PT-E2500 Series
EPON OLT

WEB GUIDE

Contents

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 to1.25Gbps.
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.

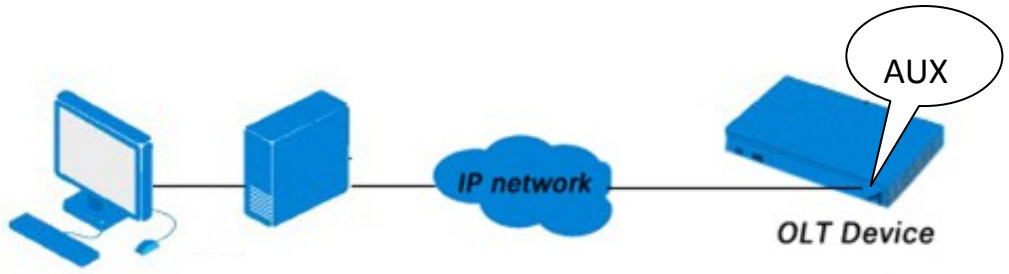
Maintenance interface	Console port AUX port	Console port is used for local maintenance. AUX port is used for remote maintenance.

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.

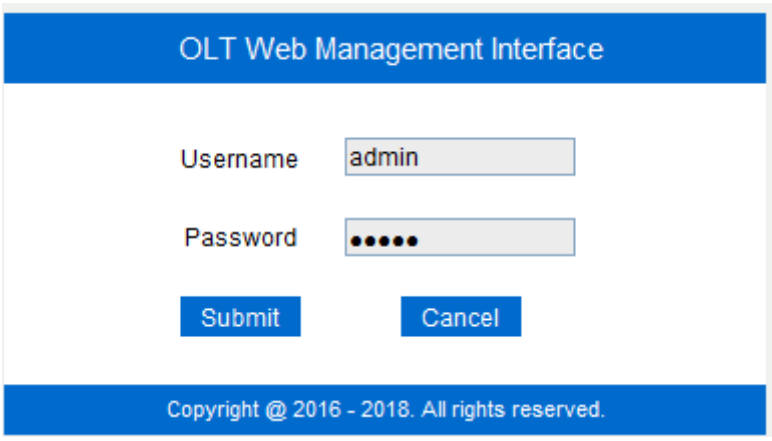


Figure 2-1: Login

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.

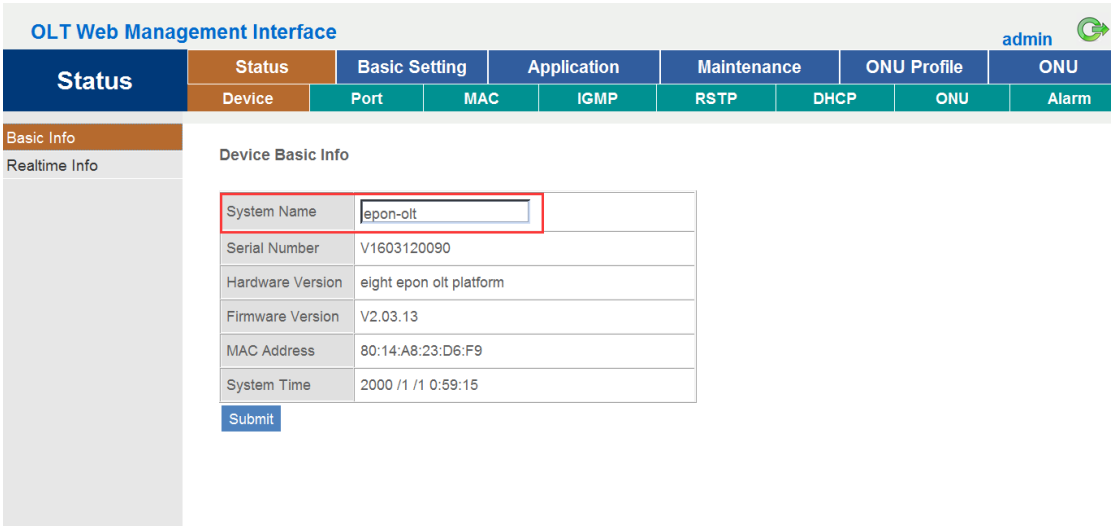


Figure 2-2: Device Information

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.

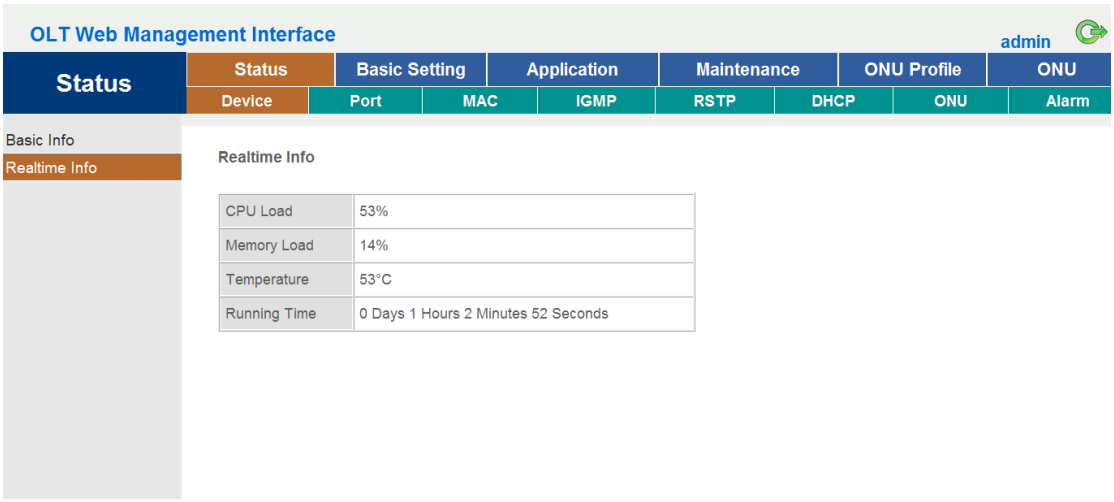
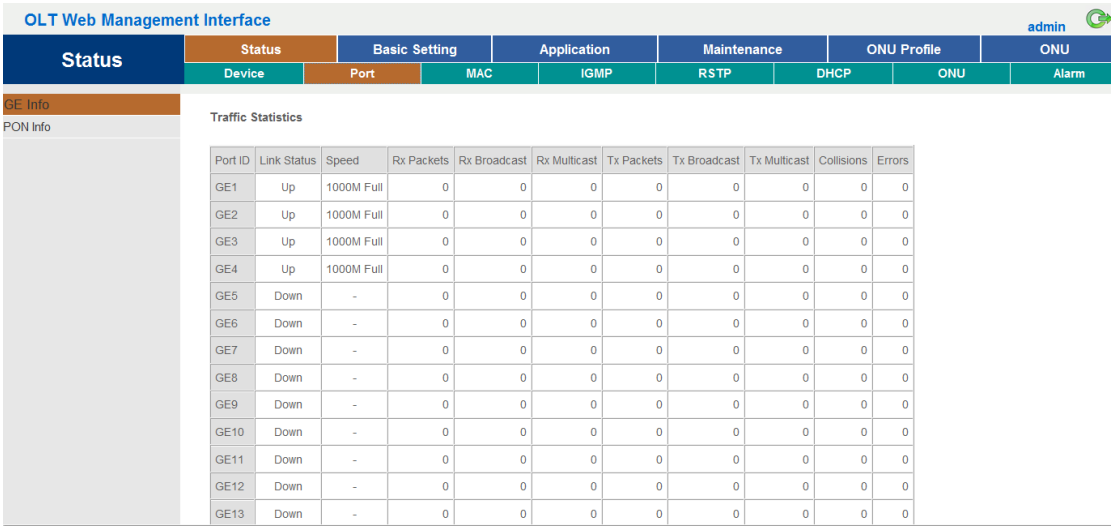


Figure 2-3: Device Real-time Information

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.



Port ID	Link Status	Speed	Rx Packets	Rx Broadcast	Rx Multicast	Tx Packets	Tx Broadcast	Tx Multicast	Collisions	Errors
GE1	Up	1000M Full	0	0	0	0	0	0	0	0
GE2	Up	1000M Full	0	0	0	0	0	0	0	0
GE3	Up	1000M Full	0	0	0	0	0	0	0	0
GE4	Up	1000M Full	0	0	0	0	0	0	0	0
GE5	Down	-	0	0	0	0	0	0	0	0
GE6	Down	-	0	0	0	0	0	0	0	0
GE7	Down	-	0	0	0	0	0	0	0	0
GE8	Down	-	0	0	0	0	0	0	0	0
GE9	Down	-	0	0	0	0	0	0	0	0
GE10	Down	-	0	0	0	0	0	0	0	0
GE11	Down	-	0	0	0	0	0	0	0	0
GE12	Down	-	0	0	0	0	0	0	0	0
GE13	Down	-	0	0	0	0	0	0	0	0

Figure 2-4: GE Port Information

The PON port will show the optical parameters exactly.

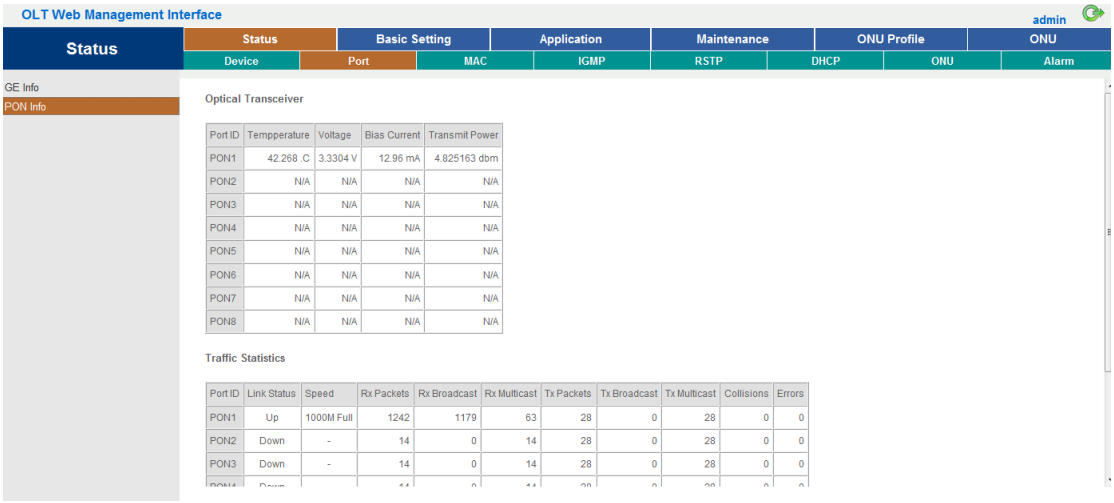


Figure 2-5: PON Port Information

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.

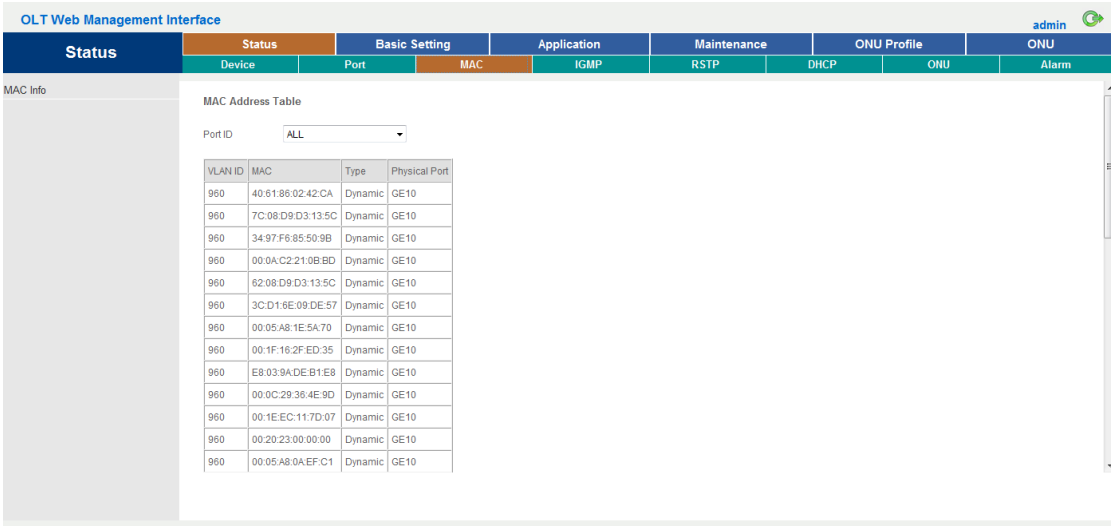


Figure 2-6: MAC Table

2.2.4 IGMP

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

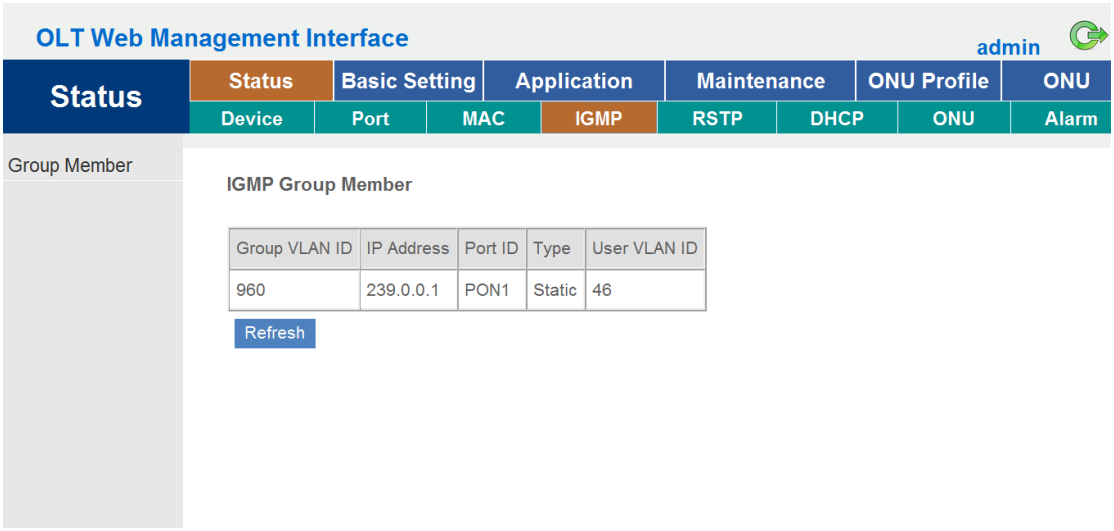


Figure 2-7: IGMP Group Member

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.

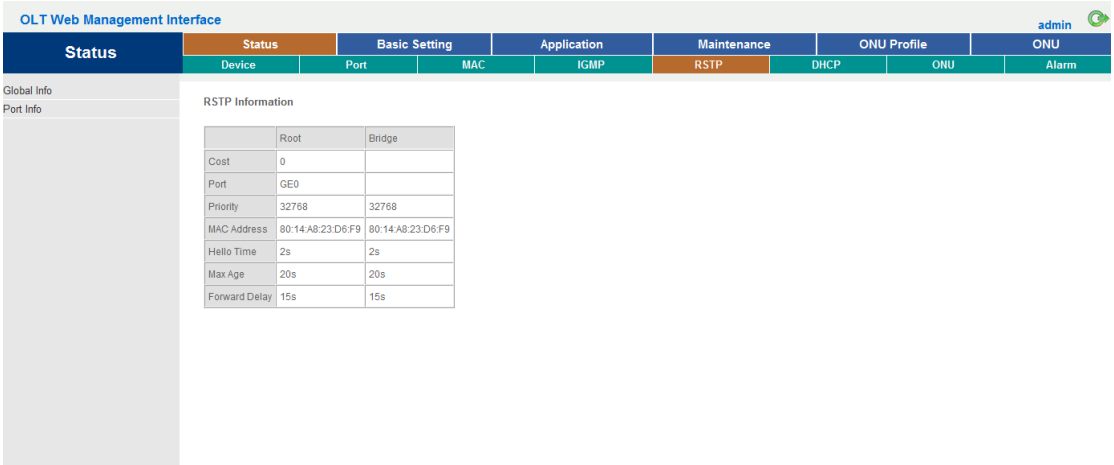


Figure 2-8: RSTP Global Information

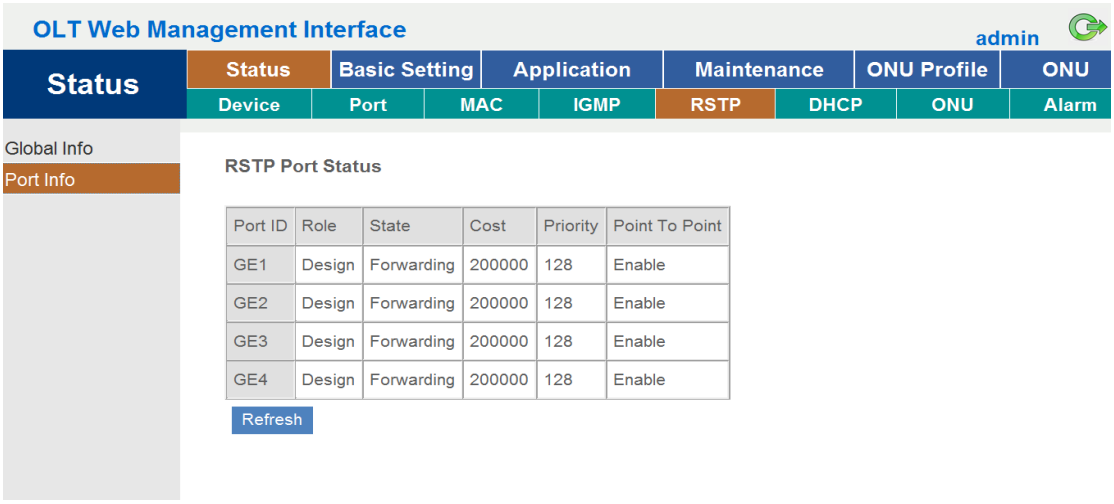


Figure 2-9: RSTP Port Information

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.

