EPON 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. 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 OLT interfaces

Products		2 ports EPON OLT	4 ports EPON OLT	8 ports EPON OLT
Chassis	Rack	1U 19 inch standard box	1U 19 inch standard box	1U 19 inch standard box
1000M Uplink Port	QTY	4	8	16
	Copper	2*10/100/1000M auto-negotiation	4*10/100/1000M auto-negotiation	8*10/100/1000M auto-negotiation
	SFP (Independent)	2*SFP	4*SFP	4*SFP and 4*SFP+ (SFP+ is compatible with 10GE)
EPON Port	QTY	2	4	8
	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		

1.1.2 PC System Requirement

Table 1-2 PC System requirement

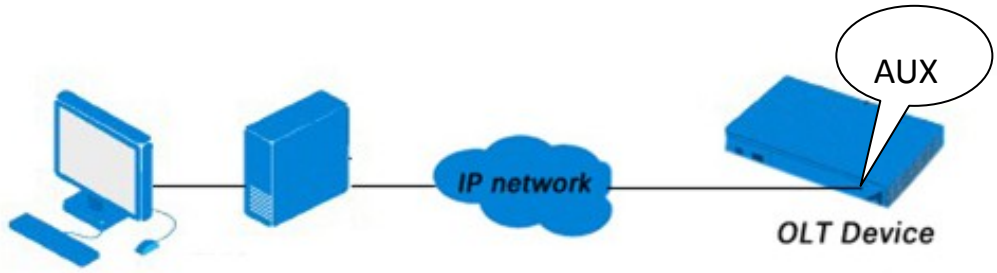
CPU	Memory	DISK	Video Card	Operating

				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 192.168.8.100.

Please set your PC IP to192.168.8.XXX (e.g.192.168.8.123).



Chapter 2 OLT Application Status

2.1 Login

Follow the steps to login:

1. Conform “1.2 Connection” to connect;

2. The device default IP address is 192.168.8.100;

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.

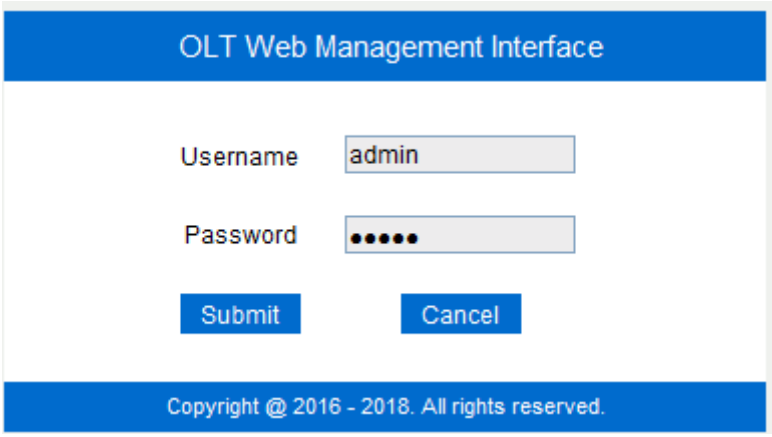


Figure 2-1: Login

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. Click **Status→Device** to get the 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.

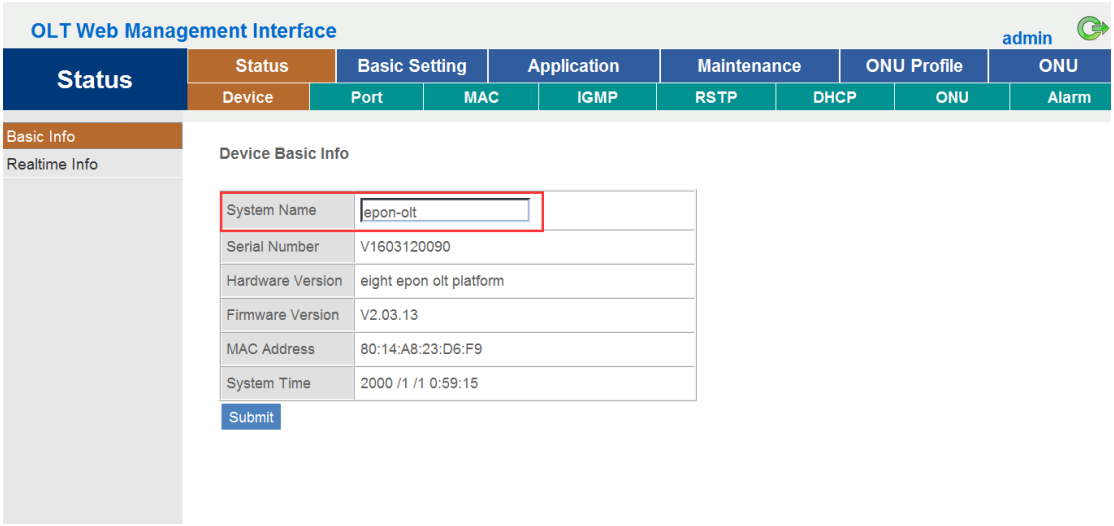


Figure 2-2: Device Information

2.2.1.2 Realtime Info

This part shows the real-time information, including the CPU load, Memory load, Temperature and Running time.

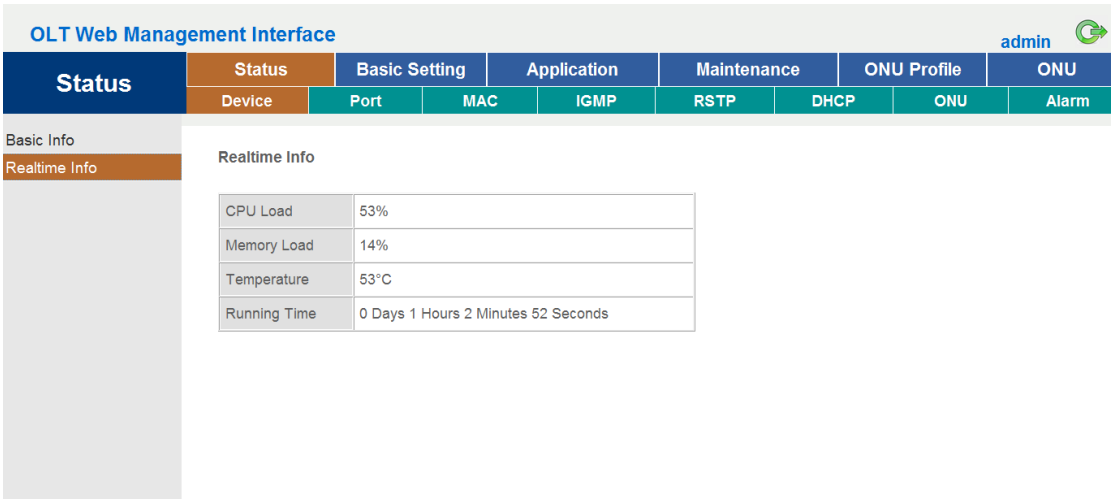


Figure 2-3: Device Real-time Information

2.2.2 Port

This part is about the OLT GE port and PON port information.

Click **Status→Port→GE Info** to show the GE port link status, speed and the packets statistics.

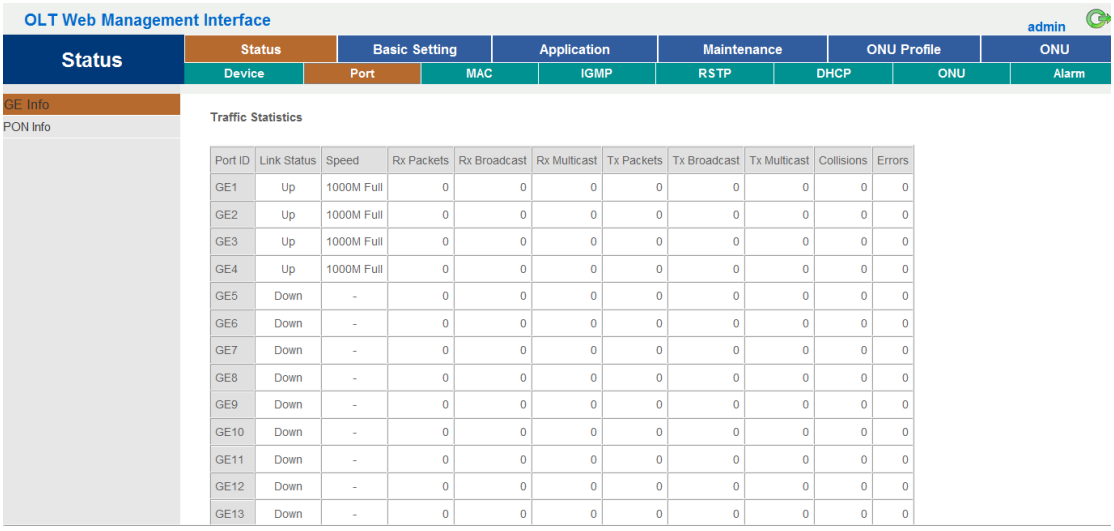


Figure 2-4: GE Port Information

The **PON Info** will show the optical parameters exactly.

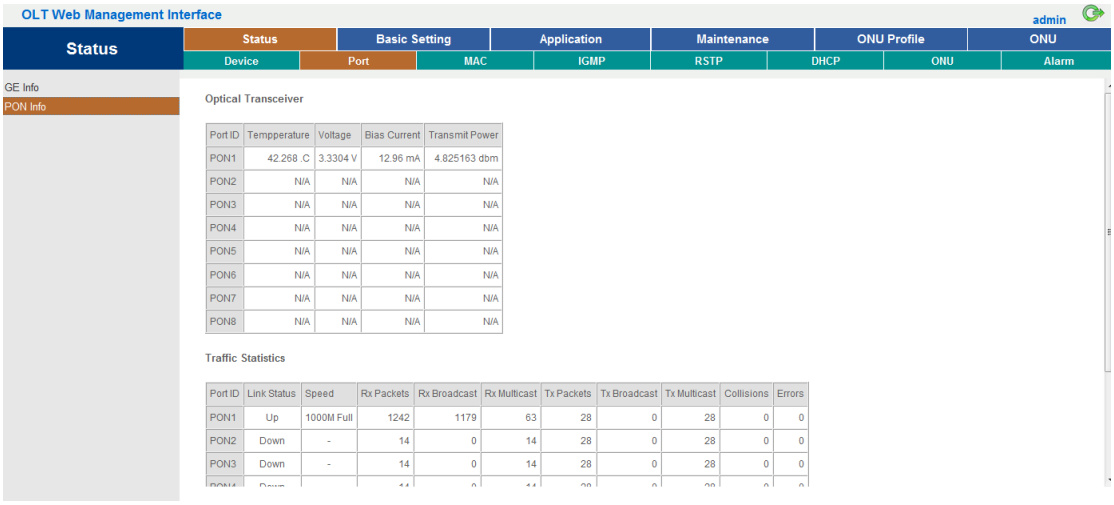


Figure 2-5: PON Port Information

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.

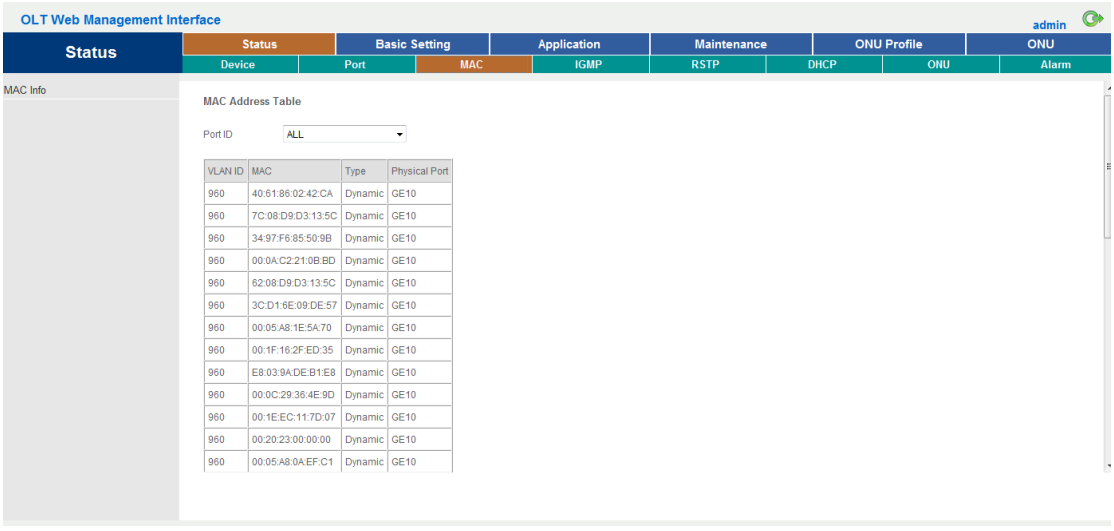


Figure 2-6: MAC Table

2.2.4 IGMP

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

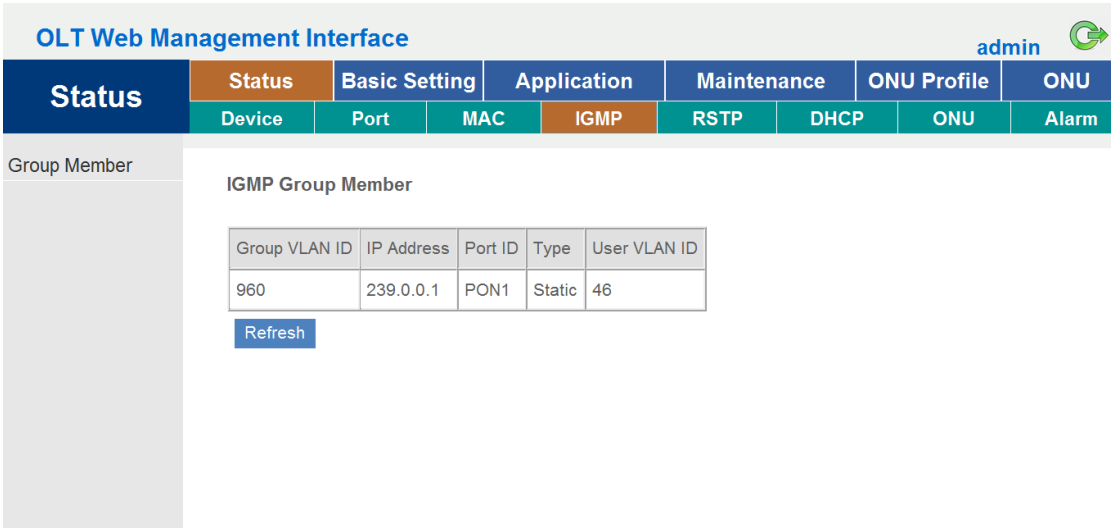


Figure 2-7: IGMP Group Member

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.

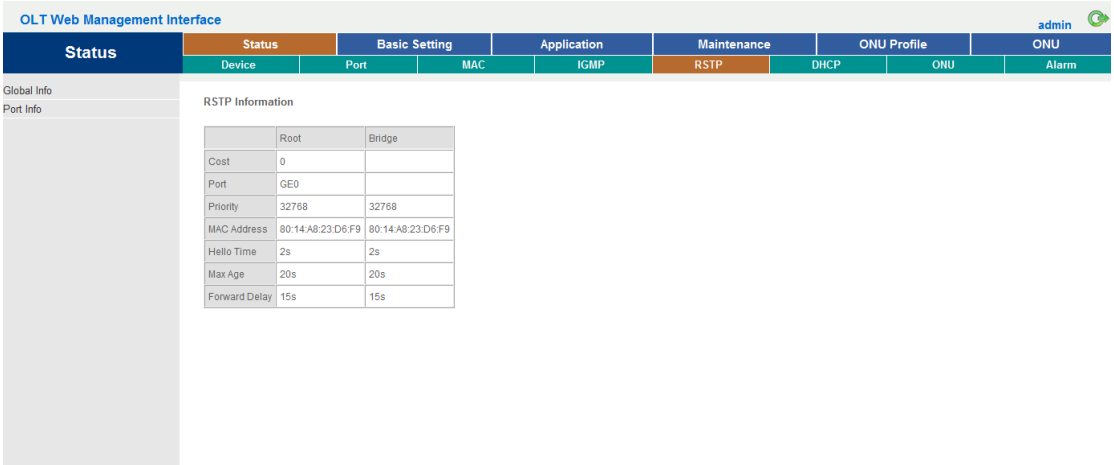


Figure 2-8: RSTP Global Information

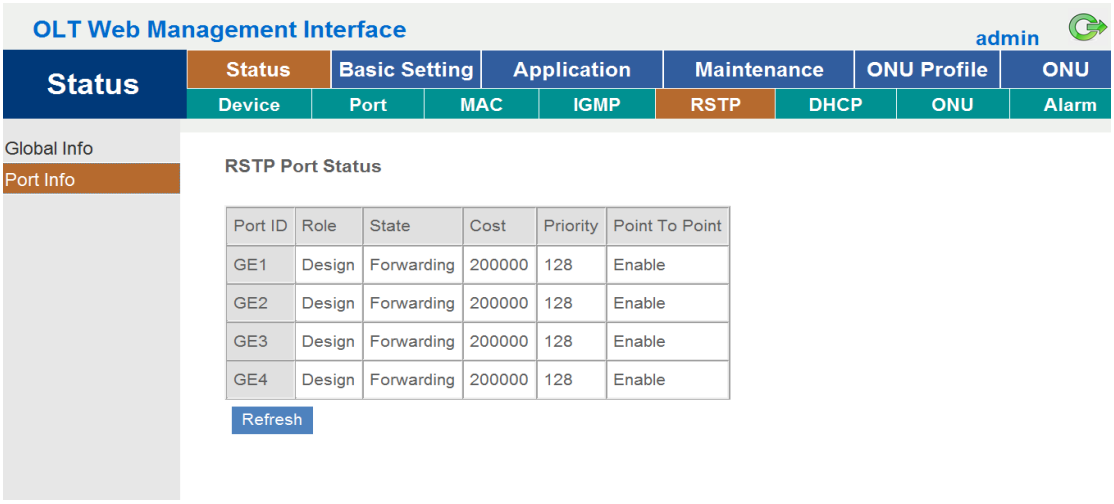


Figure 2-9: RSTP Port Information

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.

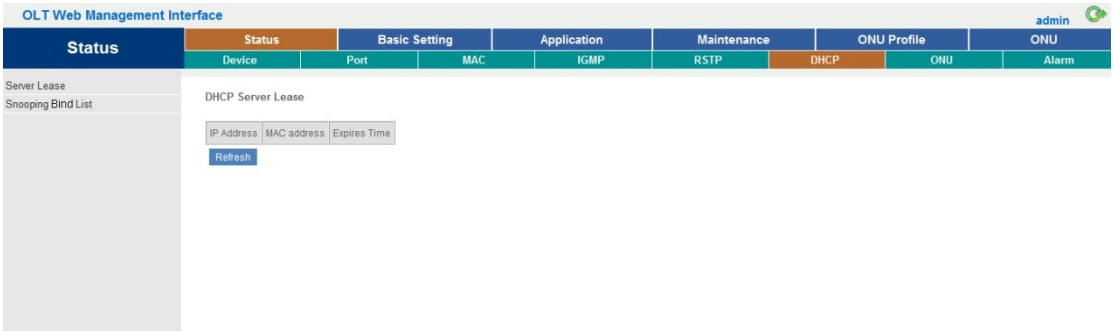


Figure 2-10: DHCP Server list

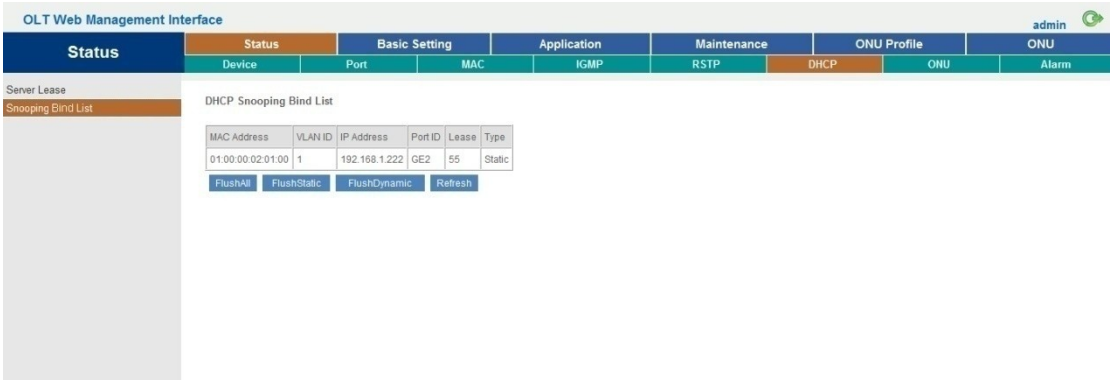
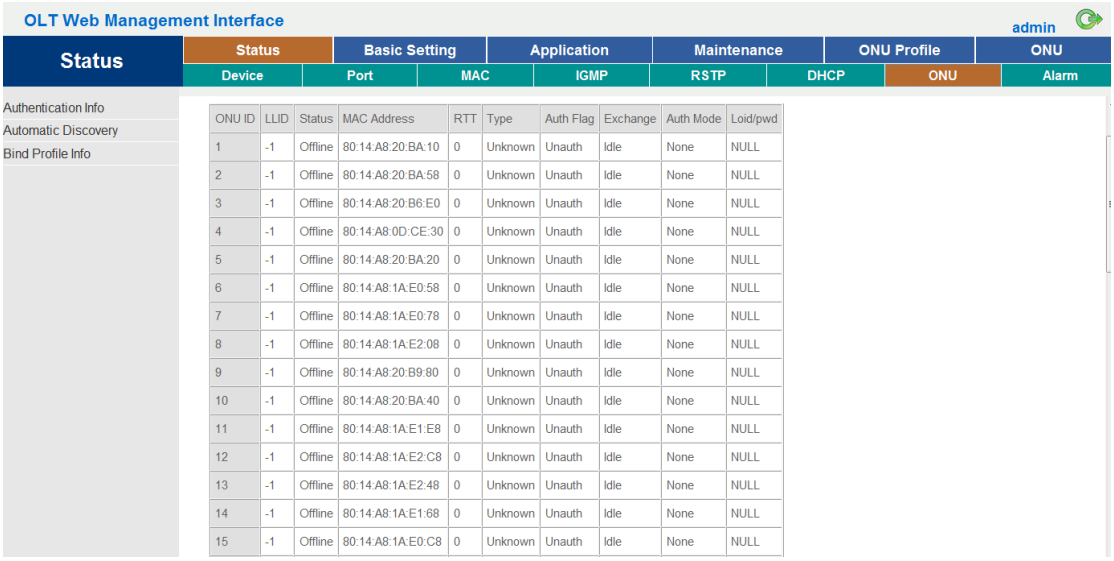


