE1), 'User VLAN ID' (set to 1), and 'Group VLAN ID' (set to 1). Below these is an 'Add' button. The 'User VLAN Table' section contains a table with the following data:

Port ID	User VLAN ID	Group VLAN ID	Delete
PON1	233	233	

Figure 3.9-4: IGMP Port User VLAN

3.9.5 Port Mrouter

OLT Configuration → IGMP → Port Mrouter

Multicast router port is used to transmit IGMP signal messages. Generally, OLT uplink ports should be set as multicast router ports.

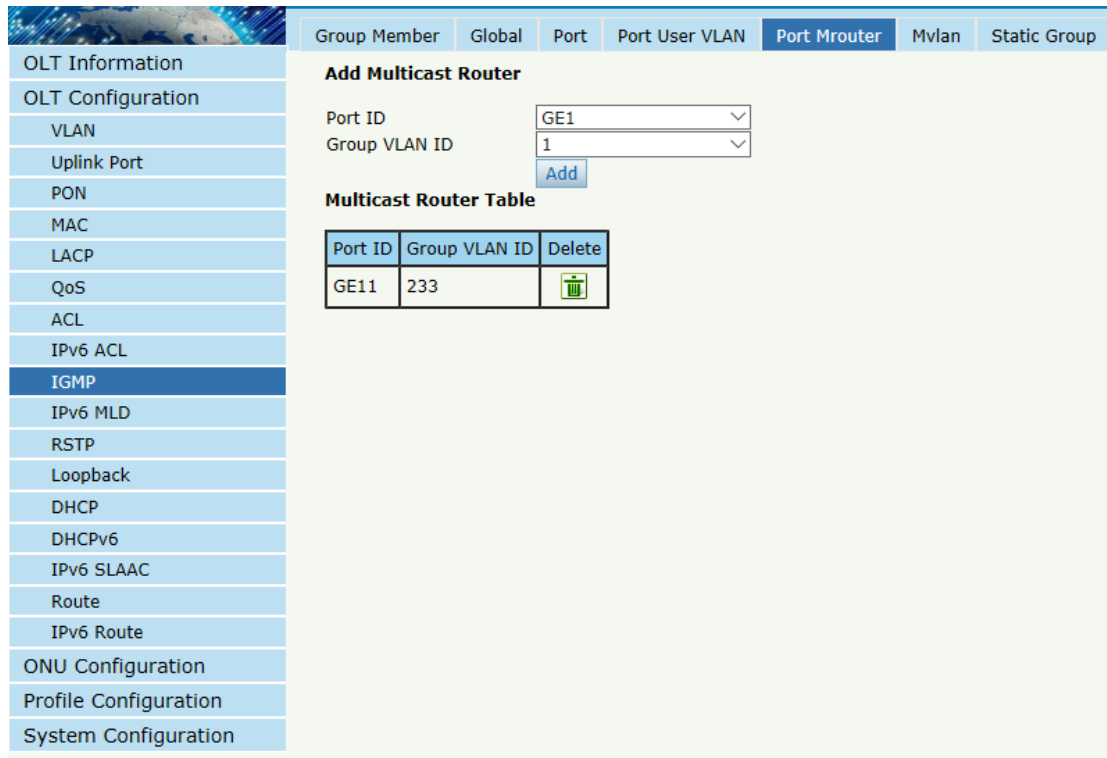


Figure 3.9-5: IGMP Port Mroute

3.9.6 Mvlan

OLT Configuration →IGMP→Mvlan

This configuration is used to configure multicast VLAN and its mode.No Mvlan configuration is required for GPON OLT -B Series.

IGMP mode	Unknown multicast	Igmp packet
Snooping	drop	trap -to -cpu
Disable(transparent)	forward	forward

The screenshot shows the OLT Web User Manual interface. On the left is a vertical navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, **IGMP**, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The 'IGMP' item is highlighted in blue.

The main content area has a top navigation bar with tabs: Group Member, Global, Port, Port User VLAN, Port Mrouter, **Mvlan**, and Static Group. The 'Mvlan' tab is selected.

Below the tabs, the page is titled 'IP Igmp Mvlan Info'. There are three sub-sections: 'Multicast vlan', 'Unknown multicast', and 'Igmp packet'. Each sub-section has a corresponding input field or dropdown menu.

The 'Add/Modify Mvlan' section contains the following fields:

Mvlan ID(1~4094)	<input type="text"/>
Unknown multicast	<input type="text" value="drop"/>
Igmp packet	<input type="text" value="trap-to-cpu"/>

Below these fields is an 'Add/Modify' button.

Figure 3.9-6: IGMP MVLAN

3.9.7 Static Group

OLT Configuration → IGMP → Static Group

This configuration is used to bind multicast IP address and VLAN ID.

The screenshot shows the 'Static Group' configuration page. The left sidebar contains a menu with 'IGMP' highlighted. The main area has tabs for 'Group Member', 'Global', 'Port', 'Port User VLAN', 'Port Mrouter', 'Mvlan', and 'Static Group'. The 'Static Group' tab is selected, showing the 'Add Static Group' form with fields for Port ID (PON1), IP Address, and User VLAN ID (1), and an 'Add' button. Below the form is the 'Static Group Table' with one entry: PON1, 239.22.2.2, 233, and a delete icon.

Port ID	IP Address	User VLAN ID	Delete
PON1	239.22.2.2	233	

Figure 3.9-7: IGMP Static Group

3.10 IPv6 MLD

3.10.1 Group Member

OLT Configuration → IPv6 MLD → Group Member

This page displays IPv6 multicast group member ports.

The screenshot shows the 'IPv6 MLD Group Member' configuration page. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, **IPv6 MLD**, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area has a top navigation bar with tabs: Group Member (selected), Global, Port User VLAN, Port, Port Mrouter, and Static Group. Below the tabs, the title 'IPv6 MLD Group Member' is displayed. A table with the following data is shown:

VLAN	Group	Type	Version	Port List
233	ff10:abcd::1234	Static	MLA V1	GE 0/1

Below the table is a 'Refresh' button.

Figure 3.10-1: IPv6 MLD Group Member

3.10.2 Global

OLT Configuration → IPv6 MLD → Global

This page is used to enable IPv6 MLD and set IPv6 MLD related parameters.

	Group Member	Global	Port User VLAN	Port	Port Mrouter	Static Group
OLT Information	IPv6 MLD Configuration					
OLT Configuration	MLD Status <input type="text" value="Enable"/>					
VLAN	MLDv2 Status <input type="text" value="Disable"/>					
Uplink Port	Query interval <input type="text" value="125"/> (1-255s)					
PON	Query response interval <input type="text" value="10"/> (1-3600s)					
MAC	Robustness variable <input type="text" value="2"/> (1-3)					
LACP	Last listener query count <input type="text" value="2"/> (1-7)					
QoS	Last listener query interval <input type="text" value="1"/> (1-255s)					
ACL	Send general query packet <input type="radio"/> Disable <input checked="" type="radio"/> Enable					
IPv6 ACL	General query interval <input type="text" value="125"/> (10-3600s)					
IGMP	Query Source IP <input type="text" value="fe80::1"/>					
IPv6 MLD	<input type="button" value="Submit"/> <input type="button" value="Reset"/>					
RSTP						
Loopback						
DHCP						
DHCPv6						
IPv6 SLAAC						
Route						
IPv6 Route						
ONU Configuration						
Profile Configuration						
System Configuration						

Figure 3.10-2: IPv6 MLD Global

3.10.3 Port User VLAN

OLT Configuration→IPv6 MLD→Port User VLAN

This page is used to configure IGMP VLAN for OLT.

The screenshot displays the configuration interface for IPv6 Port User VLAN. The left sidebar lists various configuration categories, with 'IPv6 MLD' currently selected. The main panel features several tabs, with 'Port User VLAN' being the active one. This tab contains two main sections: 'User VLAN Configuration' and 'User VLAN Table'. In the 'User VLAN Configuration' section, the 'User VLAN ID' is set to '1', and there is an 'Add' button. The 'User VLAN Table' section contains a table with the following data:

User VLAN ID	Delete
233	

Below the table, there is a 'Refresh' button.

Figure 3.10-3: IPv6 Port User VLAN

3.10.4 Port

OLT Configuration → IPv6 MLD → Port

This page is used to configure group limit value, fast leave for each port.

	Group Member	Global	Port User VLAN	Port	Port Mrouter	Static Group
OLT Information						
OLT Configuration						
VLAN						
Uplink Port						
PON						
MAC						
LACP						
QoS						
ACL						
IPv6 ACL						
IGMP						
IPv6 MLD						
RSTP						
Loopback						
DHCP						
DHCPv6						
IPv6 SLAAC						
Route						
IPv6 Route						
ONU Configuration						
Profile Configuration						
System Configuration						
	Port ID	Fast Leave	Group Limit(0-256)			
	GE1	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE2	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE3	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE4	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE5	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE6	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE7	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE8	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE9	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE10	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE11	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE12	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE13	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE14	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE15	<input type="checkbox"/>	<input type="text" value="256"/>			
	GE16	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON1	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON2	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON3	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON4	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON5	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON6	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON7	<input type="checkbox"/>	<input type="text" value="256"/>			
	PON8	<input type="checkbox"/>	<input type="text" value="256"/>			
	<input type="button" value="Submit"/>	<input type="button" value="Reset"/>				

Figure 3.10-4: IPv6 MLD Port

3.10.5 Port Mrouter

OLT Configuration → IPv6 MLD → Port Mrouter

This page is used to set a port as IPv6 multicast router port.

The screenshot displays the configuration interface for IPv6 MLD Port Mrouter. The left sidebar lists various configuration options, with 'IPv6 MLD' highlighted. The main panel features several tabs, with 'Port Mrouter' selected. This tab contains an 'Add Multicast Router' section with two dropdown menus: 'Port ID' set to 'GE1' and 'Group VLAN ID' set to '1'. An 'Add' button is located below these fields. A 'Multicast Router Table' is shown below, containing a single entry with the following details:

Port ID	Group VLAN ID	Type	Delete
GE 0/1	233	static	

A 'Refresh' button is positioned below the table.

Figure 3.10-5: IPv6 MLD Port Mrouter

3.11 RSTP

Spanning Tree Protocol is layer2 protocol, which is used to eliminate network loop by blocking network redundant links selectively. It has the feature of link backup as well.

3.11.1 Information

OLT Configuration→RSTP→Information

Global information mainly displays RSTP parameters of root bridge device.

The screenshot shows the RSTP configuration interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, **RSTP**, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area has three tabs: Information, Global, and Port. The 'Information' tab is selected and displays the following data:

RSTP Information

	Root	Bridge
Cost	0	
Port	CPU	
Priority	32768	32768
MAC Address	80:14:A8:23:D6:F7	80:14:A8:23:D6:F7
Hello Time	2s	2s
Max Age	20s	20s
Forward Delay	15s	15s

RSTP Port Status

[Refresh](#)

Port ID	Role	State	Cost	Priority	Point To Point
GE10	Design	Forwarding	200000	128	Enable
GE12	Design	Forwarding	200000	128	Enable
GE16	Design	Forwarding	200000	128	Enable

Figure 3.11-1: RSTP Information

3.11.2 Global

OLT Configuration → RSTP → Global

This configuration is used to set RSTP parameters of the device, which contains RSTP switch, priority, hello time, max age, forward delay and MAC address.

Information	Global	Port
OLT Information	RSTP Configuration	
OLT Configuration	RSTP Status	Enable <input type="text"/>
VLAN	Global Priority	32768 (0-61440)
Uplink Port	Hello Time	2 (1-10s)
PON	Max Age	20 (6-40s)
MAC	Forward Delay	15 (4-30s)
LACP	Notice: $2 * (\text{HelloTime} + 1) \leq \text{MaxAge} \leq 2 * (\text{ForwardDelay} - 1)$	
QoS	<input type="button" value="Submit"/> <input type="button" value="Reset"/>	
ACL		
IPv6 ACL		
IGMP		
IPv6 MLD		
RSTP		
Loopback		
DHCP		
DHCPv6		
IPv6 SLAAC		
Route		
IPv6 Route		
ONU Configuration		
Profile Configuration		
System Configuration		

Figure 3.11-2: RSTP Global Setup

3.11.3 Port

OLT Configuration → RSTP → Port

This user interface is used to set port RSTP parameters which contain RSTP switch, priority, cost, edge port and p2p port.

The screenshot displays the 'RSTP Port Configuration' page in the OLT web interface. The left sidebar contains a menu with 'RSTP' highlighted. The main content area shows a table of port configurations. Each row represents a port from GE1 to GE16. All ports have their 'Status' checked, a 'Priority' of 128, a 'Cost' of 200000, 'OperEdge' checked, and 'Point To Point' checked. The interface also includes 'Submit' and 'Reset' buttons at the top of the configuration area.

Port ID	Status	Priority (0-255)	Cost (1-200000000)	OperEdge	Point To Point
GE1	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE2	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE3	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE4	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE5	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE6	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE7	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE8	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE9	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE10	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE11	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE12	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE13	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE14	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE15	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE16	<input checked="" type="checkbox"/>	128	200000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 3.11-3: RSTP Port Settings

3.12 Loopback

Loopback can detect loop ports and process loop ports.

3.12.1 Information

OLT Configuration → Loopback → Information

The screenshot displays the OLT Web User Manual interface. On the left, a vertical menu lists various configuration options, with 'Loopback' highlighted in dark blue. The main content area is titled 'Loopback Information' and features three tabs: 'Information', 'Global', and 'Port'. The 'Information' tab is selected. Below the tabs, there is a 'Refresh' button and a table with the following columns: 'Interface', 'Mode', 'Time(s)', and 'Source Interface'.

Figure 3.12-1: Loopback Information

3.12.2 Global

OLT Configuration → Loopback → Global

This page is used to enable or disable loopback detect and configure loopback mode, age time.

	Information	Global	Port
OLT Information	Loopback Configuration		
OLT Configuration	Status	<input type="text" value="Enable"/>	
VLAN	Mode	<input type="text" value="auto-recovery"/>	
Uplink Port	Age Time	<input type="text" value="60"/>	(30-3600s)
PON	<input type="button" value="Submit"/> <input type="button" value="Reset"/>		
MAC			
LACP			
QoS			
ACL			
IPv6 ACL			
IGMP			
IPv6 MLD			
RSTP			
Loopback			
DHCP			
DHCPv6			
IPv6 SLAAC			
Route			
IPv6 Route			
ONU Configuration			
Profile Configuration			
System Configuration			

Figure 3.12-2: Loopback Global

3.12.3 Port

OLT Configuration → Loopback → Port

Loopback port configuration is used to specify the port range of loopback function. Loopback will take effect on the port when it is checked.

The screenshot displays the 'Loopback Port Configuration' page in the OLT web interface. The left sidebar contains a list of configuration categories, with 'Loopback' highlighted. The main content area features a table with two columns: 'Port ID' and 'Status'. The table lists ports from GE1 to GE16, each with a checked checkbox in the 'Status' column. Above the table are 'Submit' and 'Reset' buttons. The page also includes tabs for 'Information', 'Global', and 'Port' at the top right.

Port ID	Status
GE1	<input checked="" type="checkbox"/>
GE2	<input checked="" type="checkbox"/>
GE3	<input checked="" type="checkbox"/>
GE4	<input checked="" type="checkbox"/>
GE5	<input checked="" type="checkbox"/>
GE6	<input checked="" type="checkbox"/>
GE7	<input checked="" type="checkbox"/>
GE8	<input checked="" type="checkbox"/>
GE9	<input checked="" type="checkbox"/>
GE10	<input checked="" type="checkbox"/>
GE11	<input checked="" type="checkbox"/>
GE12	<input checked="" type="checkbox"/>
GE13	<input checked="" type="checkbox"/>
GE14	<input checked="" type="checkbox"/>
GE15	<input checked="" type="checkbox"/>
GE16	<input checked="" type="checkbox"/>

Figure 3.12-3: Loopback Port

3.13 DHCP

OLT can support the following DHCP functions.

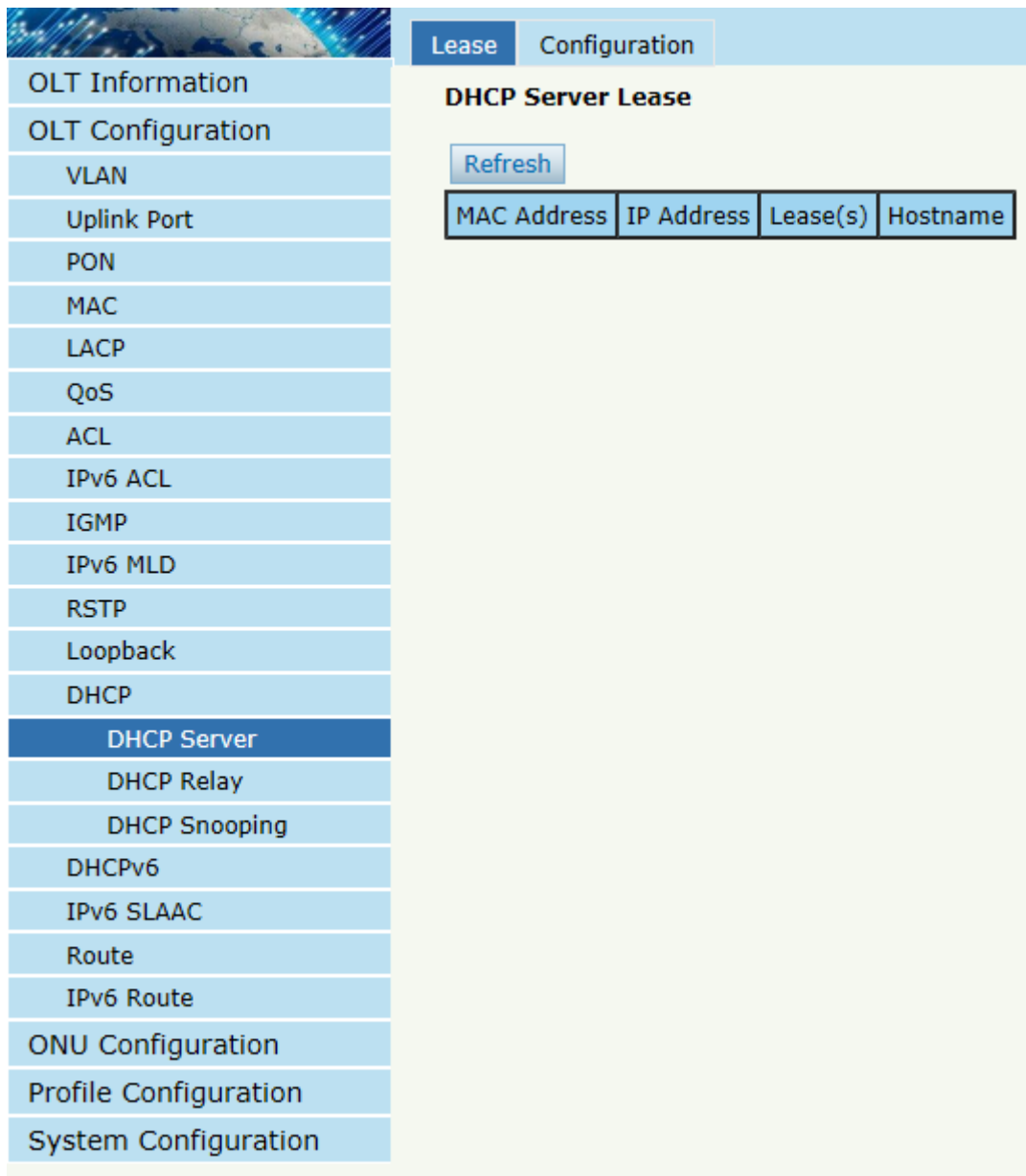
- DHCP Server
- DHCP Relay
- DHCP Snooping

3.13.1 DHCP Server

3.13.1.1 DHCP Lease

OLT Configuration → DHCP → DHCP Server → Lease

This table displays the MAC addresses, host name and IP addresses, lease time assigned to them.



Lease	Configuration		
DHCP Server Lease			
Refresh			
MAC Address	IP Address	Lease(s)	Hostname

Figure 3.13-1: DHCP Lease

3.13.1.2 DHCP Configuration

OLT Configuration → DHCP → DHCP Server → Configuration

Sometimes the devices need dynamic IP addresses, but there is no special DHCP server in network. These configurations can solve the problem.

OLT will be a DHCP server in network and assign IP addresses to other devices.

Before enabling DHCP server, you must configure IP address for the VLAN.

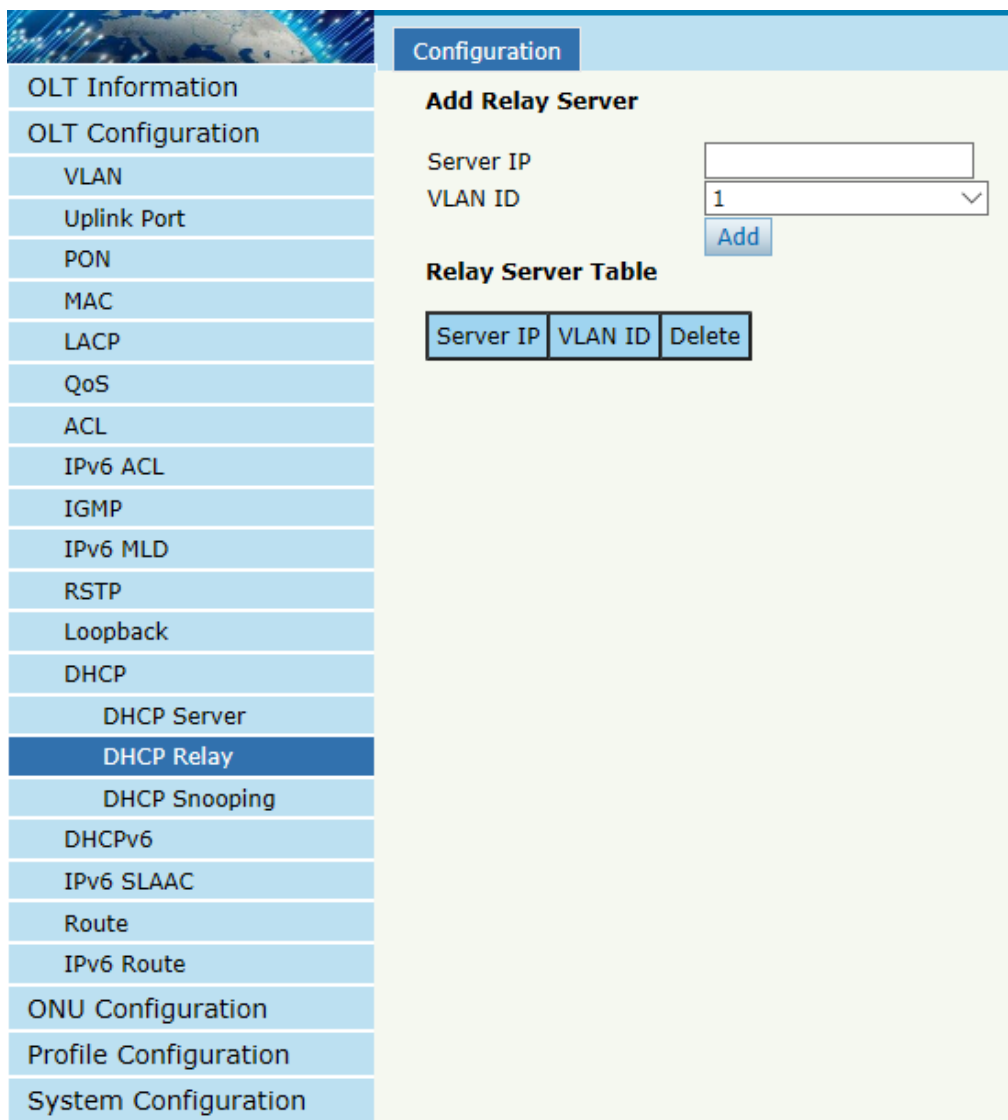
Lease	Configuration
DHCP Server Configuration	
DHCP Server	Enable
VLAN ID	1
Submit Reset	
DHCP Server Settings	
Start IP Address	192.168.0.20
End IP Address	192.168.0.254
Subnet Mask	0.0.0.0
Gateway	0.0.0.0
Static DNS 1	0.0.0.0
Static DNS 2	0.0.0.0
Static DNS 3	0.0.0.0
WINS	0.0.0.0
Client Lease Time	864000 (60-864000s)
Submit Reset	

Figure 3.13-2: DHCP Configuration

3.13.2 DHCP Relay

OLT Configuration→DHCP→DHCP Relay

Because the DHCP service exists in one broadcast domain, the server and the client are usually in the same network segment. DHCP relay can solve the issue that DHCP server and client do not exist in the same network segment.



The screenshot displays the OLT Web User Manual interface for DHCP Relay configuration. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCP Server, **DHCP Relay**, DHCP Snooping, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'Configuration' and contains the following sections:

- Add Relay Server**: Includes input fields for 'Server IP' and 'VLAN ID' (set to 1), and an 'Add' button.
- Relay Server Table**: A table with the following header:

Server IP	VLAN ID	Delete
-----------	---------	--------

Figure 3.13-3: DHCP Relay Configuration

3.13.3 DHCP Snooping

3.13.3.1 Bind List

OLT Configuration → DHCP → DHCP Snooping → Bind List

The static bind of the DHCP Snooping will be shown in the table.

The screenshot displays the OLT Web User Interface for DHCP Snooping configuration. The left sidebar lists various configuration categories, with 'DHCP Snooping' highlighted. The main content area shows the 'DHCP Snooping Bind List' configuration page. At the top, there are tabs for 'Bind List', 'Global', 'Port', and 'Static Bind'. Below the tabs, there are buttons for 'FlushAll', 'FlushStatic', 'FlushDynamic', and 'Refresh'. A table header is visible with columns: MAC Address, IP Address, Lease, VLAN ID, Port ID, and Type.

Figure 3.13-4: DHCP Snooping Bind List

3.13.3.2 Global

OLT Configuration→DHCP→DHCP Snooping→Global

DHCP Snooping is used to prevent the DHCP message attacking and guarantee network to get a correct IP address.

DHCP snooping global configuration mainly contains option 82 settings, DHCP traffic rate limit and snooping VLAN.

The screenshot displays the DHCP Snooping Global configuration page. On the left is a navigation menu with items like OLT Information, VLAN, and DHCP Snooping (highlighted). The main content area has tabs for Bind List, Global, Port, and Static Bind. Under the Global tab, the 'DHCP Snooping Configuration' section shows 'DHCP Snooping' set to 'Enable' with 'Submit' and 'Reset' buttons. The 'DHCP Snooping Settings' section includes radio buttons for 'Option82 Control' (Disable selected), 'Option82 Strategy' (Keep selected), and 'Overspeed Recovery' (Enable selected). It also features input fields for 'Overspeed Recovery Interval' (30) and 'Binding Delete Time' (300), both with 'Submit' and 'Reset' buttons. The 'VLAN ID List' section shows a table with a 'List' header and a 'VLAN ID' dropdown menu currently set to '1', with 'Add' and 'Delete' buttons below it.