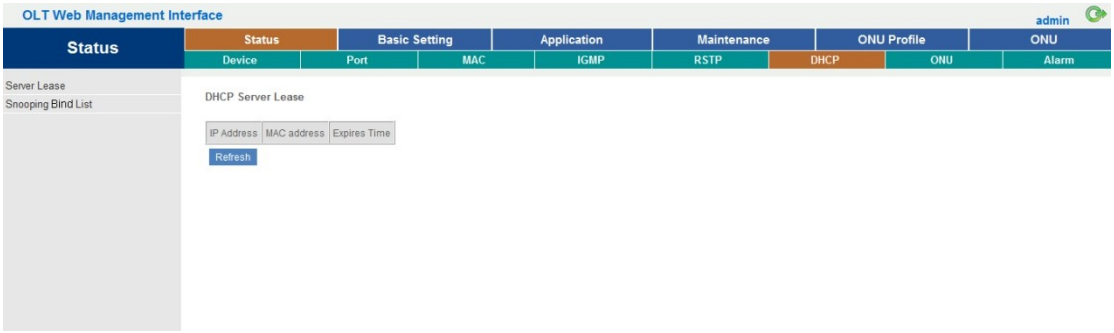


Figure 2-10: DHCP Server list

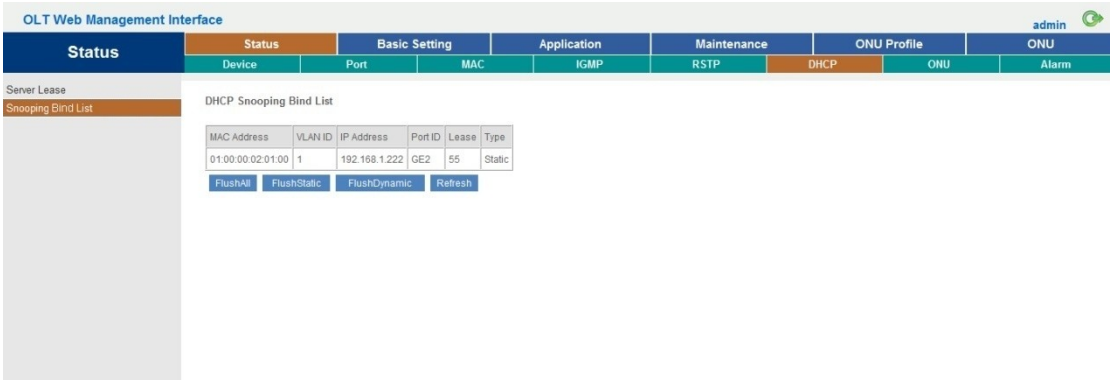
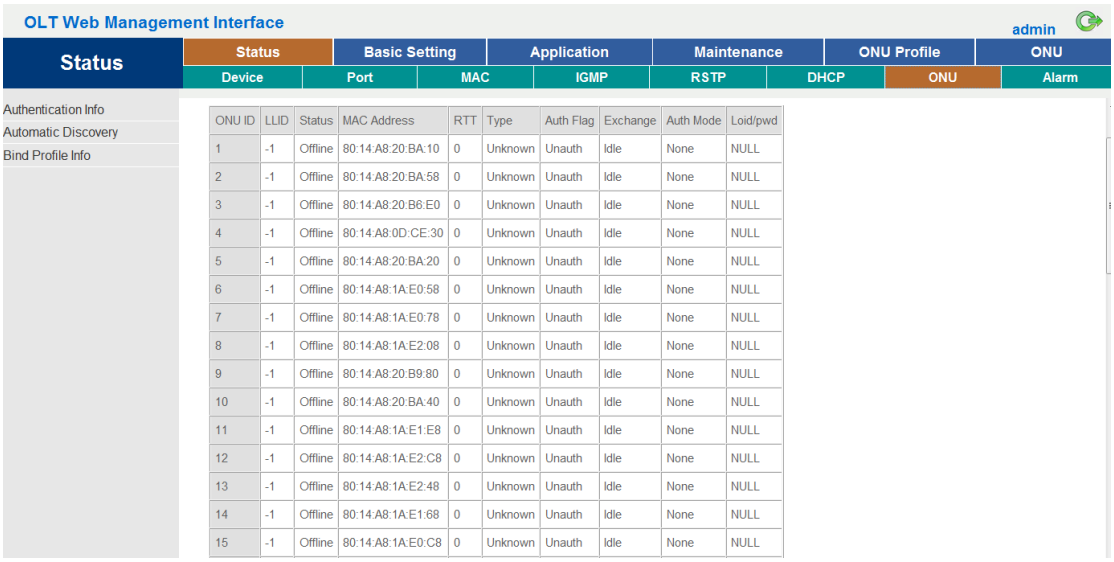


Figure 2-11: DHCP Snooping list

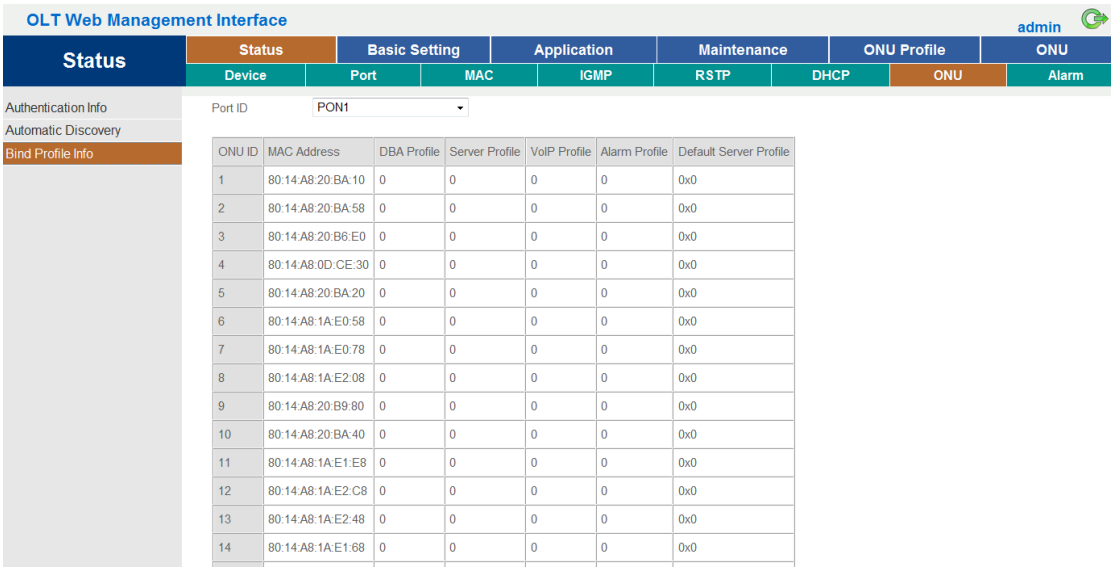
2.2.7 ONU

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.



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

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

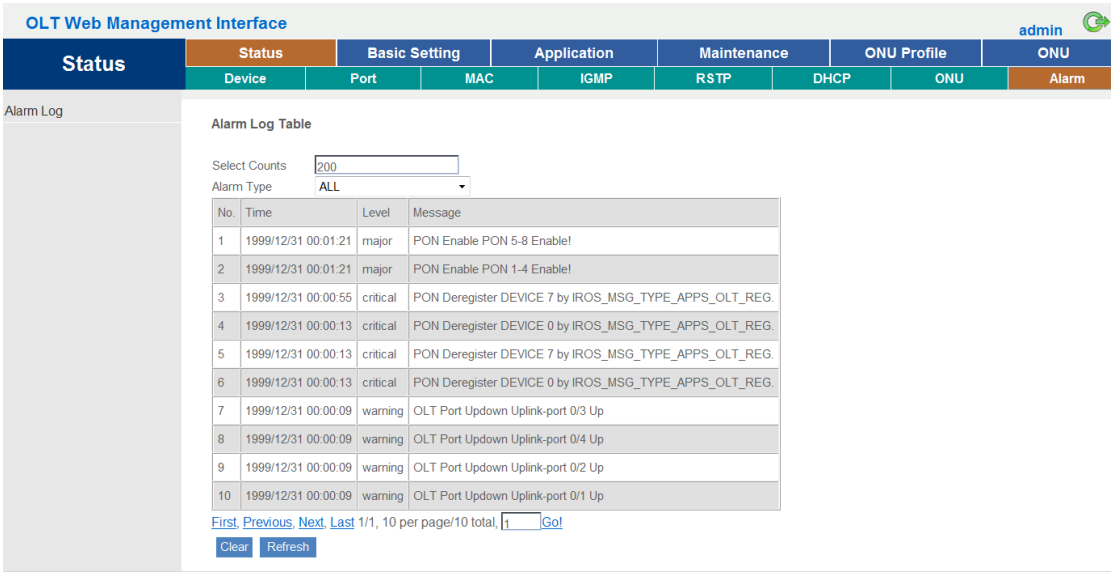


Figure 2-14: Alarm Events

Chapter 3 OLT Basic Setting

This section is about the basic service of OLT configuration.

3.1VLAN

3.1.1 New VLAN

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

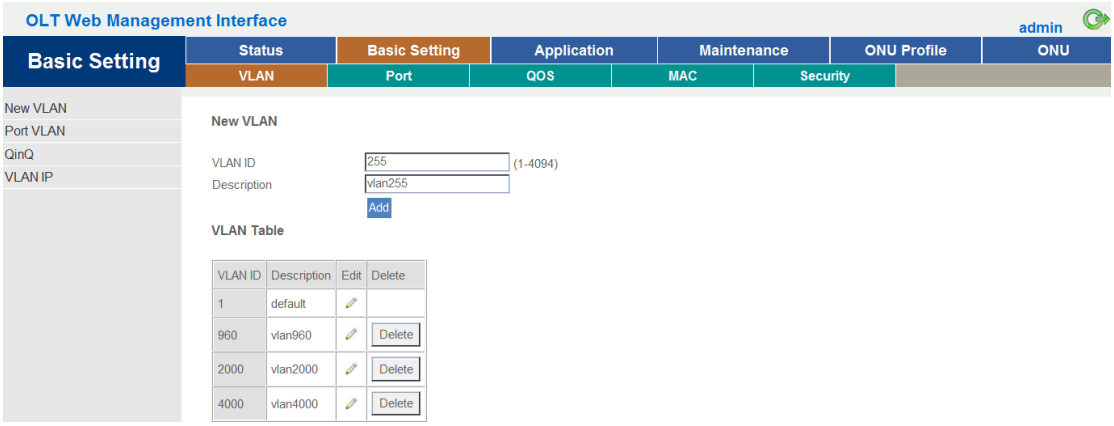


Figure 3-1: Create New VLAN

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.

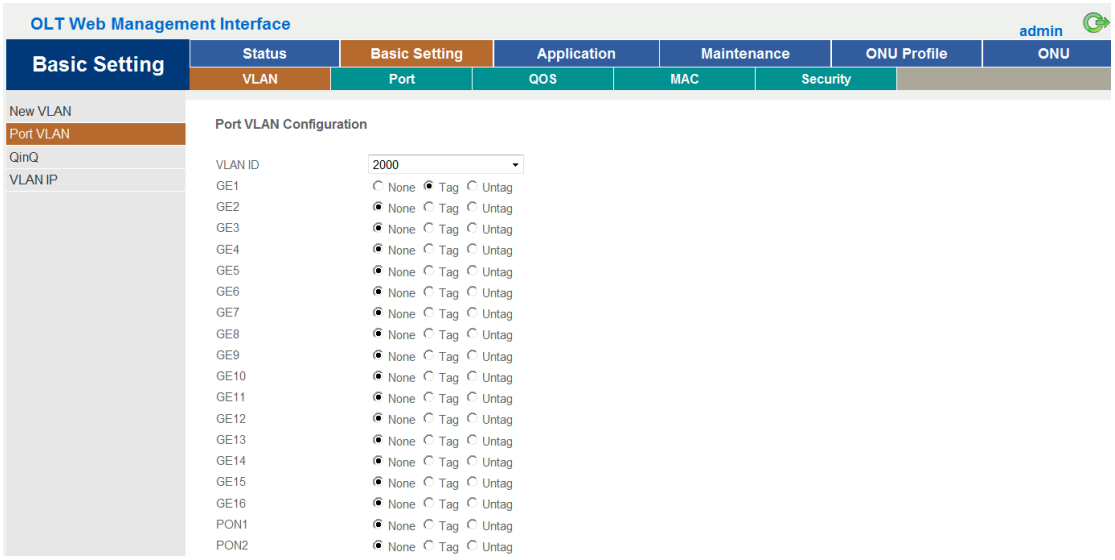


Figure 3-2: Add Port VLAN

3.1.3 QinQ

Configure the port mode VLAN translation or QinQ.

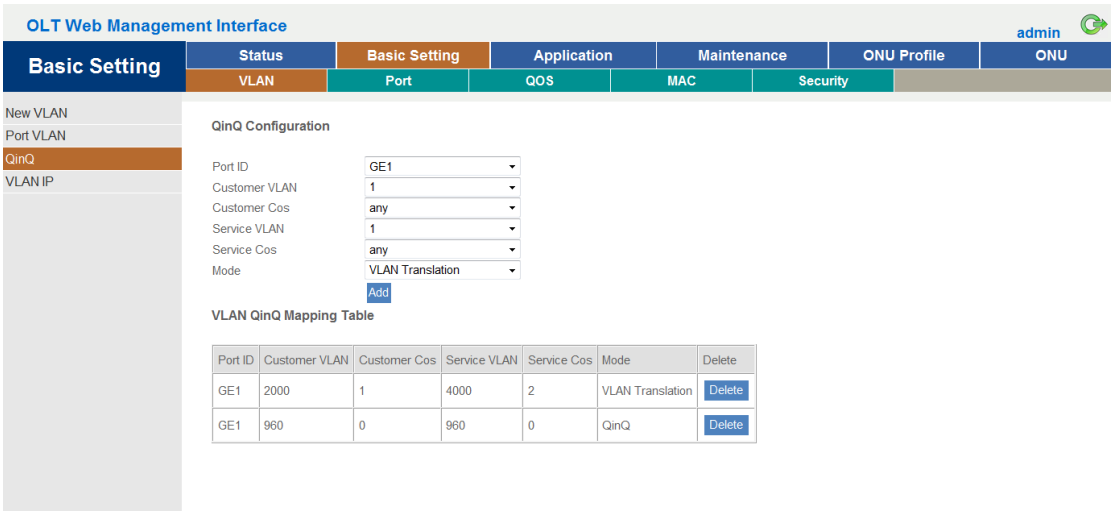


Figure 3-3: QinQ Configuration

3.1.4 VLAN IP

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

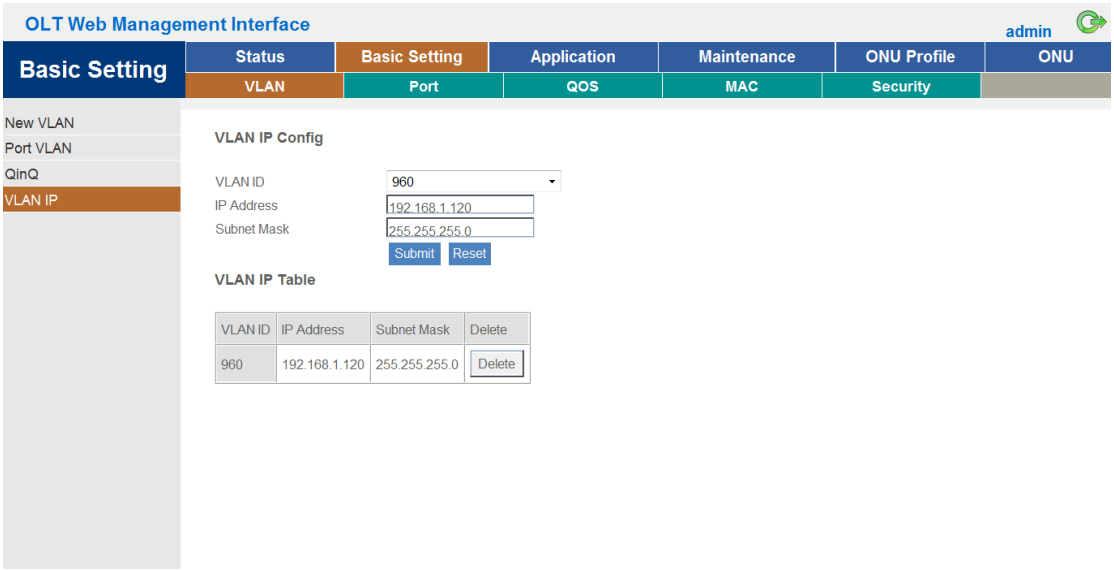


Figure 3-4: VLAN IP

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...

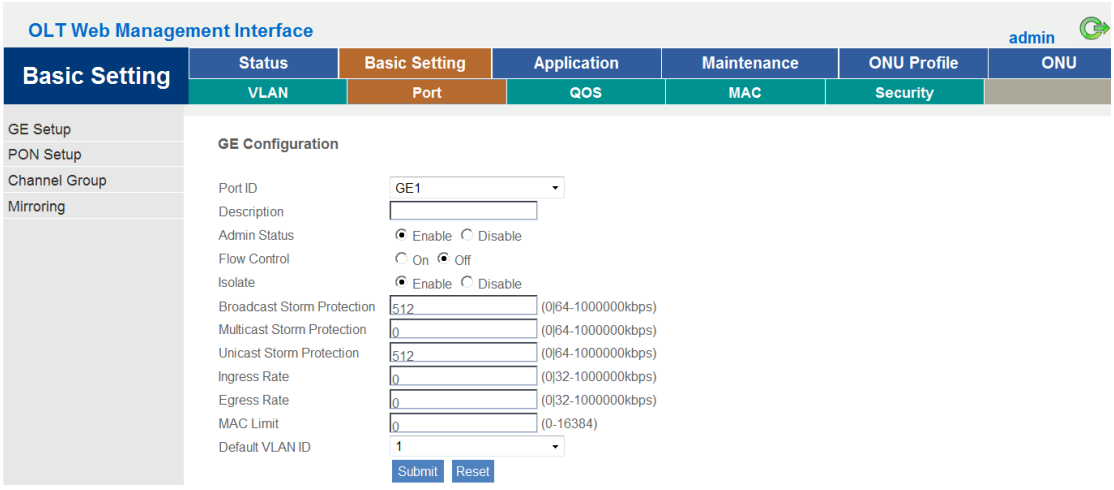


Figure3-5: GE/PON Setup

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.

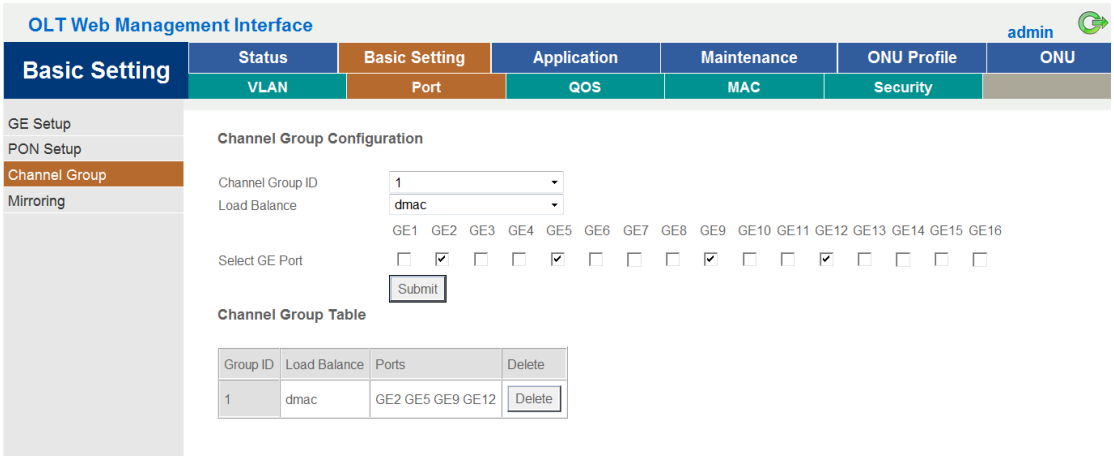


Figure 3-6: Create Channel Groups

3.2.3 Mirroring

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

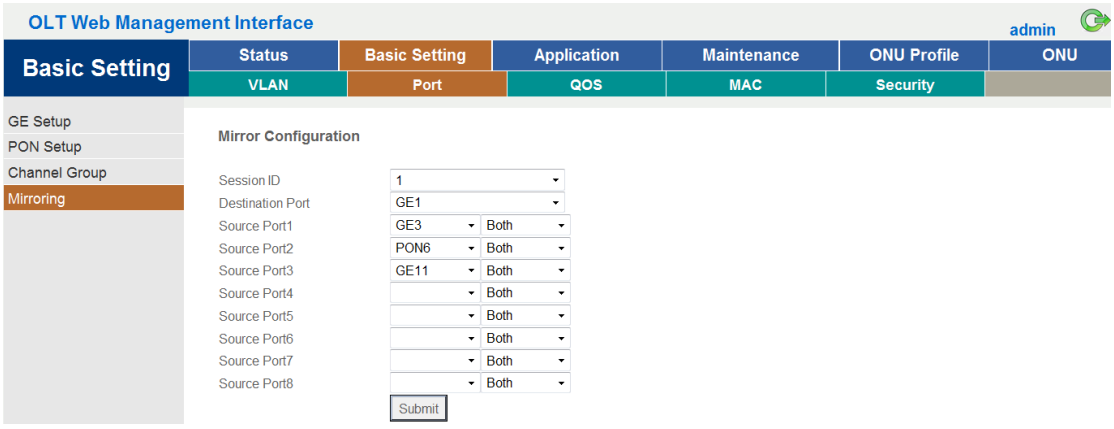


Figure 3-7: Mirroring Groups

3.3 QOS

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

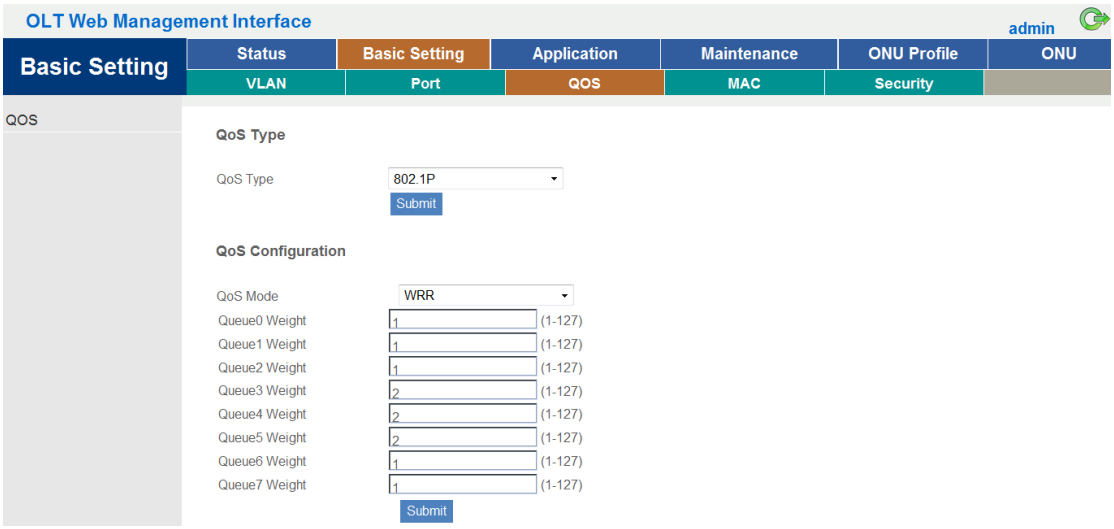


Figure 3-8: QOS Configuration

3.4 MAC

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

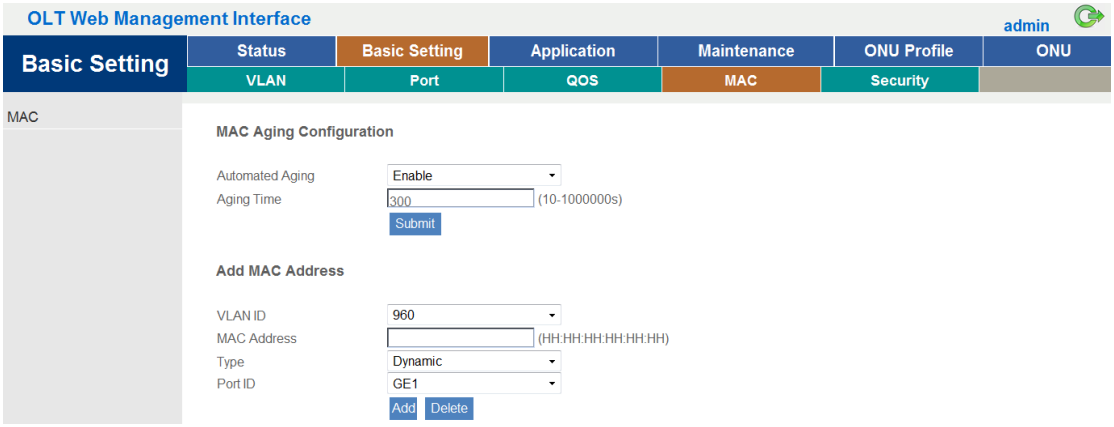


Figure 3-9: MAC Configuration

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.

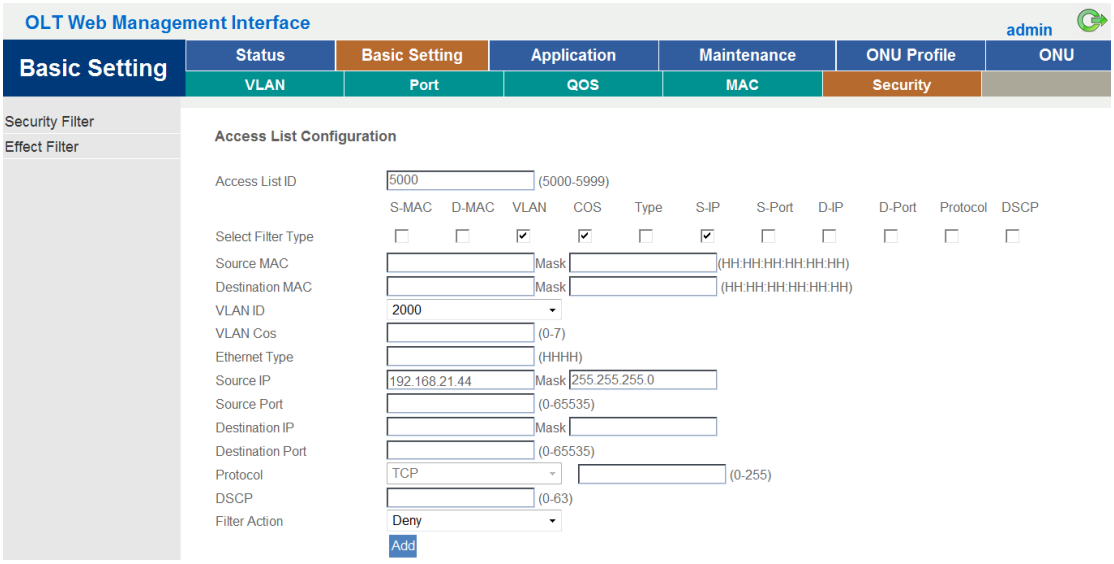


Figure 3-10: Security Filter

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.

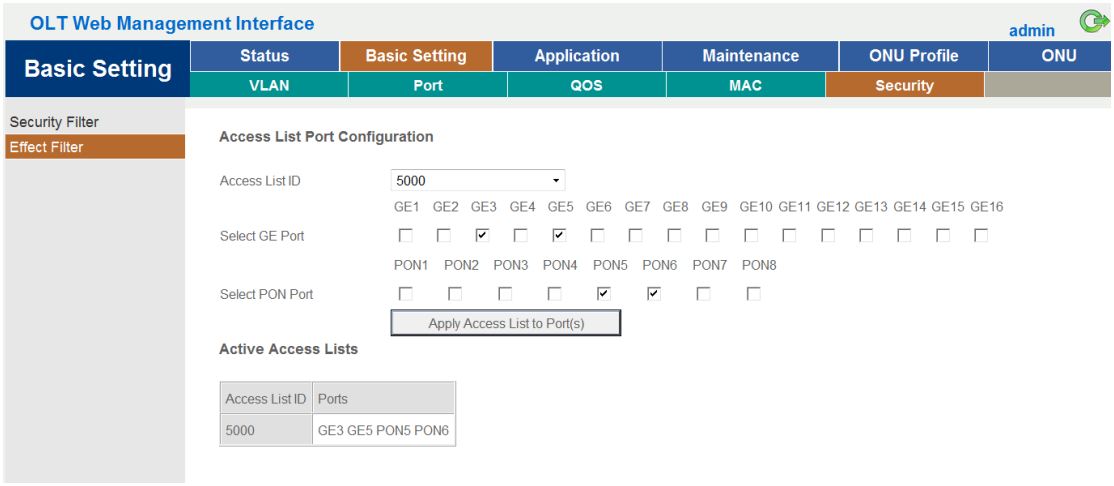


Figure 3-11: Bind Security Filter

Chapter 4 Application

This chapter is about the protocol service configuration.

4.1 IGMP

4.1.1 Global Setup

Enable the IGMP snooping mode.

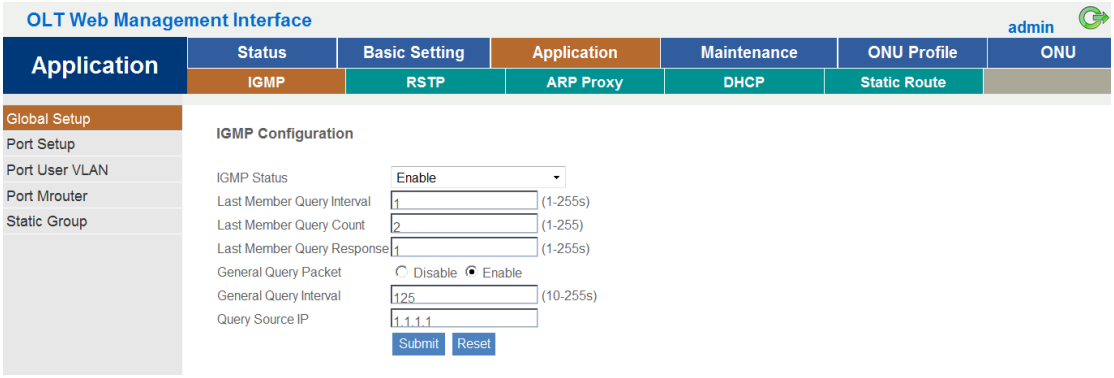


Figure 4-1: IGMP Snooping Status

4.1.2 Port Setup

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

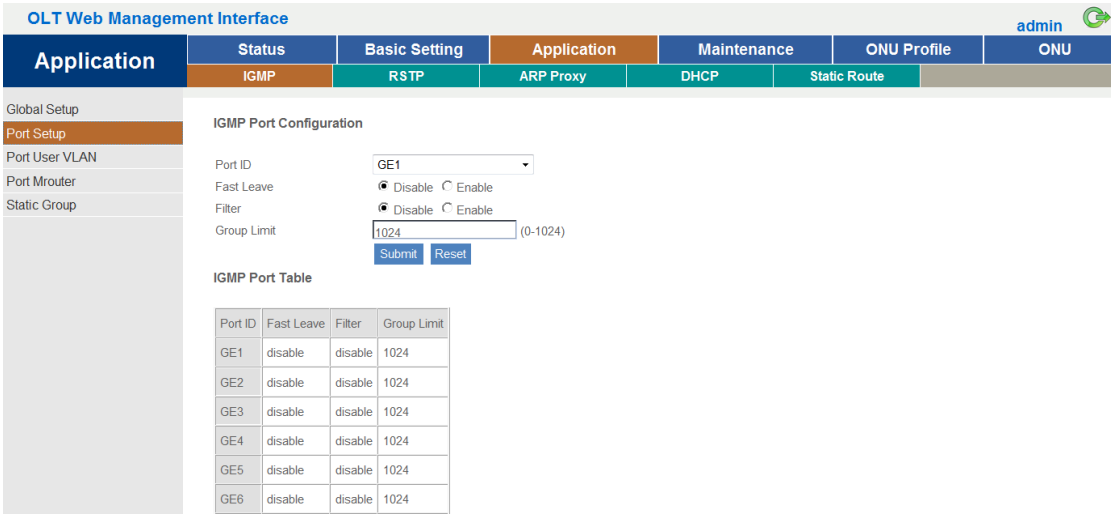


Figure 4-2: IGMP Port Setting

4.1.3 Port User VLAN

IGMP VLAN configure the user VLAN and group VLAN.

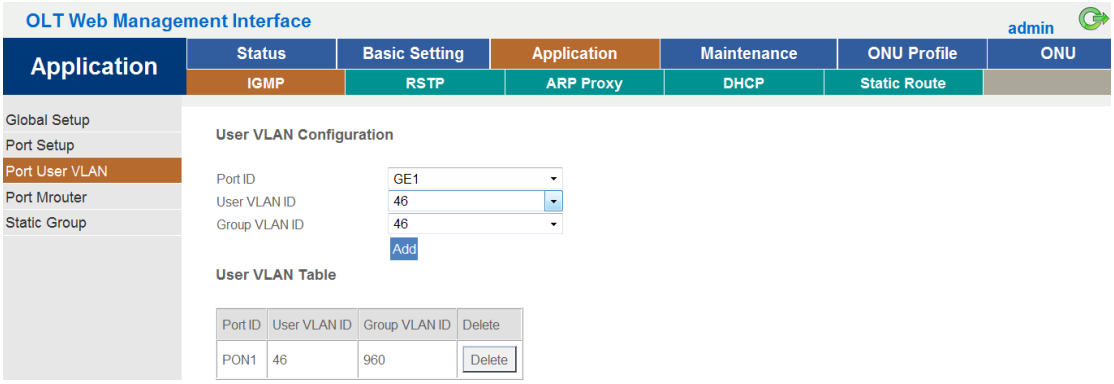


Figure 4-3: IGMP User VLAN

4.1.4 Port Mrouter

Add a port as the IGMP mrouter port.

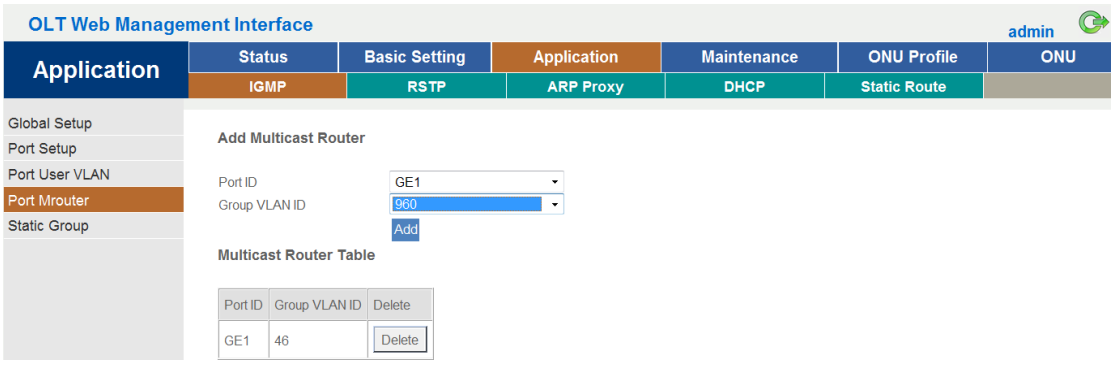


Figure 4-4: IGMP Port Mrouter

4.1.5 Static Group

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

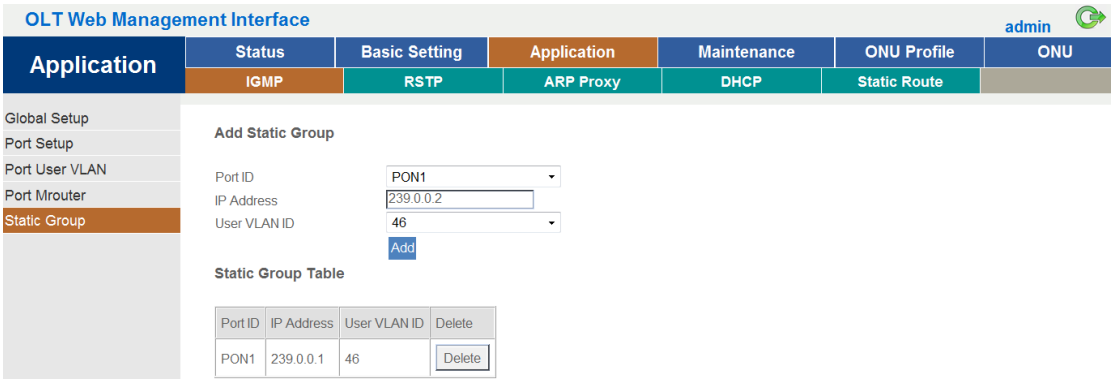


Figure 4-5: IGMP Static Group

4.2 RSTP

4.2.1 Global Setup

The switch of RSTP is disable by default.

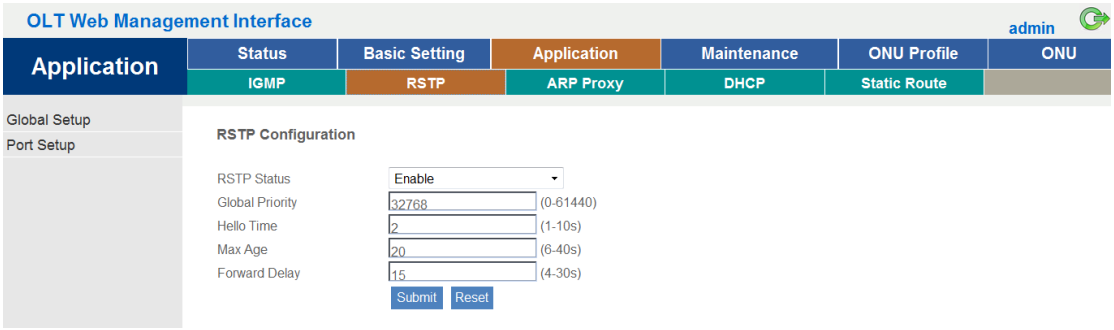


Figure 4-6: RSTP Global Setup

4.2.2 Port Setup

The RSTP ports parameter can be set.

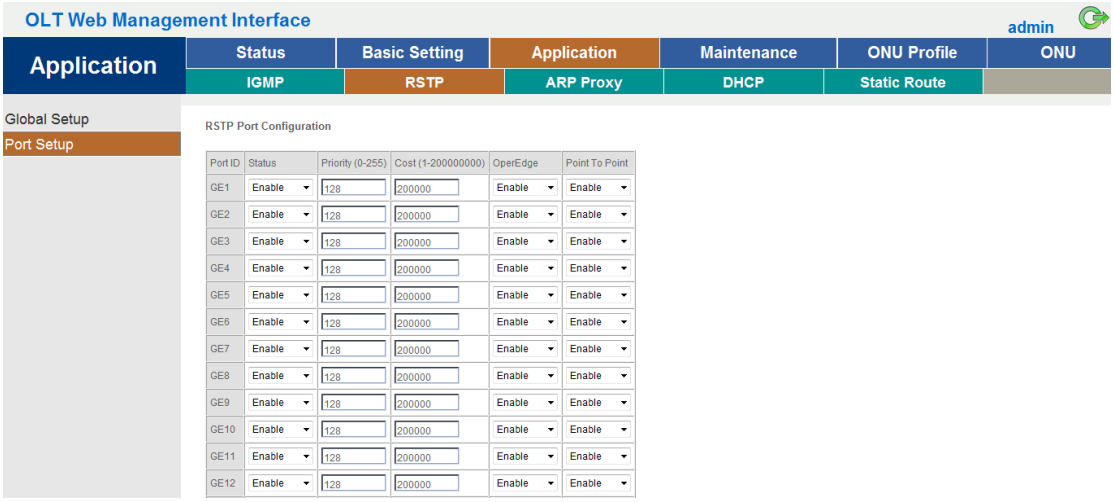


Figure 4-7: RSTP Port Setting

4.3 ARP Proxy

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

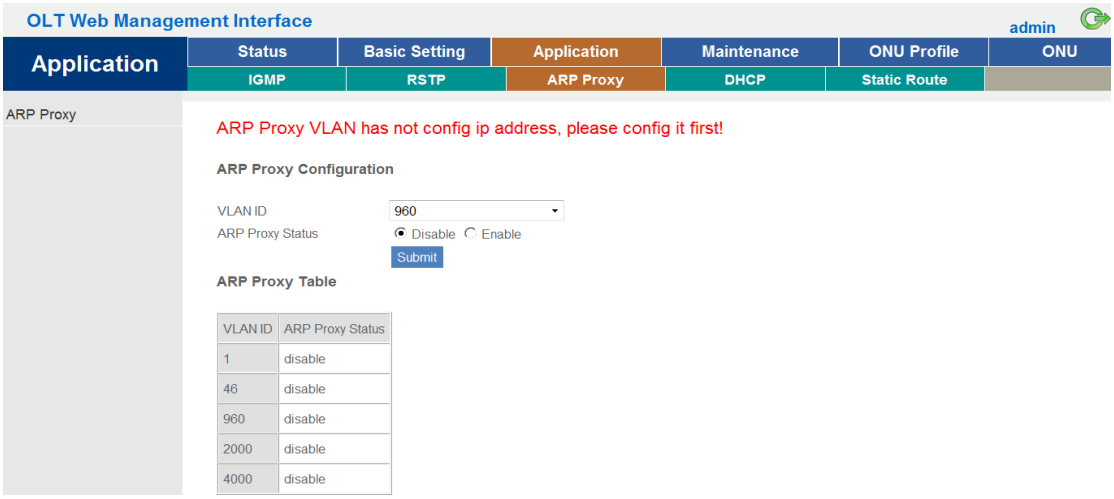


Figure4-8: ARP proxy configuration

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.