Figure 2-11: DHCP Snooping list

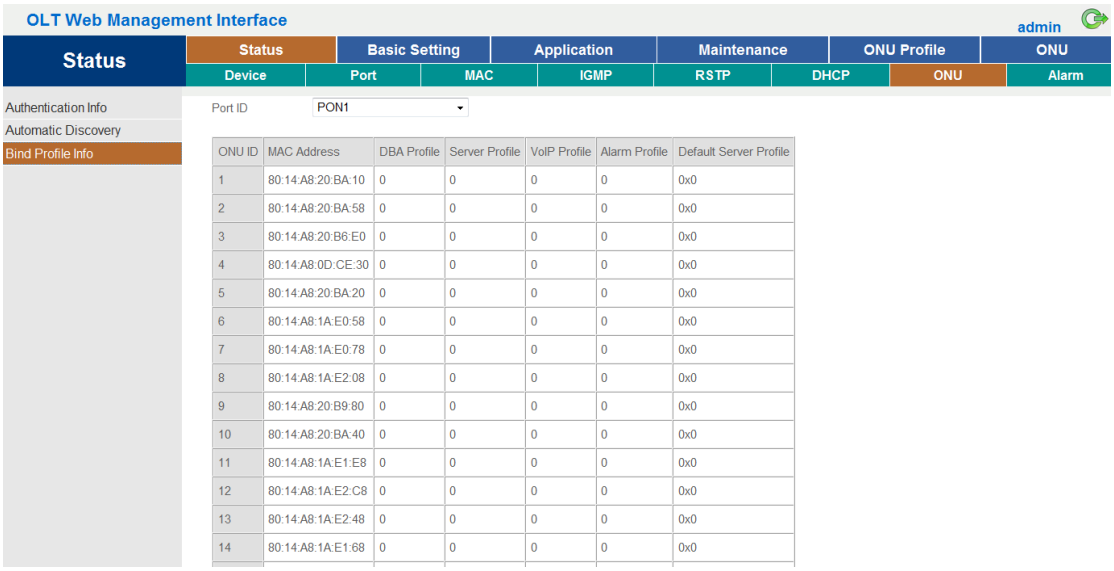
2.2.7 ONU

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. Click **Status→ONU**, as shown in Figure 2-12 and Figure 2-13.



ONU ID	LLID	Status	MAC Address	RTT	Type	Auth Flag	Exchange	Auth Mode	Loid/pwd
1	-1	Offline	80:14:A8:20:BA:10	0	Unknown	Unauth	Idle	None	NULL
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



ONU ID	MAC Address	DBA Profile	Server Profile	VoIP Profile	Alarm Profile	Default Server Profile
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

Click **Status→Alarm** to view system event and alarm information.

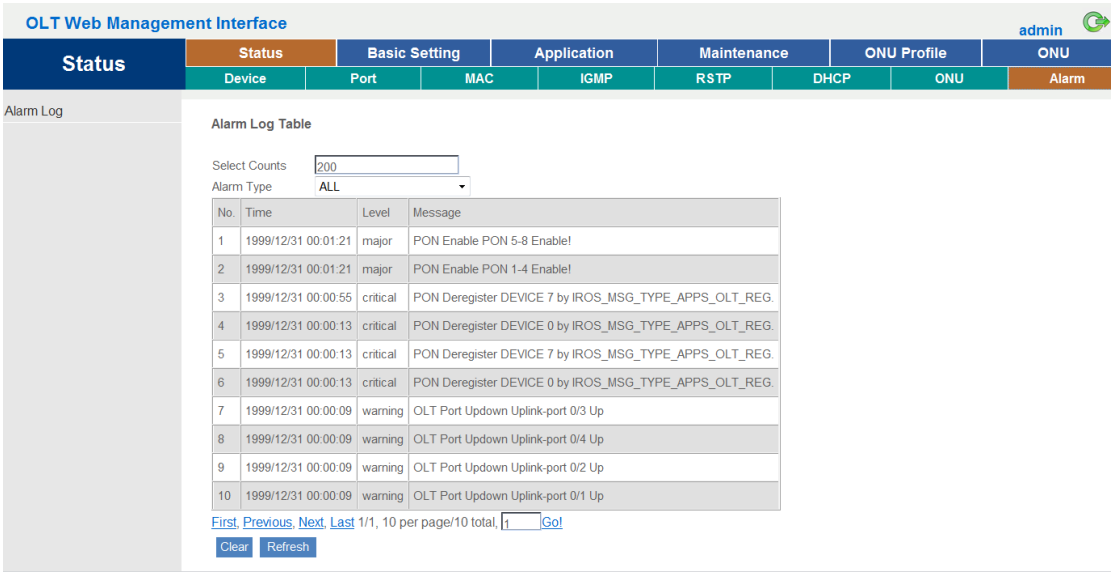


Figure 2-14: Alarm Events

The events and alarms levels are listed in Table 2-1.

Table 2-1 Event and Alarm level

ITEM	DESCRIPTION	LEVEL	ITEM	DESCRIPTION	LEVEL
ALARM	OLT Port Up down	warning	EVENT	System Config Save	warning
	OLT Port Loopback	warning		System Config Erase	warning
	OLT Temp High	major		Download File Success	major
	OLT Temp Low	major		Upload File Success	major
	OLT CPU Usage High	major		Upgrade File Success	major
	OLT MEM Usage High	major		PON Register	critical
	OLT FAN	major		PON Enable	major
	Download File Failed	major		PON LOS Recovery	major
	Upload File Failed	major		ONU is Registering	major
	Upgrade File Failed	major		ONU Link Discover	major
	PON Disable	major		ONU AUTH Success	major
	PON TX Power High	major		ONU DEAUTH Success	major
	PON TX Power Low	major		ONU Upgrade Over	major
	PON TX Bias High	major		ONU finish the register and AUTH	major
	PON TX Bias Low	major		System Reset	critical
	PON VCC High	major			

	PON VCC Low	major			
	PON Temp High	major			
	PON Temp Low	major			
	PON LOS	major			
	ONU Deregister	major			
	ONU Link LOST	major			
	ONU Illegal Register	major			
	ONU AUTH Failed	major			
	ONU MAC Conflict	major			
	ONU LOID Conflict	major			
	ONU Critical Event	major			
	Dying Gasp	major			
	ONU Link Fault	major			
	ONU Link Event	major			
	ONU Event Notific	major			
	ONU Laser Always On	major			
	PON Deregister	critical			
	PON Register Failed	critical			

Chapter 3 OLT Basic Setting

This section is about the basic service of OLT configuration.

3.1VLAN

3.1.1 New VLAN

Click **Basic Setting→VLAN→New VLAN** to create new VLAN.

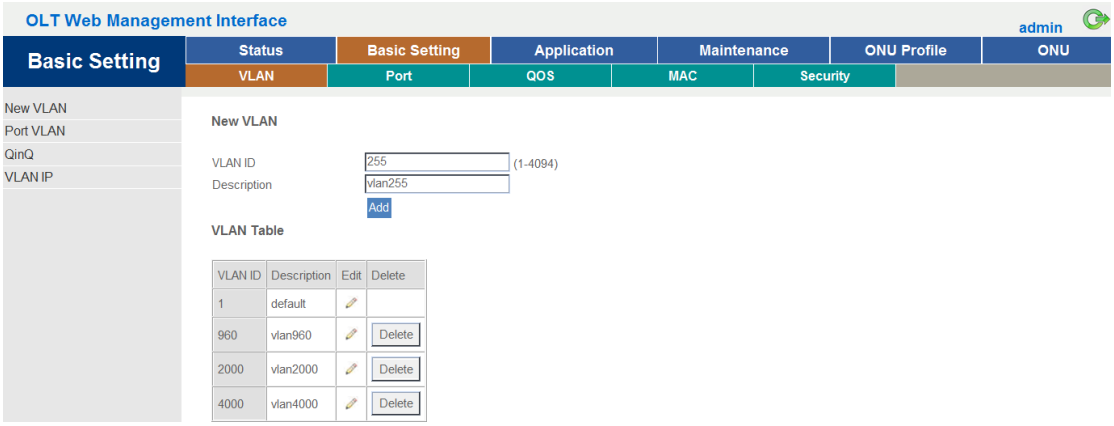


Figure 3-1: Create New VLAN

3.1.2 Port VLAN

Assign the ports to the VLANs you created. Here, you can choose the tag or untag VLAN mode. Click **Basic Setting→VLAN→Port VLAN** as shown in Figure 3-2..

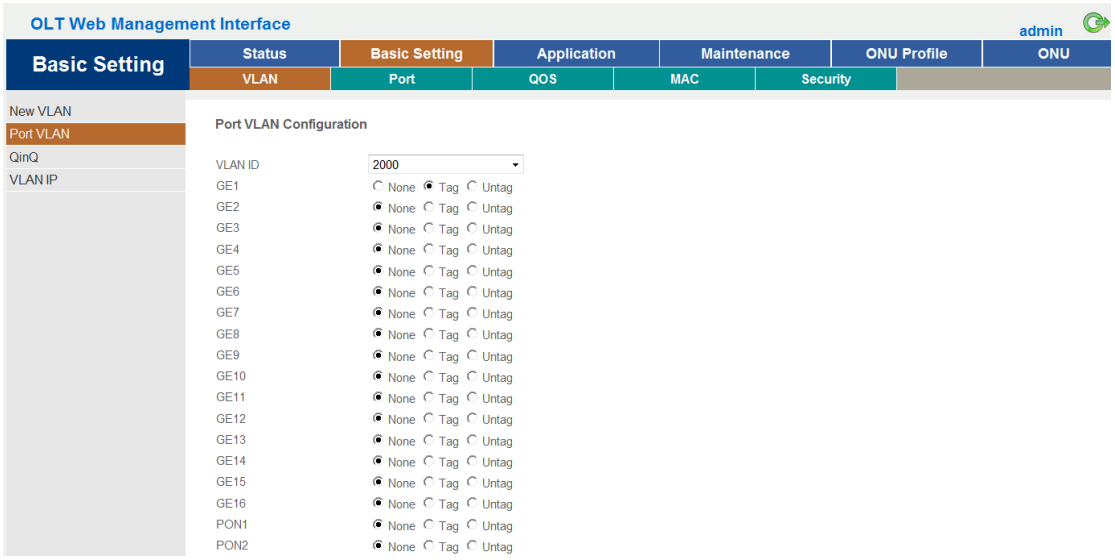


Figure 3-2: Add Port VLAN

3.1.3QinQ

To configure the port mode VLAN translation or double VLAN tag, click **Basic Setting→VLAN→QinQ**, as shown in Figure 3-3.

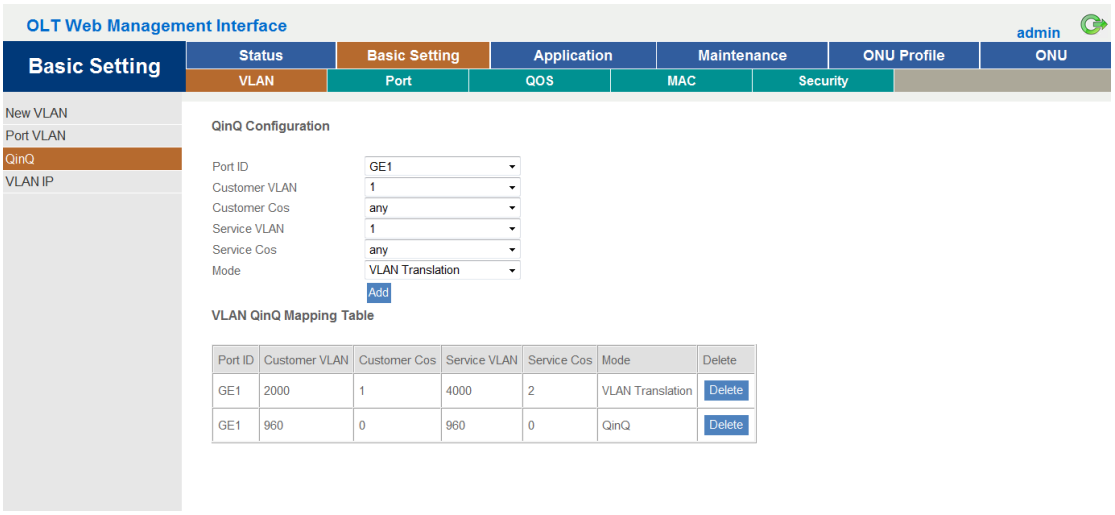


Figure 3-3: QinQ Configuration

3.1.4 VLAN IP

Select the existing VLAN and set an IP address for this VLAN, as shown in

Figure 3-4.

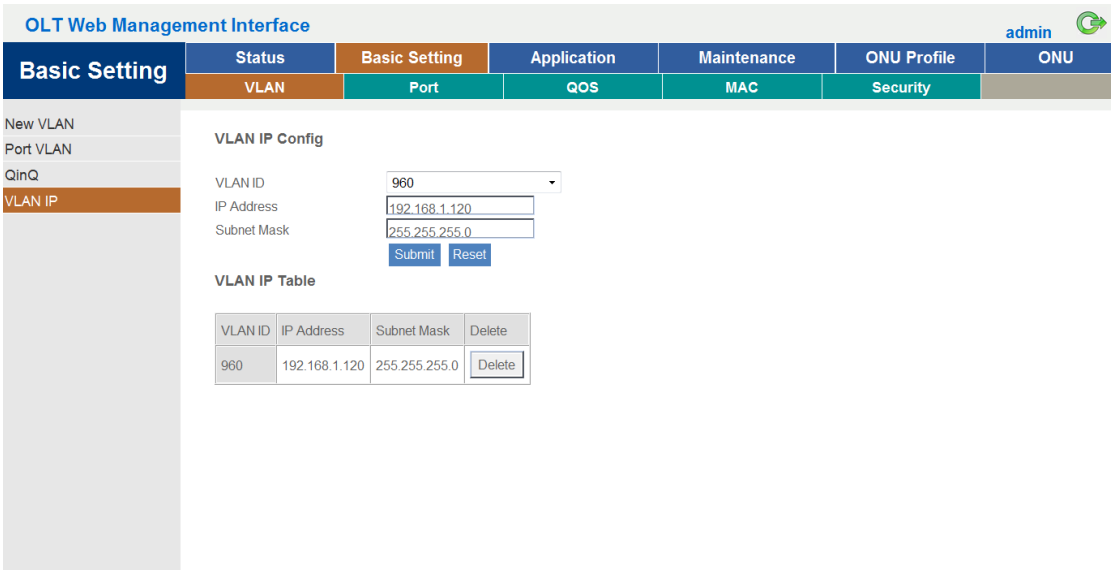


Figure 3-4: VLAN IP

3.2 Port

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

3.2.1 GE Setup

Select **Basic Setting→Port→GE Setup**, you can configure the uplink GE port parameters, as shown in Figure 3-5.

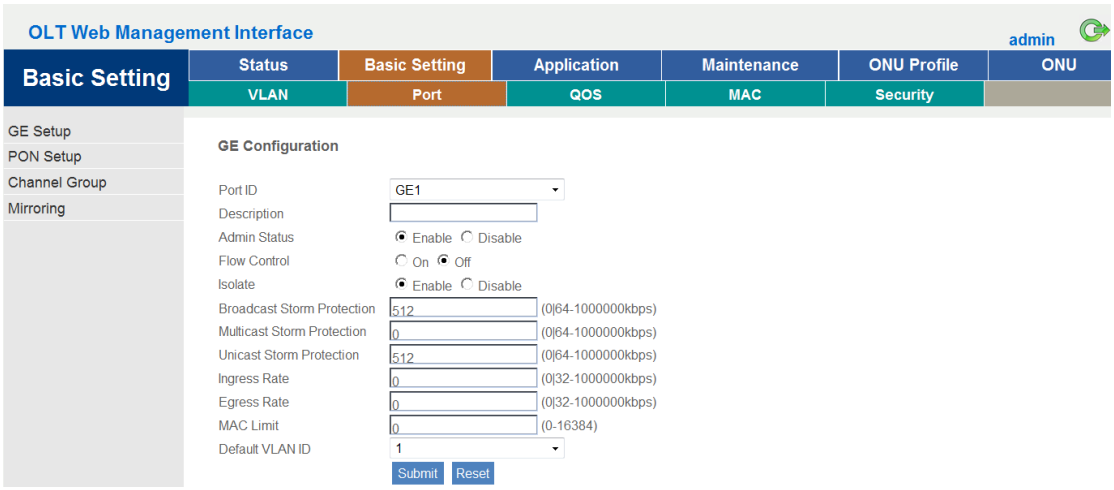


Figure3-5: GE Setup

3.2.2 PON Setup

Select **Basic Setting→Port→PON Setup**, you can configure the PON port parameters, as shown in Figure 3-6.

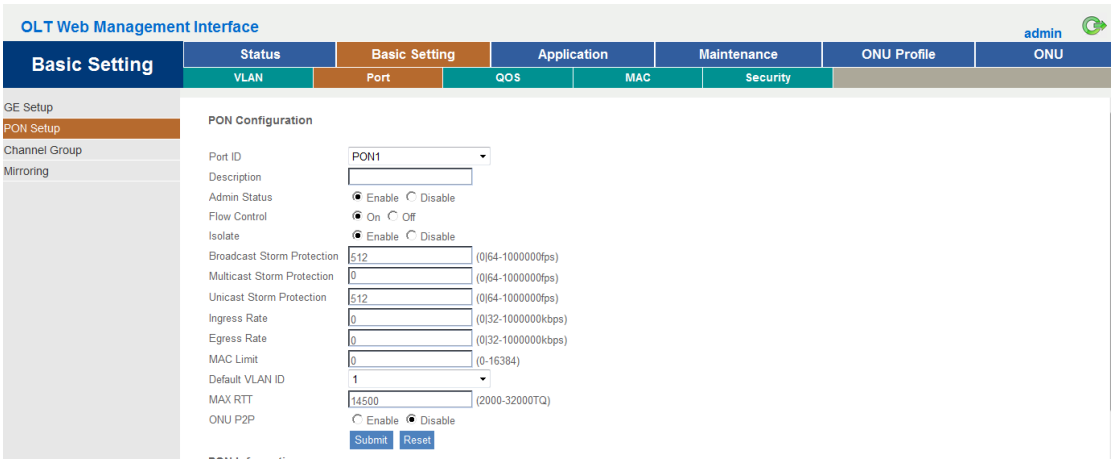


Figure3-6: PON Setup

3.2.3 Channel Group

Select **Basic Setting→Port→Channel Group** to assign and configure a uplink physical interface to an Ether Channel. When a traffic link can't be used suddenly, this 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.

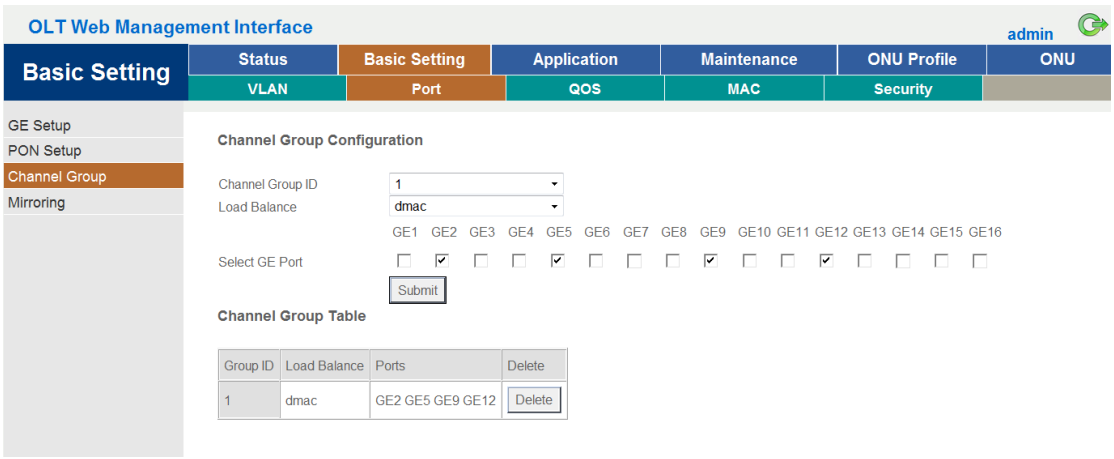


Figure 3-7: Create Channel Groups

3.2.4 Mirroring

Select **Basic Setting→Port→Mirroring** to create monitor session. Each monitor session can be set with one destination port and up to 8 source ports.