Figure 3.13-5: DHCP Snooping Global

3.13.3.3 Port

OLT Configuration→DHCP→DHCP Snooping→Port

This user interface is used to configure DHCP snooping parameters of ports which contain port type, option 82 parameters and rate limit.

All the ports are untrust ports by default. Option82 parameters, “Option 82 Circuit ID” and “Option 82 Remote ID”, are effective for untrust ports.

“Limit Rate” is the ports’ max speed of receiving DHCP packets.

Port ID	Type	Option82 Circuit ID	Option82 Remote ID	Limit Rate(0-4096pps)
GE1	Untrust			0
GE2	Untrust			0
GE3	Untrust			0
GE4	Untrust			0
GE5	Untrust			0
GE6	Untrust			0
GE7	Untrust			0
GE8	Untrust			0
GE9	Untrust			0
GE10	Untrust			0
GE11	Untrust			0
GE12	Untrust			0
GE13	Untrust			0
GE14	Untrust			0
GE15	Untrust			0
GE16	Untrust			0
PON	Untrust			0

Figure 3.13-6: DHCP Snooping Port Setup

3.13.3.4 Static Bind

OLT Configuration→DHCP→DHCP Snooping→Static Bind

DHCP snooping binding is useful when a host needs a fixed IP address assigned by DHCP server from the specific port.

	Bind List	Global	Port	Static Bind
OLT Information				
OLT Configuration				
VLAN				
Uplink Port				
PON				
MAC				
LACP				
QoS				
ACL				
IPv6 ACL				
IGMP				
IPv6 MLD				
RSTP				
Loopback				
DHCP				
DHCP Server				
DHCP Relay				
DHCP Snooping				
DHCPv6				
IPv6 SLAAC				
Route				
IPv6 Route				
ONU Configuration				
Profile Configuration				
System Configuration				

Add DHCP Snooping Bind	
MAC Address	<input type="text"/> (HH:HH:HH:HH:HH:HH)
VLAN ID	<input type="text" value="1"/> ▼
IP Address	<input type="text"/>
Port ID	<input type="text" value="GE1"/> ▼
Lease	<input type="text"/> (60-1000000s)
<input type="button" value="Add"/>	

Figure 3.13-7: DHCP Snooping Static Bind

3.13.3.5 IP Source Guard

Only GPON OLT -B Series OLT supports this feature.

OLT Configuration → DHCP → DHCP Snooping → IP Source Guard

This function is actually based on the DHCP Snooping Bind List to restrict access to the external network .That means that an issue outside the list cannot access the external network

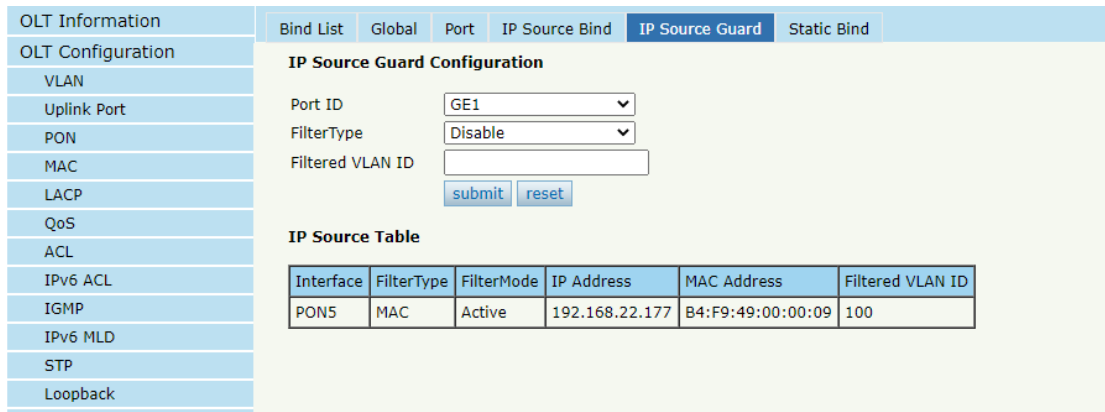


Figure 3.13-8: DHCP Snooping IP Source Guard

3.13.3.6 IP Source Bind

Only GPON OLT -B Series OLT supports this feature.

OLT Configuration→DHCP→DHCP Snooping→IP Source Bind

If you configure a rule in IP Source Guard, a dynamic rule is displayed in IP Source Bind Table. You can add a static rule manually on this page. It works as described in the previous section.

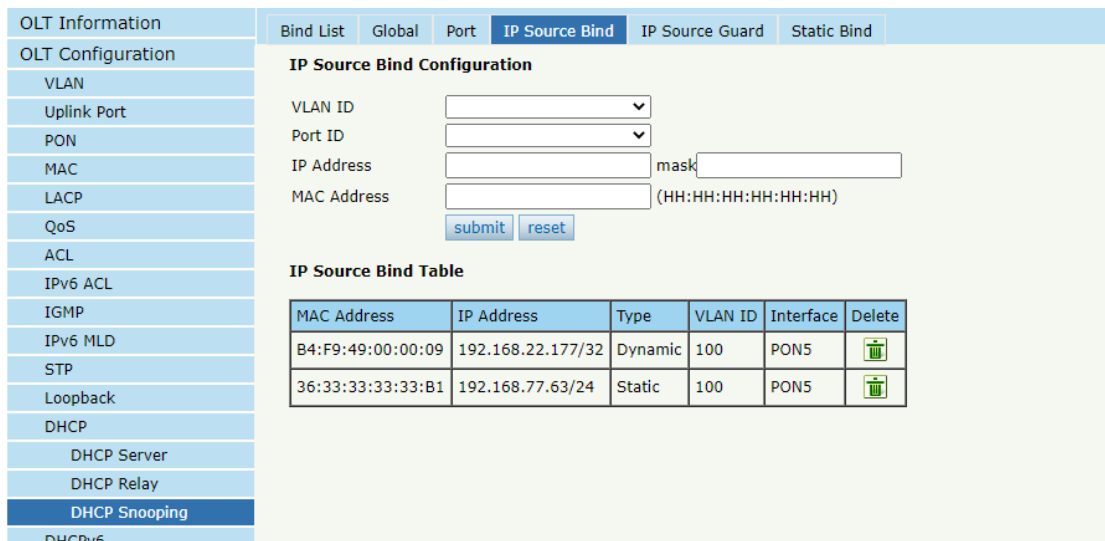


Figure 3.13-9: DHCP Snooping IP Source Bind

3.14 DHCPv6

3.14.1 DHCPv6 Server

DHCPv6 is a network protocol that used to configure IPv6 address, IPv6 prefix, DNS, domain and other network parameters for a host which operating on an IPv6 network.

3.14.1.1 DHCPv6 Bind Information

OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 Bind Information

DHCPv6 bind information displays IPv6 addresses which have been assigned to hosts.

The screenshot displays the OLT Web User Interface. On the left is a vertical menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, **DHCPv6 Server**, DHCPv6 Relay, IPv6 SLAAC, Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main area has three tabs: **DHCPv6 Bind Information**, DHCPv6 Server Enable, and Server Pool Configuration. Under the active tab, there is a table with the following columns: Client, DUID, Address, Preference LifeTime, Valid LifeTime, and Expire Info. Below the table is a Refresh button.

Figure 3.14-1: DHCPv6 Bind Information

3.14.1.2 DHCPv6 Server Enable

OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 Server Enable

Select VLAN and fill in DHCPv6 pool name, enable DHCPv6 server, then the VLAN will be added into the table. Before enabled DHCPv6 server, VLAN IPv6 address and server pool are required.

The screenshot displays the DHCPv6 Server configuration interface. The left sidebar contains a navigation menu with 'DHCPv6 Server' highlighted. The main panel features three tabs: 'DHCPv6 Bind Information', 'DHCPv6 Server Enable' (selected), and 'Server Pool Configuration'. The 'DHCPv6 Server Enable' section includes a dropdown for 'DHCPv6 Server' (set to 'Disable'), a dropdown for 'VLAN ID' (set to '1'), and an input field for 'Pool Name'. Below these are 'Submit' and 'Reset' buttons. The 'DHCPv6 Interface Information' section contains a table with two columns: 'VLAN ID' and 'Using Pool'. The table has one row with '3000' in the first column and 'test' in the second. A 'Refresh' button is located below the table.

Figure 3.14-2: DHCPv6 Server

3.14.1.3 Server Pool Configuration

OLT Configuration → DHCPv6 → DHCPv6 Server → Server Pool Configuration

DHCPv6 pool specifies the range of assigned IPv6 address. Life time, DNS and domain also can be specified here for DHCPv6 client.

The screenshot displays the 'DHCPv6 Server Pool Configuration' page. The left sidebar lists various configuration categories, with 'DHCPv6 Server' selected. The main content area is divided into two sections: 'DHCPv6 Server Pool Setting' and a table of existing pools.

DHCPv6 Server Pool Setting

Pool Name:

Start IPv6 Address:

End IPv6 Address:

Valid LifeTime: (60-4294967295)s

Preferred LifeTime: (60-4294967295)s (Valid lifetime must be large than Preferred lifetime)

DNS Server:

Domain Name:

Buttons:

DHCPv6 Server Pool

Pool Name	Start IPv6 Address	End IPv6 Address	Valid LifeTime	Preferred LifeTime	DNS Server	Domain Name	Edit	Delete
test	2222:abcd::ef:1111/64	2222:abcd::ef:3333/64	600	500	2222:abcd::ef:1111 2222:abcd::ef:1	test.com		

Figure 3.14-3: DHCPv6 Pool

3.14.2 DHCPv6 Relay

OLT Configuration → DHCPv6 → DHCPv6 Relay → Configuration

During the process of obtaining the IPv6 address/prefix and other network configuration parameters dynamically through the DHCPv6 relay, the DHCPv6 client and the DHCPv6 server are processed in the same way as when the DHCPv6 relay is not processed.

Configuration

Add DHCPv6 Relay Server

VLAN ID

Server IPv6

DHCPv6 Relay Server Table

VLAN ID	Server IPv6	Delete
888	2006:888::888:2	

Figure 3.14-4: DHCPv6 Relay

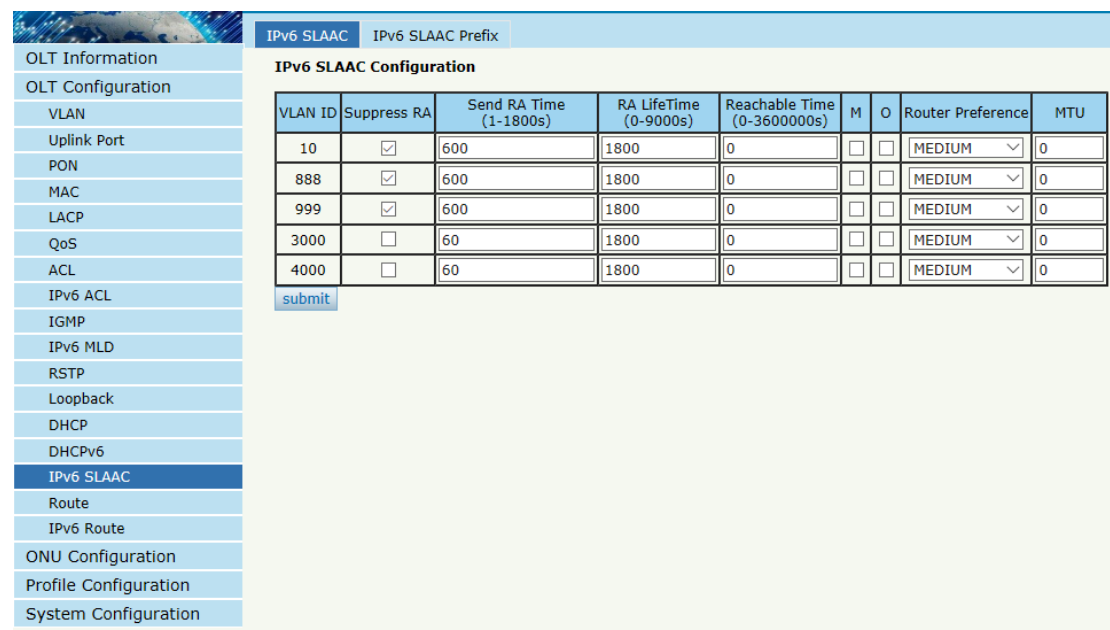
3.15 IPv6 SLAAC

IPv6 network uses the ICMPv6 route discovery protocol. When an IPv6 host connects to the network for the first time, it automatically configures it according to the information got by route discovery/prefix discovery. Route discovery/prefix discovery is that when a host is connected to IPv6 network, it can discover local router and obtain neighbor information, prefix of current network and other configuration parameters from route advertisement (RA) packets.

3.15.1 IPv6 SLAAC

OLT Configuration → IPv6 SLAAC → IPv6 SLAAC

When IPv6 host use SLAAC (Stateless Address AutoConfiguration), OLT will send a route advertisement (RA) packet to it. This page is used to configure parameters of the route advertisement packet.



The screenshot shows the OLT web interface for IPv6 SLAAC configuration. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC (highlighted), Route, IPv6 Route, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'IPv6 SLAAC Configuration' and contains a table with the following columns: VLAN ID, Suppress RA, Send RA Time (1-1800s), RA LifeTime (0-9000s), Reachable Time (0-3600000s), M, O, Router Preference, and MTU. The table has five rows of data, each with a 'submit' button below it.

VLAN ID	Suppress RA	Send RA Time (1-1800s)	RA LifeTime (0-9000s)	Reachable Time (0-3600000s)	M	O	Router Preference	MTU
10	<input checked="" type="checkbox"/>	600	1800	0	<input type="checkbox"/>	<input type="checkbox"/>	MEDIUM	0
888	<input checked="" type="checkbox"/>	600	1800	0	<input type="checkbox"/>	<input type="checkbox"/>	MEDIUM	0
999	<input checked="" type="checkbox"/>	600	1800	0	<input type="checkbox"/>	<input type="checkbox"/>	MEDIUM	0
3000	<input type="checkbox"/>	60	1800	0	<input type="checkbox"/>	<input type="checkbox"/>	MEDIUM	0
4000	<input type="checkbox"/>	60	1800	0	<input type="checkbox"/>	<input type="checkbox"/>	MEDIUM	0

submit

Figure 3.15-1: IPv6 SLAAC

3.15.2 IPv6 SLAAC Prefix

OLT Configuration → IPv6 SLAAC → IPv6 SLAAC Prefix

When IPv6 host uses stateless address auto configuration, OLT can provide IPv6 prefix. The host will generate an IPv6 address with the prefix.

The screenshot displays the web interface for configuring IPv6 SLAAC Prefixes. On the left, a navigation menu lists various configuration options, with 'IPv6 SLAAC' currently selected. The main panel is divided into two tabs: 'IPv6 SLAAC' and 'IPv6 SLAAC Prefix', with the latter being the active tab. Under the 'IPv6 SLAAC Prefix Configuration' section, there are five input fields: 'VLAN ID' (a dropdown menu showing '1'), 'ND Prefix', 'ND Prefixlen', 'Valid Lifetime', and 'Preferred Lifetime'. An 'Add' button is located below these fields. Below the configuration section is a table titled 'IPv6 SLAAC Prefix' with five columns: 'VLAN ID', 'ND Prefix', 'Valid LifeTime', 'Preference Time', and 'Delete'. A 'Refresh' button is positioned below the table.

Figure 3.15-2: IPv6 SLAAC Prefix

3.16 Route

3.16.1 IP

3.16.1.1 VLAN IP

OLT Configuration→Route→IP→VLAN IP

This configuration is used to configure IP address for VLAN. When the VLAN is added to a port, you can access OLT by the IP address from the port.

The screenshot displays the 'VLAN IP' configuration interface. On the left is a navigation menu with 'IP' highlighted. The main area shows configuration options for VLAN ID, IP Address, and Subnet Mask, along with 'Submit' and 'Reset' buttons. A table below lists the configured VLAN IP entries.

VLAN ID	IP Address	Subnet Mask	Delete
3000	192.168.6.182	255.255.255.0	

Figure 3.16-1: VLAN IP

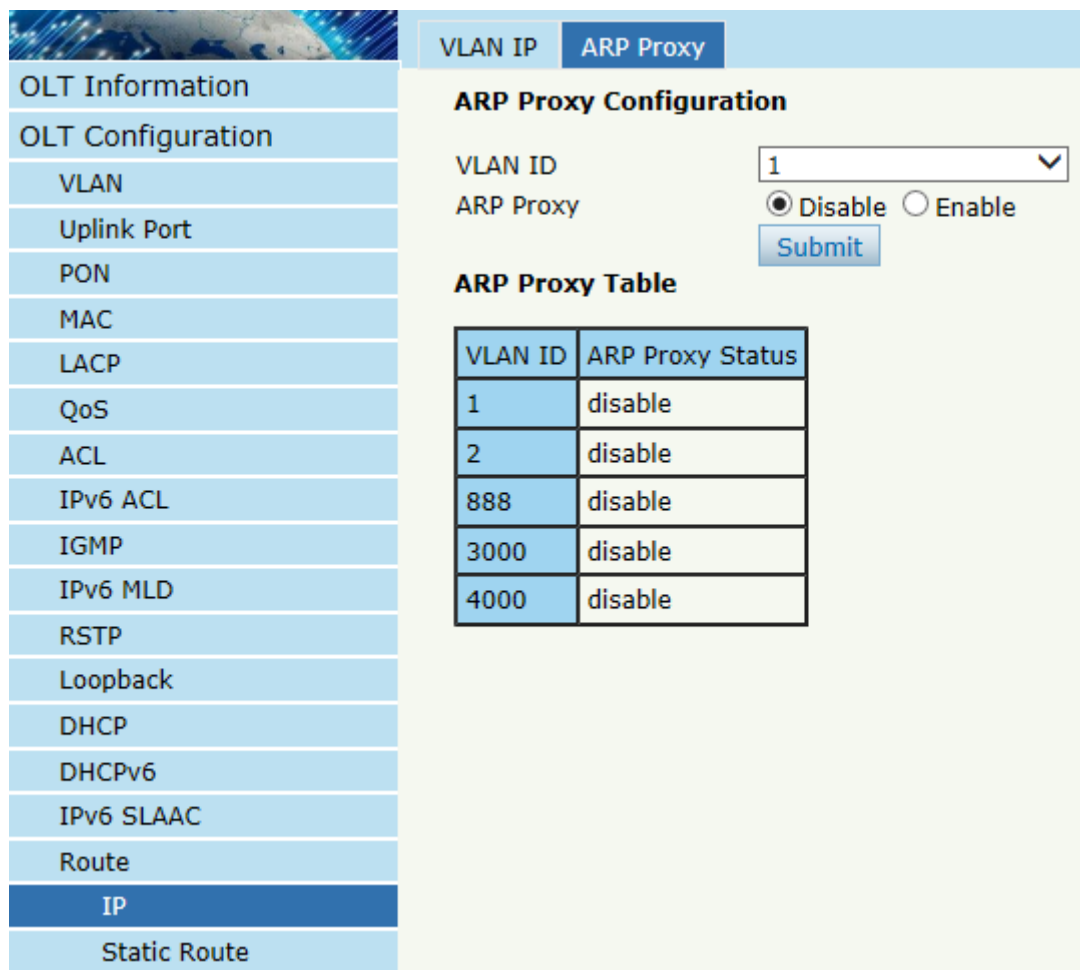
3.16.1.2 ARP Proxy

ARP Proxy is a technique by which a device on a given network answers the ARP queries for a network address that is not on that network. The ARP Proxy is aware of the location of the traffic's destination, and offers its own MAC address as (ostensibly final) destination. The "captured" traffic is then typically routed by the Proxy to the intended destination via another interface or via a tunnel.

The process which results in the node responding with its own MAC

address to an ARP request for a different IP address for proxying purposes is sometimes referred to as 'publishing'. GPON OLT -B Series OLT does not support ARP Proxy.

OLT Configuration→Route→IP→ARP Proxy



The screenshot displays the ARP Proxy configuration page. On the left, a navigation menu includes options like OLT Information, VLAN, Uplink Port, and IP (which is highlighted). The main content area is titled 'ARP Proxy Configuration' and includes a dropdown for 'VLAN ID' set to '1', radio buttons for 'Disable' (selected) and 'Enable', and a 'Submit' button. Below this is an 'ARP Proxy Table' with the following data:

VLAN ID	ARP Proxy Status
1	disable
2	disable
888	disable
3000	disable
4000	disable

Figure 3.16-2: ARP proxy configuration

3.16.2 Static Route

Static route is a form of routing that a router uses a manually-configured routing entry. In many cases, static routes are manually configured by a

network administrator. Unlike dynamic routing, static routes are fixed and do not change if the network is changed or reconfigured.

The OLT only supports static route. After configured VLAN IP address, add static routes to make the network on the different network segment communicate with each other.

OLT Configuration→Route→Static Route

The screenshot shows the 'Static Route' configuration page in the OLT web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IP, **Static Route**, and RIP. The main content area is titled 'Static Route' and contains the following sections:

Add Static Route

Destination IP:

Destination Mask:

Gateway:

Static Route Table

Destination IP	Destination Mask	Gateway	Delete
0.0.0.0	0.0.0.0	192.168.6.1	

Figure 3.16-3: Static Route

3.16.3 RIP

RIP (Routing Information Protocol) is a simple internal gateway protocol,

which is based on the D-V algorithm and uses hop count to represent metric. The hop count is the number of routers that a datagram must pass through. RIP only support maximum 15 hops; hence it is fit for a small network.

3.16.3.1 RIP Information

OLT Configuration → Route → RIP → RIP Information

This page displays RIP information.

The screenshot shows the 'RIP Information' configuration page. On the left is a sidebar with a list of configuration categories: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IP, Static Route, RIP (highlighted), and OSPF. The main content area has five tabs: RIP Information (selected), RIP Enable, RIP Route Networking, RIP Redistribute, and RIP Interface. Under the 'RIP Information' tab, there are two sections: 'RIP Route Table' with a table header containing 'Route Type', 'Network', 'Next Hop', 'Metric', 'From', 'Tag', and 'Time'; and 'Routing Information Sources' with a table header containing 'Gateway', 'BadPackets', 'BadRoutes', 'Distance', and 'Last Update'. A 'refresh' button is located below the 'Routing Information Sources' table.

Figure 3.16-4: RIP Information

3.16.3.2 RIP Enable

OLT Configuration → Route → RIP → RIP Enable

Enable RIP protocol and configure RIP parameters.

	RIP Information	RIP Enable	RIP Route Networking	RIP Redistribute	RIP Interface
OLT Information	RIP Enable Configuration				
OLT Configuration	RIP Route	Disable			<input type="button" value="Bases"/>
VLAN	RIP Version				
Uplink Port	Update Time	30	(5-2147483647s)		
PON	Timeout Time	180	(5-2147483647s)		
MAC	Garbage Time	120	(5-2147483647s)		
LACP	Default Metric	1	(1-16)		
QoS	Distance	120	(1-255)		
ACL		<input type="button" value="submit"/>	<input type="button" value="reset"/>		
IPv6 ACL					
IGMP					
IPv6 MLD					
RSTP					
Loopback					
DHCP					
DHCPv6					
IPv6 SLAAC					
Route					
IP					
Static Route					
RIP					
OSPF					

Figure 3.16-5: RIP Enable

3.16.3.3 RIP Route Networking

OLT Configuration → Route → RIP → RIP Route Networking

This page is used to add RIP route networking. VLAN IP address must be set before adding the VLAN to RIP route networking table.

The screenshot shows the configuration page for RIP Route Networking. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IP, Static Route, RIP (highlighted), and OSPF. The main content area has tabs for RIP Information, RIP Enable, RIP Route Networking (selected), RIP Redistribute, and RIP Interface. Under the 'RIP Route Networking' tab, there are input fields for VLAN (set to 3000), IP Address, and Subnet Mask, with 'add' and 'reset' buttons below. Below that is the 'RIP Route Networking Table' section, which contains 'Network' and 'Delete' buttons, and a 'refresh' button at the bottom.

Figure 3.16-6: RIP Route Networking

3.16.3.4 RIP Redistribute

OLT Configuration → Route → RIP → RIP Redistribute.

This page is used to enable or disable route redistribute and choose redistribute mode.

The screenshot shows the 'RIP Redistribute' configuration page. The left sidebar contains a menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IP, Static Route, RIP (highlighted), and OSPF. The main content area has tabs for 'RIP Information', 'RIP Enable', 'RIP Route Networking', 'RIP Redistribute', and 'RIP Interface'. The 'RIP Redistribute' tab is active, showing the following configuration options:

- Default Route Redistribute:** A dropdown menu set to 'Disable' with 'submit' and 'reset' buttons below it.
- Redistribute:** A dropdown menu set to 'Kernel' and a text input field for 'Metric' with '(0-16)' next to it, and 'add' and 'reset' buttons below it.
- Redistribute Table:** A table with columns 'Redistribute Type', 'Metric', and 'Delete', and a 'refresh' button below it.

Figure 3.16-7: RIP Redistribute

3.16.3.5 RIP Interface

OLT Configuration → Route → RIP → RIP Interface

This page is used to configure RIP interface and its authentication type. VLAN IP address must be set before configuring RIP interface. And authentication chain should be set on page **Key Chain**, refer to section 3.16.5.

The screenshot displays the 'RIP Interface' configuration page. On the left is a navigation menu with 'RIP' highlighted. The main area features a tabbed interface with 'RIP Interface' selected. Under this tab, there are configuration fields for VLAN, IP Address, Subnet Mask, Send Version (set to 1), Recv Version (set to 1), and Authentication (set to Disable). Below the configuration fields is a 'RIP Interface Table' with columns for Interface, Network, Send Version, Recv Version, and Authentication, and a 'refresh' button.

Figure 3.16-8: RIP Interface

3.16.4 OSPF

OSPF (Open Shortest Path First) is an internal gateway protocol based on link state routing protocol. This protocol uses the Dijkstra algorithm to calculate the shortest path to each network, and performs the algorithm to quickly converge to the new loop-free topology when detecting changes in the link (such as link failure).

3.16.4.1 OSPF Information

OLT Configuration → Route → OSPF → OSPF Information

This page displays OSPF information, including neighbor information and OSPF routing information.