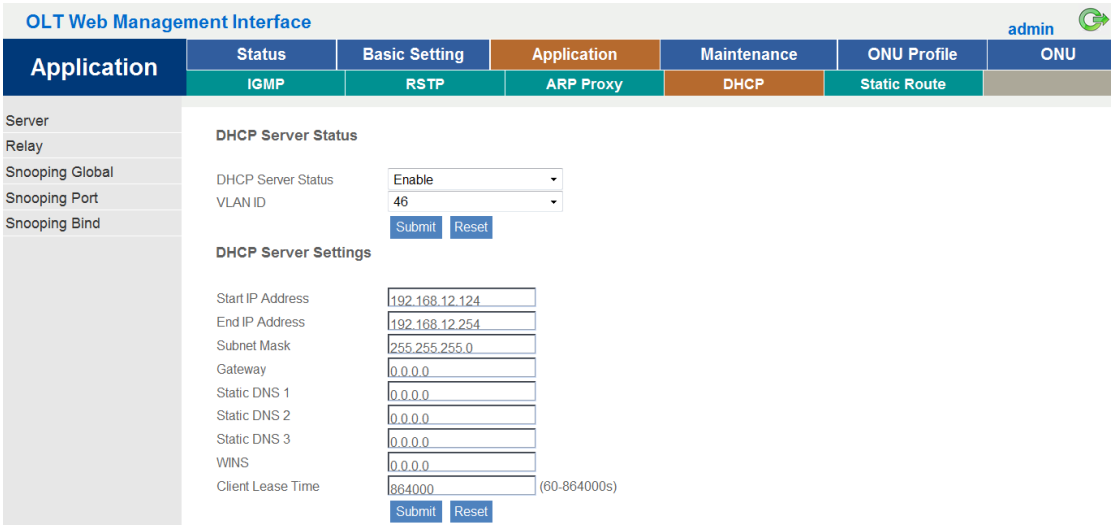


Figure4-9: DHCP Server

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.

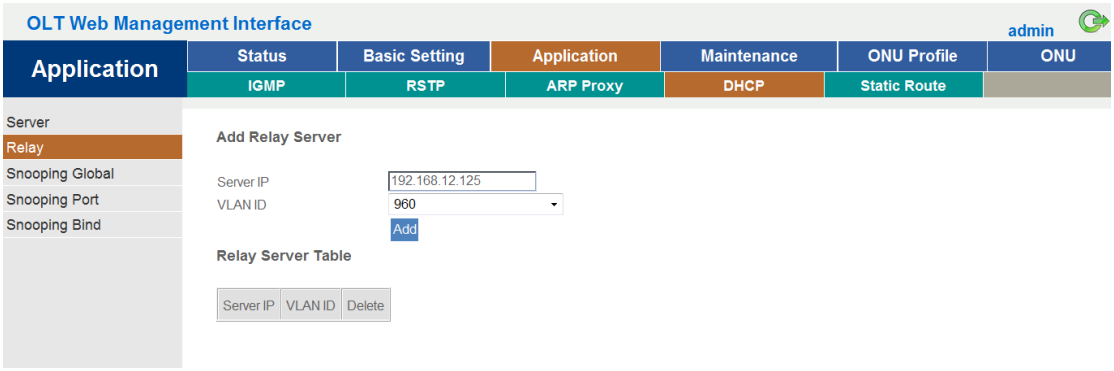


Figure4-10: DHCP Relay

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.

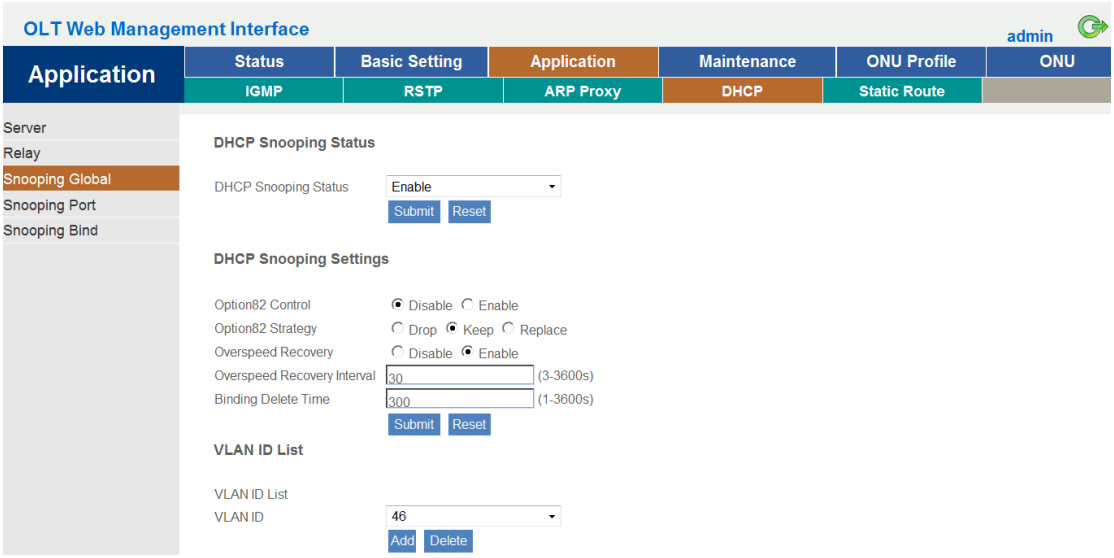


Figure4-11: DHCP Snooping Global

4.4.4 DHCP Snooping Port

The DHCP snooping ports are untrust by default.

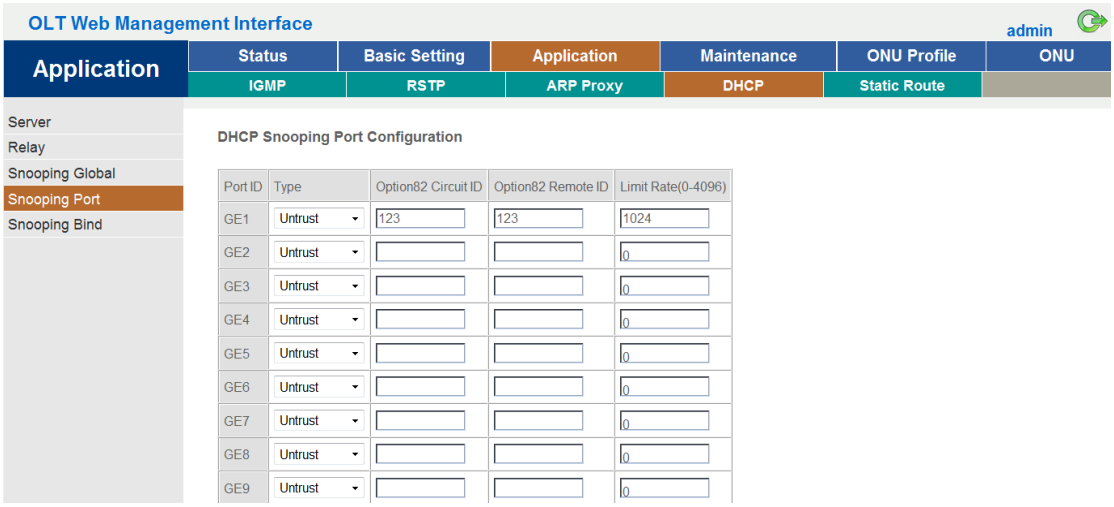


Figure4-12: DHCP Snooping Port

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.

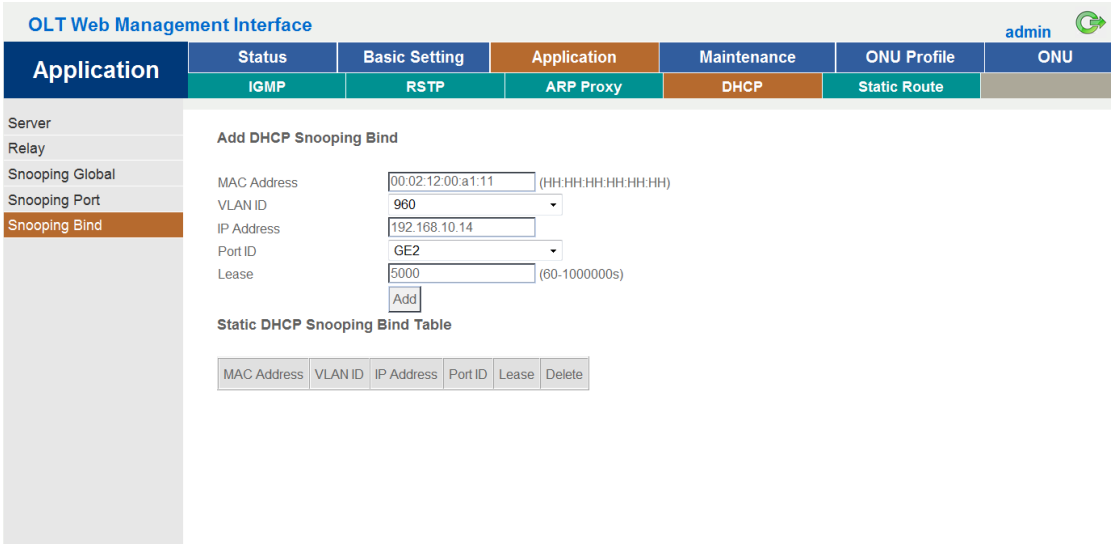


Figure4-13: DHCP Snooping Bind

4.5 Static Route

OLT support L3 function by static route.

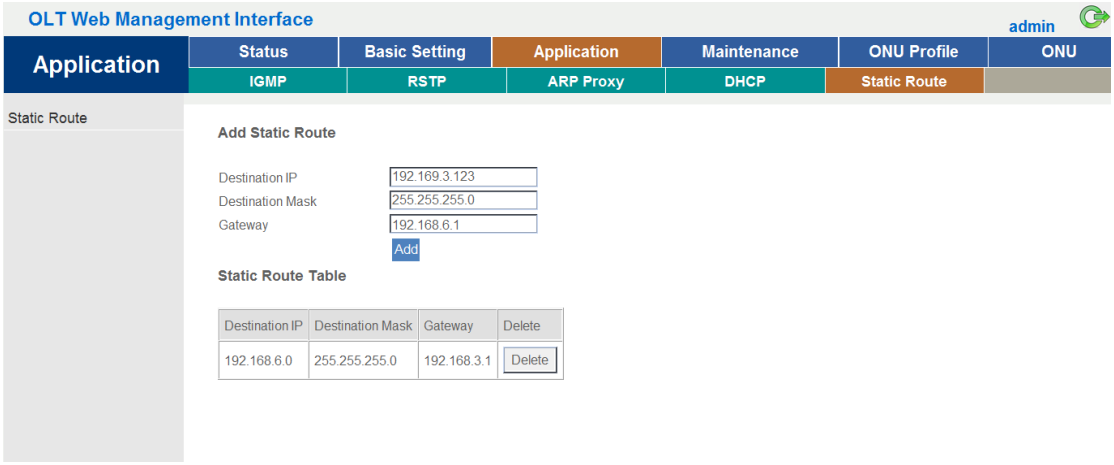


Figure4-14: Static Route

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.

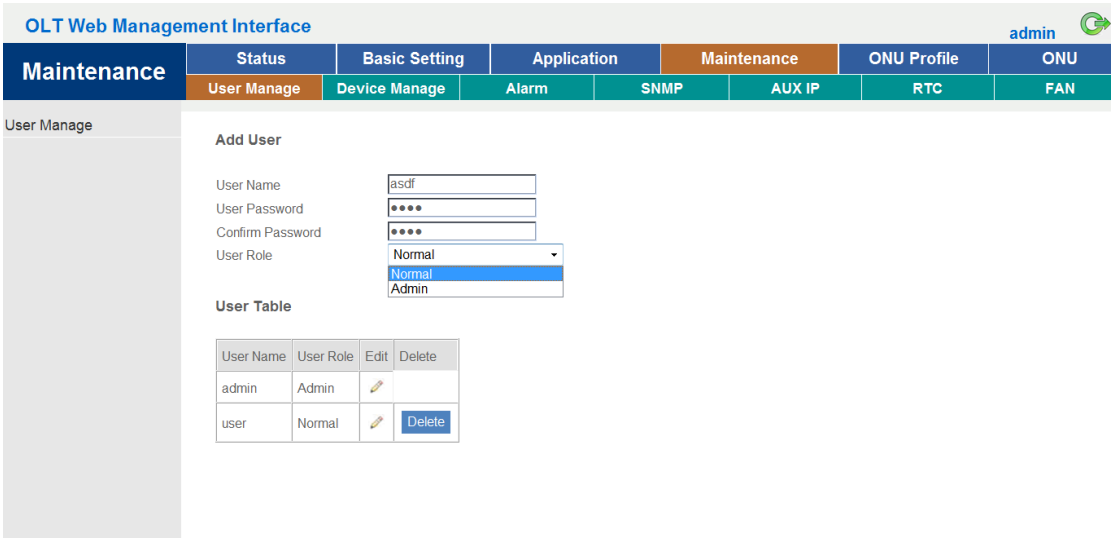


Figure5-1: User Manage

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.

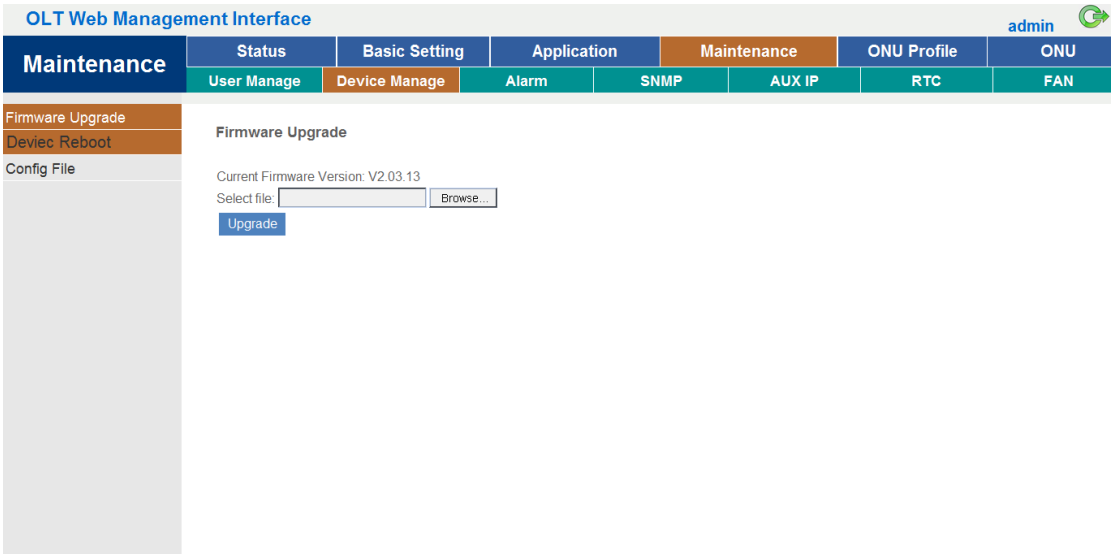


Figure5-2: Firmware Upgrade

5.2.2 Device Reboot

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

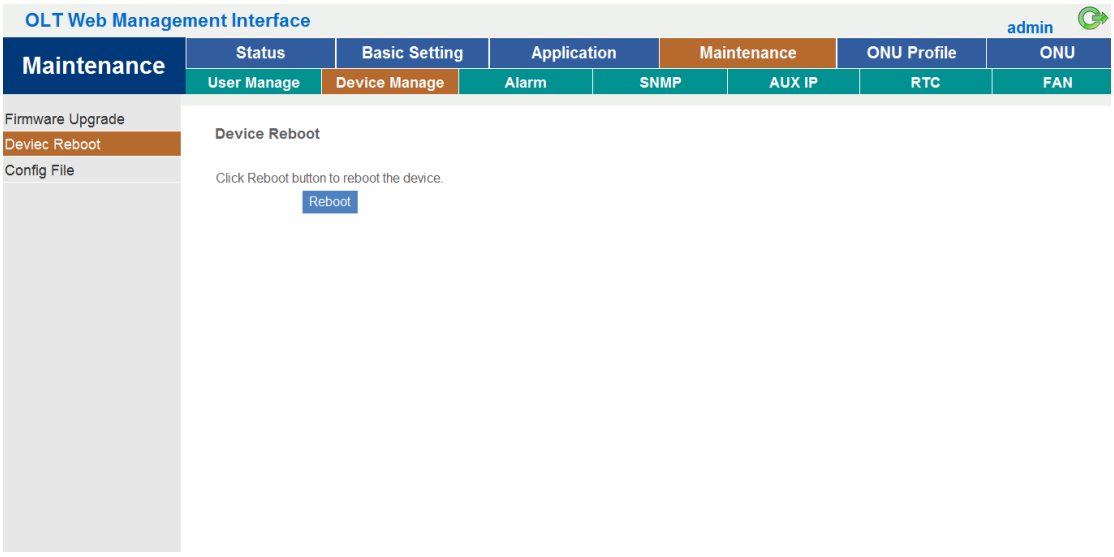


Figure5-3: Device Reboot

5.2.3 Config File

It includes backup configuration, restore configuration, factory default

and save configuration.

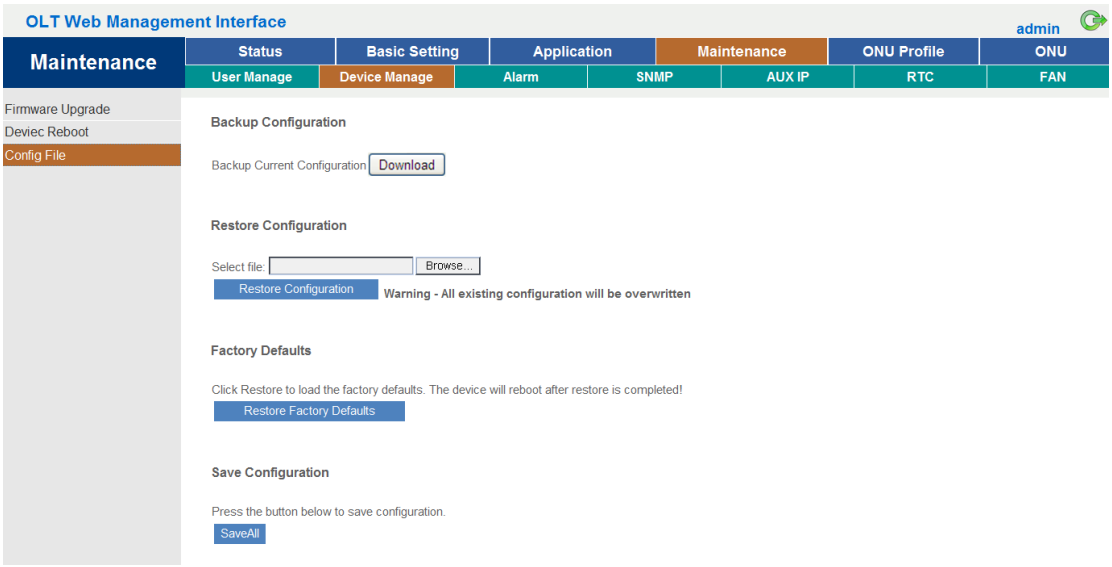


Figure5-4: Config File

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**".

