

# PICOTEL

## PT-E2500 Series EPON OLT

### WEB GUIDE



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## Chapter 1 System Description

### 1.1 OLT Introduction

EPON OLT provides various types of network interface, service interface and maintenance interface to adapt to different networking environments. All the interfaces could comply with the relevant telecommunications standards.

Table 1-1 lists all OLT interface types.

Type	Interface	Remarks
PON Interface	PON optical interface	The point-to-multipoint architecture and the passive fiber transmission mode are used. The downstream rate and upstream rate can reach up to 1.25Gbps.
Uplink port interface	Support GE copper interface and optical interface	RJ45 connect the uplink port To Ethernet, or add optical model connecting the optical uplink port to Ethernet.

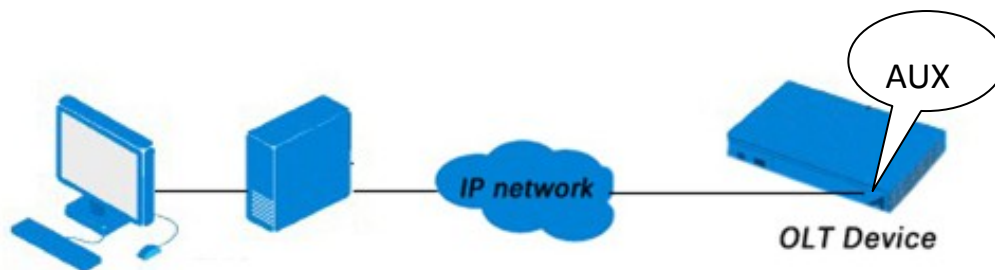
Maintenance interface	Console port AUX port	Console port is used for local maintenance.  AUX port is used for remote maintenance.
-----------------------	--------------------------	---

## 1.2 Connection

Manage the OLT via WEB by connecting the OLT AUX port to Ethernet.

The OLT default management IP is 192.168.8.100.

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

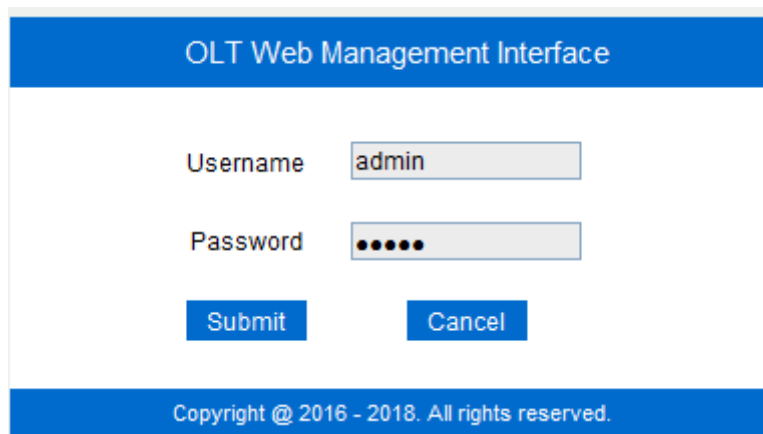


## Chapter 2 OLT Application Status

### 2.1 Login

One of the ways to configure device is by the web interface. The following steps will enable you to login:

1. Conform "1.2 Connection" to connect;
2. The device default IP address is 192.168.8.100;
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 "admin" by default.



OLT Web Management Interface

Username

Password

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Figure 2-1: Login

### 2.2 Status

This part shows the main information and the service status of OLT.

## 2.2.1 Device

It's about the OLT basic information and the real-time information.

### 2.2.1.1 Basic Info

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.

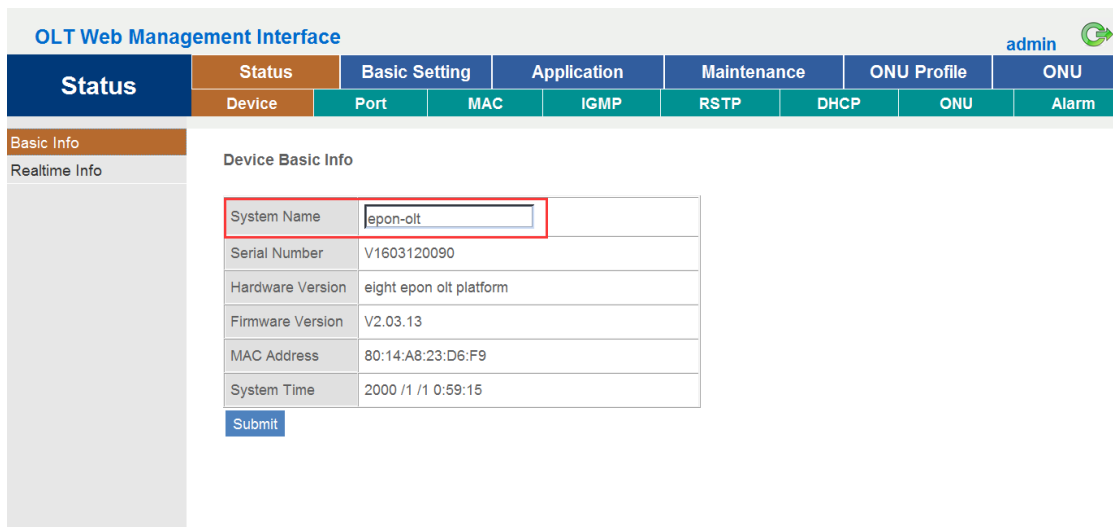


Figure 2-2: Device Information

### 2.2.1.2 Realtime Info

This part shows the real-time information, include the CUP load, Memory load, Temperature and running time. All the information is real-time.



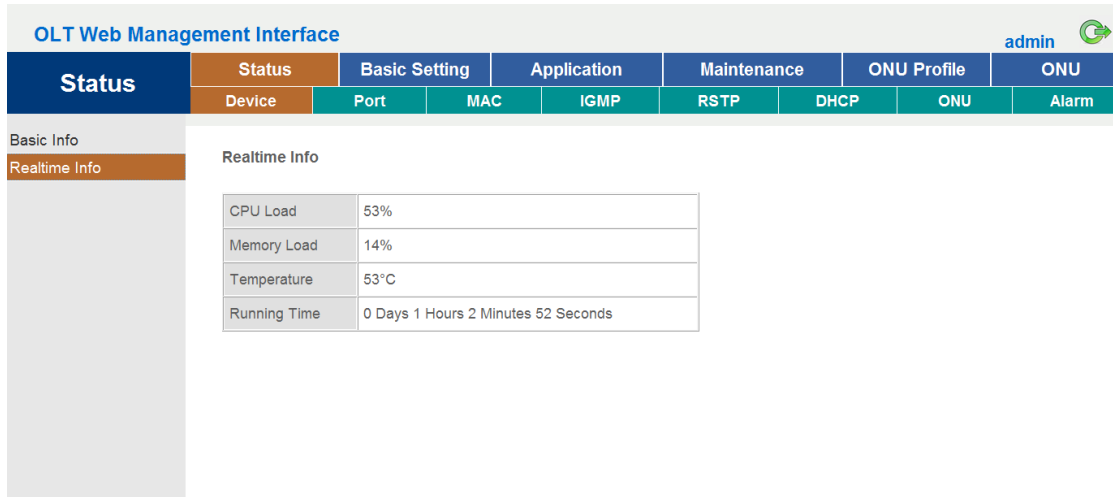


Figure 2-3: Device Real-time Information

## 2.2.2 Port

This part is about the OLT GE port and PON port information. It can show the GE port link status, speed and the packets statistics.

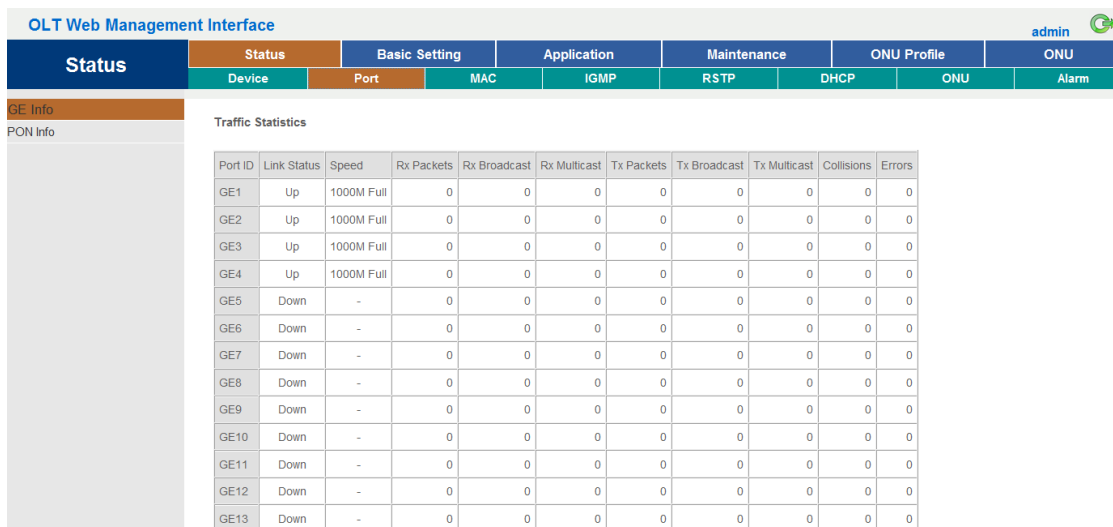


Figure 2-4: GE Port Information

The PON port will show the optical parameters exactly.

**Optical Transceiver**

Port ID	Temperature	Voltage	Bias Current	Transmit Power
PON1	42.268 C	3.3304 V	12.96 mA	4.825163 dbm
PON2	N/A	N/A	N/A	N/A
PON3	N/A	N/A	N/A	N/A
PON4	N/A	N/A	N/A	N/A
PON5	N/A	N/A	N/A	N/A
PON6	N/A	N/A	N/A	N/A
PON7	N/A	N/A	N/A	N/A
PON8	N/A	N/A	N/A	N/A

**Traffic Statistics**

Port ID	Link Status	Speed	Rx Packets	Rx Broadcast	Rx Multicast	Tx Packets	Tx Broadcast	Tx Multicast	Collisions	Errors
PON1	Up	1000M Full	1242	1179	63	28	0	28	0	0
PON2	Down	-	14	0	14	28	0	28	0	0
PON3	Down	-	14	0	14	28	0	28	0	0

Figure 2-5: PON Port Information

## 2.2.3 MAC

MAC Info is to show the learning MAC address of OLT. All the MAC addresses of all the ports with VLAN can be shown.

**MAC Address Table**

Port ID:

VLAN ID	MAC	Type	Physical Port
960	40:61:86:02:42:CA	Dynamic	GE10
960	7C:08:D9:D3:13:5C	Dynamic	GE10
960	34:97:F6:85:50:9B	Dynamic	GE10
960	00:0A:C2:21:0B:BD	Dynamic	GE10
960	62:08:D9:D3:13:5C	Dynamic	GE10
960	3C:D1:8E:09:DE:57	Dynamic	GE10
960	00:05:A8:1E:5A:70	Dynamic	GE10
960	00:1F:16:2F:ED:35	Dynamic	GE10
960	E8:03:9A:DE:B1:E8	Dynamic	GE10
960	00:0C:29:36:4E:9D	Dynamic	GE10
960	00:1E:EC:11:7D:07	Dynamic	GE10
960	00:20:23:00:00:00	Dynamic	GE10
960	00:05:A8:0A:EF:C1	Dynamic	GE10

Figure 2-6: MAC Table

## 2.2.4 IGMP

Click **Status**→**IGMP**→**Group Member**, IGMP Group Member (both the dynamic and static IGMP Group) can be shown.

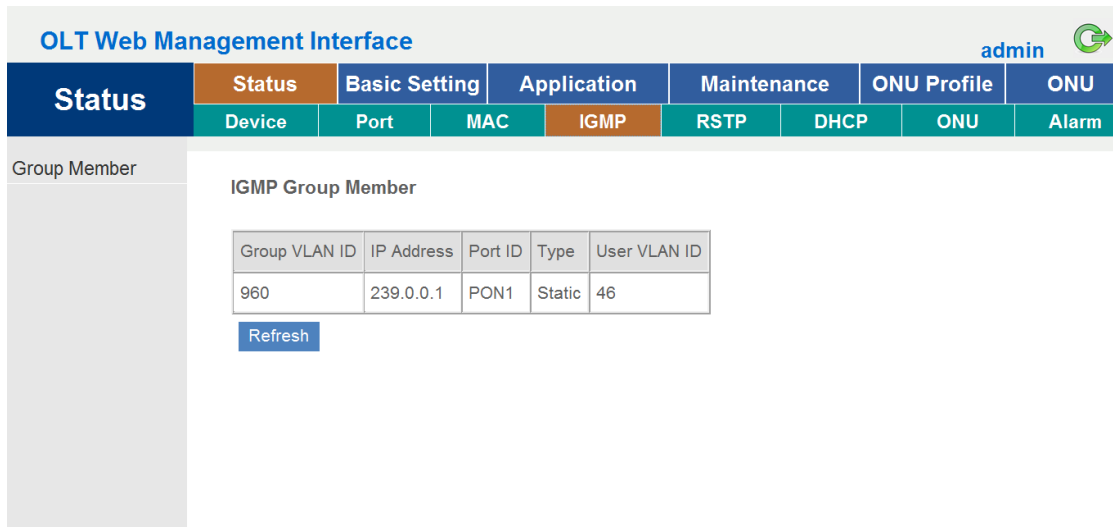


Figure 2-7: IGMP Group Member

## 2.2.5 RSTP

The OLT is disabling RSTP by default. When enable the RSTP, the RSTP global information and port information can be shown by click **Status**→**RSTP**. See figure 2-8 and figure 2-9.