The screenshot shows the OSPF Information configuration page. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IP, Static Route, RIP, and OSPF. The main content area has tabs for OSPF Information, OSPF Enable, OSPF Route Networking, OSPF Area Type, OSPF Area Summary, OSPF Redistribute, and OSPF Interface. The OSPF Information tab is selected, showing the following tables:

OSPF Neighbor Table

Neighbor ID	Priority	State	Dead Time	Address	Interface	RxmtL	RqstL	DBsmL
-------------	----------	-------	-----------	---------	-----------	-------	-------	-------

OSPF Routing Table

OSPF Network Routing Table

Destination Type	Network	Cost	Area	Interface
N	192.168.6.0/24	1	0.0.0.0	directly attached to ethv0.3000

OSPF Router Routing Table

Destination Type	Network	Cost	Area/Type	Interface
------------------	---------	------	-----------	-----------

OSPF External Routing Table

Destination Type	Network	Cost/Type2 Cost	Tag	Interface
------------------	---------	-----------------	-----	-----------

Figure3.16-9: OSPF Information

3.16.4.2 OSPF Enable

OLT Configuration → Route → OSPF → OSPF Enable

This page is used to enable OSPF. Fill in route ID and let it blank, enable OSPF. OLT will use the biggest IP address as route ID if it's blank.

The screenshot shows the OSPF Enable configuration page. The left sidebar contains the same navigation menu as Figure 3.16-9. The main content area has tabs for OSPF Information, OSPF Enable, OSPF Route Networking, OSPF Area Type, OSPF Area Summary, OSPF Redistribute, and OSPF Interface. The OSPF Enable tab is selected, showing the OSPF Enable Configuration form:

OSPF Enable Configuration

OSPF Route:

Router ID:

Figure 3.16-10: OSPF Enable

3.16.4.3 OSPF Route Networking

OLT Configuration → Route → OSPF → OSPF Route Networking

This page is used to configure area number for VLAN where OSPF protocol is operating.

The screenshot displays the OSPF Route Networking configuration page. The left sidebar lists various configuration options, with OSPF selected. The main content area is titled 'OSPF Route Networking' and includes the following configuration fields:

- Area:
- VLAN:
- IP Address:
- Subnet Mask:

Below the configuration fields are 'add' and 'reset' buttons. The 'OSPF Route Networking Table' is shown below:

Area	Network	Delete
0.0.0.0	192.168.6.182/24	

A 'refresh' button is located below the table.

Figure 3.16-11: OSPF Route Networking

3.16.4.4 OSPF Area Type

OLT Configuration → Route → OSPF → OSPF Area Type

This page is used to configure area type. Backbone area will not display on this page.

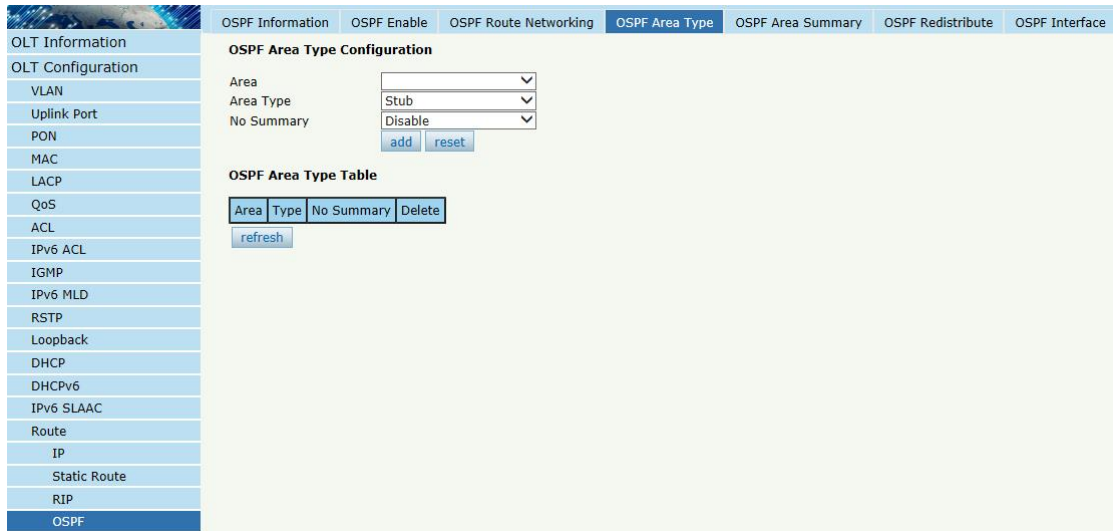


Figure 3.16-12: OSPF Area Type

3.16.4.5 OSPF Area Summary

OLT Configuration → Route → OSPF → OSPF Area Summary

This page is used to configure area IP address summary.

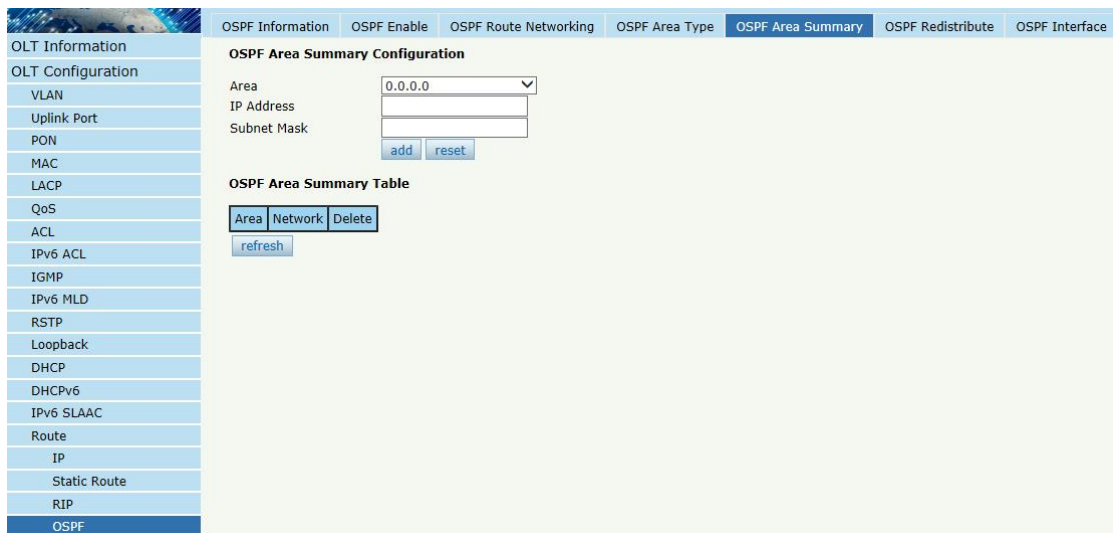


Figure 3.16-13: OSPF Area Summary

3.16.4.6 OSPF Redistribute

The router can use route redistribution to broadcast the OSPF routing it

learns through another routing protocol so that several routing protocols can cooperate with each other in a network.

OLT Configuration → Route → OSPF → OSPF Redistribute

The screenshot shows the OSPF Redistribute configuration page. The left sidebar lists various configuration options, with OSPF selected. The main content area has tabs for OSPF Information, OSPF Enable, OSPF Route Networking, OSPF Area Type, OSPF Area Summary, OSPF Redistribute, and OSPF Interface. The OSPF Redistribute tab is active, showing the following configuration:

Default Route Redistribute

Default Route Redistribute: (1-16777214)

Always:

Metric: (1-16777214)

Metric Type: (1-2)

Redistribute

Redistribute: (1-16777214)

Metric: (1-16777214)

Metric Type: (1-2)

Redistribute Table

Redistribute Table	Metric	Metric Type	Delete
<input type="button" value="refresh"/>			

Figure 3.16-14: OSPF Redistribute

3.16.4.7 OSPF Interface

OLT Configuration → Route → OSPF → OSPF Interface

This page is used to OSPF interface parameters such as cost, time, priority, authentication, and so on.

The screenshot shows the OSPF Interface configuration page. The left sidebar lists various configuration options, with OSPF selected. The main content area has tabs for OSPF Information, OSPF Enable, OSPF Route Networking, OSPF Area Type, OSPF Area Summary, OSPF Redistribute, and OSPF Interface. The OSPF Interface tab is active, showing the following configuration:

OSPF Interface Configuration

VLAN:

IP Address:

Subnet Mask:

Authentication:

OSPF Interface Table

VLAN	Network	Cost	Priority	Retransmit Interval	Transmit Delay	Hello Interval	Dead Interval	Authentication
3000	192.168.6.182/24	1	1	5	1	10	40	

Figure 3.16-15: OSPF Interface

3.16.5 Key Chain

Key management is a method of controlling the authentication key used by routing protocols. The authentication key is available for EIGRP and RIP version 2. To manage the authentication key needs a key chain. Each key has its own key identifier, which is stored locally. The combination of the key identifier and the interface associated with the message uniquely identifies the authentication algorithm and MD5 authentication key in use.

OLT Configuration → Route → Key Chain

The screenshot displays the 'Key Chain' configuration page in the OLT web interface. On the left is a navigation menu with 'Key Chain' highlighted. The main content area is titled 'Key Chain' and contains two sections:

Add Key Chain

Key Chain:

Key ID: (0-2147483647)

Key String:

Buttons:

Key Chain Table

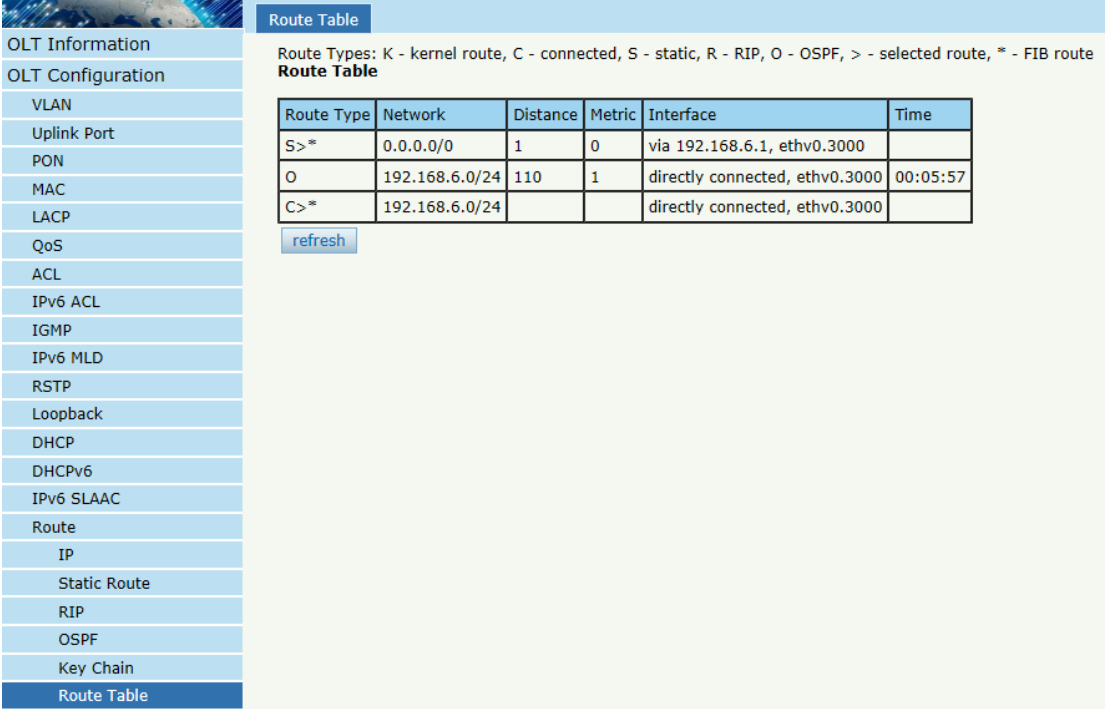
Key Chain	Key ID	Key String	Edit	Delete
<input type="button" value="refresh"/>				

Figure 3.16-16: Key Chain

3.16.6 Route Table

OLT Configuration → Route → Route Table

This page displays routing items of OLT.



Route Types: K - kernel route, C - connected, S - static, R - RIP, O - OSPF, > - selected route, * - FIB route

Route Type	Network	Distance	Metric	Interface	Time
S>*	0.0.0.0/0	1	0	via 192.168.6.1, ethv0.3000	
O	192.168.6.0/24	110	1	directly connected, ethv0.3000	00:05:57
C>*	192.168.6.0/24			directly connected, ethv0.3000	

[refresh](#)

Figure 3.16-17: Route Table

3.17 IPv6 Route

3.17.1 IPv6

OLT Configuration → IPv6 Route → IPv6 → VLAN IPv6

Configure IPv6 address for VLAN that has been created.

OLT Information

OLT Configuration

VLAN

Uplink Port

PON

MAC

LACP

QoS

ACL

IPv6 ACL

IGMP

IPv6 MLD

RSTP

Loopback

DHCP

DHCPv6

IPv6 SLAAC

Route

IPv6 Route

IPv6

IPv6 Static Route

IPv6 Route Table

ONU Configuration

Profile Configuration

System Configuration

VLAN IPv6

VLAN IPv6 Configuration

VLAN ID

IPv6 Address

Prefixlen

VLAN IPv6 Table





VLAN ID	IPv6 Address	Prefixlen	Delete
10	fe80::a:8214:a8ff:fe23:d6f7		
	2222:1234::1	64	
888	fe80::378:8214:a8ff:fe23:d6f7		
	2206:abcd:888::888:2	64	
999	fe80::3e7:8214:a8ff:fe23:d6f7		
3000	fe80::bb8:8214:a8ff:fe23:d6f7		
	2206:abcd:ef::30:3	64	
4000	fe80::fa0:8214:a8ff:fe23:d6f7		
	2206:abcd:4000::40:3	64	

Figure 3.17-1: VLAN IPv6

3.17.2 IPv6 Static Route

Static route is added manually. It will not change even the situation and network topology has been changed.

OLT Configuration → IPv6 Route → IPv6 Static Route

Add IPv6 static route item one by one.

The screenshot displays the 'IPv6 Static Route' configuration page. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, RSTP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, IPv6, IPv6 Static Route (highlighted), IPv6 Route Table, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'IPv6 Static Route' and contains a section for 'Add IPv6 Static Route' with three input fields: 'Destination IPv6', 'Destination Prefixlen', and 'Gateway', followed by an 'add' button. Below this is an 'IPv6 Static Route Table' with the following columns: Destination IPv6, Destination Prefixlen, Gateway, and Delete.

Figure 3.17-2: IPv6 Static Route

3.17.3 IPv6 Route Table

OLT Configuration → IPv6 Route → IPv6 Route Table

This table displays all IPv6 route items of the device, including static route and dynamic route.

- OLT Information
- OLT Configuration
- VLAN
- Uplink Port
- PON
- MAC
- LACP
- QoS
- ACL
- IPv6 ACL
- IGMP
- IPv6 MLD
- RSTP
- Loopback
- DHCP
- DHCPv6
- IPv6 SLAAC
- Route
- IPv6 Route
- IPv6
- IPv6 Static Route
- IPv6 Route Table
- ONU Configuration
- Profile Configuration
- System Configuration

IPv6 Route Table

Route Types: K - kernel route, C - connected, S - static, R - RIPng, O - OSPFv6, > - selected route, * - FIB route

IPv6 Route Table

Route Type	Network	Distance	Metric	Interface	Time
C>*	:::1			directly connected, ethv0.10	
C>*	2206:abcd:ef::/64			directly connected, ethv0.3000	
C>*	2206:abcd:888::/64			directly connected, ethv0.888	
C>*	2206:abcd:4000::/64			directly connected, ethv0.4000	
C>*	2222:1234::/64			directly connected, ethv0.10	
K>*	ff00::/8			directly connected, ethv0.888	

[Refresh](#)

Figure 3.17-3: IPv6 Route Table

Chapter 4 ONU Configuration

This chapter is about the ONU management by OLT.

4.1 ONU AuthList

4.1.1 ONU List

ONU Configuration→ONU AuthList→ONU List

Select PON port ID, all ONUs will be displayed in this interface. You can check ONU using profile, Registration mode and do some operations to every ONU.

ONU ID	Status	Descriptions	Model	Profile	Mode	Info	Action
GPON0/1:1	Online	GPON0/1:1	H113	default	Sn	GPON0091A830	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Offline	GPON0/1:2	unknown	default	Sn	GPON00673A80	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:3	Online	GPON0/1:3	H113	default	Sn	GPON0093A921	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:4	Offline	GPON0/1:4	unknown	default	Sn	RTKG11111111	Config Deactivate Delete Modify Optical Info Detail Info Reboot

Figure 4.1-1: ONU List

4.1.1.1 Config

ONU Configuration→ONU AuthList→ONU List→Config

Configure ONU parameter information which you selected.

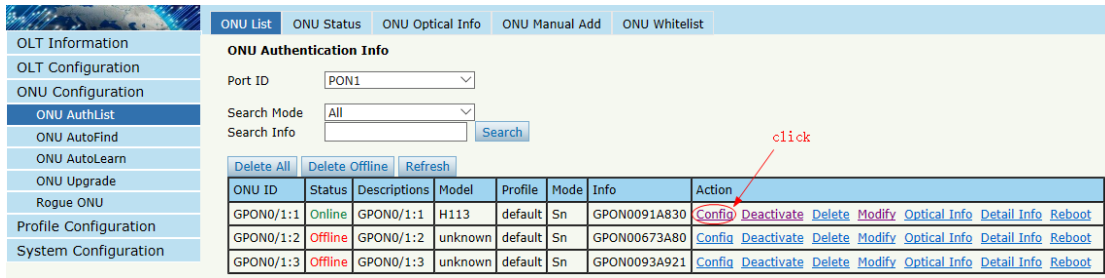


Figure 4.1-2: Configure ONU

4.1.1.1.1 Tcont

ONU Configuration → ONU AuthList → ONU List → Config → Tcont

Create tcont ID and bind DBA profile. Tcont name is optional.

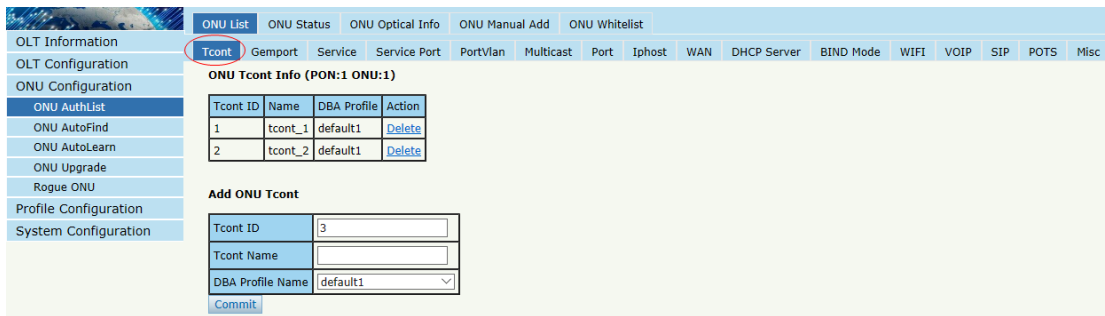


Figure 4.1-3: Create Tcont

4.1.1.1.2 Gempport

ONU Configuration → ONU AuthList → ONU List → Config → Gempport

Create gempport ID and bind tcont ID.

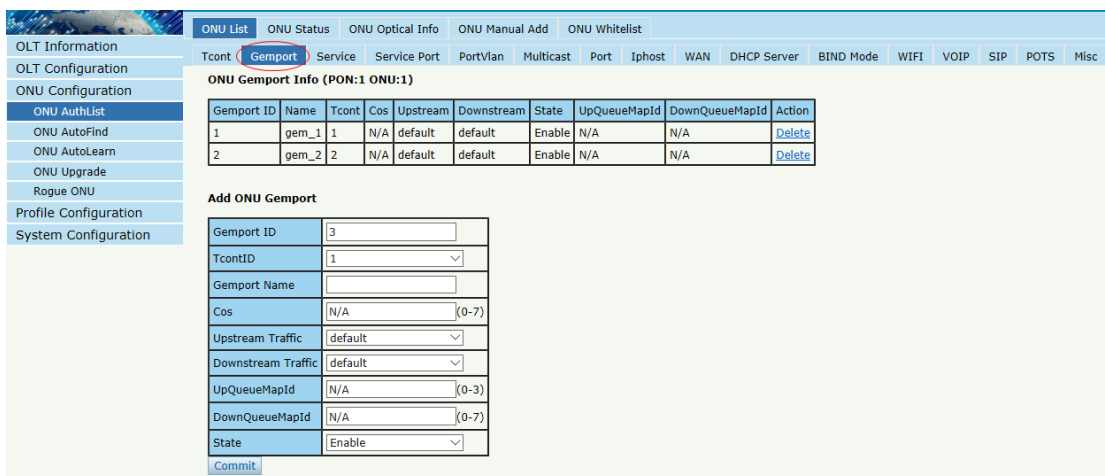


Figure 4.1-4: Create gempport

4.1.1.1.3 Service

ONU Configuration→ONU AuthList→ONU List→Config→Service

Create a service, set the VLAN and VLAN mode and bind one gempport ID.

ONU Service Info (PON:1 ONU:1)

Service Name	Gempport	Vlan Mode	Vlan List	Cos List	Port	Action
ser_1	1	Tag	3000	N/A	N/A	Delete
ser_2	2	Tag	4000	N/A	N/A	Delete

Add ONU Service

Service Name	ser_3
Gempport ID	1
Vlan Mode	Tag
Vlan List	
Cos List	N/A
Port Type	N/A

Figure 4.1-5: Create service

4.1.1.1.4 Service Port

ONU Configuration→ONU AuthList→ONU List→Config→Service Port

Create a service port, set the user VLAN and translate VLAN and bind one gempport ID. If don't need VLAN translation, just set translate VLAN the same as user VLAN.

ONU Service Port Info (PON:1 ONU:1)

Service Port	Gempport ID	BenignVid	EndVid	OuterVid	InnerVid	UserPrio	Etype	Vlan	Cos	SVlan	SCos	Mode	Enable	Description	Action
1	1	3000	3000	N/A	N/A	N/A	N/A	3000	N/A	N/A	N/A	1:1	YES	N/A	Delete
2	2	4000	4000	N/A	N/A	N/A	N/A	4000	N/A	N/A	N/A	1:1	YES	N/A	Delete

Add ONU Service Port

Service Mode	Cvlan
Service-Port ID	3
Gempport ID	1
User Vlan	
Translate Vlan	
Translate Cos	N/A
Translate SVlan	N/A
Translate SCos	N/A
Description	N/A

Figure 4.1-6: Create service port

4.1.1.1.5 PortVlan

ONU Configuration→**ONU AuthList**→**ONU List**→**Config**→**PortVlan**

Set the VLAN mode of the ONU's port. For HGU, need to configure veip 1 transparent; for SFU, configure Ethernet port directly.

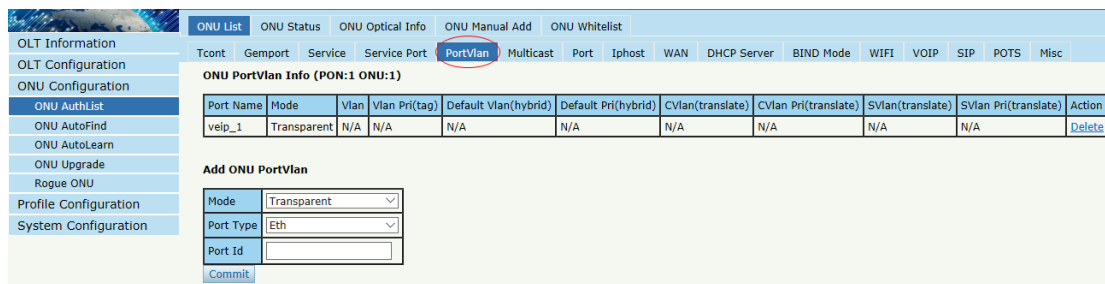


Figure 4.1-7: Configure port VLAN mode

4.1.1.1.6 Multicast

ONU Configuration→**ONU AuthList**→**ONU List**→**Config**→**Multicast**

Set the Multicast VLAN of ONU and the Multicast VLAN mode of ONU's port.

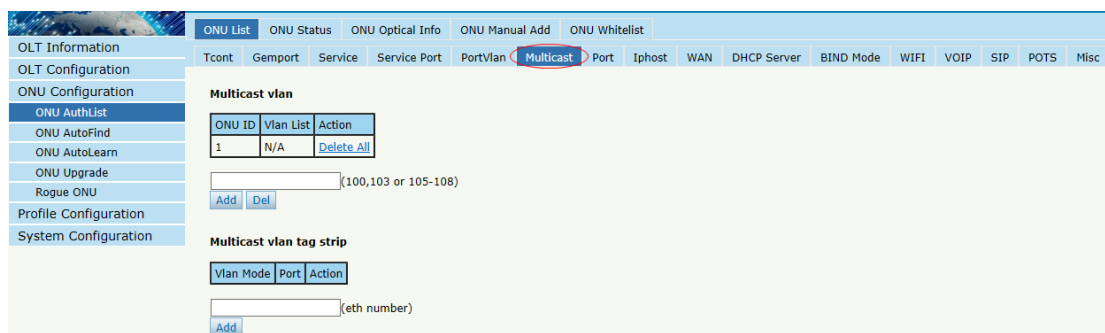


Figure 4.1-8: Configure multicast VLAN

4.1.1.1.7 Port

ONU Configuration→ONU AuthList→ONU List→Config→Port

Set attribute of ONU LAN port.

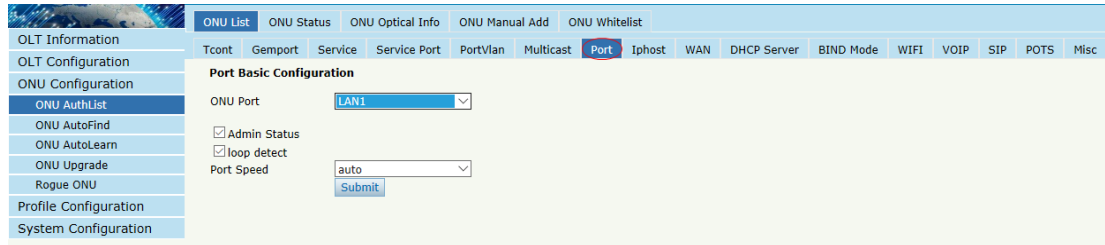


Figure 4.1-9: ONU port attribute

4.1.1.1.8 Iphost

ONU Configuration→ONU AuthList→ONU List→Config→Iphost

Create Iphost for ONU wan connection. It is used for ONU management.

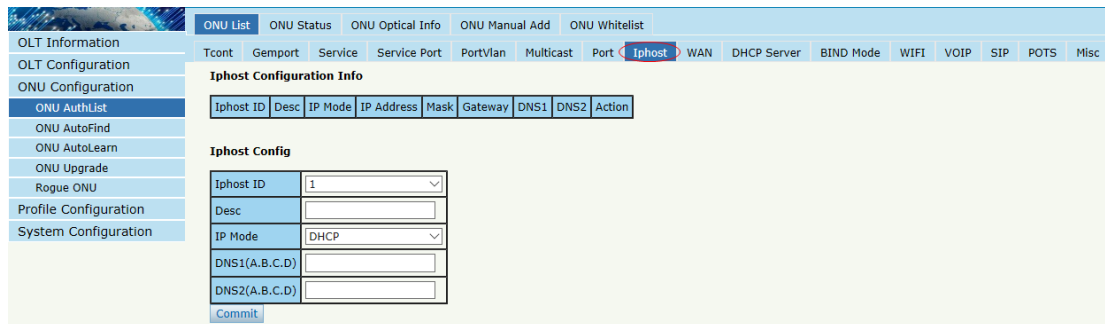


Figure 4.1-10: Configure IPhost

4.1.1.1.9 WAN

ONU Configuration→ONU AuthList→ONU List→Config→WAN

ONU WAN connection is configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "WAN" can be shown on this page.