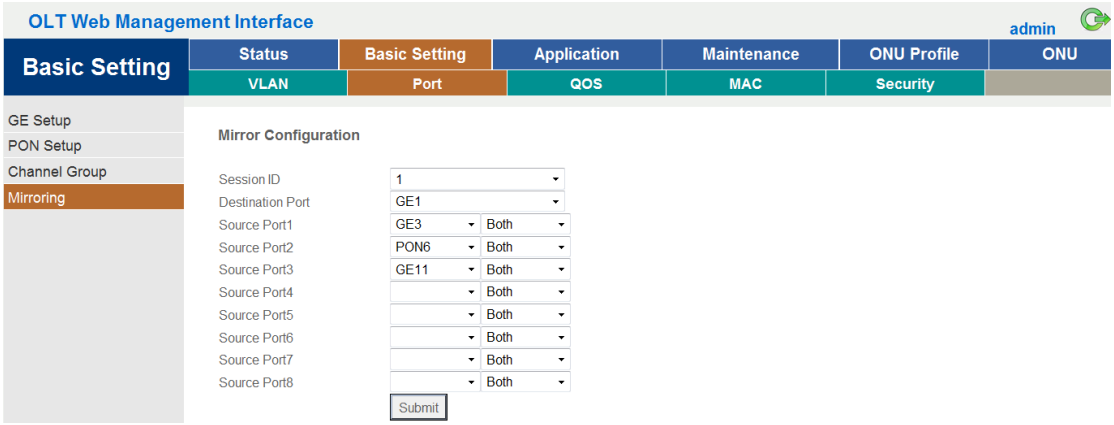


Figure 3-8:Traffic Mirroring

3.3 QOS

The EPON OLT supports layer 2802.1p and layer 3 DSCP QOS. Frames can be placed in different queues and serviced via Strict

Priority(SP),Weighted Round Robin (WRR) and SP+WRR. Select **Basic Setting→QOS** to set QOS configuration, as shown in Figure 3-8.

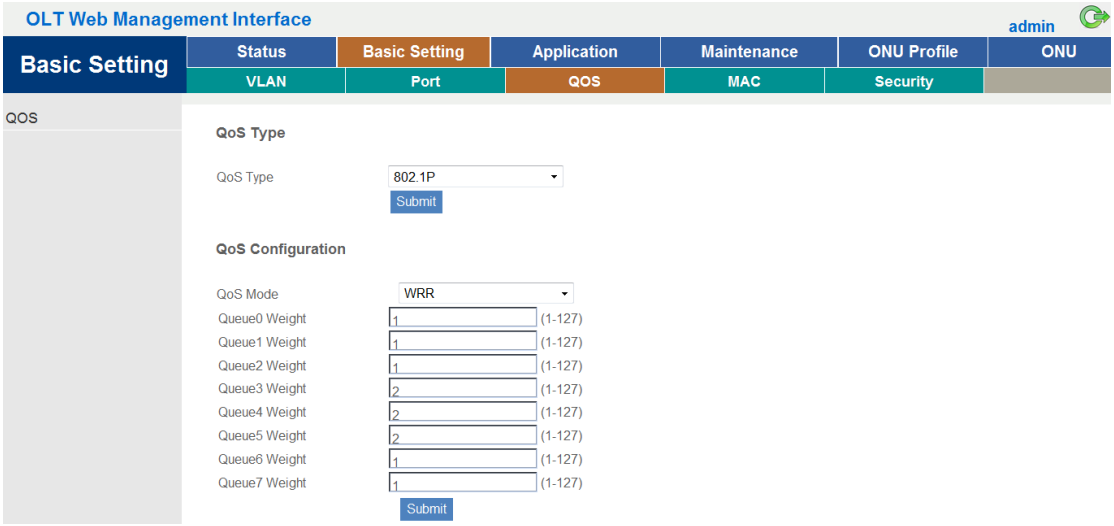


Figure 3-9: QOS Configuration

3.4 MAC

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

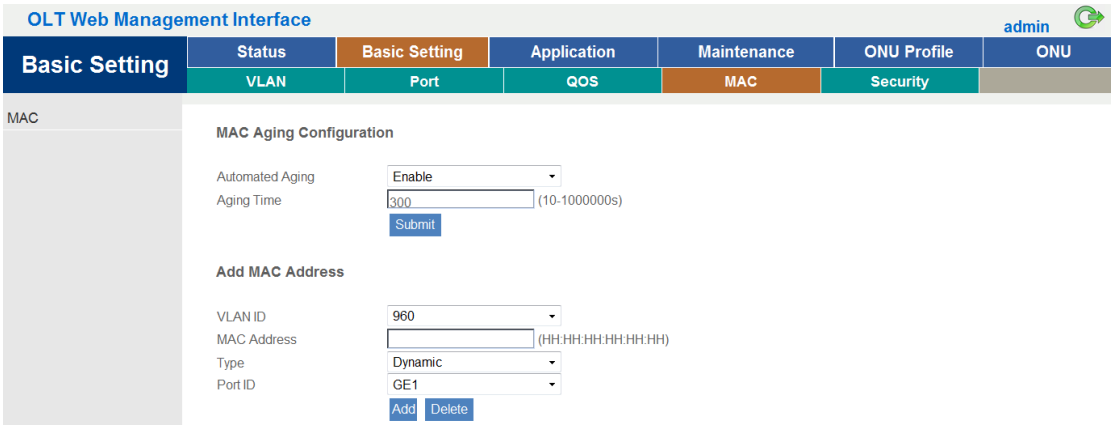


Figure 3-10: MAC Configuration

3.5Security（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.

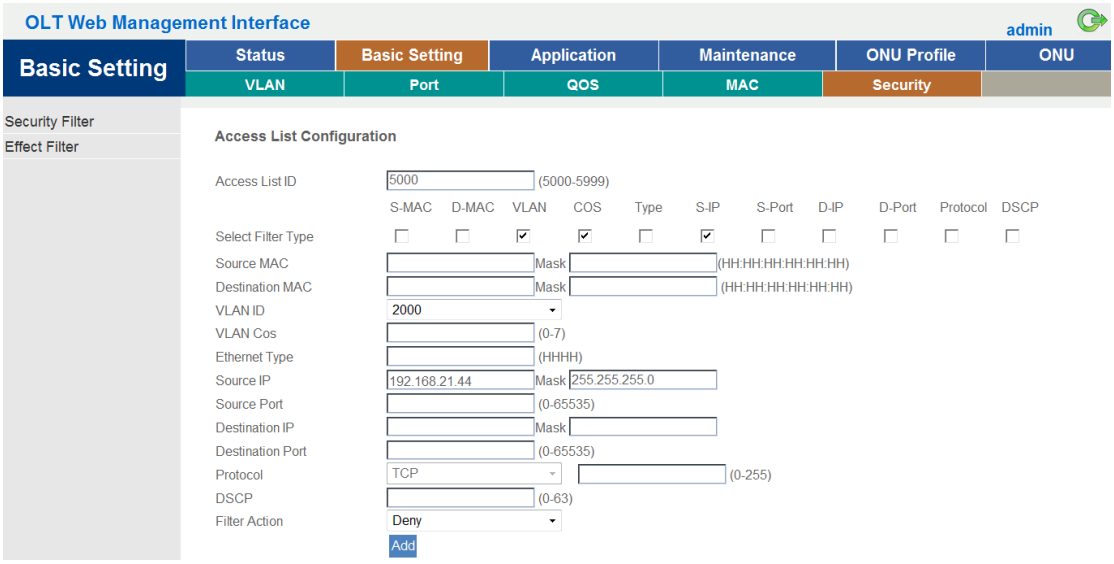


Figure 3-11: Security Filter

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.

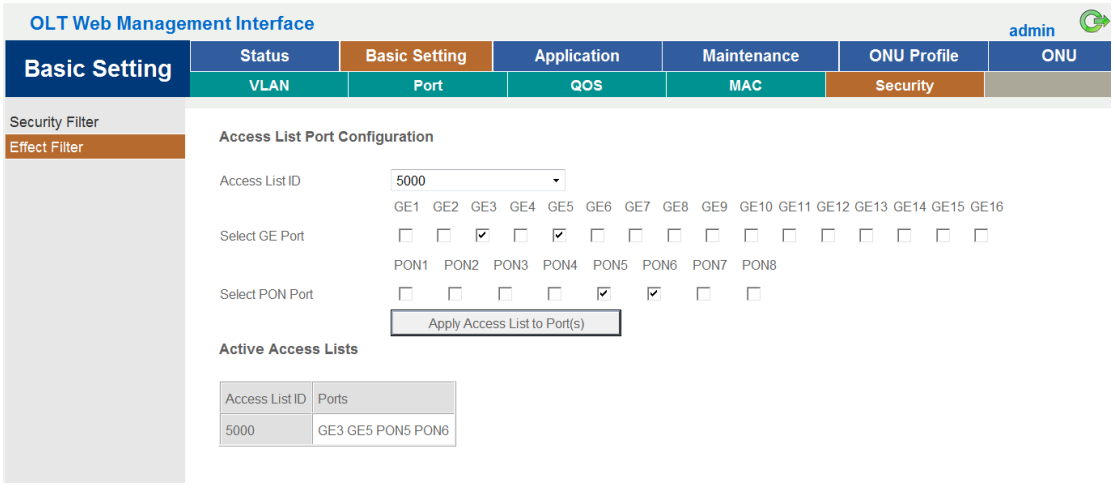


Figure 3-12: Bind Security Filter

Chapter 4 Application

This chapter is about the protocol service configuration.

4.1 IGMP

4.1.1 Global Setup

To enable the IGMP snooping mode, click **Application→IGMP→Global Setup**.

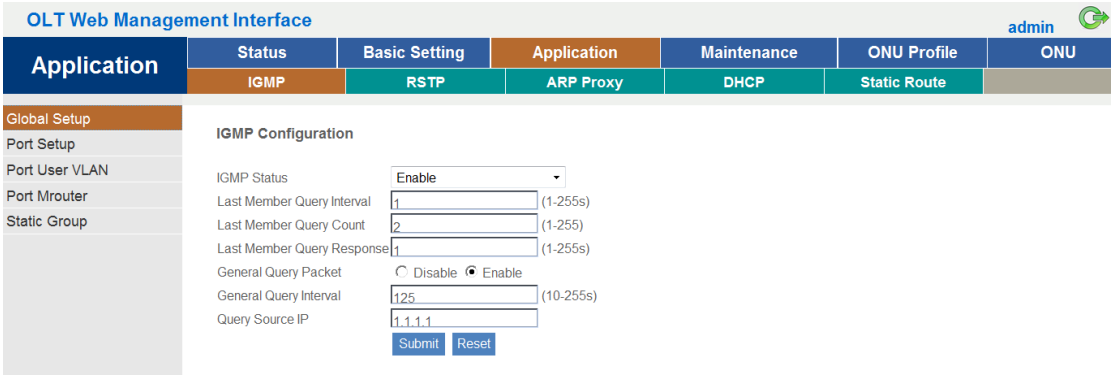


Figure 4-1: IGMP Snooping Status

4.1.2 Port Setup

Click **Application→IGMP→Port Setup** to set group limit value, enable/disable fast leave and filter.

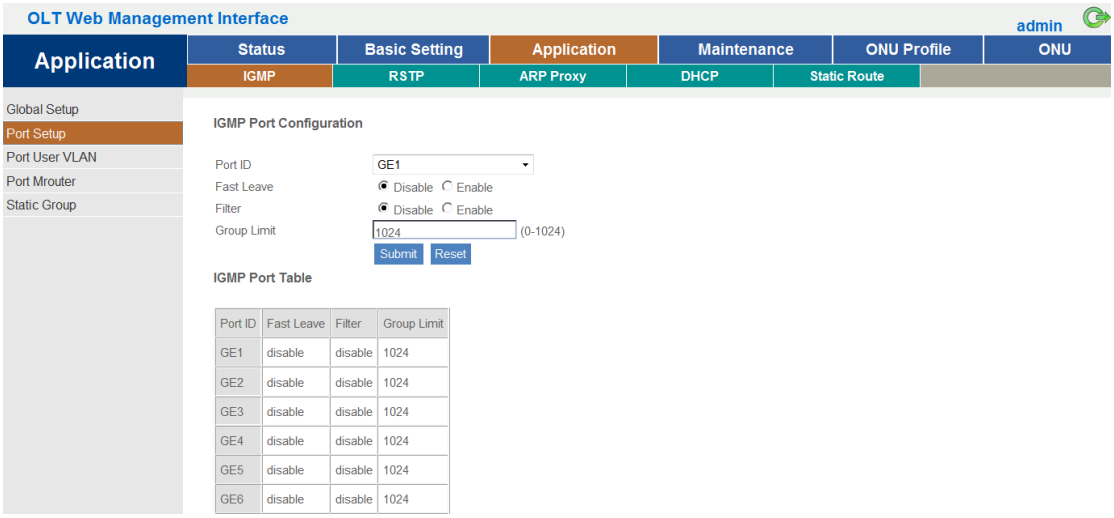


Figure 4-2: IGMP Port Setting

4.1.3 Port User VLAN

Click **Application→IGMP→Port User VLAN** to configure the user VLAN and group VLAN.

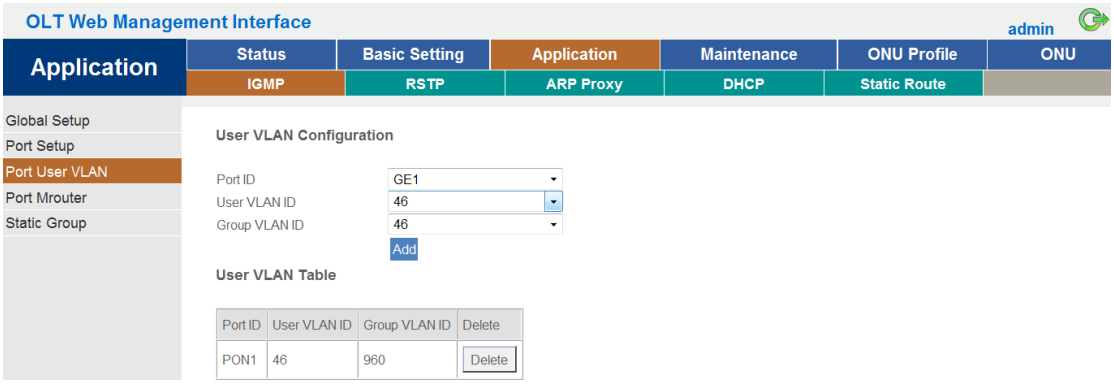


Figure 4-3: IGMP User VLAN

4.1.4 Port Mrouter

To add a port to the IGMP multicast routing group, click **Application→IGMP→Port Mrouter, as shown in Figure 4-1**.

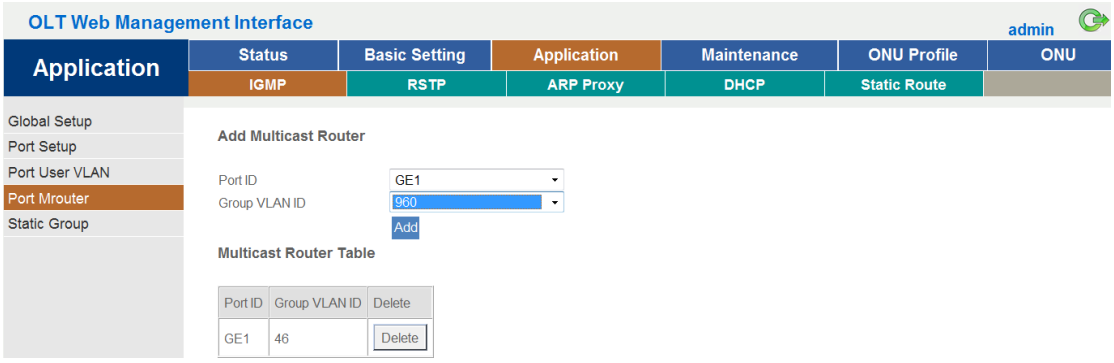


Figure 4-4: IGMP Port Mrouter

4.1.5 Static Group

Add an IGMP group manually. Always choose the PON port as the group port.

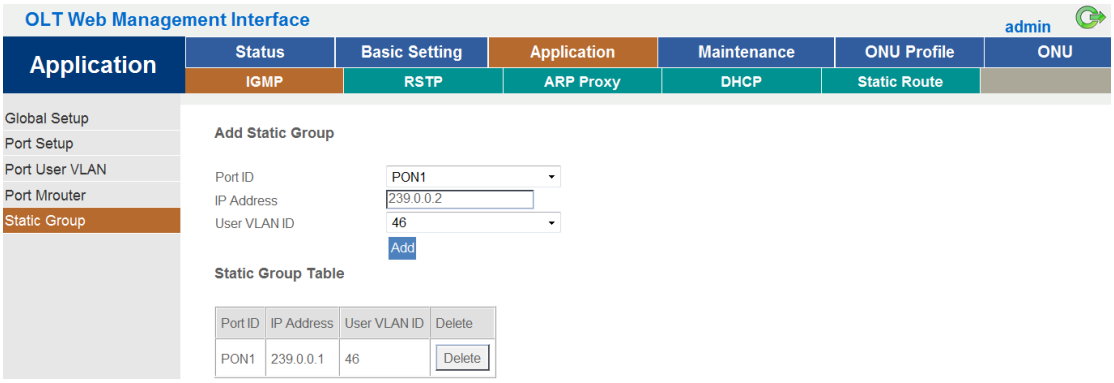


Figure 4-5: IGMP Static Group

4.2 RSTP

4.2.1 Global Setup

RSTP is disable by default, click **Application→RSTP→Global Setup** to enable.

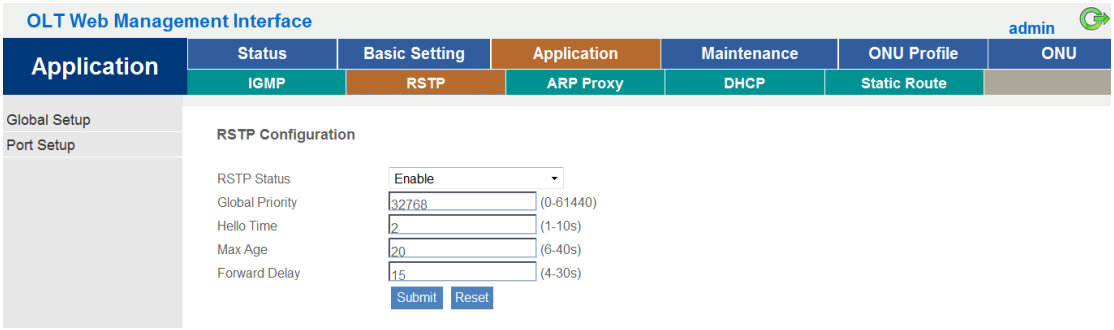


Figure 4-6: RSTP Global Setup

4.2.2 Port Setup

The RSTP ports parameter can be set by selecting

Application→RSTP→Port Setup.

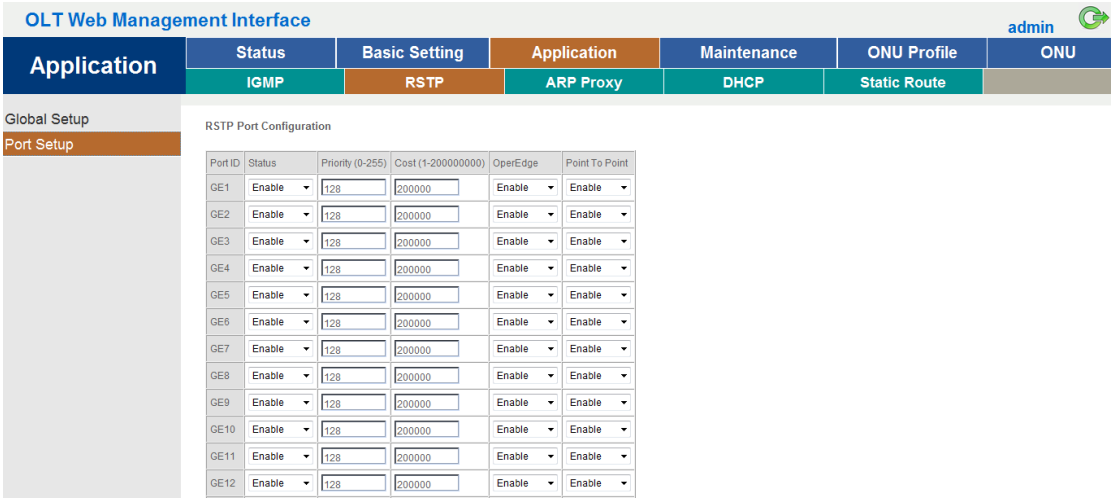


Figure 4-7: RSTP Port Setting

4.3 ARP Proxy

When serves as a ARP proxy, the OLT processes the ARP request message via configuring the VLAN as the layer 3 interface. The VLAN ID configuration value ranges from 1 to 4085.

First, configure the VLAN IP.