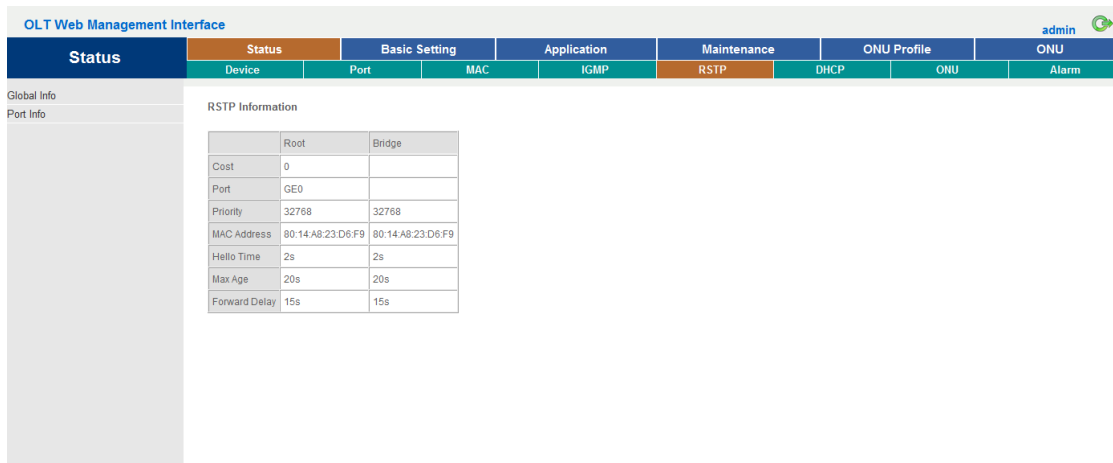


Figure 2-8: RSTP Global Information

OLT Web Management Interface admin

Status	Status	Basic Setting		Application	Maintenance	ONU Profile	ONU																														
	Device	Port	MAC	IGMP	RSTP	DHCP	ONU																														
Global Info	RSTP Port Status																																				
Port Info	<table border="1"> <thead> <tr> <th>Port ID</th> <th>Role</th> <th>State</th> <th>Cost</th> <th>Priority</th> <th>Point To Point</th> </tr> </thead> <tbody> <tr> <td>GE1</td> <td>Design</td> <td>Forwarding</td> <td>200000</td> <td>128</td> <td>Enable</td> </tr> <tr> <td>GE2</td> <td>Design</td> <td>Forwarding</td> <td>200000</td> <td>128</td> <td>Enable</td> </tr> <tr> <td>GE3</td> <td>Design</td> <td>Forwarding</td> <td>200000</td> <td>128</td> <td>Enable</td> </tr> <tr> <td>GE4</td> <td>Design</td> <td>Forwarding</td> <td>200000</td> <td>128</td> <td>Enable</td> </tr> </tbody> </table>							Port ID	Role	State	Cost	Priority	Point To Point	GE1	Design	Forwarding	200000	128	Enable	GE2	Design	Forwarding	200000	128	Enable	GE3	Design	Forwarding	200000	128	Enable	GE4	Design	Forwarding	200000	128	Enable
Port ID	Role	State	Cost	Priority	Point To Point																																
GE1	Design	Forwarding	200000	128	Enable																																
GE2	Design	Forwarding	200000	128	Enable																																
GE3	Design	Forwarding	200000	128	Enable																																
GE4	Design	Forwarding	200000	128	Enable																																
	Refresh																																				

Figure 2-9: RSTP Port Information

## 2.2.6 DHCP

Click **Status**→**DHCP**, the DHCP Server Lease and DHCP Snooping Bind List will be shown as figure 2-10 and figure 2-11.

OLT Web Management Interface admin

Status	Status	Basic Setting		Application	Maintenance	ONU Profile	ONU						
	Device	Port	MAC	IGMP	RSTP	DHCP	ONU						
Server Lease	DHCP Server Lease												
Snooping Bind List	<table border="1"> <thead> <tr> <th>IP Address</th> <th>MAC address</th> <th>Expires Time</th> </tr> </thead> <tbody> <tr> <td colspan="3">Refresh</td> </tr> </tbody> </table>							IP Address	MAC address	Expires Time	Refresh		
IP Address	MAC address	Expires Time											
Refresh													

Figure 2-10: DHCP Server list

OLT Web Management Interface admin

Status	Status	Basic Setting		Application	Maintenance	ONU Profile	ONU												
	Device	Port	MAC	IGMP	RSTP	DHCP	ONU												
Server Lease	DHCP Snooping Bind List																		
Snooping Bind List	<table border="1"> <thead> <tr> <th>MAC Address</th> <th>VLAN ID</th> <th>IP Address</th> <th>Port ID</th> <th>Lease</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>01:00:00:02:01:00</td> <td>1</td> <td>192.168.1.222</td> <td>GE2</td> <td>55</td> <td>Static</td> </tr> </tbody> </table>							MAC Address	VLAN ID	IP Address	Port ID	Lease	Type	01:00:00:02:01:00	1	192.168.1.222	GE2	55	Static
MAC Address	VLAN ID	IP Address	Port ID	Lease	Type														
01:00:00:02:01:00	1	192.168.1.222	GE2	55	Static														
	FlushAll FlushStatic FlushDynamic Refresh																		

Figure 2-11: DHCP Snooping list

## 2.2.7 ONU

When ONU had connected to OLT, it should be authenticated first. This page shows about the ONU authentication list. It will be bound a profile ID 0 when ONU is authenticated successfully.

OLT Web Management Interface admin

Status	Status		Basic Setting		Application		Maintenance		ONU Profile		ONU
	Device	Port	MAC	IGMP	RSTP	DHCP	ONU	Alarm			
Authentication Info	ONU ID	LLID	Status	MAC Address	RTT	Type	Auth Flag	Exchange	Auth Mode	Loid/pwd	
Automatic Discovery	1	-1	Offline	80:14:A8:20:BA:10	0	Unknown	Unauth	Idle	None	NULL	
Bind Profile Info	2	-1	Offline	80:14:A8:20:BA:58	0	Unknown	Unauth	Idle	None	NULL	
	3	-1	Offline	80:14:A8:20:B6:E0	0	Unknown	Unauth	Idle	None	NULL	
	4	-1	Offline	80:14:A8:0D:CE:30	0	Unknown	Unauth	Idle	None	NULL	
	5	-1	Offline	80:14:A8:20:BA:20	0	Unknown	Unauth	Idle	None	NULL	
	6	-1	Offline	80:14:A8:1A:E0:58	0	Unknown	Unauth	Idle	None	NULL	
	7	-1	Offline	80:14:A8:1A:E0:78	0	Unknown	Unauth	Idle	None	NULL	
	8	-1	Offline	80:14:A8:1A:E2:08	0	Unknown	Unauth	Idle	None	NULL	
	9	-1	Offline	80:14:A8:20:B9:80	0	Unknown	Unauth	Idle	None	NULL	
	10	-1	Offline	80:14:A8:20:BA:40	0	Unknown	Unauth	Idle	None	NULL	
	11	-1	Offline	80:14:A8:1A:E1:E8	0	Unknown	Unauth	Idle	None	NULL	
	12	-1	Offline	80:14:A8:1A:E2:C8	0	Unknown	Unauth	Idle	None	NULL	
	13	-1	Offline	80:14:A8:1A:E2:48	0	Unknown	Unauth	Idle	None	NULL	
	14	-1	Offline	80:14:A8:1A:E1:68	0	Unknown	Unauth	Idle	None	NULL	
	15	-1	Offline	80:14:A8:1A:E0:C8	0	Unknown	Unauth	Idle	None	NULL	

Figure 2-12: ONU Authentication List

OLT Web Management Interface admin

Status	Status		Basic Setting		Application		Maintenance		ONU Profile		ONU
	Device	Port	MAC	IGMP	RSTP	DHCP	ONU	Alarm			
Authentication Info	Port ID: PON1										
Automatic Discovery	ONU ID	MAC Address	DBA Profile	Server Profile	VoIP Profile	Alarm Profile	Default Server Profile				
Bind Profile Info	1	80:14:A8:20:BA:10	0	0	0	0	0x0				
	2	80:14:A8:20:BA:58	0	0	0	0	0x0				
	3	80:14:A8:20:B6:E0	0	0	0	0	0x0				
	4	80:14:A8:0D:CE:30	0	0	0	0	0x0				
	5	80:14:A8:20:BA:20	0	0	0	0	0x0				
	6	80:14:A8:1A:E0:58	0	0	0	0	0x0				
	7	80:14:A8:1A:E0:78	0	0	0	0	0x0				
	8	80:14:A8:1A:E2:08	0	0	0	0	0x0				
	9	80:14:A8:20:B9:80	0	0	0	0	0x0				
	10	80:14:A8:20:BA:40	0	0	0	0	0x0				
	11	80:14:A8:1A:E1:E8	0	0	0	0	0x0				
	12	80:14:A8:1A:E2:C8	0	0	0	0	0x0				
	13	80:14:A8:1A:E2:48	0	0	0	0	0x0				
	14	80:14:A8:1A:E1:68	0	0	0	0	0x0				

Figure 2-13: ONU Profile Bind List

## 2.2.8 Alarm

Any operation will lead to OLT alarm, such as ONU lost link, ONU Auth...

OLT Web Management Interface admin

Status	Status	Basic Setting		Application		Maintenance		ONU Profile		ONU	
	Device	Port	MAC	IGMP	RSTP	DHCP	ONU	Alarm			

Alarm Log

**Alarm Log Table**

Select Counts:

Alarm Type: ALL

No.	Time	Level	Message
1	1999/12/31 00:01:21	major	PON Enable PON 5-8 Enable!
2	1999/12/31 00:01:21	major	PON Enable PON 1-4 Enable!
3	1999/12/31 00:00:55	critical	PON Deregister DEVICE 7 by IROS_MSG_TYPE_APPS_OLT_REG.
4	1999/12/31 00:00:13	critical	PON Deregister DEVICE 0 by IROS_MSG_TYPE_APPS_OLT_REG.
5	1999/12/31 00:00:13	critical	PON Deregister DEVICE 7 by IROS_MSG_TYPE_APPS_OLT_REG.
6	1999/12/31 00:00:13	critical	PON Deregister DEVICE 0 by IROS_MSG_TYPE_APPS_OLT_REG.
7	1999/12/31 00:00:09	warning	OLT Port Updown Uplink-port 0/3 Up
8	1999/12/31 00:00:09	warning	OLT Port Updown Uplink-port 0/4 Up
9	1999/12/31 00:00:09	warning	OLT Port Updown Uplink-port 0/2 Up
10	1999/12/31 00:00:09	warning	OLT Port Updown Uplink-port 0/1 Up

[First](#)
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 1/1, 10 per page/10 total,  [Go!](#)

Figure 2-14: Alarm Events

## Chapter 3 OLT Basic Setting

This section is about the basic service of OLT configuration.

### 3.1 VLAN

#### 3.1.1 New VLAN

OLT network service is based on VLAN, create a new VLAN is necessary.

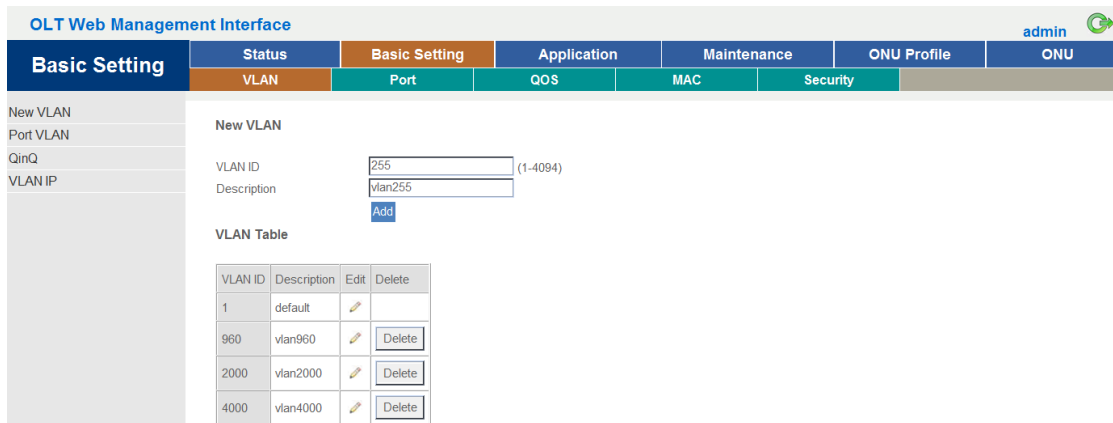


Figure 3-1: Create New VLAN

#### 3.1.2 Port VLAN

Add the new VLAN in the port you want to connect. You can choose the VLAN mode tag or untag in this page.

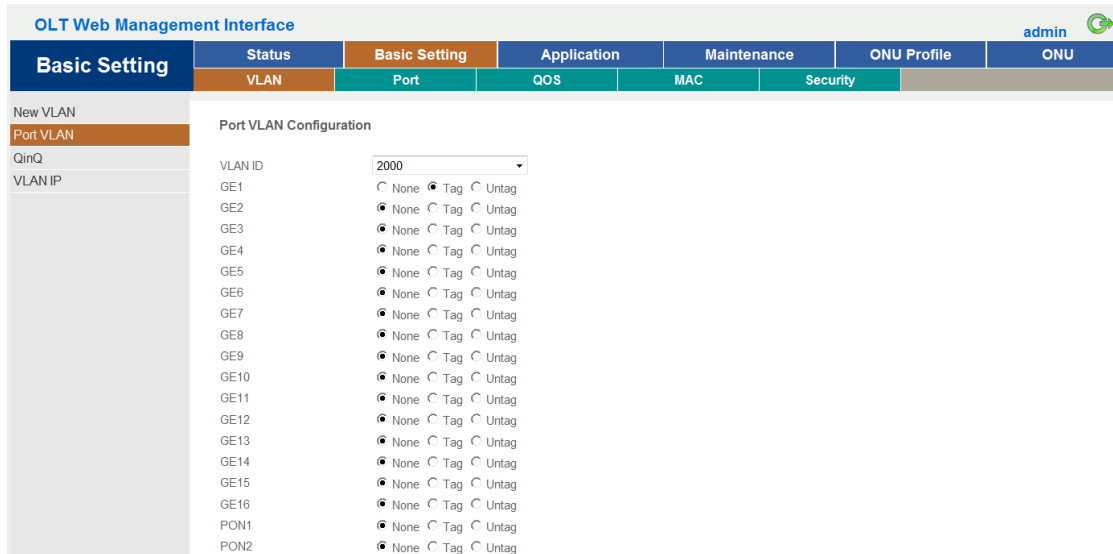


Figure 3-2: Add Port VLAN

### 3.1.3 QinQ

Configure the port mode VLAN translation or QinQ.