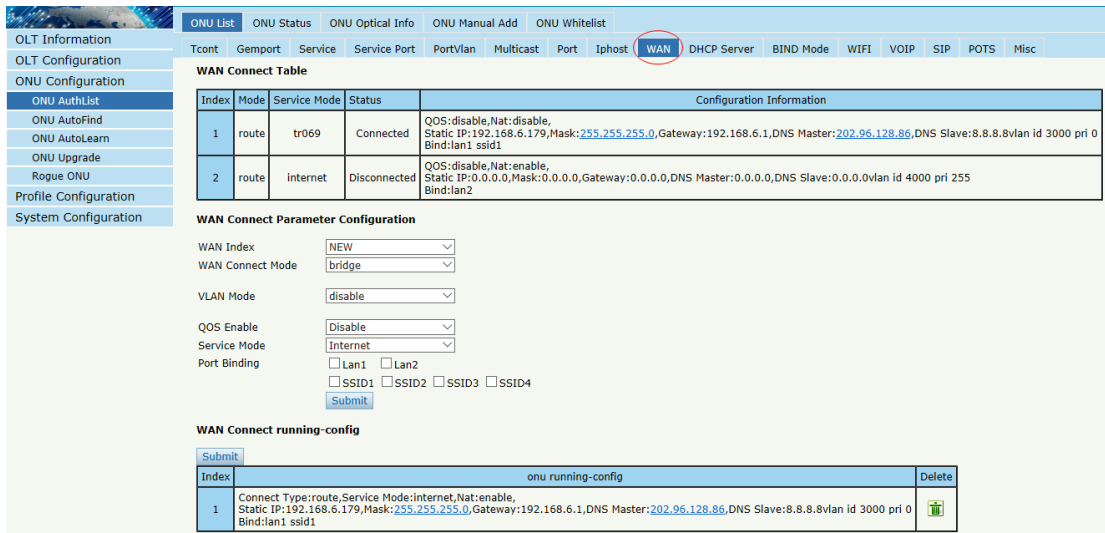


Figure 4.1-11: Configure WAN

4.1.1.1.10 DHCP Server

ONU Configuration → ONU AuthList → ONU List → Config → DHCP Server

ONU LAN and DHCP server are configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "DHCP Server" can be shown on this page.

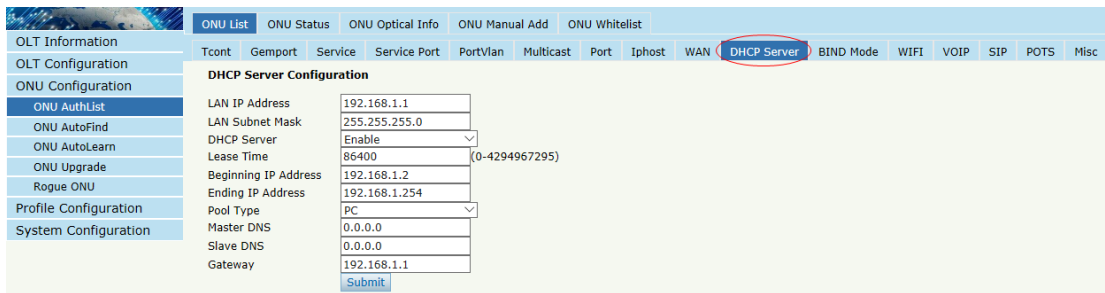


Figure 4.1-12: ONU DHCP Server

4.1.1.1.11 Bind Mode

ONU Configuration → ONU AuthList → ONU List → Config → BIND Mode

ONU LAN bind mode is configured by private OMCI between OLT and

ONU. When the connected ONU supports this function, the option "Bind Mode" can be shown on this page.

Figure 4.1-13: LAN Bind Mode Configuration

4.1.1.1.12 WIFI

ONU Configuration→ONU AuthList→ONU List→Config→WIFI

ONU WIFI is configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "WIFI" can be shown on this page.

Figure 4.1-14: WIFI Configuration

4.1.1.1.13 VOIP

ONU Configuration→ONU AuthList→ONU List→Config→VOIP

This page shows WAN information of VOIP service, including IP address and VLAN. You can also operate VOIP module on this page. When the connected ONU supports VOIP, the option "VOIP" can be shown on this

page.

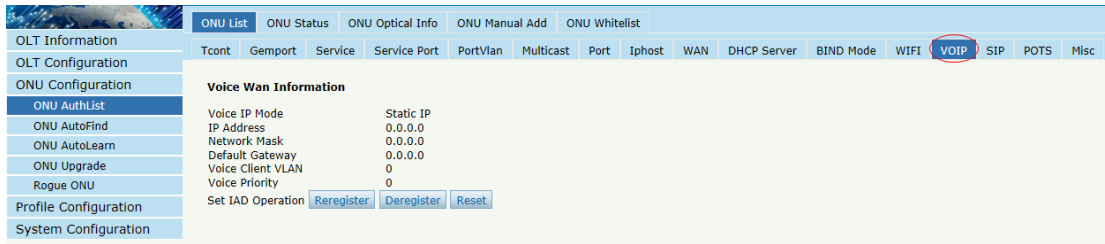


Figure 4.1-15: Voice Wan Information

4.1.1.1.14 SIP

ONU Configuration→ONU AuthList→ONU List→Config→SIP

ONU VoIP SIP parameter can be configured on this page, including SIP server, proxy server, digit map and so on. When the connected ONU supports VOIP, the option "SIP" can be shown on this page.

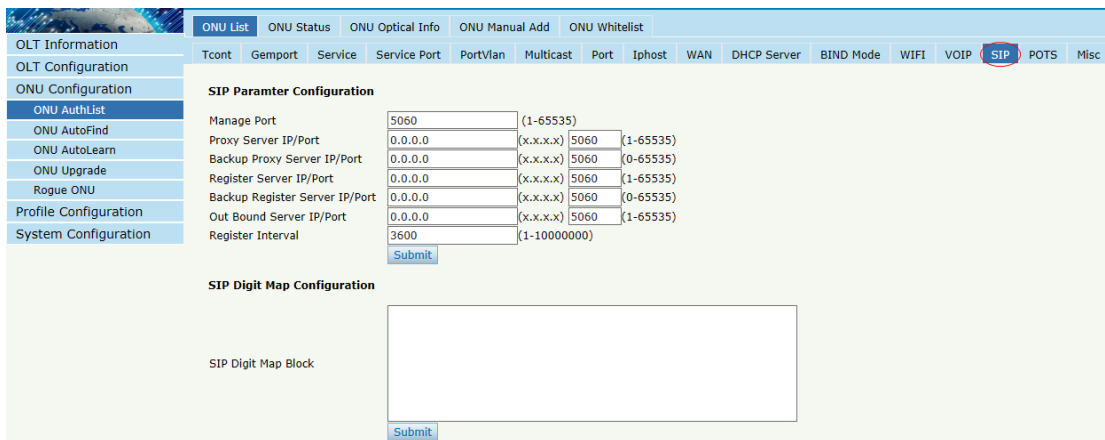


Figure 4.1-16: SIP Parameter

4.1.1.1.15 POTS

ONU Configuration→ONU AuthList→ONU List→Config→POTS

ONU VoIP POTS account, password and other VOIP parameters of POTS can be configured on this page; the length of SIP account can't be more than 16 bits. When the connected ONU supports VOIP, the option

"POTS" can be shown on this page.

The screenshot shows the POTS Configuration page. The left sidebar contains a navigation menu with items like OLT Information, OLT Configuration, ONU Configuration, ONU AuthList, and System Configuration. The main content area is titled 'POTS Configuration' and includes the following sections:

- VoIP Port:** A dropdown menu set to 'Pots1'.
- POTS Information:** A 'Port Status' dropdown menu set to 'Inactive'.
- SIP User Parameter Configuration:** Radio buttons for 'Account active' (selected 'Disable'), and input fields for 'User Account', 'User name', and 'User Password' with a 'Submit' button.
- Advanced Parameter Configuration:** Dropdown menus for 'VAD' (set to 'Disable'), 'Echo cancel' (set to 'Enable'), 'Input gain(dB)' (set to '0'), 'Output gain(dB)' (set to '0'), and 'Dtmf mode' (set to 'Transparent'), with a 'Submit' button.

Figure 4.1-17: POTS Configuration

4.1.1.1.16 Misc

ONU Configuration → ONU AuthList → ONU List → Config → Misc

Misc includes other features of ONU which are configured by private OMCI.

The screenshot shows the Misc Configuration page. The left sidebar is the same as in Figure 4.1-17. The main content area is titled 'Misc Configuration' and includes the following sections:

- Misc Control Operation:** A table with buttons for 'Save configuration' (Save), 'Restore default' (Restore), and checkboxes for 'IGMP configuration' (IGMP Enable), 'STP configuration' (STP Enable), and 'Port isolate' (Port isolate Enable), each with a 'Submit' button.
- Speed Limit Configuration:** Input fields for 'Upstream limit' and 'DownStream limit' (both set to '0') with a 'Submit' button.
- Mac Table Configuration:** Input fields for 'mac age time', 'Pon mac limit', and 'Lan mac limit' (all set to '0') with a 'Submit' button.
- Mac Address Table:** A 'Clean' button.

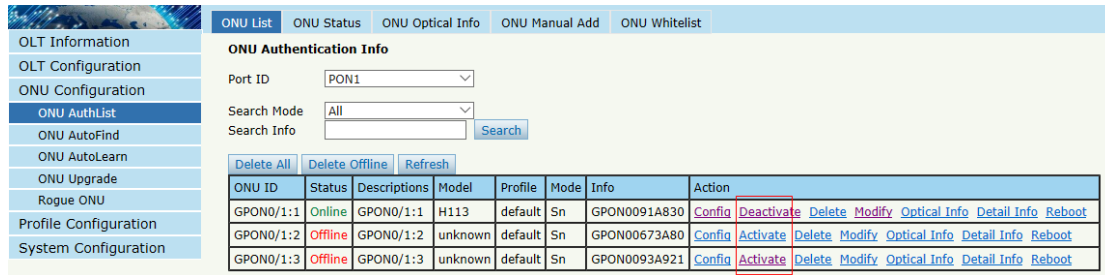
Figure 4.1-18: Misc Configuration

4.1.1.2 Deactivate

ONU Configuration → ONU AuthList → ONU List → Deactivate

(Activate)

Deactivate ONU which you selected, the ONU will be disabled and the registration failed. Activate selected ONU, this ONU will register successfully.



The screenshot shows the 'ONU Authentication Info' page. It includes a sidebar with navigation options like 'OLT Information', 'ONU Configuration', and 'ONU AuthList'. The main content area has a search bar and a table of ONUs. The table has columns for ONU ID, Status, Descriptions, Model, Profile, Mode, Info, and Action. The first row (GPON0/1:1) has a status of 'Online' and its 'Deactivate' button is highlighted with a red box.

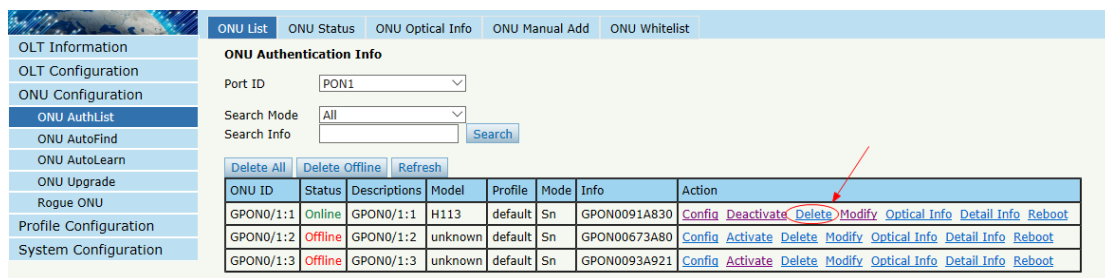
ONU ID	Status	Descriptions	Model	Profile	Mode	Info	Action
GPON0/1:1	Online	GPON0/1:1	H113	default	Sn	GPON0091A830	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Offline	GPON0/1:2	unknown	default	Sn	GPON00673A80	Config Activate Delete Modify Optical Info Detail Info Reboot
GPON0/1:3	Offline	GPON0/1:3	unknown	default	Sn	GPON0093A921	Config Activate Delete Modify Optical Info Detail Info Reboot

Figure 4.1-19: Deactivate/Activate ONU

4.1.1.3 Delete

ONU Configuration→ONU AuthList→ONU List→Delete

Delete ONU which you selected, the ONU will be deleted and the registration failed. All the configurations related this ONU will be deleted as well.



The screenshot shows the 'ONU Authentication Info' page. It includes a sidebar with navigation options like 'OLT Information', 'ONU Configuration', and 'ONU AuthList'. The main content area has a search bar and a table of ONUs. The table has columns for ONU ID, Status, Descriptions, Model, Profile, Mode, Info, and Action. The first row (GPON0/1:1) has a status of 'Online' and its 'Delete' button is highlighted with a red circle and a red arrow.

ONU ID	Status	Descriptions	Model	Profile	Mode	Info	Action
GPON0/1:1	Online	GPON0/1:1	H113	default	Sn	GPON0091A830	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Offline	GPON0/1:2	unknown	default	Sn	GPON00673A80	Config Activate Delete Modify Optical Info Detail Info Reboot
GPON0/1:3	Offline	GPON0/1:3	unknown	default	Sn	GPON0093A921	Config Activate Delete Modify Optical Info Detail Info Reboot

Figure 4.1-20: Delete ONU

4.1.1.4 Modify

ONU Configuration→ONU AuthList→ONU List→Modify

This is used to modify ONU authentication mode.

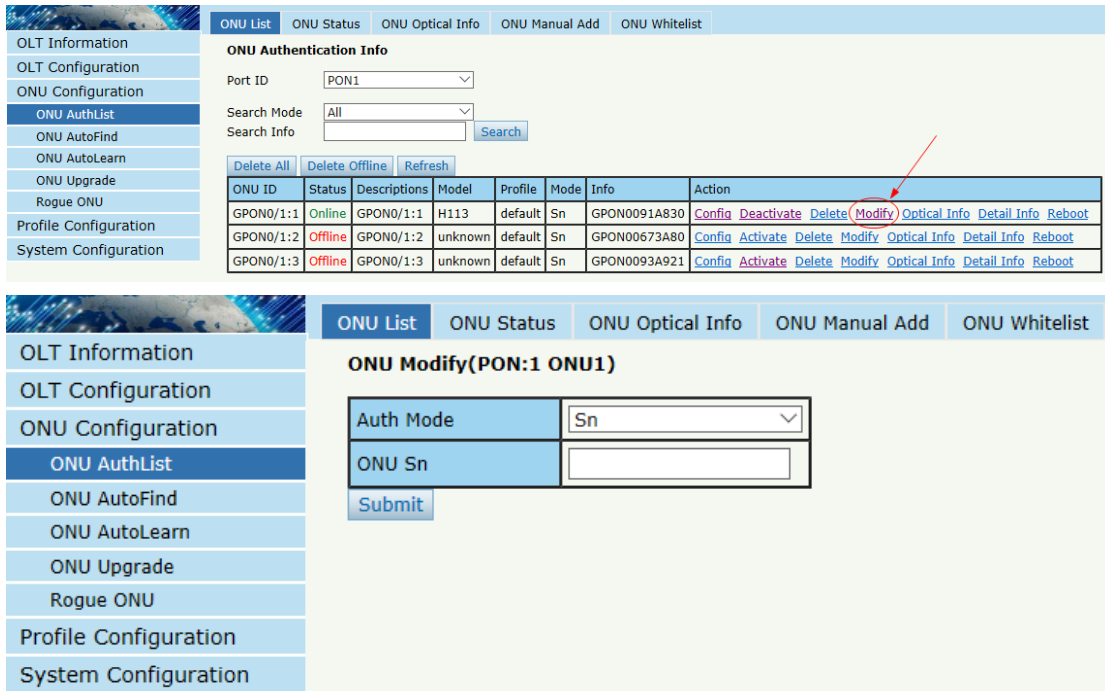
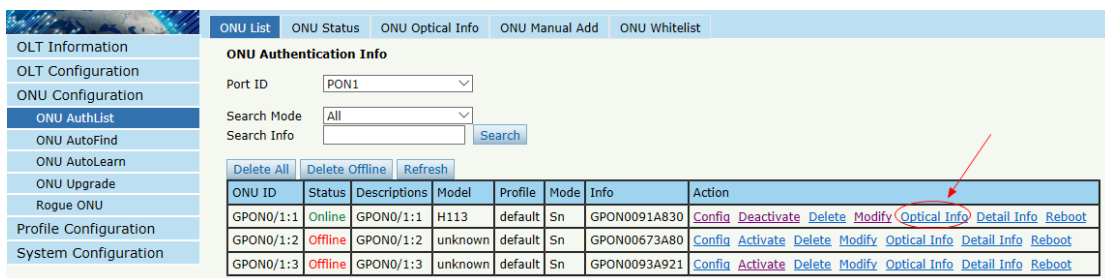


Figure 4.1-21: Modify ONU Authentication mode

4.1.1.5 Optical Info

ONU Configuration→ONU AuthList→ONU List→Optical Info

Check the Optical Information of ONU PON module which you selected.



ONU Optical Info

Back

Interface	pon_0/1
GEM_blocklen	48
Sf threshold	5
Sd threshold	9
Alarm	enable
Alarm disable interval	0
Total T-CONT number	16
Piggyback DBA rpt mode	mode0 only
Whole ONU DBA rpt mode	not support
Rx optical level	-12.286(dBm)
Lower rx optical threshold	ont internal policy
Upper rx optical threshold	ont internal policy
Tx optical level	2.746(dBm)
Lower tx optical threshold	ont internal policy
Upper tx optical threshold	ont internal policy
ONU response time	0
Power feed voltage	3.28(V)
Laser bias current	19.000(mA)
Temperature	40.395(C)
Distance	1(m)

Figure 4.1-22: Optical info of ONU

4.1.1.6 Detail Info

ONU Configuration → ONU AuthList → ONU List → Detail Info

Check the Detail Info of ONU which you selected.

ONU Authentication Info

Port ID:

Search Mode:

Search Info:

ONU ID	Status	Descriptions	Model	Profile	Mode	Info	Action
GPON0/1:1	Online	GPON0/1:1	H113	default	Sn	GPON0091A830	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Offline	GPON0/1:2	unknown	default	Sn	GPON00673A80	Config Activate Delete Modify Optical Info Detail Info Reboot
GPON0/1:3	Offline	GPON0/1:3	unknown	default	Sn	GPON0093A921	Config Activate Delete Modify Optical Info Detail Info Reboot

The screenshot shows the 'Detail Information' and 'Device Capability' sections for an ONU. The 'Detail Information' section includes fields for Description, Main software version, Standby software version, Vendor ID, Version, SN, Admin status, Battery monitor, Security mode, Product code, Total priority queue num, Total traffic schedule num, Traffic management option, Operate status, Equipment ID, OMCC Version, Security capability, Model, Survival time, TotalGemPortNum, SysUpTime, Region code, Product SN, and Chip info. The 'Device Capability' section includes fields for TCONT number, GEM port number, Total priority queue number, up priority queue number, Down priority queue number, Traffic scheduler number, Traffic management option, Total UNI number, Ethernet UNI number, 10GE number, GE number, FE number, CES UNI number, POTS UNI number, Video UNI number, WIFI UNI number, XDSL UNI number, IP host number, IPv6 host number, VEIP number, Operation Id, CTC spc version, CUC spc version, ONU type, and Tx power supply control.

Figure 4.1-23: Detail info of ONU

4.1.1.7 Reboot

ONU Configuration→ONU AuthList→ONU List→Reboot

Reboot ONU which you selected.

The screenshot shows the 'ONU Authentication Info' section. It includes a search form with 'Port ID' (PON1), 'Search Mode' (All), and a 'Search' button. Below the search form are buttons for 'Delete All', 'Delete Offline', and 'Refresh'. A table lists ONU details with columns for ONU ID, Status, Descriptions, Model, Profile, Mode, Info, and Action. The 'Action' column for the first ONU (GPON0/1:1) has a 'Reboot' button highlighted with a red circle and arrow.

ONU ID	Status	Descriptions	Model	Profile	Mode	Info	Action
GPON0/1:1	Online	GPON0/1:1	H113	default	Sn	GPON0091A830	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Offline	GPON0/1:2	unknown	default	Sn	GPON00673A80	Config Activate Delete Modify Optical Info Detail Info Reboot
GPON0/1:3	Offline	GPON0/1:3	unknown	default	Sn	GPON0093A921	Config Activate Delete Modify Optical Info Detail Info Reboot

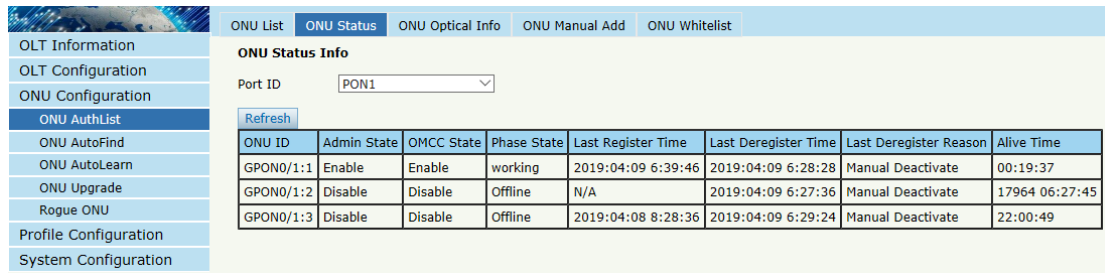
Figure 4.1-24: Reboot ONU

4.1.2 ONU Status

ONU Configuration→ONU AuthList→ONU Status

This pages shows the ONU information of the activity. User can check

"Last Register Time", "Last Deregister Reason" and "Active Time" of each ONU.



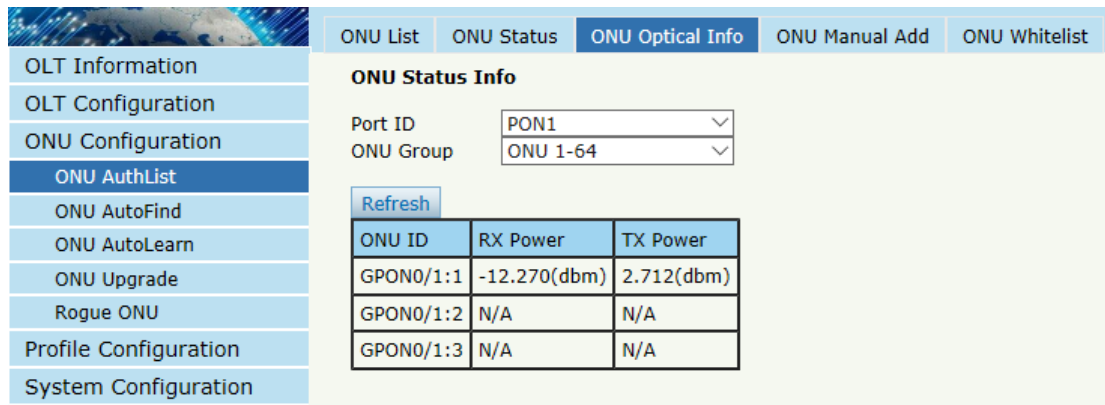
ONU ID	Admin State	OMCC State	Phase State	Last Register Time	Last Deregister Time	Last Deregister Reason	Alive Time
GPON0/1:1	Enable	Enable	working	2019:04:09 6:39:46	2019:04:09 6:28:28	Manual Deactivate	00:19:37
GPON0/1:2	Disable	Disable	Offline	N/A	2019:04:09 6:27:36	Manual Deactivate	17964 06:27:45
GPON0/1:3	Disable	Disable	Offline	2019:04:08 8:28:36	2019:04:09 6:29:24	Manual Deactivate	22:00:49

Figure 4.1-25: ONU Status

4.1.3 ONU Optical Info

ONU Configuration→ONU AuthList→ONU Optical Info

This page displays ONU Rx and Tx power. A batch of ONU optical power information can be shown in a list. Clearly to check the register power when register issue happens.



ONU ID	RX Power	TX Power
GPON0/1:1	-12.270(dbm)	2.712(dbm)
GPON0/1:2	N/A	N/A
GPON0/1:3	N/A	N/A

Figure 4.1-26: ONU Optical Info

4.1.4 ONU Manual Add

ONU Configuration→ONU AuthList→ONU Manual Add

You can manually add ONU to a selected PON port. ONU will appear in

the ONU list after you added.

ONU List	ONU Status	ONU Optical Info	ONU Manual Add	ONU Whitelist
OLT Information				
OLT Configuration				
ONU Configuration				
ONU AuthList				
ONU AutoFind				
ONU AutoLearn				
ONU Upgrade				
Rogue ONU				
Profile Configuration				
System Configuration				

Add ONU

PON Port	PON1
ONU ID	4
Auth Mode	Sn
ONU Sn	
ONU Profile	default

[Submit](#)

Figure 4.1-27: Add ONU Manually

4.1.5 ONU Whitelist

ONU Configuration→**ONU AuthList**→**ONU Whitelist**

You can set up whitelist on this page.

Whitelist can limit illegal ONU to register. Only the GPON SN in the whitelist can register, but only effective for the ONU which has not been added to OLT.