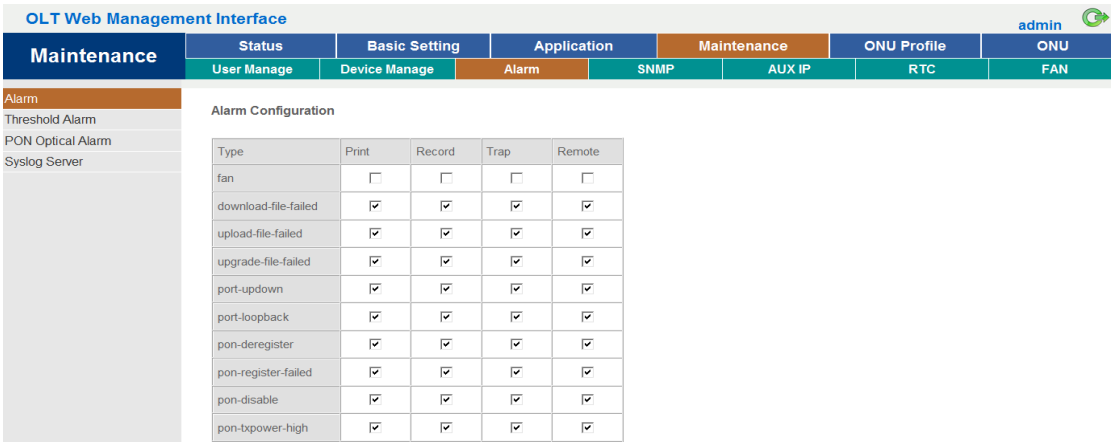


Figure5-5: Alarm configuration

5.3.2 Threshold Alarm

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

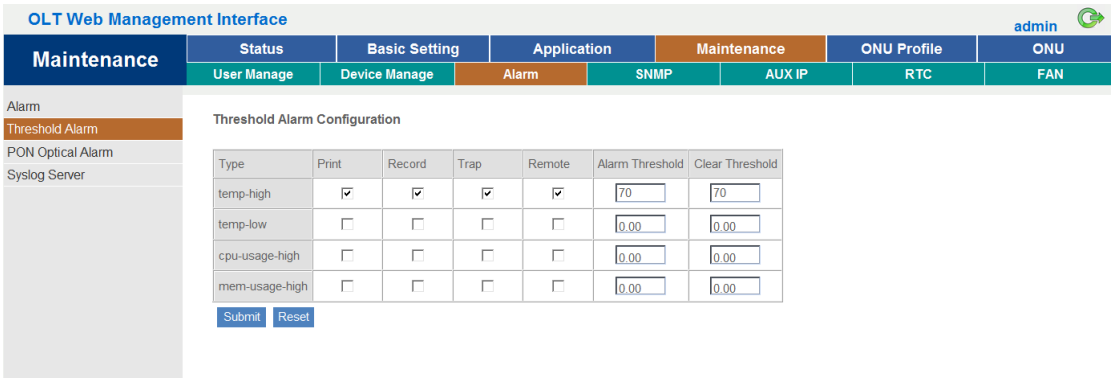


Figure5-6: Threshold Alarm

5.3.3 PON Optical Alarm

It is about the PON ports threshold alarm configuration.

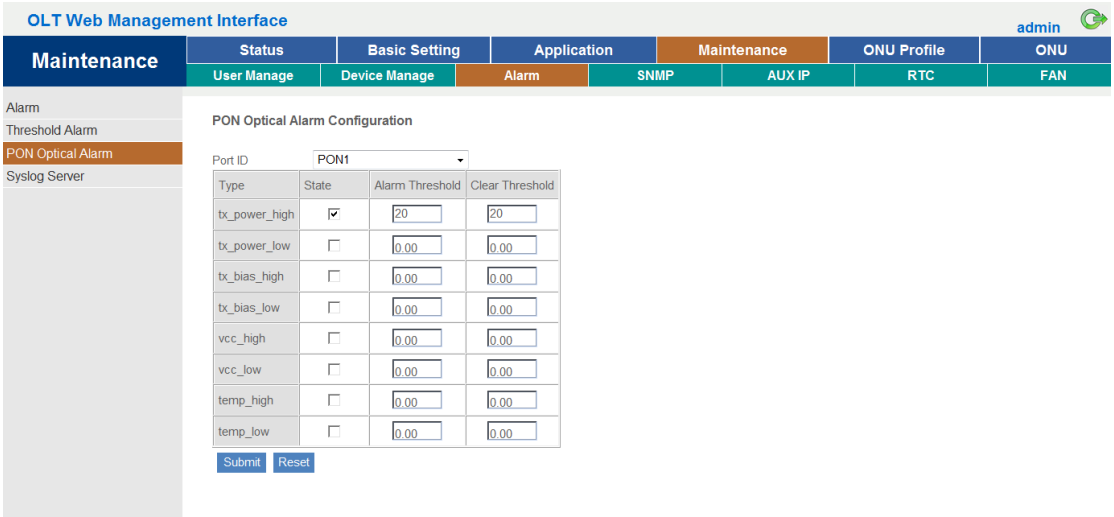


Figure5-7: PON Threshold Alarm

5.3.4 Syslog Server

Configure the server of OLT remote system logs.

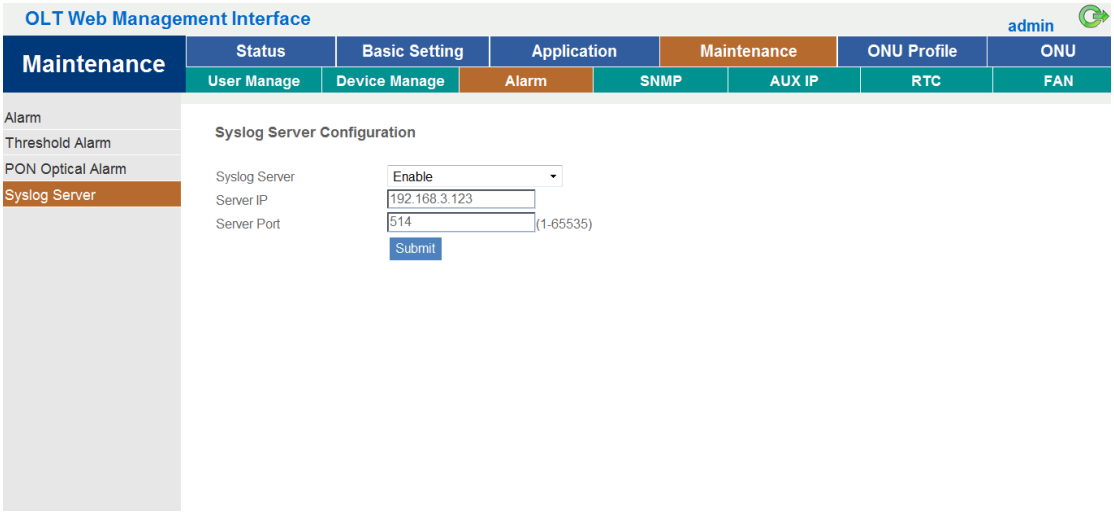


Figure5-8: Syslog Server Configuration

5.4 SNMP

5.4.1 SNMP V1/V2

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

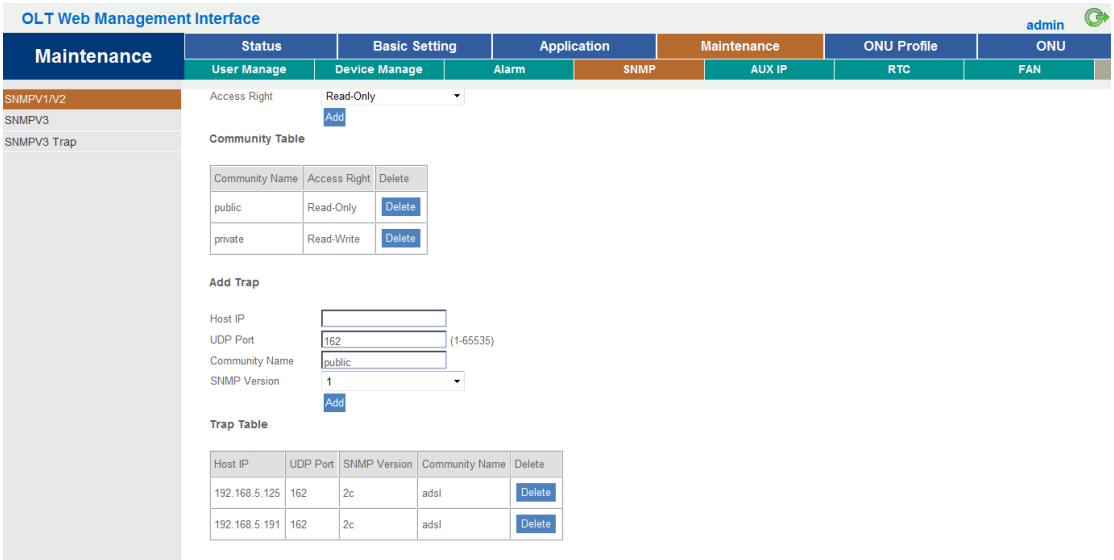


Figure5-9: SNMP V1/V2

5.4.2 SNMP V3

The SNMP V3 is the newer version.

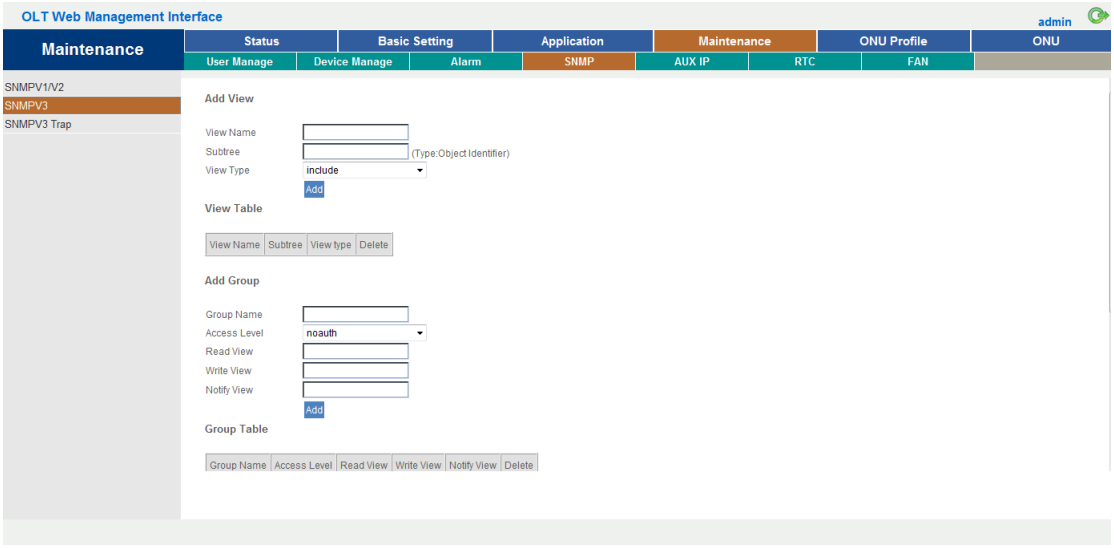


Figure5-10: SNMP V3

5.4.3 SMNP V3 Trap

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

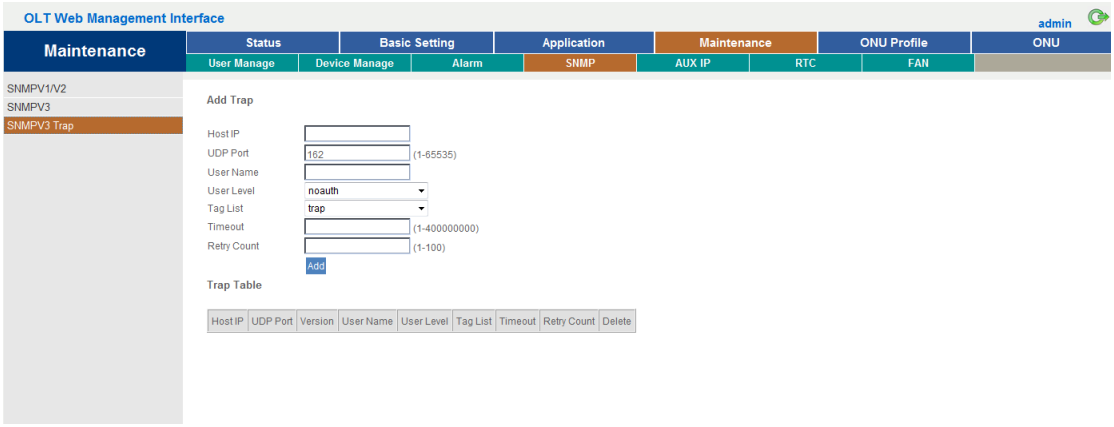


Figure5-11: SNMP V3 Trap

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.

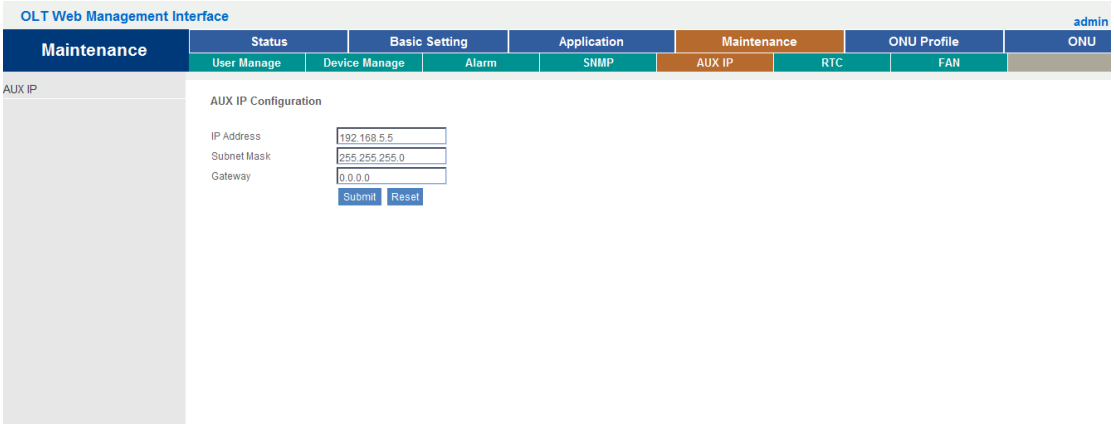


Figure5-12: AUX IP

5.6 RTC

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

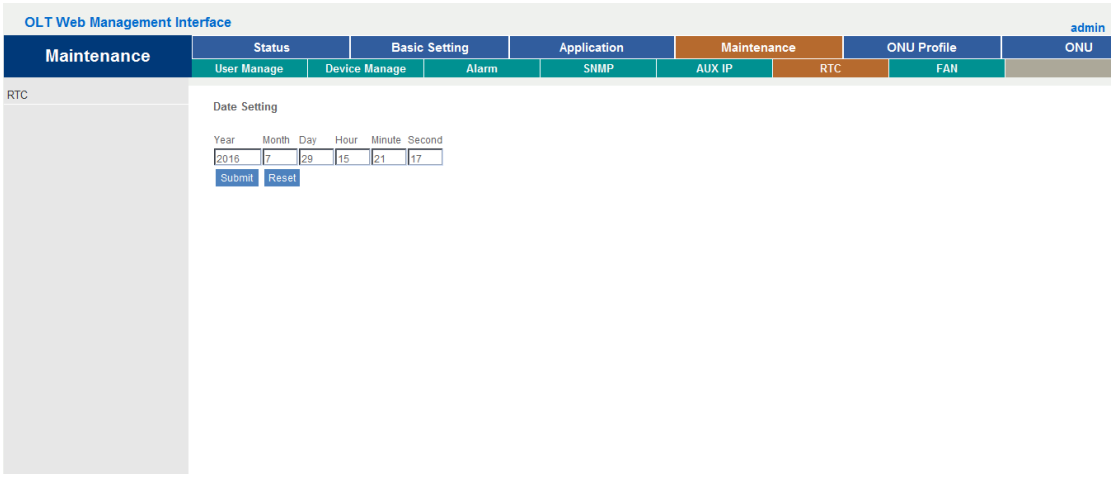


Figure5-13: RTC Configuration

5.7 FAN

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

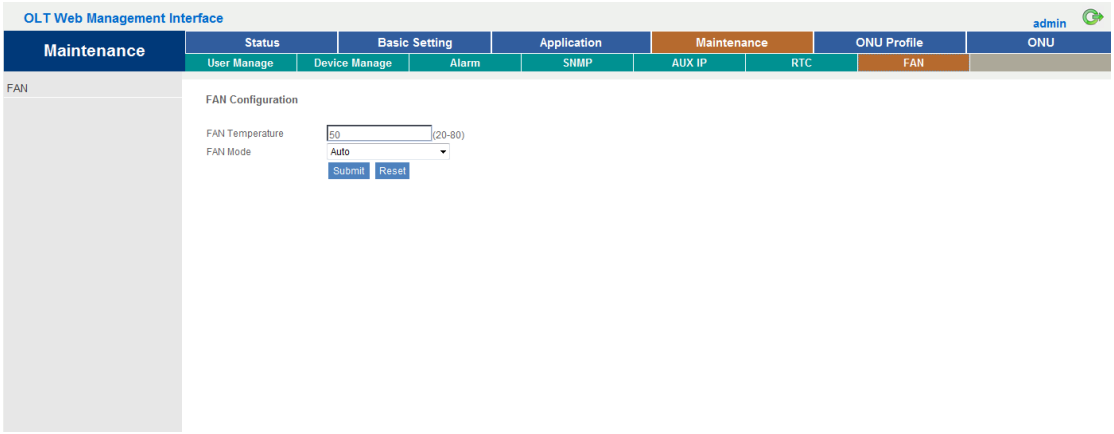


Figure5-14: FAN Configuration

Chapter 6 ONU Profile

This chapter is about the ONU profile configuration. It is 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.

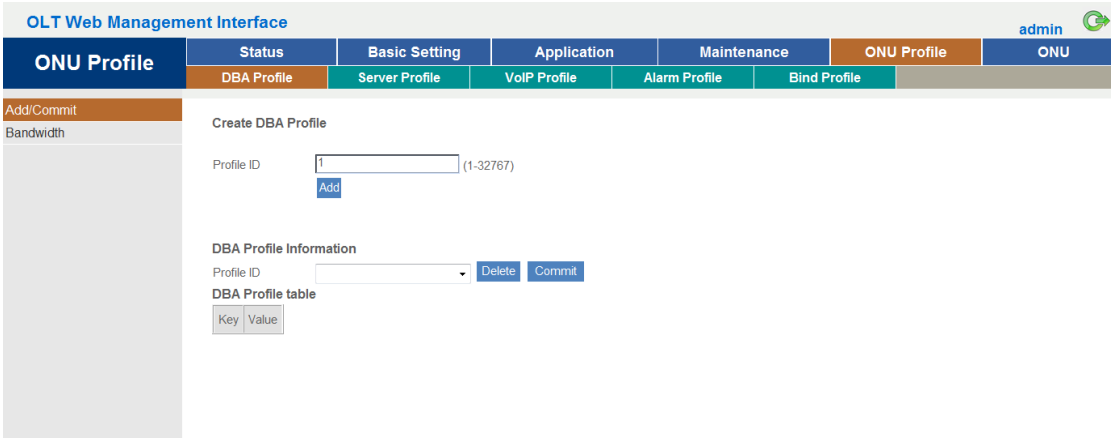


Figure6-1: Add a DBA Profile

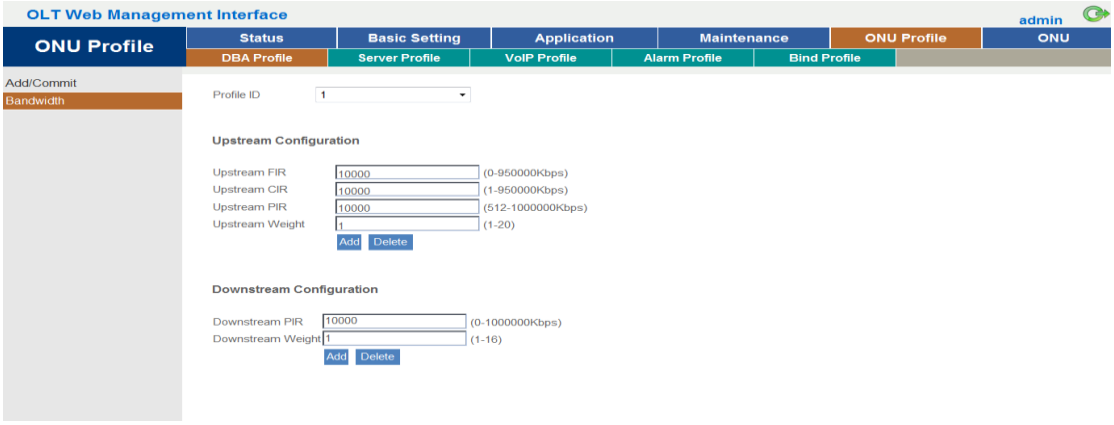


Figure6-2: DBA Profile Configure

6.2 Server Profile

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

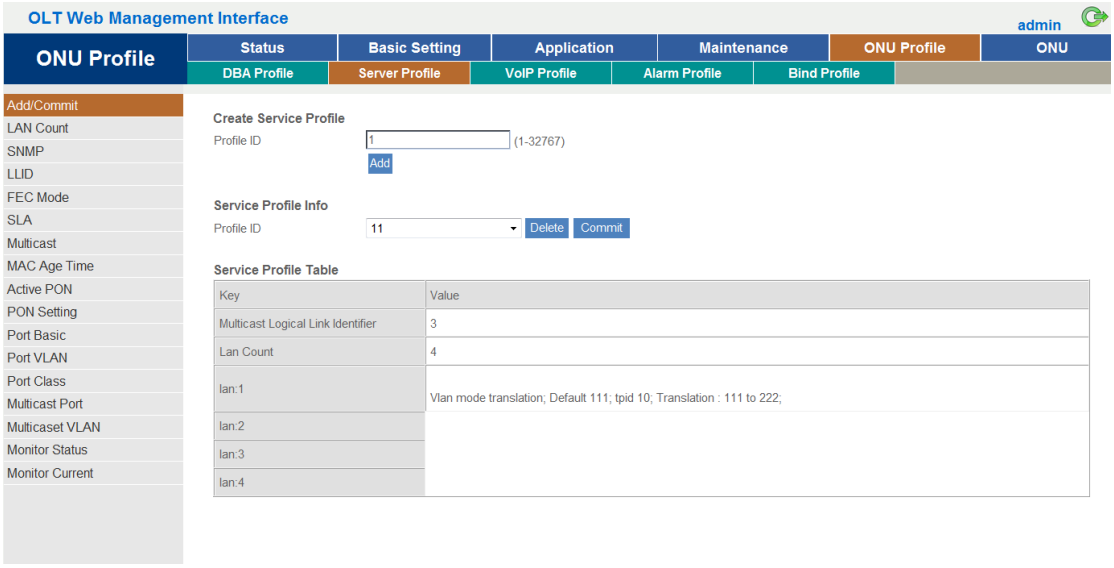


Figure6-3: Add Server Profile

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

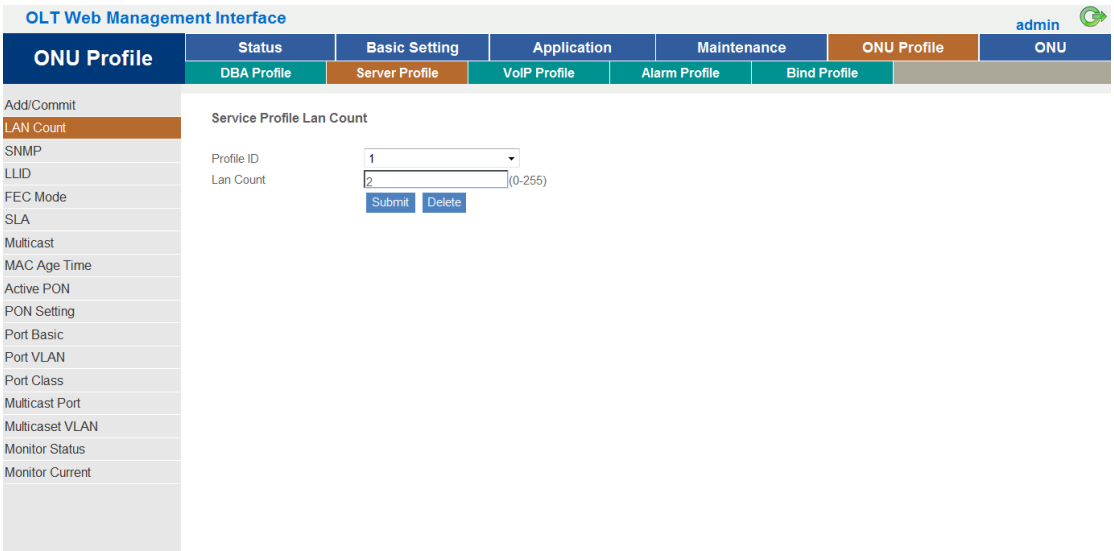


Figure6-4: Server Profile Configuration

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.

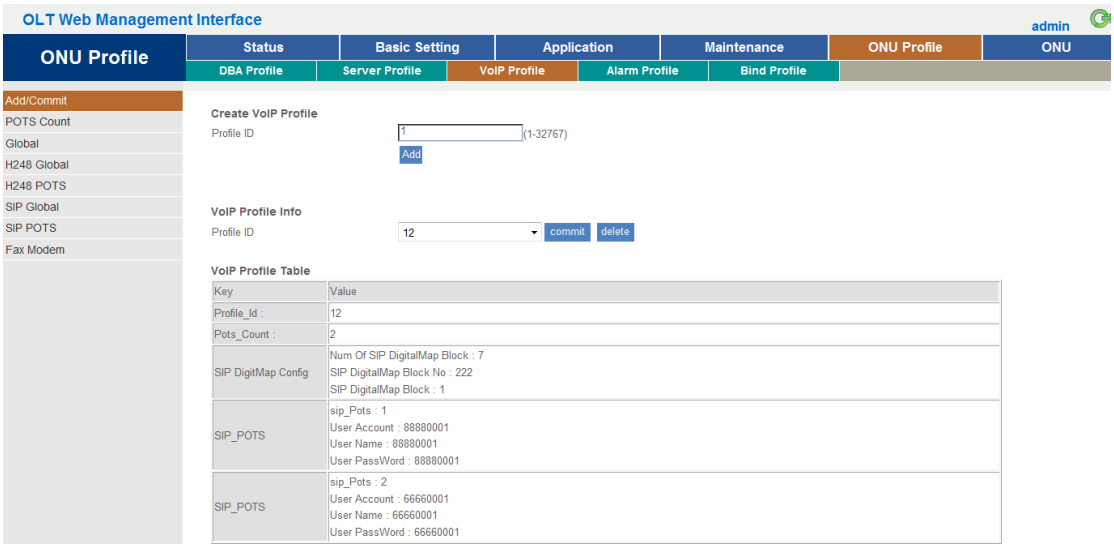


Figure6-5: Add VoIP Profile

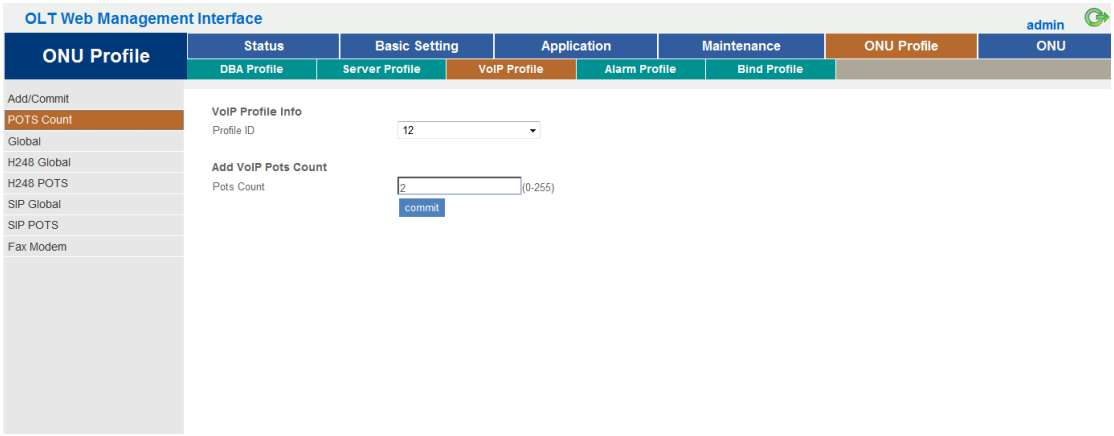


Figure6-6: Server Profile Configuration

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.

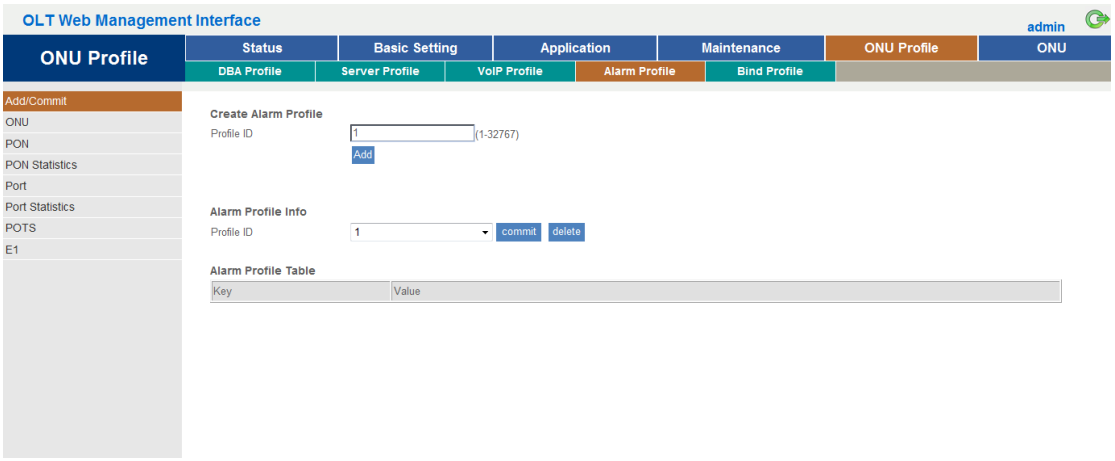


Figure6-7: Add Alarm Profile

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

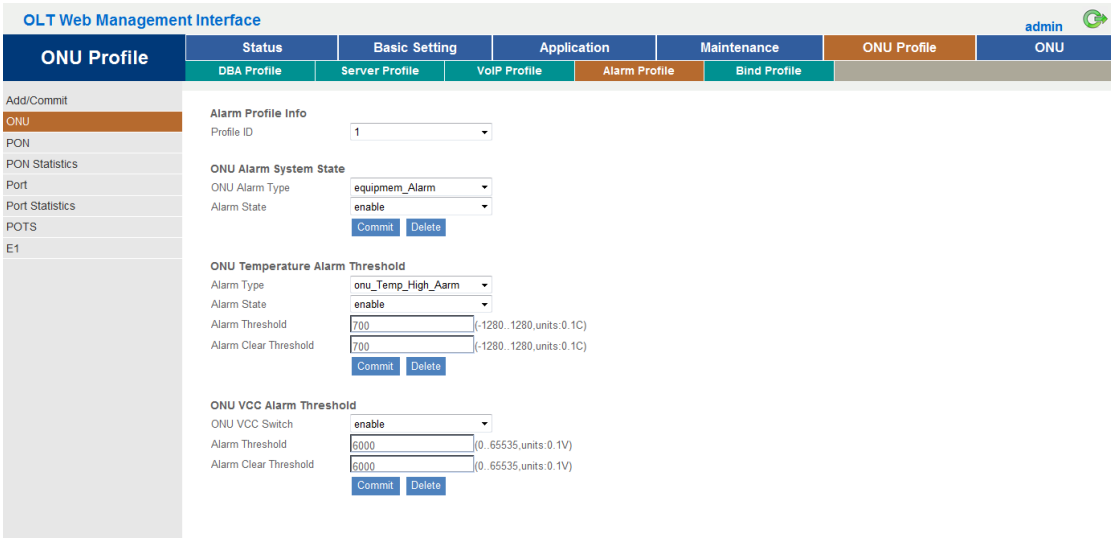


Figure6-8: Alarm Profile Configuration

6.5 Bind Profile

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

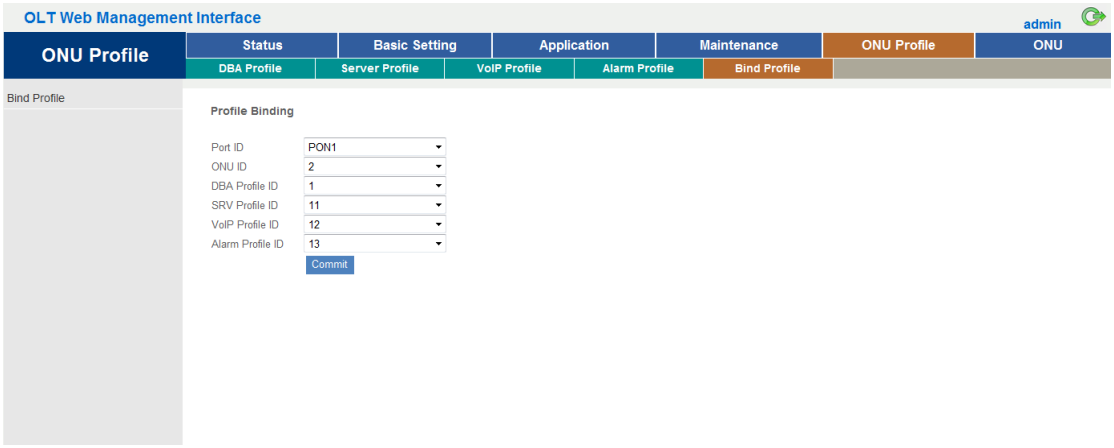


Figure6-9: Bind Profile Configuration

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.

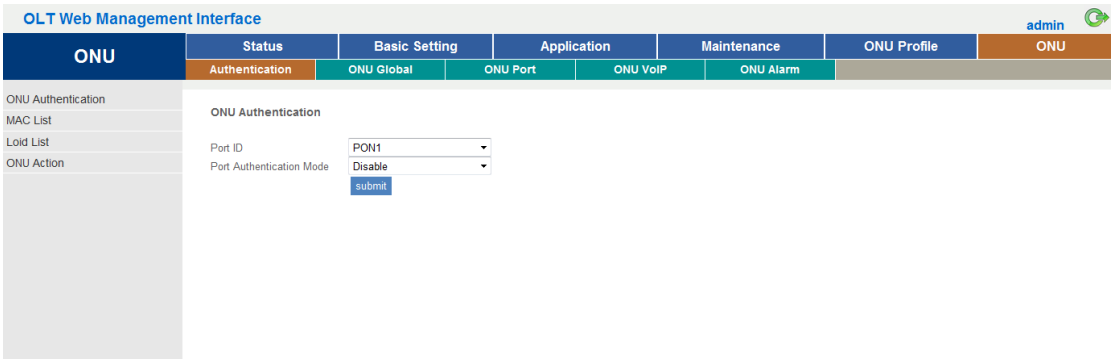


Figure7-1 ONU Authentication

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.

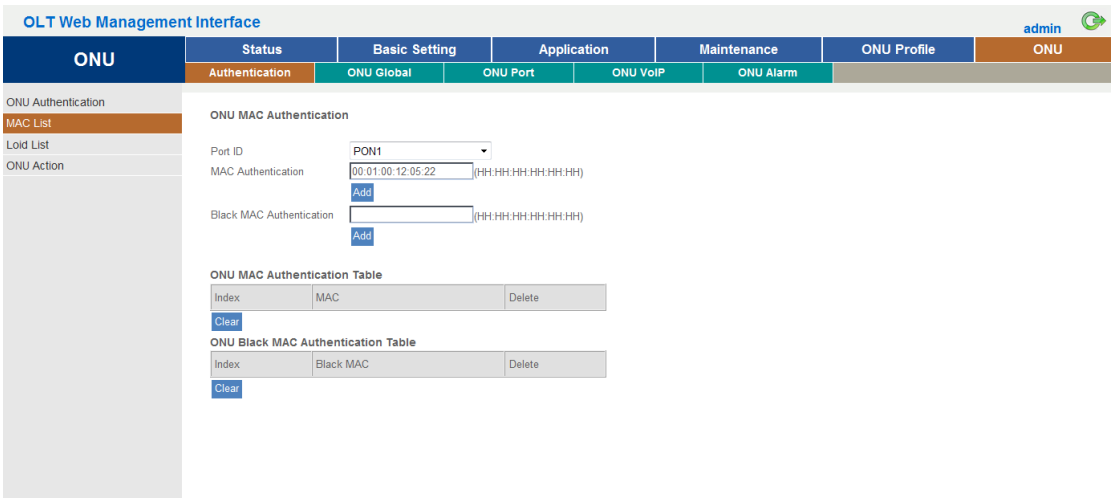


Figure7-2 MAC List

7.1.3 Loid List

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

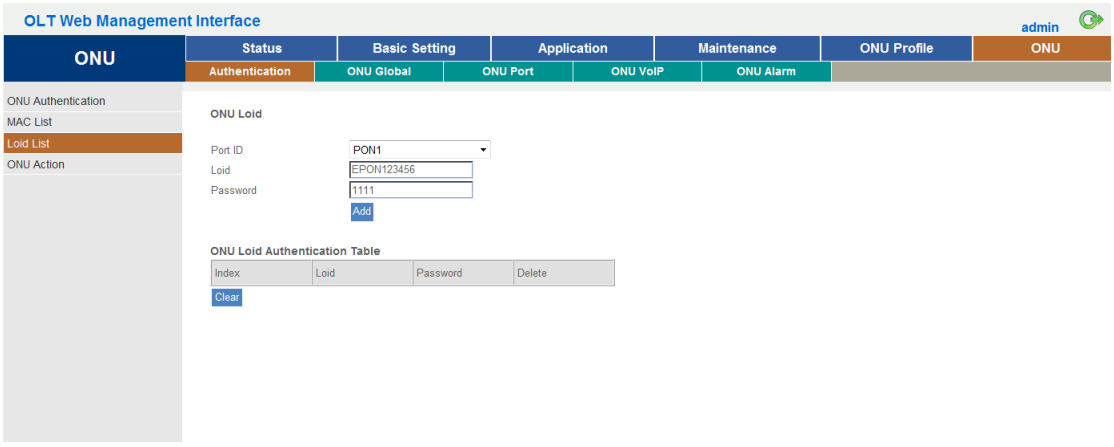


Figure7-3 Loid List

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.

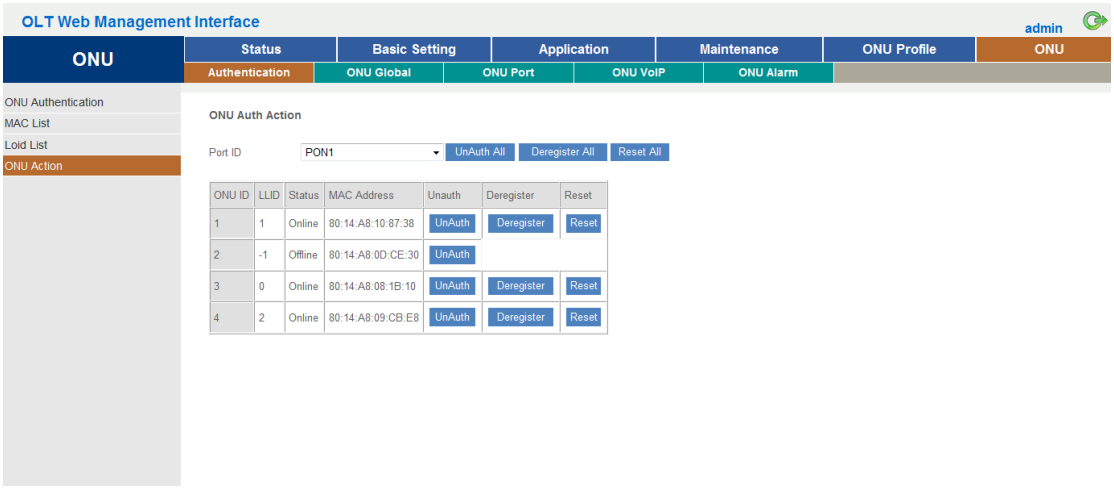


Figure7-4 ONU Action

7.2 ONU Global

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

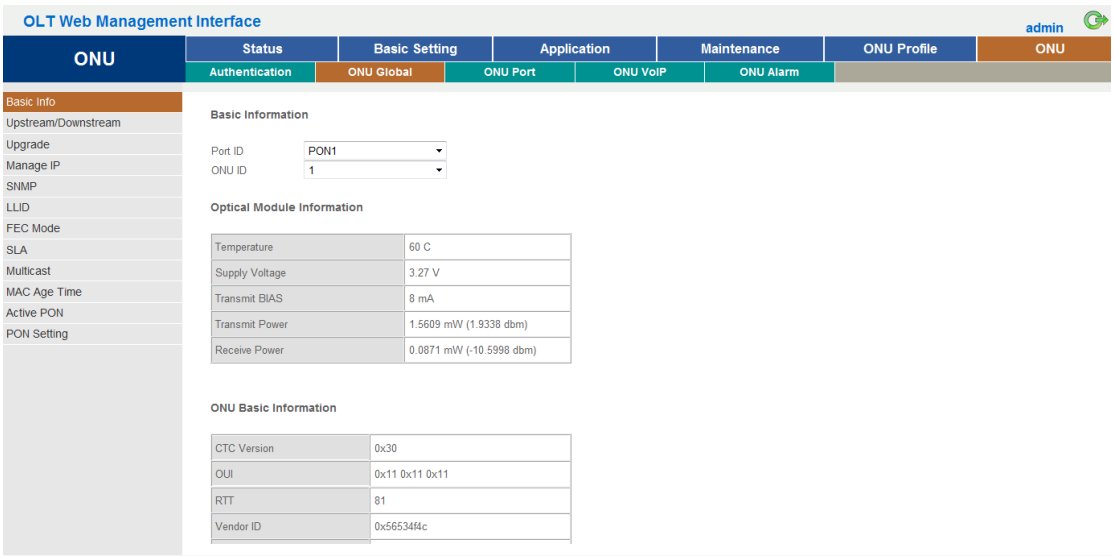


Figure7-5 ONU Global Configuration

7.3 ONU Port

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

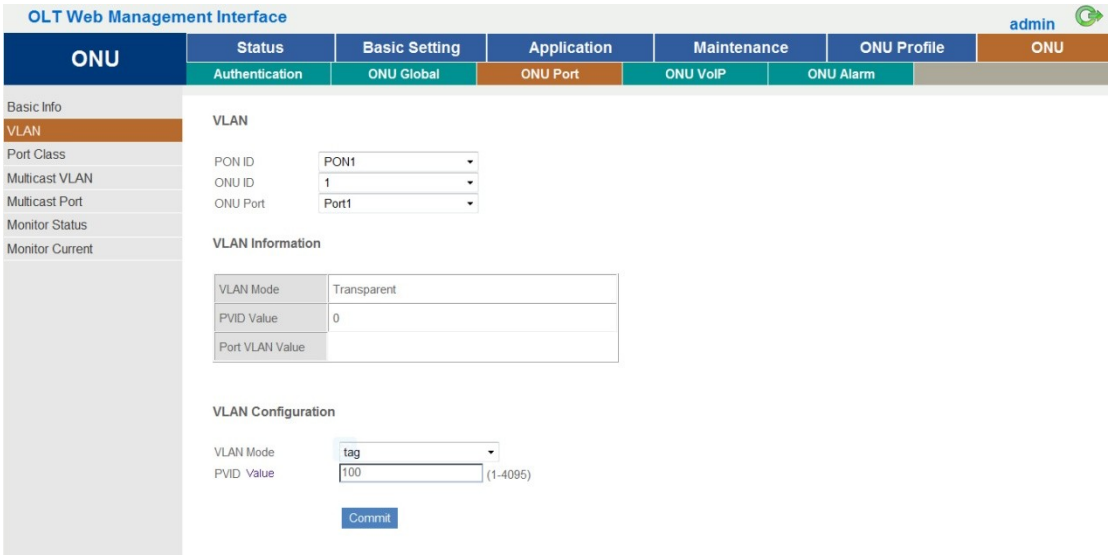


Figure7-6 ONU Port Configuration

7.4 ONU VoIP

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

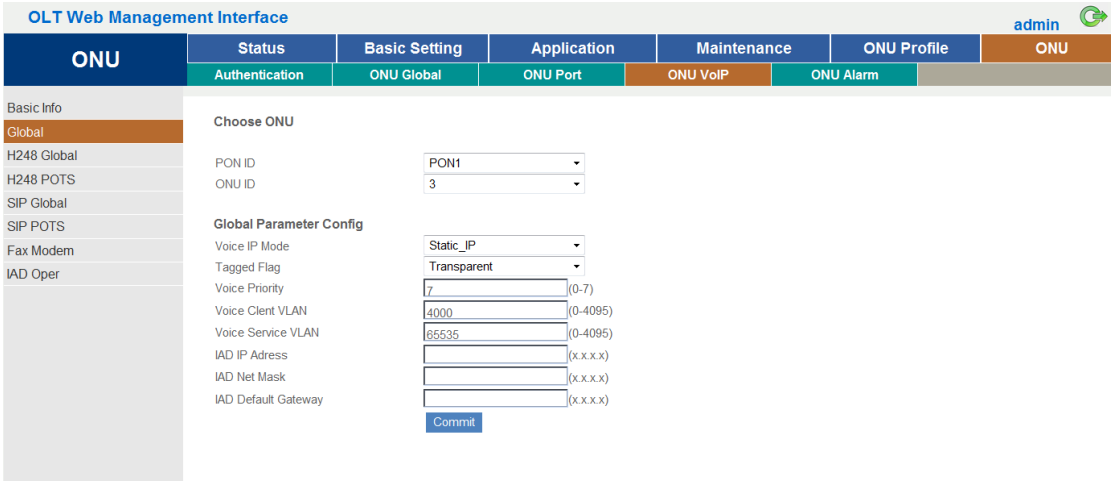


Figure7-7 ONU VoIP Configuration

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.

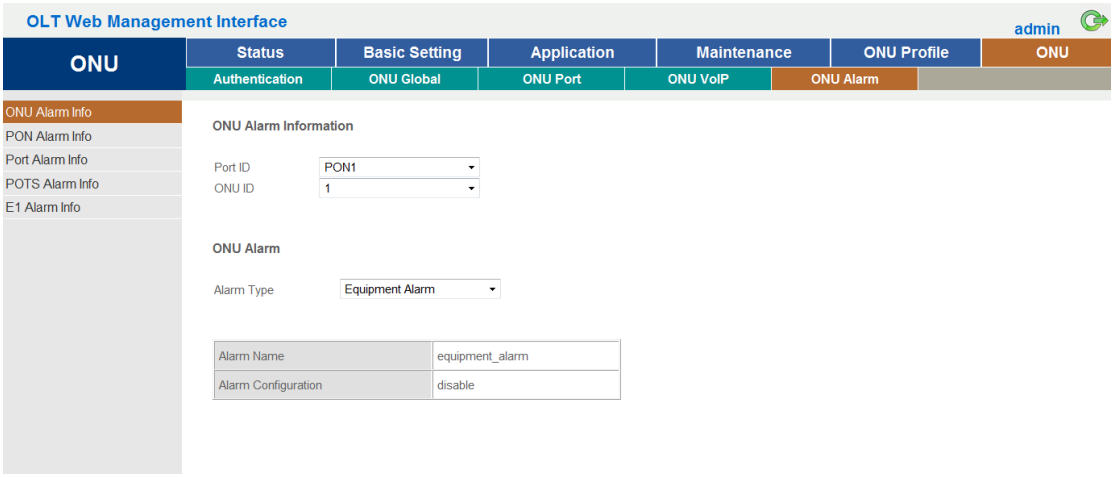


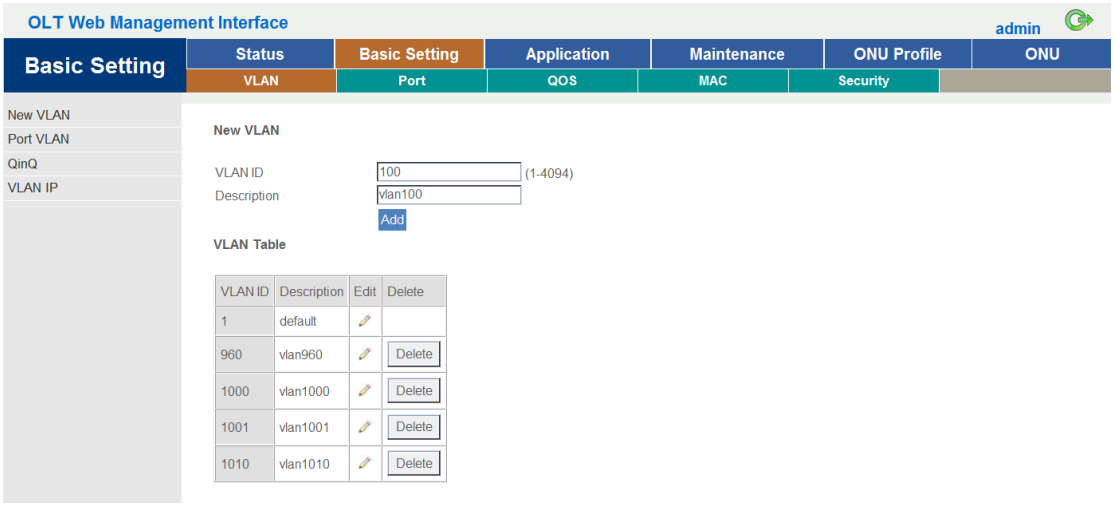
Figure7-8 ONU Alarm Information

Chapter 8 Configuration Cases

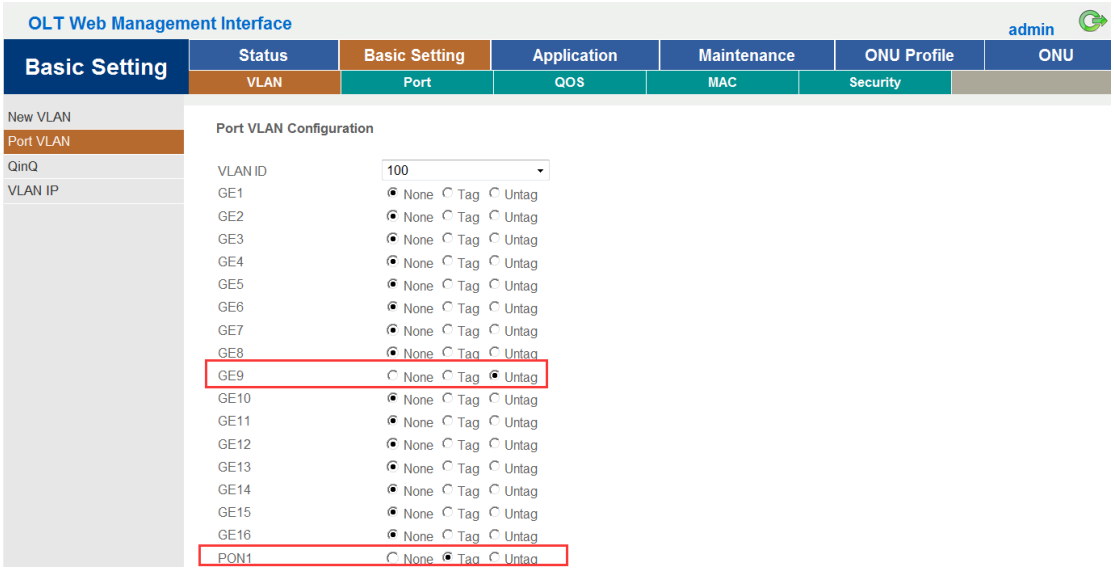
8.1 Internet With VLAN 100

OLT configuration

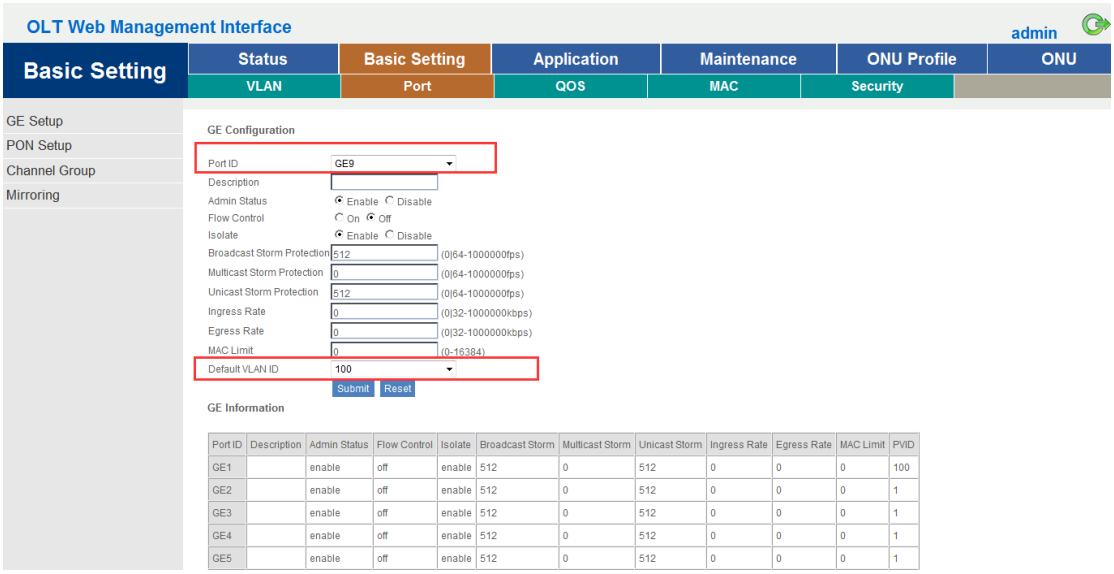
Step 1: Create a new VLAN.



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

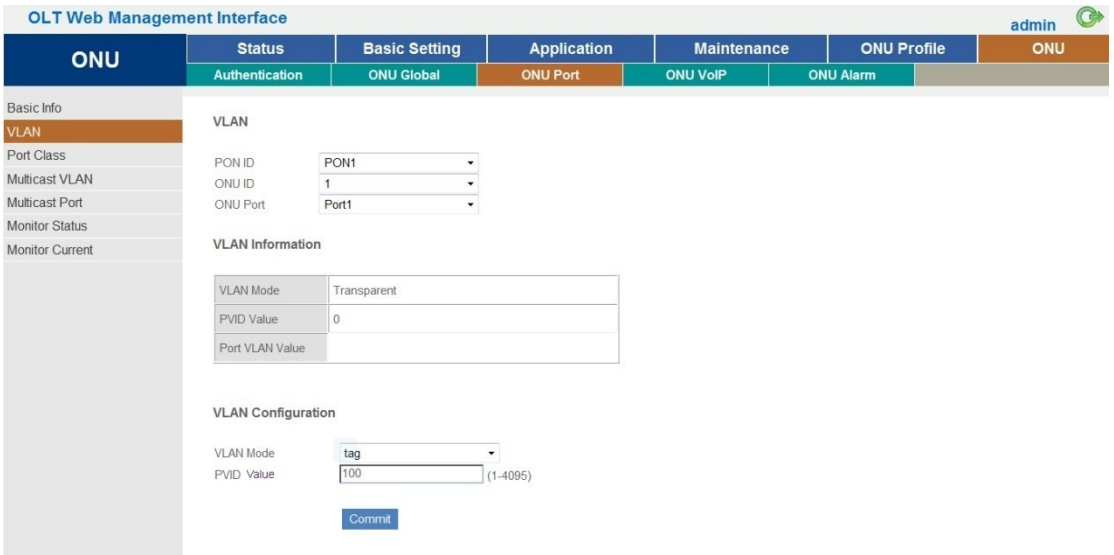


Step 3: Configure the default VLAN ID (PVID) in untag port.



ONU configuration

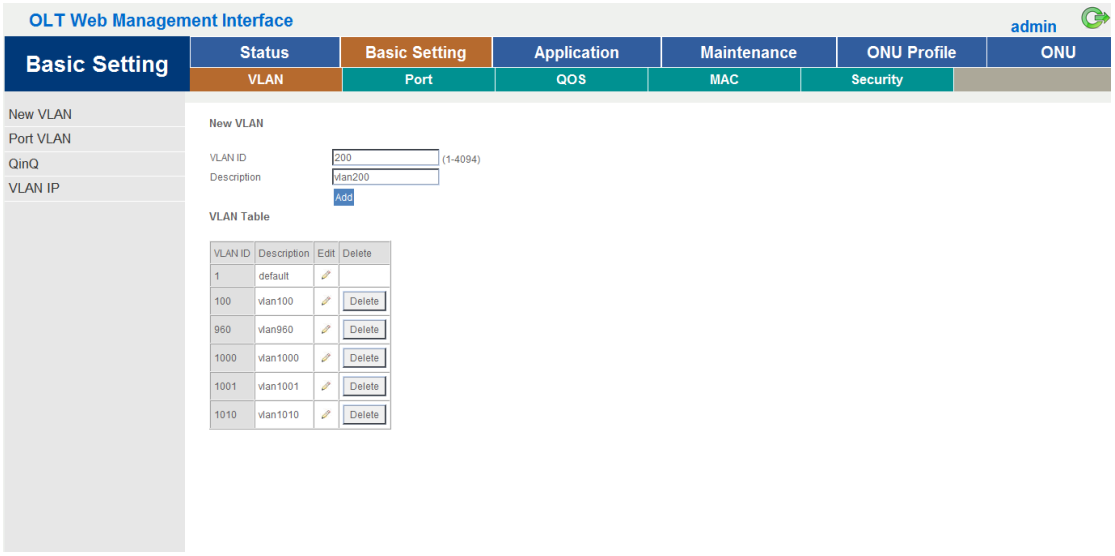
Step 4: Choose the VLAN mode and set the PVID value.



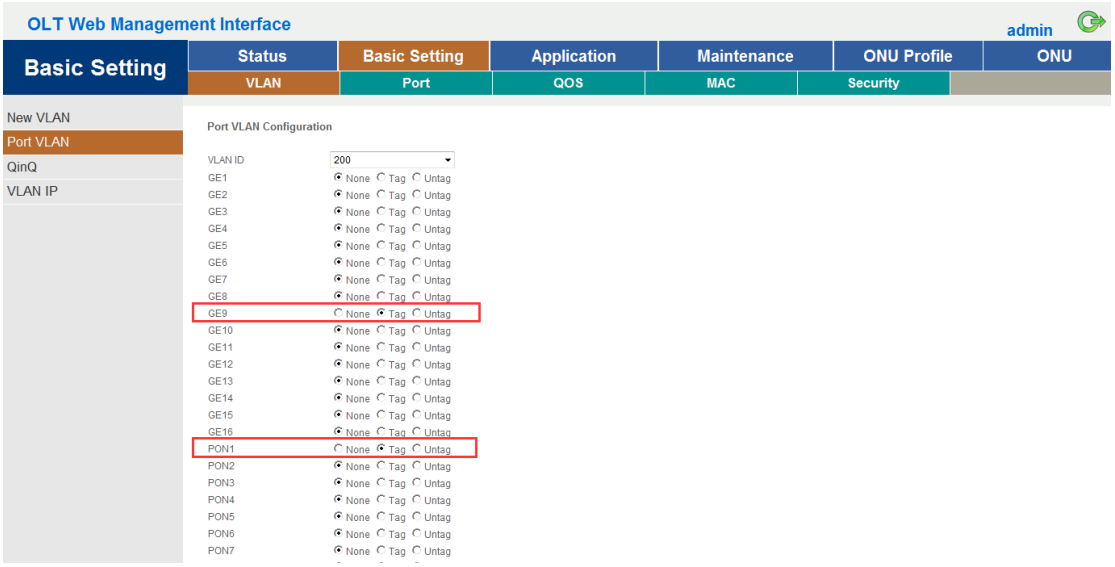
8.2 IPTV With VLAN 200

OLT configuration

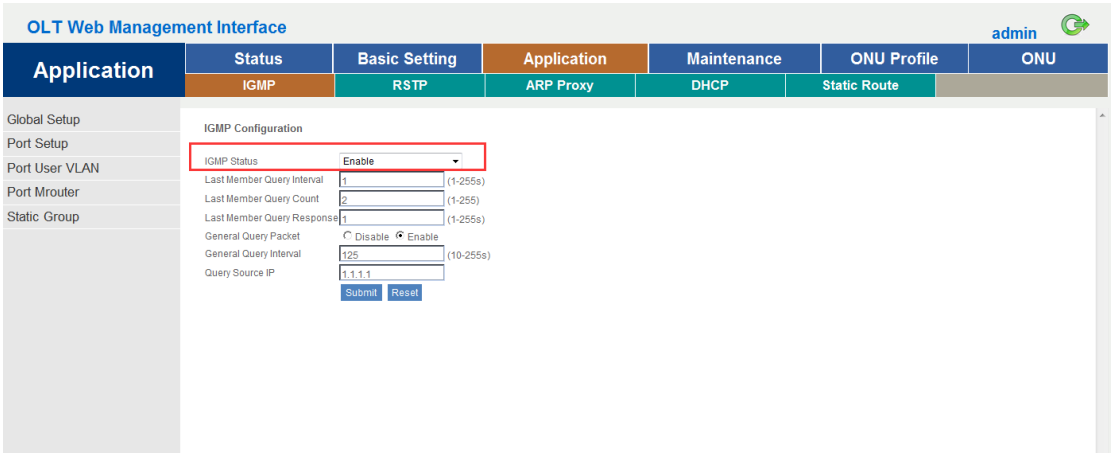
Step 1: Create a new VLAN.



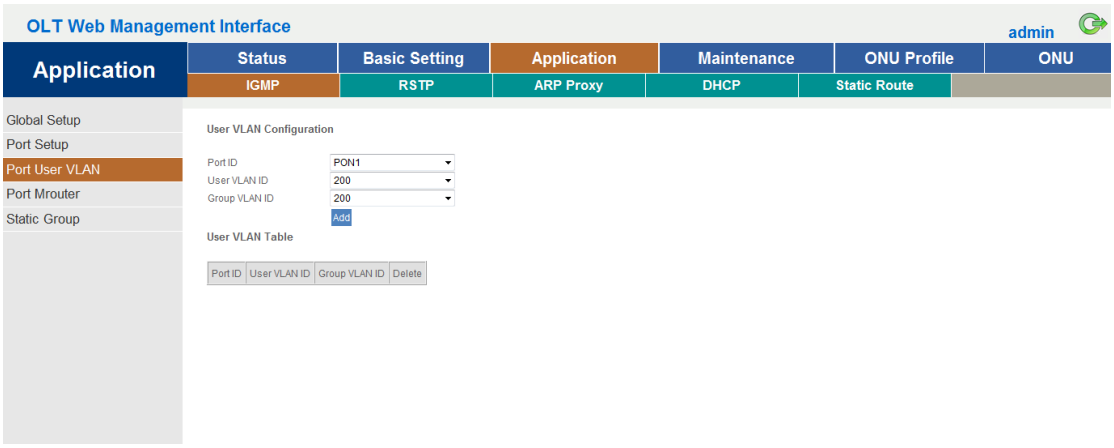
Step 2: Add the VLAN to GE port and PON port.



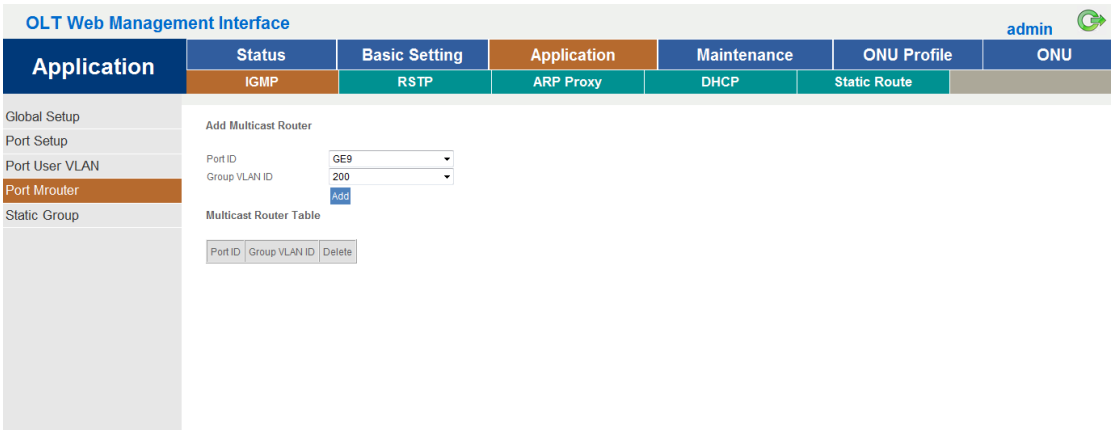
Step 3: Enable the IGMP status.



Step 4: Add the IGMP user VLAN and group VLAN

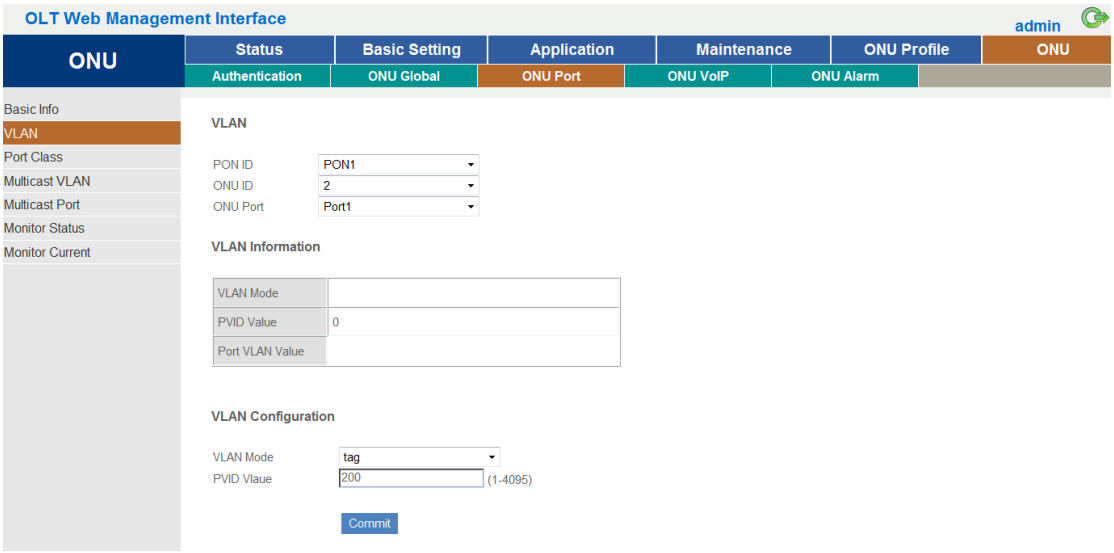


Step 5: Add the M-router in GE port

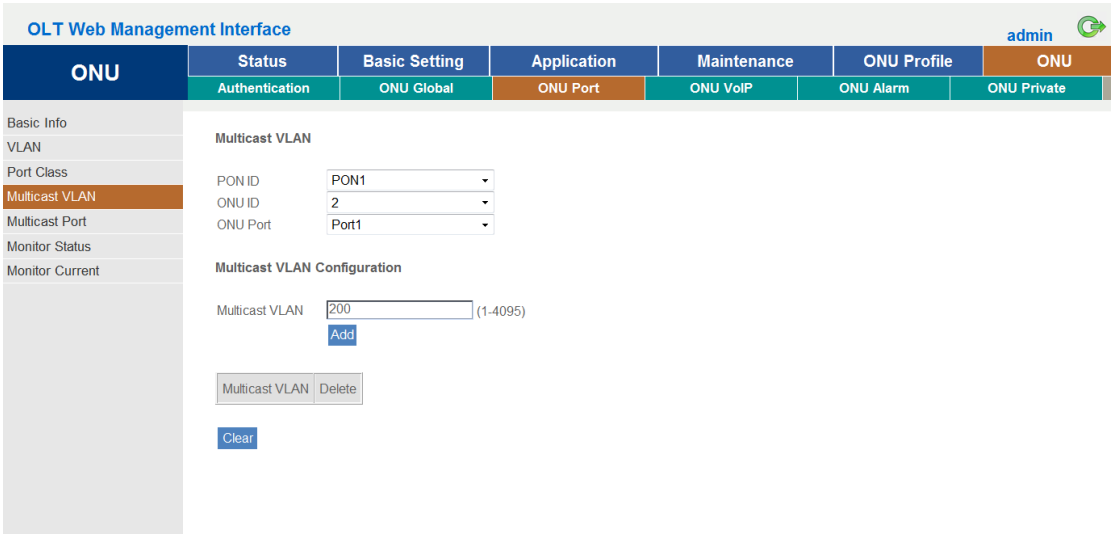


ONU configuration

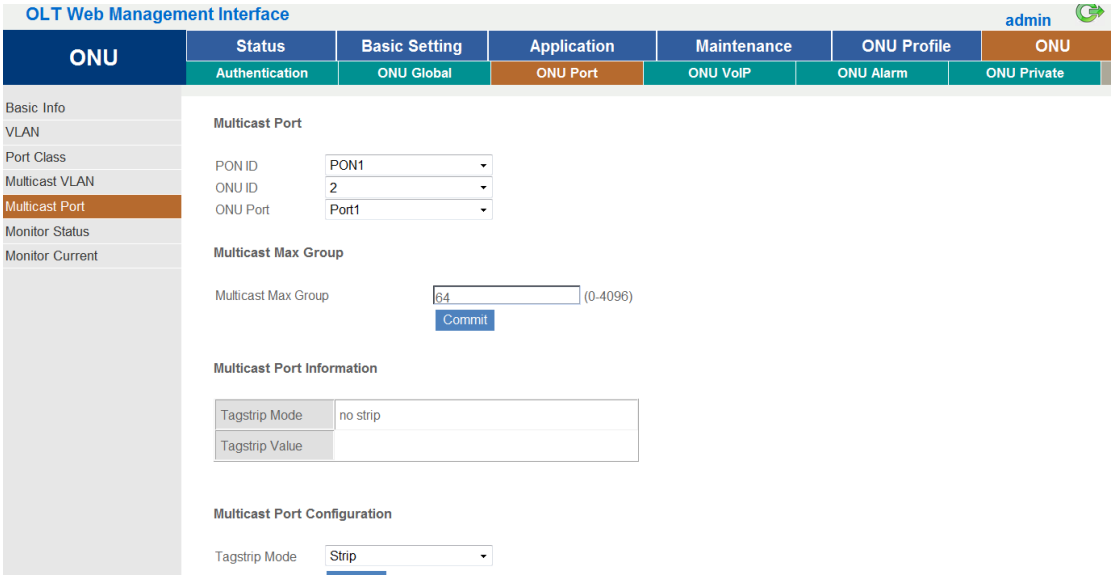
Step 6: Choose the VLAN mode and set the PVID value.



Step 7: Configuration multicast VLAN



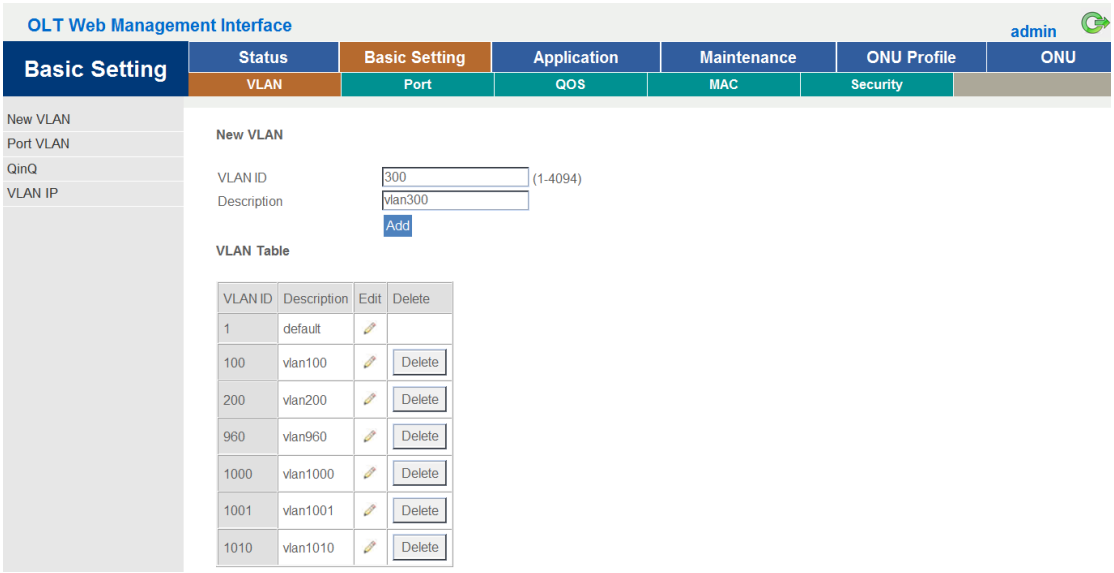
Step 8: Configure the IGMP VLAN tagstrip mode



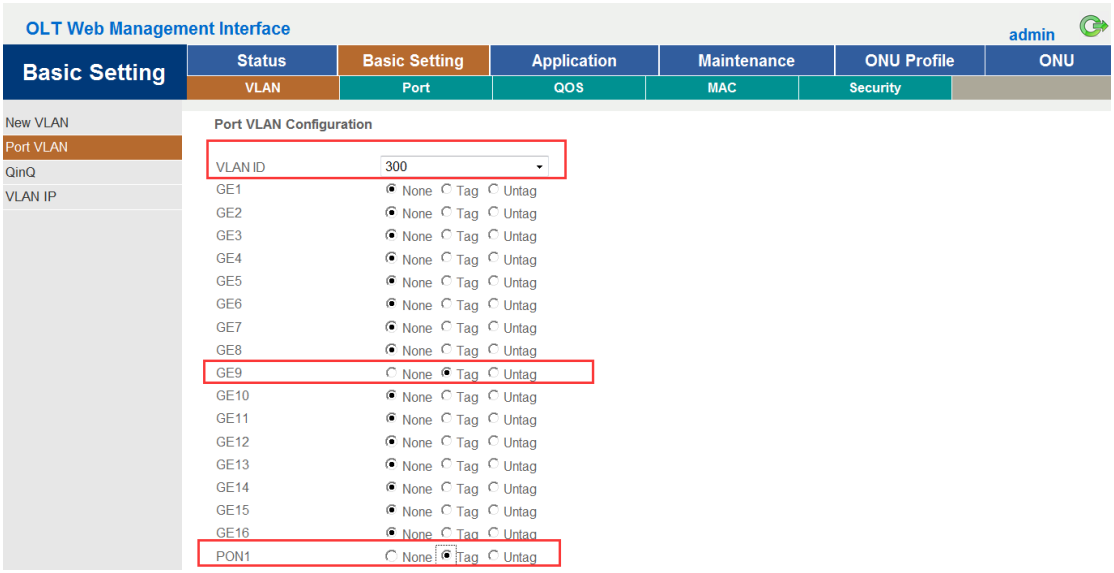
8.3 VoIP With VLAN 300

OLT Configuration

Step 1: Create a new VLAN

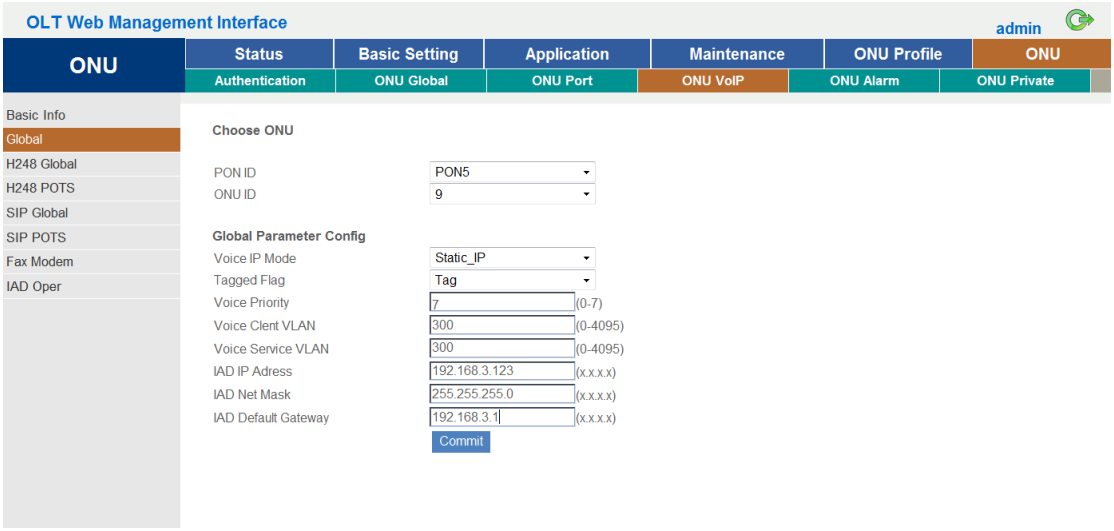


Step 2: Add the VLAN to GE port and PON port.

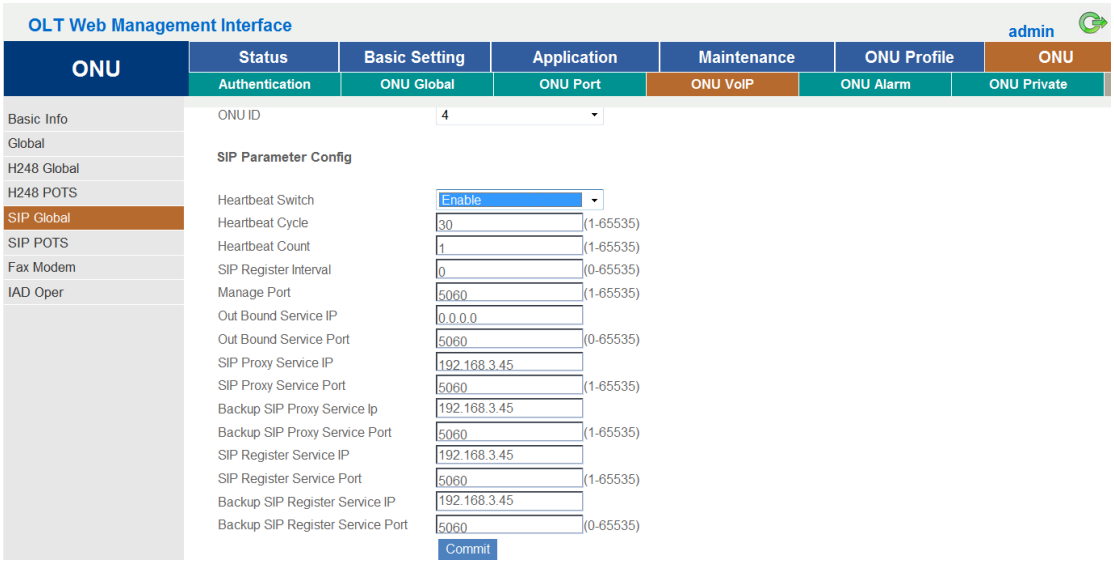


ONU Configuration

Step 3: Configure the VoIP global parameter



Step 4: Setup the sip configuration



Step 5: Fill in the user account and password