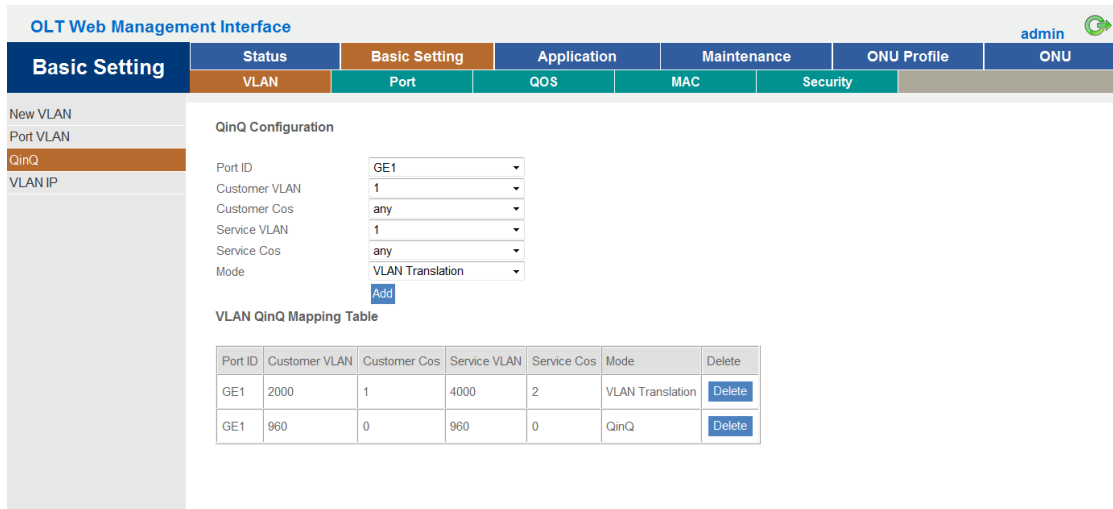


Figure 3-3: QinQ Configuration

### 3.1.4 VLAN IP

Select the existing VLAN and put an IP address in this VLAN.



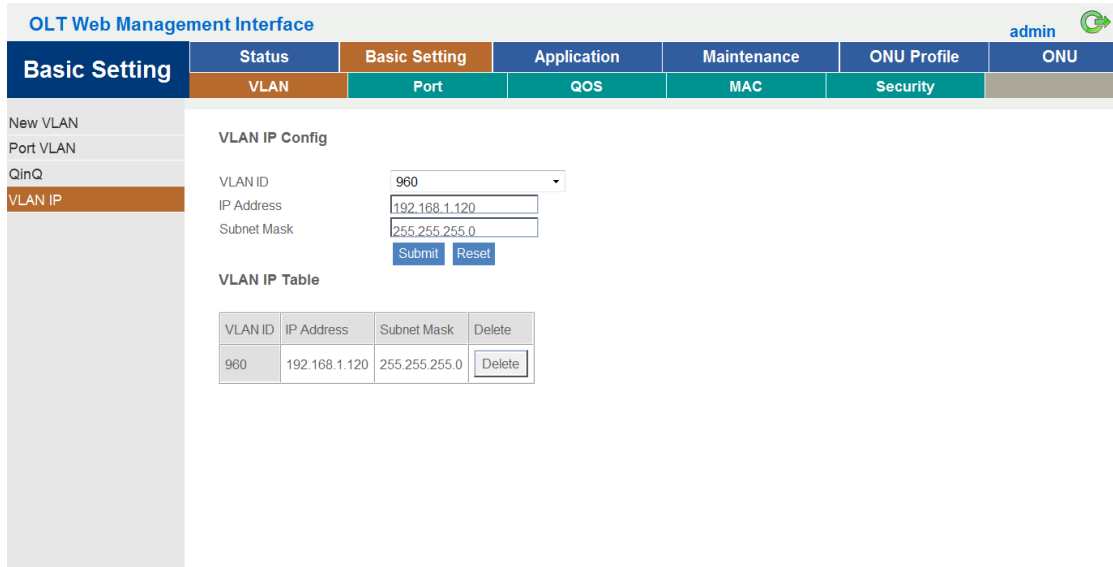


Figure 3-4: VLAN IP

## 3.2 Port

GE ports and PON ports basic service can be configured here.

### 3.2.1 GE/PON Setup

Configure the GE/PON ports basic service, including admin status, flow control switch, isolate switch, PVID...

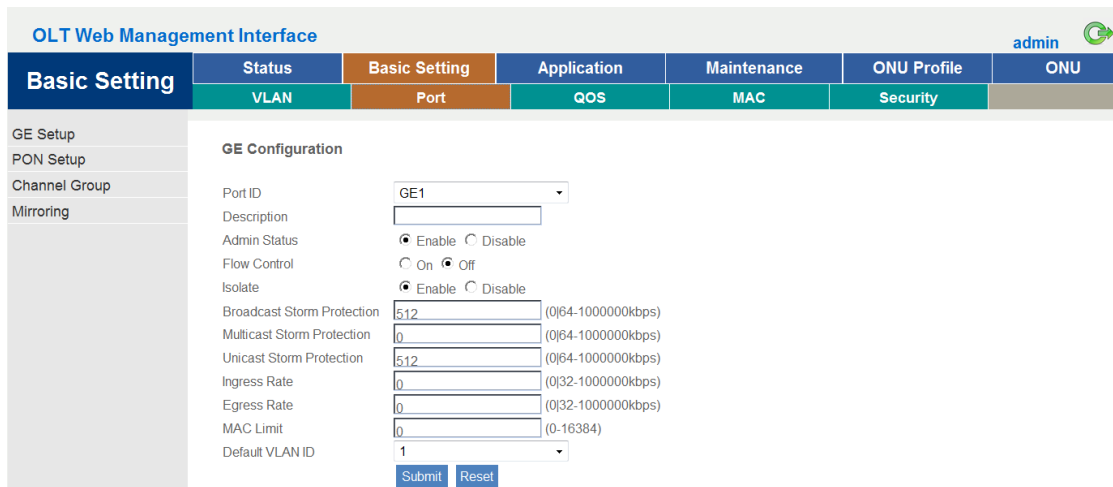


Figure3-5: GE/PON Setup

## 3.2.2 Channel Group

It can be created 4 groups at most. Each group can add 4 ports at most.

Only GE ports can be added in the channel groups.

**Channel Group Configuration**

Channel Group ID: 1  
 Load Balance: dmac

Select GE Port:  GE1  GE2  GE3  GE4  GE5  GE6  GE7  GE8  GE9  GE10  GE11  GE12  GE13  GE14  GE15  GE16

**Channel Group Table**

Group ID	Load Balance	Ports	Delete
1	dmac	GE2 GE5 GE9 GE12	<input type="button" value="Delete"/>

Figure 3-6: Create Channel Groups

## 3.2.3 Mirroring

It can be created 4 groups at most. One destination port can support 8 source ports at most.

**Mirror Configuration**

Session ID: 1  
 Destination Port: GE1

Source Port1: GE3 Both  
 Source Port2: PON6 Both  
 Source Port3: GE11 Both  
 Source Port4: Both  
 Source Port5: Both  
 Source Port6: Both  
 Source Port7: Both  
 Source Port8: Both

Figure 3-7: Mirroring Groups

## 3.3 QOS

The QoS types can be divided into 802.1P and DSCP. It can support 3 modes: strict, WRR and strict-WRR.

Figure 3-8: QOS Configuration

## 3.4 MAC

The MAC aging time is 300s by default. You can add a static MAC manually with VLAN and port.

Figure 3-9: MAC Configuration

## 3.5 Security (ACL)

### 3.5.1 Security Filter

This part is about the security of OLT. It can permit or deny the clients access. Each access list can support 3 rules at most.

The screenshot shows the 'OLT Web Management Interface' with the 'Basic Setting' tab active. Under the 'Security' sub-tab, the 'Access List Configuration' section is visible. The configuration includes the following fields:

- Access List ID: 5000 (range 5000-5999)
- Select Filter Type: Checkboxes for S-MAC, D-MAC, VLAN, COS, Type, S-IP, S-Port, D-IP, D-Port, Protocol, and DSCP. 'VLAN' and 'S-IP' are checked.
- Source MAC: [ ] Mask [ ] (HH:HH:HH:HH:HH:HH)
- Destination MAC: [ ] Mask [ ] (HH:HH:HH:HH:HH:HH)
- VLAN ID: 2000 (dropdown)
- VLAN Cos: [ ] (0-7)
- Ethernet Type: [ ] (HH:HH)
- Source IP: 192.168.21.44 Mask 255.255.255.0
- Source Port: [ ] (0-65535)
- Destination IP: [ ] Mask [ ]
- Destination Port: [ ] (0-65535)
- Protocol: TCP (dropdown)
- DSCP: [ ] (0-63)
- Filter Action: Deny (dropdown)
- An 'Add' button is located at the bottom left of the configuration area.

Figure 3-10: Security Filter

### 3.5.2 Effect Filter

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

OLT Web Management Interface admin

<b>Basic Setting</b>	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	VLAN	Port	QOS	MAC	Security	

Security Filter

Effect Filter

**Access List Port Configuration**

Access List ID:

Select GE Port:
 

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

Select PON Port:
 

<input type="checkbox"/> PON1	<input type="checkbox"/> PON2	<input type="checkbox"/> PON3	<input type="checkbox"/> PON4	<input checked="" type="checkbox"/> PON5	<input checked="" type="checkbox"/> PON6	<input type="checkbox"/> PON7	<input type="checkbox"/> PON8
-------------------------------	-------------------------------	-------------------------------	-------------------------------	--	--	-------------------------------	-------------------------------

**Active Access Lists**

Access List ID	Ports
5000	GE3 GE5 PON5 PON6

Figure 3-11: Bind Security Filter

## Chapter 4 Application

This chapter is about the protocol service configuration.

### 4.1 IGMP

#### 4.1.1 Global Setup

Enable the IGMP snooping mode.

The screenshot shows the OLT Web Management Interface with the 'Application' tab selected. The 'IGMP' sub-tab is active, displaying the 'IGMP Configuration' section. The settings are as follows:

Application	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
IGMP	RSTP	ARP Proxy	DHCP	Static Route		

**IGMP Configuration**

- IGMP Status:  (dropdown)
- Last Member Query Interval:  (1-255s)
- Last Member Query Count:  (1-255)
- Last Member Query Response:  (1-255s)
- General Query Packet:  Disable  Enable
- General Query Interval:  (10-255s)
- Query Source IP:

Buttons:

Figure 4-1: IGMP Snooping Status

#### 4.1.2 Port Setup

IGMP port configuration is about the max groups number, port fast leave status and filter status.

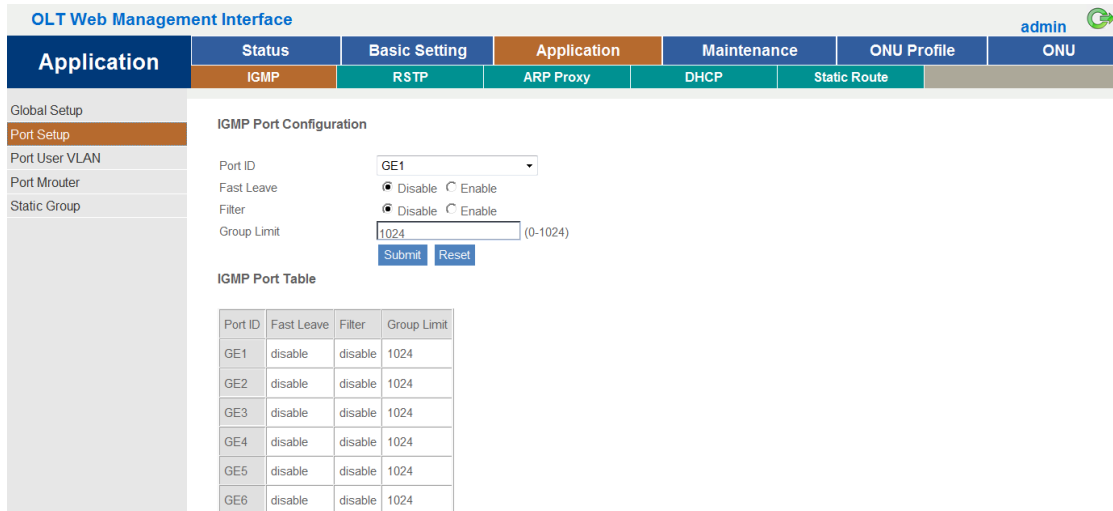


Figure 4-2: IGMP Port Setting

## 4.1.3 Port User VLAN

IGMP VLAN configure the user VLAN and group VLAN.

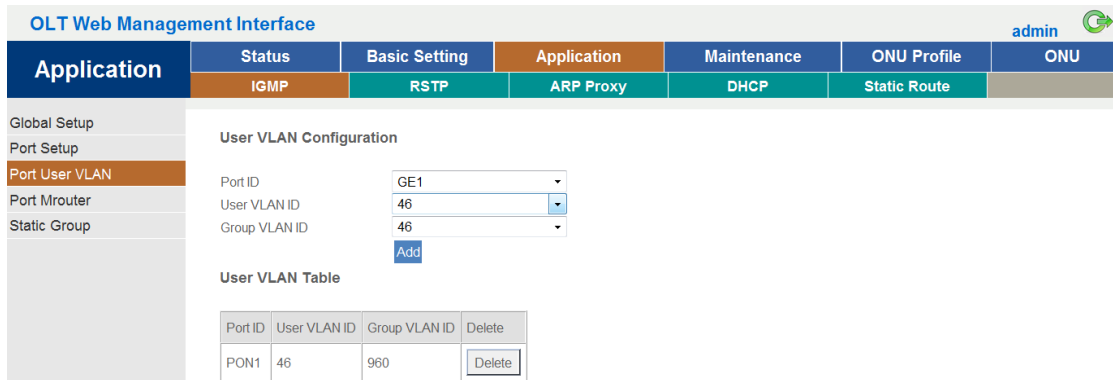


Figure 4-3: IGMP User VLAN

## 4.1.4 Port Mrouter

Add a port as the IGMP mrouter port.

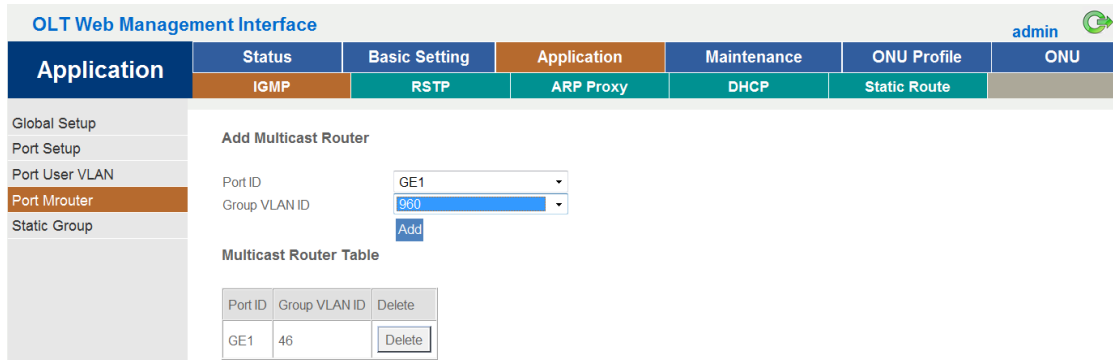


Figure 4-4: IGMP Port Mrouter

## 4.1.5 Static Group

Add an IGMP group manually. We always choose the PON port as the group port.