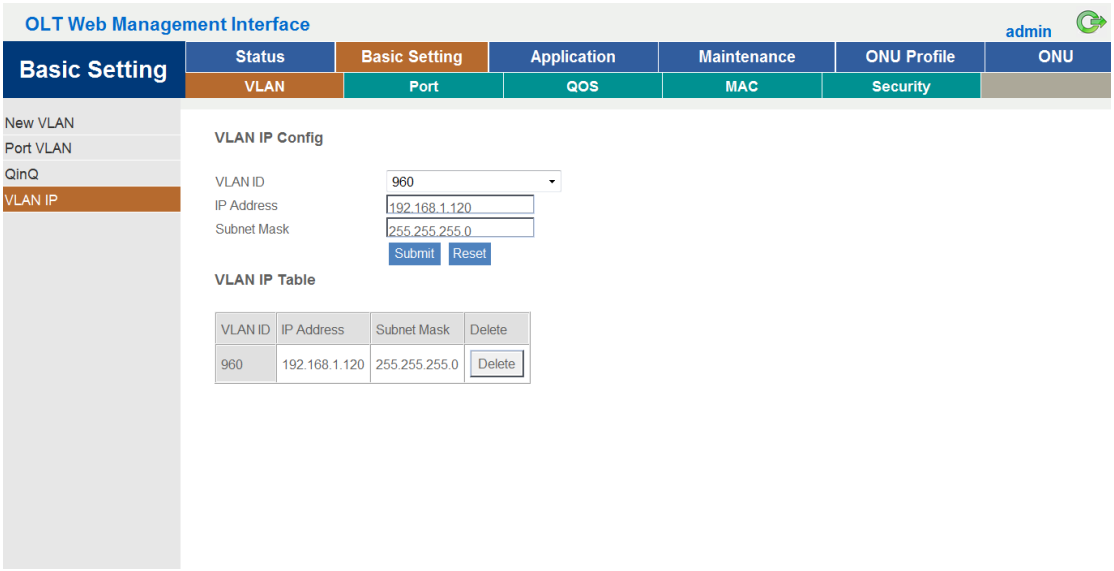


Figure 4-8:VLAN IP

Then enable the ARP proxy.

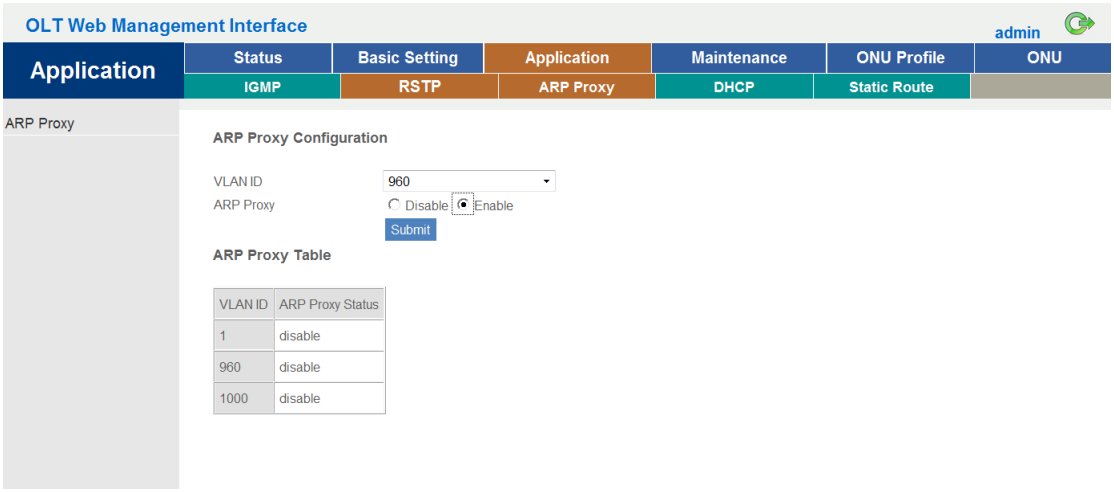


Figure4-9: ARP proxy configuration

4.4 DHCP

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

4.4.1 DHCP Server

When enable OLT DHCP server, the connecting devices will obtain an IP address. Click **Application→DHCP→Server** to configure the DHCP Server.

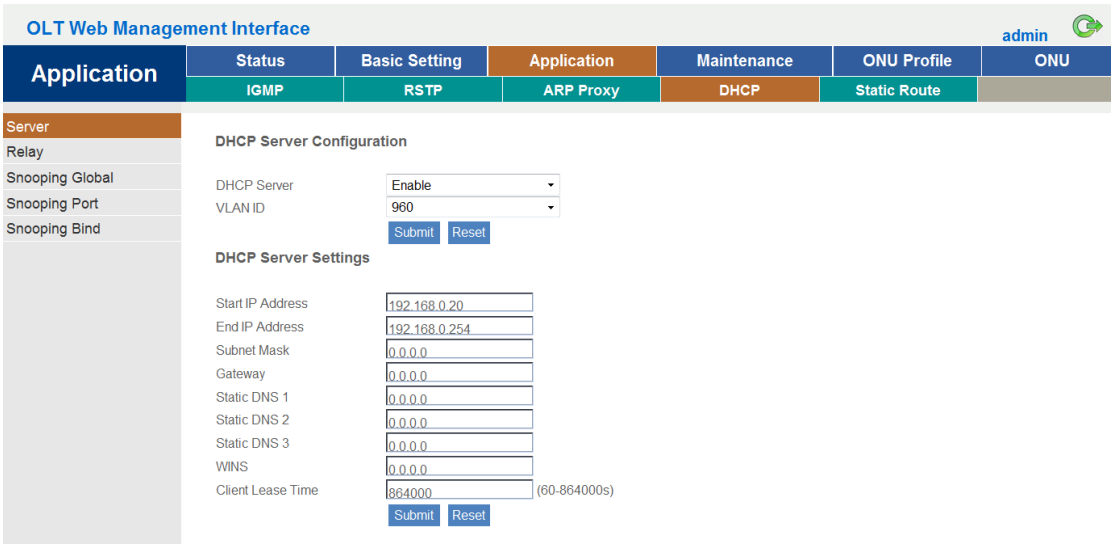


Figure4-10: DHCP Server

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. The relay server IP address network segment should be the same as the DHCP server.

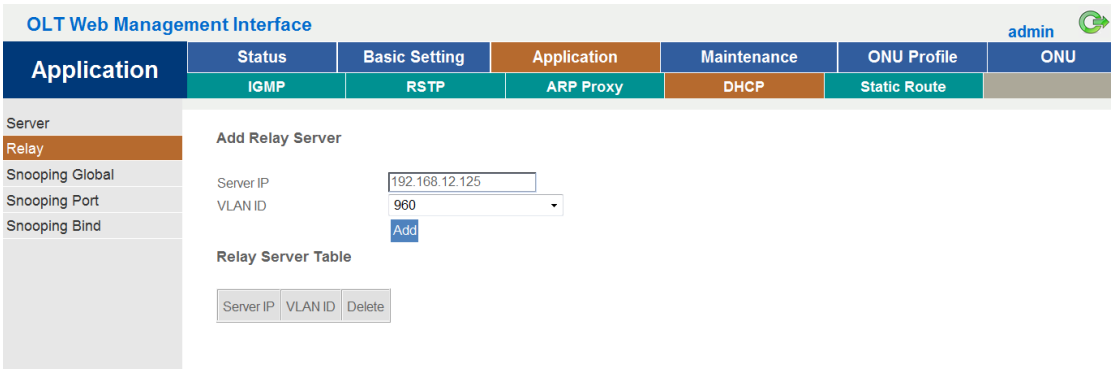


Figure4-11: DHCP Relay

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. DHCP Snooping is used for denying the DHCP offers packets. The DHCP server is forbided, which can not allocate the IP address successfully. Click **Snooping Global** to enable DHCP Snooping.

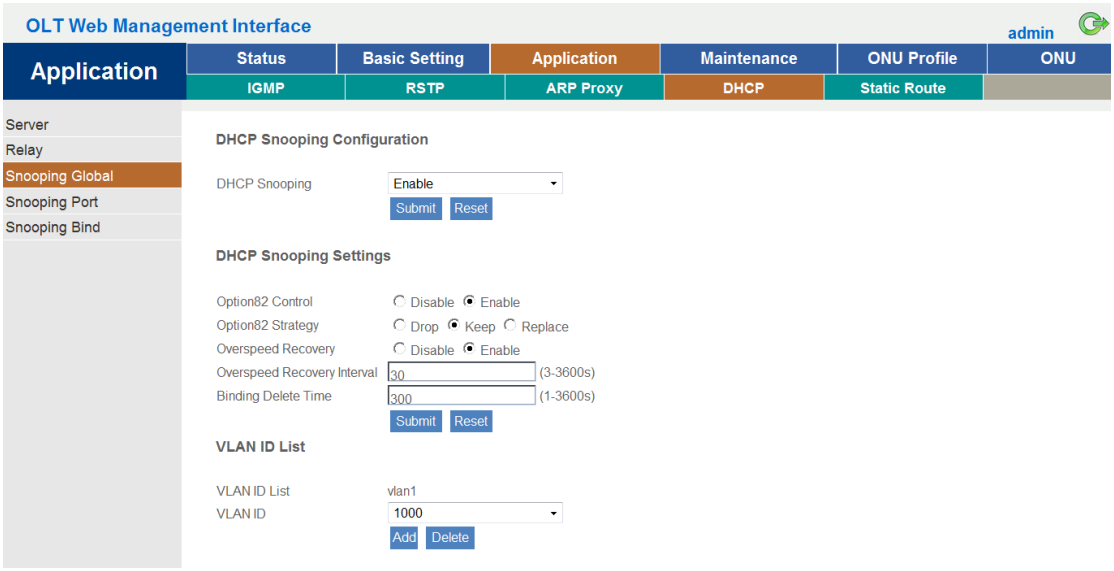


Figure4-12: DHCP Snooping Global

4.4.4 DHCP Snooping Port

The DHCP snooping ports are untrust by default. Click **Snooping Port** to configure, as shown in Figure 4-12.

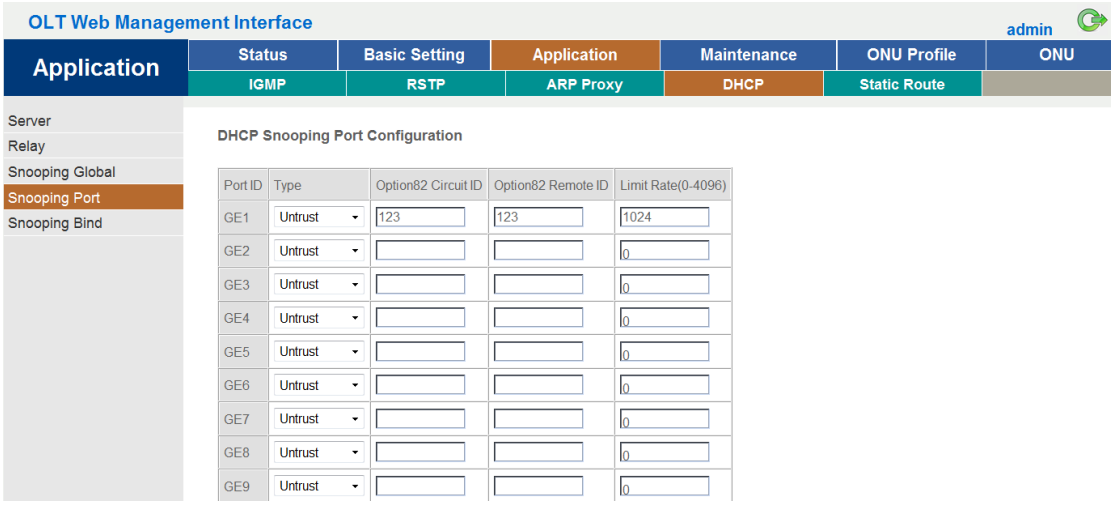


Figure4-13: DHCP Snooping Port

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.

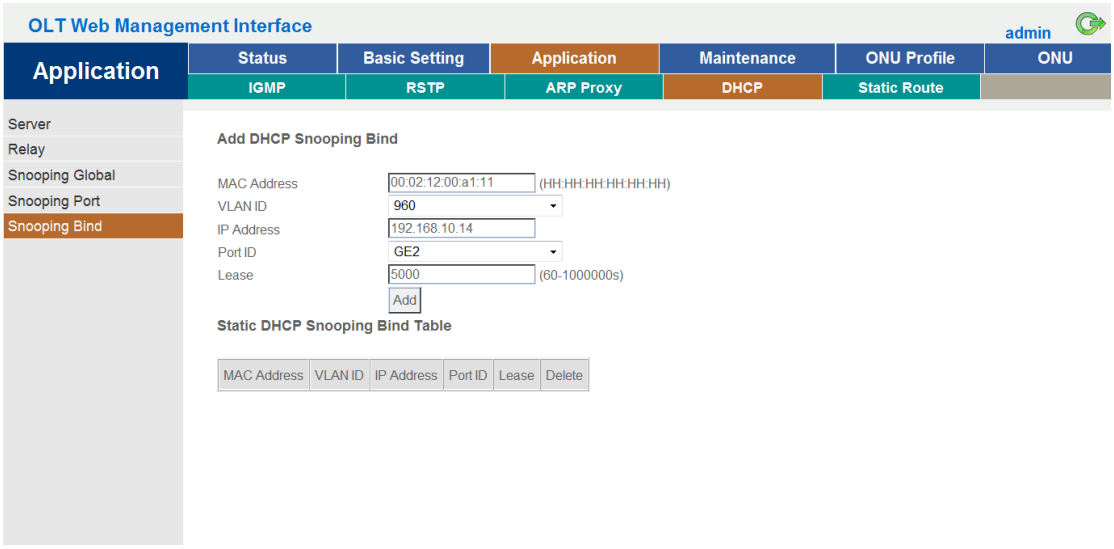


Figure4-14: DHCP Snooping Bind

4.5 Static Route

OLT supports static route L3 function. Click **Static Route** to configure, as

shown in Figure 4-14.

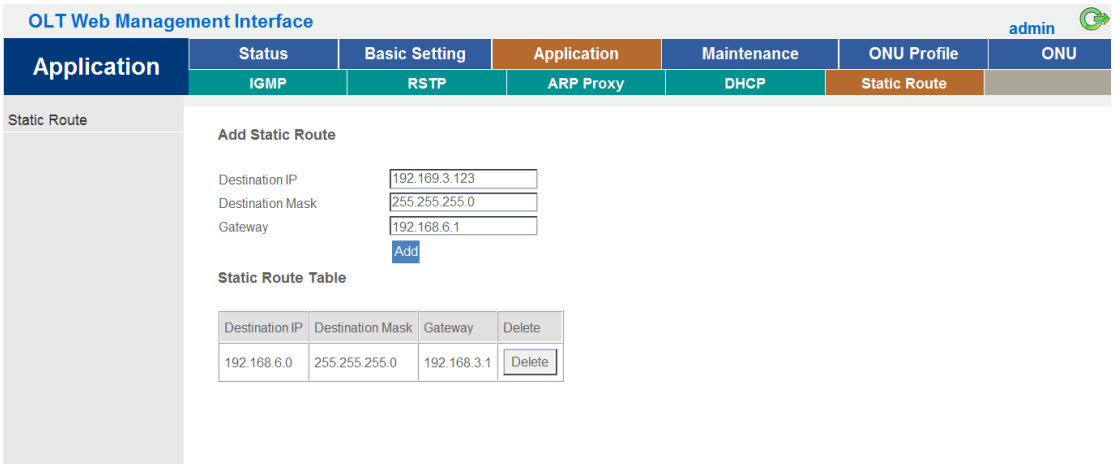


Figure4-15: Static Route

Chapter 5Maintenance

This chapter is about the global management of OLT.

5.1 User Manage

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

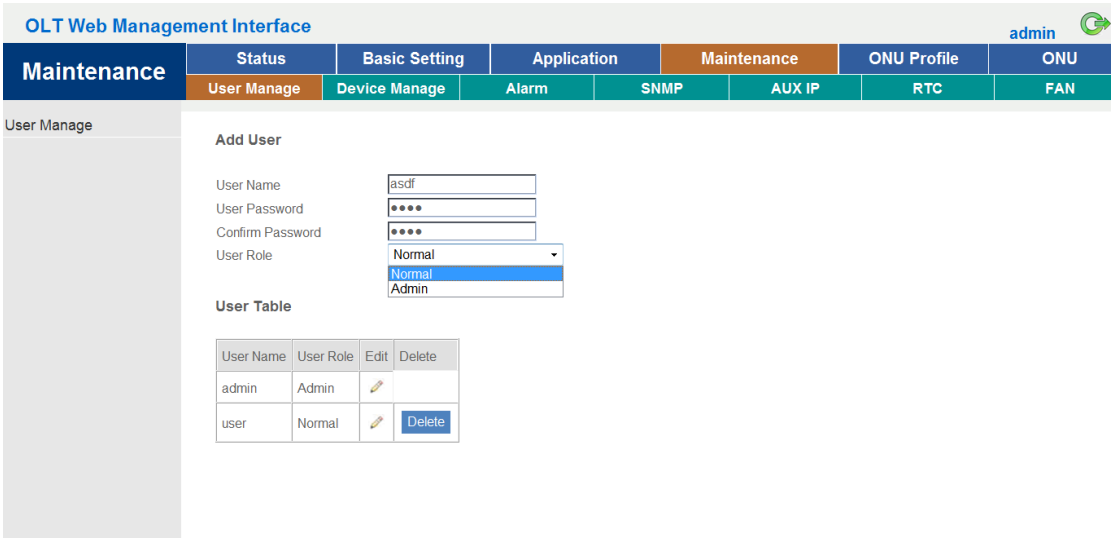


Figure5-1: User Manage

5.2 Device Manage

5.2.1 Firmware Upgrade

You can upgrade the OLT firmware by WEB, do not need TFTP server. After finish upgrading, it will reboot automatically. Click **Maintenance→Device Manage** to upgrade firmware.

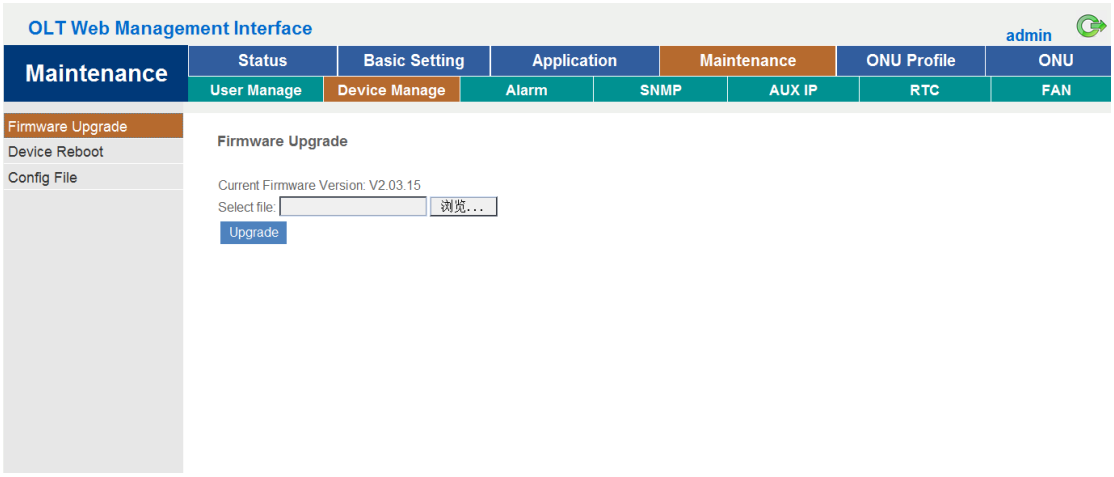


Figure5-2: Firmware Upgrade

5.2.2 Device Reboot

Click **Maintenance→Device Manage→Device Reboot**, it will reboot the entire system.(Please save the configuration first)

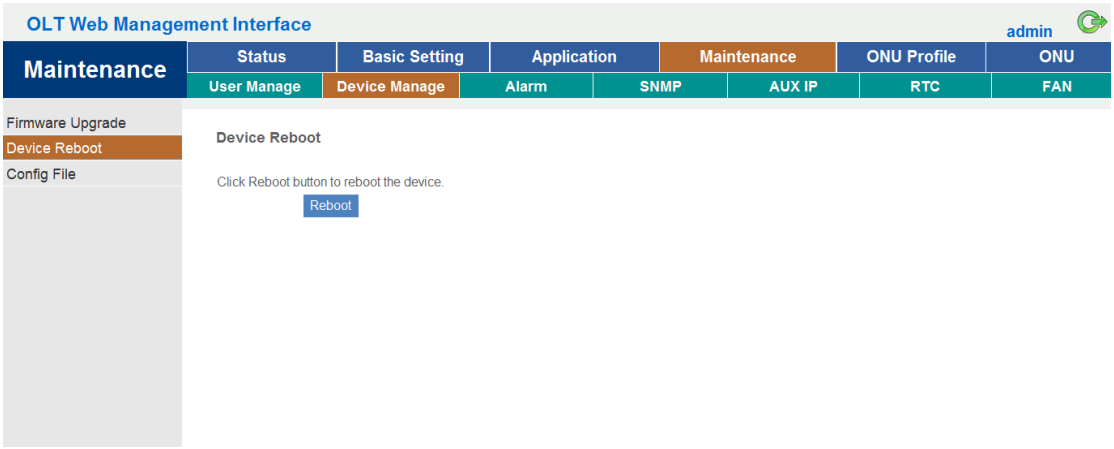


Figure5-3: Device Reboot

5.2.3 Config File

Click Maintenance→Device Manage→Config File, you can backup configuration, restore configuration, restore factory defaults and save configuration.