ONU List	ONU Status	ONU Optical Info	ONU Manual Add	ONU Whitelist
OLT Information				
OLT Configuration				
ONU Configuration				
ONU AuthList				
ONU AutoFind				
ONU AutoLearn				
ONU Upgrade				
Rogue ONU				
Profile Configuration				
System Configuration				

ONU Whitelist Authentication

Add ONU Whitelist

sn	<input type="text"/>
endsn	<input type="text"/>

[Add](#)

ONU Whitelist Table

Index	Whitelist	Delete

[Clear](#) [Refresh](#)

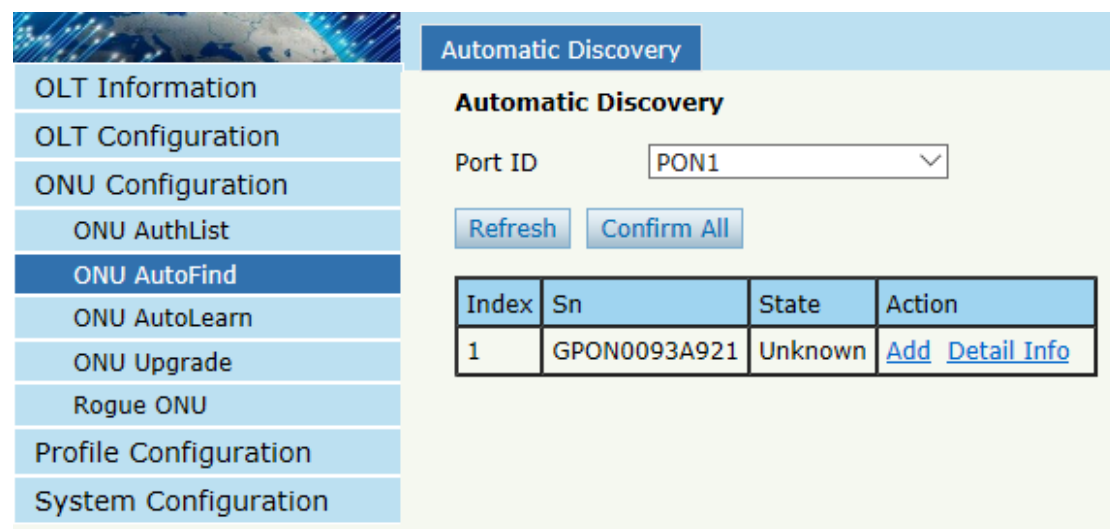
Figure 4.1-28: ONU Whitelist

4.2 ONU AutoFind

ONU Configuration→ONU AutoFind

After selecting PON port number, all ONUs which are authenticated failed or not authenticated will be displayed in this interface. You can check the serial number of ONUs.

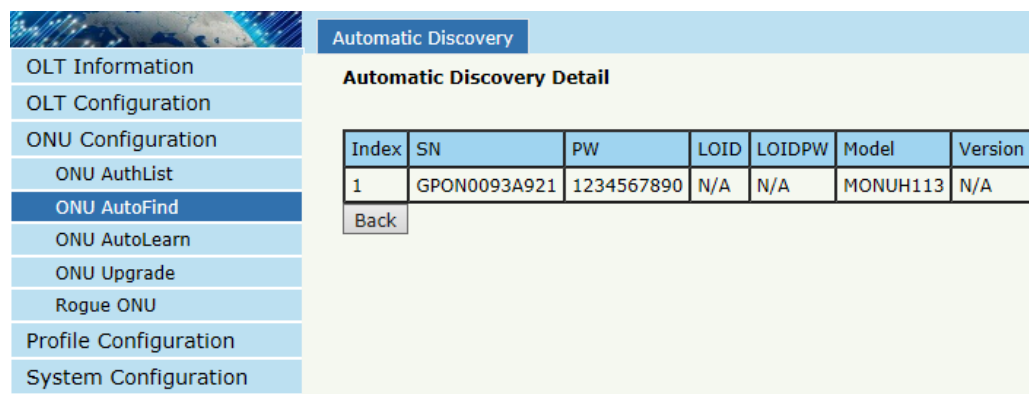
More information will be shown under the ONU Detail menu.



The screenshot shows the 'Automatic Discovery' interface. On the left is a navigation menu with 'ONU AutoFind' selected. The main area has a 'Port ID' dropdown set to 'PON1', 'Refresh' and 'Confirm All' buttons, and a table with one row of discovery results.

Index	Sn	State	Action
1	GPON0093A921	Unknown	Add Detail Info

Figure4.2-1: Automatic Discovery



The screenshot shows the 'Automatic Discovery Detail' interface. On the left is the same navigation menu. The main area displays a table with detailed information for the selected ONU and a 'Back' button.

Index	SN	PW	LOID	LOIDPW	Model	Version
1	GPON0093A921	1234567890	N/A	N/A	MONUH113	N/A

[Back](#)

Figure 4.2-2: Detail info

4.3 ONU AutoLearn

4.3.1 ONU AutoLearn

Configuration→AutoLearn→ONU AutoLearn

ONU can be authenticated automatically after enabling PON port automatic learning.

PON ID	Enable	Line profile	Srv profile	Alarm profile	Pri profile	Plug and Play
PON1	Enable	N/A	N/A	N/A	N/A	Enable
PON2	Enable	N/A	N/A	N/A	N/A	Enable
PON3	Enable	N/A	N/A	N/A	N/A	Enable
PON4	Enable	N/A	N/A	N/A	N/A	Enable
PON5	Enable	N/A	N/A	N/A	N/A	Enable
PON6	Enable	N/A	N/A	N/A	N/A	Enable
PON7	Enable	N/A	N/A	N/A	N/A	Enable
PON8	Enable	N/A	N/A	N/A	N/A	Enable

Figure 4.3-1: Automatic learn

4.3.2 ONU AutoBind

Configuration→AutoLearn→ONU AutoBind

Input the Equipment ID and bind the profile you need

Note: you must create profile first.

Equipment ID	ONU Profile	Line Profile	Service Profile	Alarm Profile	Pri Profile	Action
	default					

Add ONU Auto Bind

Equipment ID:

ONU Profile:

Add Refresh

Figure 4.3-2: Bind profile

4.4 ONU Upgrade

ONU firmware can be upgraded by OLT. OLT supports manual upgrade and automatic upgrade.

4.4.1 UpLoad Image

Configuration→ONU Upgrade→ONU Image

Upload ONU firmware image which you need, the image will upload to OLT's RAM.

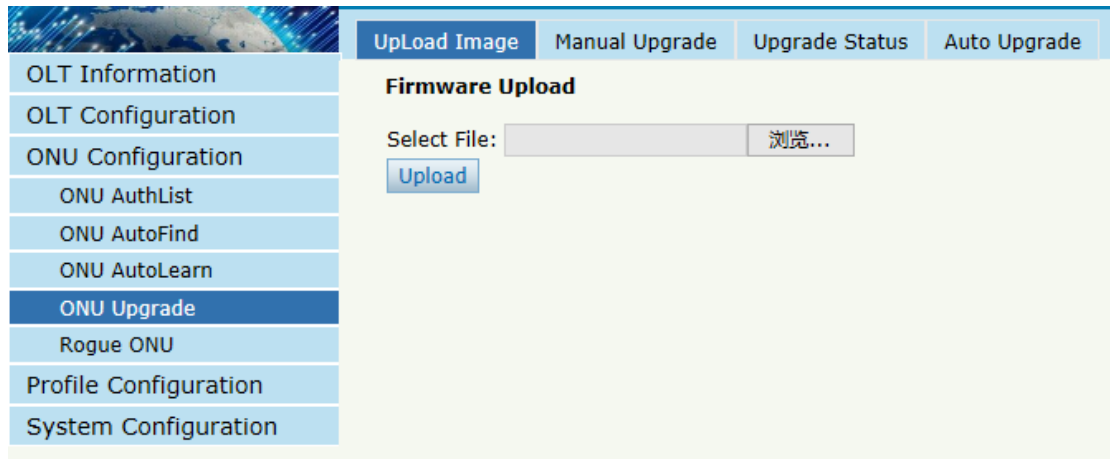


Figure 4.4-1: Upload image

4.4.2 Manual Upgrade

Configuration→ONU Upgrade→Manual Upgrade

Select the ONU image and the ONU that need upgrade, click commit button to start upgrading. You can upgrade the ONU under one PON port everytime.

	UpLoad Image	Manual Upgrade	Upgrade Status	Auto Upgrade									
OLT Information	Select ONU Firmware												
OLT Configuration	<table border="1"> <thead> <tr> <th>Firmware Name</th> <th>Select</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				Firmware Name	Select	Action						
Firmware Name	Select	Action											
ONU Configuration	Upgrade ONU Firmware												
ONU AuthList	<table border="1"> <tbody> <tr> <td>PON ID</td> <td>PON1</td> <td>▼</td> </tr> <tr> <td>ONU ID</td> <td> </td> <td>1,3,5-8</td> </tr> <tr> <td>Upgrade Mode</td> <td>Mix</td> <td>▼</td> </tr> </tbody> </table>				PON ID	PON1	▼	ONU ID		1,3,5-8	Upgrade Mode	Mix	▼
PON ID	PON1	▼											
ONU ID		1,3,5-8											
Upgrade Mode	Mix	▼											
ONU AutoFind	Commit												
ONU AutoLearn													
ONU Upgrade													
Rogue ONU													
Profile Configuration													
System Configuration													

Figure 4.4-2: Manual Upgrade

4.4.3 Upgrade Status

Configuration→ONU Upgrade→Upgrade Status

When ONU is upgrading, the upgrading status will be shown on this page.

	UpLoad Image	Manual Upgrade	Upgrade Status	Auto Upgrade														
OLT Information	Upgrade Info																	
OLT Configuration	<table border="1"> <thead> <tr> <th>Selected</th> <th>PON 0 ONU</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>File</td> <td> </td> <td>Abort</td> </tr> </tbody> </table>				Selected	PON 0 ONU	Action	File		Abort								
Selected	PON 0 ONU	Action																
File		Abort																
ONU Configuration	Upgrade Progress																	
ONU AuthList	Refresh																	
ONU AutoFind	<table border="1"> <thead> <tr> <th>PON</th> <th>ONU</th> <th>Action</th> <th>Status</th> <th>Process</th> <th>Fail Reason</th> <th>Commit Time</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				PON	ONU	Action	Status	Process	Fail Reason	Commit Time							
PON	ONU	Action	Status	Process	Fail Reason	Commit Time												
ONU AutoLearn																		
ONU Upgrade																		
Rogue ONU																		
Profile Configuration																		
System Configuration																		

Figure 4.4-3: ONU Upgrade Status

4.4.4 Auto Upgrade

Configuration→ONU Upgrade→Auto Upgrade

After uploaded the ONU firmware image, configured automatic upgrade

conditions, once the ONU which has the same equipment ID and different software version come online, they will be upgraded automatically.

Each ONU has its own equipment ID, which you can check in ONU detail info. Software version is the firmware image version which has uploaded to the OLT.

The screenshot displays the 'Auto Upgrade' configuration page in the OLT web interface. On the left is a navigation menu with options like 'OLT Information', 'ONU Configuration', and 'ONU Upgrade' (which is highlighted). The top navigation bar includes 'UpLoad Image', 'Manual Upgrade', 'Upgrade Status', and 'Auto Upgrade'. The main content area is divided into three sections:

- Add ONU Auto Upgrade:** Contains input fields for 'Equipment ID' and 'Software Version', a 'Select ONU Firmware' dropdown menu, and 'Add' and 'Reset' buttons.
- ONU Auto Upgrade Information:** A table with columns for 'Equipment ID', 'Software Version', 'Image Name', and 'Delete'.
- Auto-Upgrade Progress:** Includes a 'Refresh' button and a table with columns for 'PON', 'ONU', 'Action', 'Status', 'Process', 'Fail Reason', and 'Commit Time'.

Figure 4.4-4: Auto Upgrade

4.5 Rogue ONU

ONU Configuration → Rogue ONU

After enabled rogue ONU detect, if there is a rogue ONU trying to register, it will appear in the list.

Rogue ONU configuration

Rogue ONU Detect Configuration

Detect state	Locate state	Auto shutdown	Control mode
disable	N/A	N/A	private

Change Configuration

[Commit](#)

Detect state	Enable ▾
Locate state	Enable ▾
Auto shutdown	Enable ▾
Control mode	private ▾

Rogue ONU List

PON	ONU	Keywords	Time	State
-----	-----	----------	------	-------

Figure 4.5-1: Rogue ONU detect

Chapter 5 Profile Configuration

This chapter is about the ONU profile configuration. It is designed for batch ONU management by OLT.

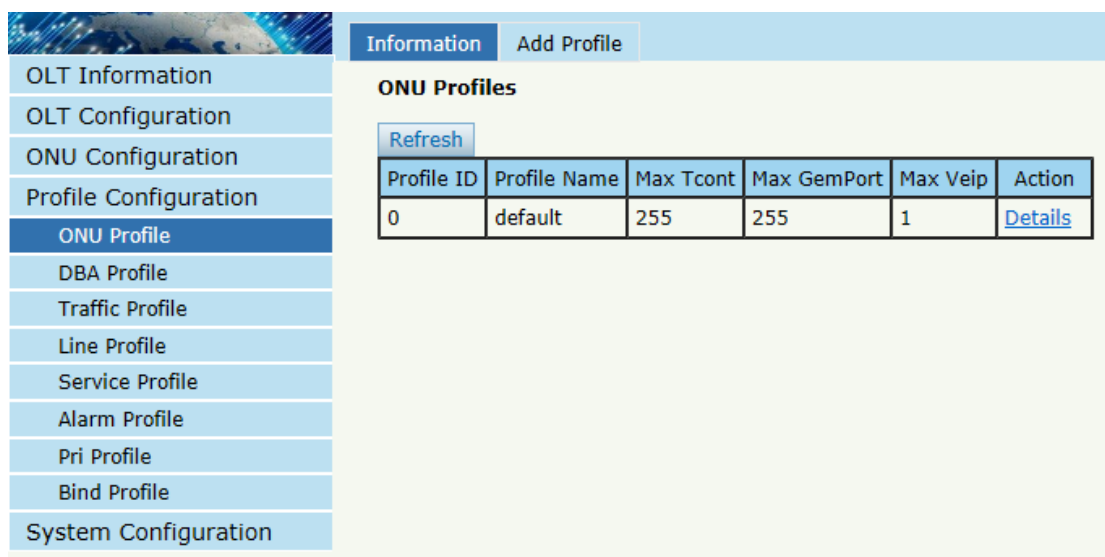
5.1 ONU Profile

The ONU profile is used for ONU authorization, and each ONU must specify only one ONU profile when authorization. The ONU profile specifies the capability of this ONU.

5.1.1 Information

Profile Configuration → ONU profile → Information

The table displays ONU profile list. You can also do some operations, such as delete and check details info.



Profile ID	Profile Name	Max Tcont	Max GemPort	Max Veip	Action
0	default	255	255	1	Details

Figure 5.1-1: ONU profile list

5.1.2 Add profile

Create a new ONU profile what you need. Generally, ONU has two different modes.

SFU mode (only using bridge mode):

Usually, only need to set correct eth port and POTS port number of ONU, others can be kept default.

Information		Add Profile
OLT Information	ONU Profile Modify	
OLT Configuration	Commit	
ONU Configuration	Profile ID	<input type="text" value="1"/>
Profile Configuration	Profile Name	<input type="text" value="onu_profile_1"/>
ONU Profile	Description	<input type="text" value="onu_profile_1"/>
DBA Profile	Max tcont	<input type="text" value="8"/>
Traffic Profile	Max gemport	<input type="text" value="32"/>
Line Profile	Max eth	<input type="text" value="1"/>
Service Profile	Max pots	<input type="text" value="0"/>
Alarm Profile	Max Iphost	<input type="text" value="2"/>
Pri Profile	Max Ipv6host	<input type="text" value="0"/>
Bind Profile	Max veip	<input type="text" value="0"/>
System Configuration	Service ability	<input type="text" value="Disable"/> ▾
	Service ability N:1	<input type="text" value="yes"/> ▾
	Service ability 1:M	<input type="text" value="yes"/> ▾
	Service ability 1:P	<input type="text" value="yes"/> ▾
	Wifi mgmt via non OMCI	<input type="text" value="Disable"/> ▾
	Omci send mode	<input type="text" value="async"/> ▾
	Default multicast range	<input type="text" value="none"/> ▾

Figure 5.1-2: Add SFU profile

HGU mode (with the routing wan connection mode):

For HGU mode, need to set correct eth port and POTS port number and set veip to be 1, keep others default.

The screenshot displays the 'ONU Profile Modify' configuration page. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, **ONU Profile**, DBA Profile, Traffic Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile, Bind Profile, and System Configuration. The main content area is titled 'ONU Profile Modify' and includes a 'Commit' button. Below the button is a table of configuration parameters:

Profile ID	1
Profile Name	onu_profile_1
Description	onu_profile_1
Max tcont	8
Max gempport	32
Max eth	4
Max pots	2
Max Iphost	2
Max Ipv6host	0
Max veip	1
Service ability	Disable
Service ability N:1	yes
Service ability 1:M	yes
Service ability 1:P	yes
Wifi mgmt via non OMCI	Disable
Omci send mode	async
Default multicast range	none

Figure 5.1-3: Add HGU profile

5.2 DBA Profile

DBA is a bandwidth allocation strategy that changes uplink bandwidth assigned to each T-CONT in real time according to the instant service

status of each ONU. There are five BW types supported and make sure that fixed <= assured <= max.

5.2.1 DBA profiles

Profile Configuration → DBA Profile → DBA Profiles

The table displays DBA profile list. You can also do some operations, such as delete and modify.

Profile ID	Profile Name	Profile Type	Fixed(Kbps)	Assured(Kbps)	Maximum(Kbps)	Action
0	default	1	10000			
511	default1	3		1024	1024000	Delete Modify

Figure 5.2-1: DBA profile list

5.2.2 Add profile

Profile Configuration → DBA Profile → Add profile

There are five types of DBA profile. In general, we use type3.

BW Type	Delay Sensitive	Applicable T-CONT types				
		Type 1	Type 2	Type 3	Type 4	Type 5
Fixed	Yes	X				X
Assured	No		X	X		X
Non-Assured	No			X		X
Best Effort	No				X	X
Max.	No			X	X	X

The screenshot shows the 'DBA Profiles' section of the web interface. On the left is a navigation menu with options: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, ONU Profile, **DBA Profile**, Traffic Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile, Bind Profile, and System Configuration. The main area is titled 'DBA Profiles' and 'Add Profile'. The 'Add Profile' form contains the following fields:

Profile ID	<input type="text" value="1"/>
Profile Type	<input type="text" value="Type_3"/>
Profile Name	<input type="text" value="dba_1"/>
Assured(Kbps)	<input type="text"/>
Maximum(Kbps)	<input type="text"/>

Below the form is a 'Commit' button.

Figure 5.2-2: Add a DBA profile

5.3 Traffic Profile

Traffic profile is used by gempport to specify the upstream/downstream bandwidth.

5.3.1 Traffic profiles

Profile Configuration → Traffic Profile → Traffic Profiles

The table displays Traffic profile list. You can also do some operation, such as delete and modify.

Profile ID	Profile Name	SIR(Kbps)	PIR(Kbps)	CBS(Kbytes)	PBS(Kbytes)	Action
0	default	10000000	10000000	default	default	N/A

Figure 5.3-1: Traffic Profile list

5.3.2 Add profile

Profile Configuration → Traffic Profile → Add Profile

Configure gemport to specify the upstream/downstream bandwidth.

SIR: Committed Information Rate

PIR: Peak Information Rate

CBS: Committed Burst Size

PBS: Peak Burst Size

Traffic Profiles	
Add Profile	
Add Profile	
Profile ID	<input type="text" value="1"/>
Profile Name	<input type="text" value="traffic_1"/>
SIR(Kbps)	<input type="text"/>
PIR(Kbps)	<input type="text"/>
CBS(Kbytes)	<input type="text"/>
PBS(Kbytes)	<input type="text"/>
Commit	

Figure 5.3-2: Add a traffic Profile

5.4 Line Profile

Line profile is used to configure the ANI side services of ONU such as t-cont, gem-port, service-port, and so on.

5.4.1 Line profile

Profile Configuration → Line Profile → Line Profile

The table displays Line profile list. You can also do some operations, such as delete and modify.

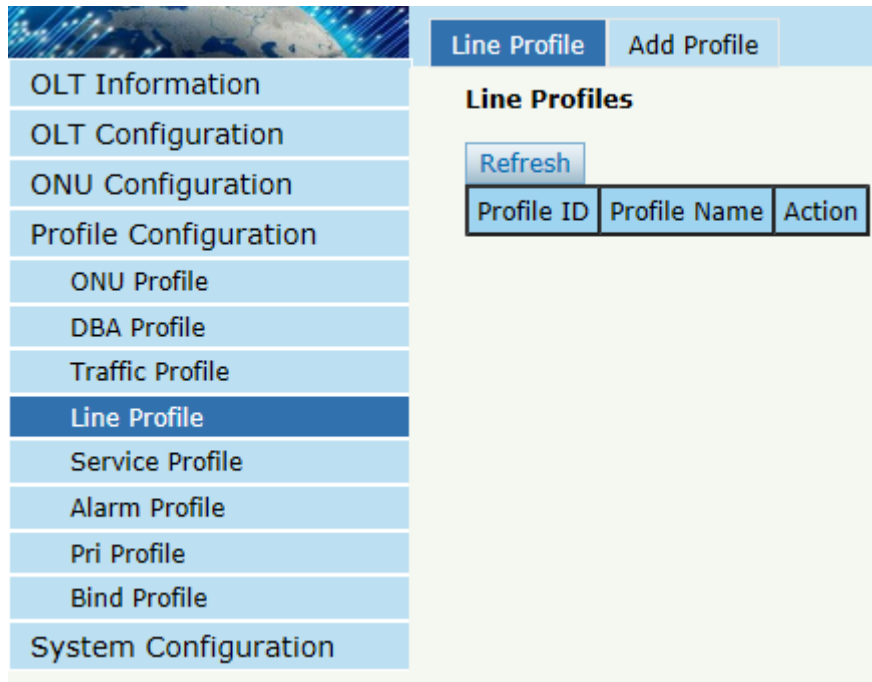


Figure 5.4-1: Line Profile list

5.4.2 Add profile

Profile Configuration→**Line profile**→**Add profile**

Create a new line profile.

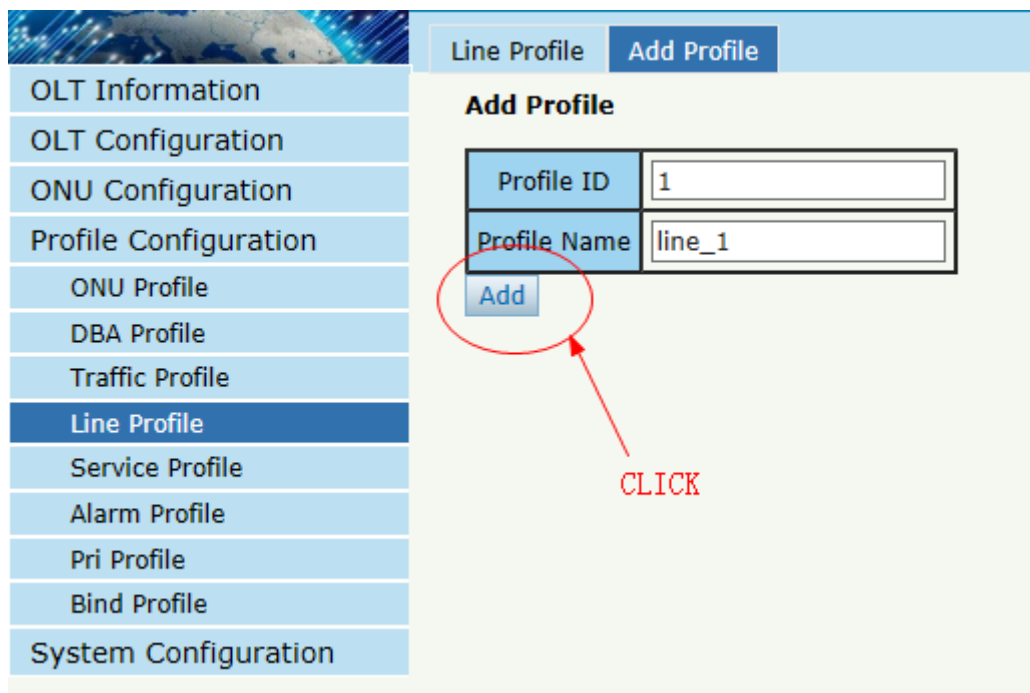


Figure 5.4-2: Add Line Profile

Modify the line profile parameters.

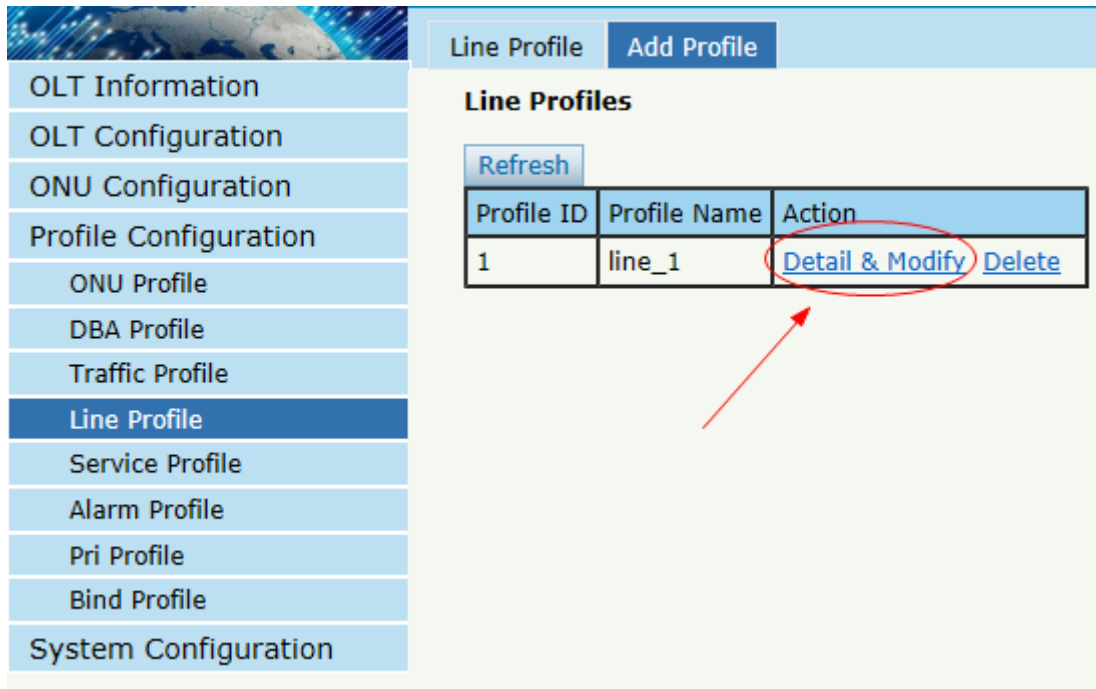


Figure 5.4-3: Modify Line Profile

5.4.2.1 Tcont

Add tcont ID and bind DBA profile.