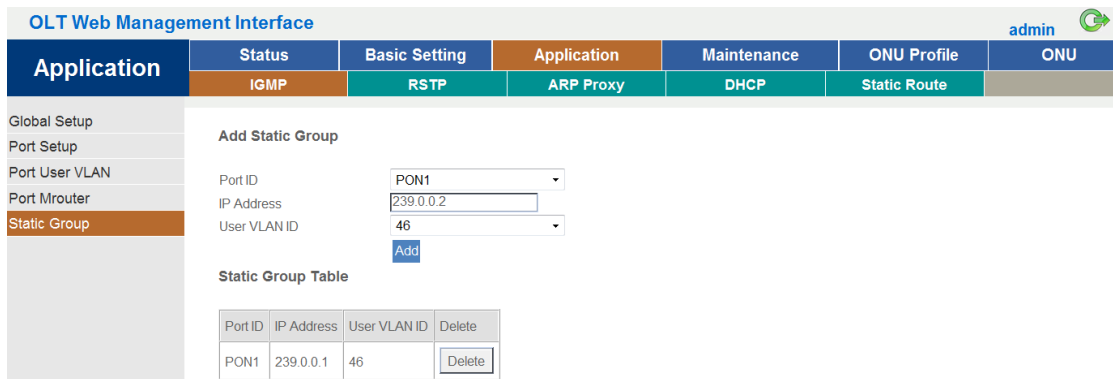


Figure 4-5: IGMP Static Group

## 4.2 RSTP

### 4.2.1 Global Setup

The switch of RSTP is disable by default.



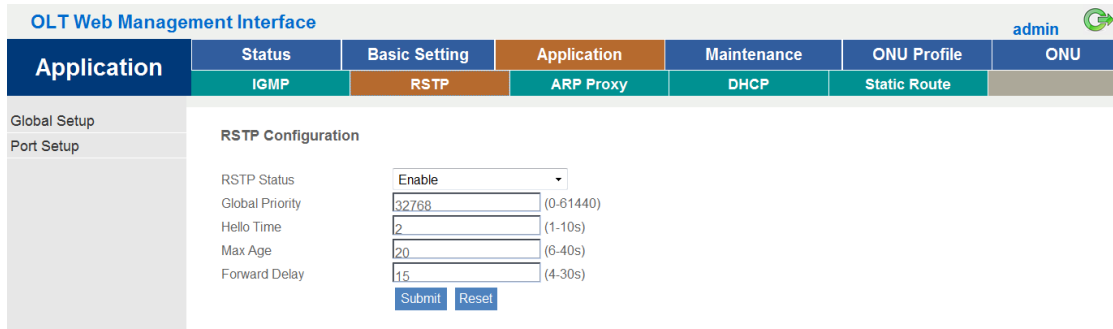


Figure 4-6: RSTP Global Setup

## 4.2.2 Port Setup

The RSTP ports parameter can be set.

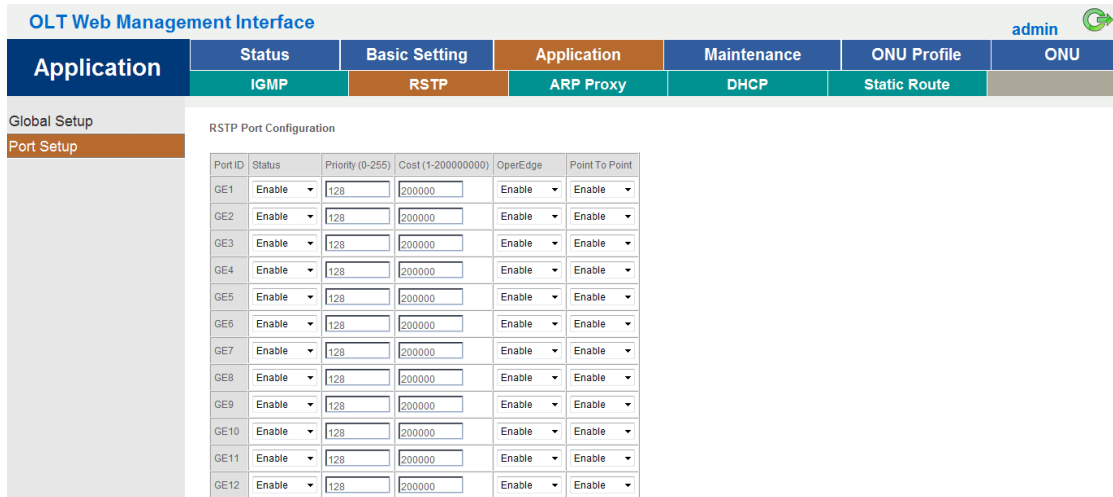


Figure 4-7: RSTP Port Setting

## 4.3 ARP Proxy

As OLT supports L3 Function, it can help the different subnet ARP access.

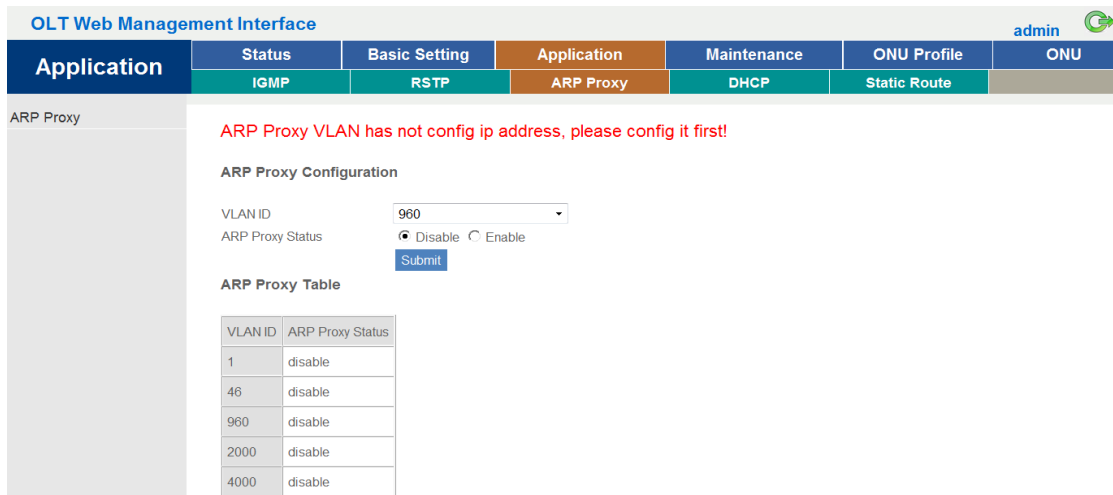


Figure4-8: ARP proxy configuration

## 4.4 DHCP

OLT supports 3 services of DHCP: DHCP server, DHCP relay, DHCP Snooping.

### 4.4.1 DHCP Server

If the OLT enable DHCP server, the connecting devices will obtain an IP address.

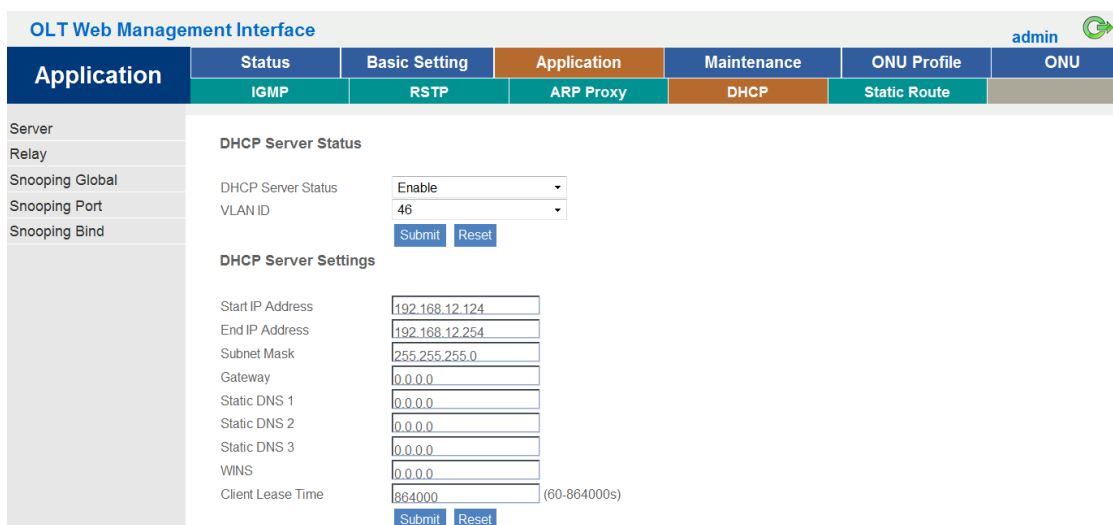


Figure4-9: DHCP Server

## 4.4.2 DHCP Relay

When the DHCP server and the clients are not in the same subnet, DHCP relay can help the clients get the IP address from the server.

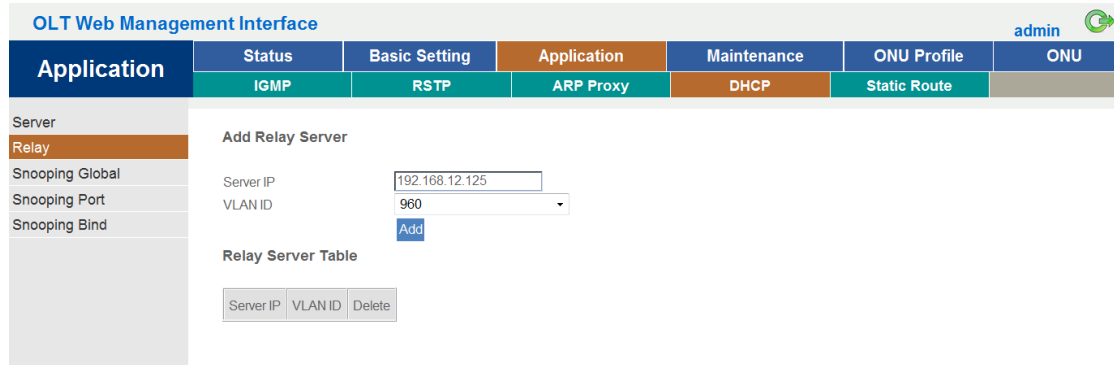


Figure4-10: DHCP Relay

## 4.4.3 DHCP Snooping Global

To prevent the DHCP message attacking and protect your network to get a useful IP address, it can deny the DHCP offers packets.

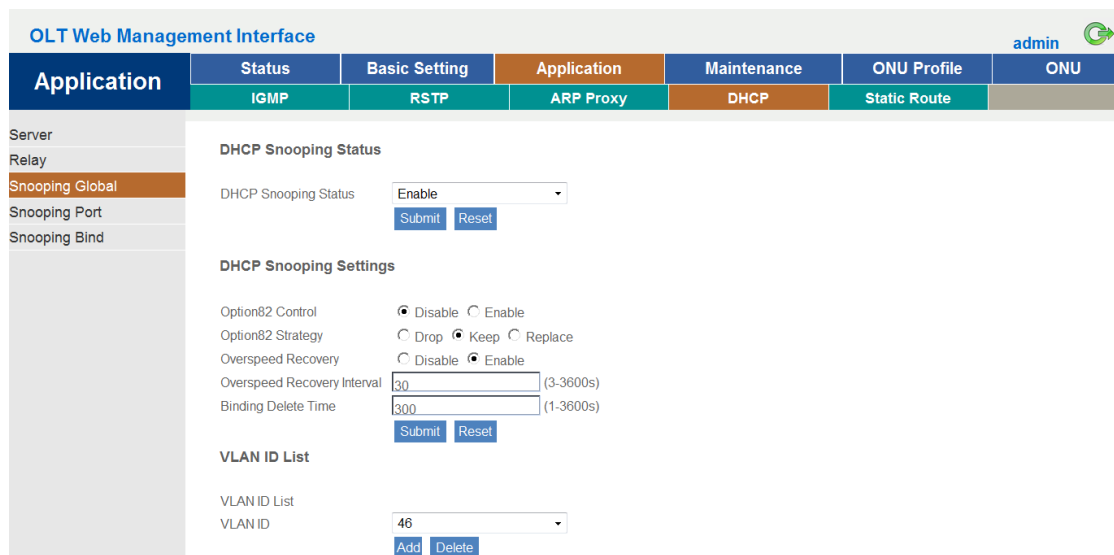


Figure4-11: DHCP Snooping Global

## 4.4.4 DHCP Snooping Port

The DHCP snooping ports are untrust by default.

Port ID	Type	Option82 Circuit ID	Option82 Remote ID	Limit Rate(0-4096)
GE1	Untrust	123	123	1024
GE2	Untrust			0
GE3	Untrust			0
GE4	Untrust			0
GE5	Untrust			0
GE6	Untrust			0
GE7	Untrust			0
GE8	Untrust			0
GE9	Untrust			0

Figure4-12: DHCP Snooping Port

## 4.4.5 DHCP Snooping Bind

Fill in the MAC address, choose the VLAN ID, port ID and the lease time.

Click "Add", it will create a DHCP snooping bind list.

**Add DHCP Snooping Bind**

MAC Address:  (HH:HH:HH:HH:HH:HH)

VLAN ID:

IP Address:

Port ID:

Lease:  (60-1000000s)


**Static DHCP Snooping Bind Table**

MAC Address	VLAN ID	IP Address	Port ID	Lease	Delete

Figure4-13: DHCP Snooping Bind

## 4.5 Static Route

OLT support L3 function by static route.

OLT Web Management Interface admin 

Application	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	IGMP	RSTP	ARP Proxy	DHCP	Static Route	

Static Route

**Add Static Route**

Destination IP:

Destination Mask:

Gateway:

**Static Route Table**

Destination IP	Destination Mask	Gateway	Delete
192.168.6.0	255.255.255.0	192.168.3.1	<input type="button" value="Delete"/>

Figure4-14: Static Route

## Chapter 5 Maintenance

This chapter is about the global management of OLT.

### 5.1 User Manage

The user can be divided into 2 levels: Normal and Admin. The different of them is the contents. The admin account number content will be more abundant. The default account number is **Admin** level.