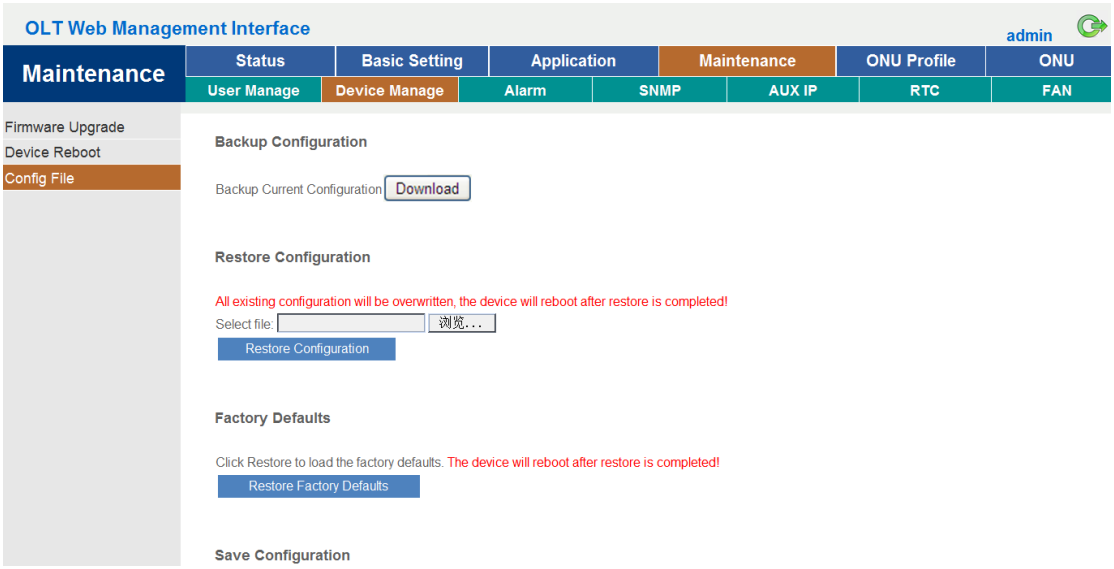


Figure5-4: Config File

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**".

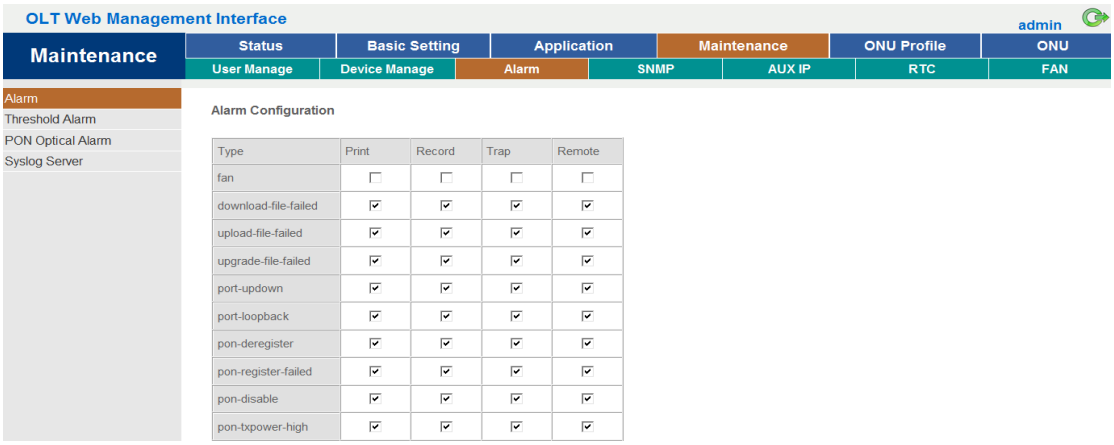


Figure5-5: Alarm configuration

5.3.2 Threshold Alarm

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

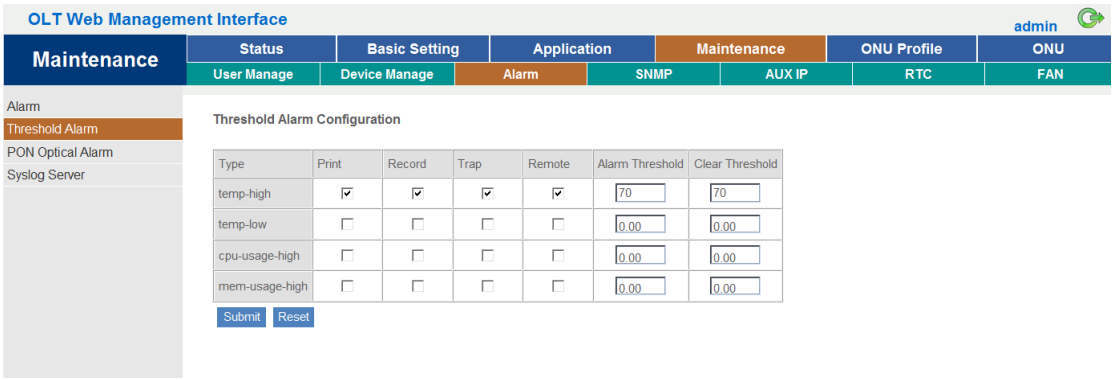


Figure5-6: Threshold Alarm

5.3.3 PON Optical Alarm

It is about the PON optical parameter threshold alarm configuration.

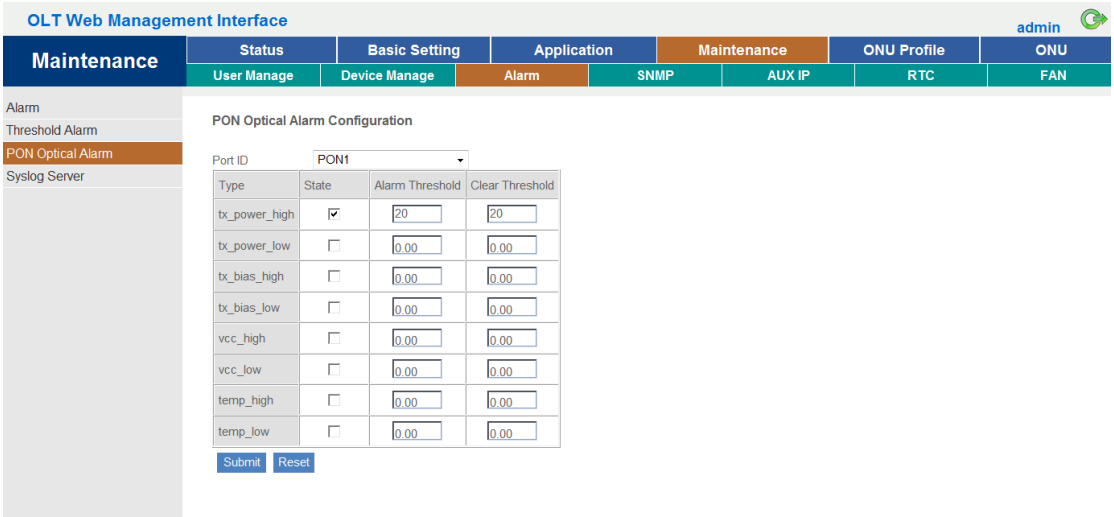


Figure5-7: PON Threshold Alarm

5.3.4 Syslog Server

Configure the server of OLT remote system logs.

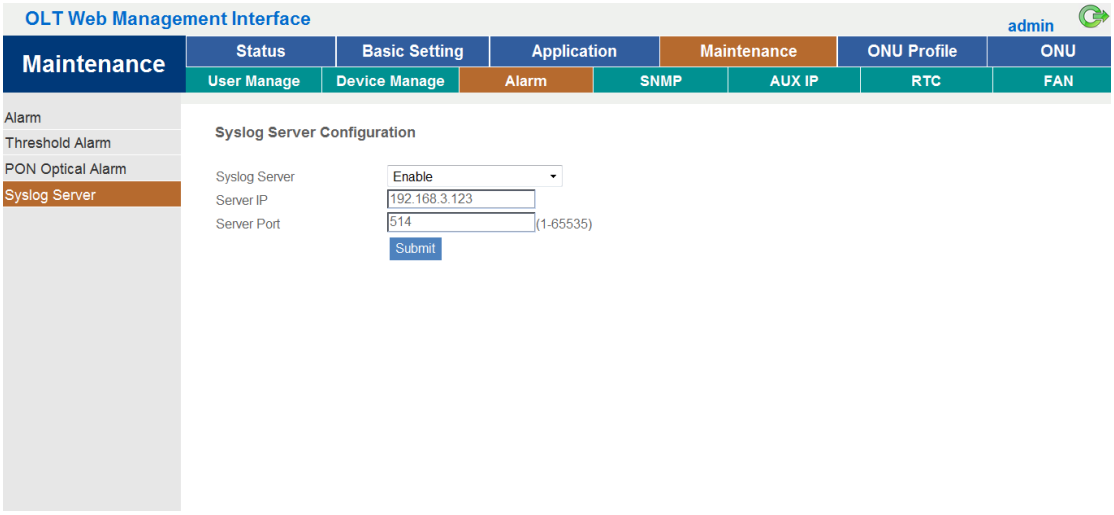


Figure5-8: Syslog Server Configuration

5.4 SNMP

5.4.1 SNMP V1/V2

The EPON OLT supports SNMP v1/v2,click Maintenance→SNMP→SNMP V1/V2 to configure.

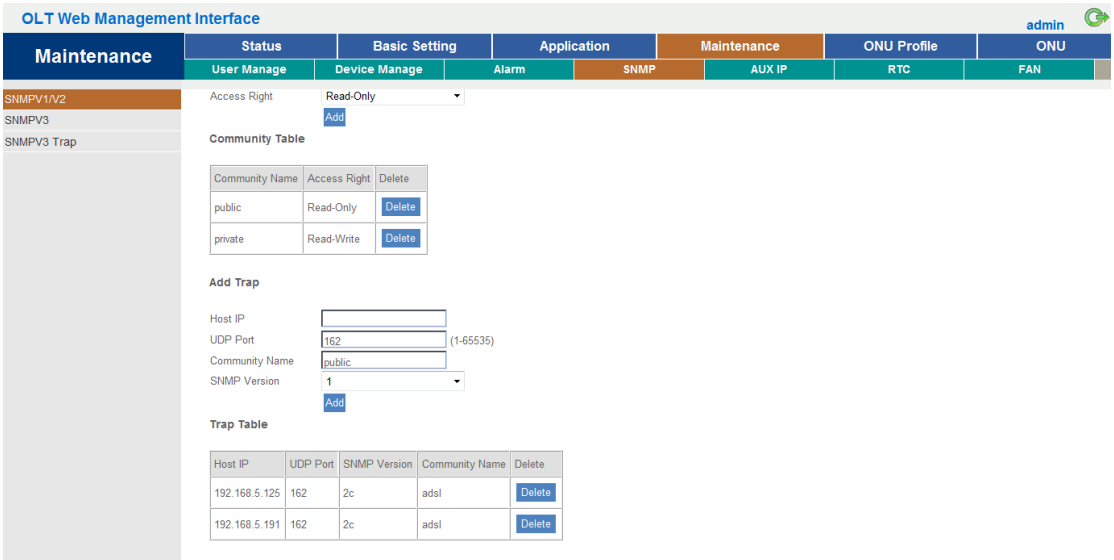


Figure5-9: SNMP V1/V2

5.4.2 SNMP V3

The EPON OLT also supports SNMP V3, as shown in Figure 5-10.

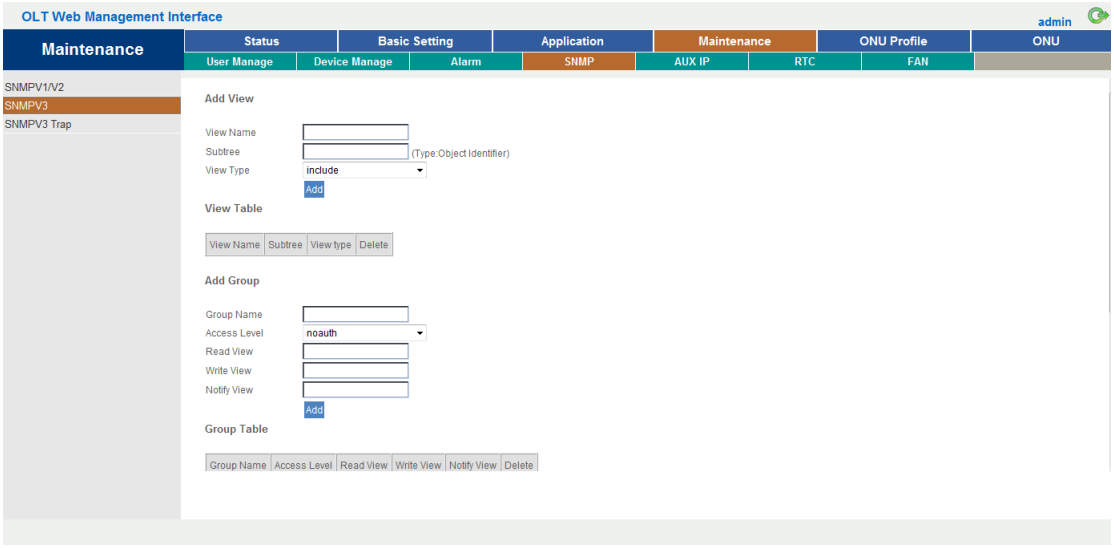


Figure5-10: SNMP V3

5.4.3 SMNP V3 Trap

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

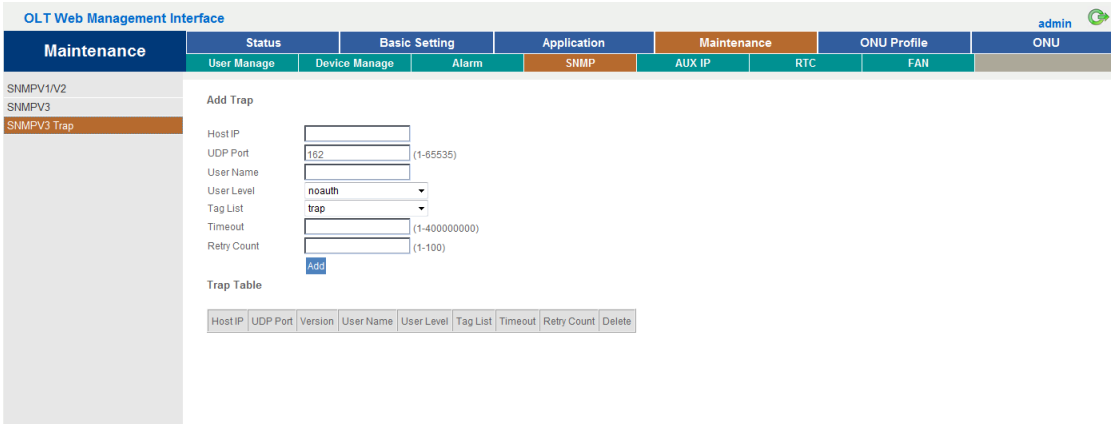


Figure5-11: SNMP V3 Trap

5.5 AUX IP

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

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

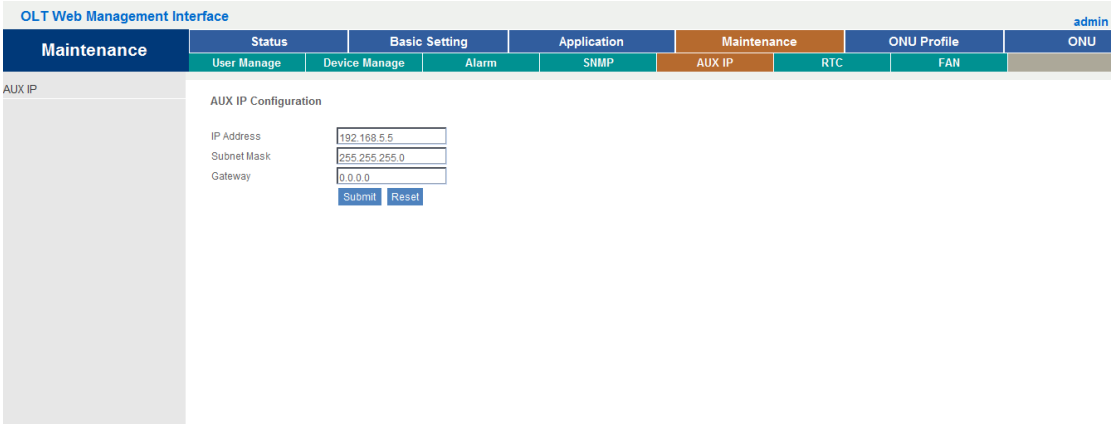


Figure5-12: AUX IP

5.6 RTC

Select Maintenance →RTC to set system time. The default system time is the OLT firmware release time.

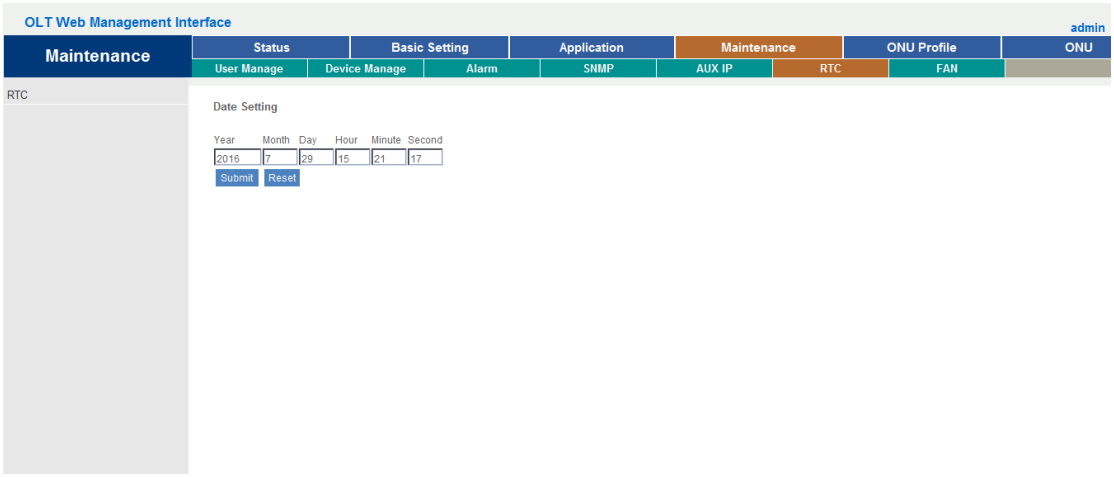


Figure5-13: RTC Configuration

5.7 FAN

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

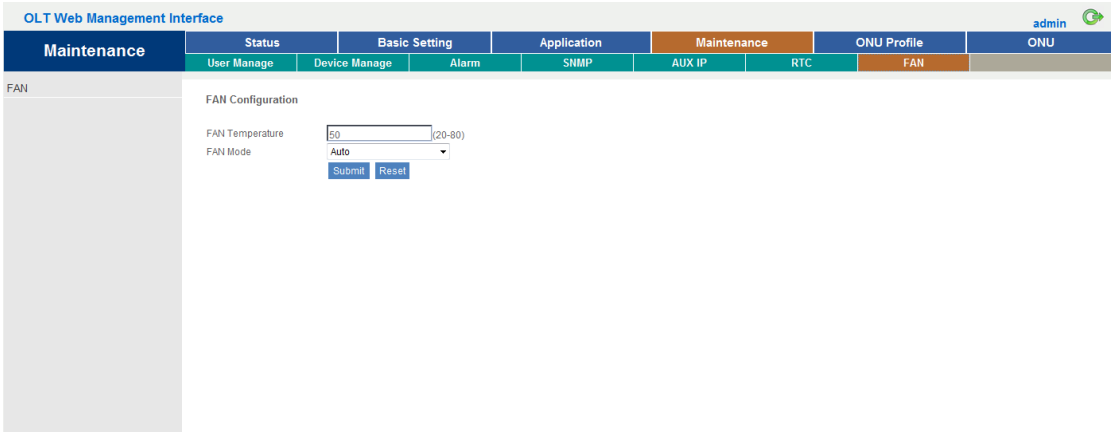


Figure5-14: FAN Configuration

Chapter 6 ONU Profile

This chapter is about the ONU profile configuration. It is designed for batch ONU management 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 manually, the new template will take effect.