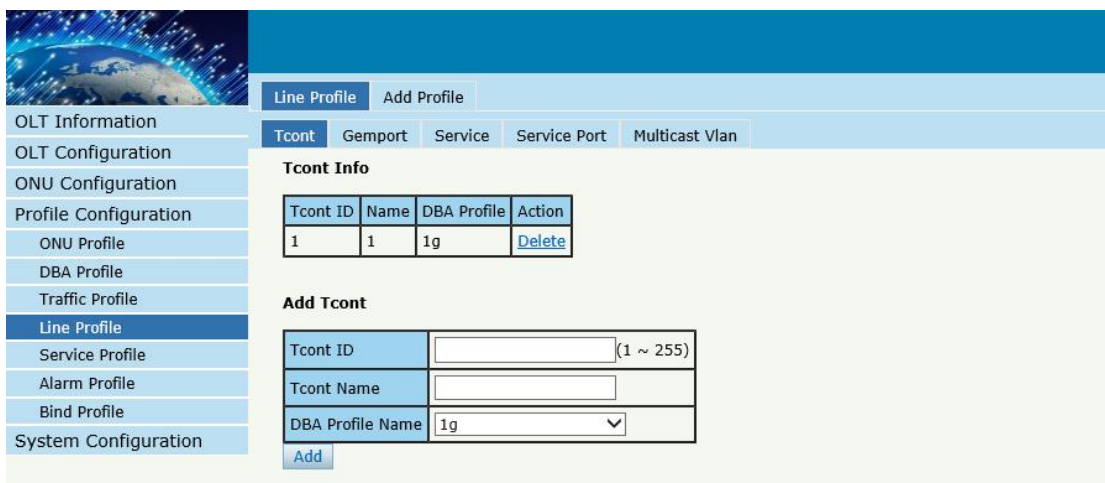
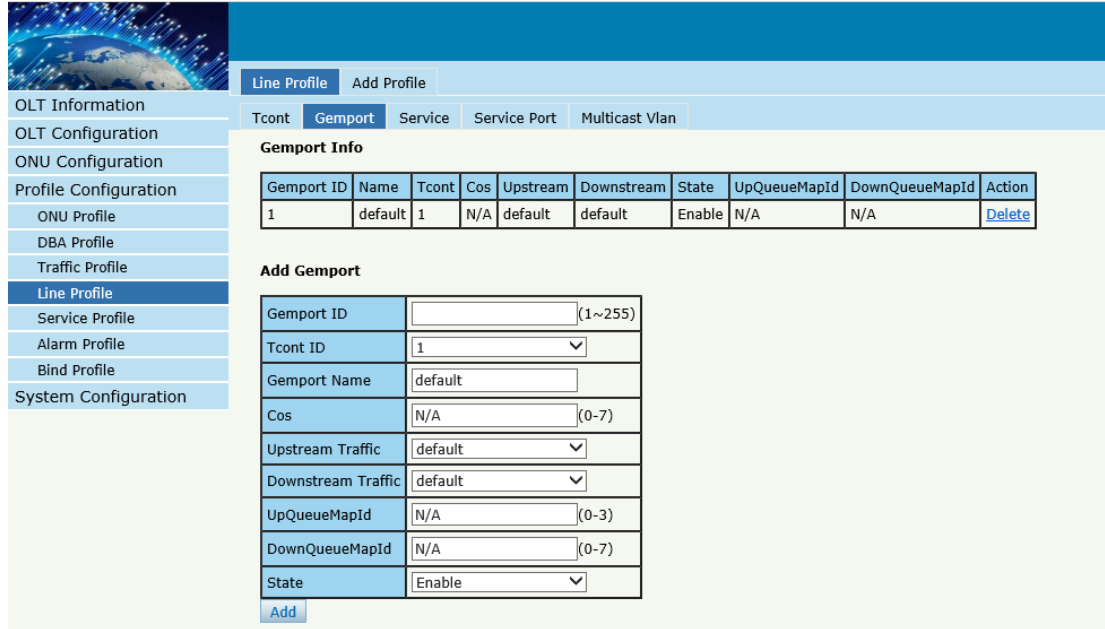


Figure 5.4-4: Add Tcont

5.4.2.2 Gempport

Add gempport ID and bind tcont ID.



The screenshot shows the 'Line Profile' configuration page. The 'Gempport' tab is selected. The 'Gempport Info' table lists one existing gempport with ID 1, Name 'default', Tcont 1, Cos N/A, Upstream 'default', Downstream 'default', State 'Enable', UpQueueMapId N/A, and DownQueueMapId N/A. Below the table is the 'Add Gempport' form with the following fields:

Gempport ID	Name	Tcont	Cos	Upstream	Downstream	State	UpQueueMapId	DownQueueMapId	Action
1	default	1	N/A	default	default	Enable	N/A	N/A	Delete

Add Gempport

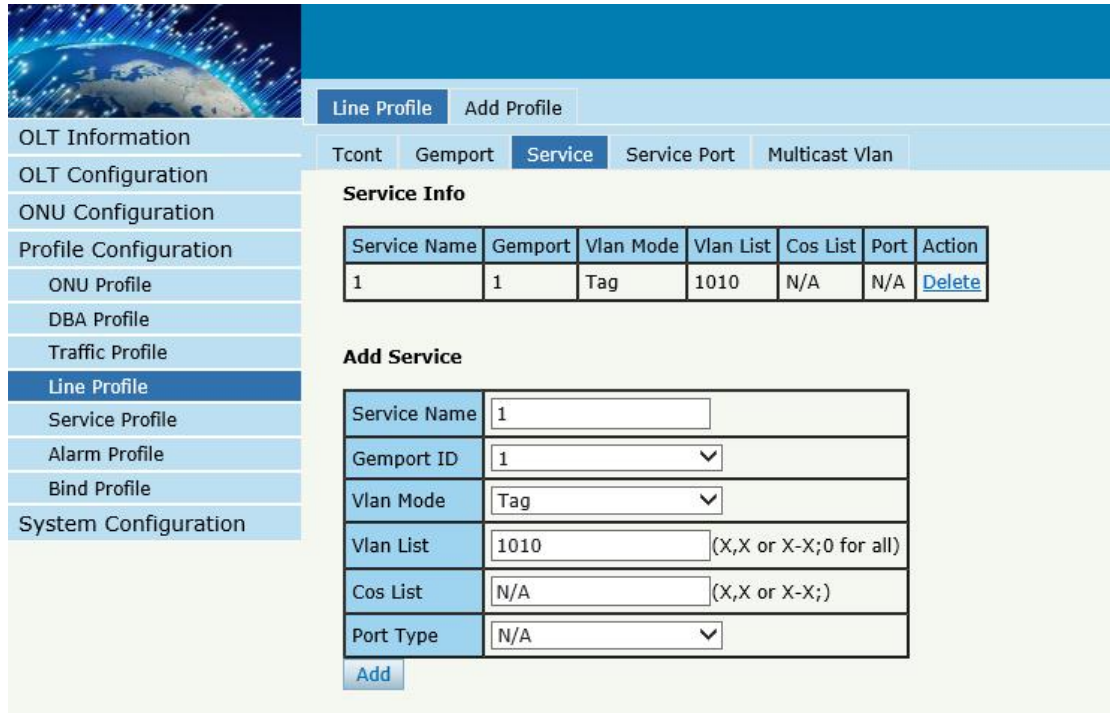
Gempport ID	<input type="text" value=""/>	(1~255)
Tcont ID	<input type="text" value="1"/>	▼
Gempport Name	<input type="text" value="default"/>	
Cos	<input type="text" value="N/A"/>	(0-7)
Upstream Traffic	<input type="text" value="default"/>	▼
Downstream Traffic	<input type="text" value="default"/>	▼
UpQueueMapId	<input type="text" value="N/A"/>	(0-3)
DownQueueMapId	<input type="text" value="N/A"/>	(0-7)
State	<input type="text" value="Enable"/>	▼

[Add](#)

Figure 5.4-5: Add Gempport

5.4.2.3 Service

Add service, set the VLAN mode and VLAN ID and bind one gempport ID.



The screenshot displays the 'Add Service' configuration page in the AS Fiber Gpon OLT Web User Manual. The interface features a navigation menu on the left with options like 'OLT Information', 'OLT Configuration', 'ONU Configuration', 'Profile Configuration', 'Line Profile', 'Service Profile', 'Alarm Profile', 'Bind Profile', and 'System Configuration'. The 'Line Profile' section is active, showing sub-tabs for 'Tcont', 'Gemport', 'Service', 'Service Port', and 'Multicast Vlan'. The 'Service' tab is selected, leading to the 'Add Service' configuration form.

Service Info

Service Name	Gemport	Vlan Mode	Vlan List	Cos List	Port	Action
1	1	Tag	1010	N/A	N/A	Delete

Add Service

Service Name	<input type="text" value="1"/>
Gemport ID	<input type="text" value="1"/> ▼
Vlan Mode	<input type="text" value="Tag"/> ▼
Vlan List	<input type="text" value="1010"/> (X,X or X-X;0 for all)
Cos List	<input type="text" value="N/A"/> (X,X or X-X;)
Port Type	<input type="text" value="N/A"/> ▼

Figure 5.4-6: Add Service

5.4.2.4 Service Port

Create a service port, set the user VLAN and translate VLAN and bind one gemport ID. If don't need VLAN translation, just set translate VLAN the same as user VLAN.

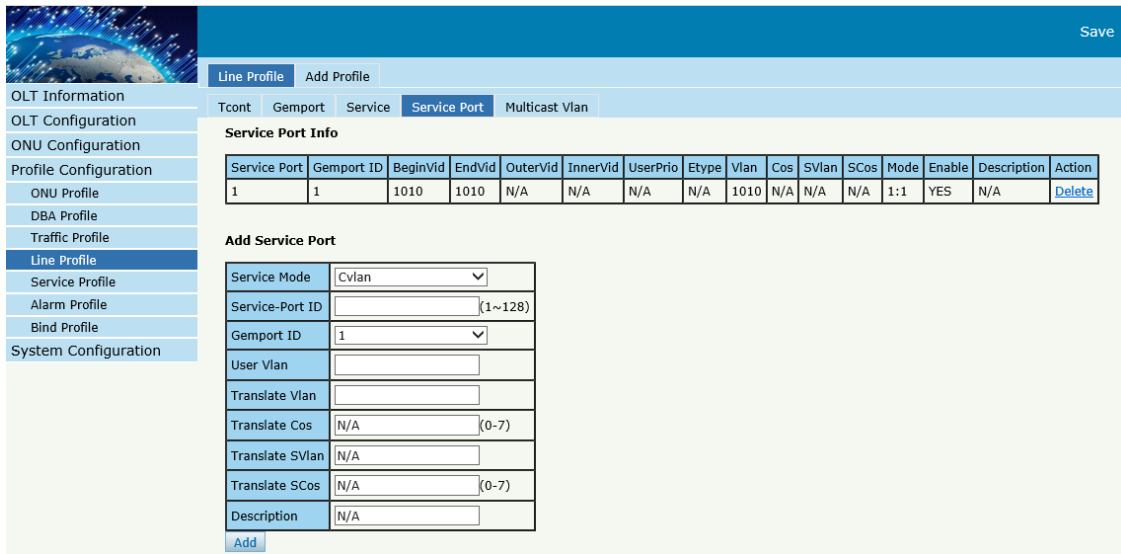


Figure 5.4-7: Add Service Port

5.4.2.5 Multicast Vlan

Set the Multicast VLAN of ONU.

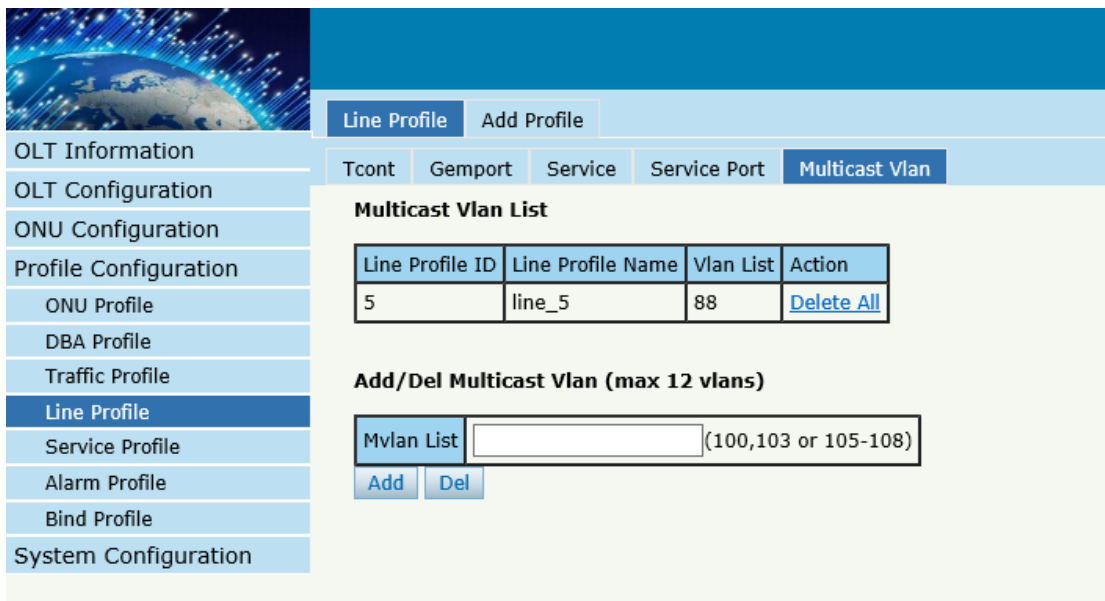


Figure 5.4-8: Configure Multicast VLAN

5.5 Service Profile

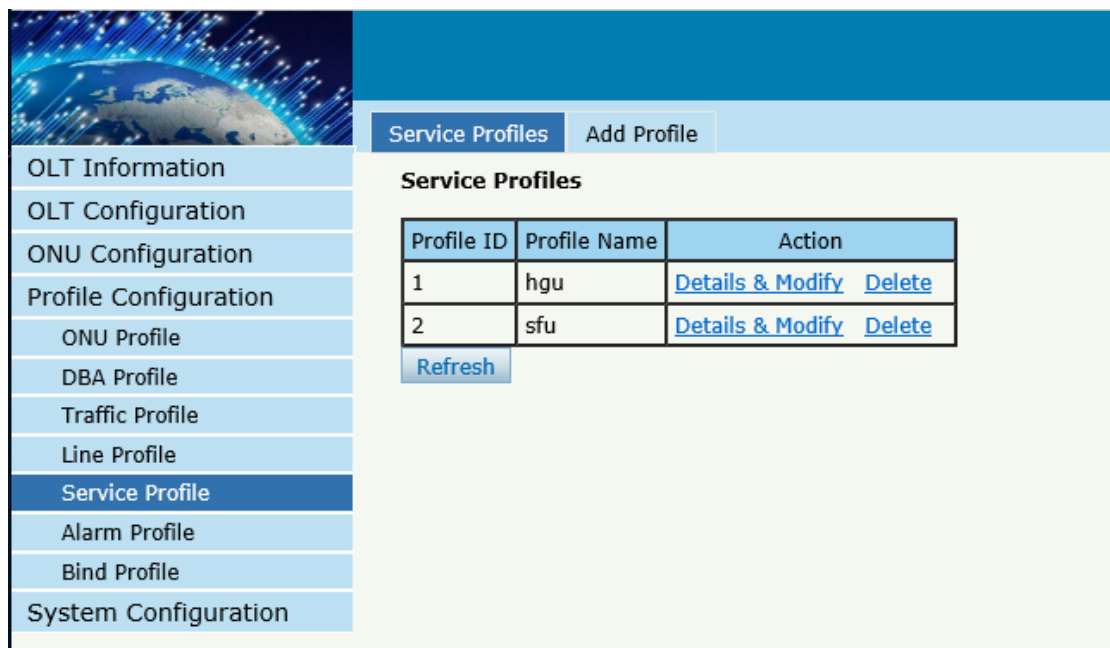
Service profile is used to configure the UNI side services of onu, such as

Ethernet port, wifi, veip, and so on.

5.5.1 Service profile

Profile Configuration → **Service Profile** → **Service Profile**

The table displays service profile list. You can also do some operations, such as delete and modify.



The screenshot shows a web interface for managing service profiles. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (with sub-items: ONU Profile, DBA Profile, Traffic Profile, Line Profile, **Service Profile**, Alarm Profile, Bind Profile), and System Configuration. The 'Service Profile' item is highlighted. The main content area has a header with 'Service Profiles' and an 'Add Profile' button. Below this is a table titled 'Service Profiles' with the following data:

Profile ID	Profile Name	Action
1	hgu	Details & Modify Delete
2	sfu	Details & Modify Delete

Below the table is a 'Refresh' button.

Figure 5.5-1: Service Profile List

5.5.2 Add profile

Profile Configuration → **Service Profile** → **Add Profile**

Add a new service profile.

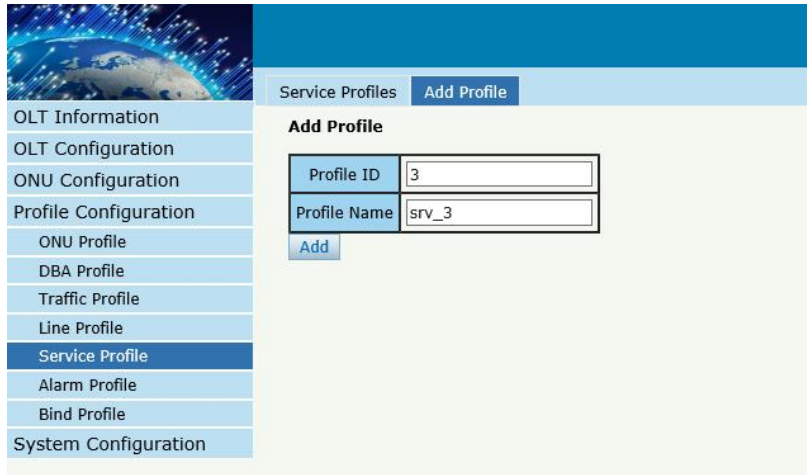


Figure 5.5-2: Add Service profile



Figure 5.5-3: Modify Service Profile

5.5.2.1 PortVlan

Set the VLAN mode of the ONU's port. For HGU, need to configure veip 1 transparent; for SFU, configure Ethernet port directly.

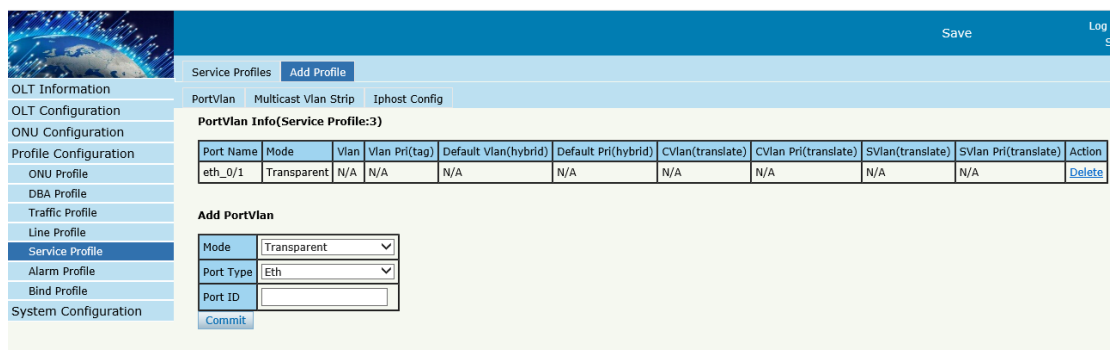
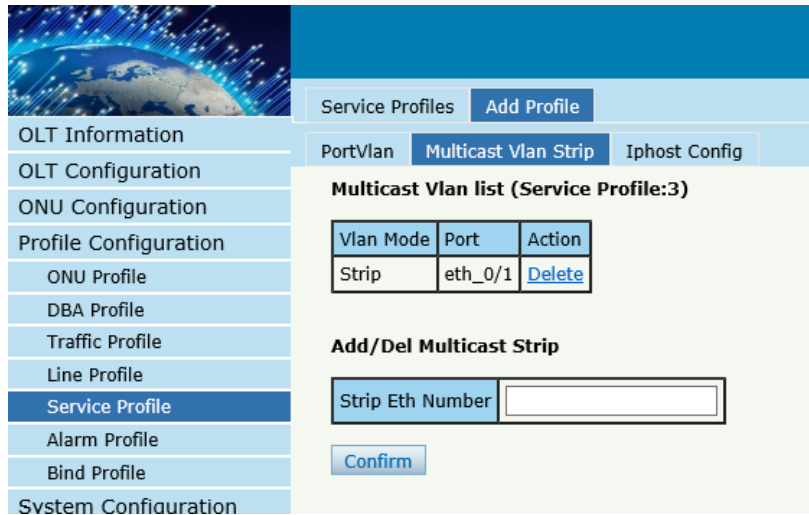


Figure 5.5-4: Port VLAN mode

5.5.2.2 Multicast Vlan Strip

Set the multicast VLAN mode of ONU's port.



Service Profiles [Add Profile](#)

PortVlan **Multicast Vlan Strip** Iphost Config

Multicast Vlan list (Service Profile:3)

Vlan Mode	Port	Action
Strip	eth_0/1	Delete

Add/Del Multicast Strip

Strip Eth Number

[Confirm](#)

Figure 5.5-5: Port Multicast VLAN Mode

5.5.2.3 Iphost Config

Add Iphost for ONU wan connection. IPhost is used for ONU management.

Figure 5.5-6: Add IPhost

5.6 Alarm Profile

Alarm profile is used to configure the parameters of ONU alarm.

5.6.1 Profile Info

Profile Configuration → **Alarm Profile** → **profile info**

The table displays alarm profile list.

Profile ID	Profile Name	State	Rx Power Alarm Threshold	Tx Power Alarm Threshold	Sf Threshold/Sd Threshold	Action
1	alarm_profile_1	enable	-27 ~ -8	1 ~ 5	5 / 9	Delete

Figure 5.6-1: Alarm Profile List

5.6.2 Add Profile

Profile Configuration → Alarm Profile → Add profile

Add new alarm profile, set the threshold of alarm generation.

Profile Info		Add Profile
Create Alarm Profile		
Alarm Name	<input type="text" value="alarm_profile_2"/>	
Alarm State	<input type="text" value="Enable"/> ▼	
Rx Low Power	<input type="text" value="-27"/>	(-27 ~ -8)
Rx High Power	<input type="text" value="-8"/>	(-27 ~ -8)
Tx Low Power	<input type="text" value="1"/>	(1 ~ 5)
Tx High Power	<input type="text" value="5"/>	(1 ~ 5)
Sf Threshold	<input type="text" value="5"/>	(3 ~ 8)
Sd Threshold	<input type="text" value="9"/>	(4 ~ 10)
<input type="button" value="Commit"/>		

Figure 5.6-2: Add Alarm Profile

5.7 Pri Profile

Pri Profile is the profile which the parameters are configured by private OMCI, including WAN, SIP, WIFI, CATV, DHCP Server, and so on.

5.7.1 Pri Profile

Profile Configuration → Pri Profile

The table displays private profile list. You can also do some operations, such as delete and modify.

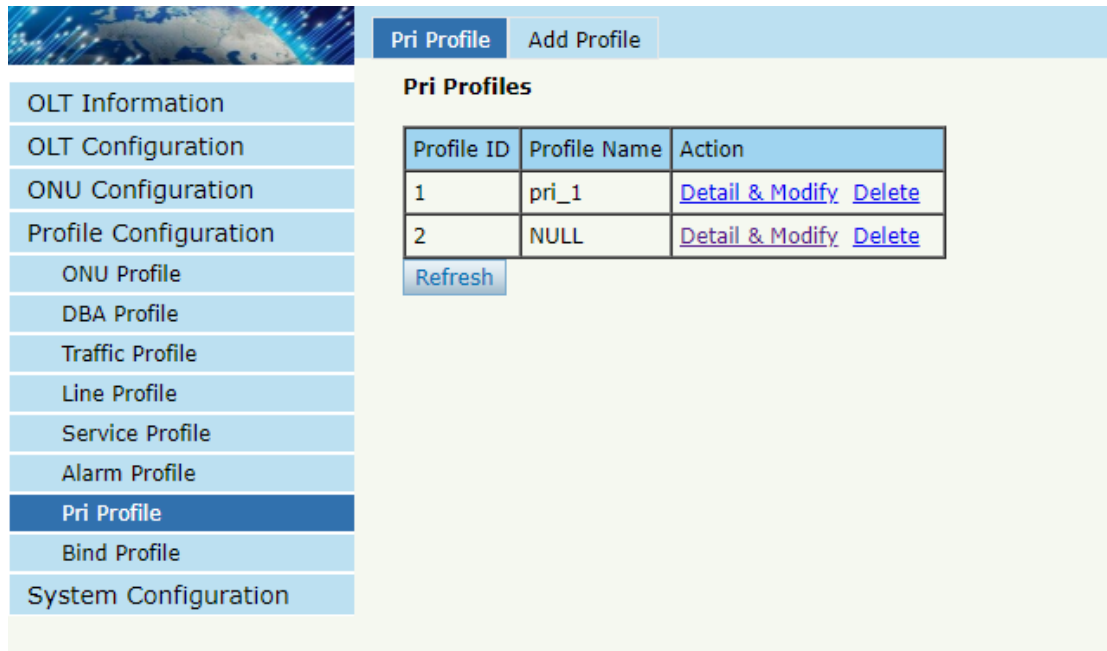


Figure 5.7-1: Pri Profile

5.7.2 Add Profile

Profile Configuration → Pri Profile → Add profile

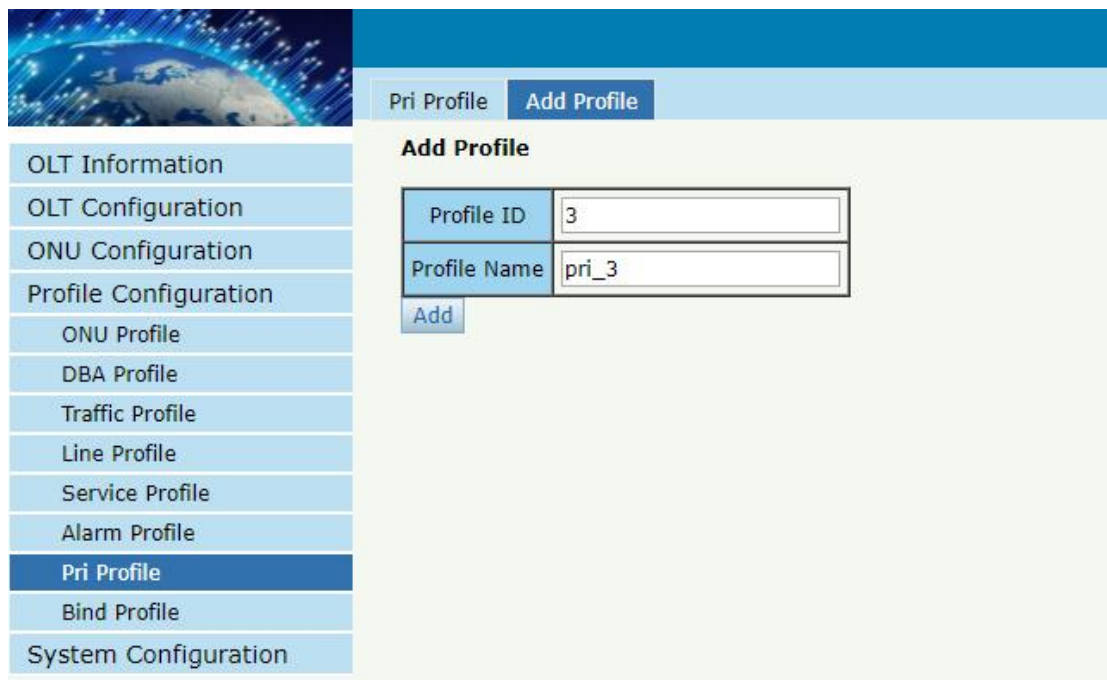
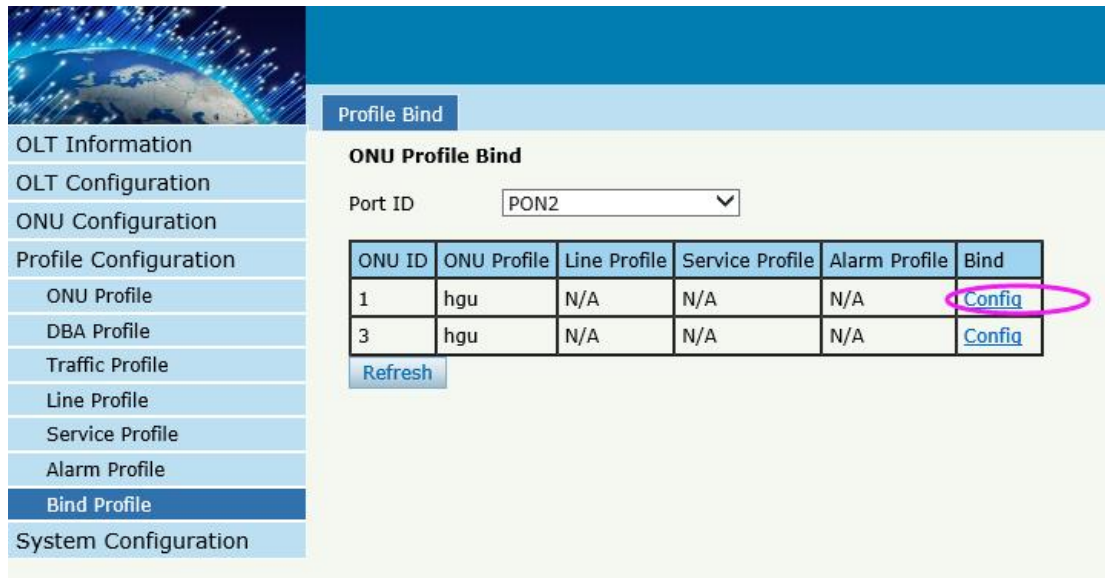


Figure 5.7-2: Add Private Profile

5.8 Bind Profile

After profile is configured, it is necessary to bind it to ONU.

Profile Configuration → Bind Profile



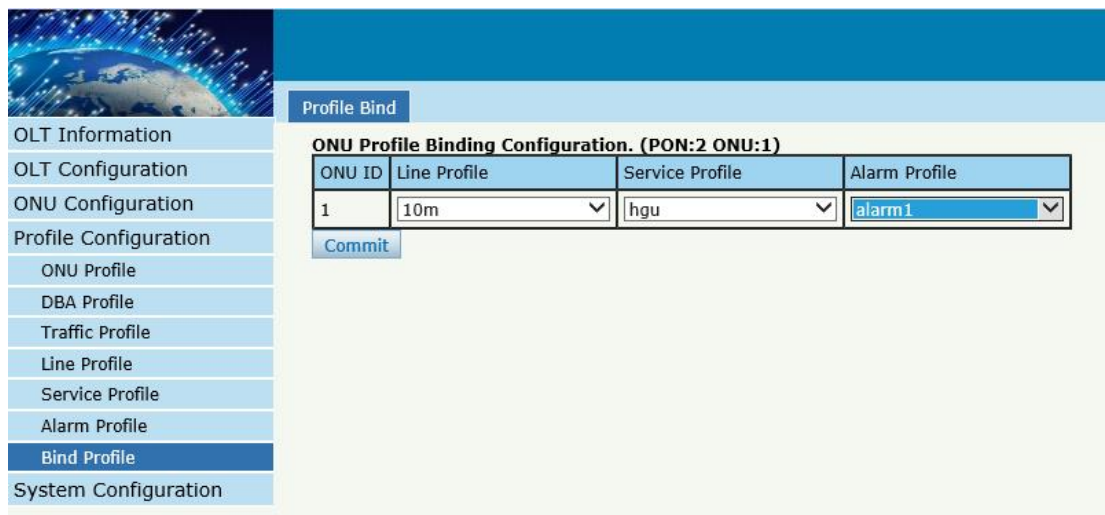
Profile Bind

ONU Profile Bind

Port ID:

ONU ID	ONU Profile	Line Profile	Service Profile	Alarm Profile	Bind
1	hgu	N/A	N/A	N/A	Config
3	hgu	N/A	N/A	N/A	Config

Figure 5.8-1: Bind profile



Profile Bind

ONU Profile Binding Configuration. (PON:2 ONU:1)

ONU ID	Line Profile	Service Profile	Alarm Profile
1	<input type="text" value="10m"/>	<input type="text" value="hgu"/>	<input type="text" value="alarm1"/>

Figure 5.8-2: Select Profile

Chapter 6 System Configuration

This chapter is about the global management of OLT.

6.1 System Log

6.1.1 System Log

System Configuration → System Log

This page displays OLT system alarms and events.

No.	Time	Level	Message
1	2019/03/09 08:58:43	warning	OLT Port Updown Uplink-port 0/10 Up
2	2019/03/09 08:58:38	warning	OLT Port Updown Uplink-port 0/10 Down
3	2019/03/09 08:57:09	warning	System Config Save save config by command
4	2019/03/09 08:56:37	warning	OLT Port Updown Uplink-port 0/10 Up
5	2019/03/09 08:56:16	warning	OLT Port Updown Uplink-port 0/10 Down
6	2019/03/09 08:53:16	warning	OLT Port Updown Uplink-port 0/10 Up
7	2019/03/09 08:53:02	warning	OLT Port Updown Uplink-port 0/10 Down
8	2019/03/09 08:52:52	warning	OLT Port Updown Uplink-port 0/10 Up
9	2019/03/09 08:52:49	warning	OLT Port Updown Uplink-port 0/10 Down
10	2019/03/09 08:52:32	warning	OLT Port Updown Uplink-port 0/10 Up
11	2019/03/09 08:52:29	warning	OLT Port Updown Uplink-port 0/10 Down
12	2019/03/09 08:52:21	warning	System Config Save save config by command
13	2019/03/09 08:52:14	warning	OLT Port Updown PON 0/1 ONU 3 sn GPON0093A921 LAN1 LINK DOWN
14	2019/03/09 08:52:14	warning	OLT Port Updown PON 0/1 ONU 3 sn GPON0093A921 LAN2 LINK DOWN
15	2019/03/09 08:52:14	major	ONU Online PON 0/1 ONU 3 sn GPON0093A921
16	2019/03/09 08:52:12	warning	System Config Save save config by command
17	2019/03/09 08:52:06	warning	OLT Port Updown PON 0/1 ONU 1 sn GPON0091A830 LAN1 LINK DOWN
18	2019/03/09 08:52:06	warning	OLT Port Updown PON 0/1 ONU 1 sn GPON0091A830 LAN2 LINK DOWN
19	2019/03/09 08:52:06	major	ONU Online PON 0/1 ONU 1 sn GPON0091A830
20	2019/03/09 08:52:06	warning	OLT Port Updown PON 0/1 Up

Figure 6.1-1: System Log

6.1.2 Alarm

System Configuration → System Log → Alarm

It contains all the alarms of OLT. User can choose the different alarms to

"Print", "Record", "Trap" and "Remote".

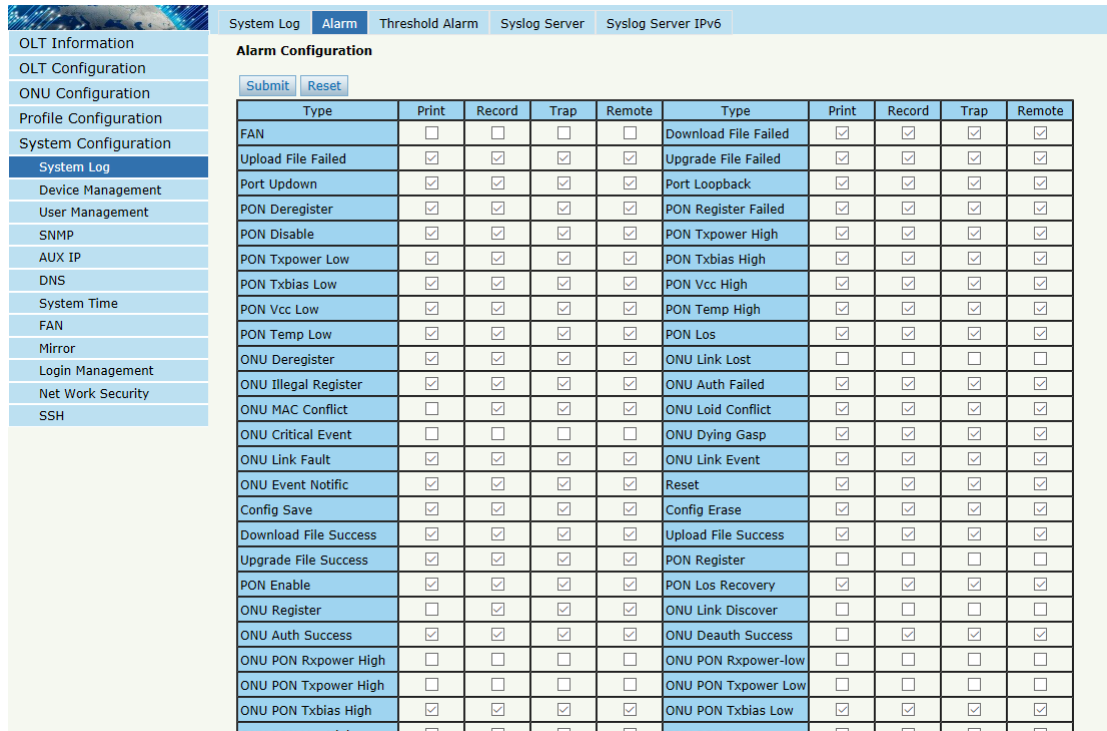


Figure 6.1-2: Alarm

options	Illustration
Print	Alarm and event show in console and telnet, but not show in syslog, EMS and remote log server.
Record	Alarm and event show in syslog, but not show in console, telnet, EMS and remote log server.
Trap	Alarm and event show in EMS, but not show in console, telnet, syslog and remote log server.
Remote	Alarm and event show in remote log server, but not show in console, telnet, syslog and EMS.

6.1.3 Threshold Alarm

System Configuration → System Log → Threshold Alarm

This page is used to configure OLT temperature threshold, CPU-usage threshold and memory- usage threshold, PON optical threshold.

Type	Print	Record	Trap	Remote	Alarm Threshold	Clear Threshold
Temp High (°C)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.00	0.00
Temp Low (°C)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.00	0.00
CPU Usage High (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.00	0.00
MEM Usage High (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.00	0.00

Submit Reset

PON Optical Alarm Configuration

Port ID: PON1

Type	State	Alarm Threshold	Clear Threshold
Tx Power High (dBm)	<input type="checkbox"/>	0.00	0.00
Tx Power Low (dBm)	<input type="checkbox"/>	0.00	0.00
Tx Bias High (mA)	<input type="checkbox"/>	0.00	0.00
Tx Bias Low (mA)	<input type="checkbox"/>	0.00	0.00
Vcc High (V)	<input type="checkbox"/>	0.00	0.00
Vcc Low (V)	<input type="checkbox"/>	0.00	0.00
Temp High (°C)	<input type="checkbox"/>	0.00	0.00
Temp Low (°C)	<input type="checkbox"/>	0.00	0.00

Submit Reset

Figure 6.1-3: Threshold Alarm

6.1.4 Syslog Server

System Configuration → System Log → Syslog Server

This page is used to configure remote IPv4 server of OLT system log.

The screenshot shows the 'Syslog Server Configuration' page. On the left is a navigation menu with items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log (highlighted), Device Management, User Management, SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management, Net Work Security, and SSH. The top navigation bar includes: System Log, Alarm, Threshold Alarm, Syslog Server (highlighted), and Syslog Server IPv6. The main content area is titled 'Syslog Server Configuration' and contains the following fields:

Syslog Server	<input type="text" value="Enable"/>	
Server IP	<input type="text" value="0.0.0.0"/>	
Server Port	<input type="text" value="514"/>	(1-65535)

A 'Submit' button is located below the Server Port field.

Figure 6.1-4: Syslog Server

6.1.5 Syslog Server IPv6

System Configuration → System Log → Syslog Server IPv6

This page is used to configure remote IPv6 server of OLT system log.

The screenshot shows the 'Syslog Server IPv6 Configuration' page. The navigation menu and top bar are identical to Figure 6.1-4, but the 'Syslog Server IPv6' tab is highlighted. The main content area is titled 'Syslog Server IPv6 Configuration' and contains the following fields:

Syslog Server IPv6	<input type="text" value="Enable"/>	
Server IPv6	<input type="text"/>	
Server Port	<input type="text" value="514"/>	(1-65535)

A 'Submit' button is located below the Server Port field.

Figure 6.1-5: Syslog Server IPv6

6.2 Device Management

6.2.1 Firmware Upgrade

System Configuration → Device Management → Firmware Upgrade

You can upgrade the OLT firmware on this page. OLT will reboot automatically with the new firmware after upgraded.

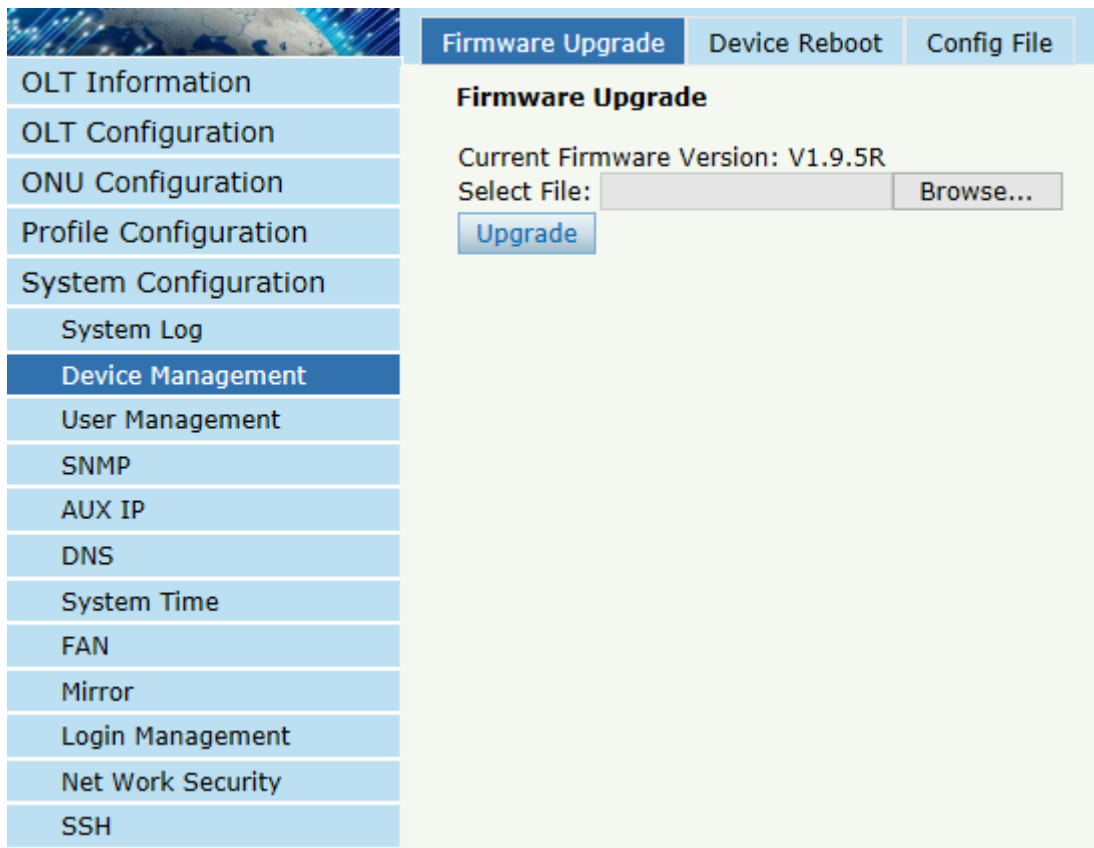


Figure 6.2-1: Firmware Upgrade

6.2.2 Device Reboot

System Configuration → Device Management → Device Reboot

You can reboot the entire system on this page. Please do save the configuration before reboot.

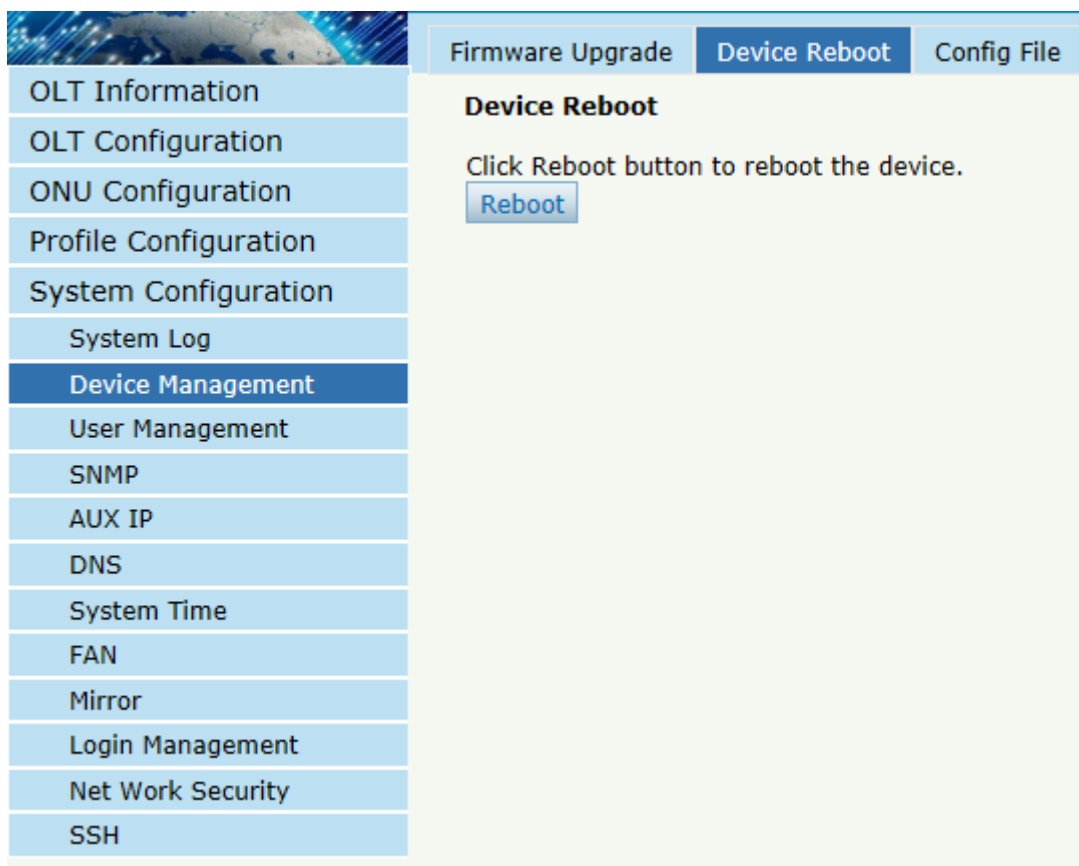


Figure 6.2-2: Device Reboot

6.2.3 Config File

System Configuration → Device Management → Config File

You can backup configuration, restore configuration, restore factory defaults and save configuration on this page.

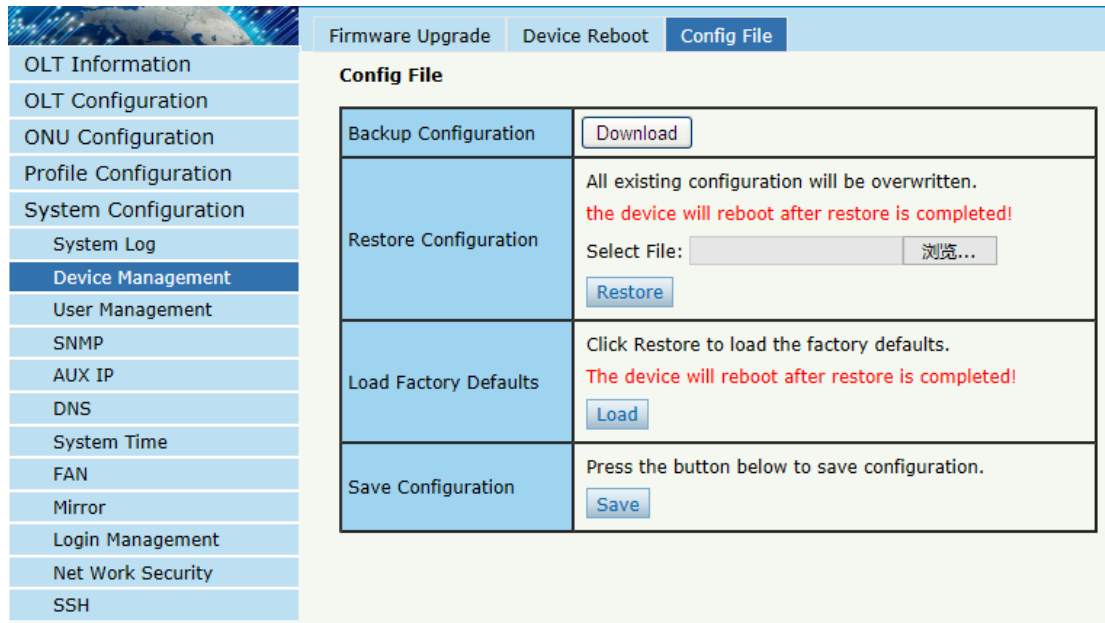


Figure 6.2-3: File Configuration

6.3 User Management

System Configuration→User management

Two types of user have been defined, Normal and Admin. There are limitations to normal user, and Admin user has no limits to full function of OLT. The default account member is **Admin** level.

The screenshot displays the 'User Manage' interface. On the left is a sidebar menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, **User Management** (highlighted), SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management, Net Work Security, and SSH. The main content area is titled 'User Manage' and contains the following sections:

Add User

User Name:

User Password:

Confirm Password:

User Role: (dropdown menu)

User Table

User Name	User Role	Edit	Delete
admin	Admin		

Figure6.3-1: User Manage

6.4 SNMP

6.4.1 SNMP V1/V2

System Configuration → SNMP →SNMP V1/V2

This page is used to configure SNMP parameters of version 1 and version 2 for OLT management.

The screenshot displays the configuration interface for SNMP V1/V2. On the left is a navigation menu with 'SNMP' highlighted. The main area has three tabs: 'SNMPV1/V2', 'SNMPV3', and 'SNMPV3 Trap'. The 'SNMPV1/V2' tab is active, showing the following sections:

- Add Community:** Includes a text input for 'Community Name', a dropdown for 'Access Right' (set to 'Read-Only'), and an 'Add' button.
- Community Table:** A table with columns 'Community Name', 'Access Right', and 'Delete'. It lists two entries: 'public' with 'Read-Only' access and 'private' with 'Read-Write' access. Each entry has a delete icon.
- Add Trap:** Includes text inputs for 'Host IP', 'UDP Port' (set to '162'), and 'Community Name' (set to 'public'). A dropdown for 'SNMP Version' is set to '1'. An 'Add' button is present.
- Trap Table:** A table with columns 'Host IP', 'UDP Port', 'SNMP Version', 'Community Name', and 'Delete'.

Figure6.4-1: SNMP V1/V2

6.4.2 SNMP V3

System Configuration → SNMP → SNMP V3

This page is used to configure SNMP parameters of version 3 for OLT management.

	SNMPV1/V2	SNMPV3	SNMPV3 Trap
OLT Information			
OLT Configuration			
ONU Configuration			
Profile Configuration			
System Configuration			
System Log			
Device Management			
User Management			
SNMP			
AUX IP			
DNS			
System Time			
FAN			
Mirror			
Login Management			
Net Work Security			
SSH			

Add View

View Name

Subtree (Type:Object Identifier)

View Type

View Table

View Name	Subtree	View Type	Delete

Add Group

Group Name

Access Level

Read View

Write View

Notify View

Group Table

Group Name	Access Level	Read View	Write View	Notify View	Delete

Add User

User Name

Group Name

Auth Type

Auth Password

Private Type

Private Password

User Table

User Name	Group Name	Auth Type	Private Type	Delete

Figure6.4-2: SNMP V3

6.4.3 SMNP V3 Trap

System Configuration → SNMP →SNMP V3 Trap

Configure the target host IP address of trap messages.

The screenshot shows the 'SNMPV3 Trap' configuration page. The left sidebar contains a navigation menu with 'SNMP' selected. The main content area has three tabs: 'SNMPV1/V2', 'SNMPV3', and 'SNMPV3 Trap'. The 'Add Trap' section contains the following fields:

- Host IP:
- UDP Port: (1-65535)
- User Name:
- User Level: (dropdown)
- Tag List: (dropdown)
- Timeout: (1-400000000)
- Retry Count: (1-100)

Below the form is an 'Add' button and a 'Trap Table' section with the following table structure:

Host IP	UDP Port	Version	User Name	User Level	Tag List	Timeout	Retry Count	Delete

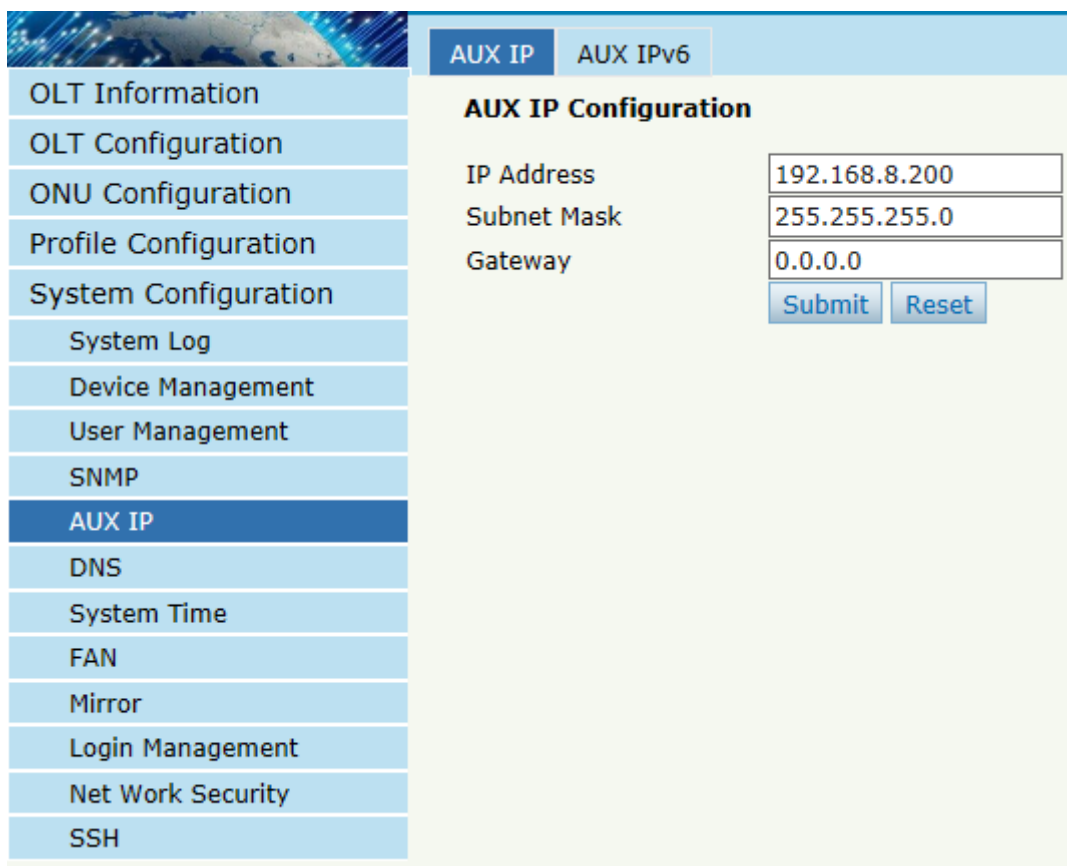
Figure 6.4-3: SNMP V3 Trap

6.5 AUX IP

6.5.1 AUX IP

System Configuration → AUX IP → AUX IP

AUX port is out band management port. The IP address of aux port is out band management IP. Default IPv4 address is 192.168.8.200.



The screenshot shows the web interface for configuring the AUX IP. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP (highlighted), DNS, System Time, FAN, Mirror, Login Management, Net Work Security, and SSH. The main content area has two tabs: 'AUX IP' (selected) and 'AUX IPv6'. Below the tabs is the title 'AUX IP Configuration'. The configuration fields are: IP Address (192.168.8.200), Subnet Mask (255.255.255.0), and Gateway (0.0.0.0). At the bottom right of the configuration area are 'Submit' and 'Reset' buttons.

Figure 6.5-1: AUX IP

6.5.2 AUX IPv6

System Configuration → AUX IP → AUX IPv6

AUX port is out band management port. The IP address of aux port is out band management IP. By default, there is a link local address.

The screenshot shows the OLT Web User Interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, **AUX IP**, DNS, System Time, FAN, Mirror, Login Management, Net Work Security, and SSH. The 'AUX IP' item is highlighted in blue. The main content area has two tabs: 'AUX IP' and 'AUX IPv6'. The 'AUX IPv6' tab is selected. Below the tabs is the 'AUX IPv6 Configuration' section, which includes three input fields: 'IPv6 Address', 'Prefixlen', and 'Gateway'. Below these fields are two buttons: 'submit' and 'reset'. Below the configuration section is the 'AUX IPv6 Table' with the following data:

IPv6 Address	Prefixlen	Gateway	Delete
fe80::8214:a8ff:feac:2616			
fec0::8214:a8ff:feac:2616	64		
2216:abcd:ef::3	64		

Figure 6.5-2: AUX IPv6

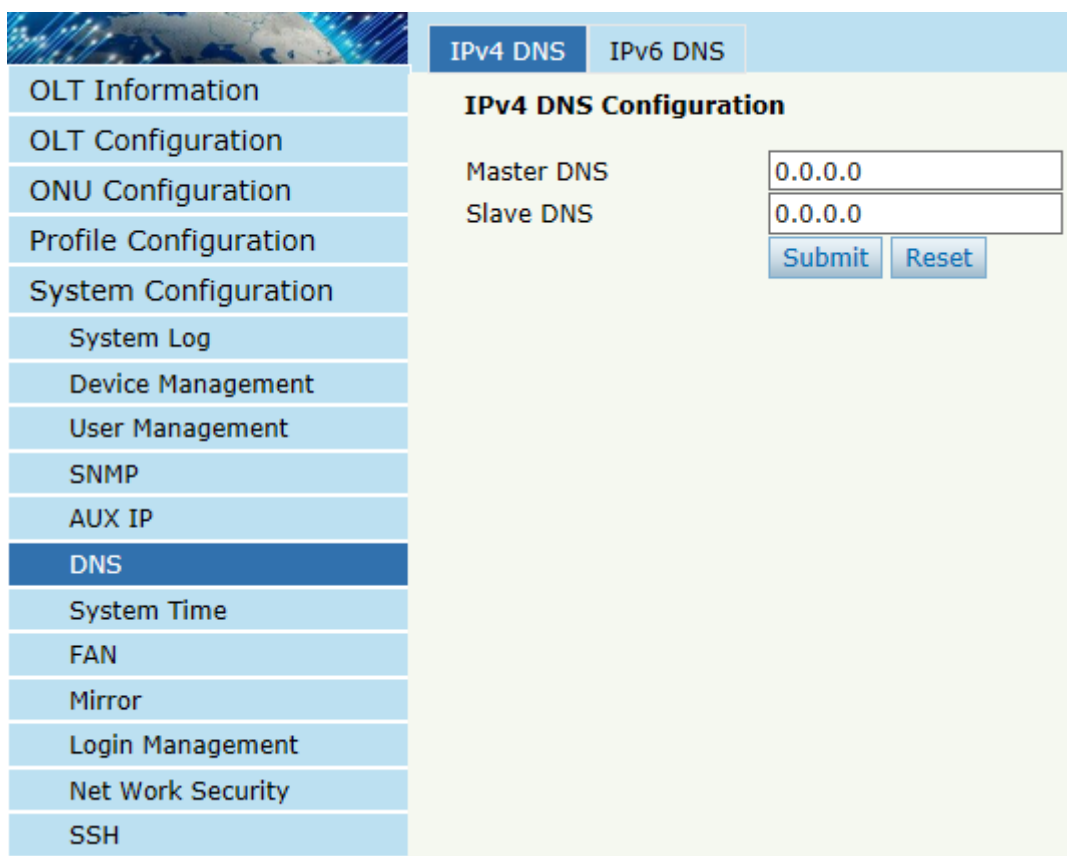
6. 6 DNS

DNS is used for domain name resolution. When OLT need to visit a site or a destination by domain, take NTP server for example, DNS is required.

6.6.1 IPv4 DNS

System Configuration → DNS → IPv4 DNS

This page is used to configure IPv4 DNS.



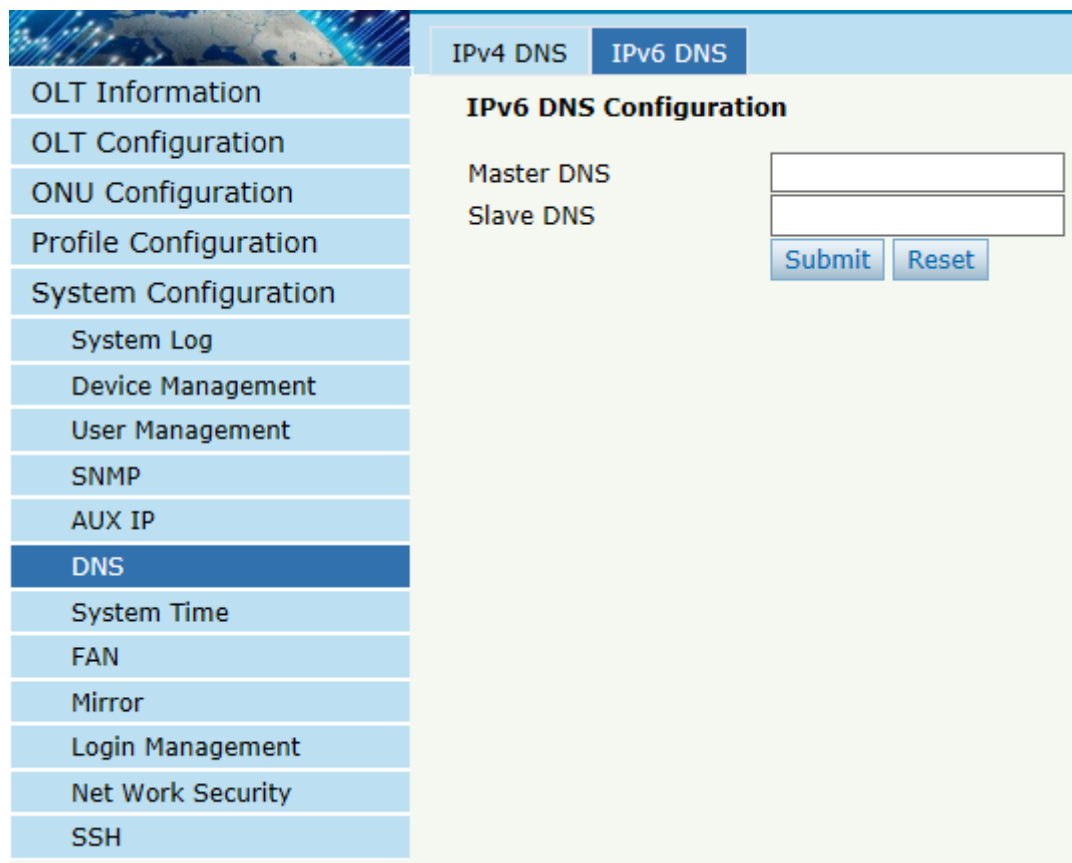
The screenshot shows the web interface for configuring IPv4 DNS. On the left is a vertical navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS (highlighted in dark blue), System Time, FAN, Mirror, Login Management, Net Work Security, and SSH. The main content area has two tabs: 'IPv4 DNS' (selected) and 'IPv6 DNS'. Below the tabs is the title 'IPv4 DNS Configuration'. There are two input fields: 'Master DNS' with the value '0.0.0.0' and 'Slave DNS' with the value '0.0.0.0'. Below the input fields are two buttons: 'Submit' and 'Reset'.

Figure 6.6-1: IPv4 DNS

6.6.2 IPv6 DNS

System Configuration → DNS → IPv6 DNS

This page is used to configure IPv6 DNS.



The screenshot shows the IPv6 DNS configuration page. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS (highlighted), System Time, FAN, Mirror, Login Management, Net Work Security, and SSH. The main content area has two tabs: IPv4 DNS and IPv6 DNS (selected). Below the tabs is the title "IPv6 DNS Configuration". There are two input fields: "Master DNS" and "Slave DNS". Below these fields are two buttons: "Submit" and "Reset".

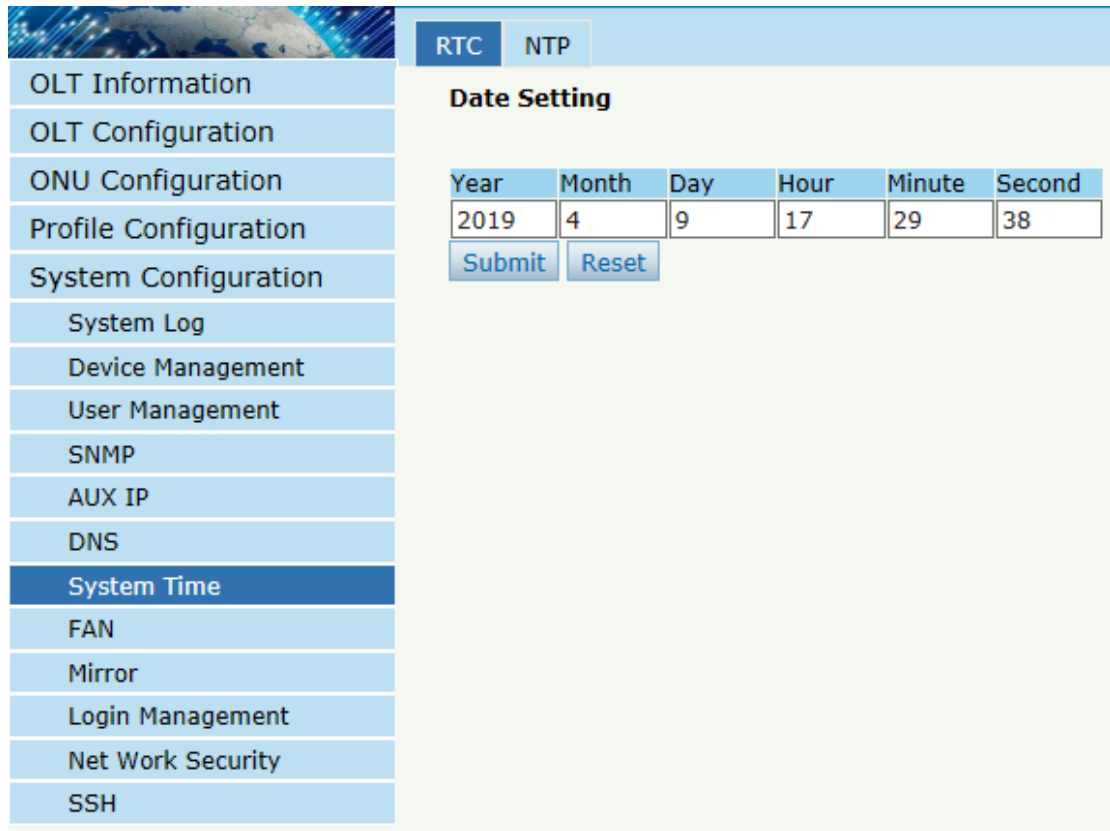
Figure 6.6-2: IPv6 DNS

6.7 System Time

6.7.1 RTC

System Configuration → System Time→RTC

This page is used to set OLT system time. RTC stands for Real-Time Clock, it provides clock signal to the system. There is no battery inside OLT, so the time will not be saved after powered off.



Year	Month	Day	Hour	Minute	Second
2019	4	9	17	29	38

Submit Reset

Figure 6.7-1: RTC Setting

6.7.2 NTP

System Configuration → System Time → NTP

This page is used to configure NTP server. OLT will synchronize time with the NTP server at a given time.

RTC NTP

NTP Configuration

Enable NTP Synchronization

NTP Timezone

NTP Server

Current Time 2019 / 4 / 9 17:29:57

OLT Information

OLT Configuration

ONU Configuration

Profile Configuration

System Configuration

System Log

Device Management

User Management

SNMP

AUX IP

DNS

System Time

FAN

Mirror

Login Management

Net Work Security

SSH

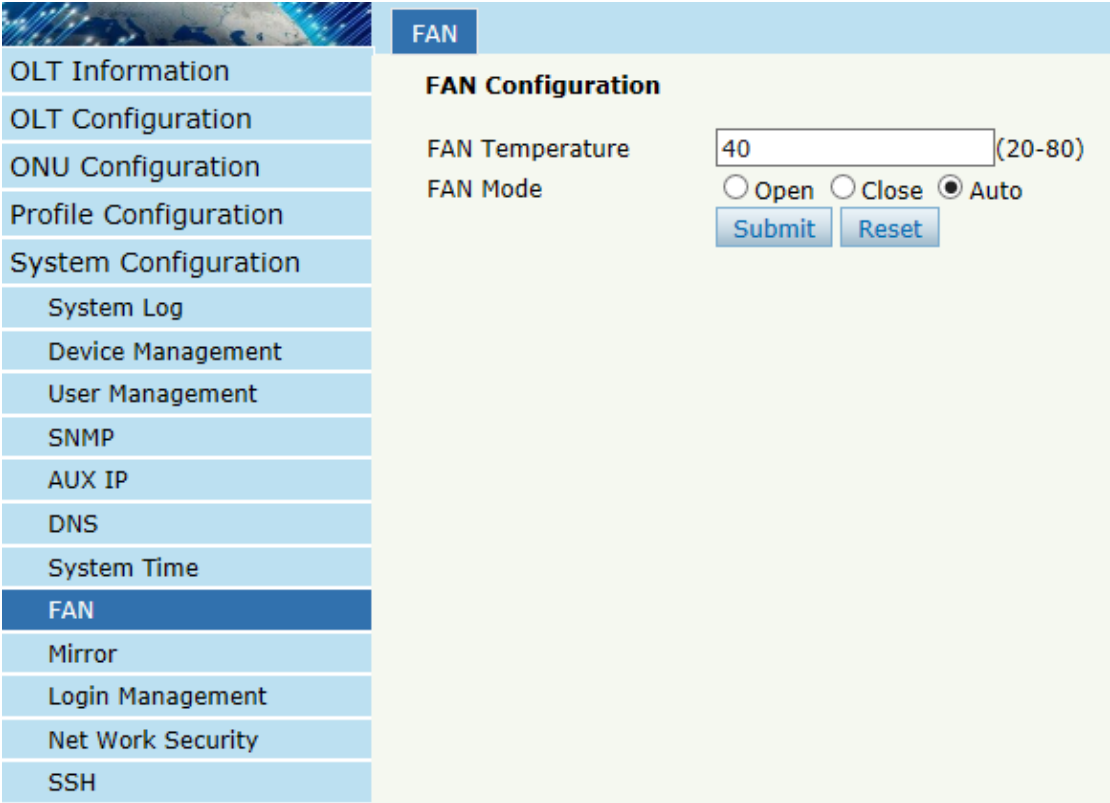
Figure 6.7-2: NTP Configuration

6.8 FAN

System Configuration → FAN

The fans can be turned on and turned off manually; and also can be turned on and off automatically according to the temperature of OLT main chip.

This configuration will not be saved after reboot.



The screenshot displays the 'FAN Configuration' page. On the left, a vertical menu lists various system configuration options, with 'FAN' highlighted in dark blue. The main content area has a light green background and is titled 'FAN Configuration'. It includes a text input field for 'FAN Temperature' with the value '40' and a range '(20-80)' to its right. Below this, the 'FAN Mode' is set to 'Auto', indicated by a selected radio button. Two buttons, 'Submit' and 'Reset', are located at the bottom of the configuration area.

Figure 6.8-1: FAN Configuration

6.9 Mirror

System Configuration → Mirror

Port mirror is usually used for troubleshooting. Each monitor session can be set with one destination port and up to 8 source ports.

- OLT Information
- OLT Configuration
- ONU Configuration
- Profile Configuration
- System Configuration
- System Log
- Device Management
- User Management
- SNMP
- AUX IP
- DNS
- System Time
- FAN
- Mirror
- Login Management
- Net Work Security
- SSH

Mirror

Mirror Configuration

Session ID

Destination Port

Port ID	Mirrored	Direction
GE1	<input type="checkbox"/>	Both
GE2	<input type="checkbox"/>	Both
GE3	<input type="checkbox"/>	Both
GE4	<input type="checkbox"/>	Both
GE5	<input type="checkbox"/>	Both
GE6	<input type="checkbox"/>	Both
GE7	<input type="checkbox"/>	Both
GE8	<input type="checkbox"/>	Both
GE9	<input type="checkbox"/>	Both
GE10	<input type="checkbox"/>	Both
GE11	<input type="checkbox"/>	Both
GE12	<input type="checkbox"/>	Both
GE13	<input type="checkbox"/>	Both
GE14	<input type="checkbox"/>	Both
GE15	<input type="checkbox"/>	Both
GE16	<input type="checkbox"/>	Both
PON	<input checked="" type="checkbox"/>	Both

Mirror Table

Session ID	Destination Port	Source Port	Type	Delete
1	GE10	PON	Both	<input type="button" value="Clean"/>

Figure 6.9-1: Mirror Configuration

6.10 Login Management

6.10.1 Login Access List

System Configuration → Login Management → Login Access List

This page is used to configure access rights for management. You can

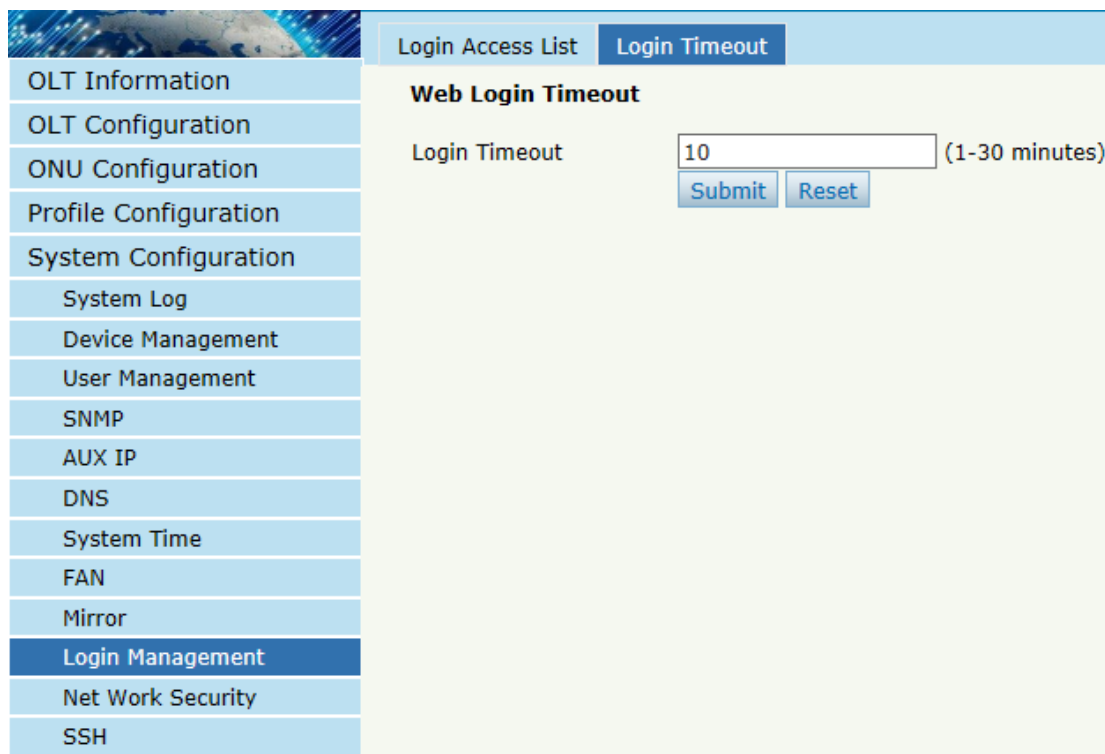
configure access rights for telnet, web, SNMP, SSH according to source IP address.

Figure 6.10-1: Login Access List Configuration

6.10.2 Login Timeout

System Configuration → Login Management → Login Timeout

This page is used to set web timeout.



The screenshot displays the OLT Web User Interface. On the left is a vertical menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management (highlighted in dark blue), Net Work Security, and SSH. The main content area has two tabs: 'Login Access List' and 'Login Timeout' (selected). Below the tabs, the heading 'Web Login Timeout' is displayed. Underneath, there is a 'Login Timeout' label followed by a text input field containing the number '10'. To the right of the input field is the text '(1-30 minutes)'. Below the input field are two buttons: 'Submit' and 'Reset'.

Figure 6.10-2: Login Timeout Configuration

6.11 Net Work Security

System Configuration → Net Work Security

This page is used to set up OLT's network security level.



Figure 6.11-1: Net Work Security Setting

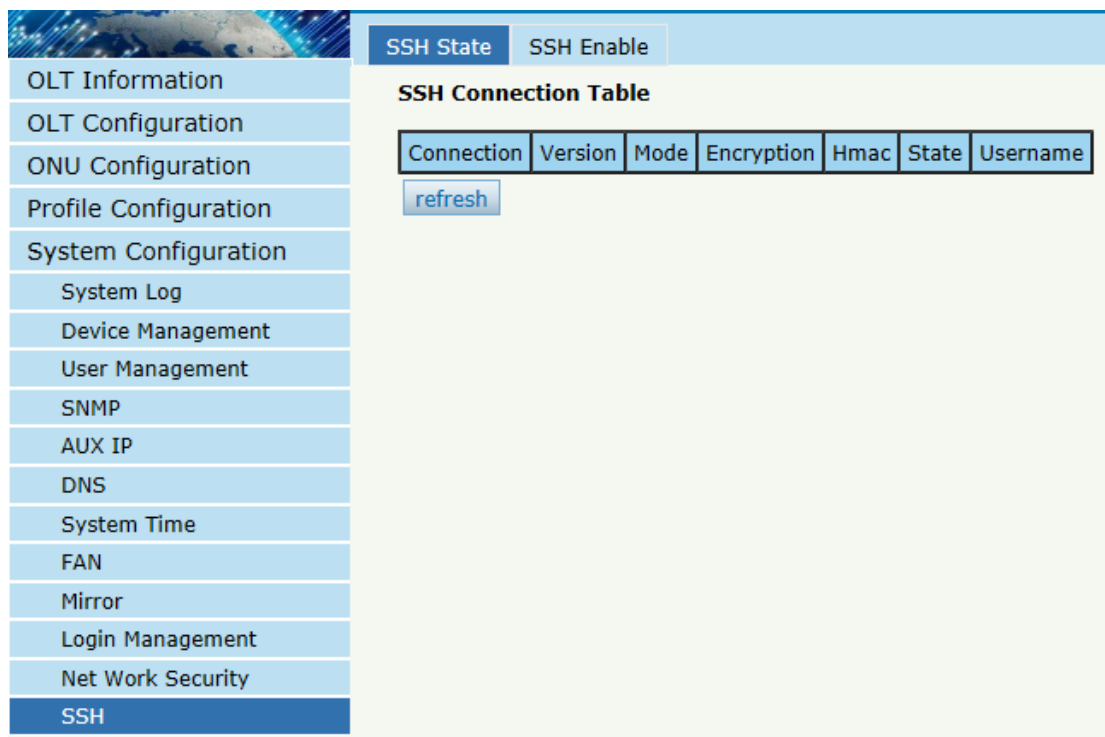
6.12 SSH

SSH (Secure Shell) is a reliable protocol that provides security for remote login sessions and other network services. The SSH protocol can effectively prevent information leakage during remote management.

6.12.1 SSH State

System Configuration → SSH → SSH State

This page displays current connections that have established by SSH protocol.



The screenshot shows the SSH configuration page. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management, Net Work Security, and SSH (highlighted). The main content area has a header with 'SSH State' and 'SSH Enable' tabs. Below the header is the title 'SSH Connection Table' and a table with the following columns: Connection, Version, Mode, Encryption, Hmac, State, and Username. A 'refresh' button is located below the table.

Figure 6.12-1: SSH State

6.12.2 SSH Enable

System Configuration → SSH → SSH Enable

This page is used to configure SSH protocol related parameters.

SSH State **SSH Enable**

SSH Global Configuration

SSH Status

SSH Version

Auth Retries (0-6)

Timeout (1-120)

Modulus (1024-16384)

SSH Key Table

Key type	Encryption algorithm	Key Data
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Figure 6.12-1: SSH Global Configuration

Thank you!