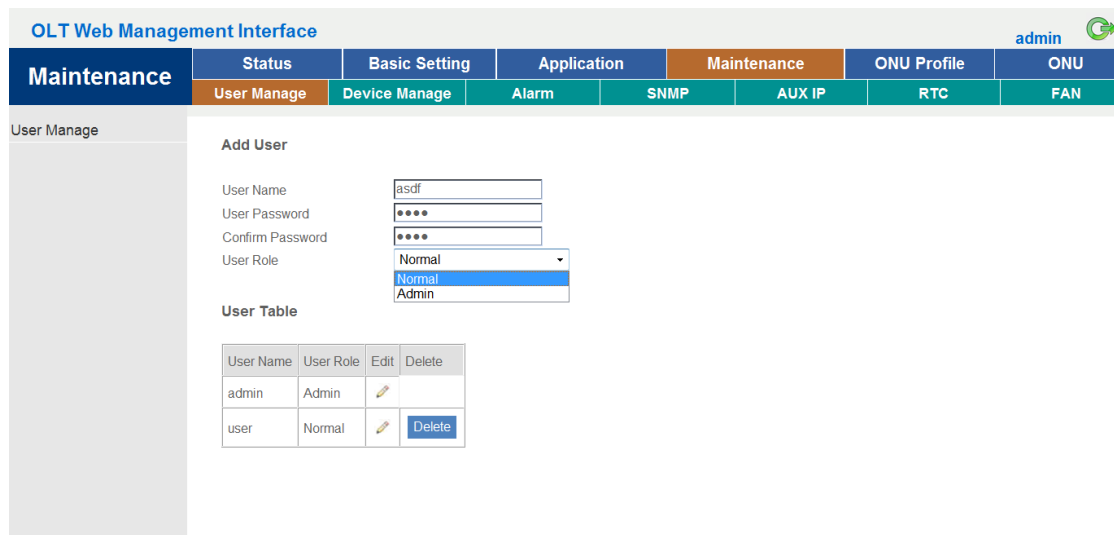


Figure5-1: User Manage

### 5.2 Device Manage

#### 5.2.1 Firmware Upgrade

Upgrade the OLT by WEB, do not need TFTP server. After finish upgrading, it will reboot automatically.

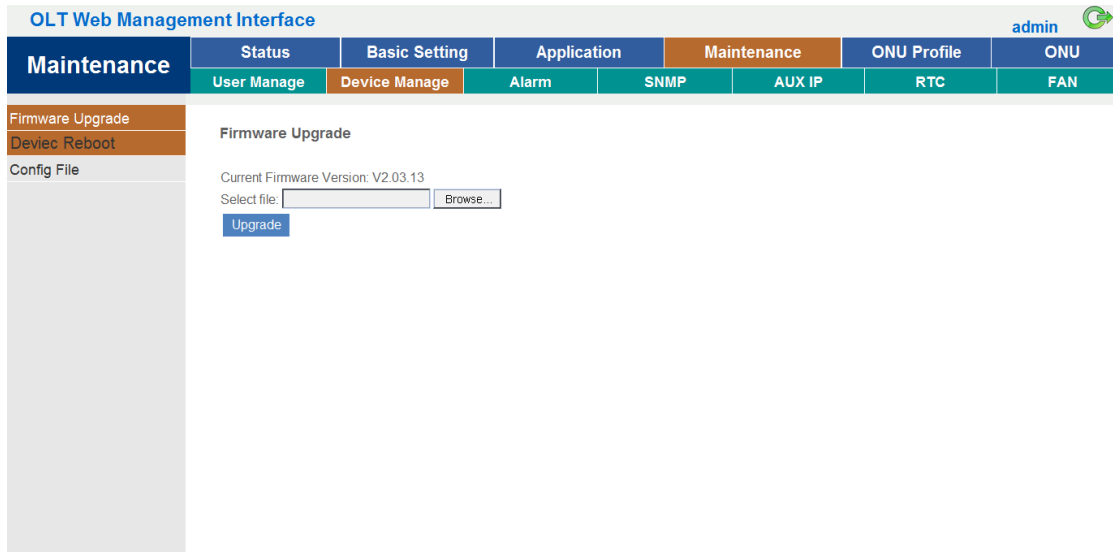


Figure5-2: Firmware Upgrade

## 5.2.2 Device Reboot

It will reboot the entire system.(Please save the configuration first)

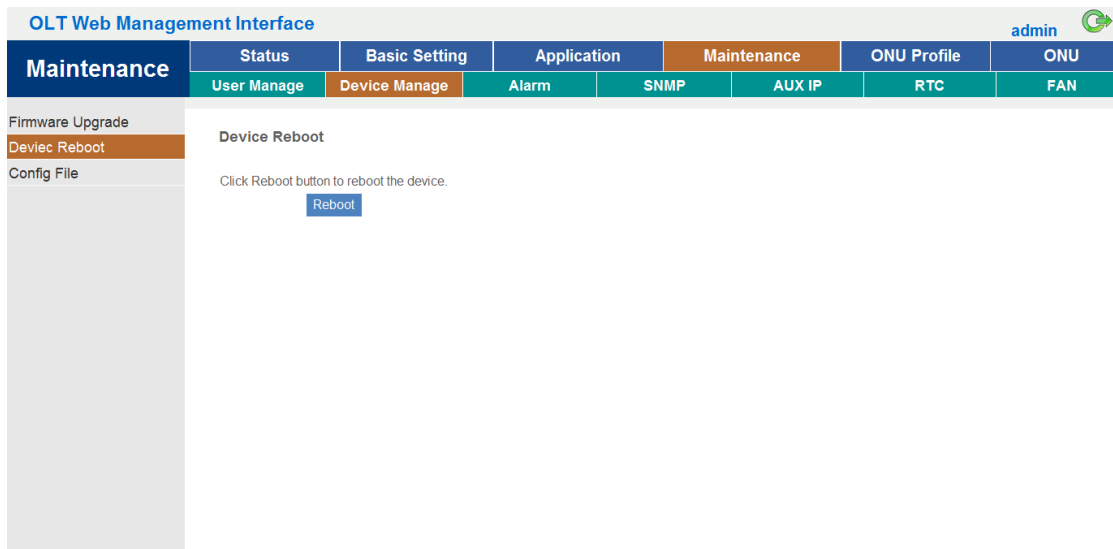


Figure5-3: Device Reboot

## 5.2.3 Config File

It includes backup configuration, restore configuration, factory default

and save configuration.

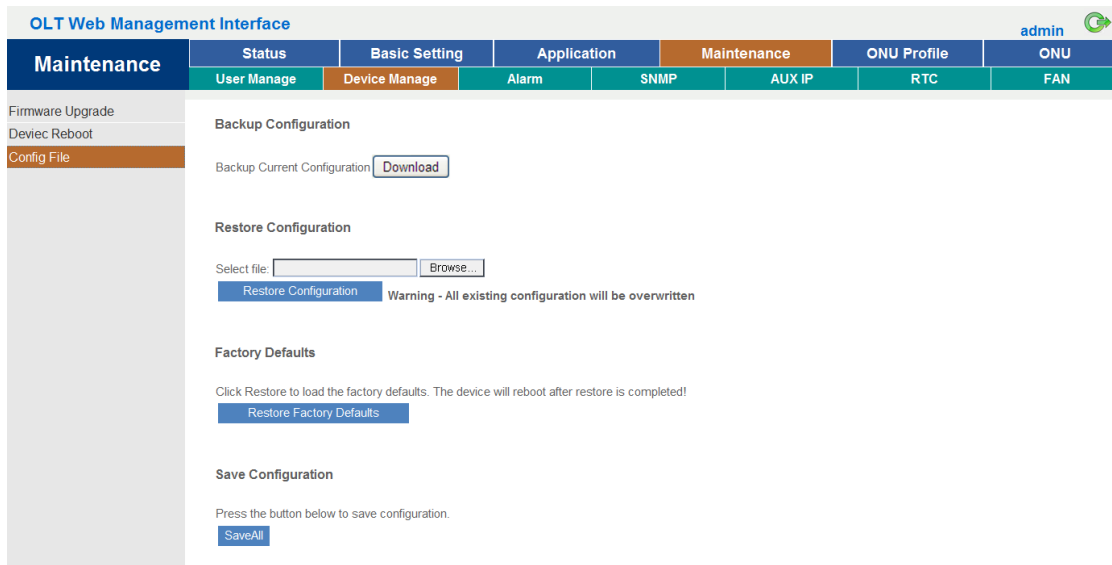


Figure5-4: Config File

## 5.3 Alarm

Show the alarm configuration list.

### 5.3.1 Alarm

It contains all the alarms of OLT. User can choose the different alarms to "Print", "Record", "Trap" and "Remote".

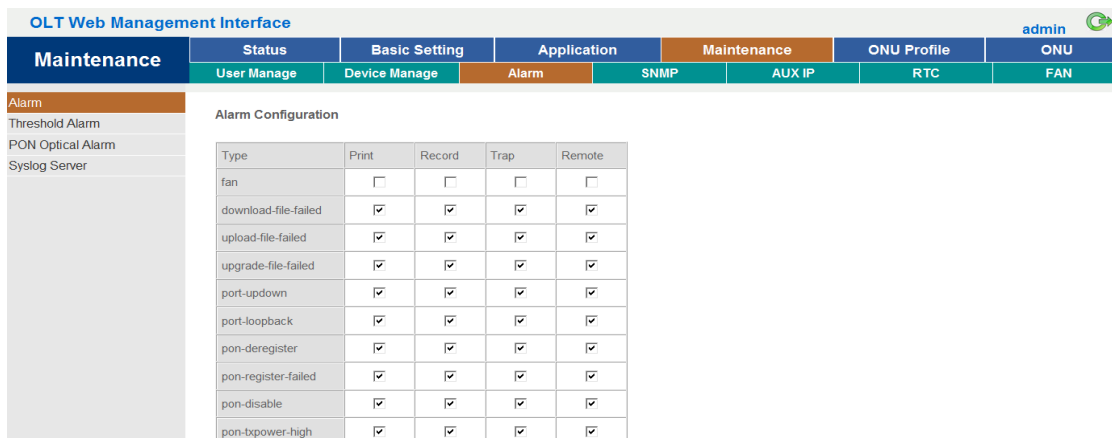


Figure5-5: Alarm configuration



## 5.3.2 Threshold Alarm

Configure the temperature threshold, cup-usage threshold and memory-usage threshold.

OLT Web Management Interface admin

**Maintenance** | Status | Basic Setting | Application | Maintenance | ONU Profile | ONU

User Manage | Device Manage | Alarm | SNMP | AUX IP | RTC | FAN

Alarm

**Threshold Alarm**

PON Optical Alarm

Syslog Server

Threshold Alarm Configuration

Type	Print	Record	Trap	Remote	Alarm Threshold	Clear Threshold
temp-high	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text" value="70"/>	<input type="text" value="70"/>
temp-low	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
cpu-usage-high	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
mem-usage-high	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

Figure5-6: Threshold Alarm

## 5.3.3 PON Optical Alarm

It is about the PON ports threshold alarm configuration.

OLT Web Management Interface admin

**Maintenance** | Status | Basic Setting | Application | Maintenance | ONU Profile | ONU

User Manage | Device Manage | Alarm | SNMP | AUX IP | RTC | FAN

Alarm

Threshold Alarm

**PON Optical Alarm**

Syslog Server

PON Optical Alarm Configuration

Port ID:

Type	State	Alarm Threshold	Clear Threshold
tx_power_high	<input checked="" type="checkbox"/>	<input type="text" value="20"/>	<input type="text" value="20"/>
tx_power_low	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
tx_bias_high	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
tx_bias_low	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
vcc_high	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
vcc_low	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
temp_high	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
temp_low	<input type="checkbox"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

Figure5-7: PON Threshold Alarm

## 5.3.4 Syslog Server

Configure the server of OLT remote system logs.

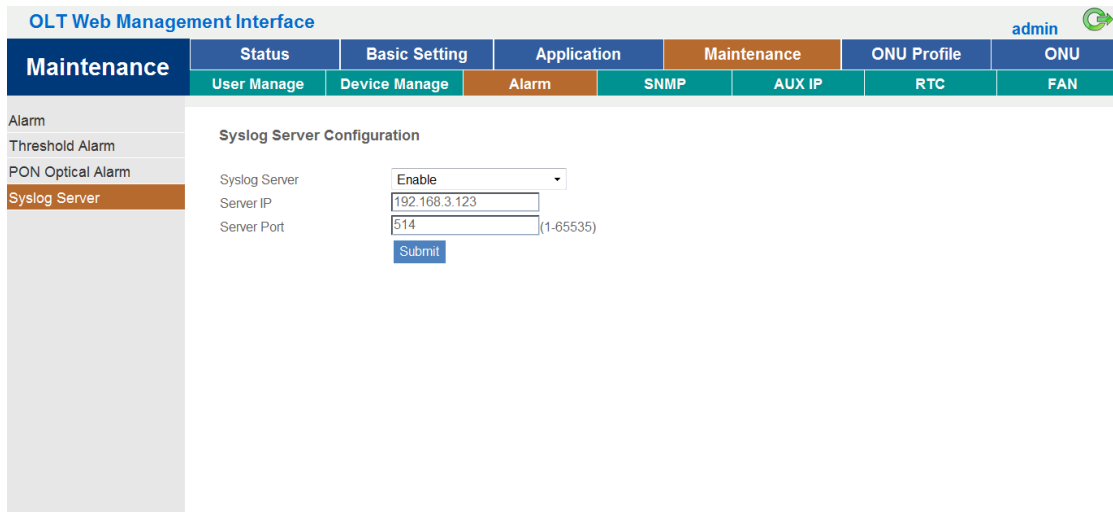


Figure5-8: Syslog Server Configuration

## 5.4 SNMP

### 5.4.1 SNMP V1/V2

SNMP (Simple Network Management Protocol) is an extensive network management protocol at the moment. The EPON OLT uses the SNMP V2.

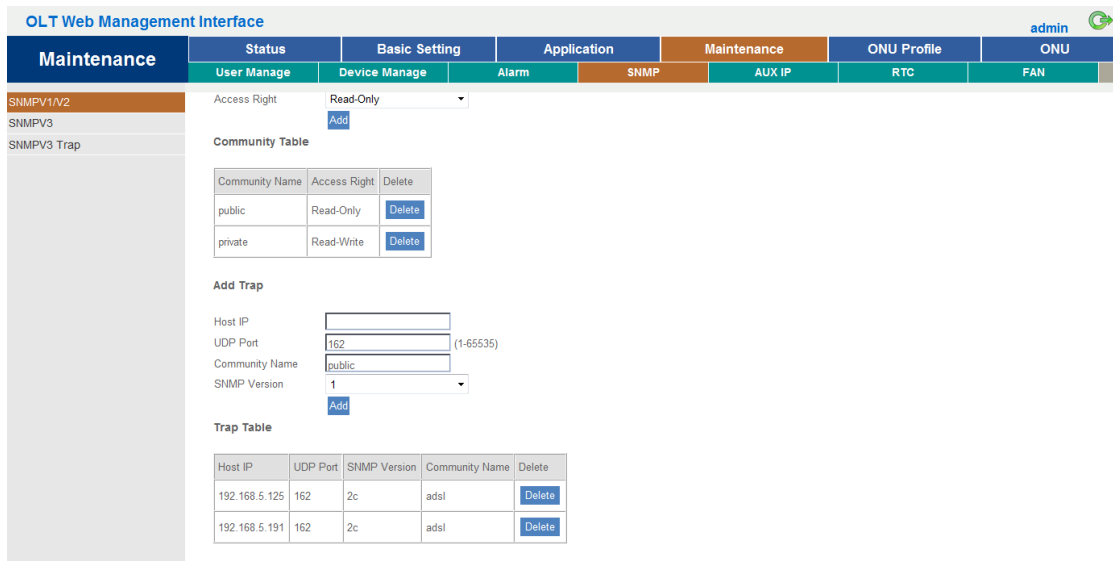


Figure5-9: SNMP V1/V2

## 5.4.2 SNMP V3

The SNMP V3 is the newer version.