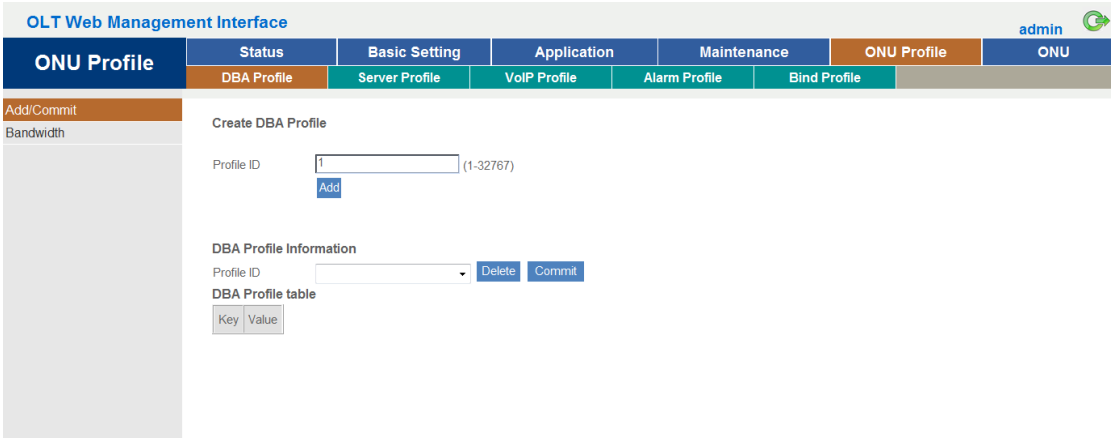


Figure6-1: Add a DBA Profile

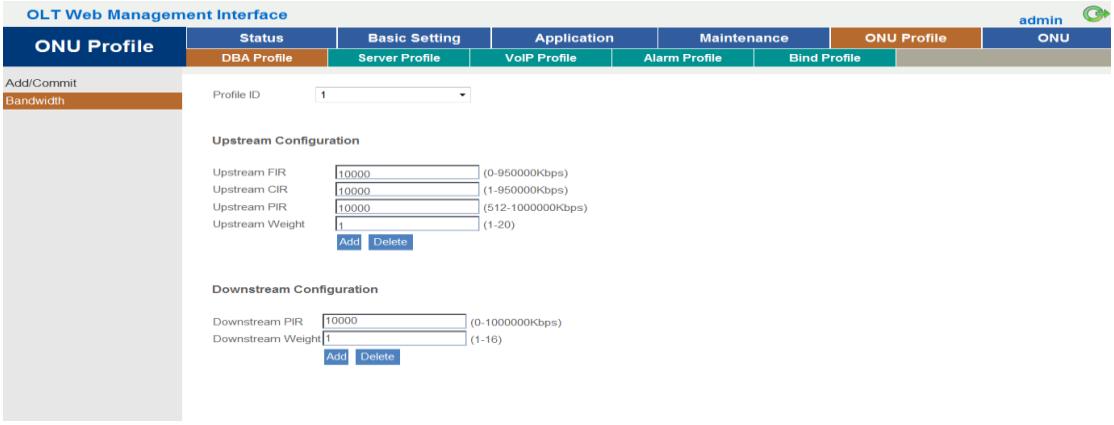


Figure6-2: DBA Profile Configure

6.2 Server Profile

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

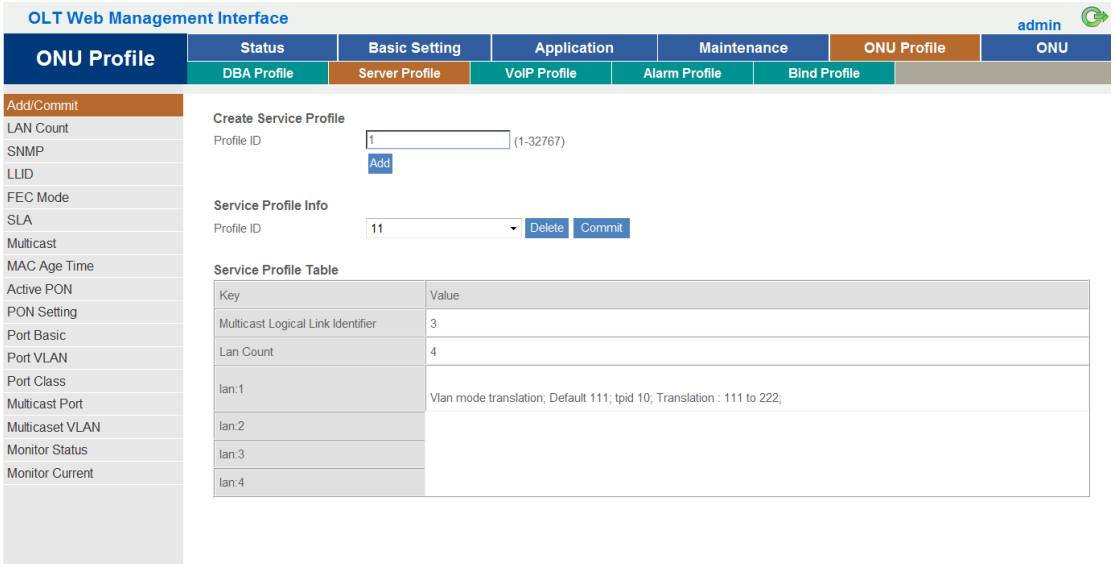


Figure6-3: Add Server Profile

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

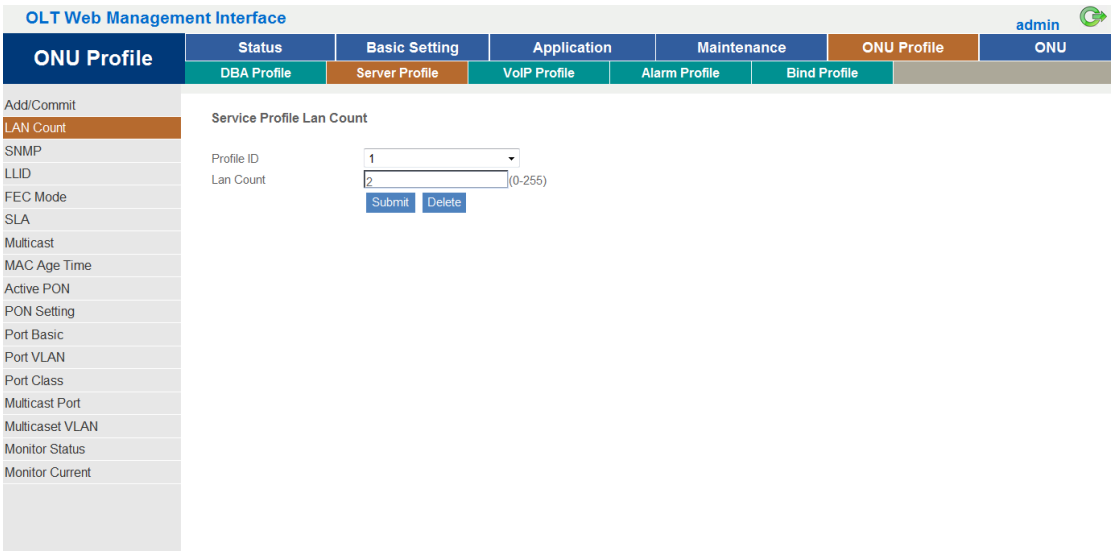


Figure6-4: Server Profile Configuration

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.

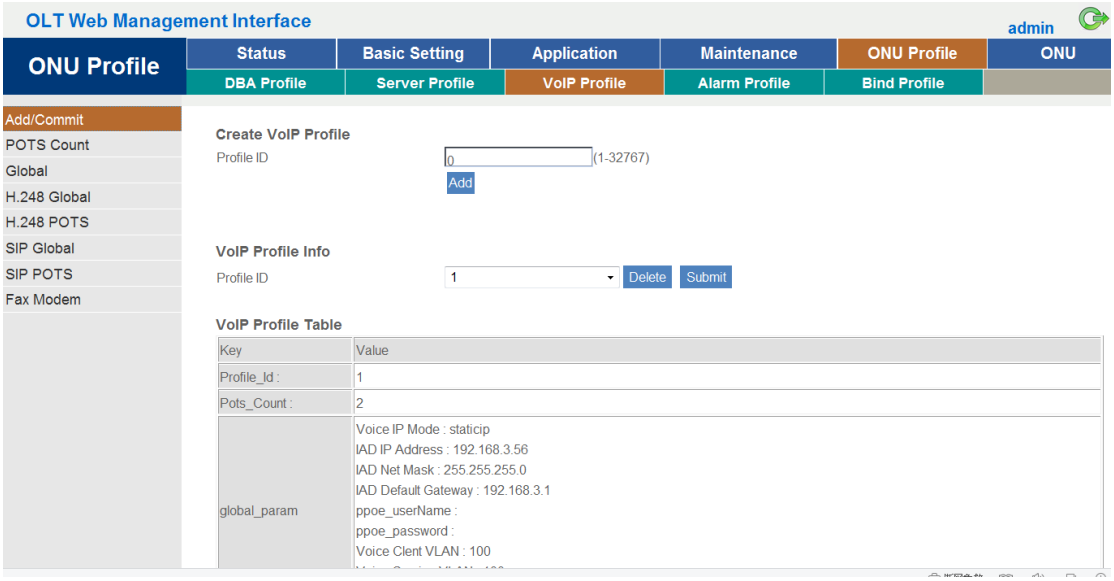


Figure6-5: Add VoIP Profile

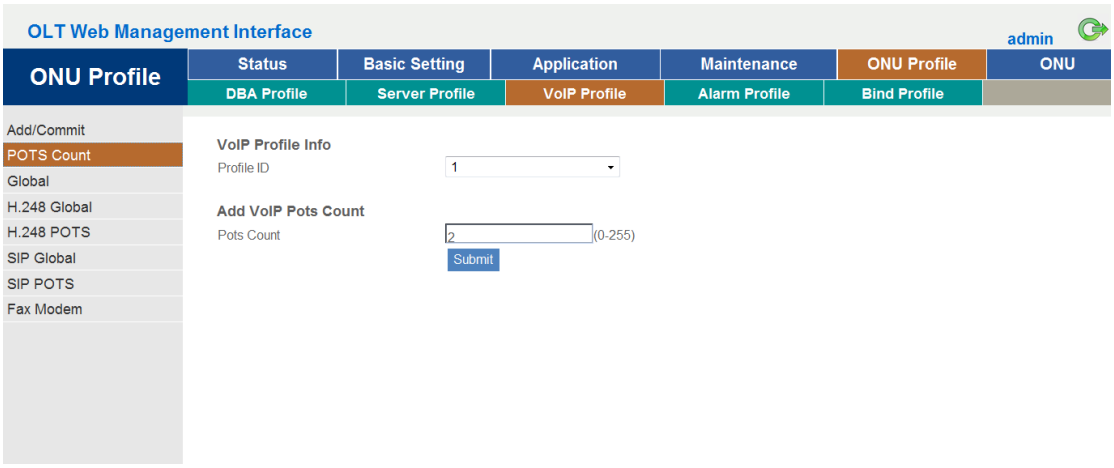


Figure6-6: Server Profile Configuration

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.

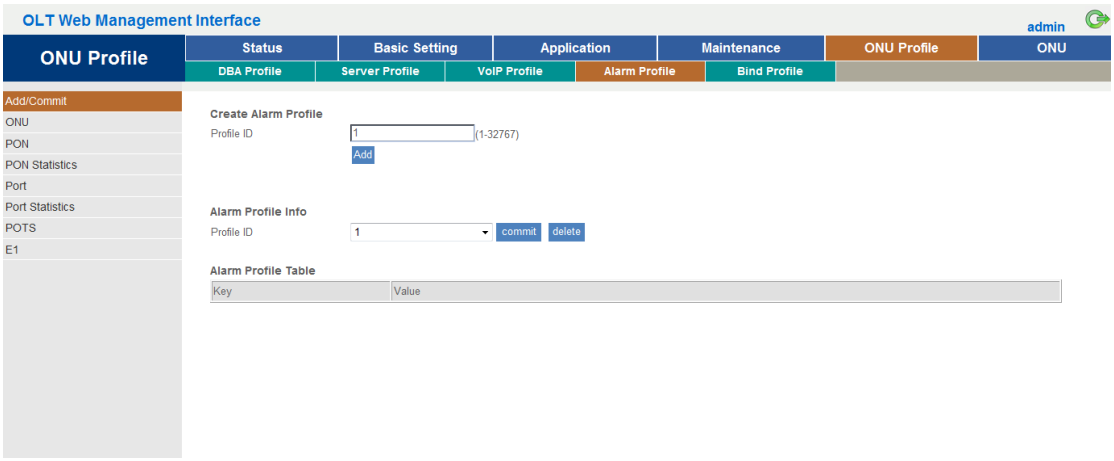


Figure6-7: Add Alarm Profile

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

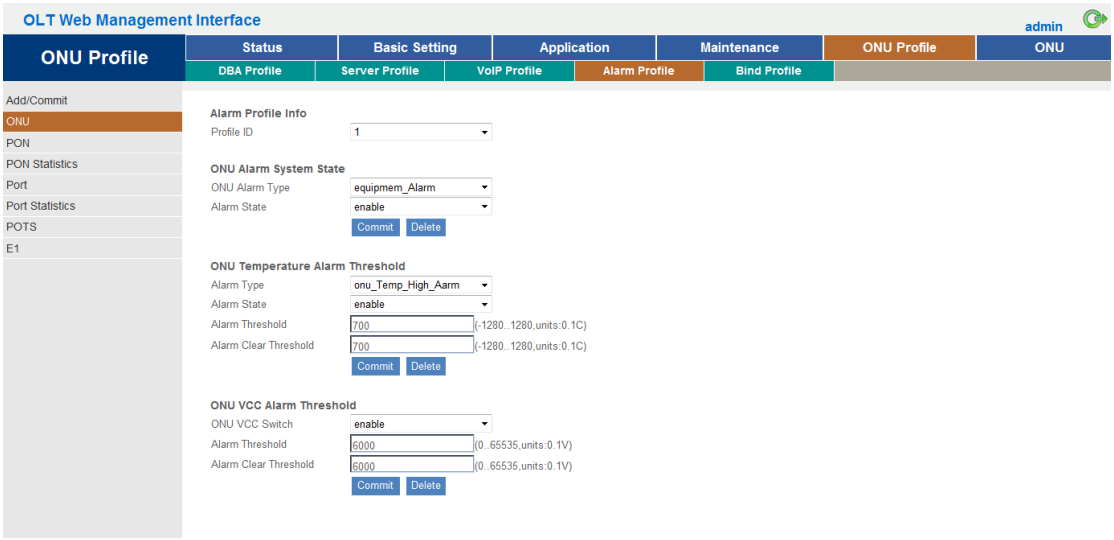


Figure6-8: Alarm Profile Configuration

6.5 Bind Profile

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

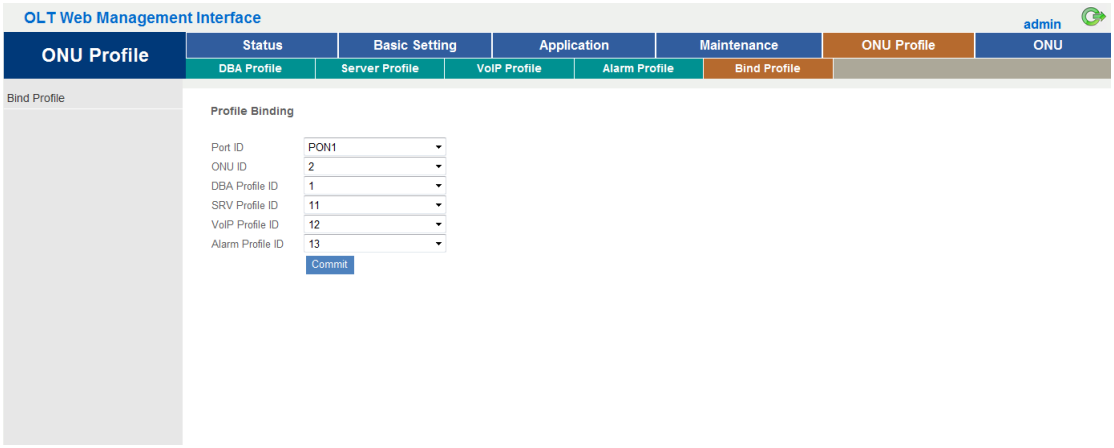


Figure6-9: Bind Profile Configuration

Chapter 7 ONU

This chapter is about configuring a single ONU by OLT.

7.1 Authentication

7.1.1 ONU authentication

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

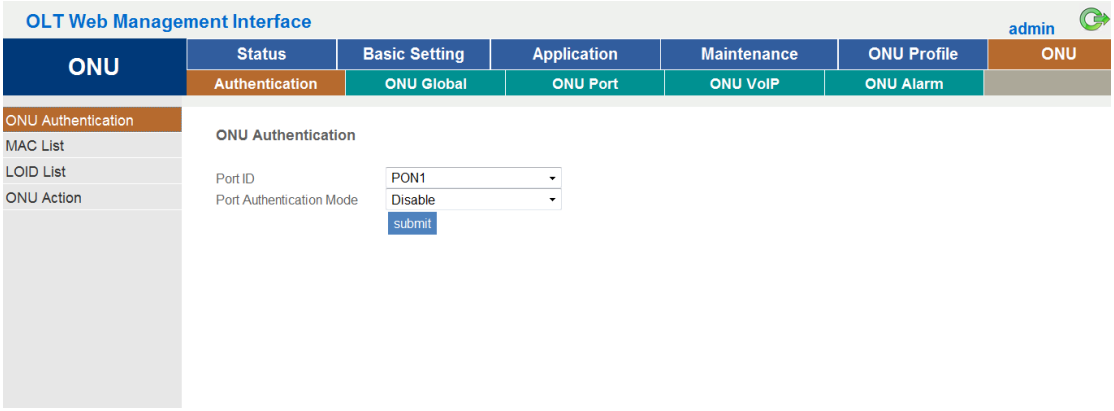


Figure7-1 ONU Authentication

7.1.2 MAC List

When the ONU authentication mode is MAC mode, only ONUs with their MAC on the white list can register to the OLT. The black MAC list ONU cannot register whatever the mode.

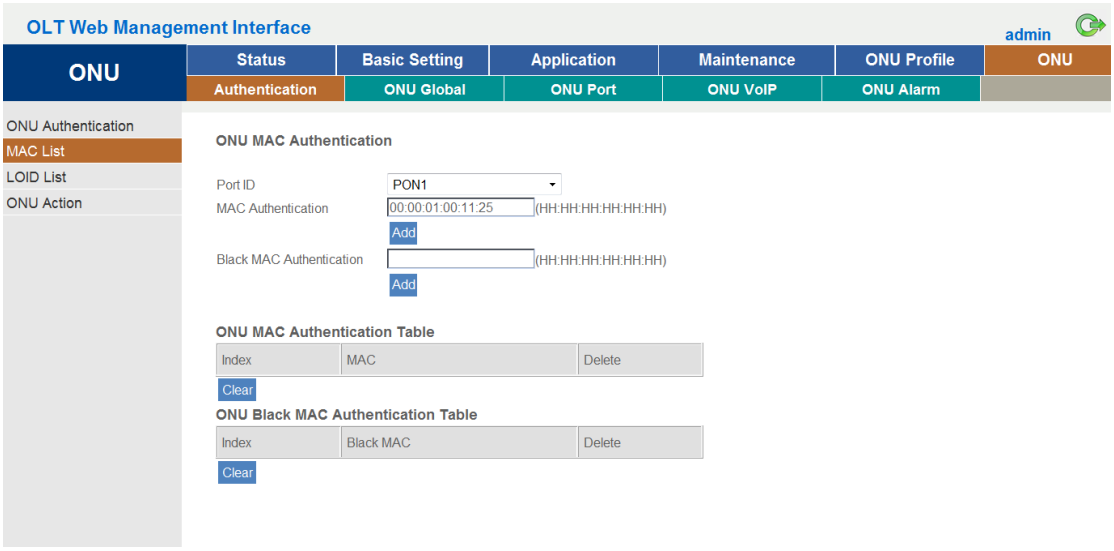


Figure7-2 MAC List

7.1.3 LOID List

When the authentication mode is LOID, only the ONUs on the LOID list can register to the OLT.

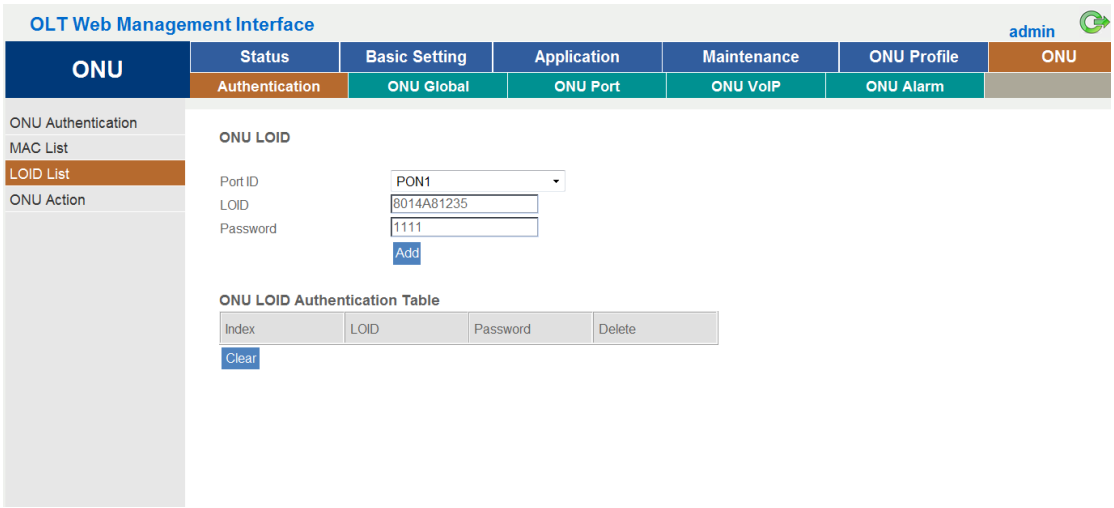


Figure7-3LOID List

7.1.4 ONU Action

Manage the ONU unauth, deregister, reset. User can operate one of the

ONU, or a batch of ONUs in the same PON port.

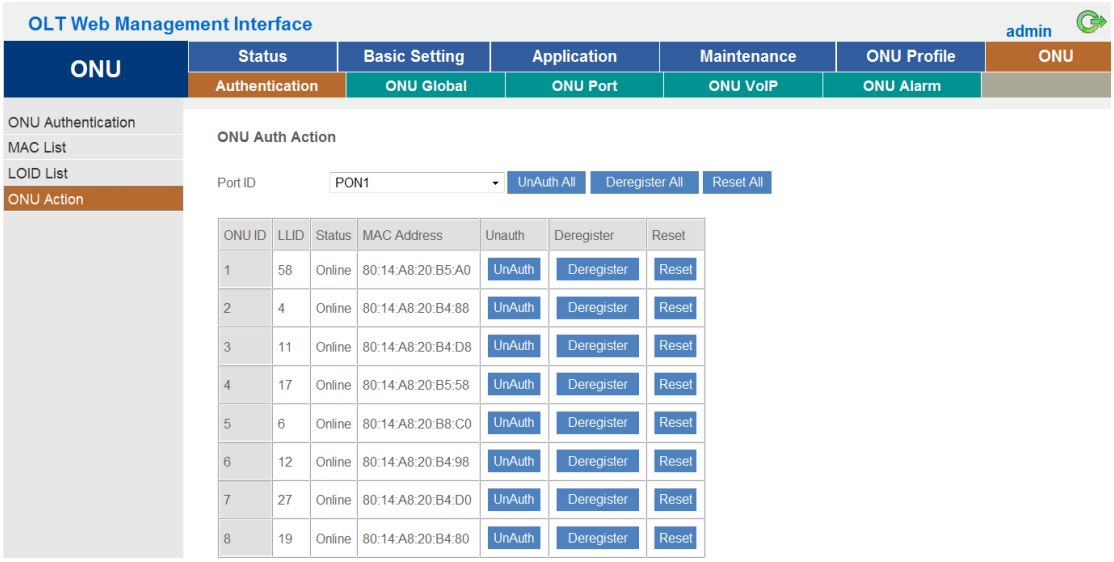


Figure7-4 ONU Action

7.2 ONU Global

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

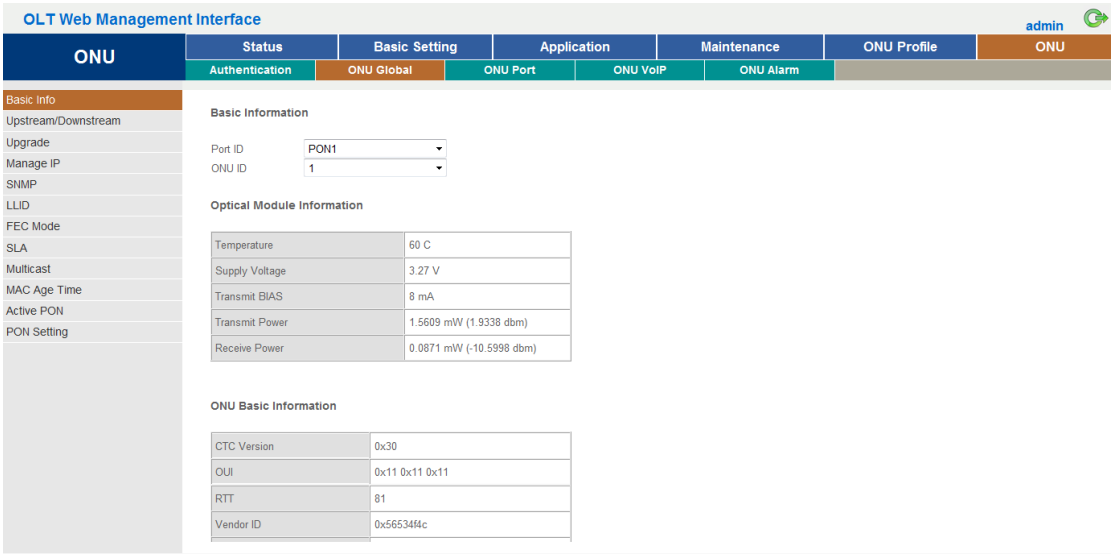


Figure7-5 ONU Global Configuration

7.3 ONU Port

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

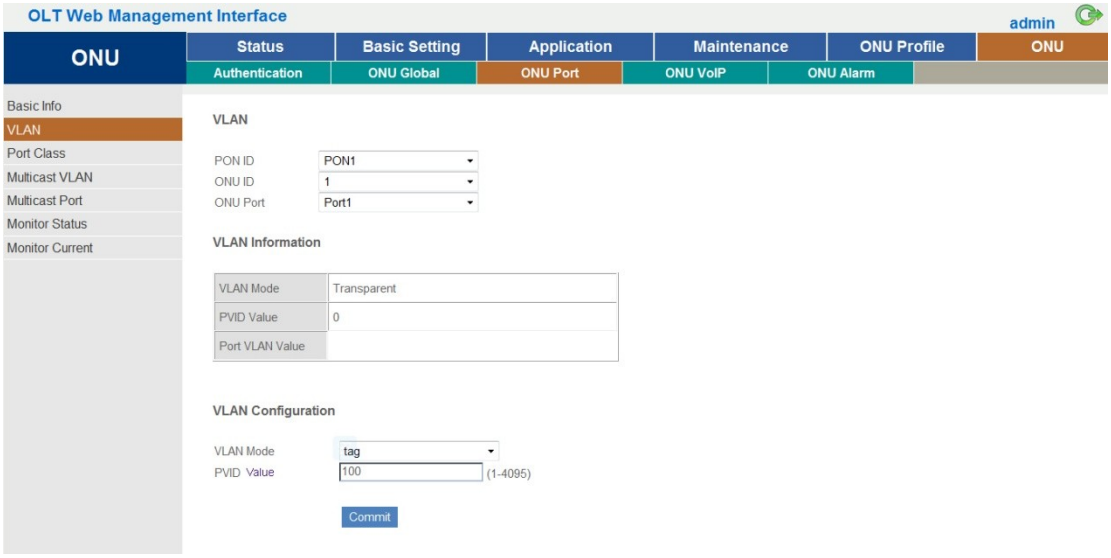


Figure7-6 ONU Port Configuration

7.4 ONU VoIP

Configure the HGU ONU VoIP parameter, including H.248 protocol and SIP protocol configuration.

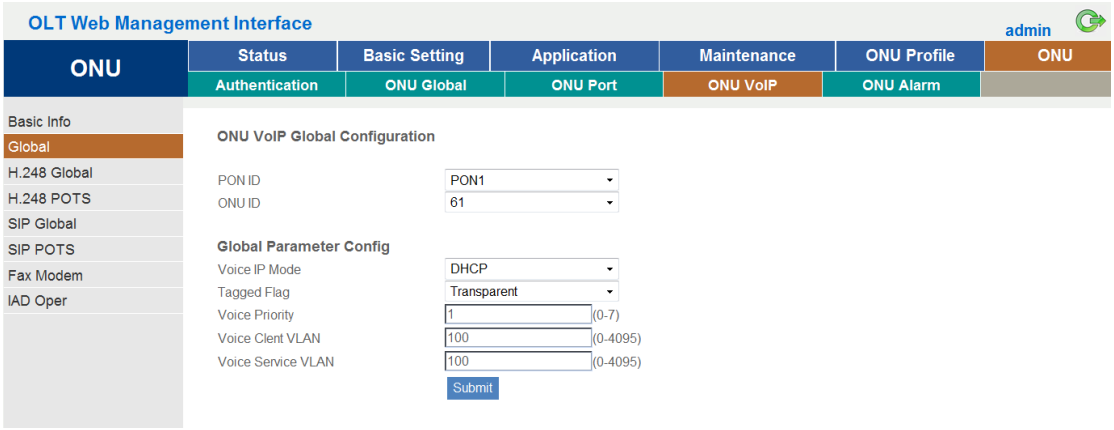


Figure7-7 ONU VoIP Configuration

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.

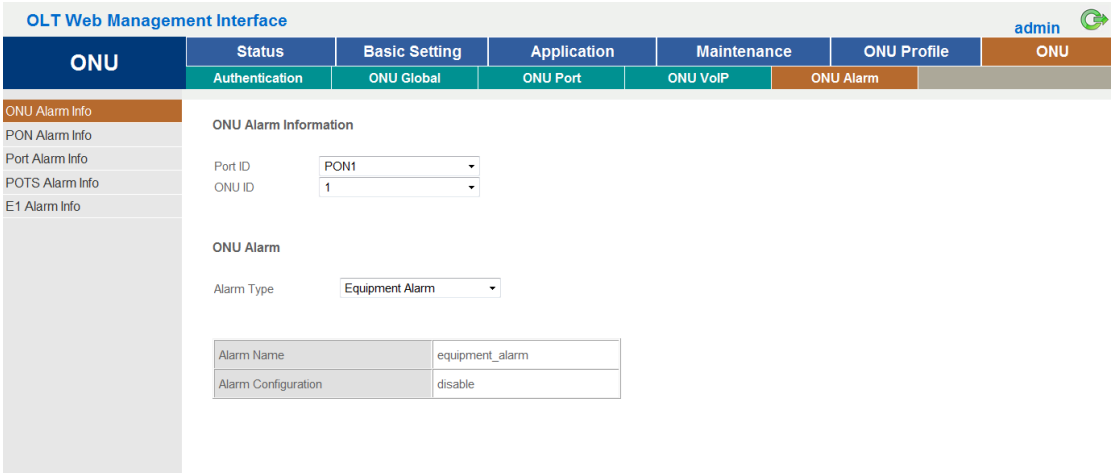


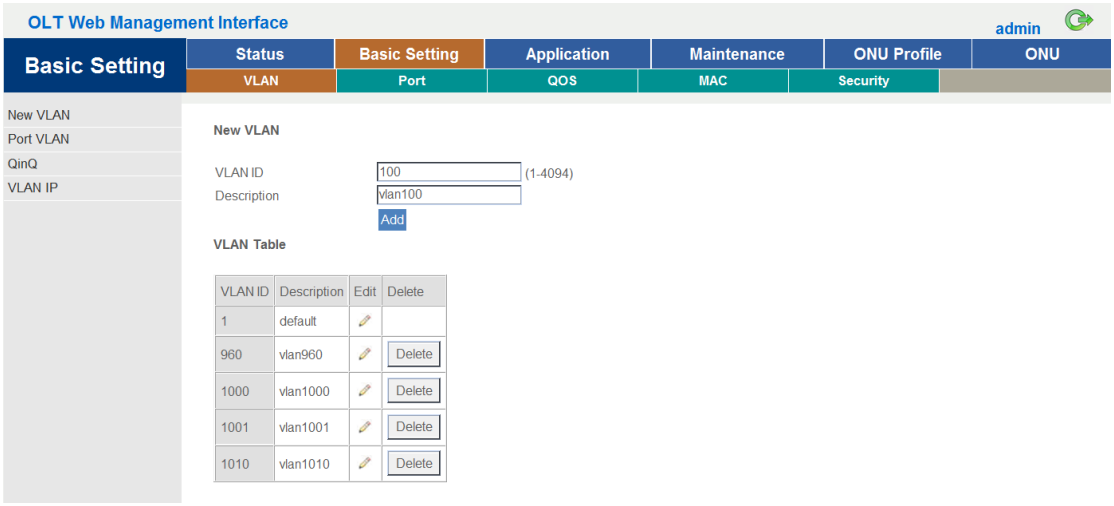
Figure7-8 ONU Alarm Information

Chapter 8 Configuration Examples

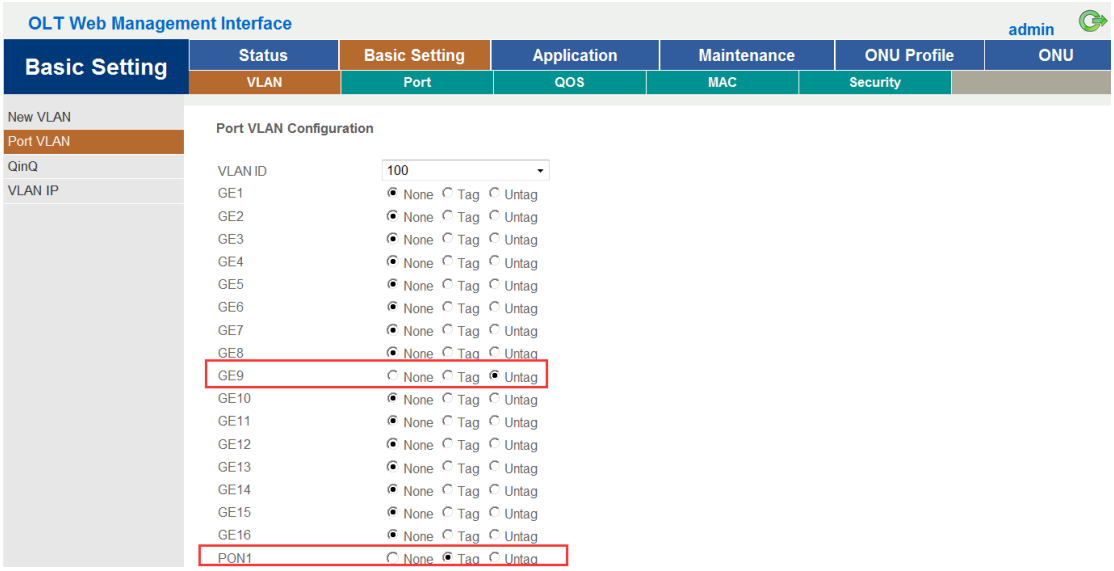
8.1 Internet With VLAN 100

a. OLT configuration

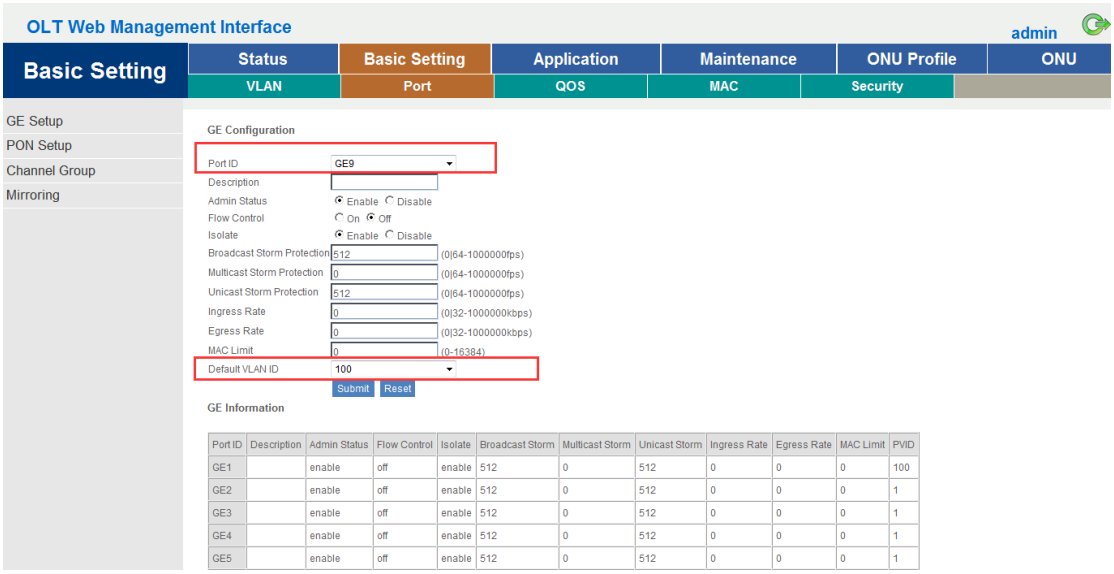
Step 1: Create a new VLAN.



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

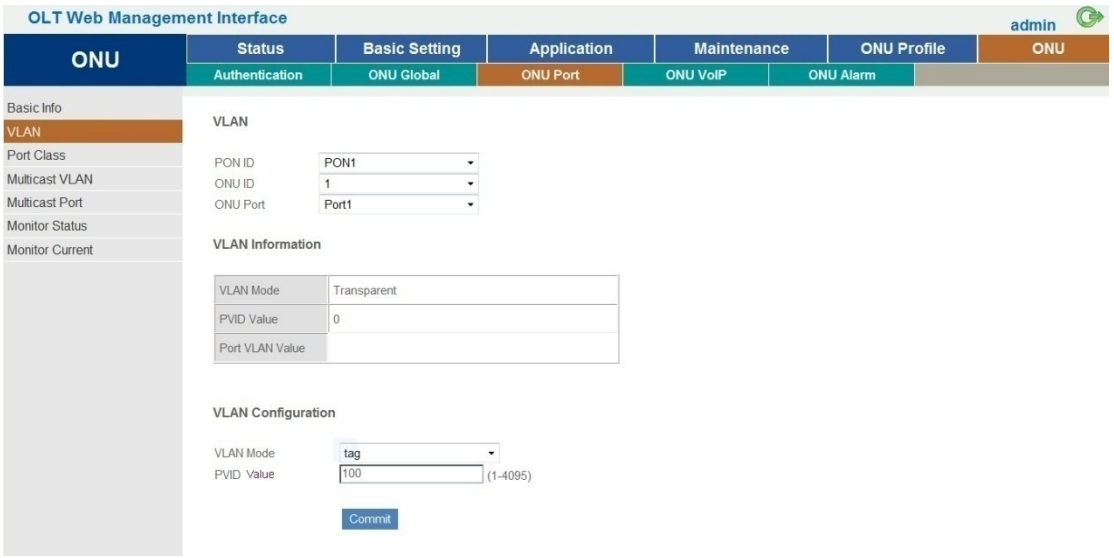


Step 3: Configure the default VLAN ID (PVID) in untag port.



b. ONU configuration

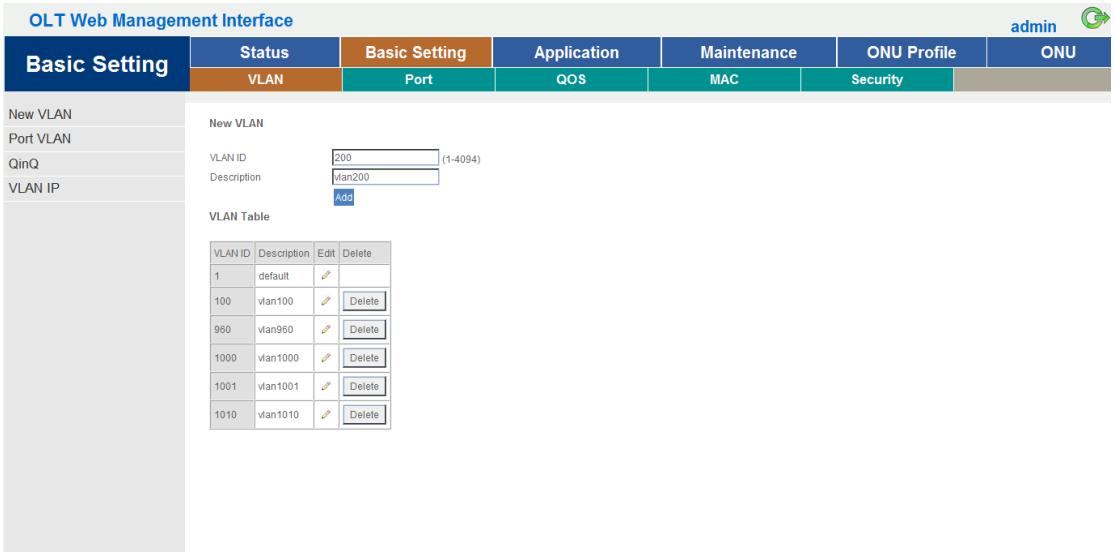
Step 4: Choose the VLAN mode and set the PVID value.



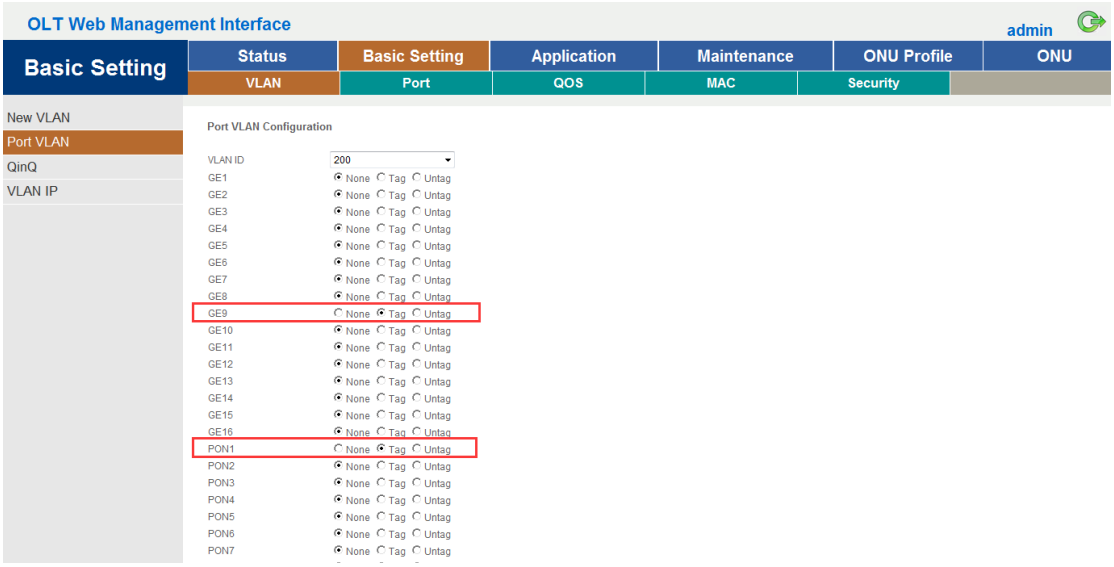
8.2 IPTV With VLAN 200

a. OLT configuration

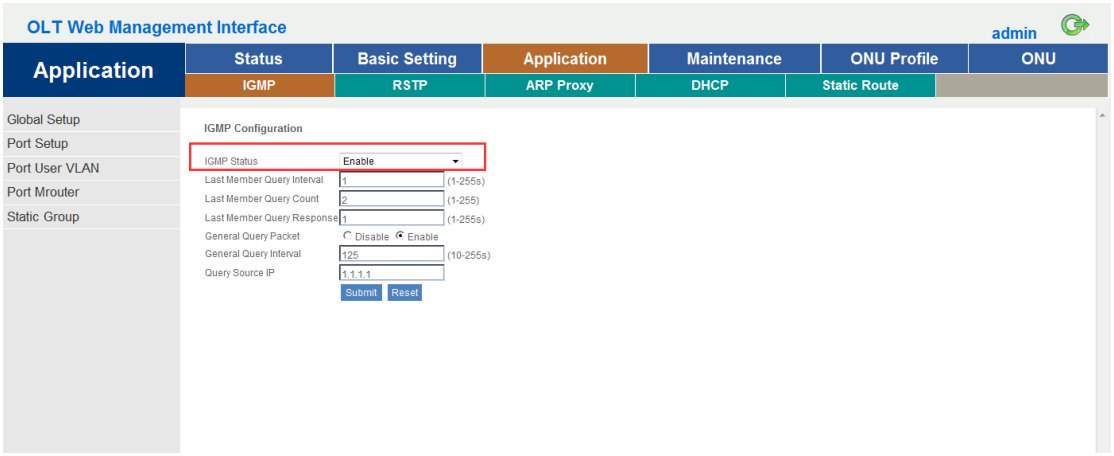
Step 1: Create a new VLAN.



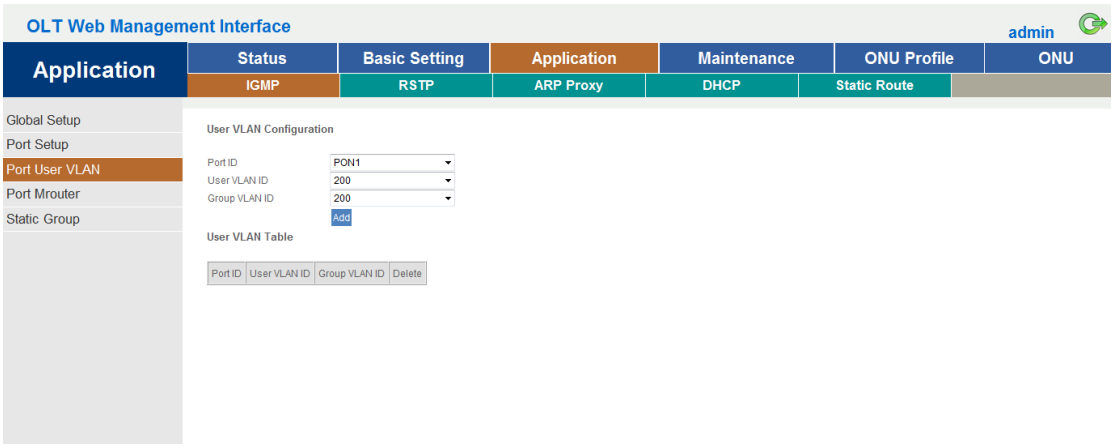
Step 2:Add the VLAN to GE port and PON port.



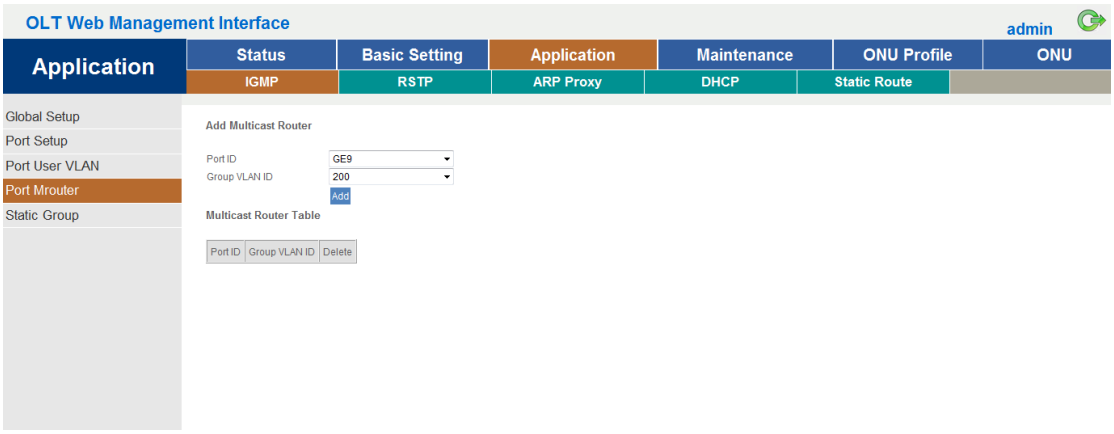
Step 3: Enable the IGMP status.



Step 4: Add the IGMP user VLAN and group VLAN

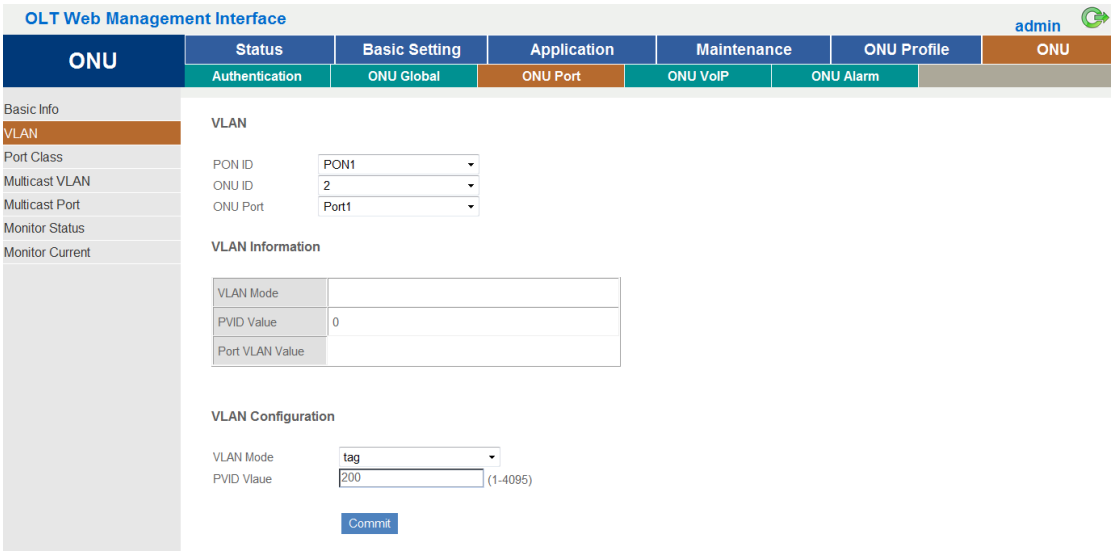


Step 5: Add the M-router in GE port

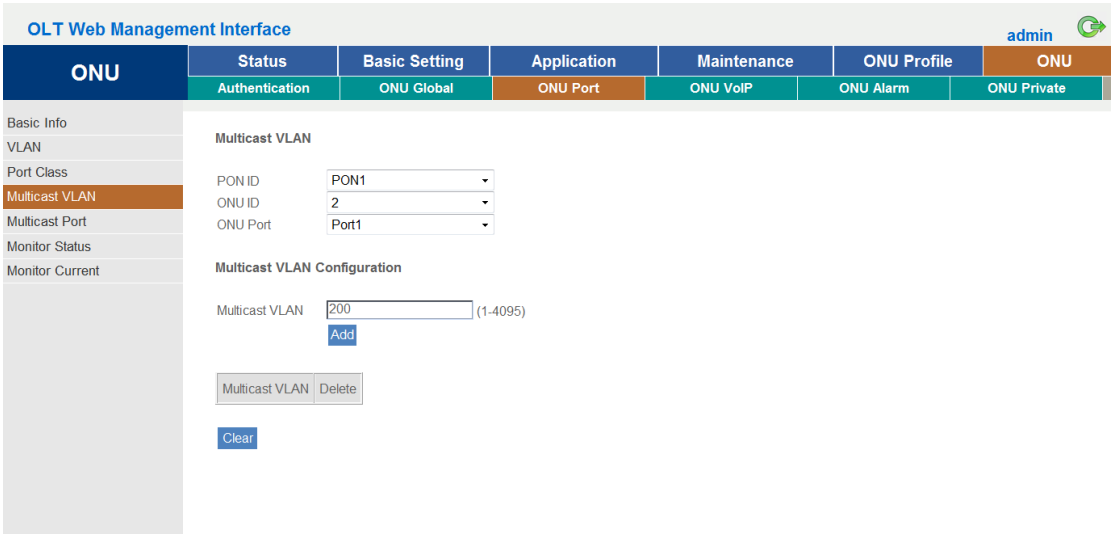


b. ONU configuration

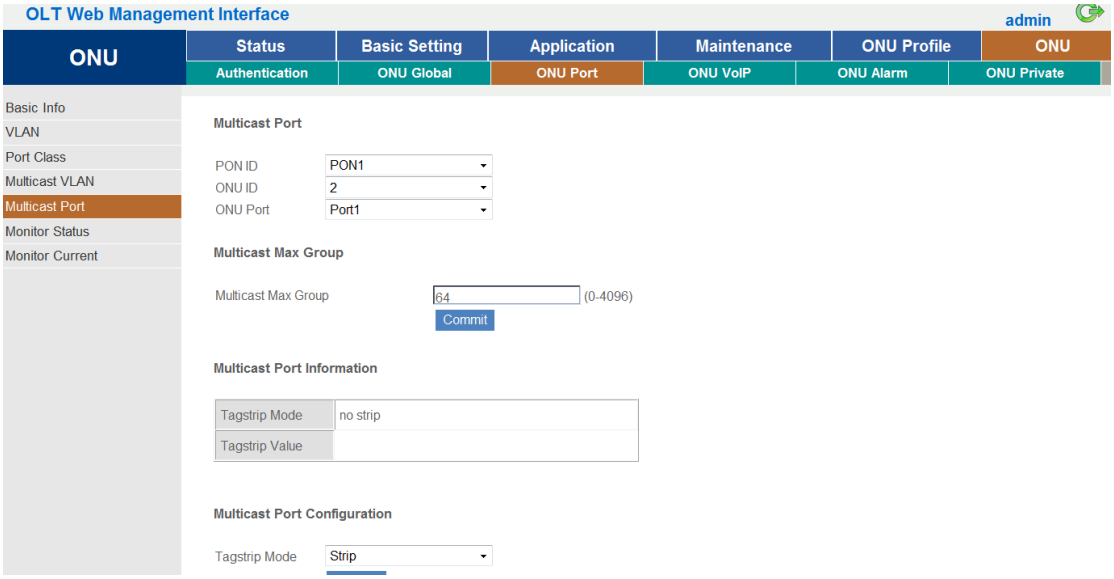
Step 6: Choose the VLAN mode and set the PVID value.



Step 7: Configuration multicast VLAN



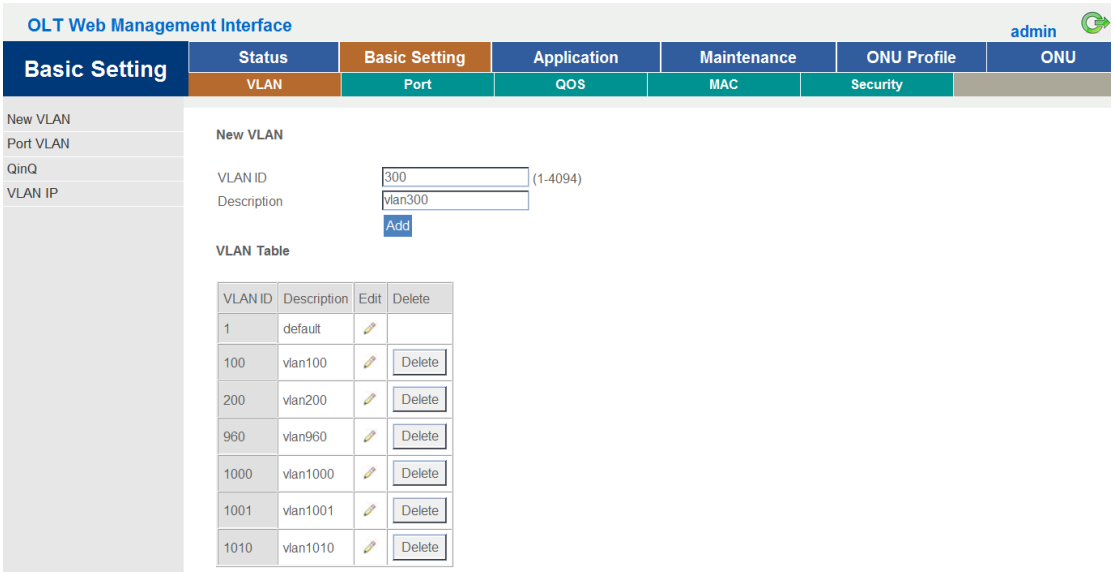
Step 8: Configure the IGMP VLAN tagstrip mode



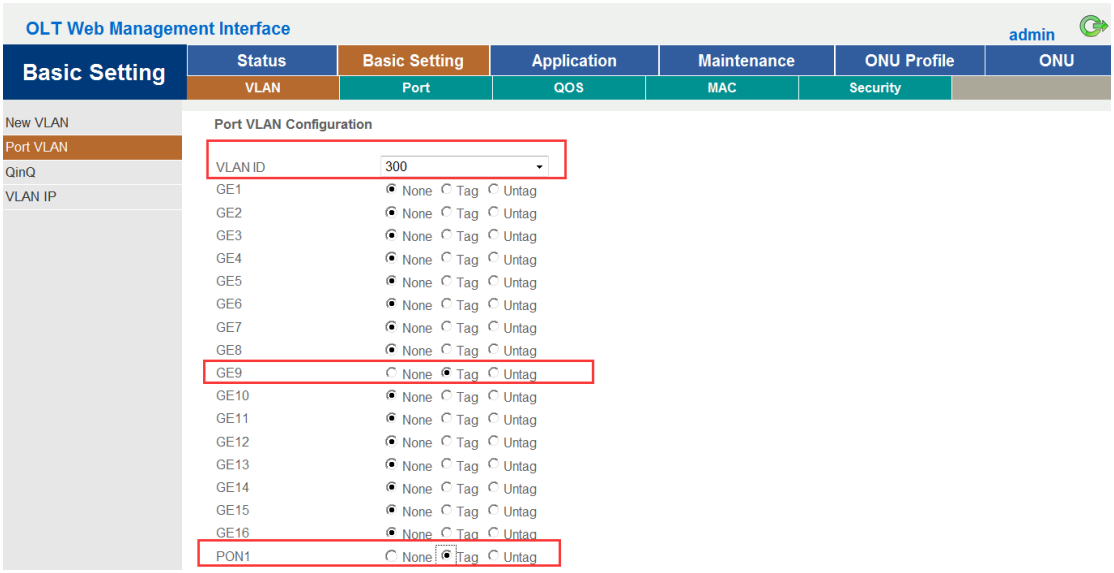
8.3 VoIP With VLAN 300

a. OLT Configuration

Step 1: Create a new VLAN

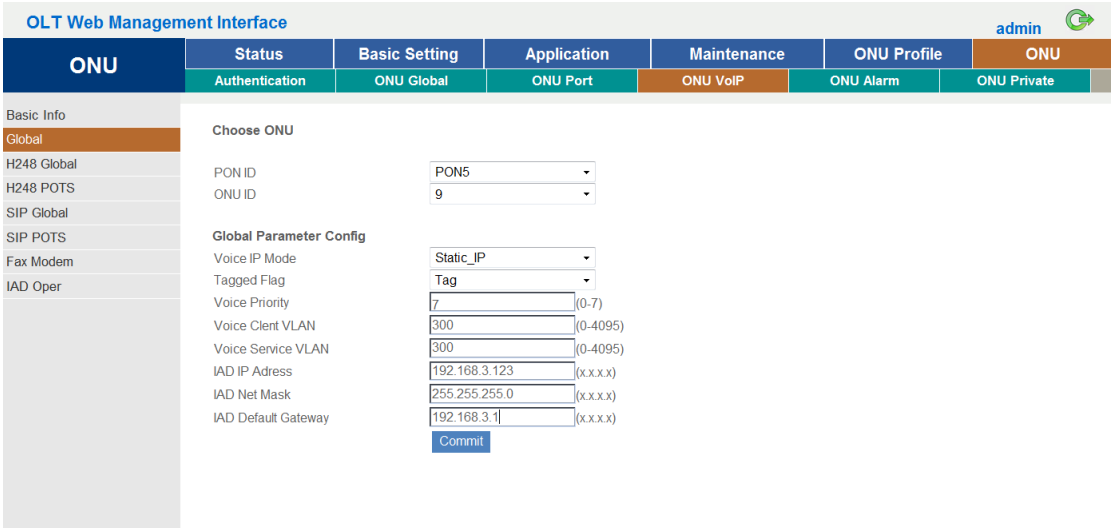


Step 2: Add the VLAN to GE port and PON port.

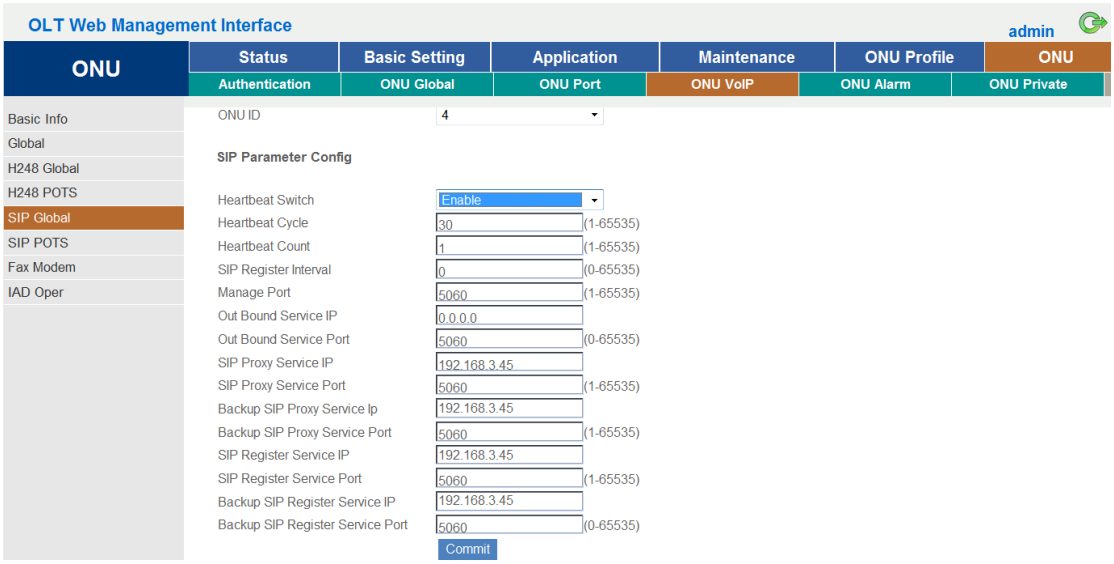


b. ONU Configuration

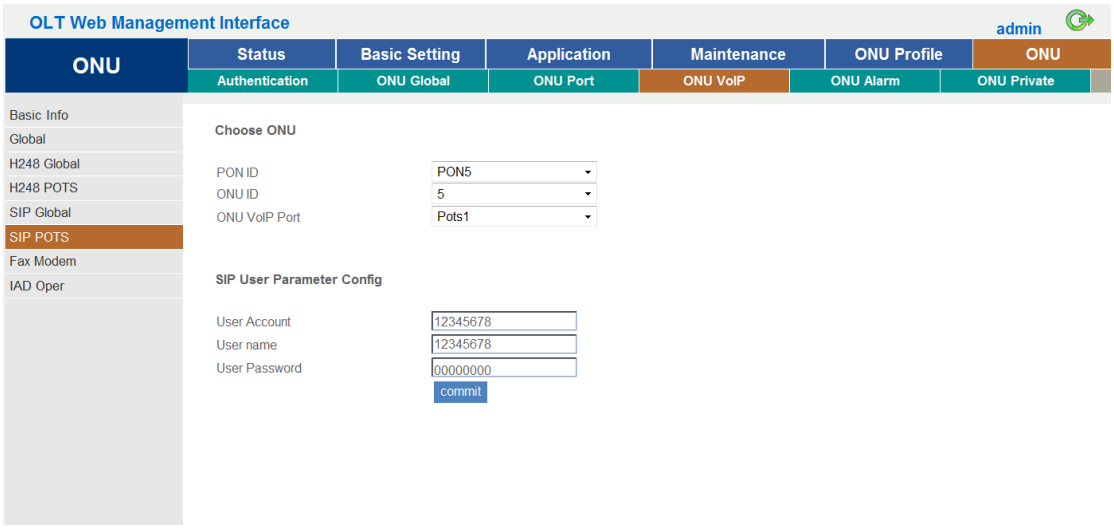
Step 3: Configure the VoIP global parameter



Step 4: Setup the SIP configuration



Step 5: Fill in the user account and password



Thank you!