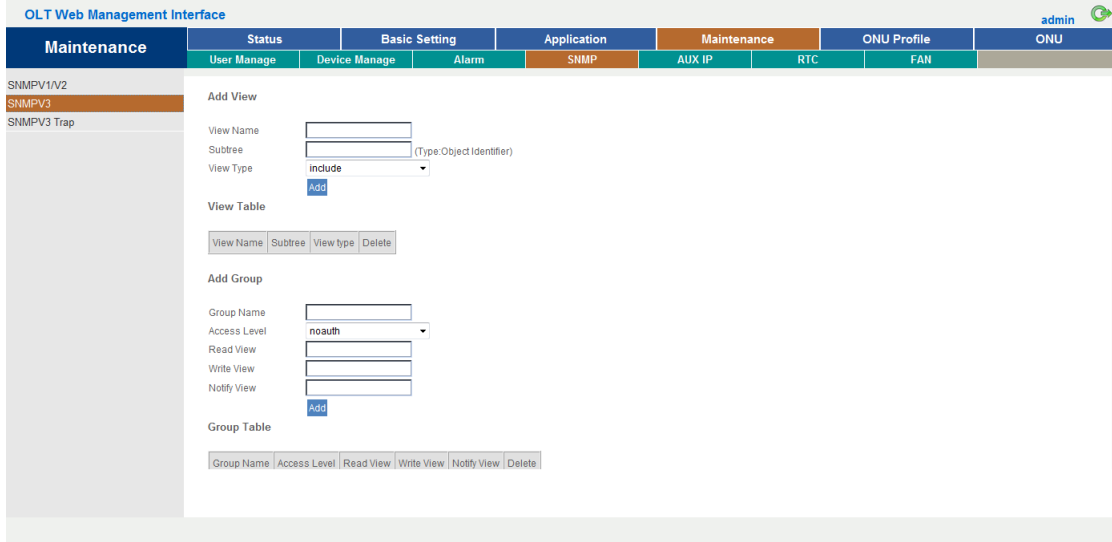


Figure5-10: SNMP V3

## 5.4.3 SMNP V3 Trap

Configure or remove the Trap messages of the target host IP address.

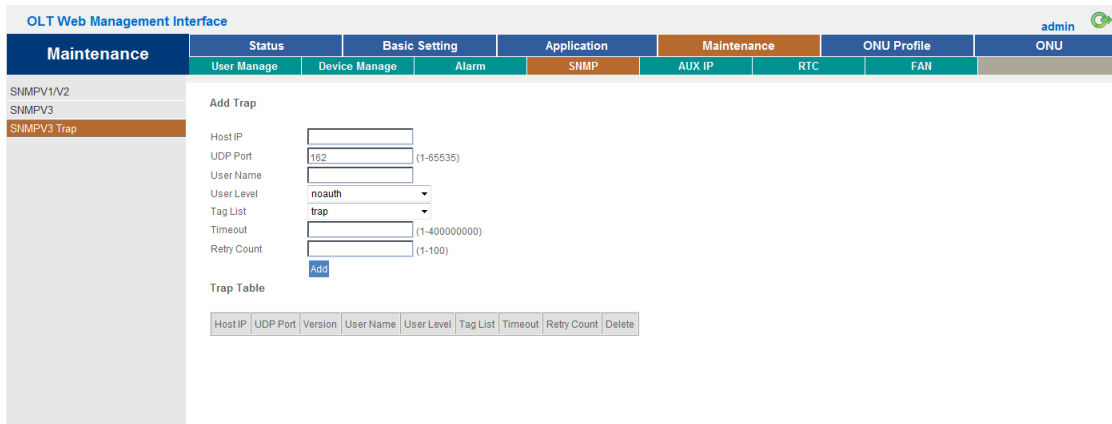


Figure5-11: SNMP V3 Trap

## 5.5 AUX IP

AUX port is out band management port. Its IP address is out band

management IP. The default IP address is 192.168.8.100. User can change it if need.

OLT Web Management Interface admin

**Maintenance** | Status | Basic Setting | Application | Maintenance | ONU Profile | ONU

User Manage | Device Manage | Alarm | SNMP | AUX IP | RTC | FAN

AUX IP

AUX IP Configuration

IP Address: 192.168.5.5

Subnet Mask: 255.255.255.0

Gateway: 0.0.0.0

Submit Reset

Figure5-12: AUX IP

## 5.6 RTC

The system time is adaptable. The default system time is the OLT release time.

OLT Web Management Interface admin

**Maintenance** | Status | Basic Setting | Application | Maintenance | ONU Profile | ONU

User Manage | Device Manage | Alarm | SNMP | AUX IP | RTC | FAN

RTC

Date Setting

Year: 2016 | Month: 7 | Day: 28 | Hour: 15 | Minute: 21 | Second: 17

Submit Reset

Figure5-13: RTC Configuration

## 5.7 FAN

The fans can be controlled to turn on/off, or turn on automatically.

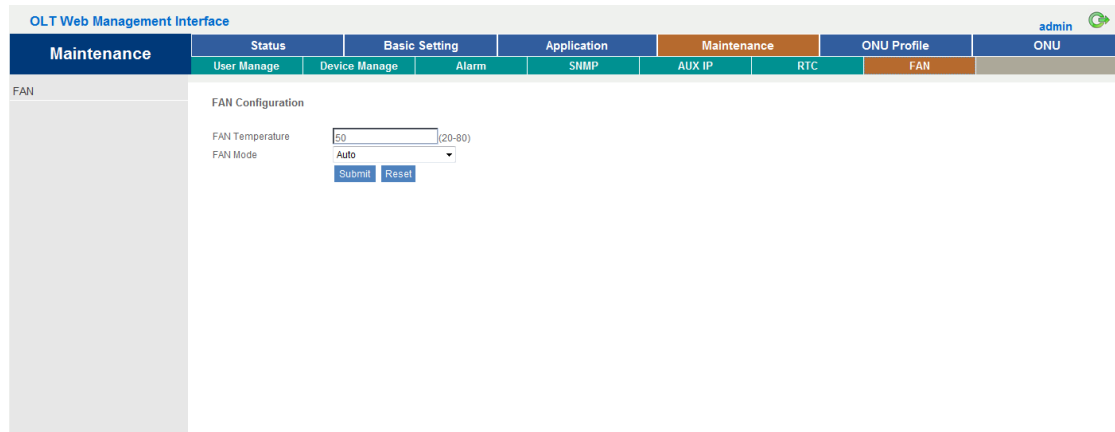


Figure5-14: FAN Configuration

## Chapter 6 ONU Profile

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

### 6.1 DBA Profile

The default system will have an id 0 DBA template, this template parameters cannot be modified. All ONU will be bound the template.

When the user bind by hands, the new template will take effect.

The screenshot shows the 'OLT Web Management Interface' with the 'ONU Profile' menu selected. The 'DBA Profile' sub-menu is active. The 'Add/Commit' step is shown, with the 'Profile ID' field set to '1'. The 'DBA Profile Information' section includes a dropdown for 'Profile ID' and 'Delete' and 'Commit' buttons. The 'DBA Profile table' section has 'Key' and 'Value' columns.

Figure6-1: Add a DBA Profile

The screenshot shows the 'OLT Web Management Interface' with the 'ONU Profile' menu selected. The 'DBA Profile' sub-menu is active. The 'DBA Profile Configure' step is shown, with the 'Profile ID' dropdown set to '1'. The 'Upstream Configuration' section includes fields for 'Upstream FIR' (10000), 'Upstream CIR' (10000), 'Upstream PIR' (10000), and 'Upstream Weight' (1). The 'Downstream Configuration' section includes fields for 'Downstream PIR' (10000) and 'Downstream Weight' (1).

Figure6-2: DBA Profile Configure

## 6.2 Server Profile

Create a server profile, it can be shown in the table when user select the profile ID.

Key	Value
Multicast Logical Link Identifier	3
Lan Count	4
lan:1	Vlan mode translation; Default 111; tpid 10; Translation : 111 to 222;
lan:2	
lan:3	
lan:4	

Figure6-3: Add Server Profile

The server profile configuration contain ONU PON configuration, port configuration, multicast configuration...

Figure6-4: Server Profile Configuration

## 6.3 VoIP Profile

As the above, create a profile first, and it will be shown in the table when user select the profile ID.

Key	Value
Profile_id :	12
Pots_Count :	2
SIP DigtMap Config	Num Of SIP DigitalMap Block : 7 SIP DigitalMap Block No : 222 SIP DigitalMap Block : 1
SIP_POTS	sip_Pots : 1 User Account : 88880001 User Name : 88880001 User PassWord : 88880001
SIP_POTS	sip_Pots : 2 User Account : 66660001 User Name : 66660001 User PassWord : 66660001

Figure6-5: Add VoIP Profile

Figure6-6: Server Profile Configuration

## 6.4 Alarm Profile

As the above, create a profile first, and it will be shown in the table when user select the profile ID.



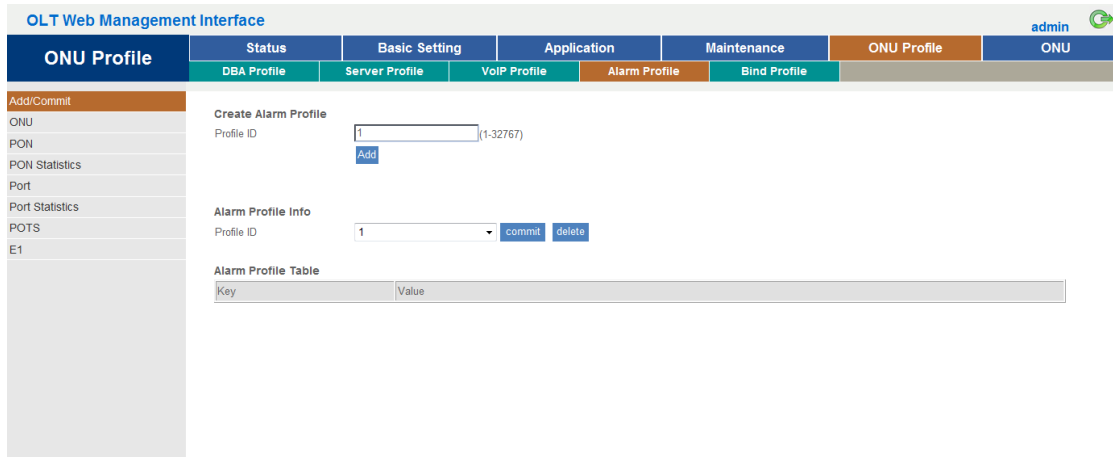


Figure6-7: Add Alarm Profile

The alarm profile contains ONU global threshold alarm, PON alarm, port alarm, pots alarm...

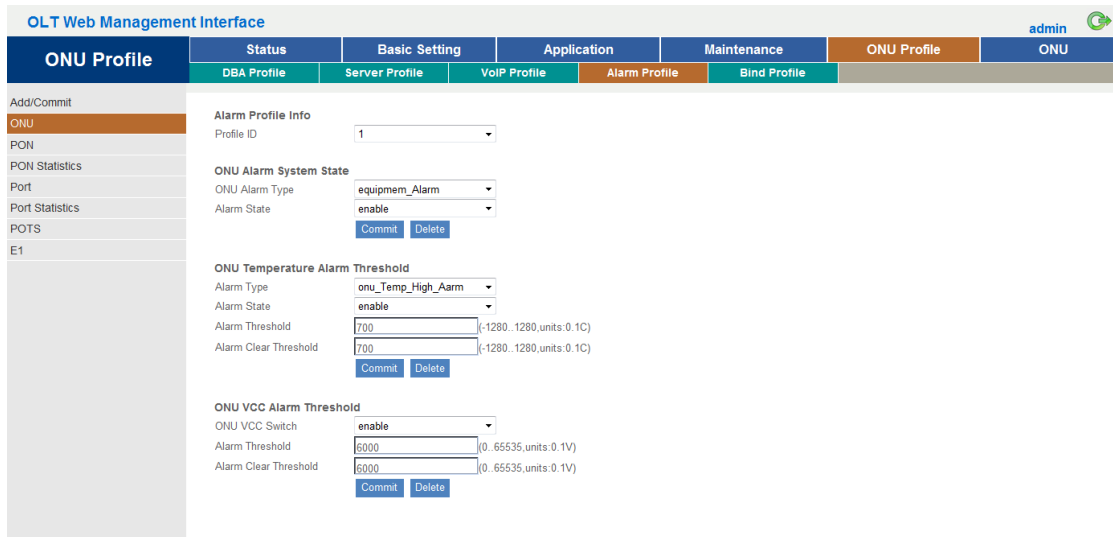


Figure6-8: Alarm Profile Configuration

## 6.5 Bind Profile

The DBA profile, server profile, VoIP profile, alarm profile can be bound to the ONU.

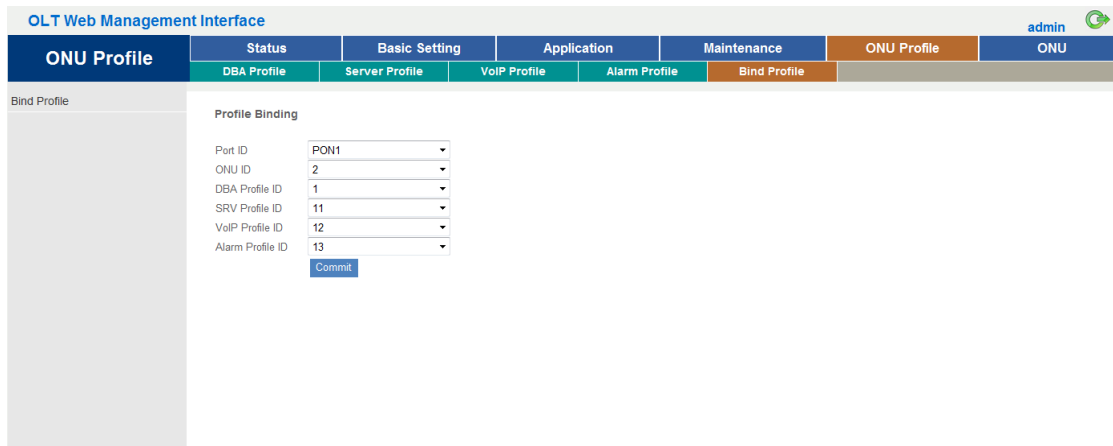


Figure6-9: Bind Profile Configuration

## Chapter 7 ONU

This chapter is about configuring the ONU by OLT.

### 7.1 Authentication

#### 7.1.1 ONU authentication

There are 4 modes of the ONU authentication. The default mode is disable.

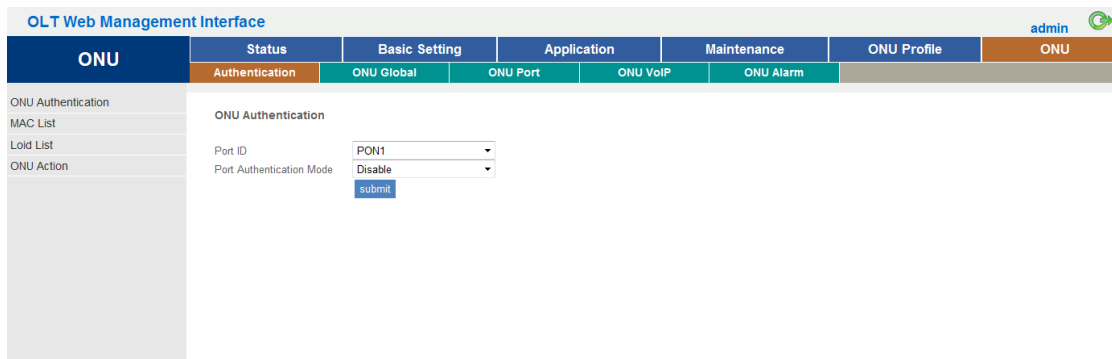


Figure7-1 ONU Authentication

#### 7.1.2 MAC List

When the ONU authentication mode is MAC mode, only the white list ONU can register. The black MAC list ONU cannot register whatever the mode.

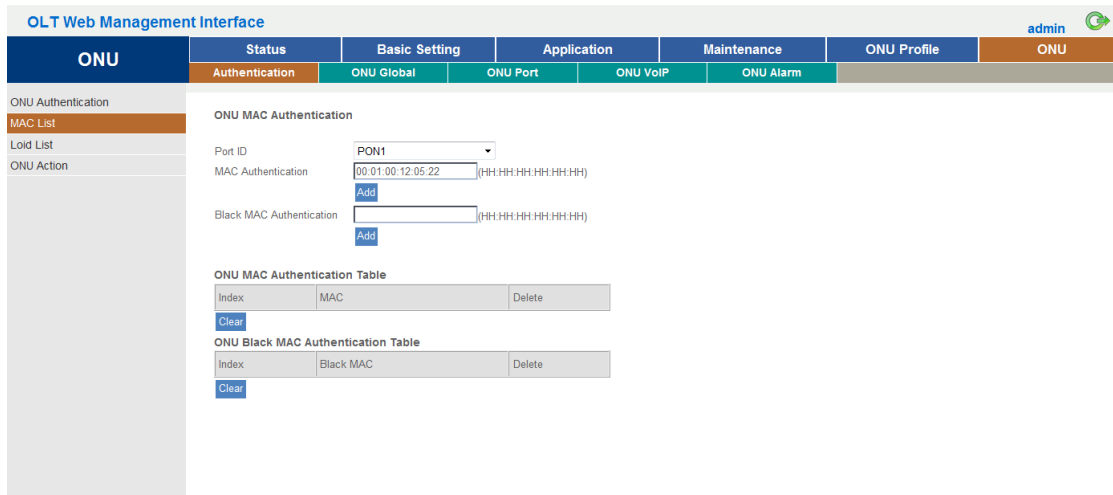


Figure7-2 MAC List

## 7.1.3 Loid List

When the authentication mode is Loid, only the Loid list ONU can register.

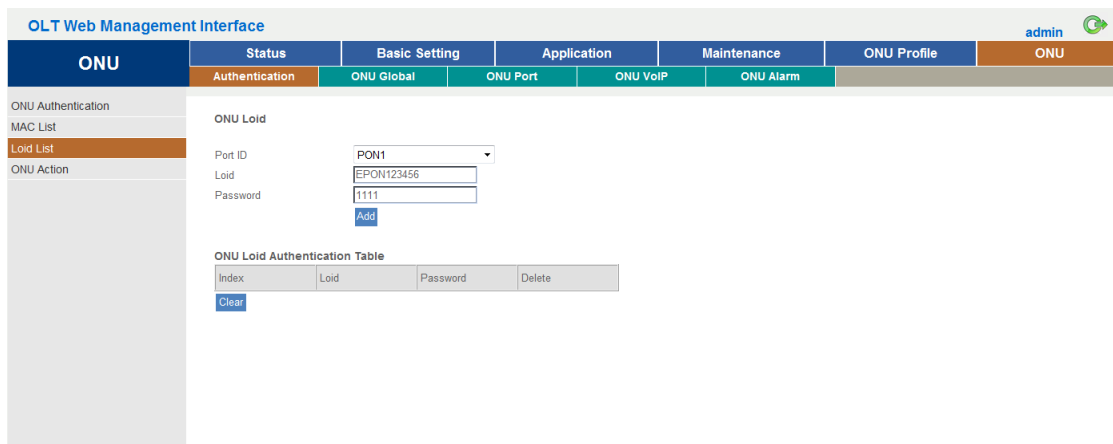


Figure7-3 Loid List

## 7.1.4 ONU Action

Manage the ONU unauth, deregister, reset. User can operate one of the ONU, or a batch of ONU in the same PON port.

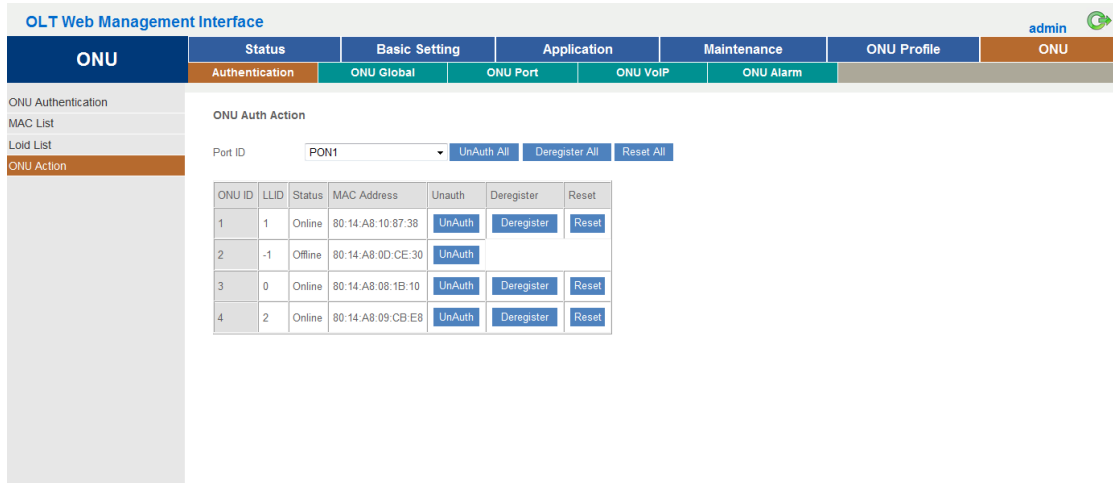


Figure7-4 ONU Action

## 7.2 ONU Global

In this section, all the global configuration of ONU can be operated.

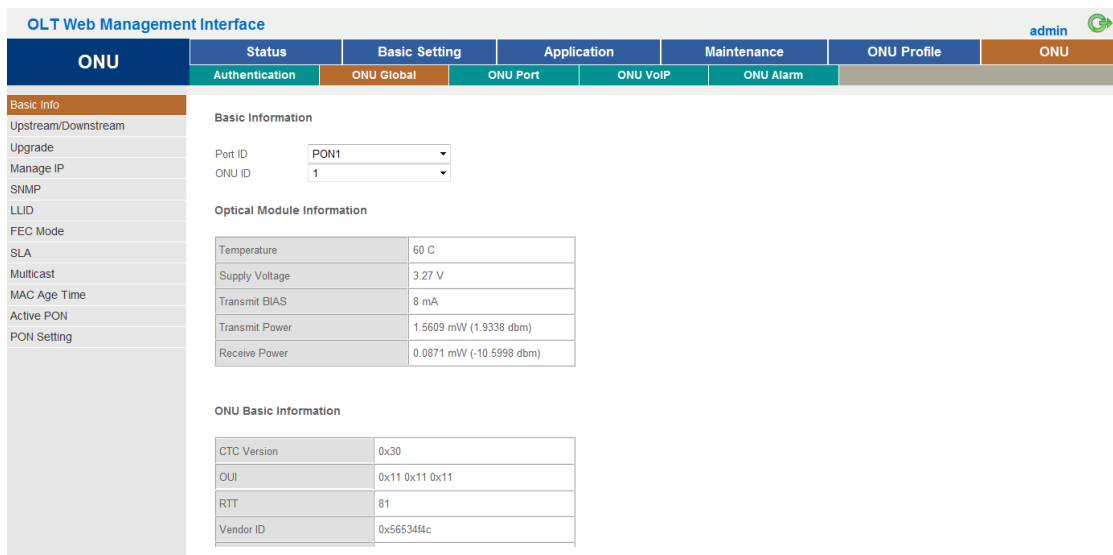


Figure7-5 ONU Global Configuration

## 7.3 ONU Port

All the port services can be configured. It contains port VLAN, multicast, monitor and so on.

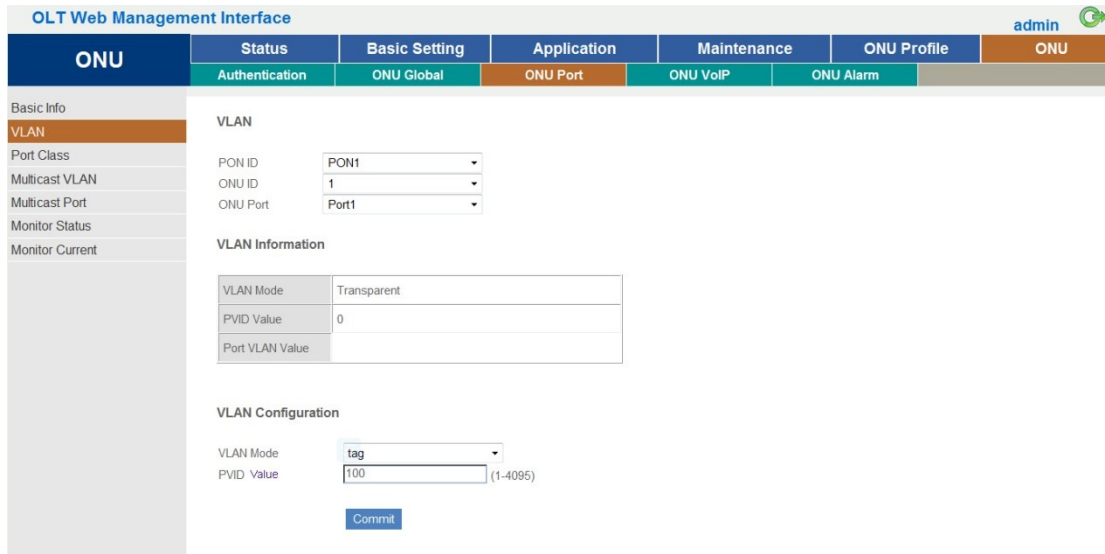


Figure7-6 ONU Port Configuration

## 7.4 ONU VoIP

Configure the HGU ONU VoIP information, it contains H248 protocol and sip protocol configuration.

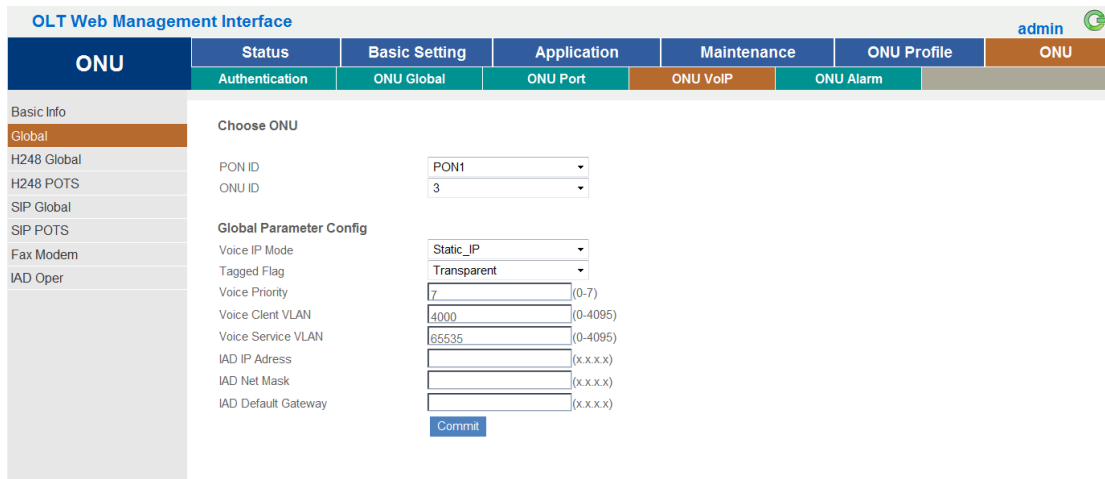


Figure7-7 ONU VoIP Configuration

## 7.5 ONU Alarm

In this page, user can view the chosen ONU alarm information, the alarm

info contains ONU global alarm info, PON alarm info, port alarm info, POTS alarm info, E1 alarm info.

The screenshot displays the OLT Web Management Interface. At the top, there is a navigation bar with the title "OLT Web Management Interface" and a user profile "admin" with a refresh icon. Below this is a main menu with tabs for "ONU", "Status", "Basic Setting", "Application", "Maintenance", "ONU Profile", and "ONU". The "ONU" tab is selected, and a sub-menu is visible with options: "Authentication", "ONU Global", "ONU Port", "ONU VoIP", "ONU Alarm", and "ONU". The "ONU Alarm" option is highlighted.

The main content area shows the "ONU Alarm Information" configuration page. It includes a left sidebar with a list of alarm types: "ONU Alarm Info", "PON Alarm Info", "Port Alarm Info", "POTS Alarm Info", and "E1 Alarm Info". The "ONU Alarm Info" option is selected.

The configuration fields are as follows:

- ONU Alarm Information:**
  - Port ID: PON1 (dropdown menu)
  - ONU ID: 1 (dropdown menu)
- ONU Alarm:**
  - Alarm Type: Equipment Alarm (dropdown menu)
- Alarm Name:** equipment\_alarm
- Alarm Configuration:** disable

Figure7-8 ONU Alarm Information

## Chapter 8 Configuration Cases

### 8.1 Internet With VLAN 100

OLT configuration

Step 1: Create a new VLAN.

**OLT Web Management Interface** admin

**Basic Setting** | Status | Basic Setting | Application | Maintenance | ONU Profile | ONU

VLAN | Port | QOS | MAC | Security

New VLAN

Port VLAN

QinQ

VLAN IP

**New VLAN**

VLAN ID: 100 (1-4094)

Description: vlan100

Add

**VLAN Table**

VLAN ID	Description	Edit	Delete
1	default		
960	vlan960		Delete
1000	vlan1000		Delete
1001	vlan1001		Delete
1010	vlan1010		Delete

Step 2: Add the VLAN to GE port and PON port.

**OLT Web Management Interface** admin

**Basic Setting** | Status | Basic Setting | Application | Maintenance | ONU Profile | ONU

VLAN | Port | QOS | MAC | Security

New VLAN

**Port VLAN**

QinQ

VLAN IP

**Port VLAN Configuration**

VLAN ID: 100

GE1:  None  Tag  Untag

GE2:  None  Tag  Untag

GE3:  None  Tag  Untag

GE4:  None  Tag  Untag

GE5:  None  Tag  Untag

GE6:  None  Tag  Untag

GE7:  None  Tag  Untag

GE8:  None  Tag  Untag

GE9:  None  Tag  Untag

GE10:  None  Tag  Untag

GE11:  None  Tag  Untag

GE12:  None  Tag  Untag

GE13:  None  Tag  Untag

GE14:  None  Tag  Untag

GE15:  None  Tag  Untag

GE16:  None  Tag  Untag

PON1:  None  Tag  Untag



Step 3: Configure the default VLAN ID (PVID) in untag port.

OLT Web Management Interface admin

Basic Setting	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	VLAN	Port	QoS	MAC	Security	

GE Setup  
PON Setup  
Channel Group  
Mirroring

GE Configuration

Port ID: **GE9**

Description:

Admin Status:  Enable  Disable

Flow Control:  On  Off

Isolate:  Enable  Disable

Broadcast Storm Protection:  (0/64-1000000pps)

Multicast Storm Protection:  (0/64-1000000pps)

Unicast Storm Protection:  (0/64-1000000pps)

Ingress Rate:  (0/32-1000000kpps)

Egress Rate:  (0/32-1000000kpps)

MAC Limit:  (0-16384)

Default VLAN ID: **100**

GE Information

Port ID	Description	Admin Status	Flow Control	Isolate	Broadcast Storm	Multicast Storm	Unicast Storm	Ingress Rate	Egress Rate	MAC Limit	PVID
GE1		enable	off	enable	512	0	512	0	0	0	100
GE2		enable	off	enable	512	0	512	0	0	0	1
GE3		enable	off	enable	512	0	512	0	0	0	1
GE4		enable	off	enable	512	0	512	0	0	0	1
GE5		enable	off	enable	512	0	512	0	0	0	1

ONU configuration

Step 4: Choose the VLAN mode and set the PVID value.

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	

Basic Info  
VLAN  
Port Class  
Multicast VLAN  
Multicast Port  
Monitor Status  
Monitor Current

VLAN

PON ID:

ONU ID:

ONU Port:

VLAN Information

VLAN Mode:

PVID Value:

Port VLAN Value:

VLAN Configuration

VLAN Mode:

PVID Value:  (1-4095)

## 8.2 IPTV With VLAN 200

OLT configuration

Step 1: Create a new VLAN.

**OLT Web Management Interface** admin

**Basic Setting** | Status | **Basic Setting** | Application | Maintenance | ONU Profile | ONU

**VLAN** | Port | QOS | MAC | Security

New VLAN

New VLAN

VLAN ID: 200 (1-4094)

Description: Man200

Add

VLAN Table

VLAN ID	Description	Edit	Delete
1	default		
100	vlan100		Delete
960	vlan960		Delete
1000	vlan1000		Delete
1001	vlan1001		Delete
1010	vlan1010		Delete

Step 2: Add the VLAN to GE port and PON port.

**OLT Web Management Interface** admin

**Basic Setting** | Status | **Basic Setting** | Application | Maintenance | ONU Profile | ONU

**VLAN** | Port | QOS | MAC | Security

New VLAN

**Port VLAN**

QinQ

VLAN IP

Port VLAN Configuration

VLAN ID: 200

GE1:  None  Tag  Untag

GE2:  None  Tag  Untag

GE3:  None  Tag  Untag

GE4:  None  Tag  Untag

GE5:  None  Tag  Untag

GE6:  None  Tag  Untag

GE7:  None  Tag  Untag

GE8:  None  Tag  Untag

**GE9:  None  Tag  Untag**

GE10:  None  Tag  Untag

GE11:  None  Tag  Untag

GE12:  None  Tag  Untag

GE13:  None  Tag  Untag

GE14:  None  Tag  Untag

GE15:  None  Tag  Untag

GE16:  None  Tag  Untag

**PON1:  None  Tag  Untag**

PON2:  None  Tag  Untag

PON3:  None  Tag  Untag

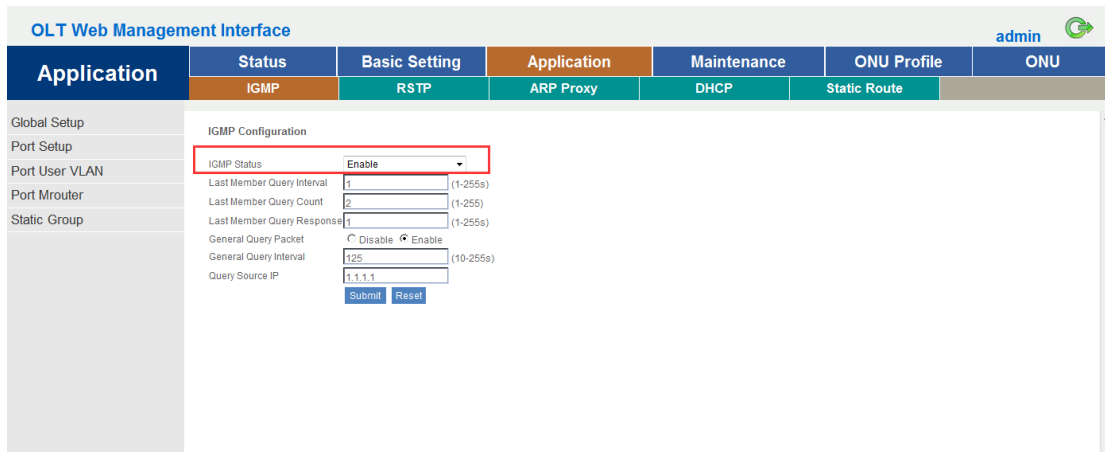
PON4:  None  Tag  Untag

PON5:  None  Tag  Untag

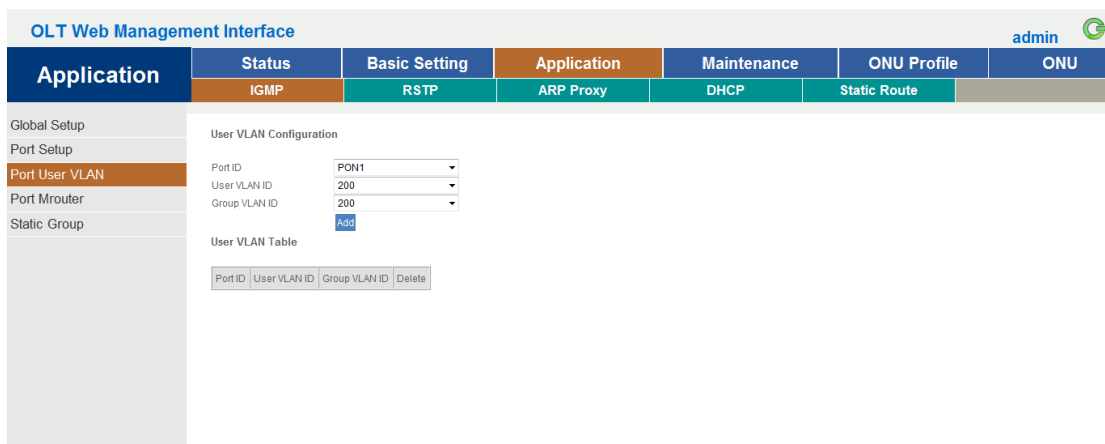
PON6:  None  Tag  Untag

PON7:  None  Tag  Untag

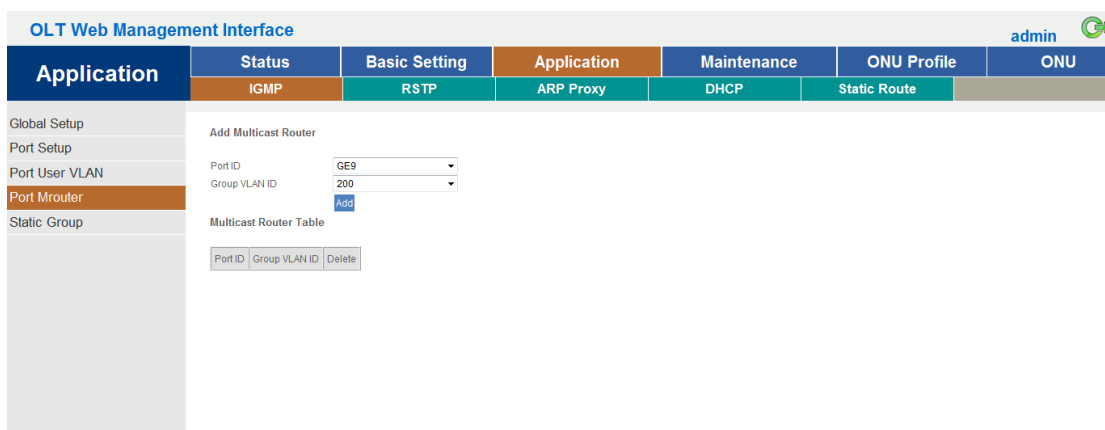
Step 3: Enable the IGMP status.



Step 4: Add the IGMP user VLAN and group VLAN



Step 5: Add the M-router in GE port



ONU configuration

Step 6: Choose the VLAN mode and set the PVID value.

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	

Basic Info

VLAN

Port Class

Multicast VLAN

Multicast Port

Monitor Status

Monitor Current

**VLAN**

PON ID:

ONU ID:

ONU Port:

**VLAN Information**

VLAN Mode	
PVID Value	0
Port VLAN Value	

**VLAN Configuration**

VLAN Mode:

PVID Value:  (1-4095)

## Step 7: Configuration multicast VLAN

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	ONU Private

Basic Info

VLAN

Port Class

Multicast VLAN

Multicast Port

Monitor Status

Monitor Current

**Multicast VLAN**

PON ID:

ONU ID:

ONU Port:

**Multicast VLAN Configuration**

Multicast VLAN:  (1-4095)

Multicast VLAN

## Step 8: Configure the IGMP VLAN tagstrip mode

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	ONU Private

- Basic Info
- VLAN
- Port Class
- Multicast VLAN
- Multicast Port
- Monitor Status
- Monitor Current

**Multicast Port**

PON ID:

ONU ID:

ONU Port:

**Multicast Max Group**

Multicast Max Group:  (0-4096)

**Multicast Port Information**

Tagstrip Mode	no strip
Tagstrip Value	

**Multicast Port Configuration**

Tagstrip Mode:

## 8.3 VoIP With VLAN 300

### OLT Configuration

#### Step 1: Create a new VLAN

OLT Web Management Interface admin

Basic Setting	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	VLAN	Port	QOS	MAC	Security	

- New VLAN
- Port VLAN
- QinQ
- VLAN IP

**New VLAN**

VLAN ID:  (1-4094)

Description:

**VLAN Table**

VLAN ID	Description	Edit	Delete
1	default		
100	vlan100		<input type="button" value="Delete"/>
200	vlan200		<input type="button" value="Delete"/>
960	vlan960		<input type="button" value="Delete"/>
1000	vlan1000		<input type="button" value="Delete"/>
1001	vlan1001		<input type="button" value="Delete"/>
1010	vlan1010		<input type="button" value="Delete"/>

#### Step 2: Add the VLAN to GE port and PON port.

OLT Web Management Interface admin

Basic Setting	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	VLAN	Port	QOS	MAC	Security	

New VLAN

**Port VLAN**

QinQ

VLAN IP

Port VLAN Configuration

VLAN ID:

GE1	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE2	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE3	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE4	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE5	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE6	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE7	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE8	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE9	<input type="radio"/> None <input checked="" type="radio"/> Tag <input type="radio"/> Untag
GE10	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE11	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE12	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE13	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE14	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE15	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
GE16	<input checked="" type="radio"/> None <input type="radio"/> Tag <input type="radio"/> Untag
PON1	<input type="radio"/> None <input checked="" type="radio"/> Tag <input type="radio"/> Untag

## ONU Configuration

### Step 3: Configure the VoIP global parameter

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	ONU Private

Basic Info

**Global**

H248 Global

H248 POTS

SIP Global

SIP POTS

Fax Modem

IAD Oper

Choose ONU

PON ID:

ONU ID:

Global Parameter Config

Voice IP Mode:

Tagged Flag:

Voice Priority:  (0-7)

Voice Client VLAN:  (0-4095)

Voice Service VLAN:  (0-4095)

IAD IP Address:  (x.x.x.x)

IAD Net Mask:  (x.x.x.x)

IAD Default Gateway:  (x.x.x.x)

### Step 4: Setup the sip configuration

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	ONU Private

Basic Info

Global

H248 Global

H248 POTS

**SIP Global**

SIP POTS

Fax Modem

IAD Oper

ONU ID: 4

**SIP Parameter Config**

Heartbeat Switch:

Heartbeat Cycle:  (1-85535)

Heartbeat Count:  (1-85535)

SIP Register Interval:  (0-85535)

Manage Port:  (1-85535)

Out Bound Service IP:

Out Bound Service Port:  (0-85535)

SIP Proxy Service IP:

SIP Proxy Service Port:  (1-85535)

Backup SIP Proxy Service Ip:

Backup SIP Proxy Service Port:  (1-85535)

SIP Register Service IP:

SIP Register Service Port:  (1-85535)

Backup SIP Register Service IP:

Backup SIP Register Service Port:  (0-85535)

## Step 5: Fill in the user account and password

OLT Web Management Interface admin

ONU	Status	Basic Setting	Application	Maintenance	ONU Profile	ONU
	Authentication	ONU Global	ONU Port	ONU VoIP	ONU Alarm	ONU Private

Basic Info

Global

H248 Global

H248 POTS

SIP Global

**SIP POTS**

Fax Modem

IAD Oper

Choose ONU

PON ID:

ONU ID:

ONU VoIP Port:

**SIP User Parameter Config**

User Account:

User name:

User Password: