# AirLive XG(S)-PON
# OLT-2XGS
# WEB USER MANUAL

# CONTENTS

# 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-2XGS Series OLT interfaces

| Product | | 2 ports XG(S)PON OLT |
|---|---|---|
| Chassis | Racks | 1U 19-inch standard box |
| 1G/10G Uplink Port | QTY | 4 |
| | Speed | 2*1G/10G<br>2*1G auto-negotiation |
| | Type (Independent) | 2*RJ45 and 2*SFP+ (SFP+ is compatible with 1GE/10GE) |
| GPON Port | QTY | 2 |
| | Physical Interface | 2*XG(S)-PON |
| Management Ports | | 1*10/100/1000BASE-T out-band port(AUX),<br>1*CONSOLE port，<br>1*USB2.0, 1*Type-C USB console. |
| Management Mode | | SNMP, WEB, and CLI(Console/Telnet/SSH) |

### 1.1.2 OS Requirement

For OLT management, it supports or requires the following operation

system.

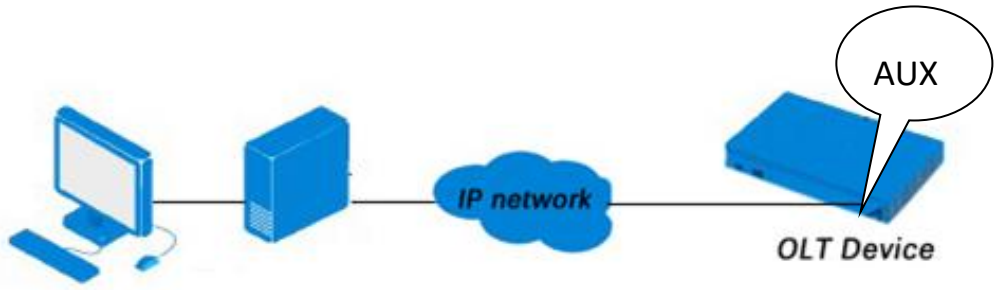
Table 1-2 Operation System requirement

| CPU | Memory | DISK | Video Card | Operating System |
|---|---|---|---|---|
| Frequency above 2GHz | 2GB Or above | 10GB disk space | 65000 color resolving capability 1024*768 and above | Windows2008<br>Windows XP<br>Windows 7<br>Windows 8<br>Windows 10<br>Windows 11 |

## 1.2 Connection

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

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



# Chapter 2 OLT Information

## 2.1 Login

Follow the steps to login:

1. Conform “1.2 Connection” to connect;

2. The device default IP address is 192.168.8.200;

3. Open your web browser, type the device IP in address bar;

4. Entry of the username and password will be prompted. Enter the default login User Name and Password. The default username and password is "**admin/Xpon@Olt9417#**".

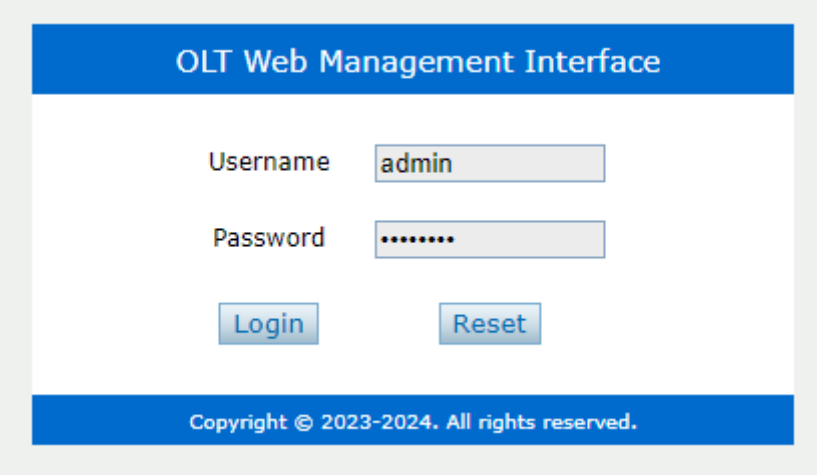



Figure 2.1-1: Login

## 2.2 Device Information

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

**OLT Information→Device Information**

This part shows the OLT information such as system name, serial number, hardware version, firmware version, MAC address and system time. The system name can be modified if need.

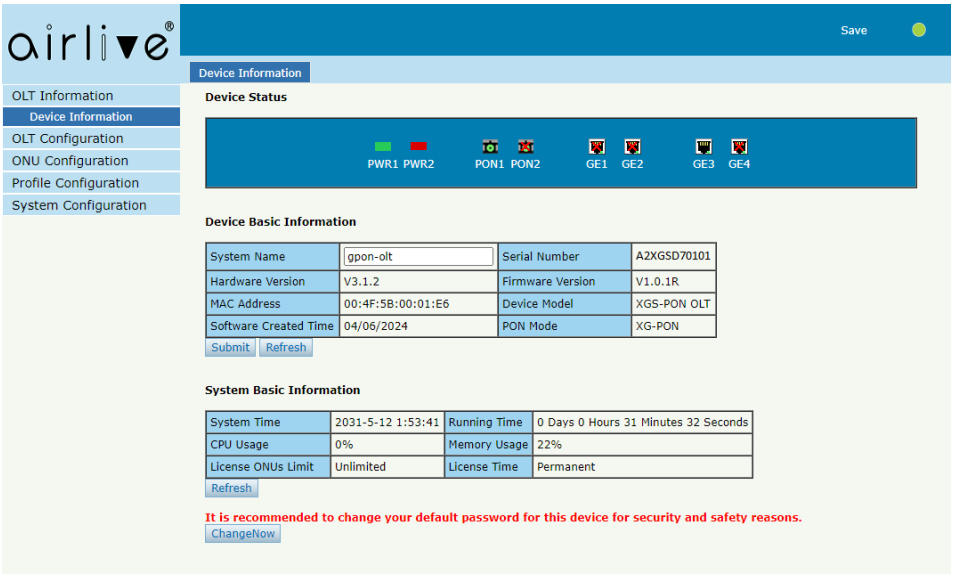



Figure 2.2-1: Device Information

# Chapter 3 OLT Configuration

This section is about the basic service of OLT configuration.

## 3.1 VLAN

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

- Support Port-based VLAN and IEEE802.1Q VLAN.
- Support full 4K VLAN group, VID range 1~4094.

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

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

### 3.1.1 Create VLAN

**OLT Configuration→VLAN**

In this user interface, you can create a new VLAN.

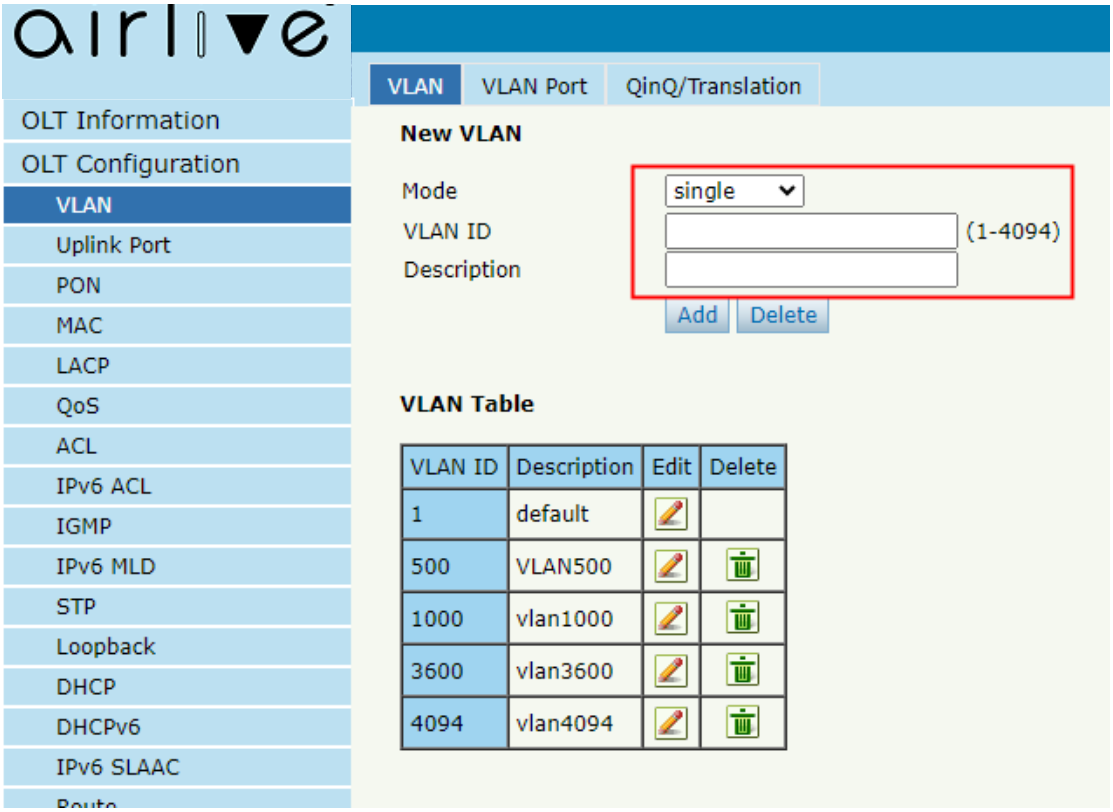



Figure 3.1-1: Create New VLAN

## 3.1.2 VLAN Port

**OLT Configuration→VLAN→VALN Port**

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

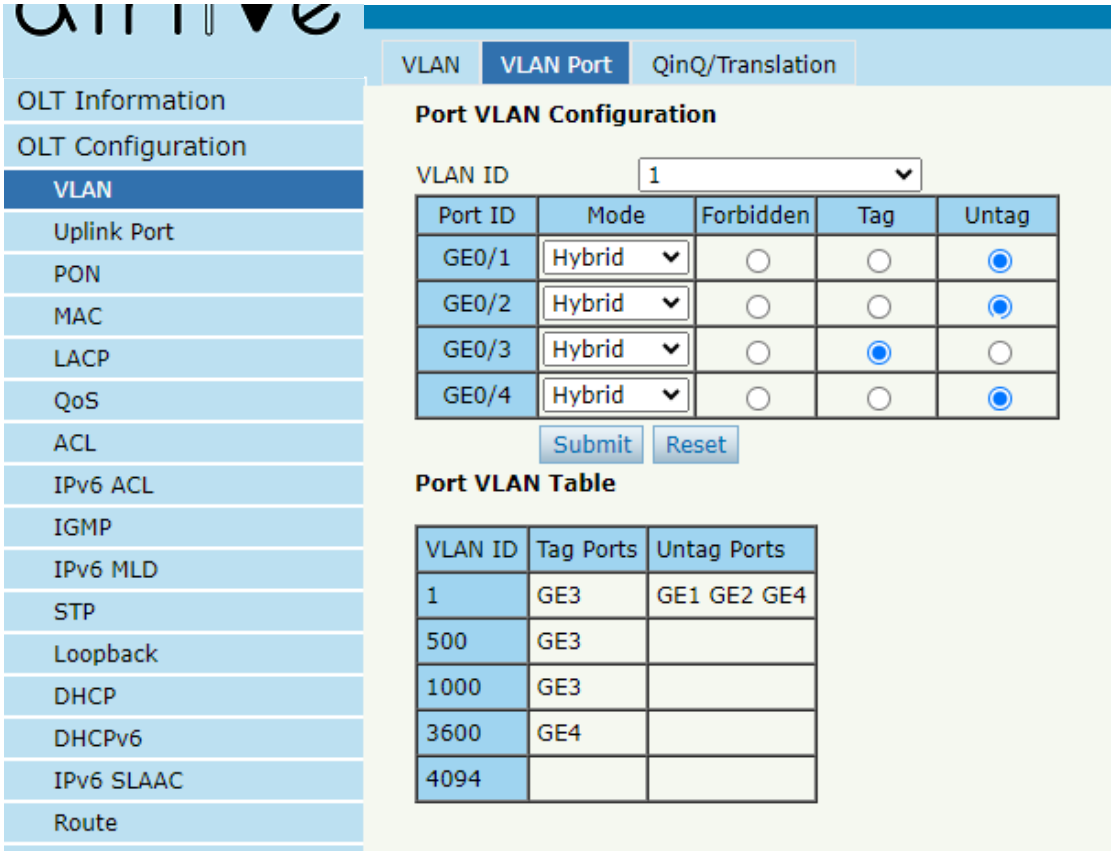



Figure 3.1-2: Add VLAN Port

### 3.1.3 QinQ/Translation

**OLT Configuration→VLAN→QinQ/Translation**

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

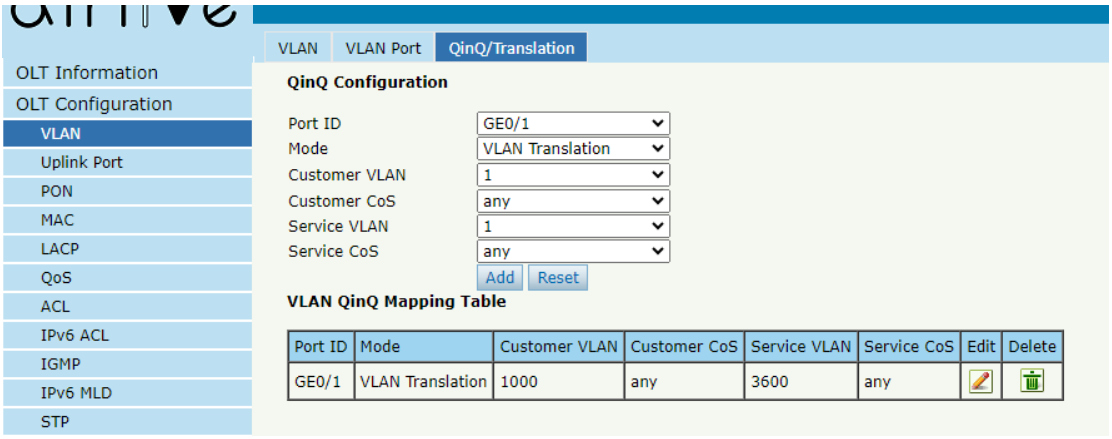



Figure 3.1-3: QinQ/Translation Configuration

## 3.2 Uplink Port

GE ports traffic statistics and basic configuration setting.

### 3.2.1 Information

**OLT Configuration→Uplink Port→Information**

This user interface displays traffic statistics of uplink ports.

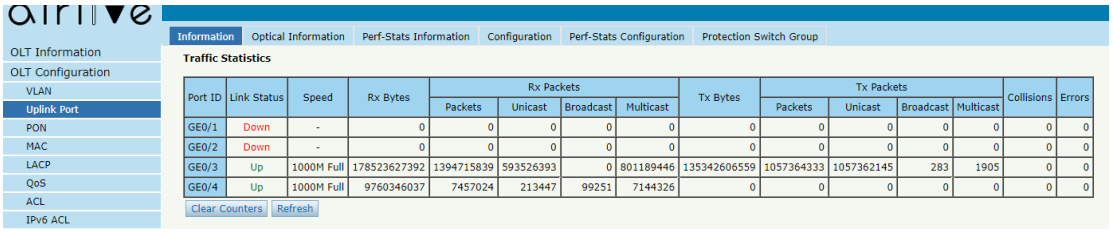



Figure3.2-1: GE Traffic Statistics

### 3.2.2 Configuration

**OLT Configuration→Uplink Port→Information**

This user interface is used to configure port related functions and characteristic parameters of uplink port, such as port attributes, PVID,

speed, rate limit, storm inhibition, port isolation and so on.

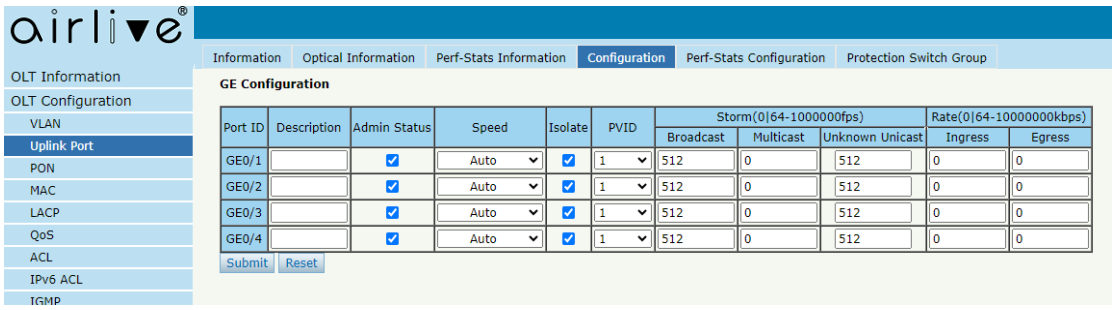



Figure3.2-2: Uplink Ports Configuration

Illustrations of each parameter:

| Parameters | Illustration |
|---|---|
| Port ID | GE port has two types, fiber SFP (GE1 to GE2) and copper (GE3 to GE4). |
| Description | Descriptions or remarks of port. |
| Admin Status | Active or inactive status of port. It is Enabled by default. |
| Speed | Configuring Port Rate. |
| Isolate | Port isolation with each other. |
| PVID | Default VLAN ID of the port. |
| Broadcast | Broadcast storm inhibition. |
| Multicast | Multicast storm inhibition. |
| Unknown Unicast | Unknown unicast storm inhibition. |
| Ingress Rate | Port ingress rate. |
| Egress Rate | Port egress rate. |

## 3.3 PON

### 3.3.1 Information

**OLT Configuration→PON→Information**

This user interface is used to display parameters of PON port, such as PON module port current Temperature, Voltage, Transmit power, Vendor Name, Vendor Revision, Vendor Serial Number.

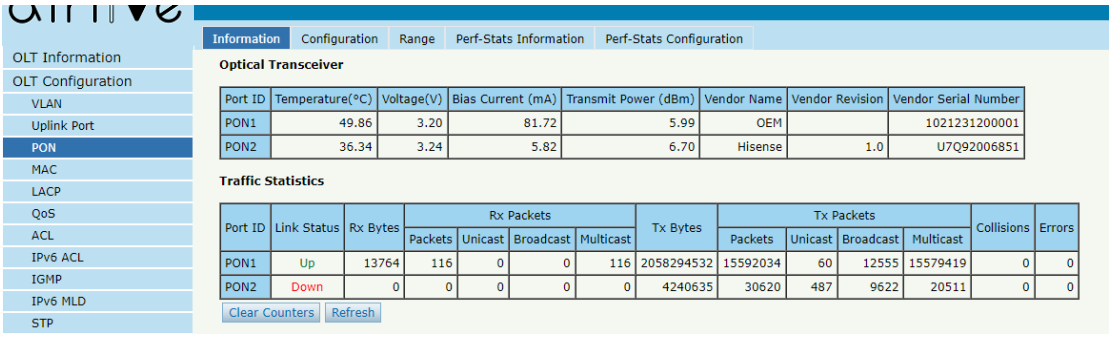



Figure3.3-1: PON Information

### 3.3.2 Configuration

**OLT Configuration→PON→Configuration**

This user interface is used to configure rate limit, storm inhibition, port isolation and so on like uplink port.

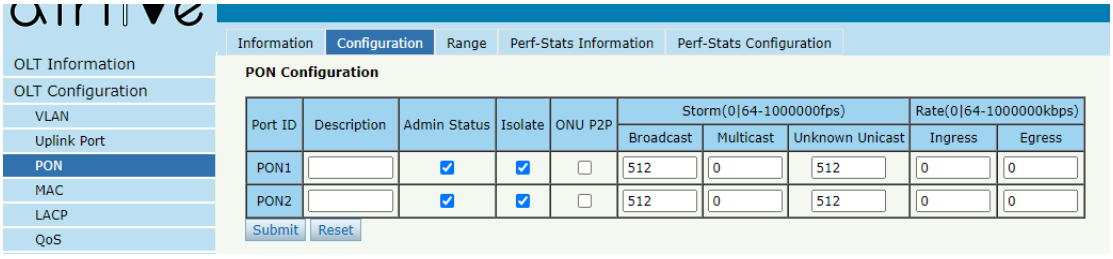



Figure3.3-2: PON configuration

### 3.3.3 Range

**OLT Configuration→PON→Range**

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

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

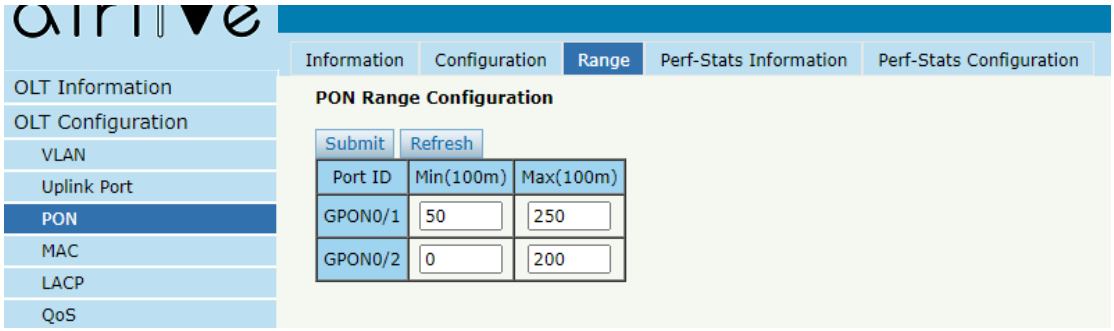



Figure3.3-3: PON Range Configuration

### 3.3.4 Perf-Stats Information

**OLT Configuration→PON→Perf-Stats Information**

This user interface is used to View the traffic statistics of the PON port within a period of time.

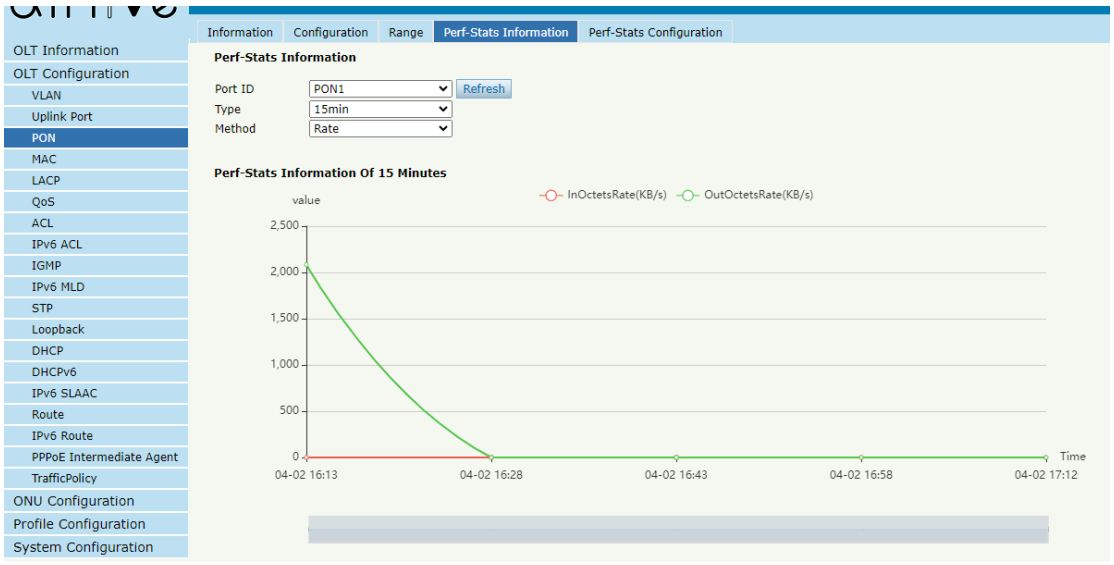



Figure3.3-4: PON Perf-Stats Information

## 3.3.5 Perf-Stats Configuration

This user interface is used to Set the sampling time and sampling times for traffic statistics.

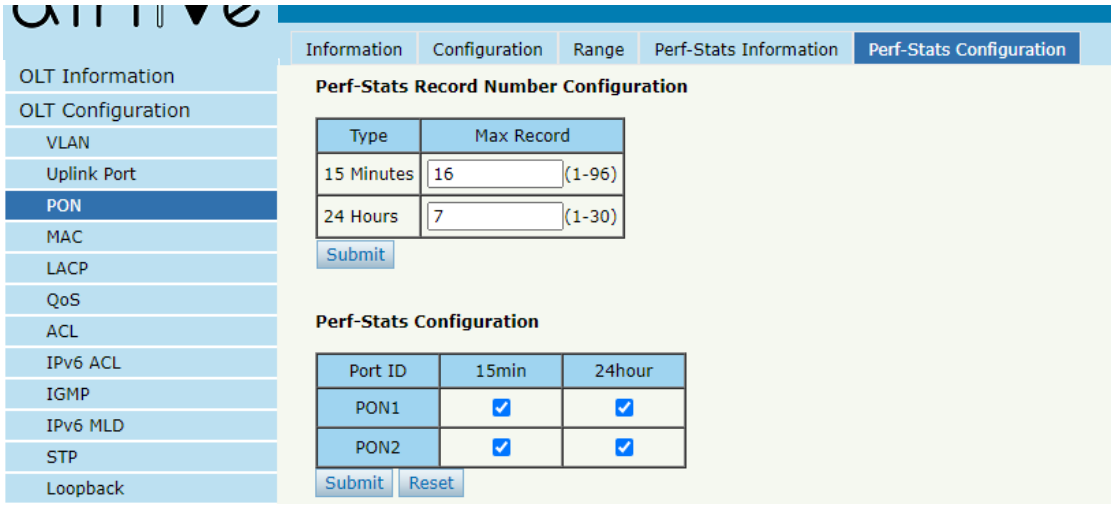



Figure3.3-5: PON Perf-Stats Configuration

## 3.4 MAC

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

### 3.4.1 MAC Table

**OLT Configuration→MAC→MAC Table**

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

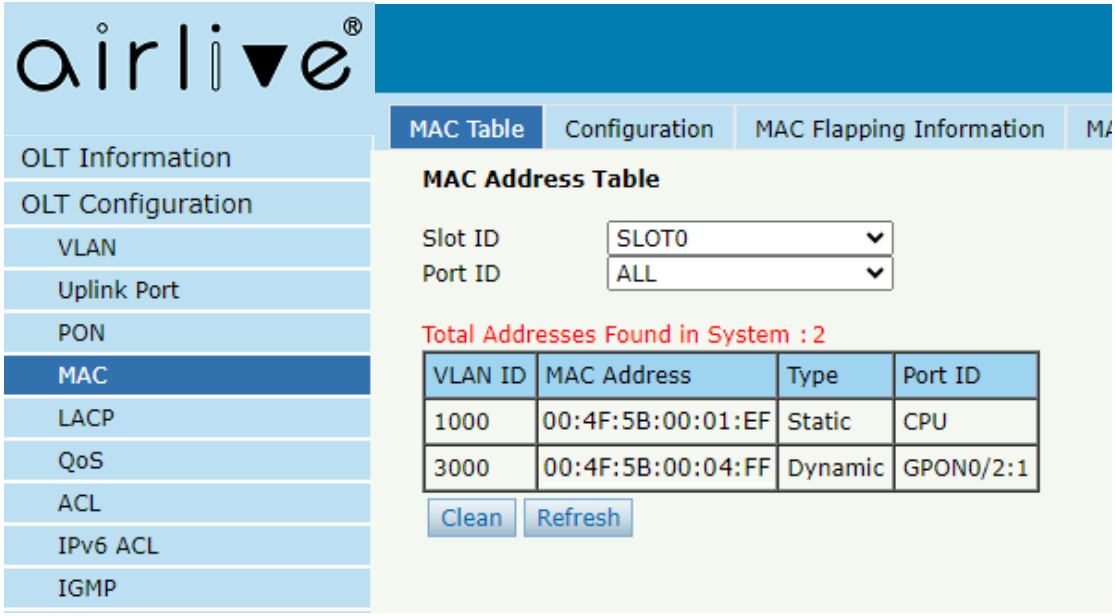



Figure3.4-1: MAC Address Table

### 3.4.2 Configuration

**OLT Configuration→MAC→Configuration**

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

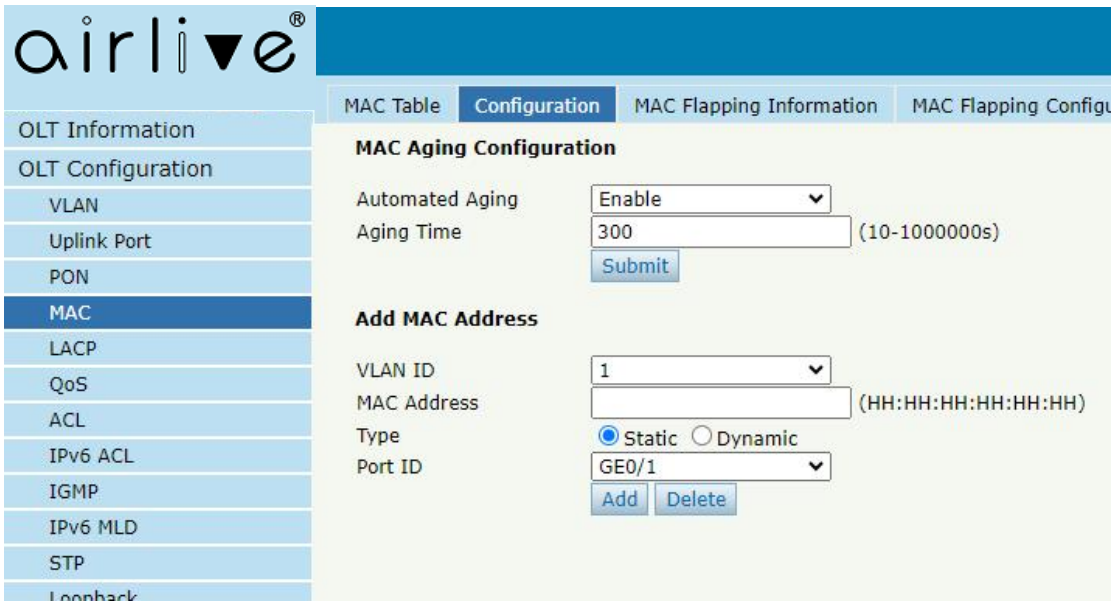



Figure 3.4-2: MAC Configuration

### 3.4.3 MAC Flapping Information

This interface displays information learned on multiple ports for the same MAC if you enable MAC Flapping switch.


| MAC Address | VLAN | Source port | Current Port | Begin Time | Last Time | Times |
|---|---|---|---|---|---|---|
| 00:4F:5B:98:81:4D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:56 | 2021/07/23 13:26:28 | 2/0 |
| 00:4F:5B:98:81:7D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 13:26:28 | 2/0 |
| 00:4F:5B:98:81:35 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 13:26:28 | 2/0 |
| 00:4F:5B:98:83:7D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 13:26:28 | 2/0 |
| 00:4F:5B:98:80:D5 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 11:09:57 | 1/0 |
| 00:4F:5B:98:81:15 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 13:26:29 | 2/0 |
| 00:4F:5B:98:81:5D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 13:26:29 | 2/0 |
| 00:4F:5B:98:82:7D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:57 | 2021/07/23 11:09:57 | 1/0 |
| 00:4F:5B:98:83:0D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:58 | 2021/07/23 13:26:29 | 2/0 |
| 00:4F:5B:98:83:25 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:58 | 2021/07/23 13:26:30 | 2/0 |
| 00:4F:5B:98:81:95 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:58 | 2021/07/23 13:26:30 | 2/0 |
| 00:4F:5B:98:80:E5 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:59 | 2021/07/23 13:26:30 | 2/0 |
| 00:4F:5B:98:82:55 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:59 | 2021/07/23 13:26:30 | 2/0 |
| 00:4F:5B:98:81:3D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:59 | 2021/07/23 11:09:59 | 1/0 |
| 00:4F:5B:98:81:25 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:59 | 2021/07/23 13:26:27 | 2/0 |
| 00:4F:5B:98:80:FD | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:09:59 | 2021/07/23 13:26:30 | 2/0 |
| 00:4F:5B:98:82:5D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 11:10:00 | 2021/07/23 11:10:00 | 1/0 |
| 00:4F:5B:98:81:B5 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 13:26:27 | 2021/07/23 13:26:27 | 1/0 |
| 00:4F:5B:98:81:05 | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 13:26:28 | 2021/07/23 13:26:28 | 1/0 |
| 00:4F:5B:98:82:0D | 3000 | GPON 0/1 | GE 0/1 | 2021/07/23 13:26:28 | 2021/07/23 13:26:28 | 1/0 |

Figure 3.4-3: MAC Flapping Information

## 3.4.4 MAC Flapping Configuration

You can enable MAC Flapping Configuration in this interface.

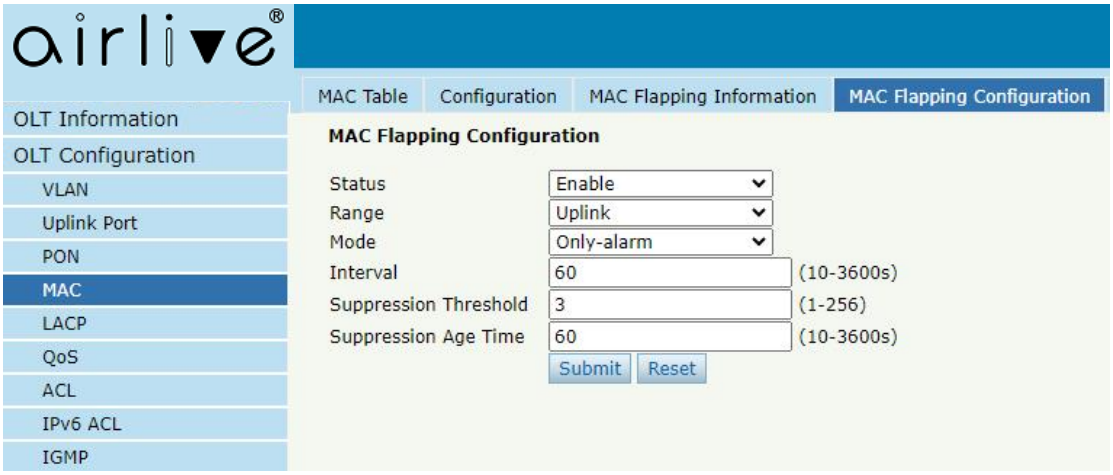



Figure 3.4-4: MAC Flapping Configuration

### 3.4.5 MAC Flapping Port Configuration

This user interface is used to enable MAC Flapping Configuration for specific port.

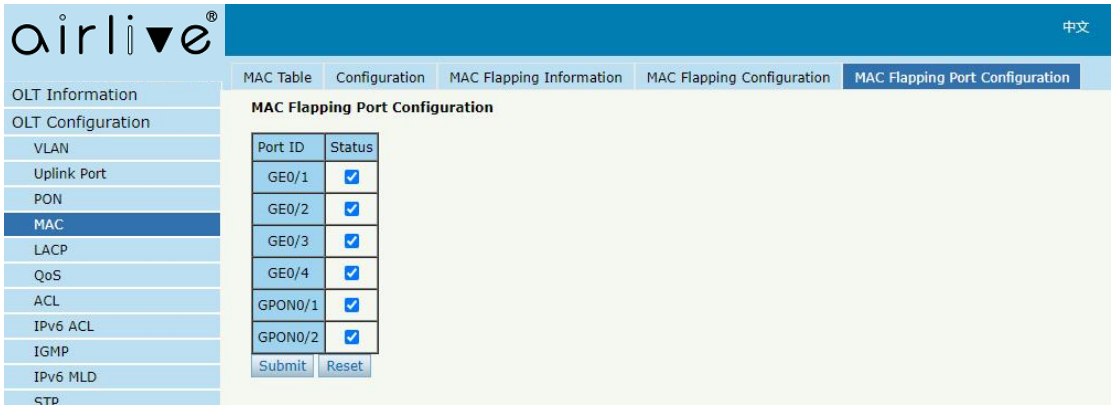



Figure 3.4-5: MAC Flapping Port Configuration

## 3.5 LACP

### 3.5.1 Static LACP

**OLT Configuration→LACP→Static LACP**

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

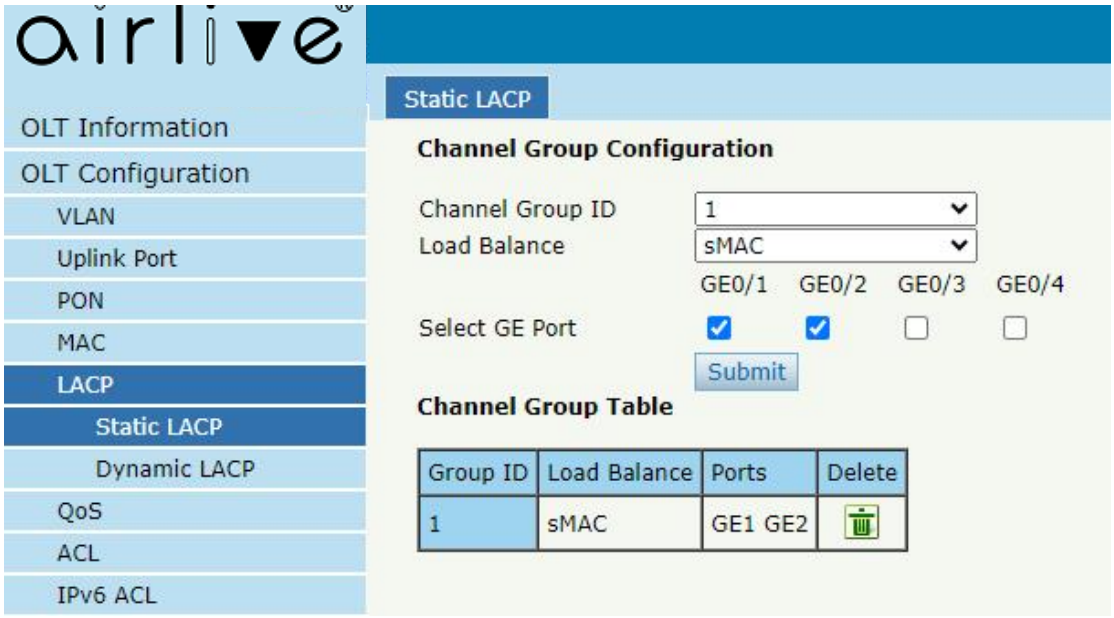



Figure 3.5-1: Create Static LACP

## 3.5.2 Dynamic LACP

**OLT Configuration→LACP→Dynamic LACP**

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

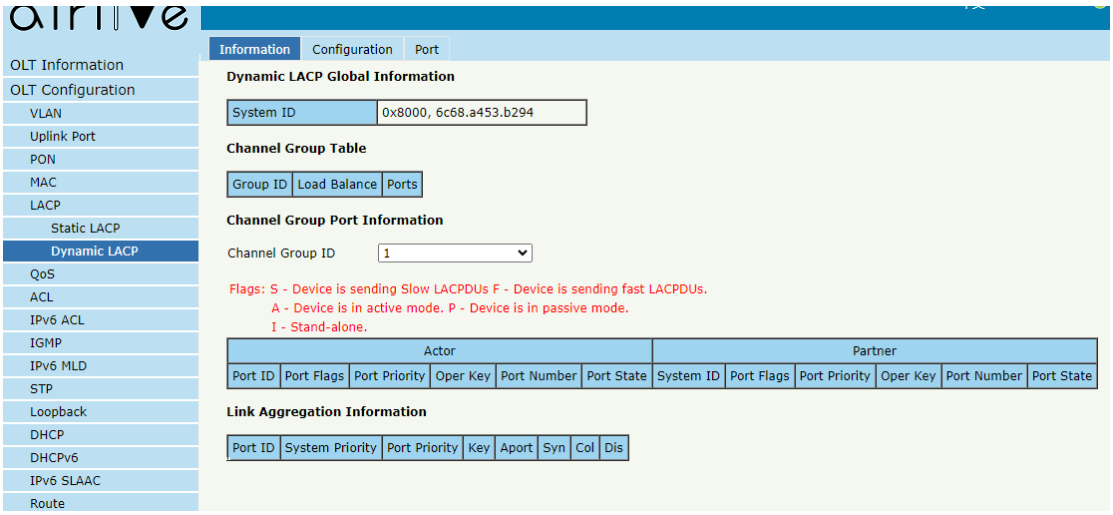



Figure 3.5-2: Dynamic LACP Information

# 3.6 QoS

## OLT Configuration→QoS

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

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

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

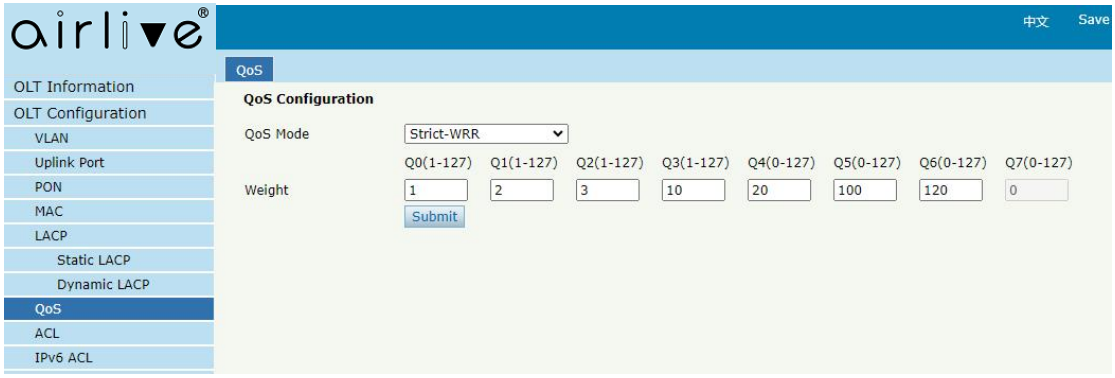



Figure 3.6-1: QoS Configuration

## 3.7 ACL

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

This device supports the following types of ACL.

### 3.7.1 IP Filter

**OLT Configuration→ACL→IP Filter**

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

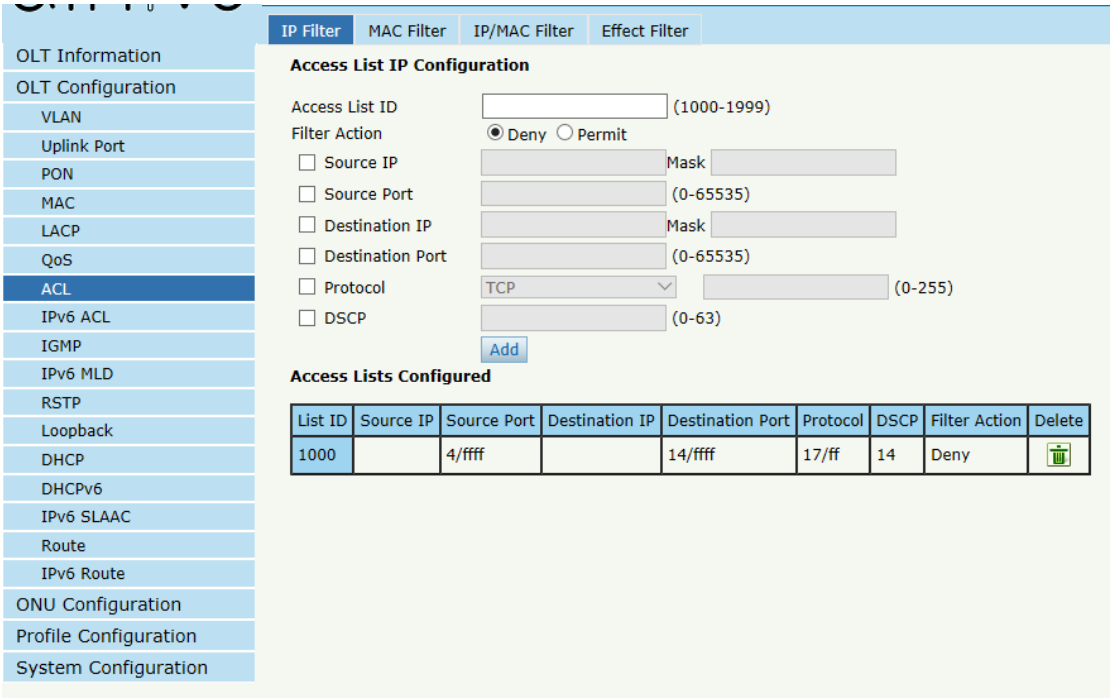



Figure 3.7-1: IP Filter

## 3.7.2 MAC Filter

### OLT Configuration→ACL→MAC Filter

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

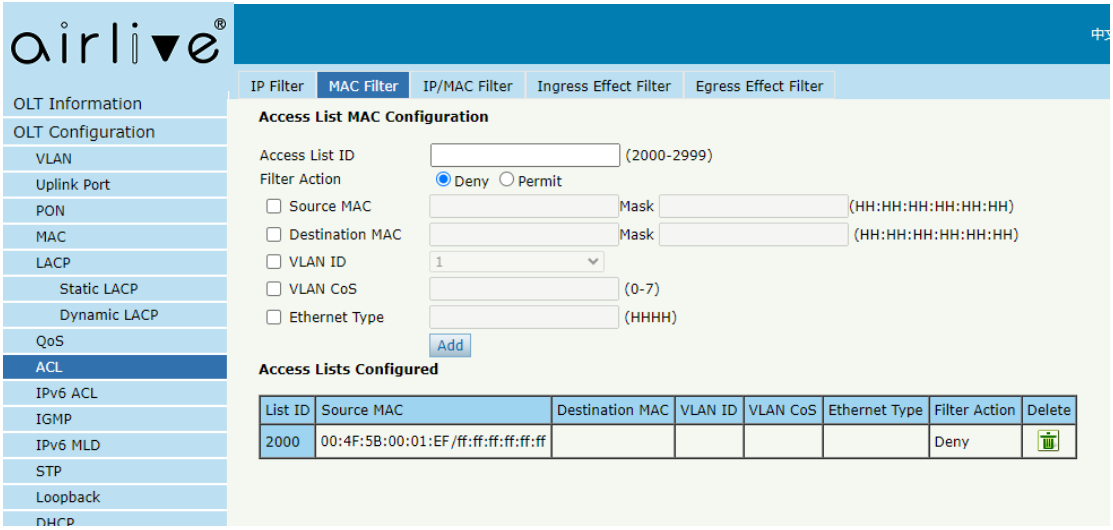



Figure 3.7-2: MAC Filter

## 3.7.3 IP/MAC Filter

### OLT Configuration→ACL→IP/MAC Filter

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

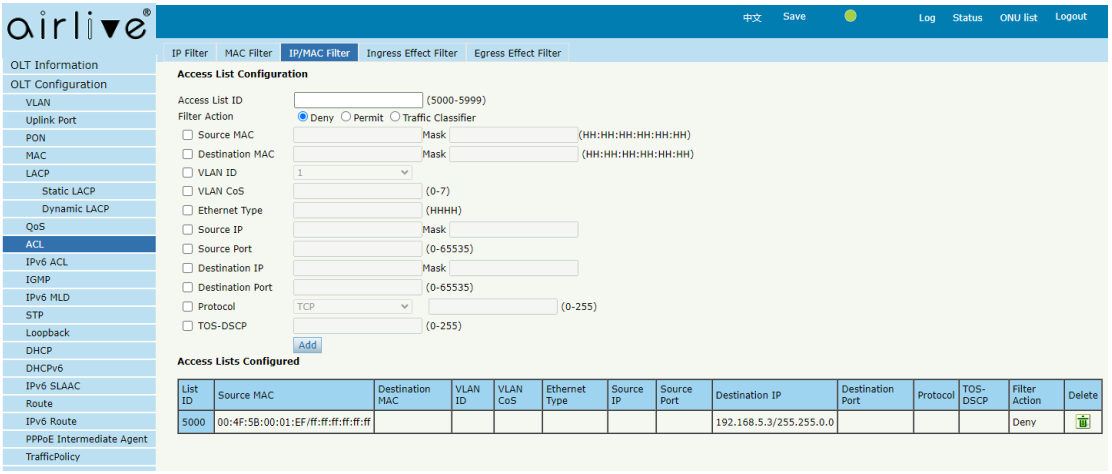



Figure 3.7-3: IP/MAC Filter

## 3.7.4 Ingress Effect Filter

### OLT Configuration→ACL→Effect Filter

Bind the access list to the ports then it can take effect. Each access list can be bound to several ports. The inbound direction of port traffic is bound here.

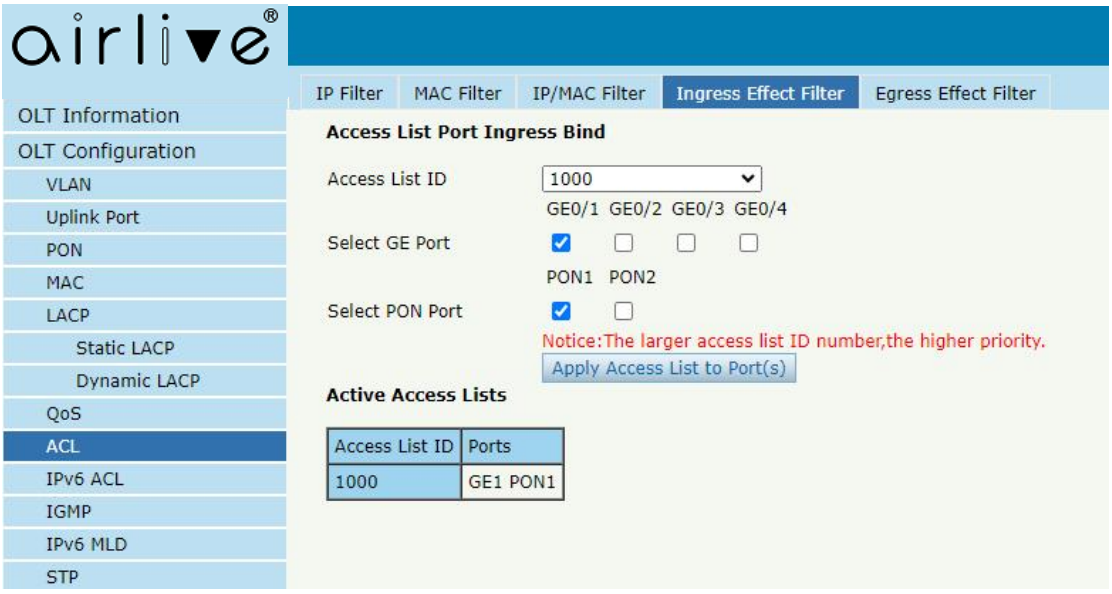



Figure 3.7-4: Bind Security Filter(Ingress)

## 3.7.5 Egress Effect Filter

**OLT Configuration→ACL→Effect Filter**

Bind the access list to the ports then it can take effect. Each access list can be bound to several ports. The outbound direction of port traffic is bound here.

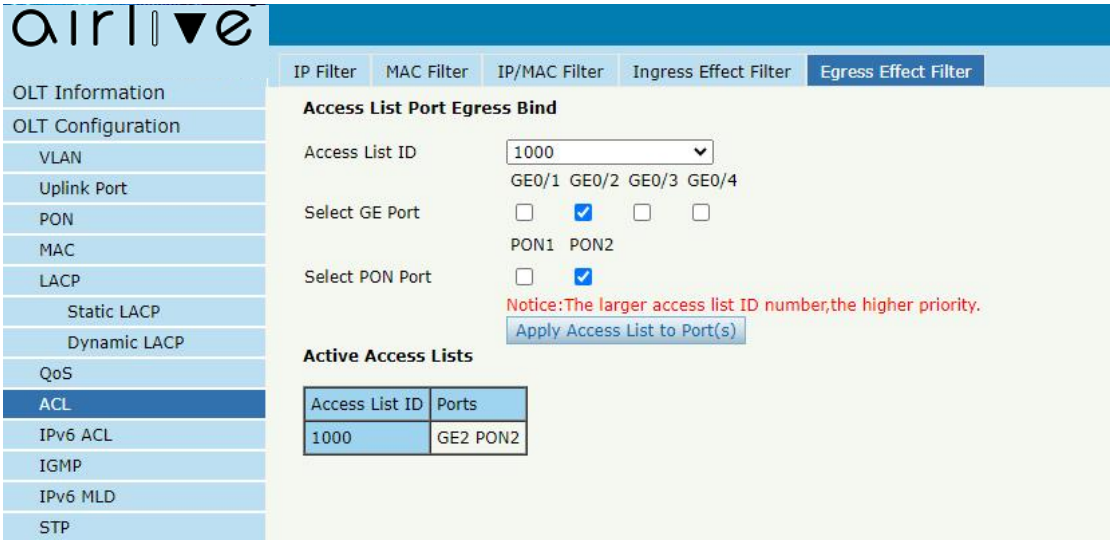



Figure 3.7-5: Bind Security Filter(Egress)

## 3.8 IPv6 ACL

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

### 3.8.1 IPv6 Filter

**OLT Configuration→IPv6 ACL→ IPv6 Filter**

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

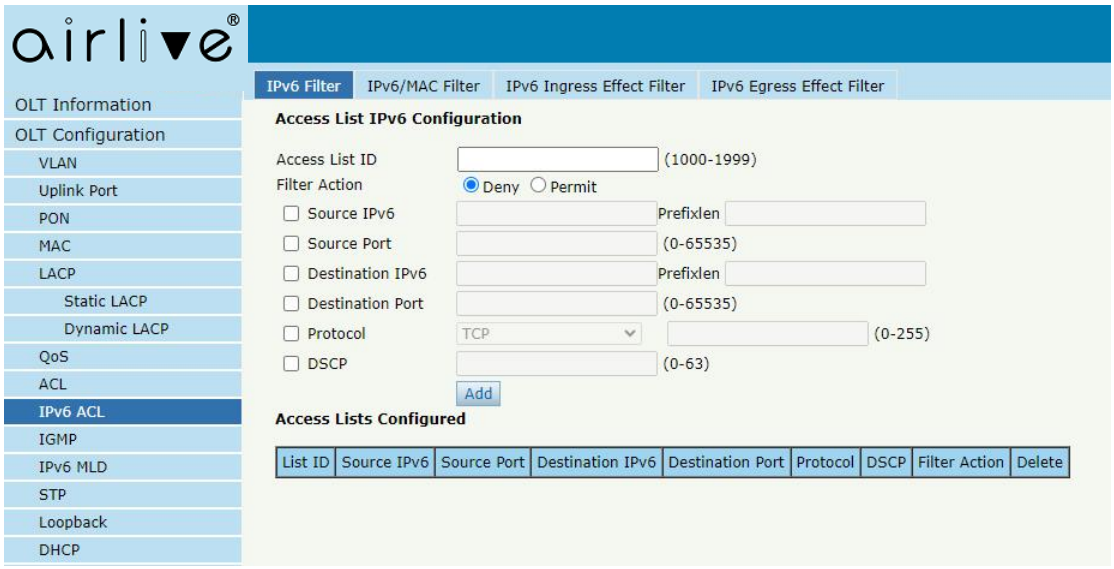



Figure 3.8-1: IPv6 Filter

### 3.8.2 IPv6/MAC Filter

**OLT Configuration→IPv6 ACL→IPv6/MAC Filter**

This filter mixes IPv6 address, MAC address and other parameters,

including source IPv6 address and destination IPv6 address, source MAC address and destination MAC address, VLAN, Ethernet type, protocol, TCP/UDP port, and so on.

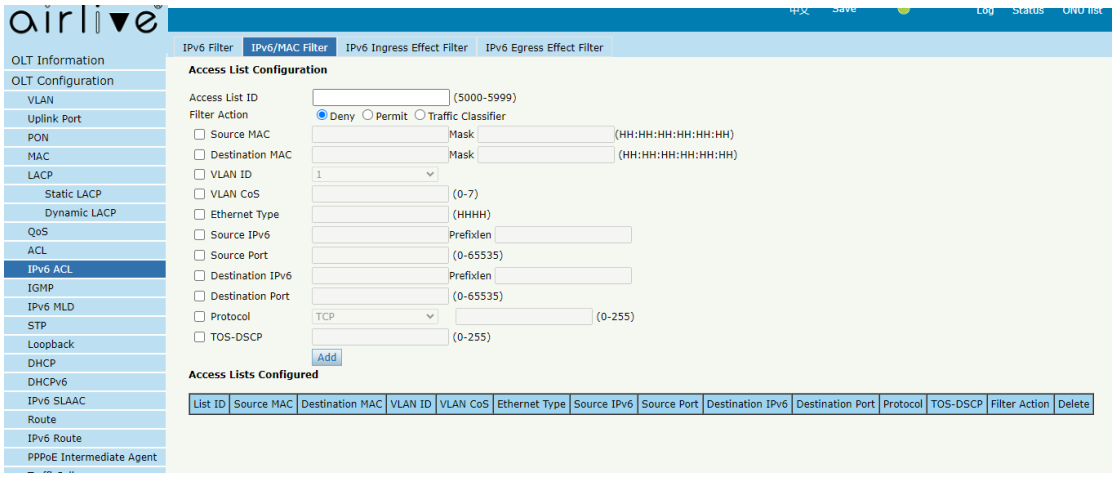



Figure 3.8-2: IPv6/MAC Filter

## 3.8.3 IPv6 Ingress Effect Filter

**OLT Configuration → IPv6 ACL →IPv6 Ingress Effect Filter**

Bind access list to ports so that the ACL rules can take effect. Each access list can be bound to several ports. The inbound direction of port traffic is bound here.

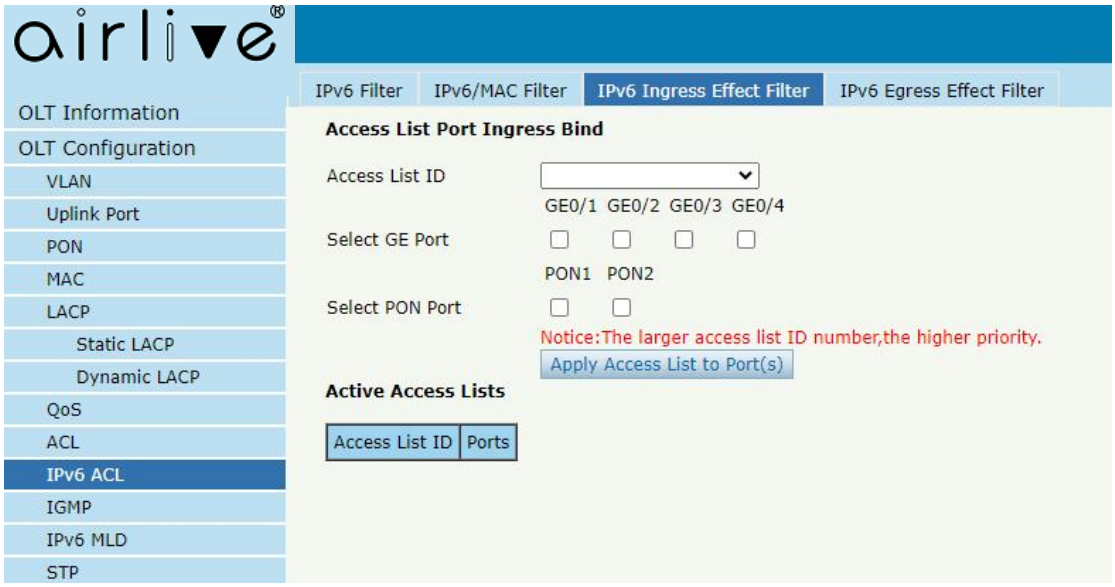



Figure 3.8-3: Bind IPv6 Security Filter(Ingress)

## 3.8.4 IPv6 Egress Effect Filter

**OLT Configuration → IPv6 ACL →IPv6 Egress Effect Filter**

Bind access list to ports so that the ACL rules can take effect. Each access list can be bound to several ports. The outbound direction of port traffic is bound here.

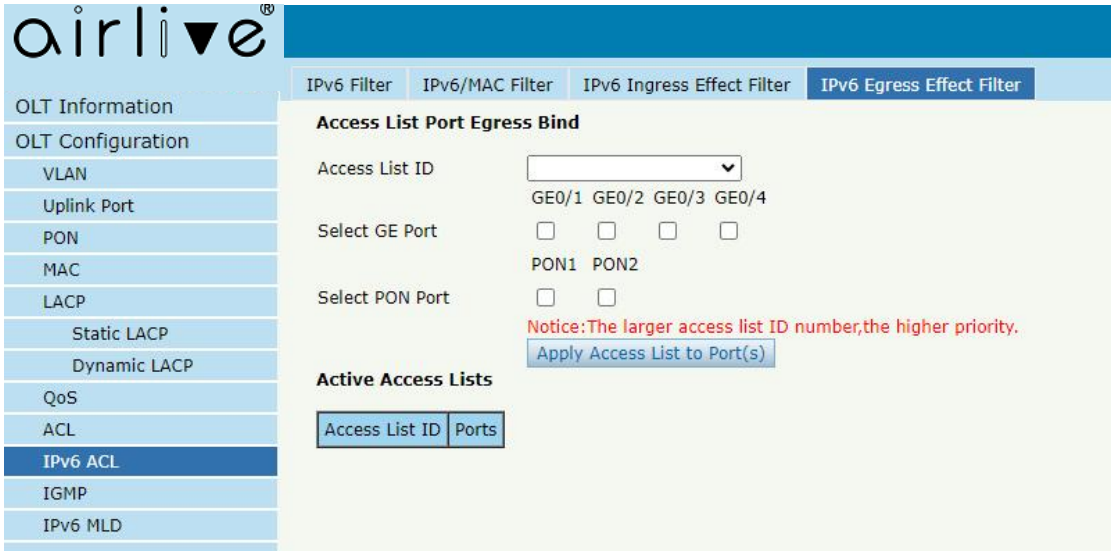



Figure 3.8-4: Bind IPv6 Security Filter(Egress)

## 3.9 IGMP

### 3.9.1 Group Member

**OLT Configuration→IGMP→Group Member**

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

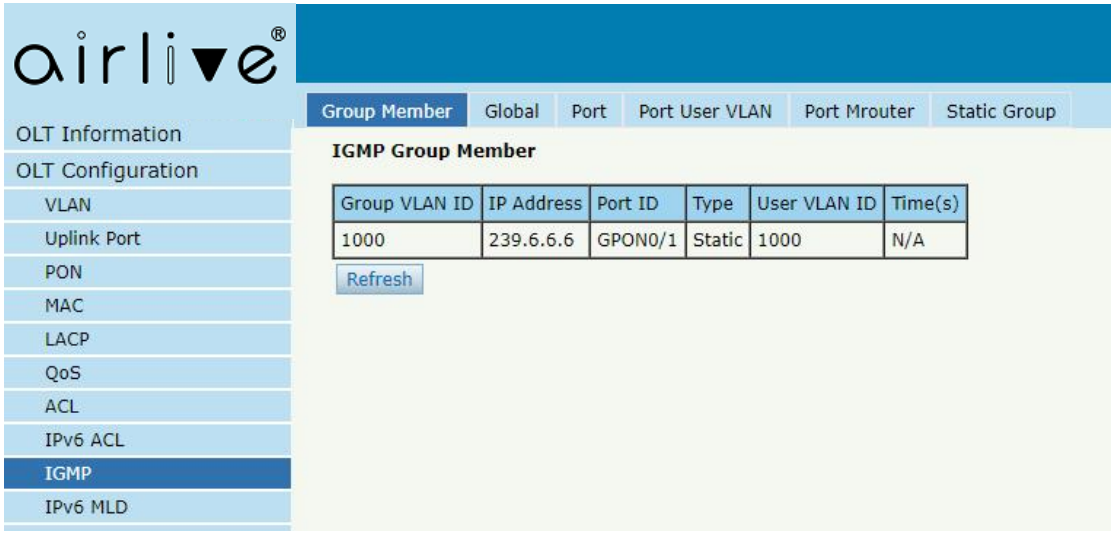



Figure 3.9-1: Group Member

### 3.9.2 Global

**OLT Configuration →IGMP→Global**

IGMP basic configuration mainly contains parameters of query packet. When IGMP status is enabled, OLT works at IGMP snooping mode. IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to "listen in" on the IGMP conversation between hosts and routers. By

listening to these conversations, the switch maintains a map of which devices need which IP multicast streams. Multicasts may be filtered from the ports which do not need them and thus controls which ports receive specific multicast traffic. When IGMP status is disabled, OLT works at transparent mode.

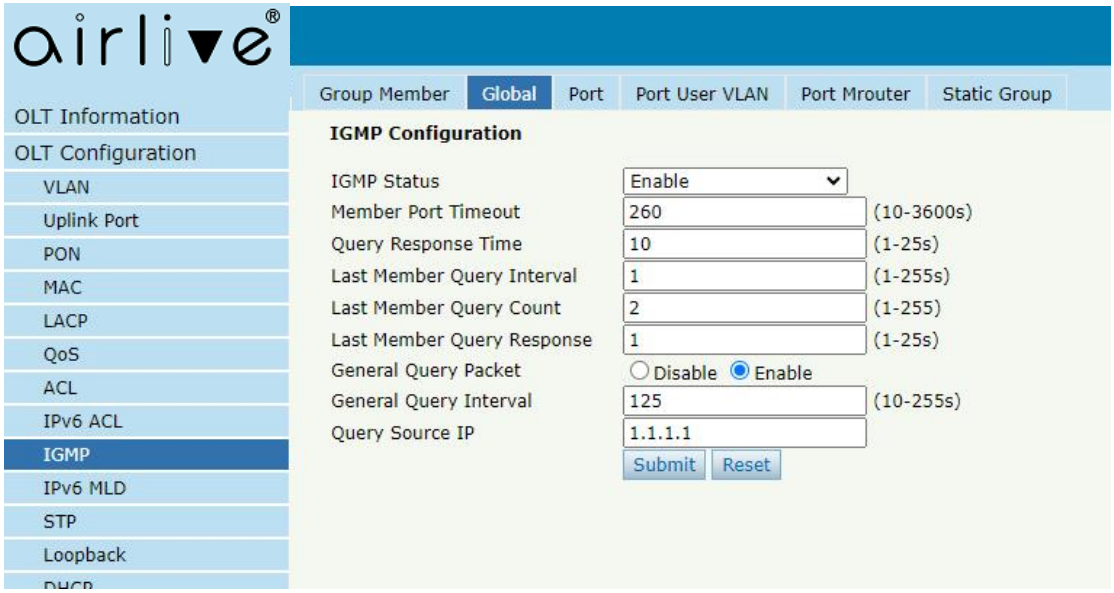



Figure 3.9-2: IGMP Global

## 3.9.3 Port

**OLT Configuration →IGMP→Port**

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

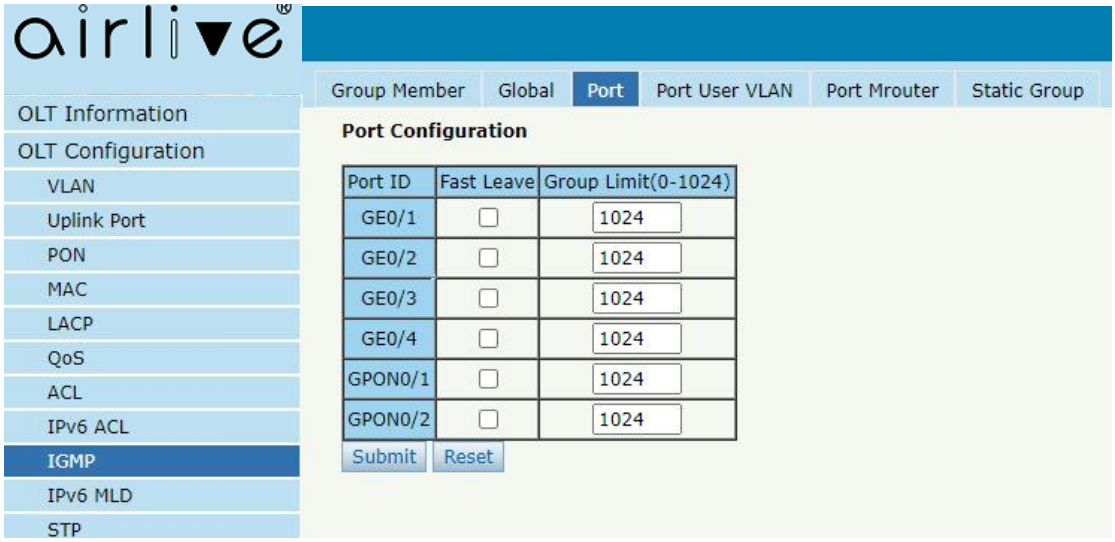



Figure 3.9-3: IGMP Port

## 3.9.4 Port User VLAN

**OLT Configuration →IGMP→Port User VLAN**

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

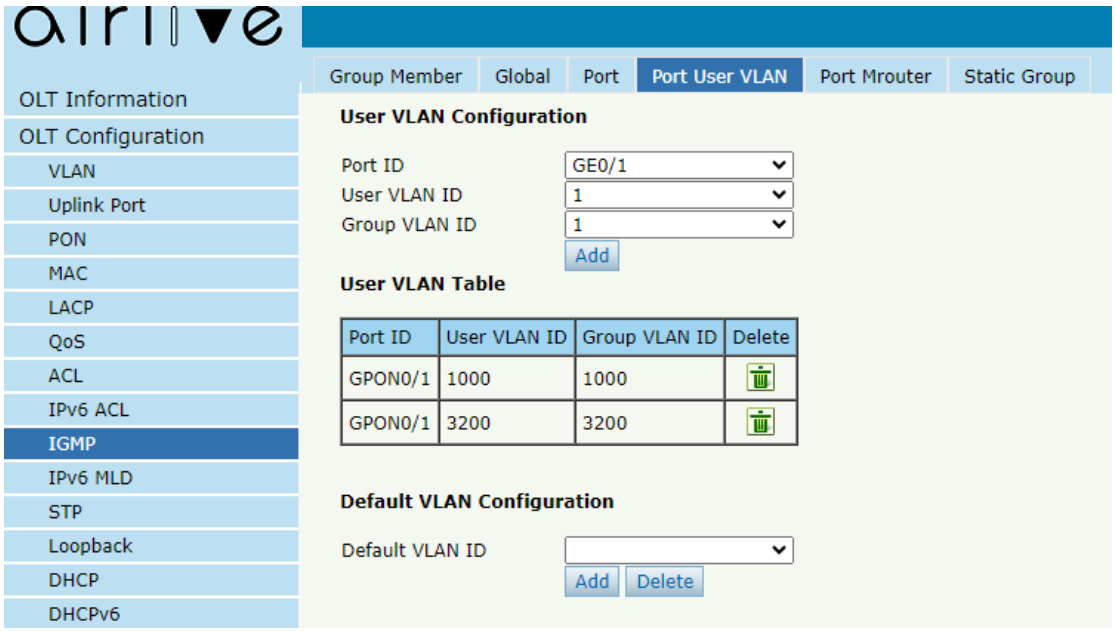


Figure 3.9-4: IGMP Port User VLAN

## 3.9.5 Port Mrouter

### OLT Configuration →IGMP→Port Mrouter

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

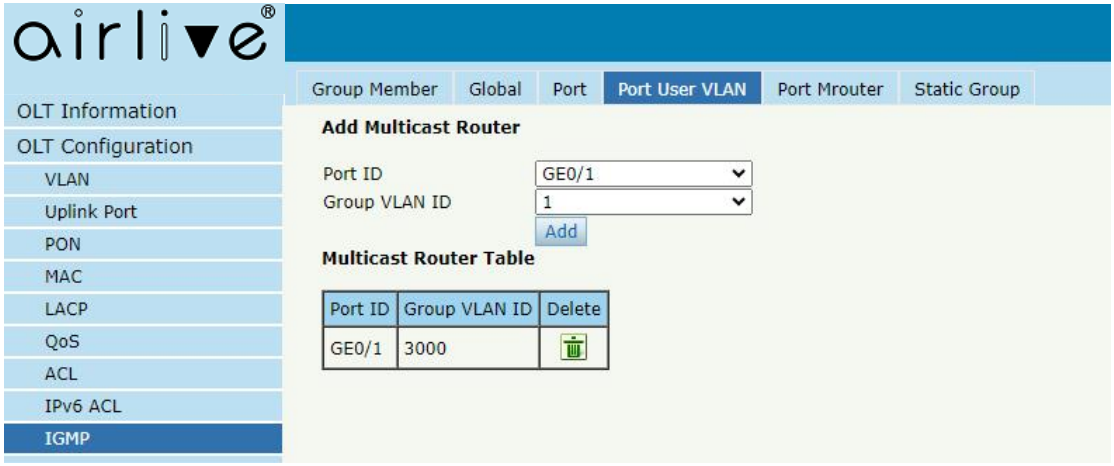



Figure 3.9-5: IGMP Port Mroute

## 3.9.6 Static Group

### OLT Configuration →IGMP→Static Group

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

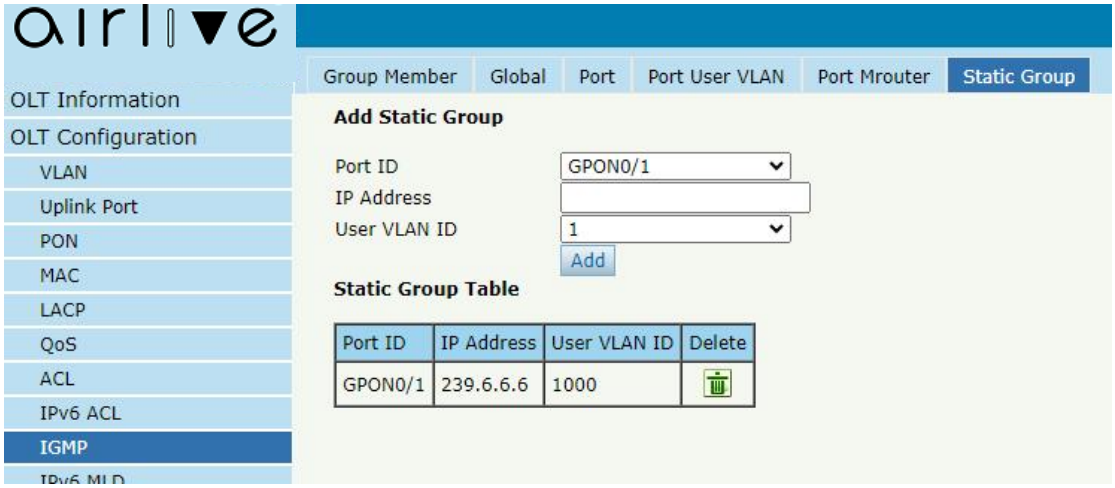



Figure 3.9-6: IGMP Static Group

# 3.10 IPv6 MLD

## 3.10.1 Group Member

### OLT Configuration → IPv6 MLD → Group Member

This page displays IPv6 multicast group member ports.

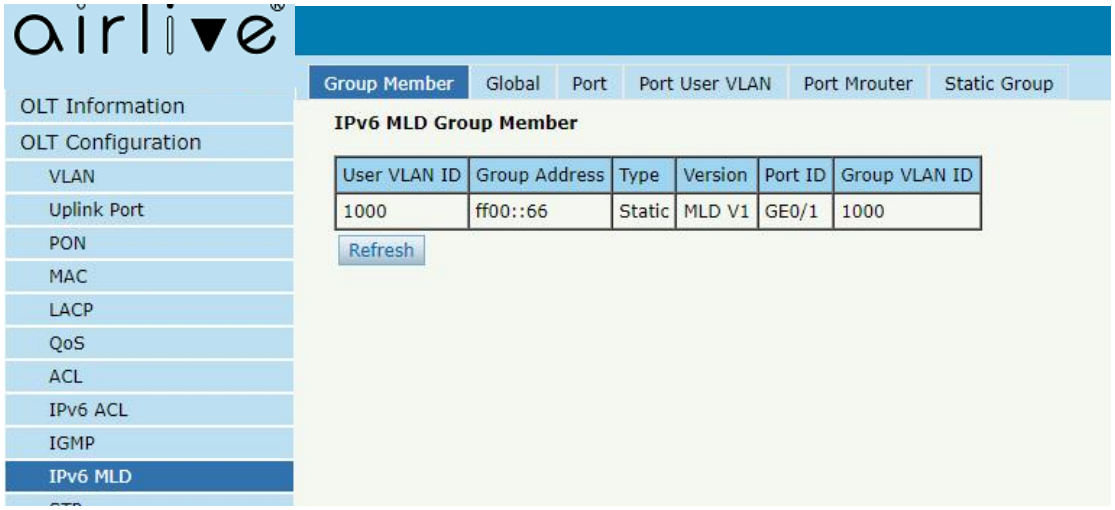



Figure 3.10-1: IPv6 MLD Group Member

## 3.10.2 Global

### OLT Configuration → IPv6 MLD → Global

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

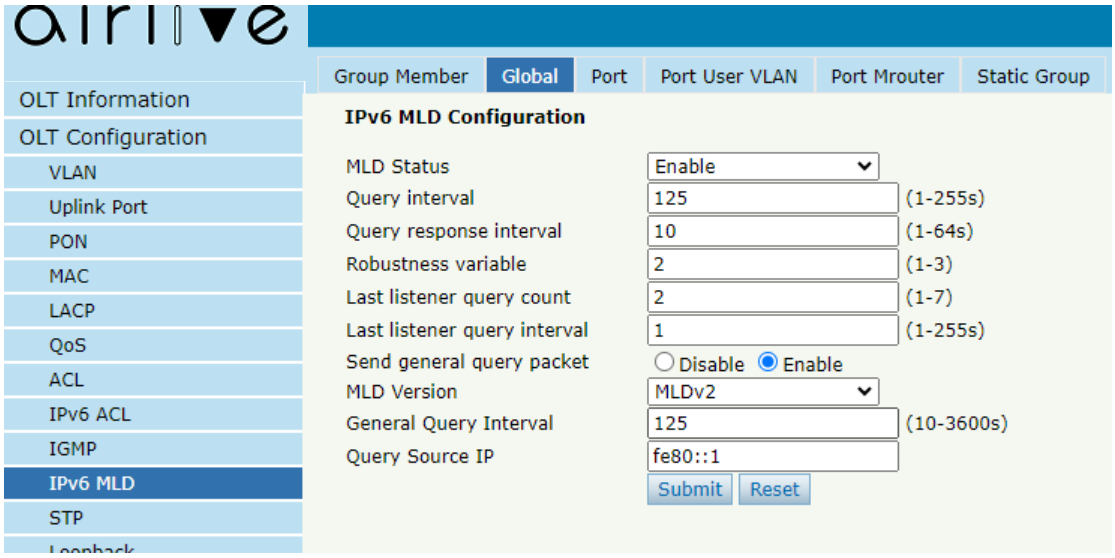



Figure 3.10-2: IPv6 MLD Global

## 3.10.3 Port

**OLT Configuration → IPv6 MLD → Port**

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

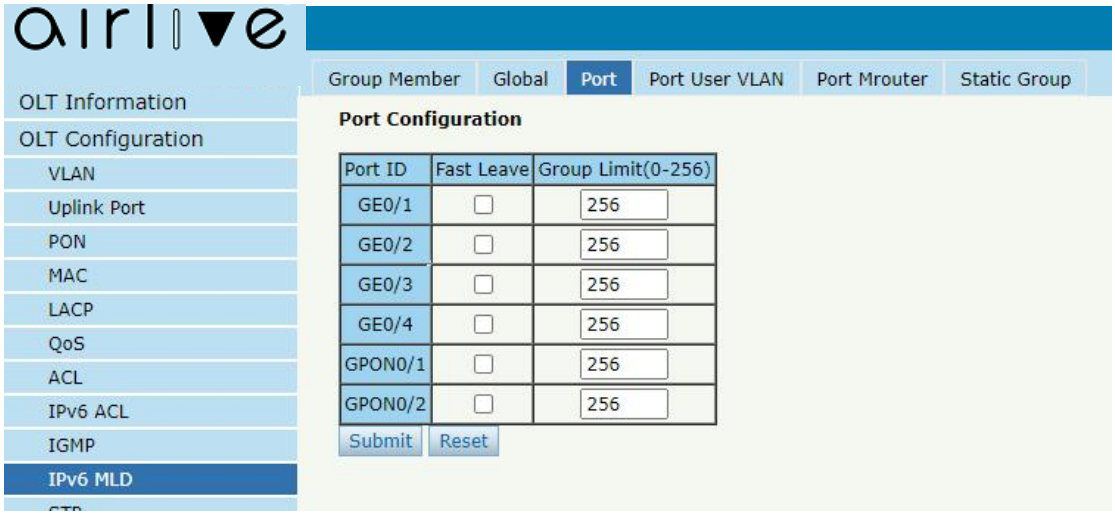



Figure 3.10-3: IPv6 MLD Port

## 3.10.4 Port User VLAN

### OLT Configuration→IPv6 MLD→Port User VLAN

This page is used to configure MLD VLAN for OLT.

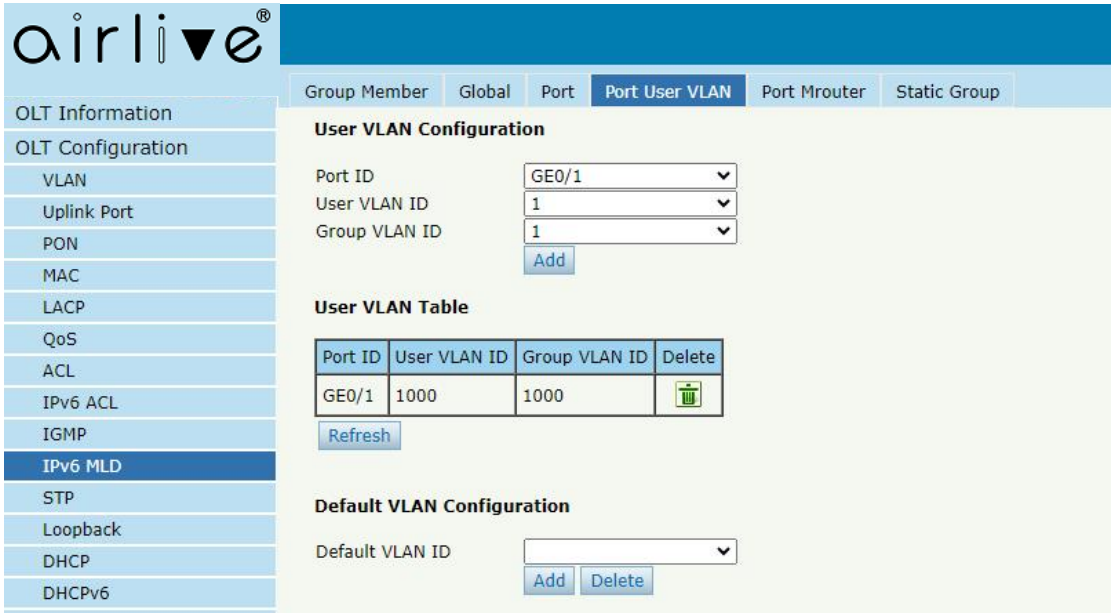



Figure 3.10-4: IPv6 Port User VLAN

## 3.10.5 Port Mrouter

### OLT Configuration → IPv6 MLD → Port Mrouter

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

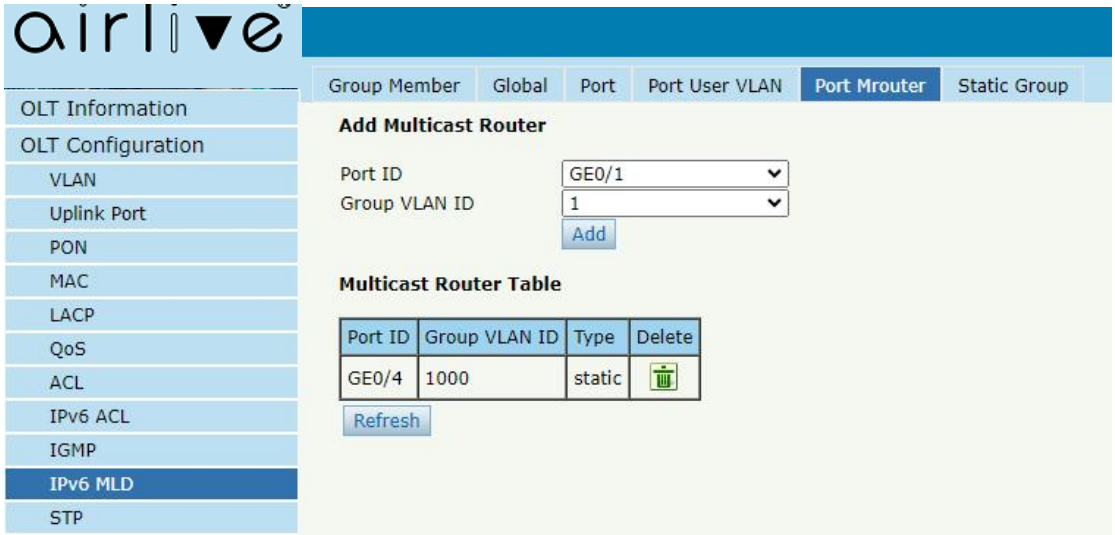


Figure 3.10-5: IPv6 MLD Port Mrouter

### 3.10.6 Static Group

**OLT Configuration → IPv6 MLD →Static Group**

This configuration is used to bind multicast IPv6 address and VLAN ID.

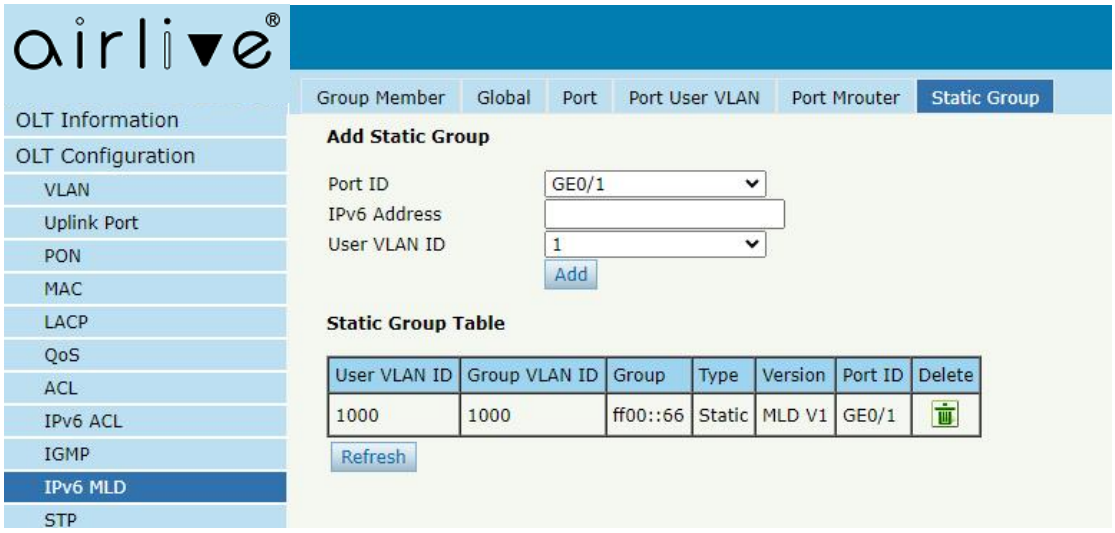



Figure 3.10-6: MLD Static Group

## 3.11 STP

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

### 3.11.1 Information

**OLT Configuration→STP→Information**

Global information mainly displays STP parameters of root bridge

device.

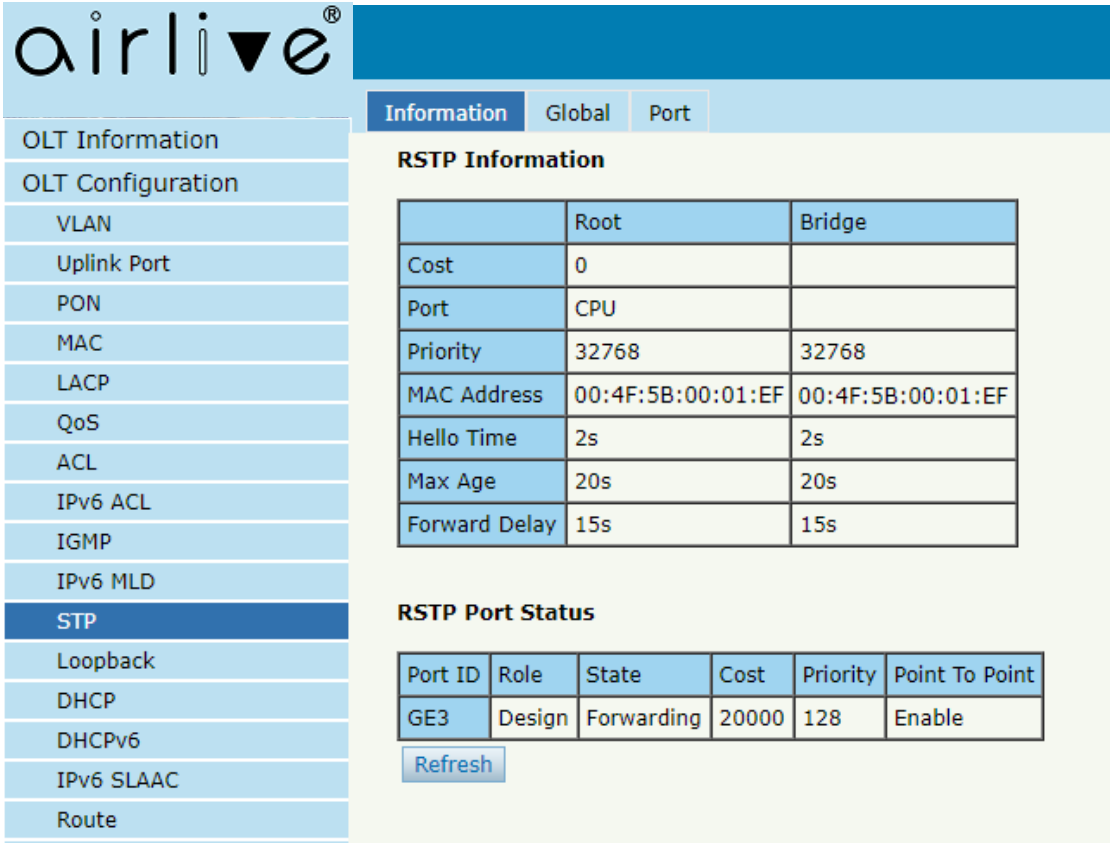



Figure 3.11-1: STP Information

## 3.11.2 Global

**OLT Configuration→STP→Global**

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

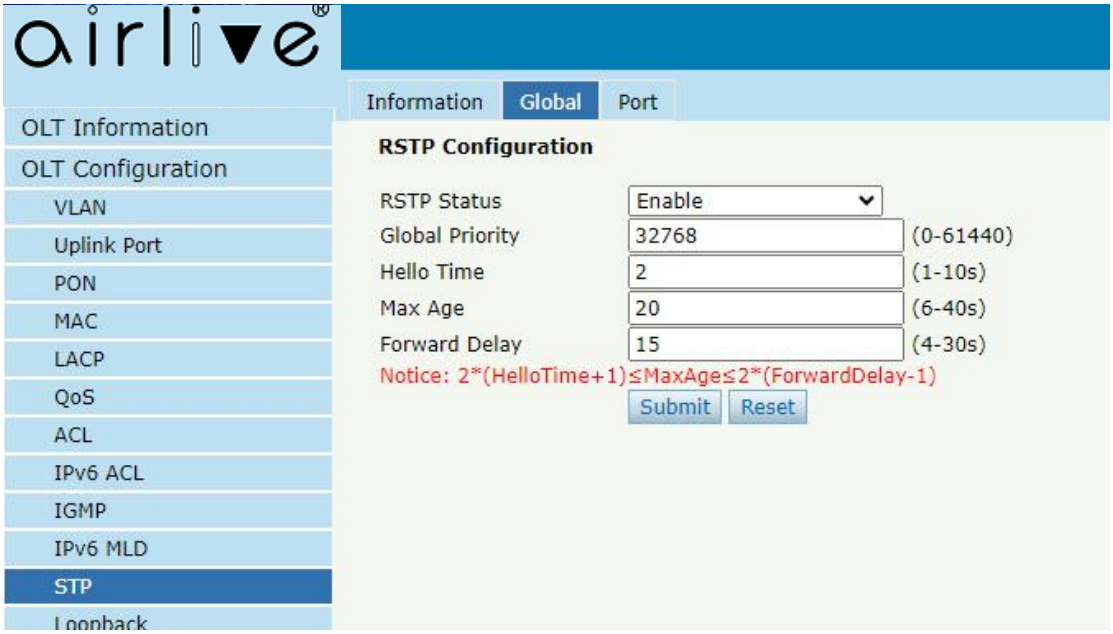



Figure 3.11-2: STP Global Setup

## 3.11.3 Port

**OLT Configuration→STP→Port**

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

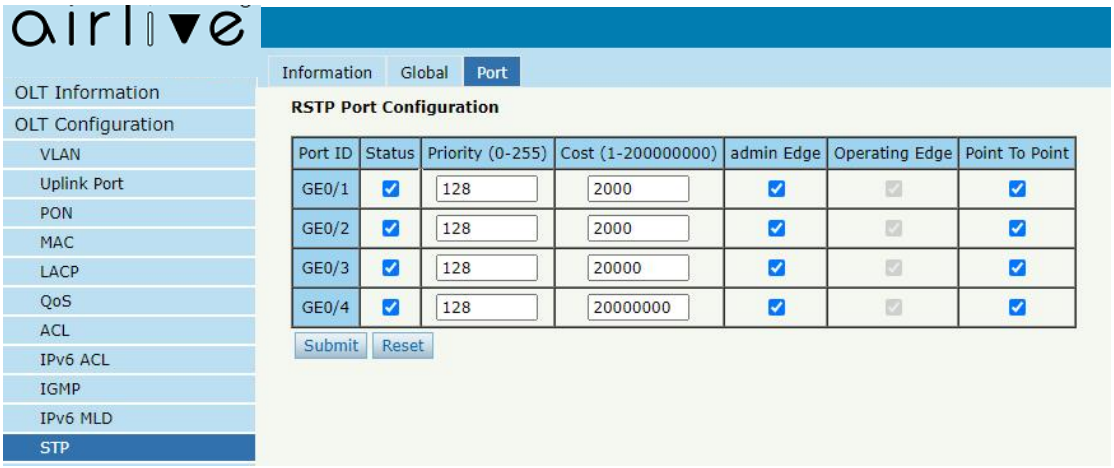



Figure 3.11-3: STP Port Settings

## 3.12 Loopback

Loopback can detect loop ports and process loop ports.

### 3.12.1 Information

**OLT Configuration→Loopback→Information**

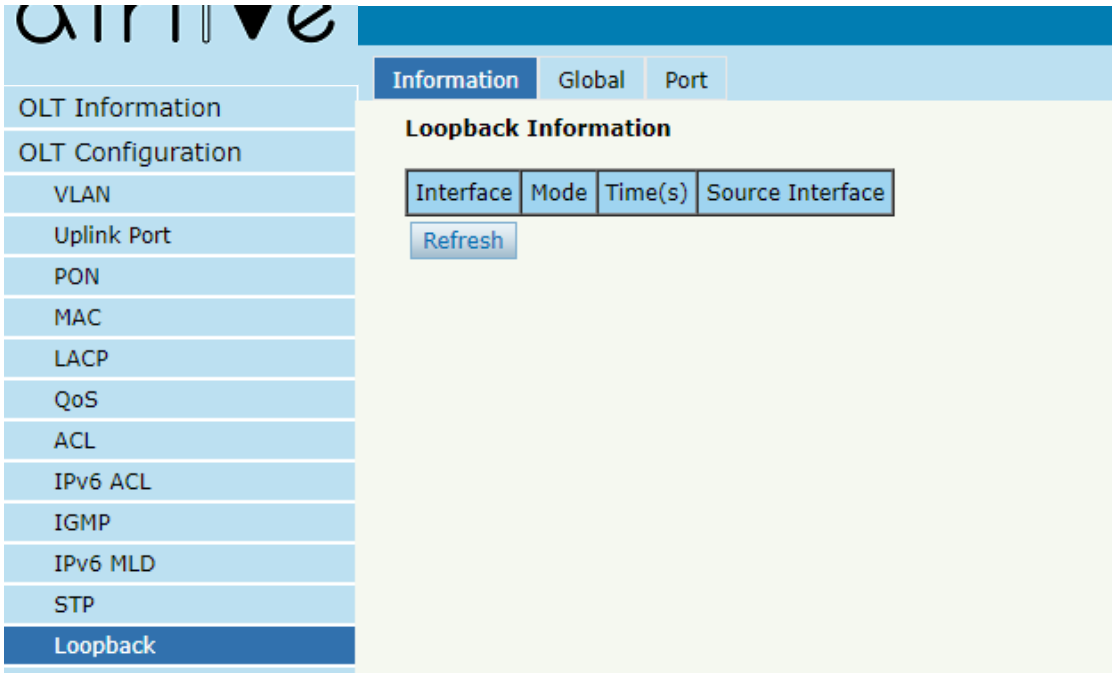



Figure 3.12-1: Loopback Information

### 3.12.2 Global

**OLT Configuration→Loopback→Global**

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

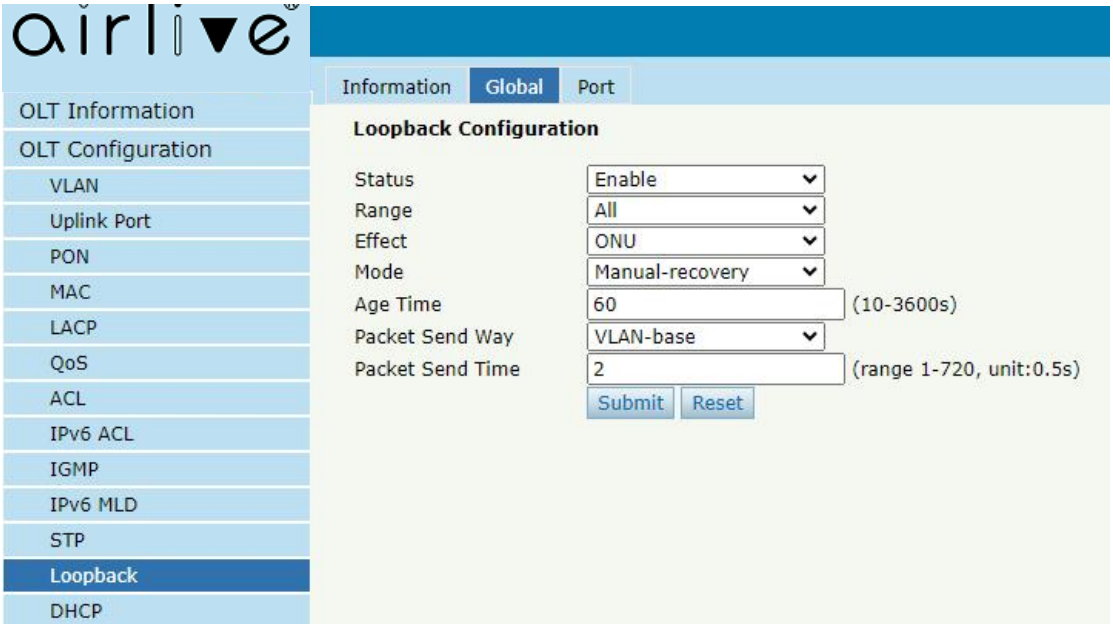



Figure 3.12-2: Loopback Global

## 3.12.3 Port

**OLT Configuration→Loopback→Port**

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

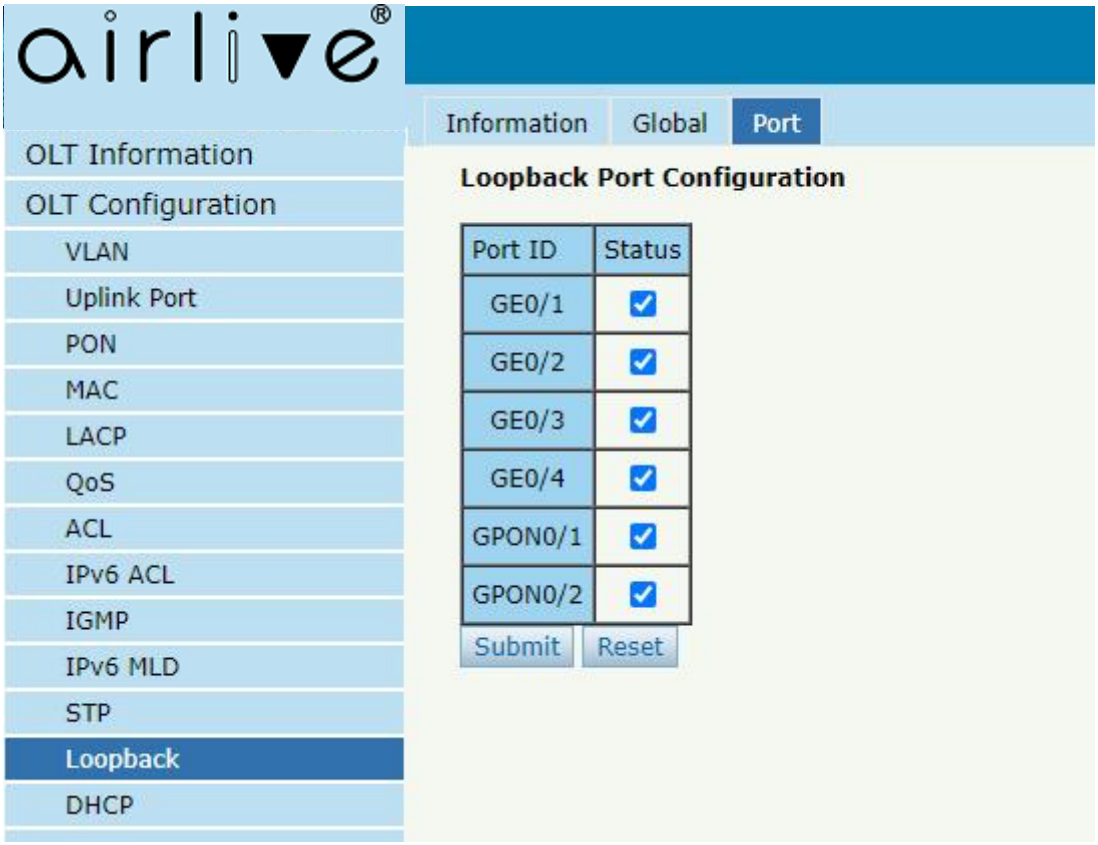



Figure 3.12-3: Loopback Port

## 3.13 DHCP

OLT can support the following DHCP functions.

- DHCP Server
- DHCP Relay
- DHCP Snooping

### 3.13.1 DHCP Server

#### 3.13.1.1 DHCP Bind Information

**OLT Configuration→DHCP→DHCP Server→DHCP Bind**

**Information**

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

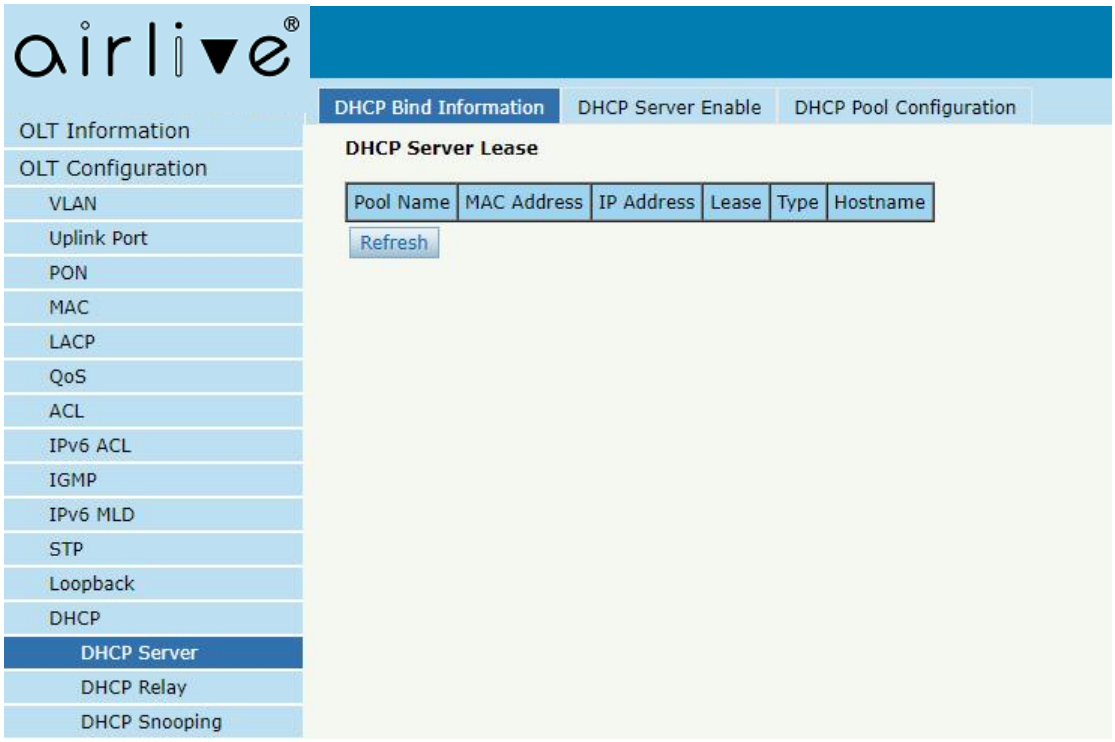



Figure 3.13-1: DHCP Bind Information

### 3.13.1.2 DHCP Server Enable

**OLT Configuration→DHCP→DHCP Server→DHCP Server Enable**

This parameter is used to configure different DHCP servers for different VLAN ID.

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

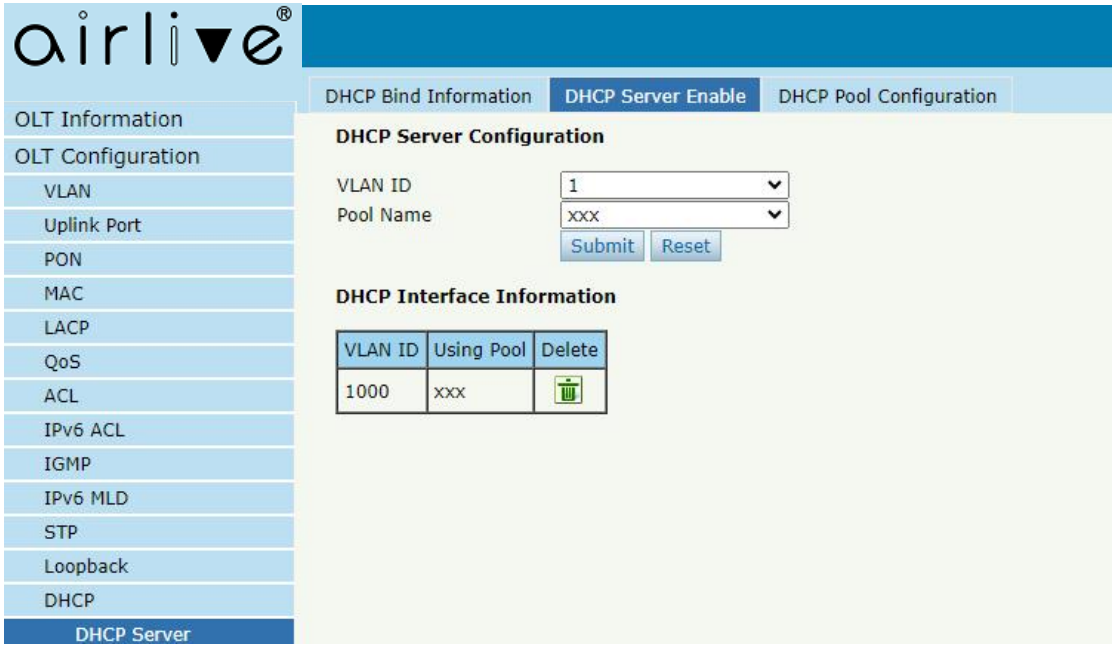



Figure 3.13-2: DHCP Server Enable

### 3.13.1.3 DHCP Pool Configuration

**OLT Configuration→DHCP→DHCP Server→DHCP Pool Configuration**

This page is used to configure basic information about the DHCP server, including Pool Name, Lease Time, and Gateway.

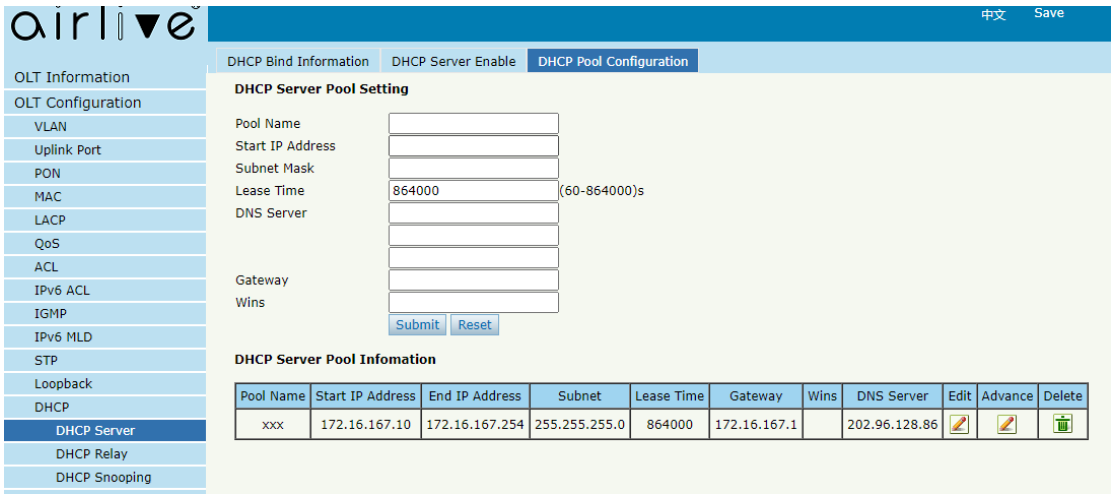



Figure 3.13-3: DHCP Pool Configuration

## 3.13.2 DHCP Relay

### 3.13.2.1 Configuration

**OLT Configuration→DHCP→DHCP Relay→Configuration**

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

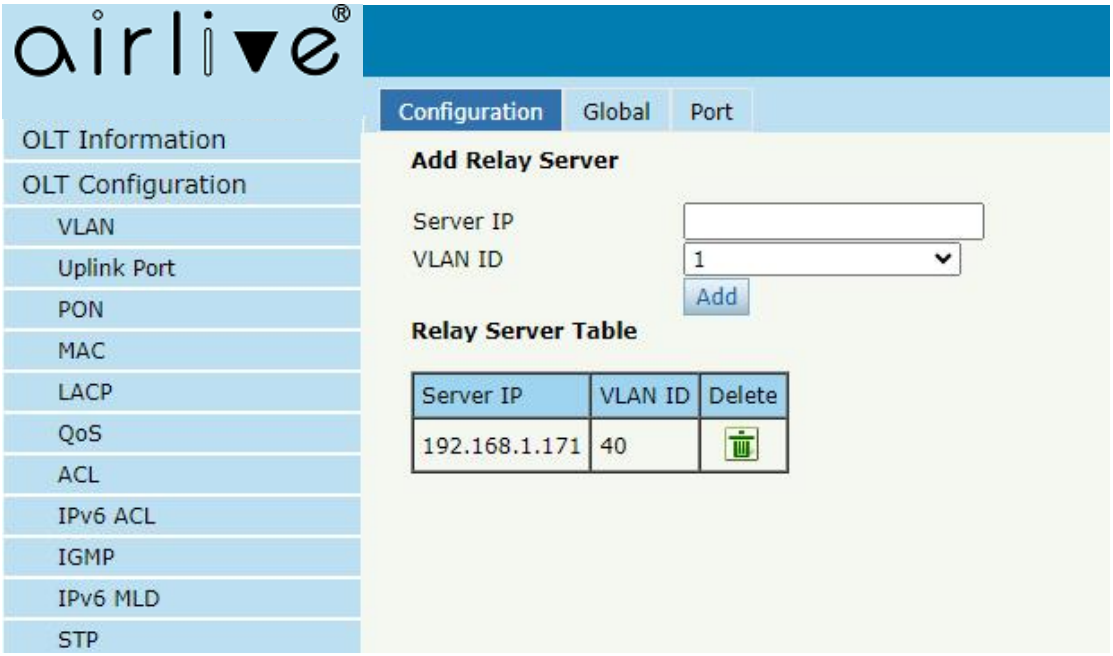



Figure 3.13-4: DHCP Relay Configuration

### 3.13.2.2 Global

**OLT Configuration→DHCP→DHCP Relay→Global**

The global configuration of DHCP relay mainly includes option 82 settings, including switches and processing modes.

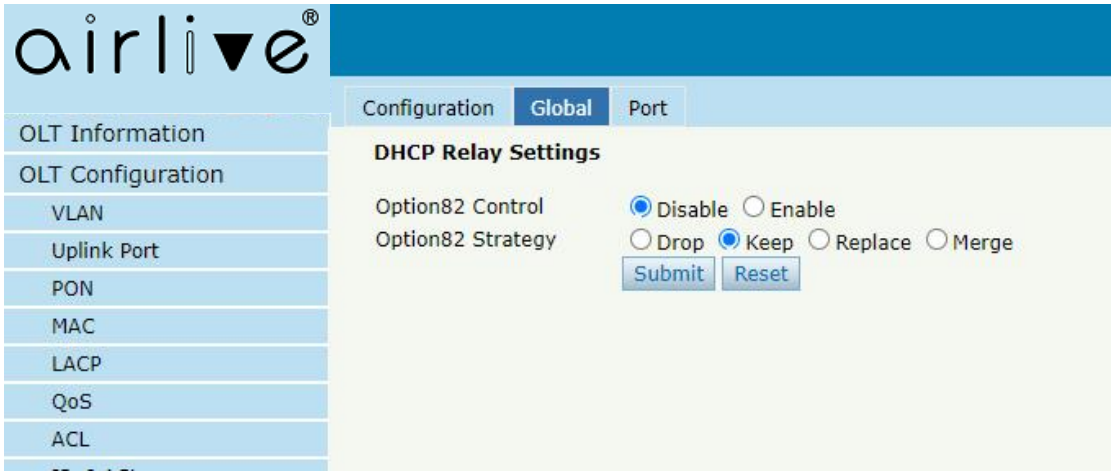



Figure 3.13-5: DHCP Relay Global

### 3.13.2.3 Port

**OLT Configuration→DHCP→DHCP Relay→Port**

This user interface is used to configure the parameters "Option 82 Circuit ID" and "Option 82 Remote ID" for option 82.

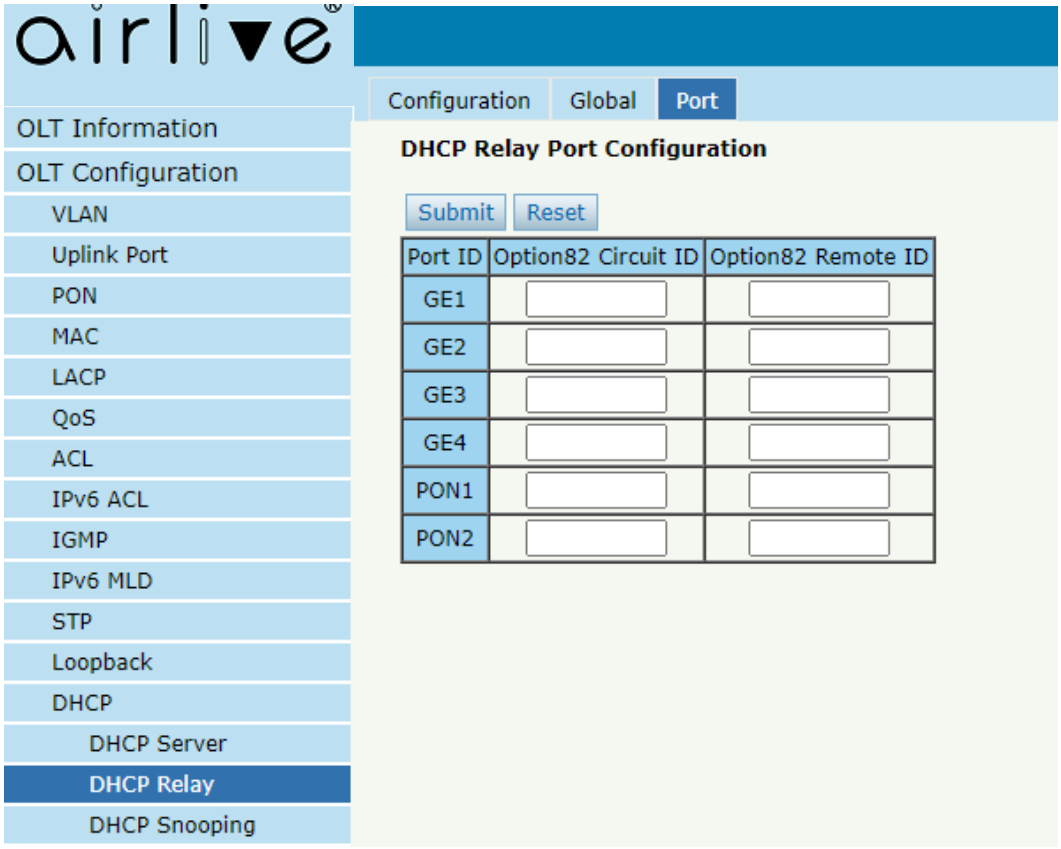



Figure 3.13-6: DHCP Relay Port

## 3.13.3 DHCP Snooping

### 3.13.3.1 Bind List

**OLT Configuration→DHCP→DHCP Snooping→Bind List**

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

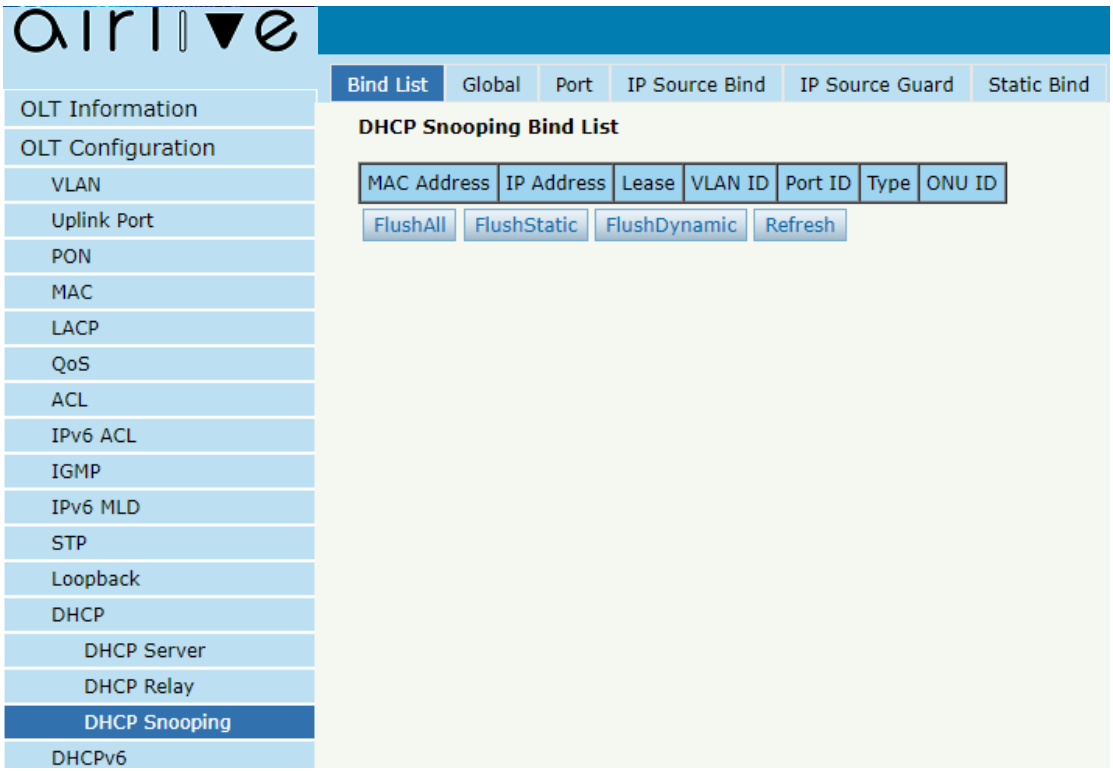



Figure 3.13-7: DHCP Snooping Bind List

### 3.13.3.2 Global

**OLT Configuration→DHCP→DHCP Snooping→Global**

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

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

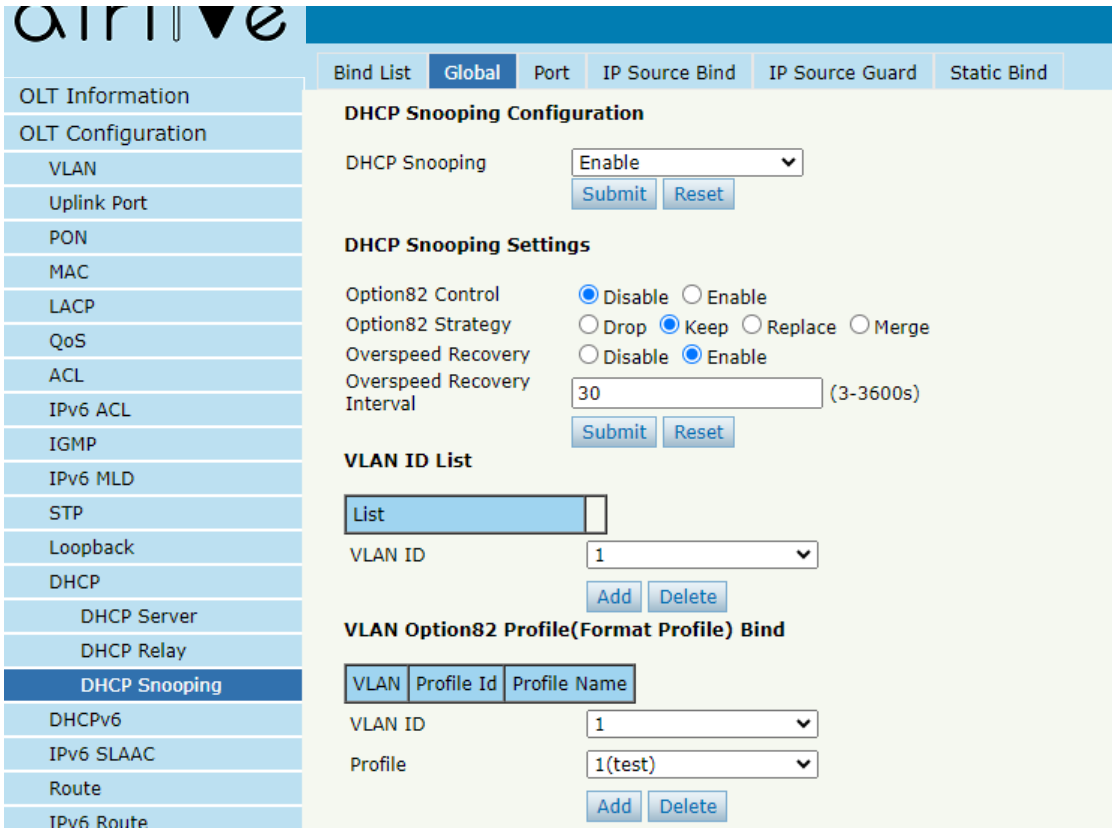



Figure 3.13-8: DHCP Snooping Global

### 3.13.3.3 Port

**OLT Configuration→DHCP→DHCP Snooping→Port**

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

All the ports are untrust ports by default. Option82 parameters, “Option 82 Circuit ID” and “Option 82 Remote ID”, are effective for untrust ports. “Limit Rate” is the ports’ max speed of receiving DHCP packets.

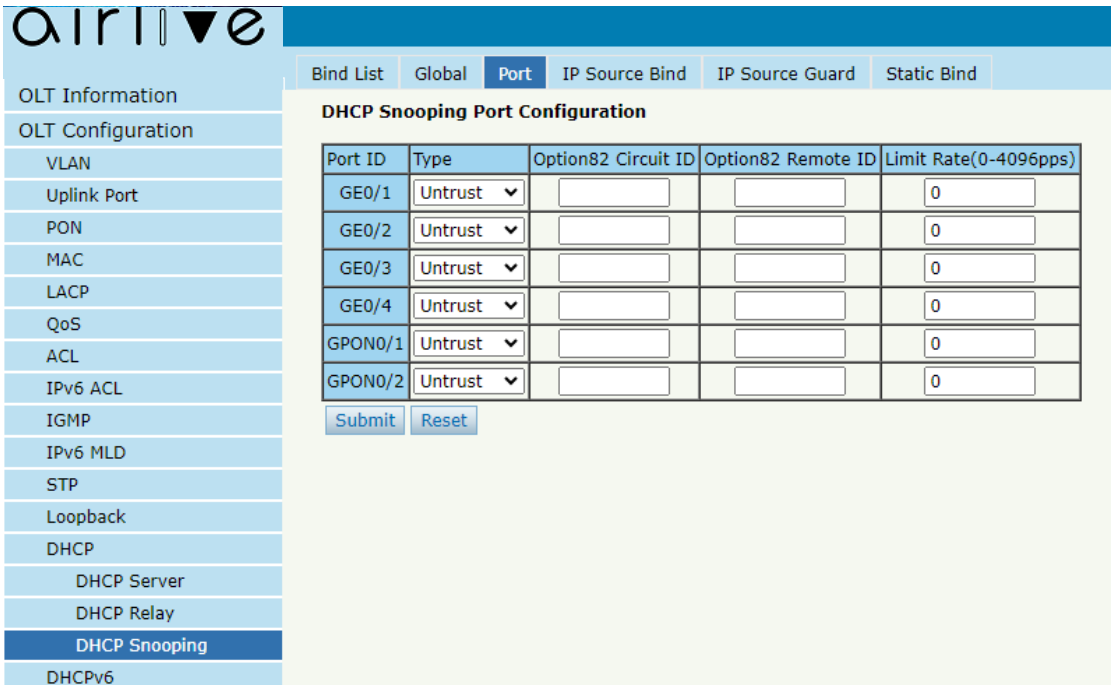



Figure 3.13-9: DHCP Snooping Port Setup

### 3.13.3.4 Static Bind

**OLT Configuration→DHCP→DHCP Snooping→Static Bind**

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

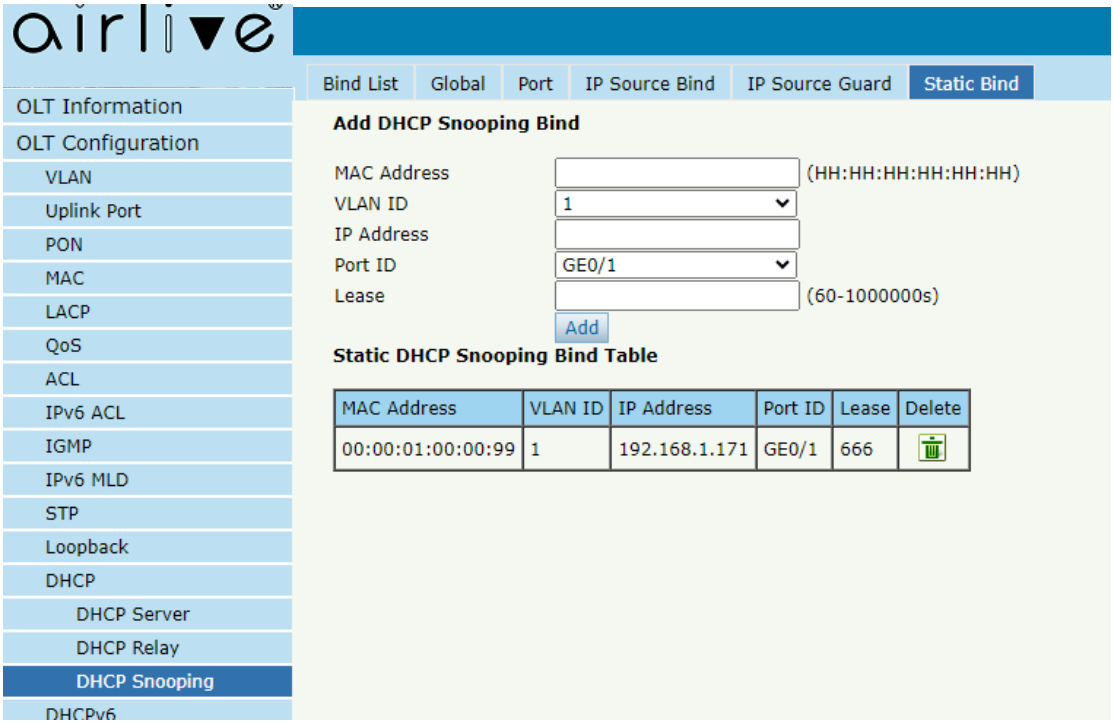



Figure 3.13-10: DHCP Snooping Static Bind

### 3.13.3.5 IP Source Guard

Only GPON OLT-B Series supports this feature.

**OLT Configuration→DHCP→DHCP Snooping→IP Source Guard**

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

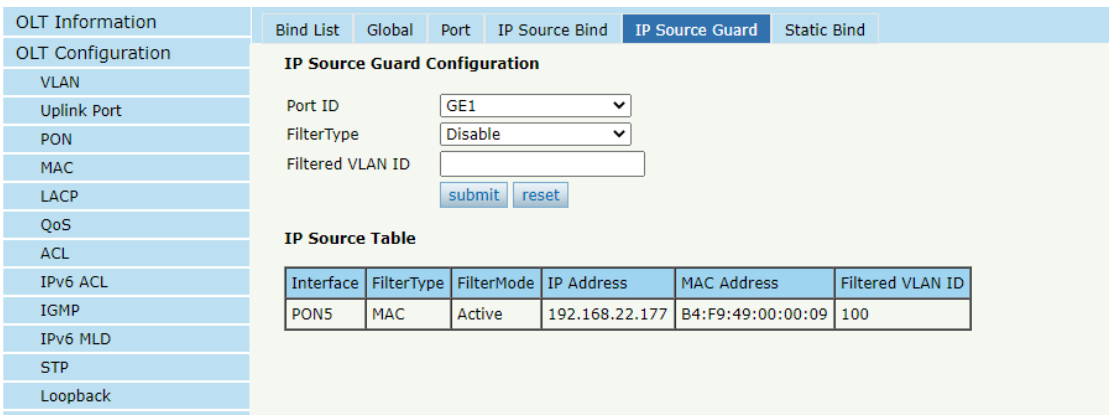


Figure 3.13-11: DHCP Snooping IP Source Guard

### 3.13.3.6 IP Source Bind

Only GPON OLT-B Series supports this feature.

**OLT Configuration→DHCP→DHCP Snooping→IP Source Bind**

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

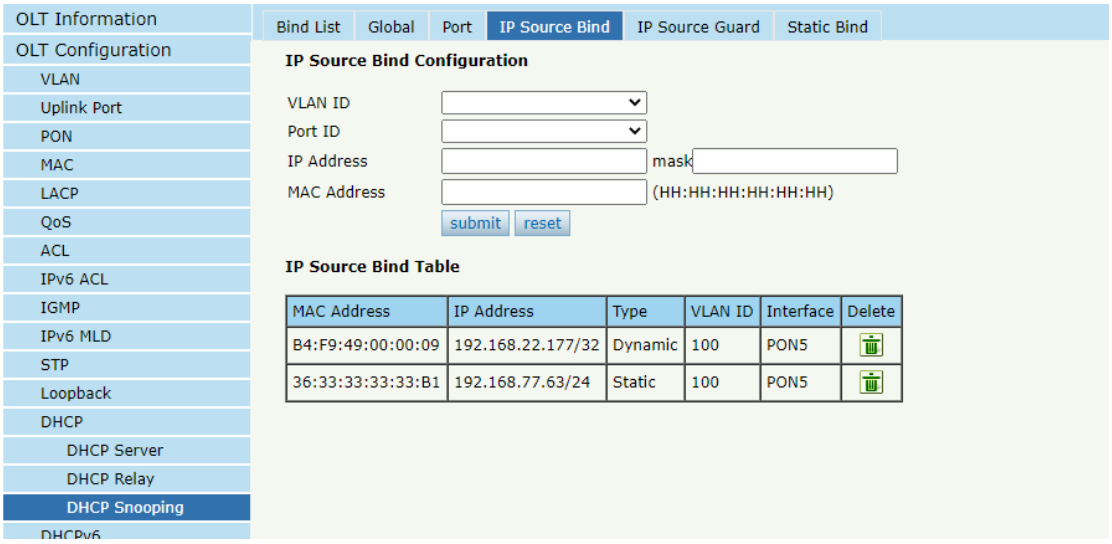



Figure 3.13-12: DHCP Snooping IP Source Bind

## 3.14 DHCPv6

### 3.14.1 DHCPv6 Server

DHCPv6 is a network protocol that used to configure IPv6 address, IPv6

prefix, DNS, domain and other network parameters for a host which operating on an IPv6 network.

### 3.14.1.1 DHCPv6 Bind Information

**OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 Bind Information**

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

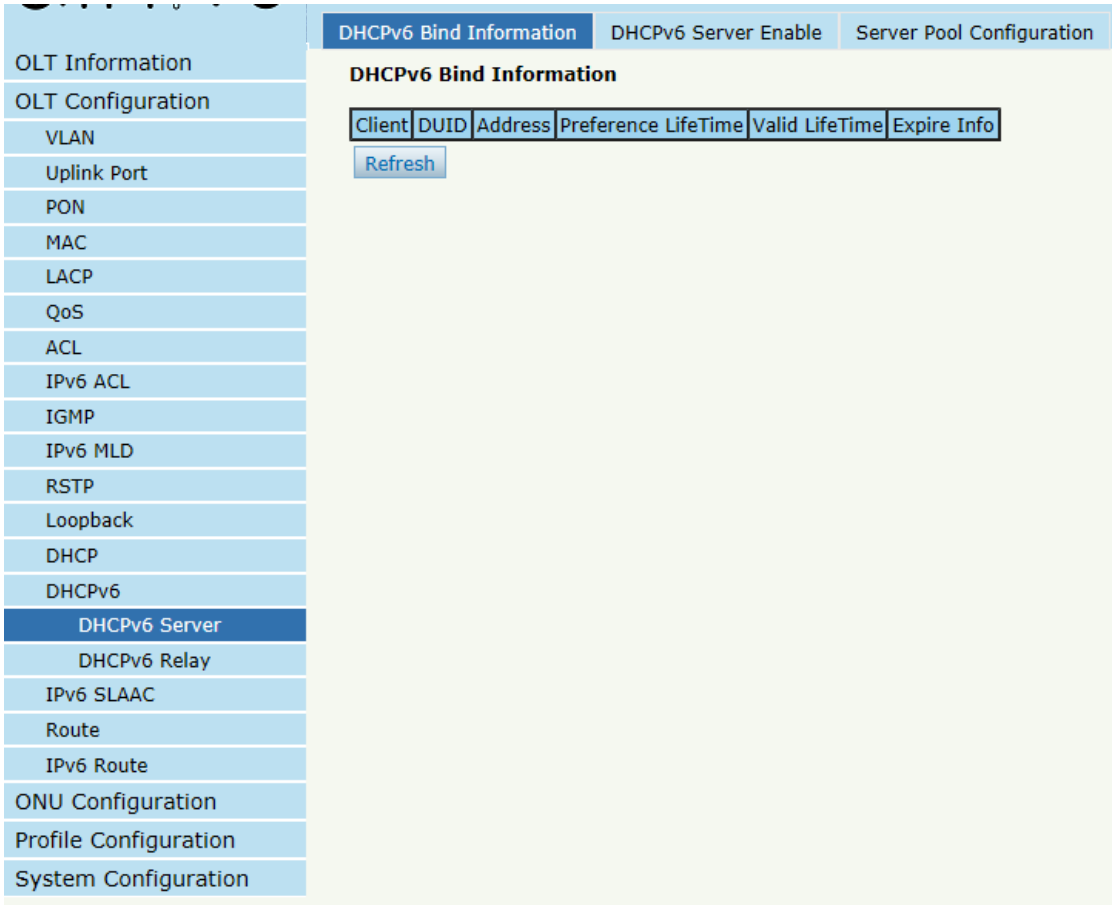



Figure 3.14-1: DHCPv6 Bind Information

### 3.14.1.2 DHCPv6 Server Enable

**OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 Server Enable**

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

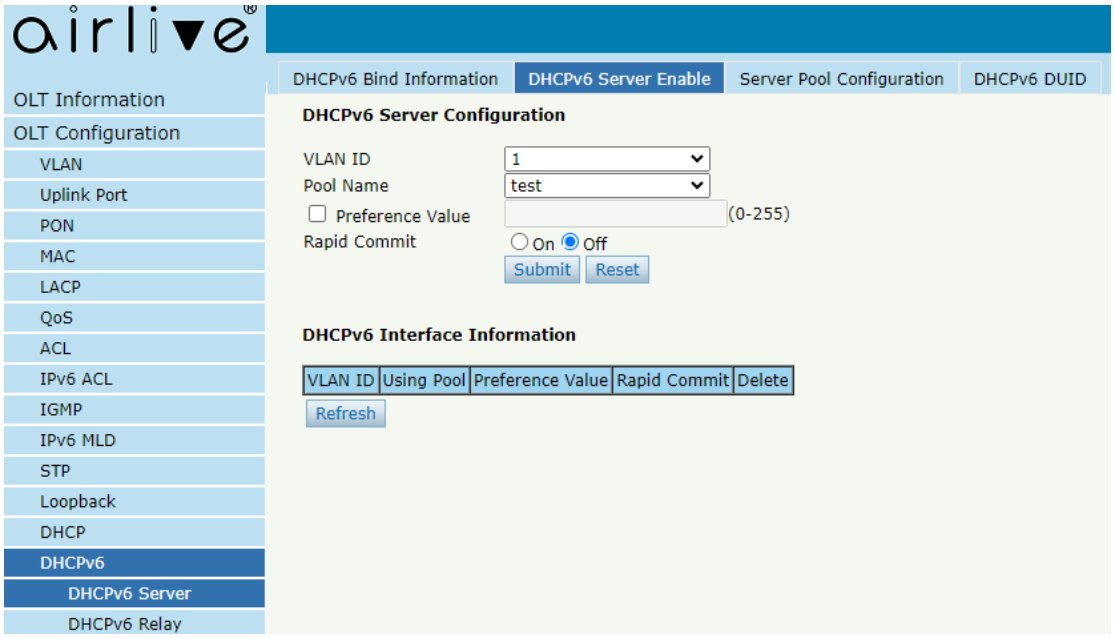



Figure 3.14-2: DHCPv6 Server

### 3.14.1.3 Server Pool Configuration

**OLT Configuration → DHCPv6 → DHCPv6 Server → Server Pool Configuration**

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

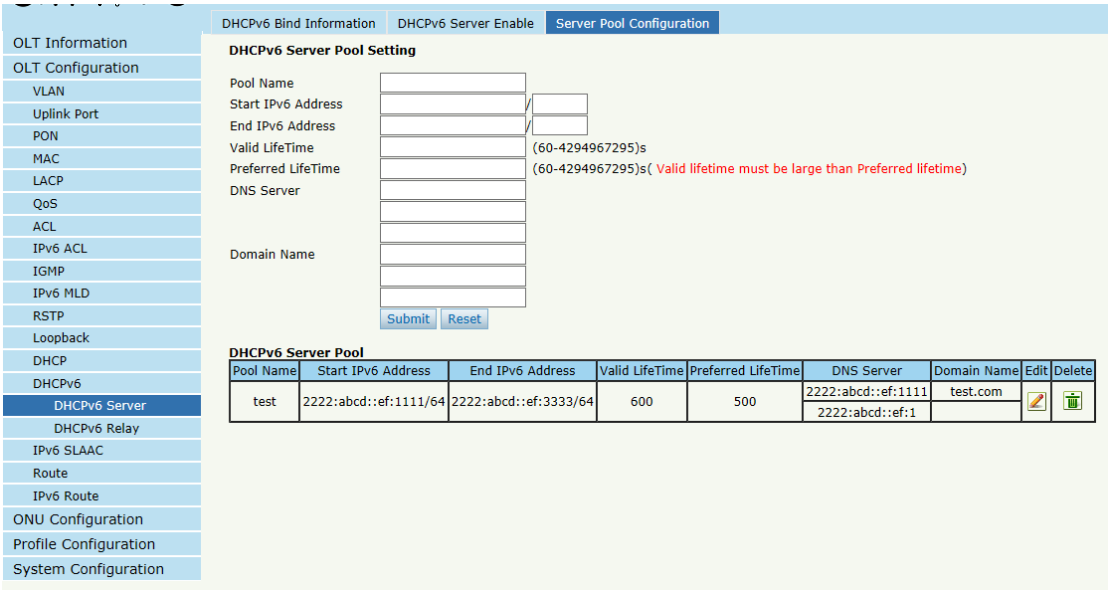



Figure 3.14-3: DHCPv6 Pool

### 3.14.1.4 DHCPv6 DUID

**OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 DUID**

This page is used to configure DHCPv6 DUID types, Enterprise Number and Identifier.

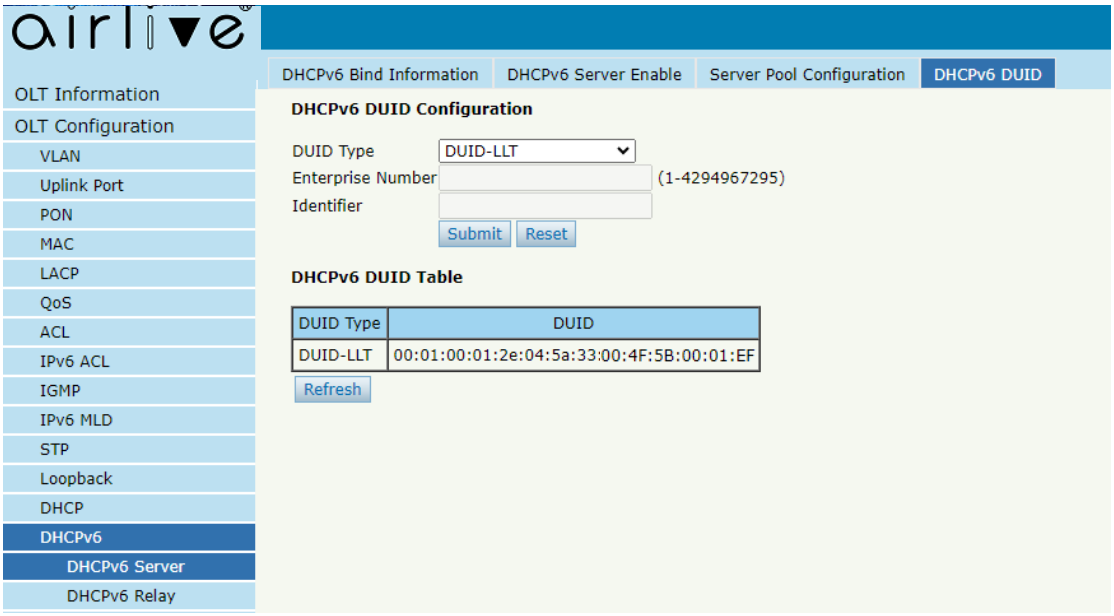


Figure 3.14-4: DHCPv6 DUID

### 3.14.2 DHCPv6 Relay

**OLT Configuration → DHCPv6 → DHCPv6 Relay → Configuration**

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

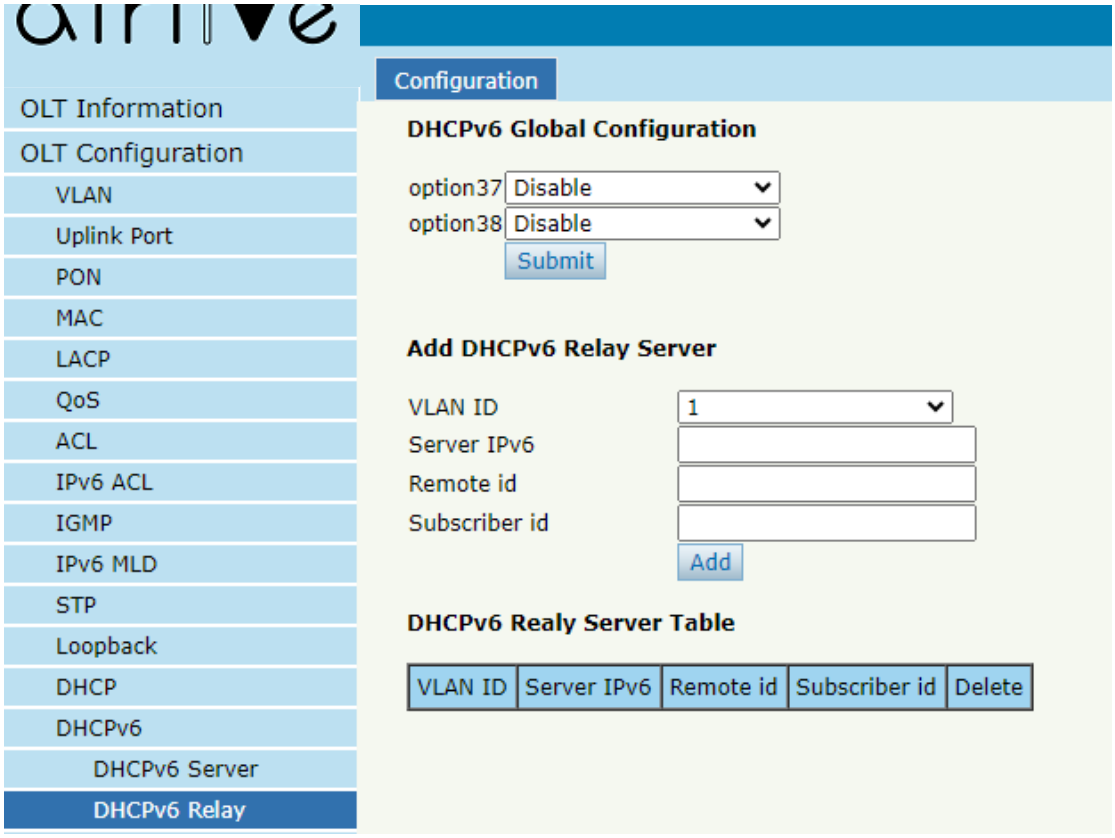



Figure 3.14-5: DHCPv6 Relay

## 3.15 IPv6 SLAAC

IPv6 network uses the ICMPv6 route discovery protocol. When an IPv6

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

## 3.15.1 IPv6 SLAAC

**OLT Configuration → IPv6 SLAAC → IPv6 SLAAC**

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

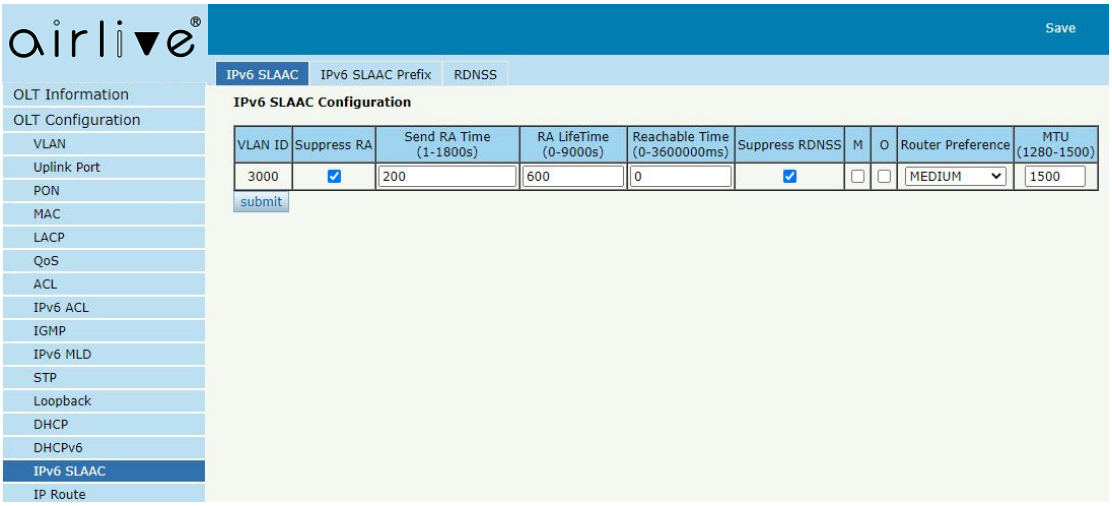



Figure 3.15-1: IPv6 SLAAC

## 3.15.2 IPv6 SLAAC Prefix

### OLT Configuration → IPv6 SLAAC → IPv6 SLAAC Prefix

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

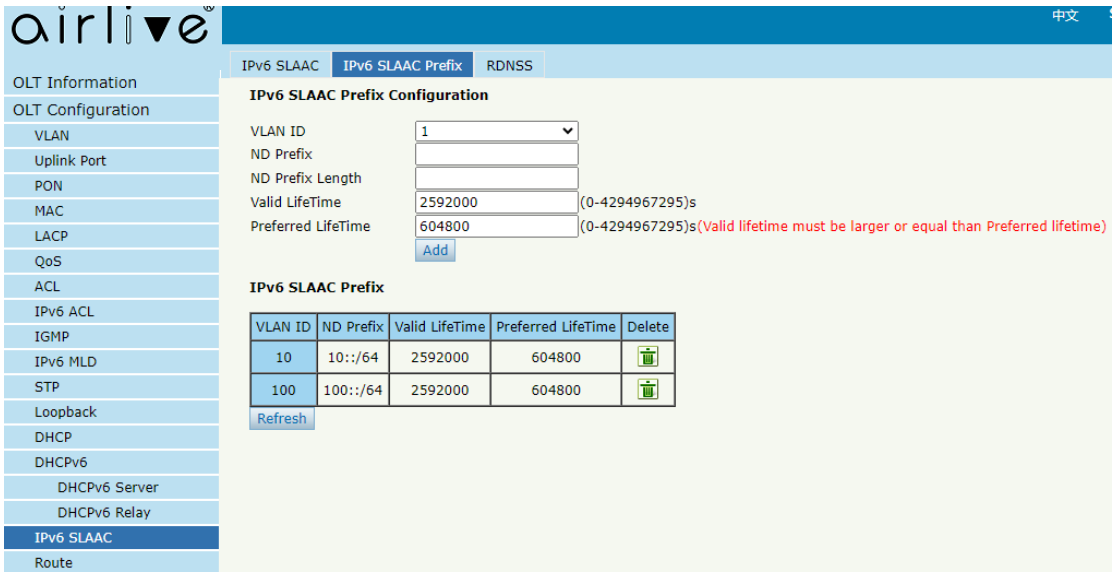



Figure 3.15-2: IPv6 SLAAC Prefix

## 3.15.3 RDNSS

### OLT Configuration → IPv6 SLAAC → RDNSS

OLT will send the route advertisement packet with the DNS parameters you configured.

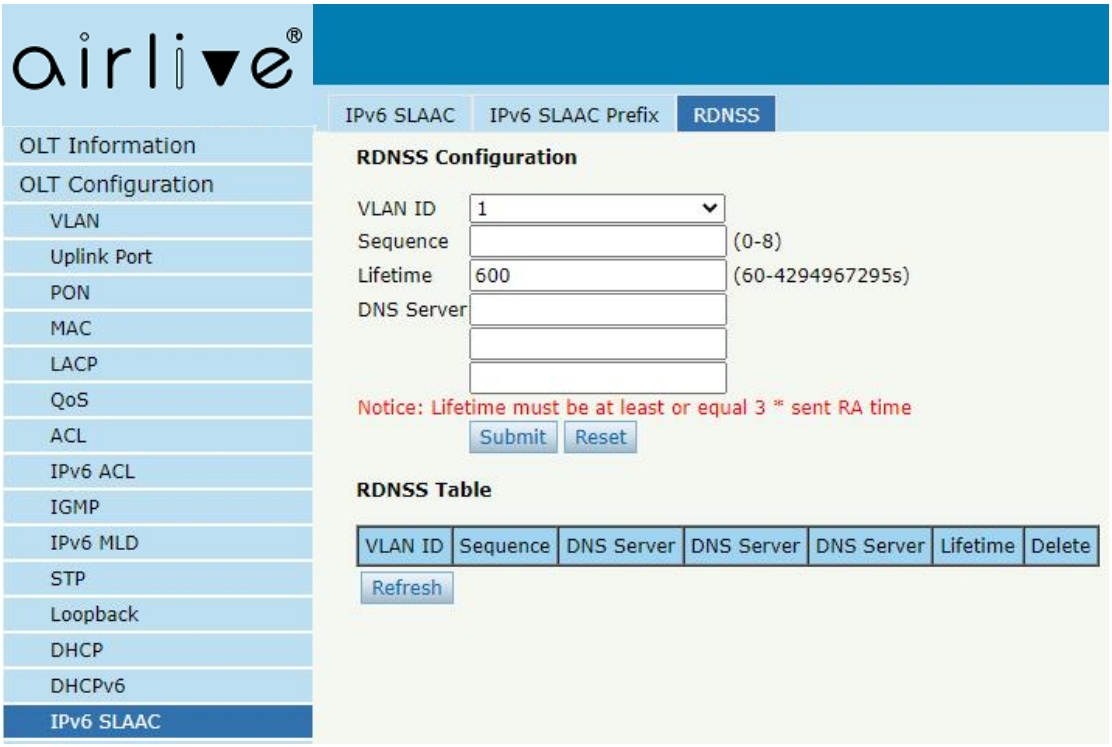



Figure 3.15-3: RDNSS

# 3.16 Route

## 3.16.1 IP

### 3.16.1.1 VLAN IP

**OLT Configuration→Route→IP→VLAN IP**

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

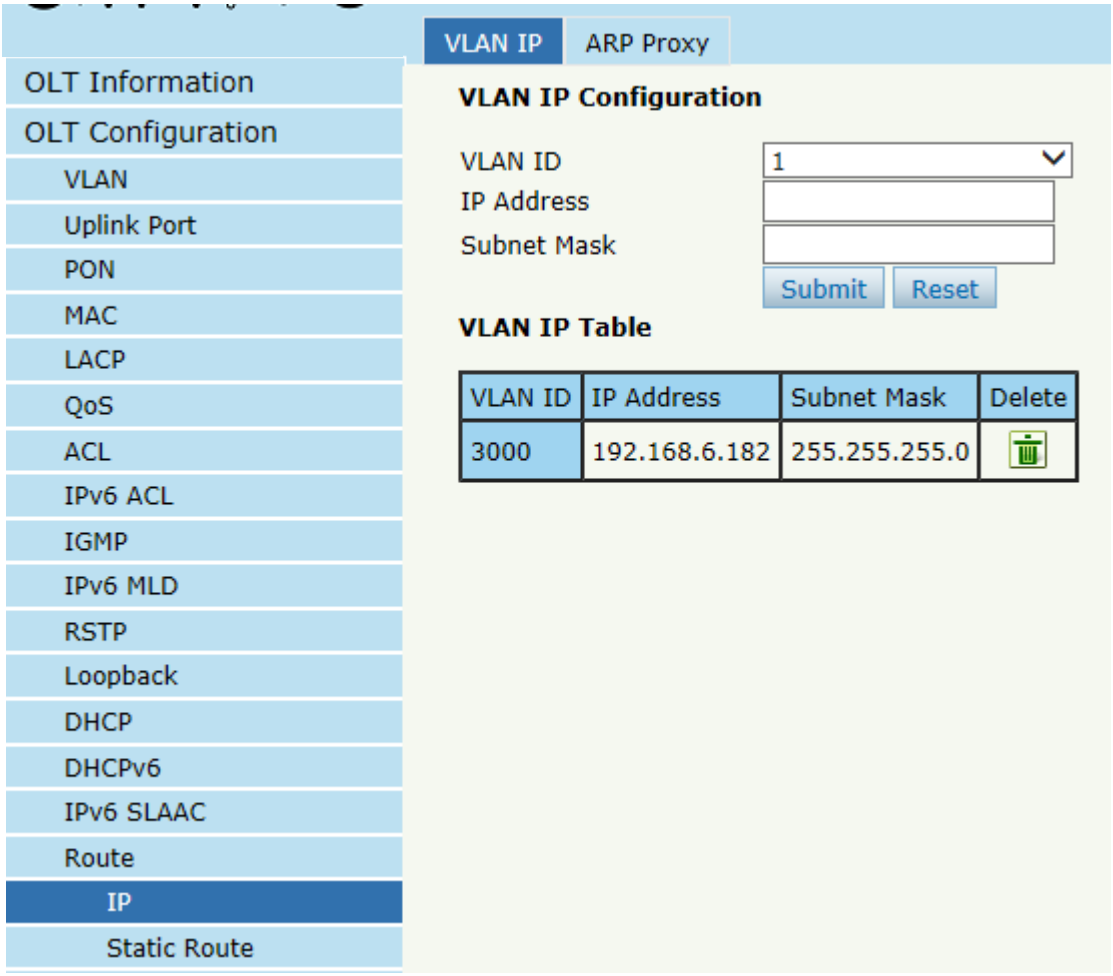



Figure 3.16-1: VLAN IP

### 3.16.1.2 ARP Proxy

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

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

address to an ARP request for a different IP address for proxying purposes is sometimes referred to as 'publishing'.

**OLT Configuration→Route→IP→ARP Proxy**

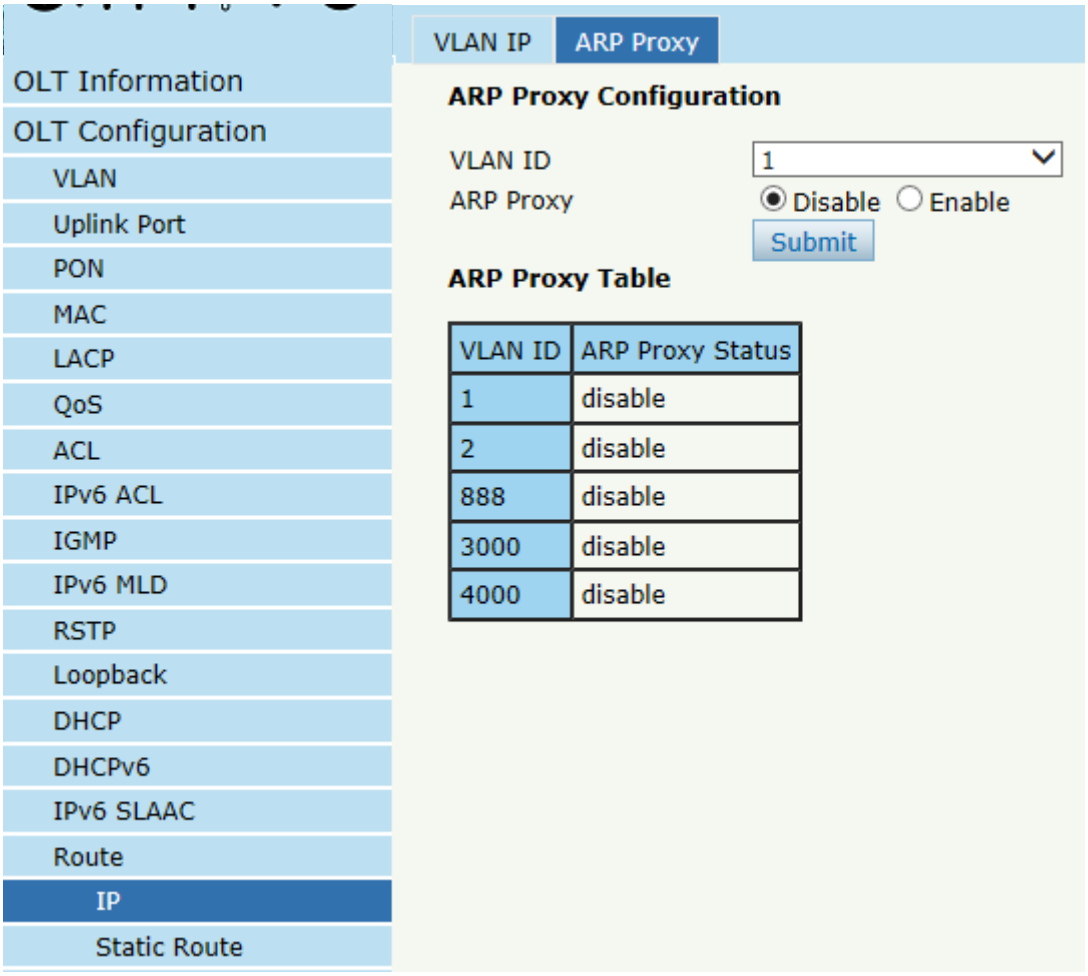



Figure 3.16-2: ARP proxy configuration

## 3.16.2 Static Route

Static route is a form of routing that a router uses a manually-configured routing entry. In many cases, static routes are manually configured by a network administrator. Unlike dynamic routing, static routes are fixed and

do not change if the network is changed or reconfigured.

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

**OLT Configuration→Route→Static Route**

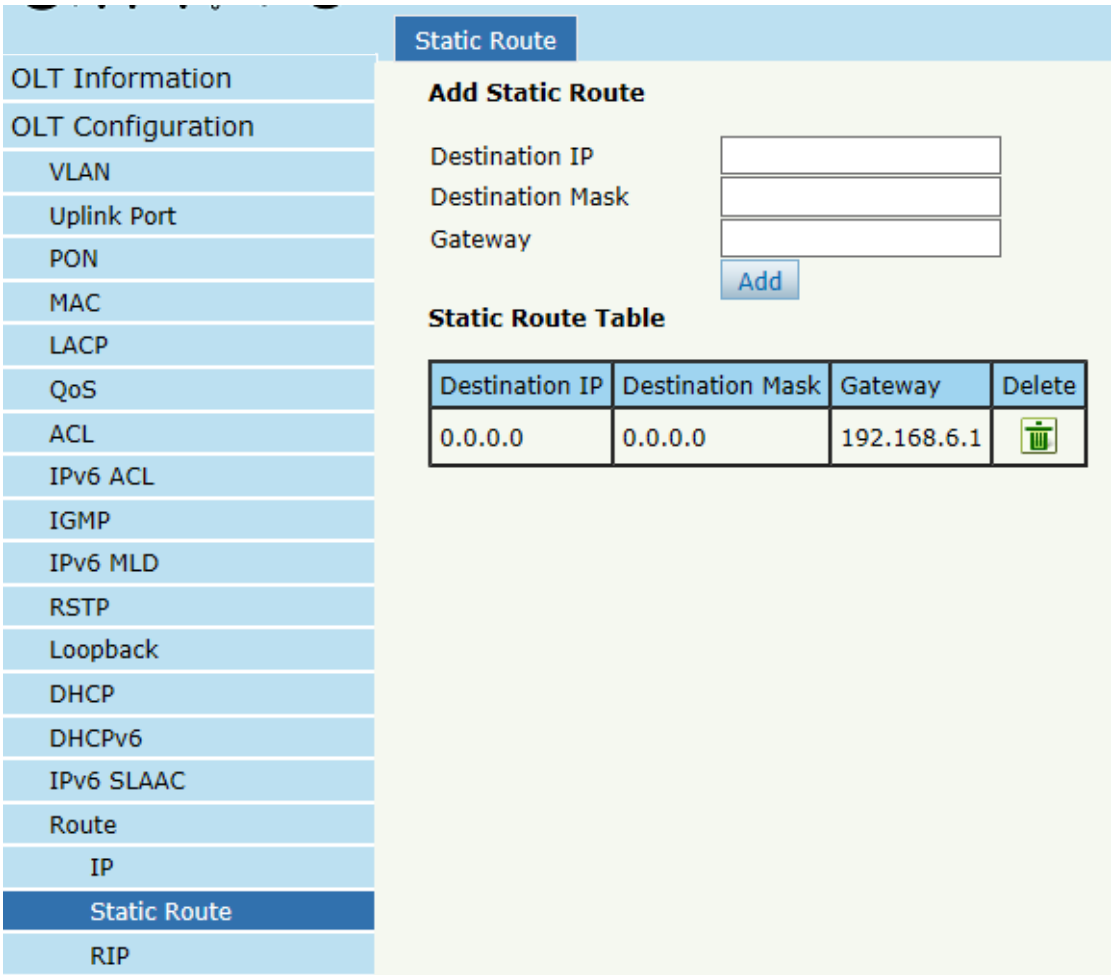



Figure 3.16-3: Static Route

## 3.16.3 RIP

RIP (Routing Information Protocol) is a simple internal gateway protocol, which is based on the D-V algorithm and uses hop count to represent

metric. The hop count is the number of routers that a datagram must pass through. RIP only support maximum 15 hops; hence it is fit for a small network.

### 3.16.3.1 RIP Information

**OLT Configuration → Route → RIP → RIP Information**

This page displays RIP information.

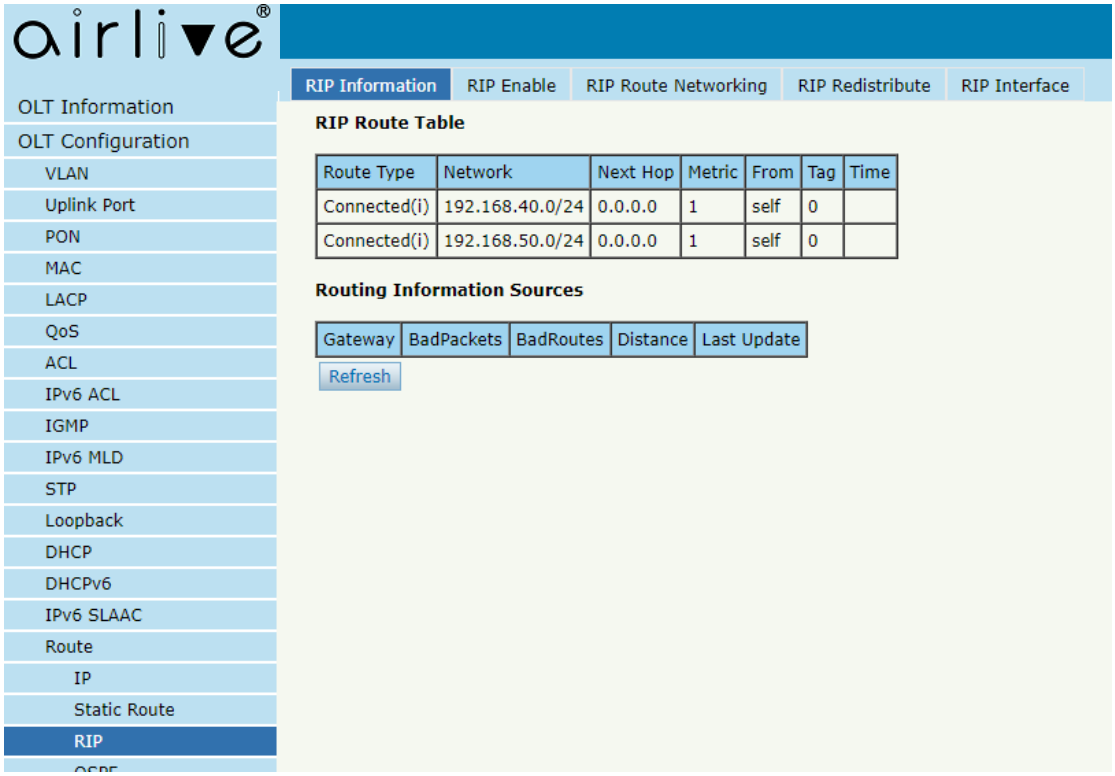



Figure 3.16-4: RIP Information

### 3.16.3.2 RIP Enable

**OLT Configuration → Route → RIP → RIP Enable**

Enable RIP protocol and configure RIP parameters.

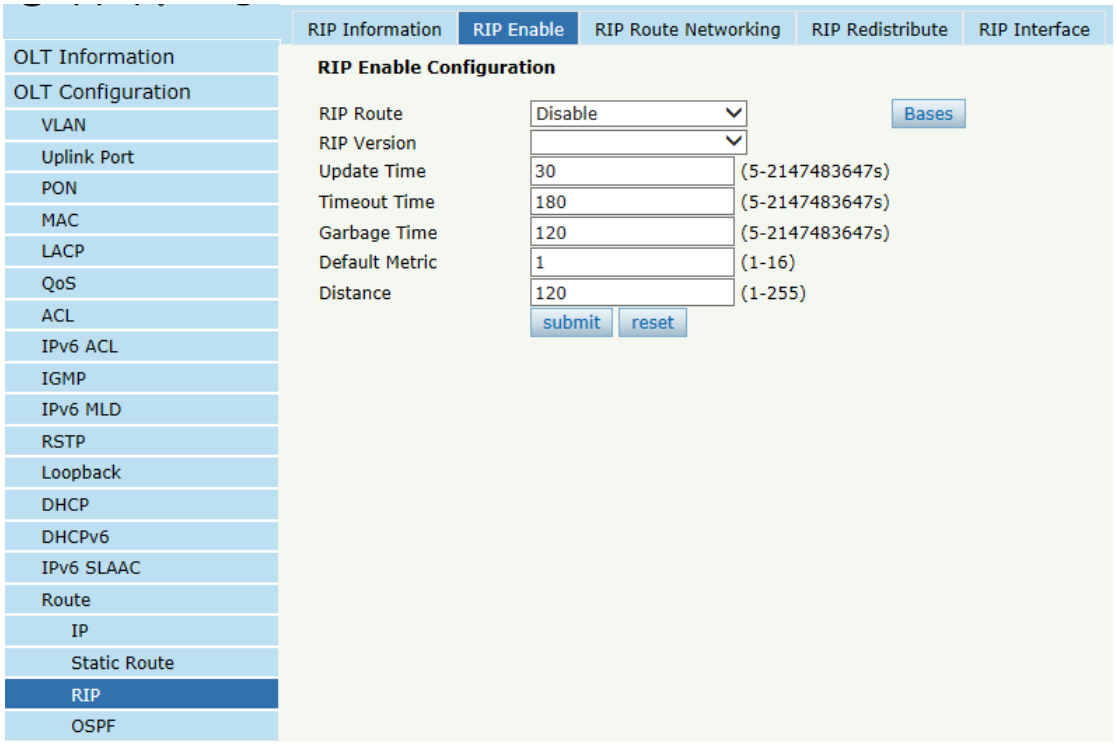



Figure 3.16-5: RIP Enable

### 3.16.3.3 RIP Route Networking

**OLT Configuration → Route → RIP → RIP Route Networking**

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

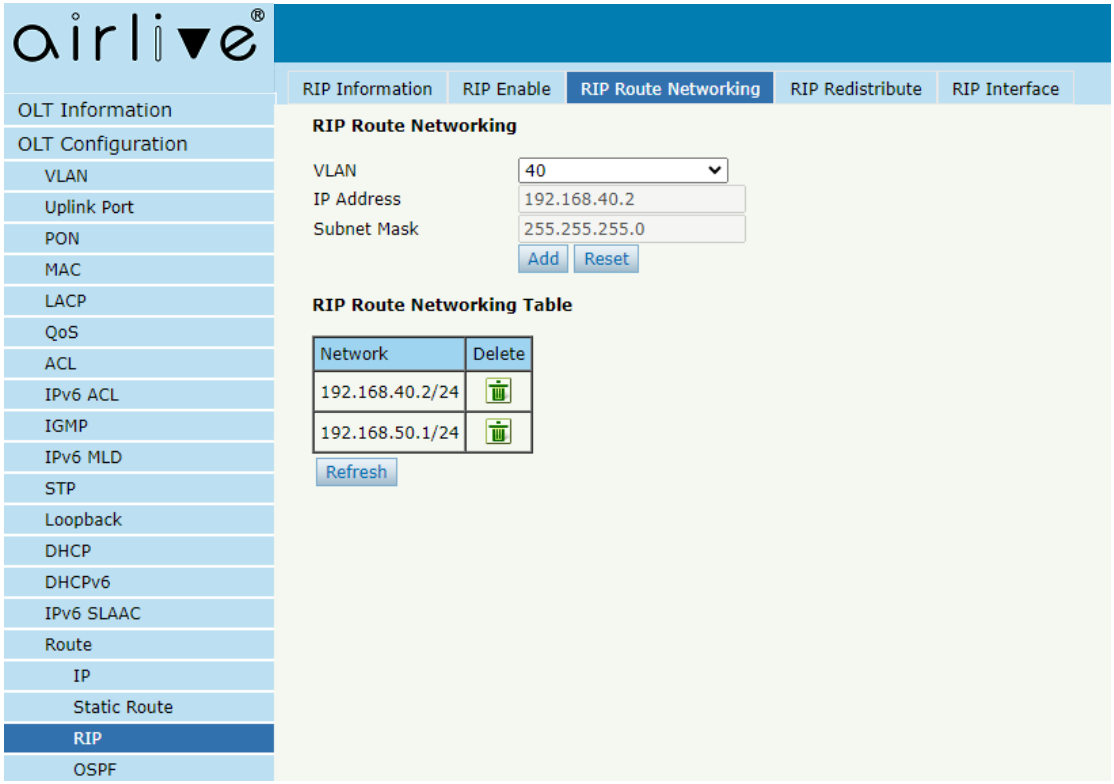



Figure 3.16-6: RIP Route Networking

### 3.16.3.4 RIP Redistribute

**OLT Configuration → Route → RIP → RIP Redistribute**.

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

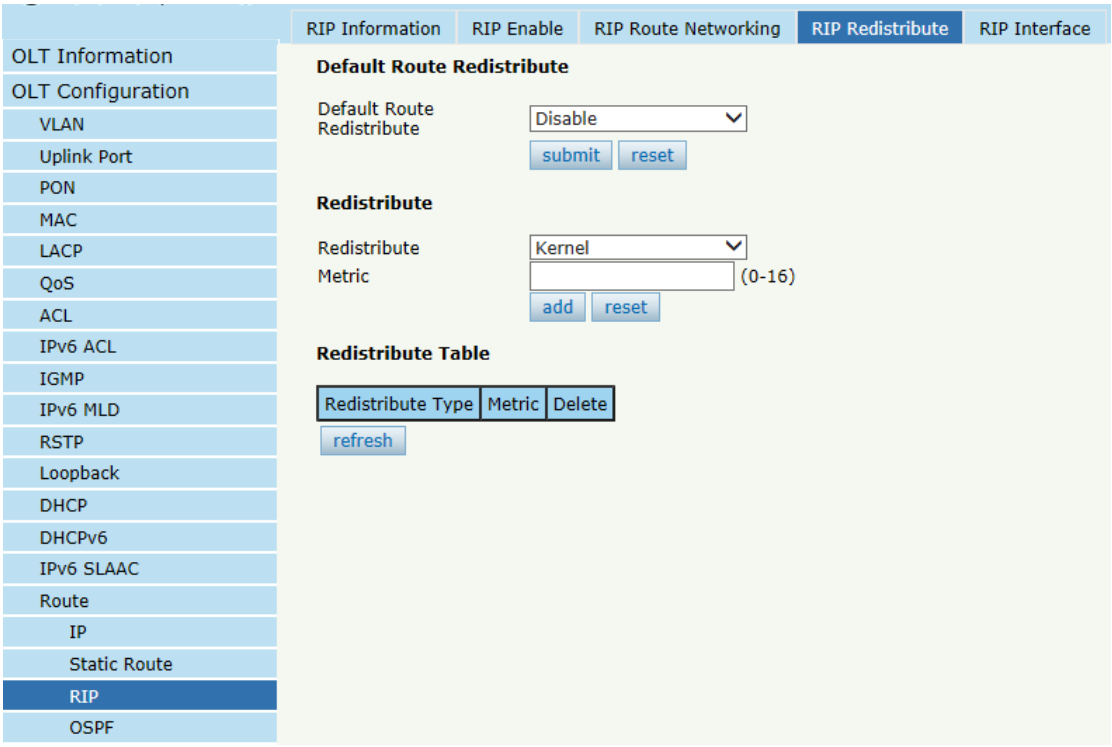



Figure 3.16-7: RIP Redistribute

### 3.16.3.5 RIP Interface

**OLT Configuration → Route → RIP → RIP Interface**

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

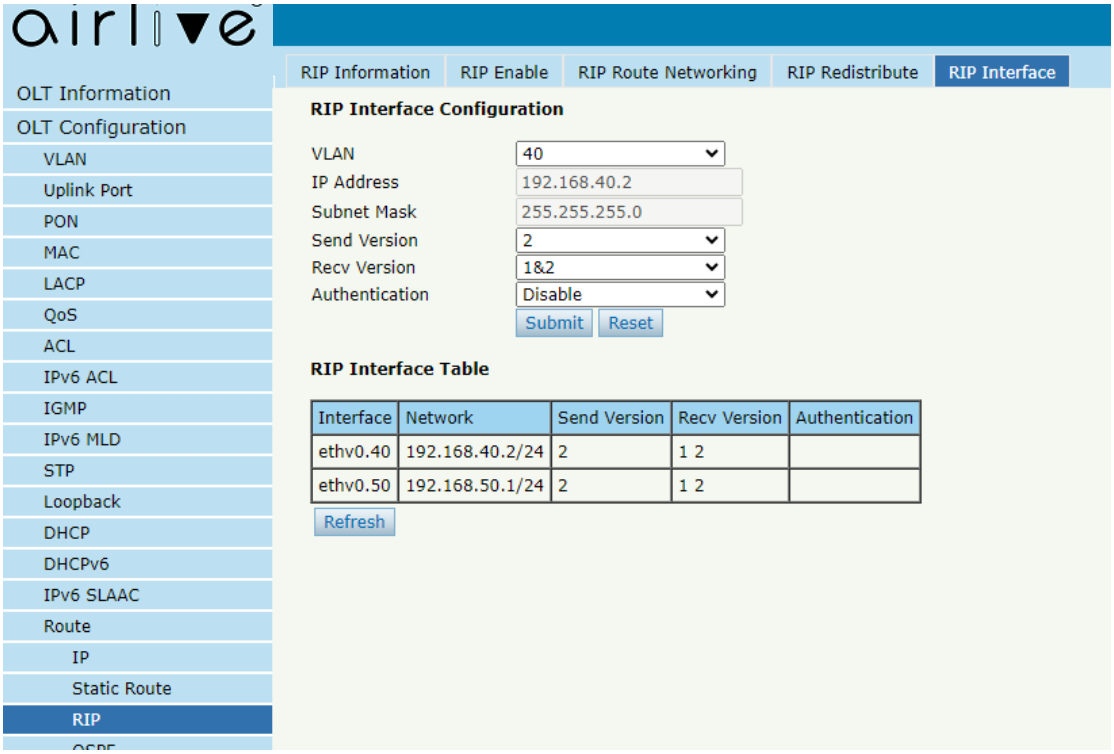



Figure 3.16-8: RIP Interface

## 3.16.4 OSPF

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

### 3.16.4.1 OSPF Information

**OLT Configuration → Route → OSPF → OSPF Information**

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

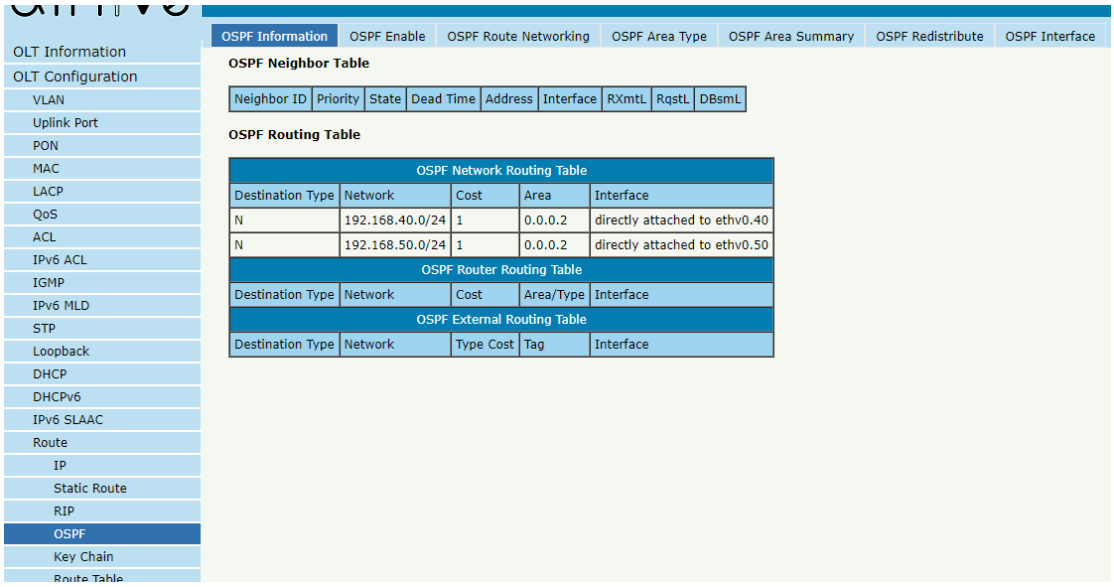



Figure3.16-9: OSPF Information

## 3.16.4.2 OSPF Enable

### OLT Configuration → Route → OSPF → OSPF Enable

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

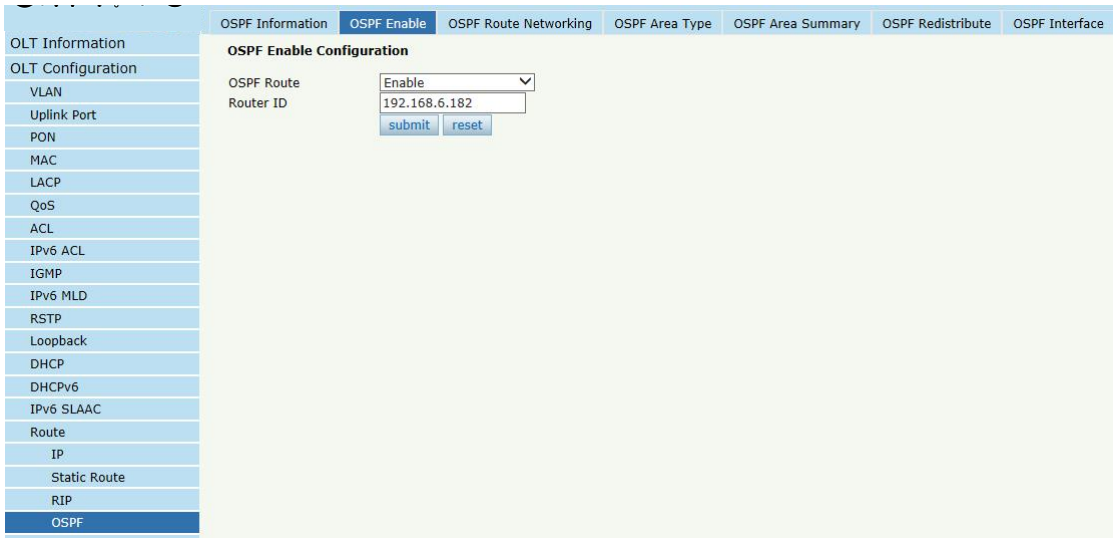



Figure 3.16-10: OSPF Enable

### 3.16.4.3 OSPF Route Networking

**OLT Configuration → Route → OSPF → OSPF Route Networking**

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

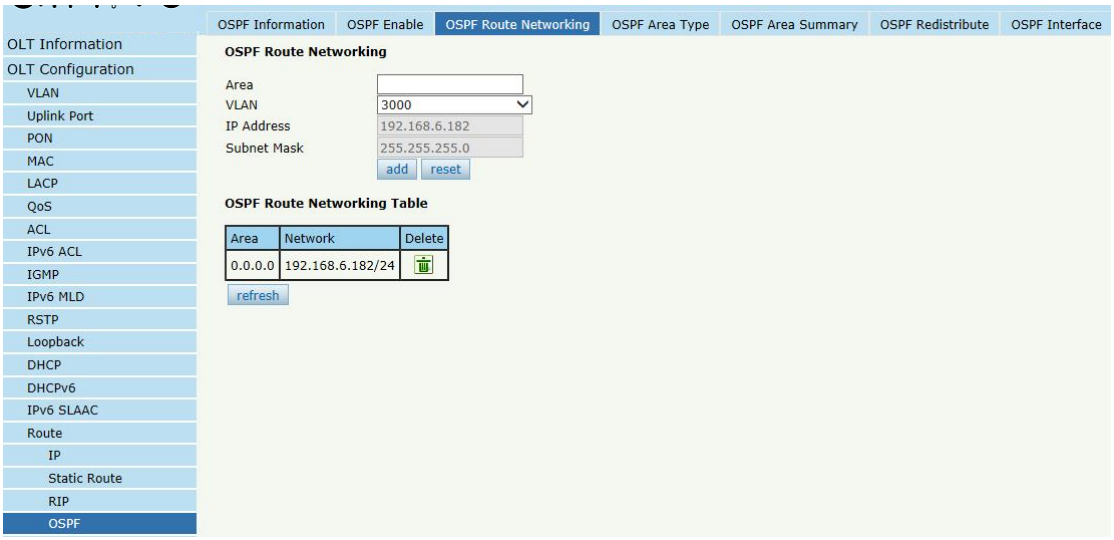



Figure 3.16-11: OSPF Route Networking

### 3.16.4.4 OSPF Area Type

**OLT Configuration → Route → OSPF → OSPF Area Type**

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

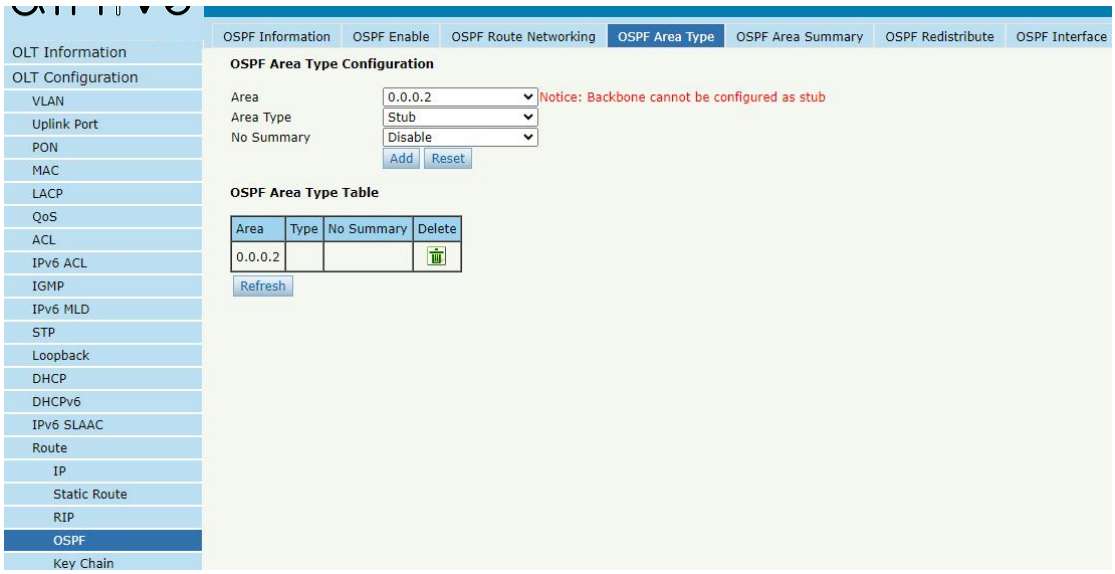



Figure 3.16-12: OSPF Area Type

### 3.16.4.5 OSPF Area Summary

**OLT Configuration → Route → OSPF → OSPF Area Summary**

This page is used to configure area IP address summary.

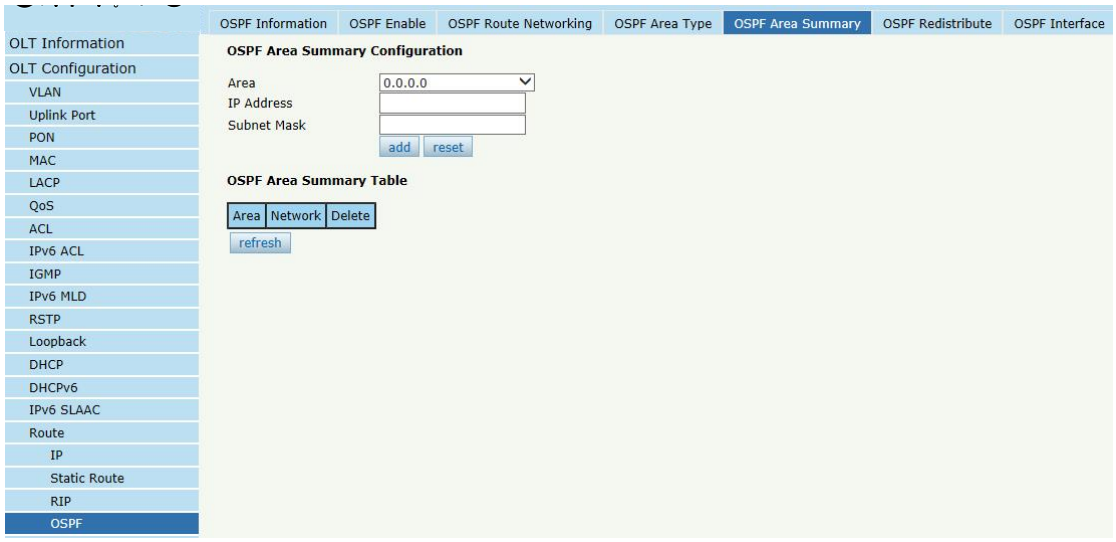



Figure 3.16-13: OSPF Area Summary

### 3.16.4.6 OSPF Redistribute

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

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

**OLT Configuration → Route → OSPF → OSPF Redistribute**

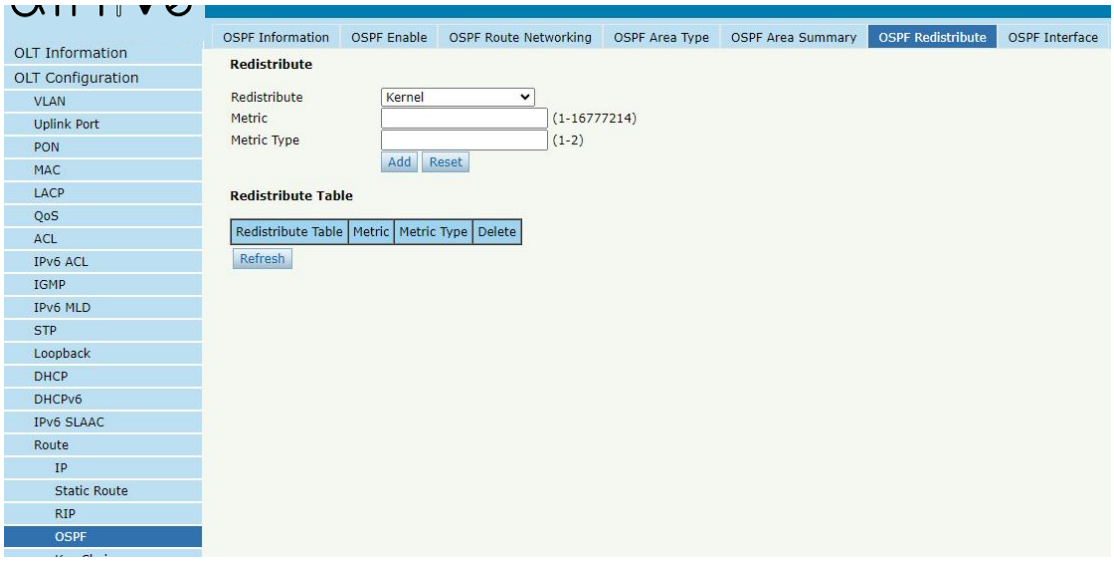



Figure 3.16-14: OSPF Redistribute

### 3.16.4.7 OSPF Interface

**OLT Configuration → Route → OSPF → OSPF Interface**

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

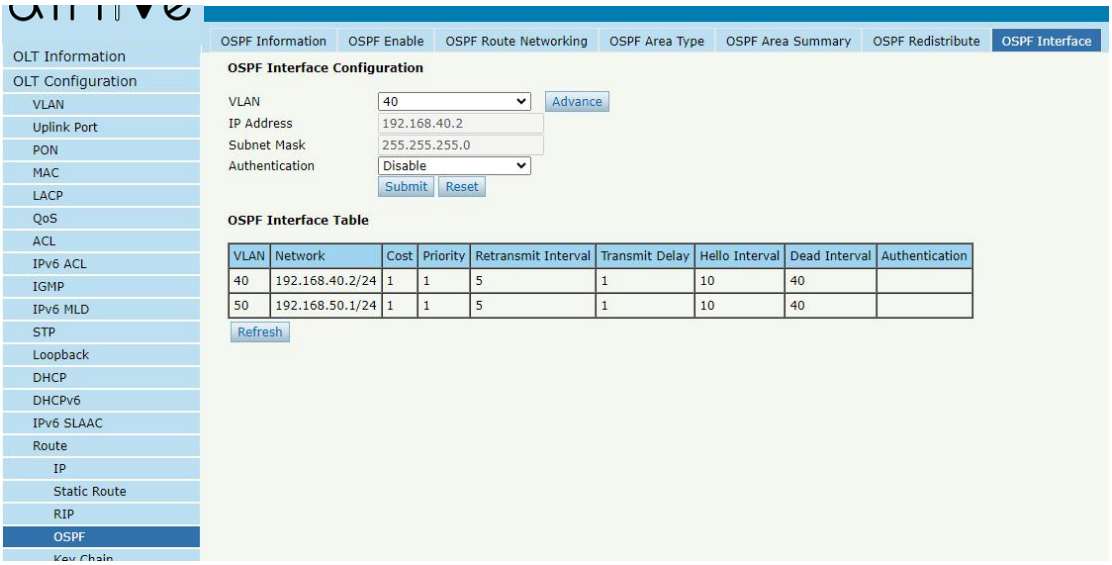



Figure 3.16-15: OSPF Interface

## 3.16.5 Key Chain

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

**OLT Configuration → Route → Key Chain**

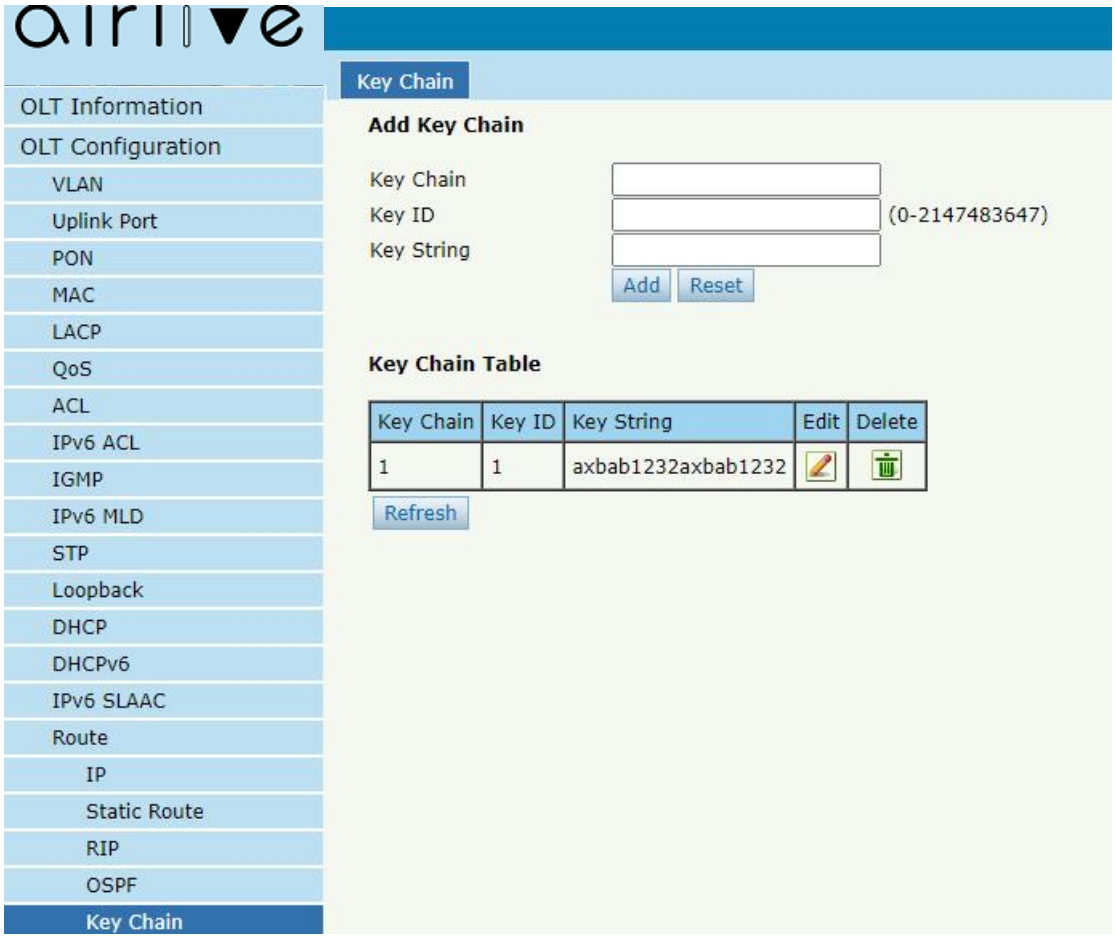



Figure 3.16-16: Key Chain

## 3.16.6 Route Table

**OLT Configuration → Route → Route Table**

This page displays routing items of OLT.

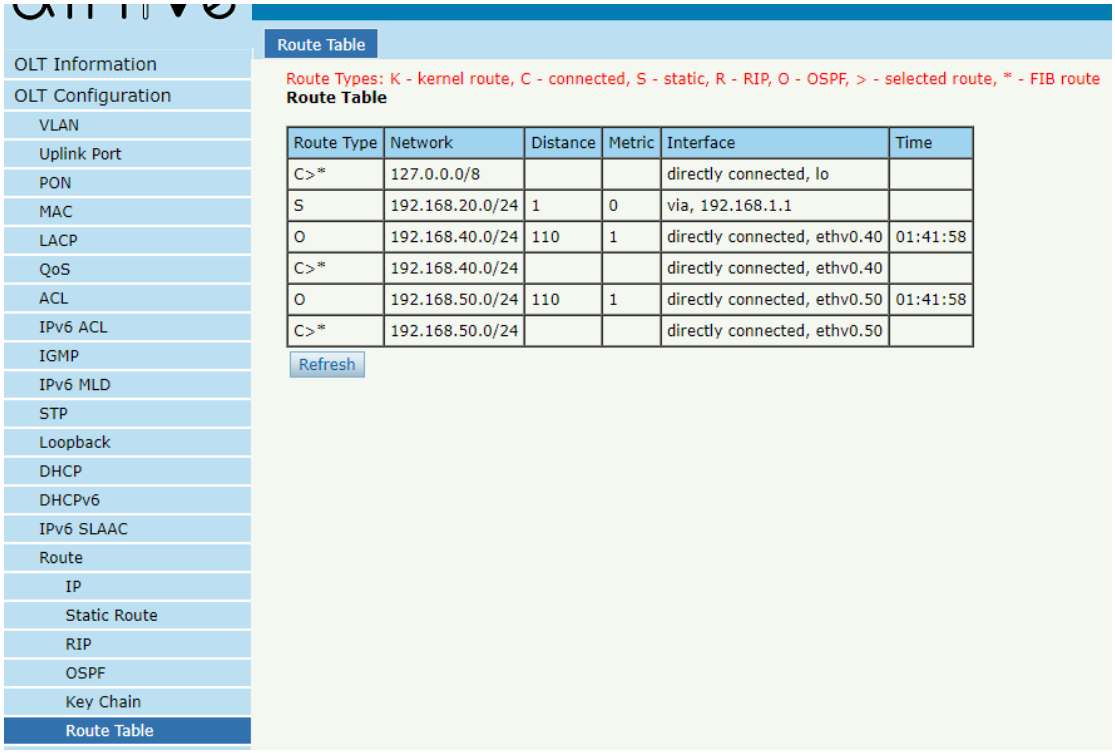



Figure 3.16-17: Route Table

# 3.17 IPv6 Route

## 3.17.1 IPv6

**OLT Configuration → IPv6 Route → IPv6 → VLAN IPv6**

Configure IPv6 address for VLAN that has been created.

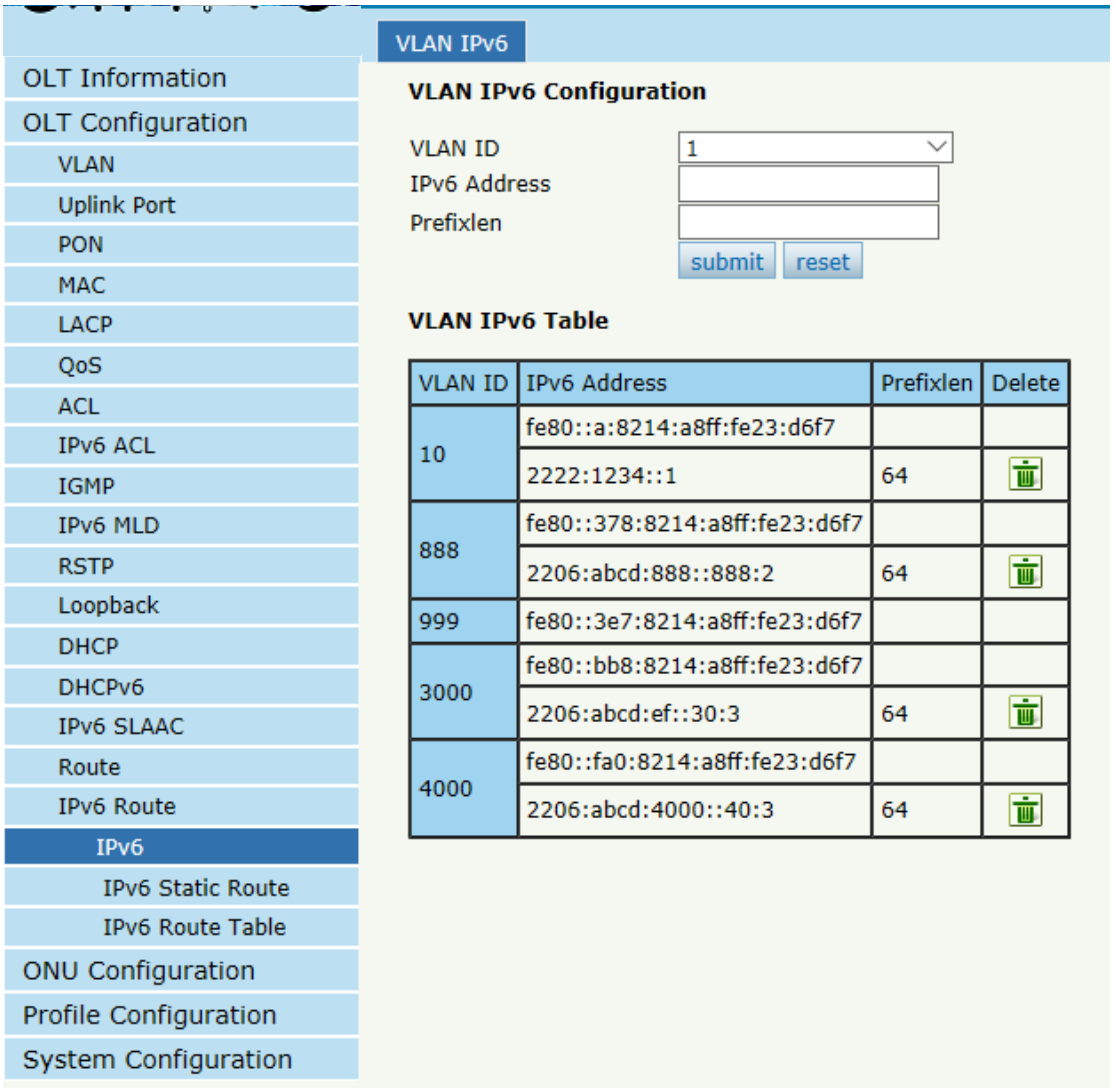



Figure 3.17-1: VLAN IPv6

## 3.17.2 IPv6 Static Route

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

**OLT Configuration → IPv6 Route → IPv6 Static Route**

Add IPv6 static route item one by one.

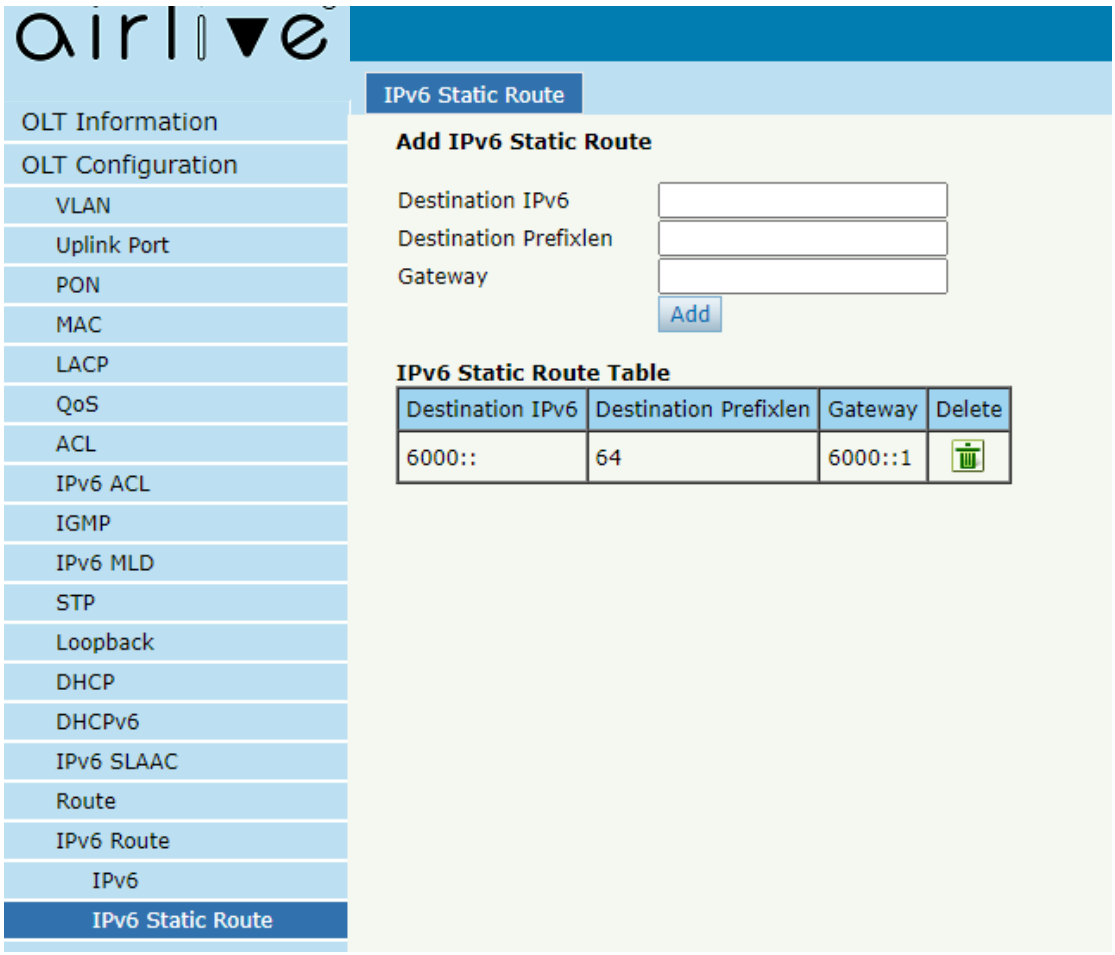



Figure 3.17-2: IPv6 Static Route

## 3.17.3 RIPng

RIPng is the next generation of RIP, which uses the IPv6 protocol on top of RIP.

### 3.17.3.1 RIPng Information

**OLT Configuration →IPv6 Route → RIPng → RIPng Information**

This page displays RIPng information.


Figure 3.17-3: RIPng Information

## 3.17.3.2 RIPng Enable

## OLT Configuration → IPv6 Route → RIPng → RIPng Enable

Enable RIPng protocol and configure RIPng parameters.

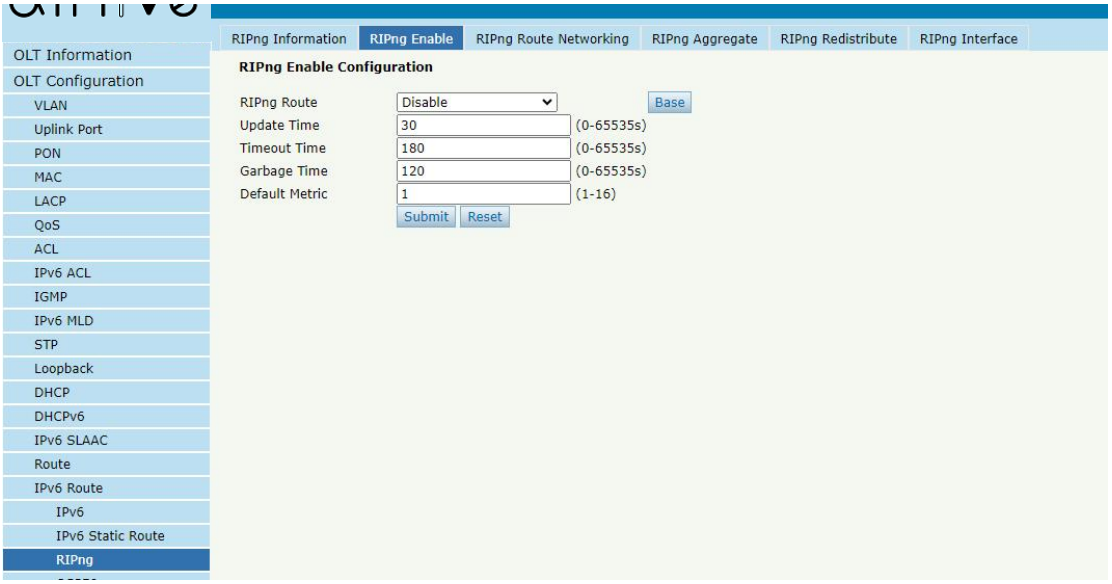



Figure 3.17-4: RIPng Enable

### 3.17.3.3 RIPng Route Networking

**OLT Configuration → IPv6 Route → RIPng → RIPng Route Networking**

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

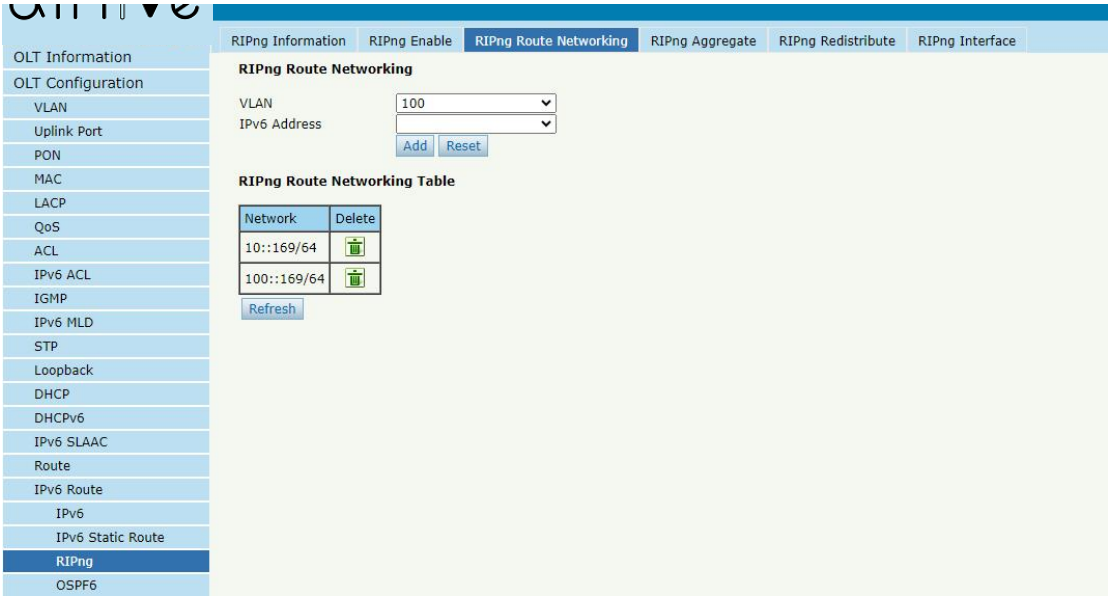



Figure 3.17-5: RIPng Route Networking

### 3.17.3.4 RIPng Aggregate

**OLT Configuration → IPv6 Route → RIPng → RIPng Aggregate**.

This page is used to aggregate routes of the same network segment with different prefixes.

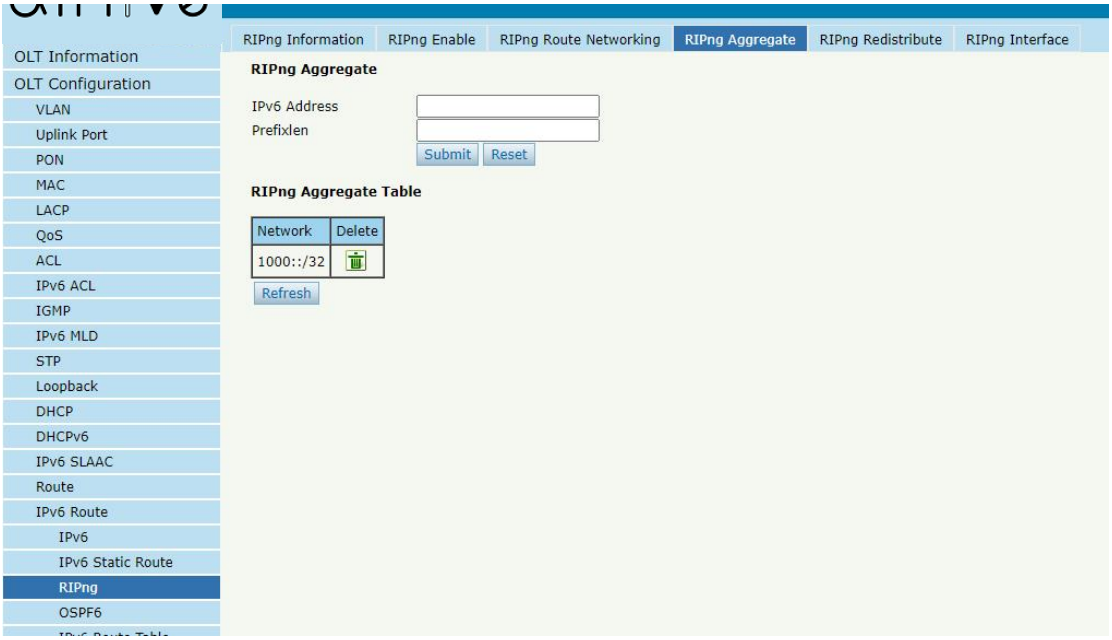



Figure 3.17-6: RIPng Aggregate

### 3.17.3.5 RIPng Redistribute

**OLT Configuration → IPv6 Route → RIPng → RIPng Redistribute**.

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

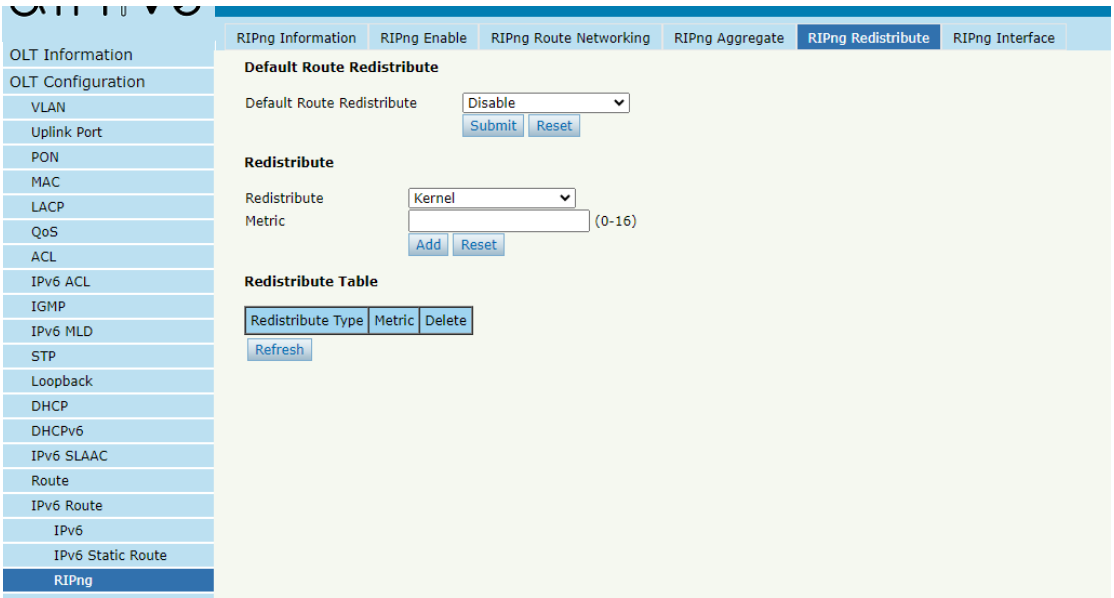


Figure 3.17-7: RIPng Redistribute

### 3.17.3.6 RIPng Interface

**OLT Configuration → IPv6 Route → RIPng → RIPng Interface**

This page is used to configure the RIPng interface's modes, including split-horizon, split-horizon, and poisoned-reverse mixed mode selection.

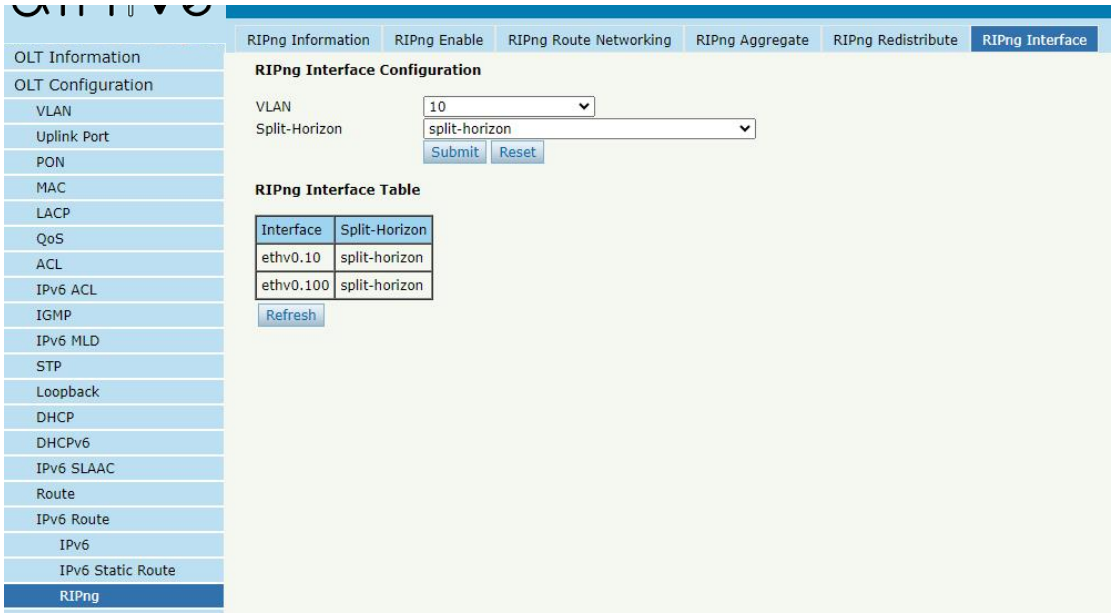



Figure 3.17-8: RIPng Interface

## 3.17.4 OSPF6

OSPF6 is the next generation of OSPF, which uses the IPv6 protocol on top of OSPF.

### 3.17.4.1 OSPF6 Information

**OLT Configuration → IPv6 Route → OSPF6 → OSPF6 Information**

This page displays OSPF6 information, including neighbor information

and OSPF6 routing information.

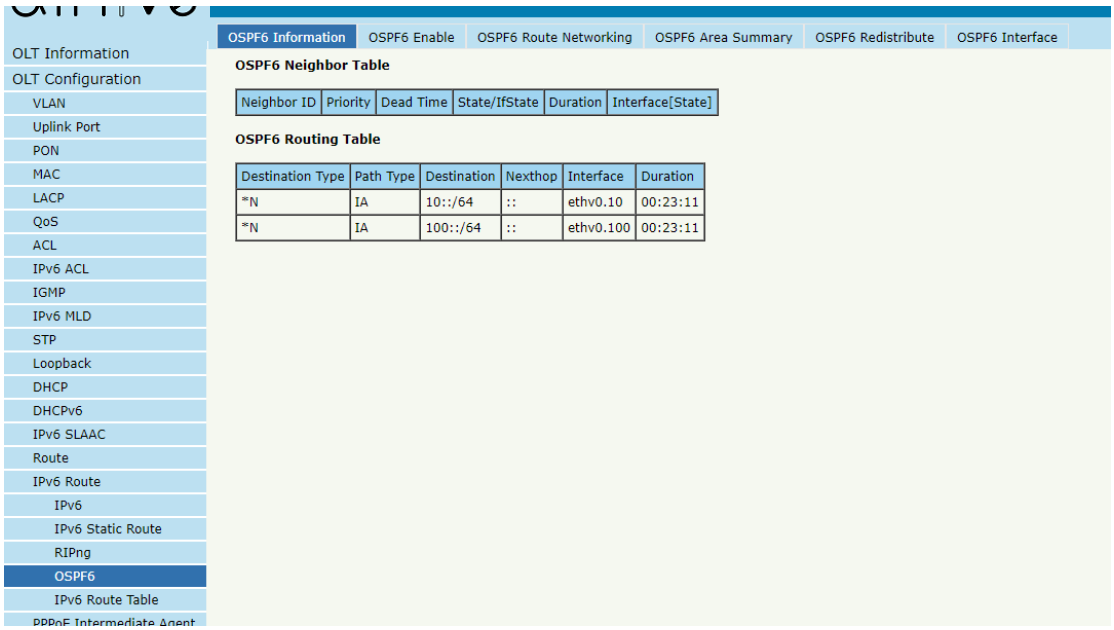



Figure3.17-9: OSPF6 Information

### 3.17.4.2 OSPF6 Enable

**OLT Configuration → IPv6 Route → OSPF6 → OSPF6 Enable**

This page is used to enable OSPF6. Fill in route ID and let it blank, enable OSPF6. OLT will use the biggest IPv6 address as route ID if it's blank.

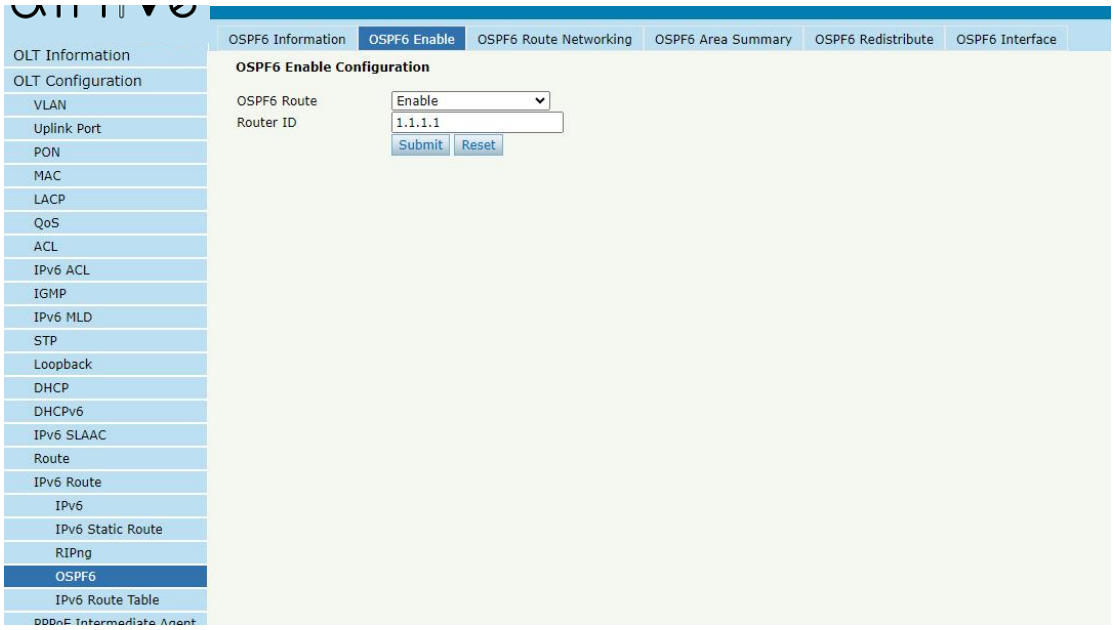



Figure 3.17-10: OSPF6 Enable

### 3.17.4.3 OSPF6 Route Networking

**OLT Configuration →IPv6 Route → OSPF6 → OSPF6 Route Networking**

This page is used to configure area number for VLAN where OSPF6 protocol is operating.

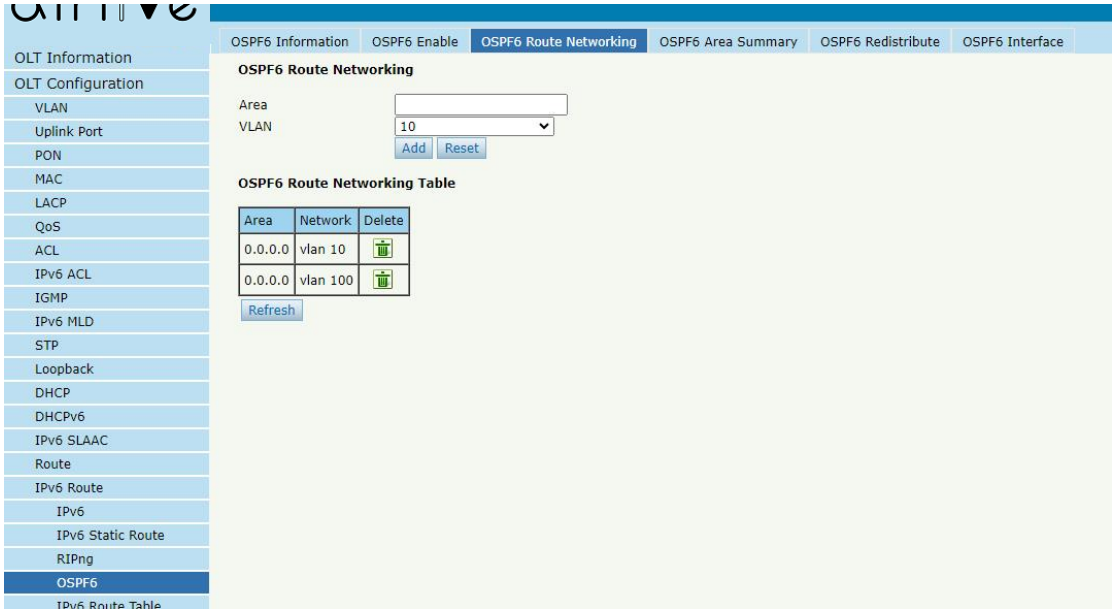


Figure 3.17-11: OSPF6 Route Networking

### 3.17.4.4 OSPF6 Area Summary

**OLT Configuration → IPv6 Route → OSPF6 → OSPF6 Area Summary**

This page is used to configure area IPv6 address summary.

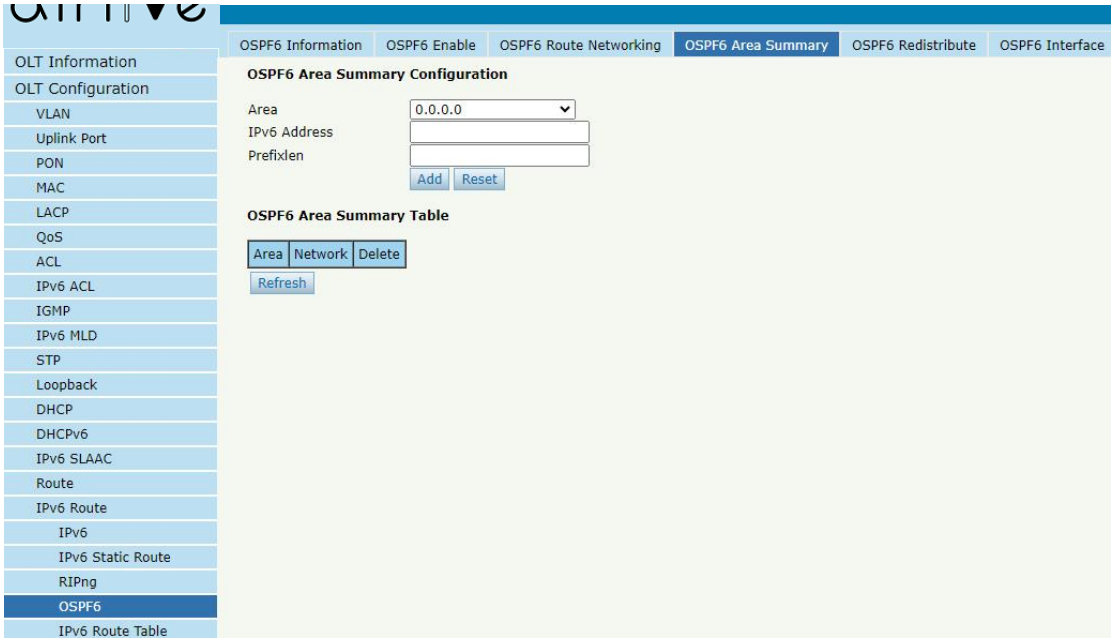



Figure 3.17-12: OSPF6 Area Summary

### 3.17.4.5 OSPF6 Redistribute

The router can use route redistribution to broadcast the OSPF6 routing it learns through another routing protocol so that several routing protocols can cooperate with each other in a network.

**OLT Configuration →IPv6 Route → OSPF6 → OSPF6 Redistribute**

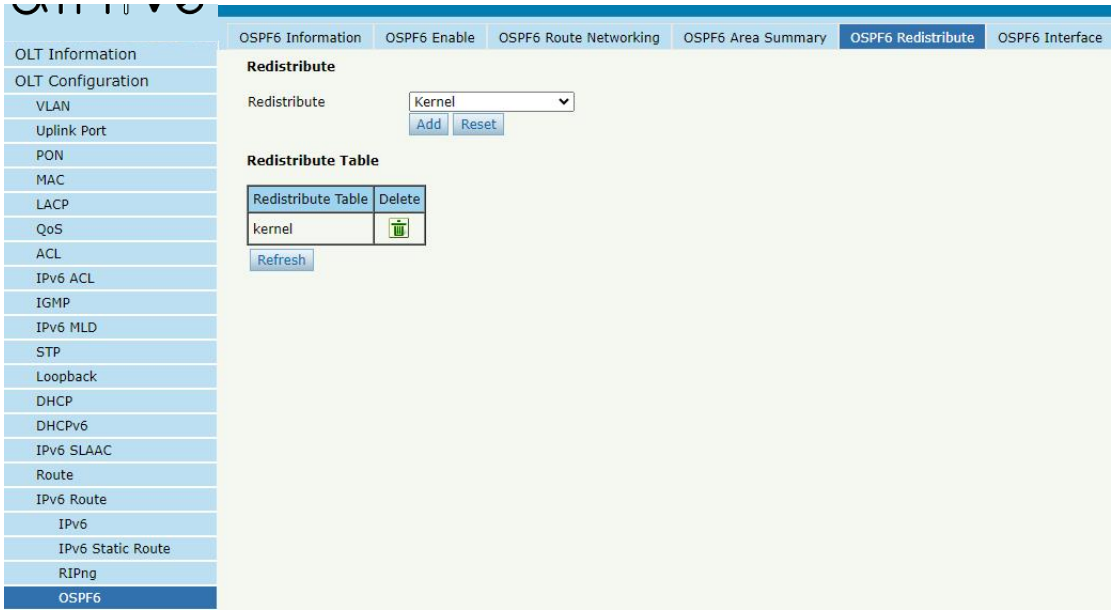



Figure 3.17-13: OSPF6 Redistribute

### 3.17.4.6 OSPF6 Interface

**OLT Configuration → IPv6 Route → OSPF6 → OSPF6 Interface**

This page is used to OSPF6 interface parameters such as cost, time, priority, authentication, and so on.

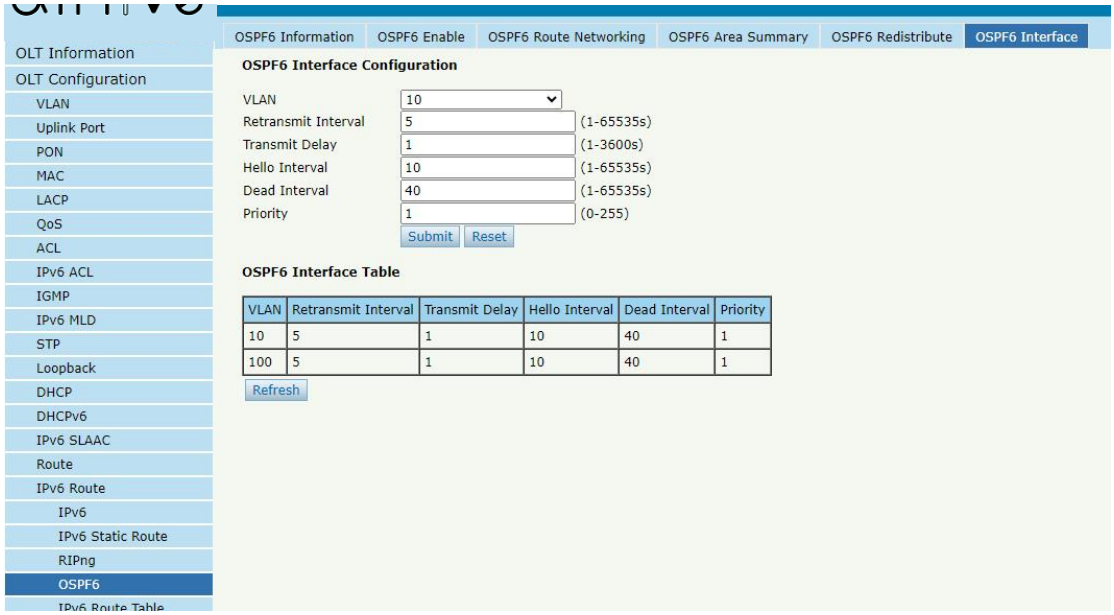



Figure 3.17-14: OSPF6 Interface

### 3.17.5 IPv6 Route Table

**OLT Configuration → IPv6 Route → IPv6 Route Table**

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

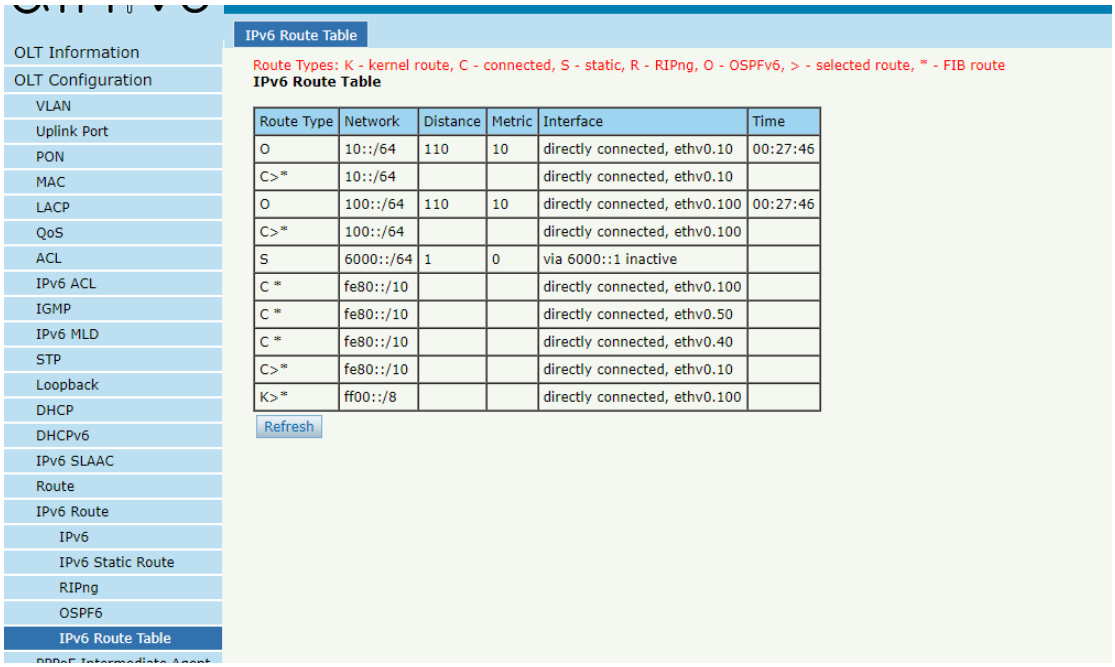



Figure 3.17-15: IPv6 Route Table

## 3.18 PPPoE Intermediate Agent

The PPPoE Intermediate Agent intercepts the PPPoE client's PPPoE message and adds port information (such as slot number/sub card number/interface number, VLAN, MAC address, etc.) for the end user's host access to it. It then forwards it to the PPPoE Server through PAD (PPPoE Active Discovery) to achieve binding authentication between the end user's user account and the access port.

### 3.18.1 PPPoE Intermediate Agent

**OLT Configuration → PPPoE Intermediate Agent → PPPoE Intermediate Agent**

This page is used to configure the PPPoE Intermediate Agent's switches, bound VLANs, and other parameter information.

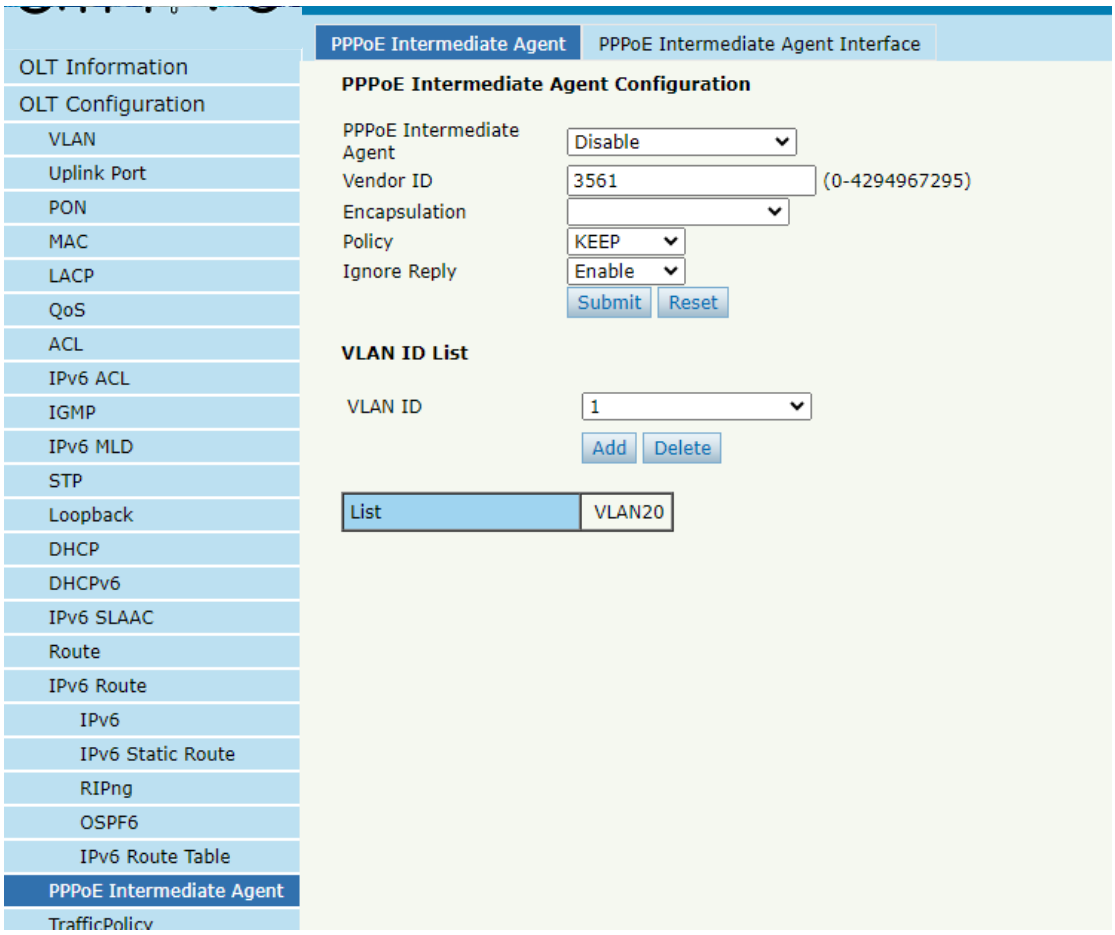



Figure 3.18-1: PPPoE Intermediate Agent

### 3.18.2 PPPoE Intermediate Agent Interface

**OLT Configuration → PPPoE Intermediate Agent → PPPoE Intermediate Agent Interface**

This page is used to configure whether the port is trusted, as well as the values of Circuit ID and Remote ID.

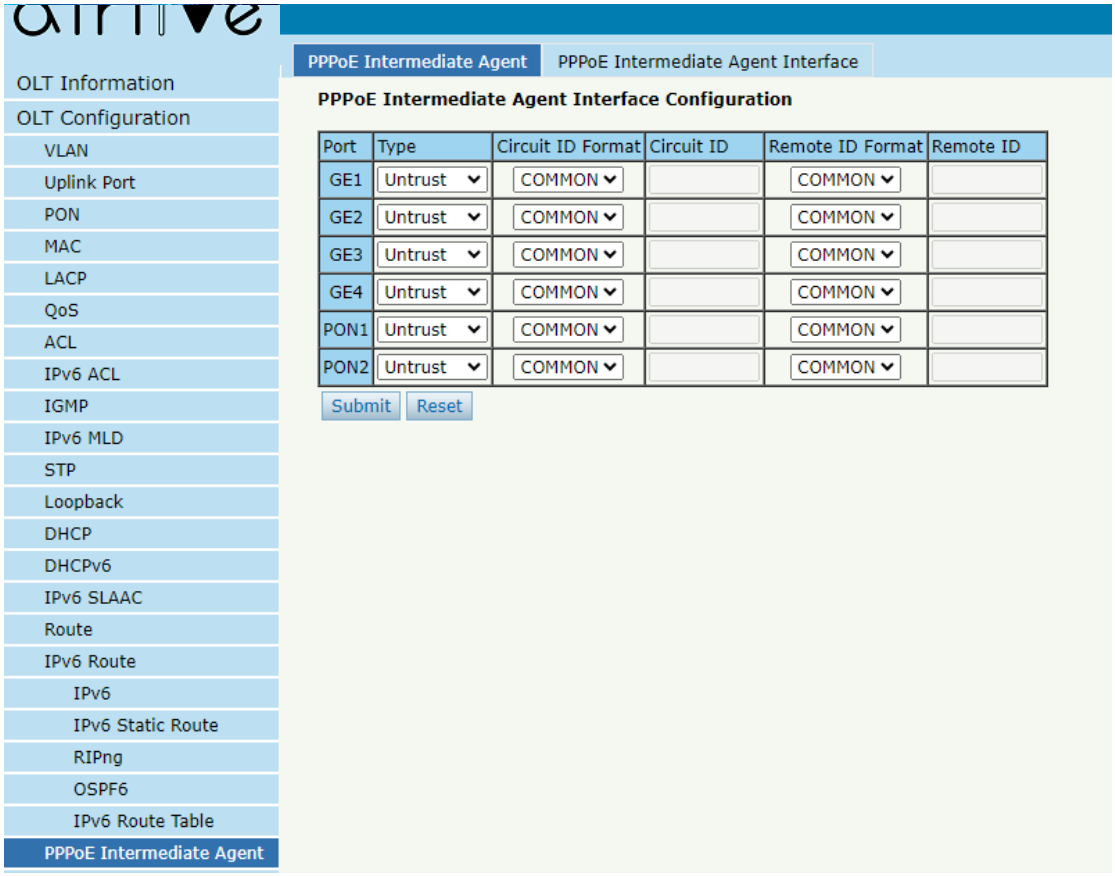



Figure 3.18-2: PPPoE Intermediate Agent Interface

# 3.19 TrafficPolicy

## 3.19.1 Policy

**OLT Configuration → TrafficPolicy → Policy**

This page is used to bind flow classifier and flow behaviorto to flow policy.

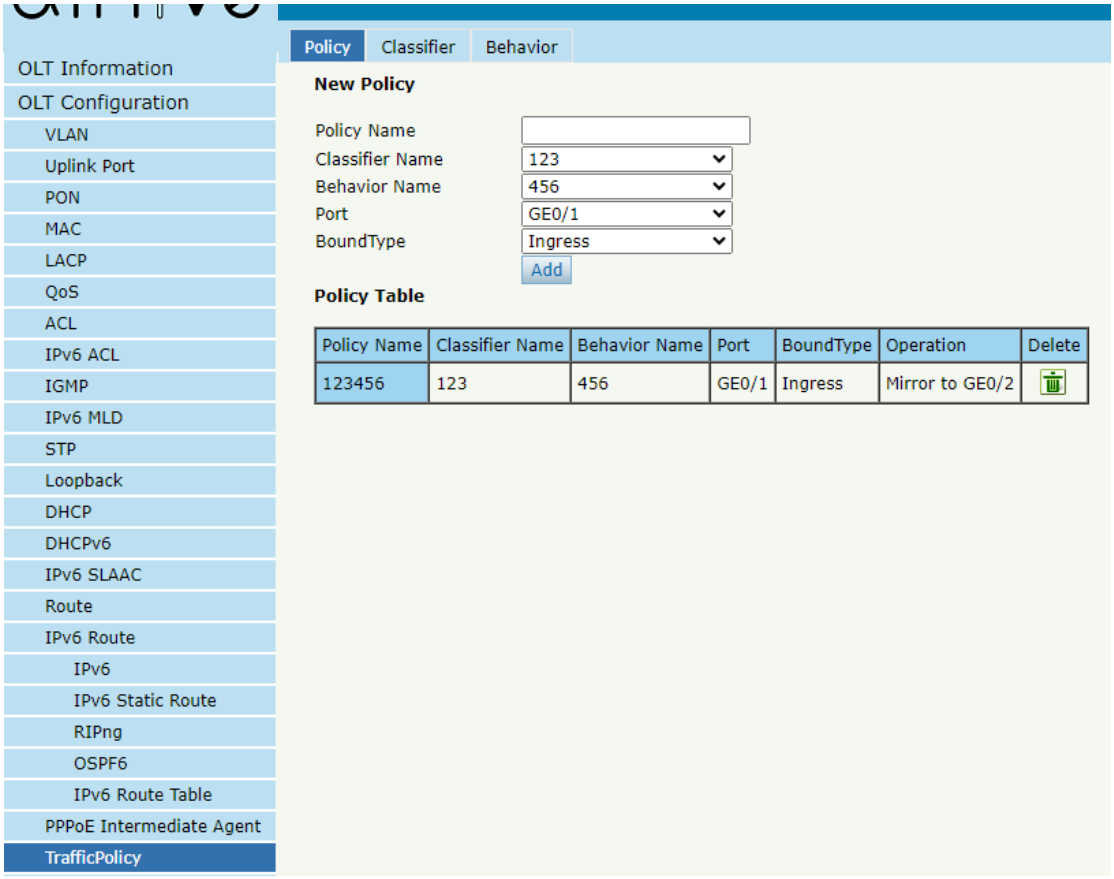



Figure 3.19-1: Policy

## 3.19.2 Classifier

**OLT Configuration → TrafficPolicy → Classifier**

This page is used to configure flow classifier, It is created based on ACL.

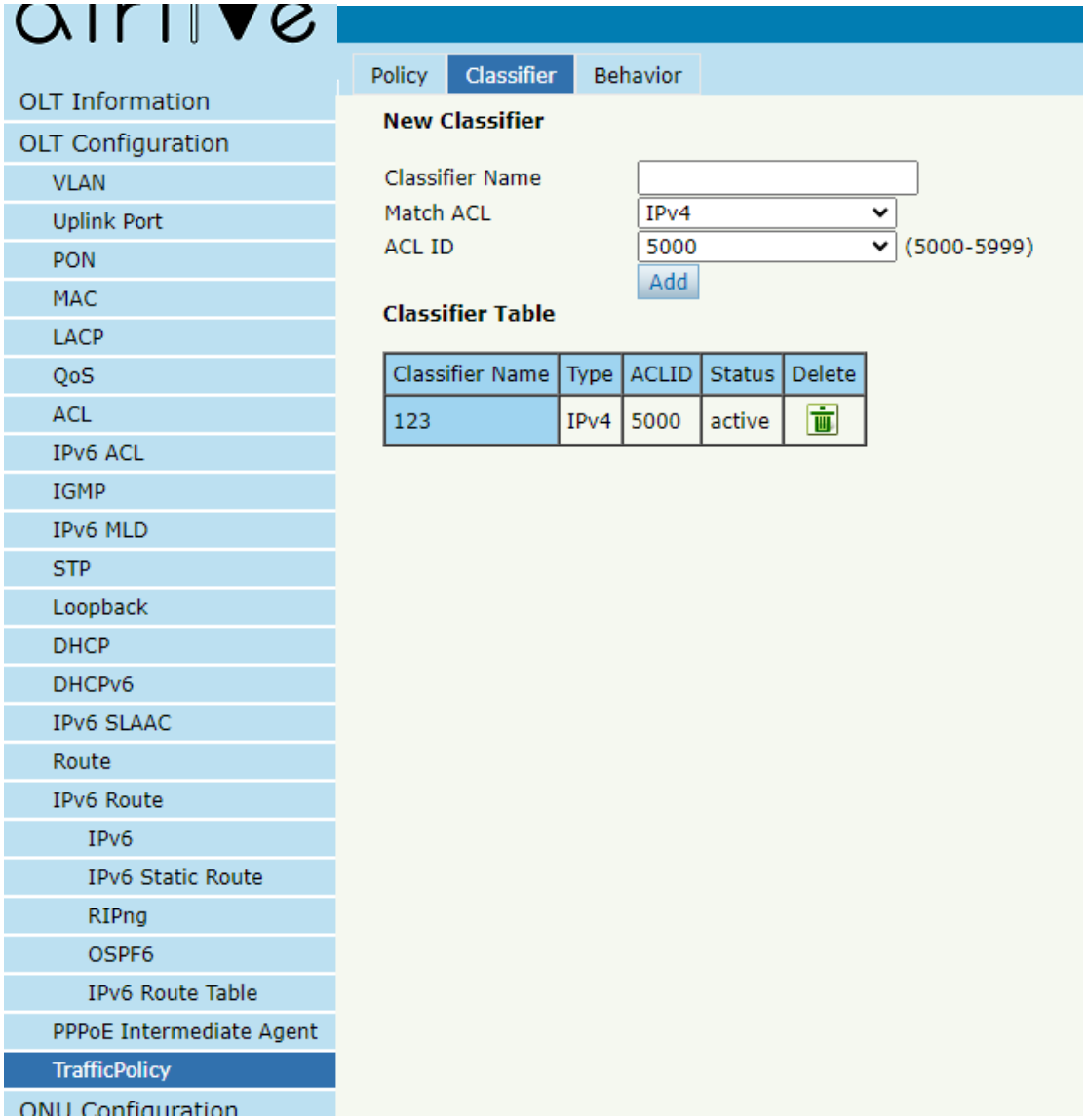



Figure 3.19-2: Classifier

## 3.19.3 Behavior

**OLT Configuration → TrafficPolicy → Behavior**

This page is used to configure flow behavior, here subsequent operations can be specified, such as mirroring, speed limits, and data statistics.

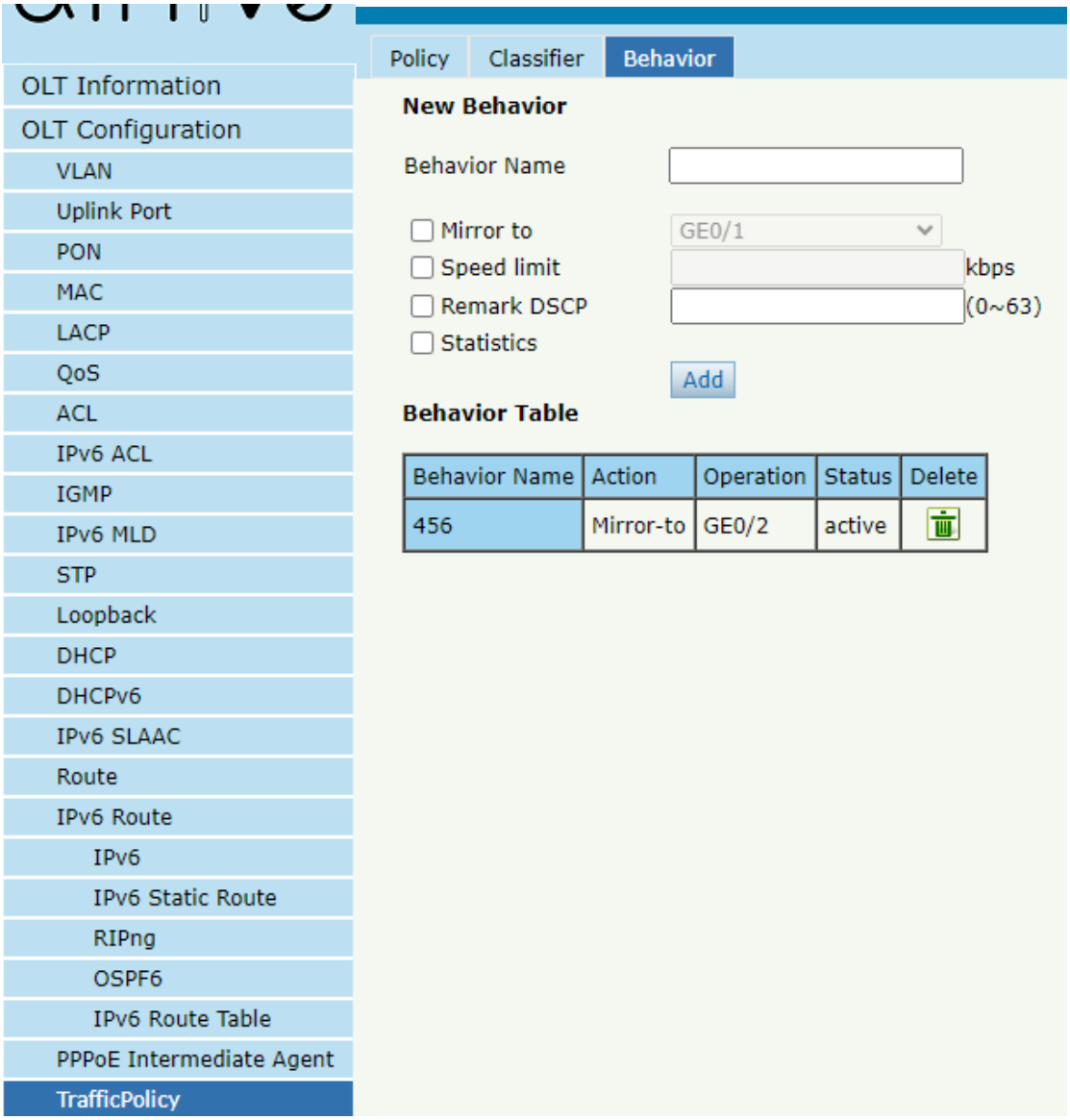



Figure 3.19-3: Behavior

# Chapter 4 ONU Configuration

This chapter is about the ONU management by OLT.

## 4.1 ONU AuthList

### 4.1.1 ONU List

**ONU Configuration→ONU AuthList→ONU List**

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

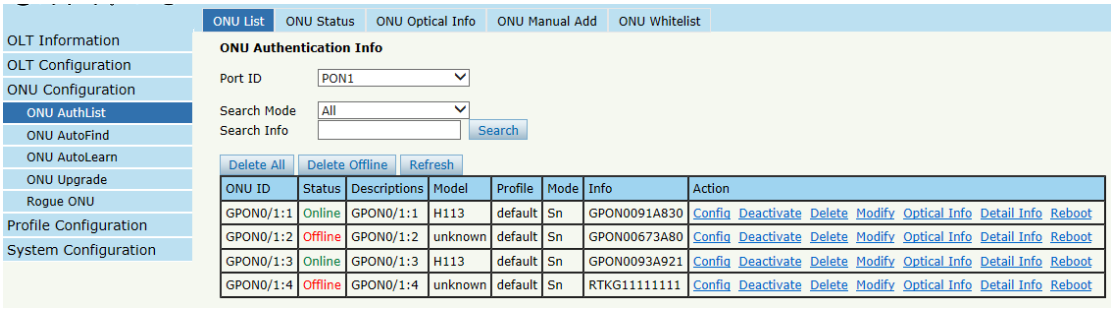



Figure 4.1-1: ONU List

#### 4.1.1.1 Config

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

Configure ONU parameter information which you selected.

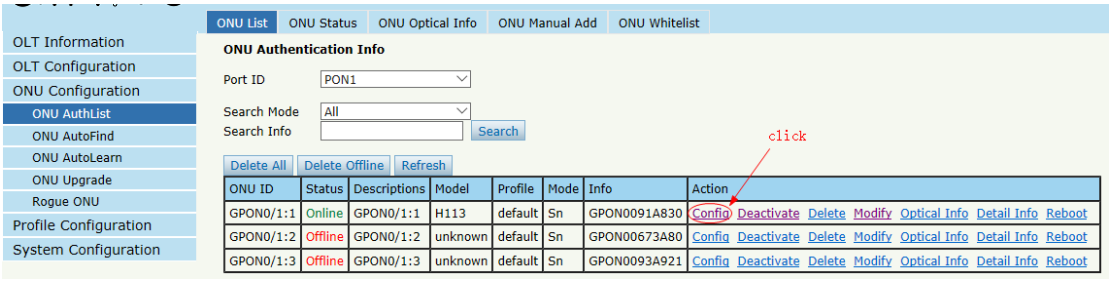



Figure 4.1-2: Configure ONU

#### 4.1.1.1.1 Tcont

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

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

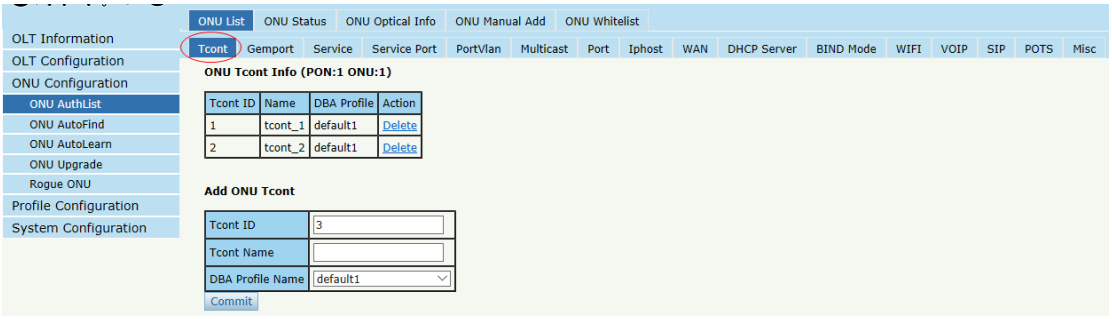



Figure 4.1-3: Create Tcont

#### 4.1.1.1.2 Gemport

**ONU Configuration→ONU AuthList→ONU List→Config→Gemport**

Create gemport ID and bind tcont ID.

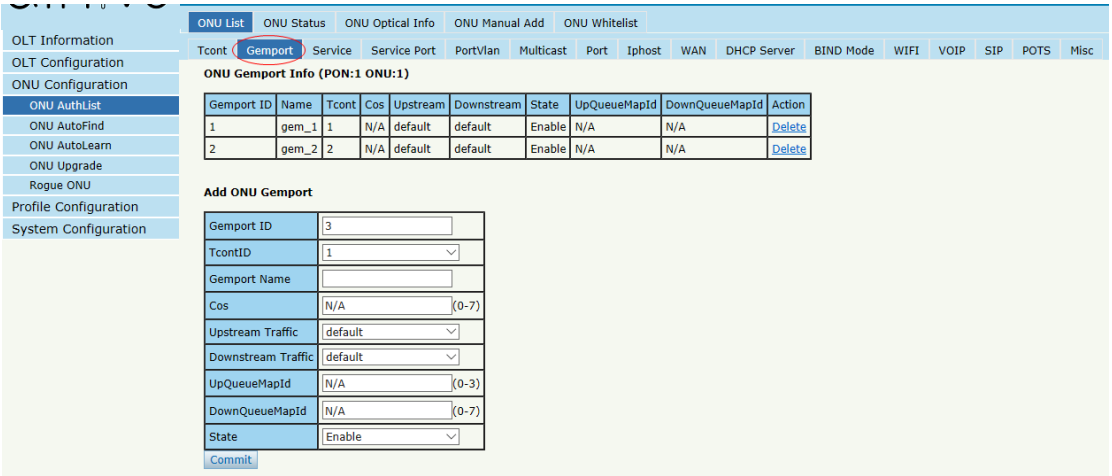



Figure 4.1-4: Create gemport

#### 4.1.1.1.3 Service

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

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

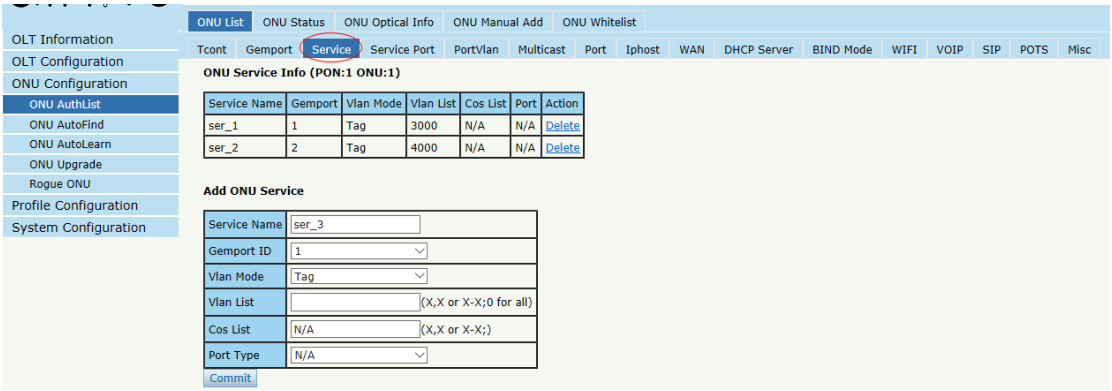



Figure 4.1-5: Create service

#### 4.1.1.1.4 Service Port

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

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

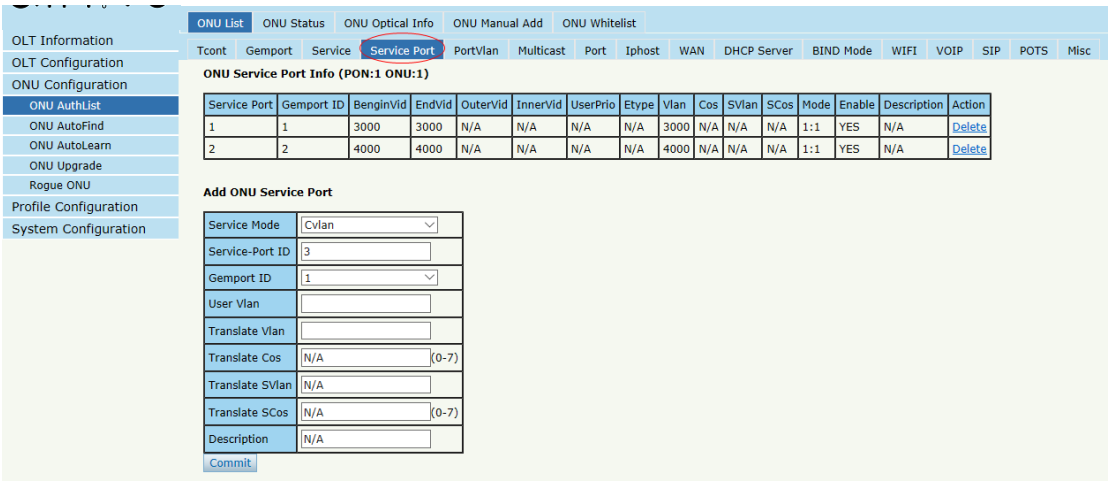


Figure 4.1-6: Create service port

#### 4.1.1.1.5 PortVlan

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

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

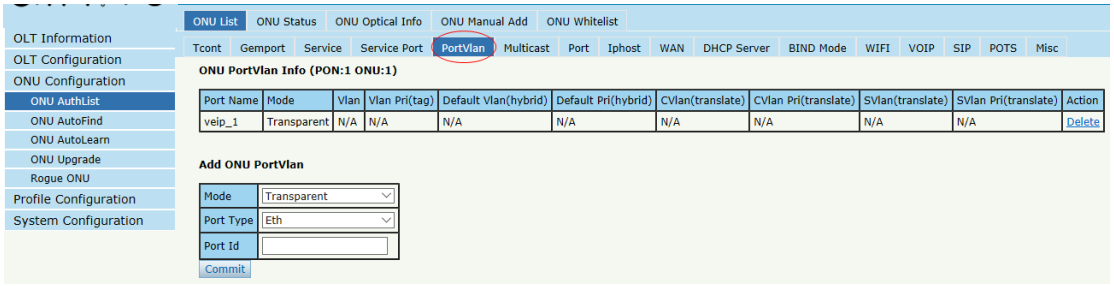



Figure 4.1-7: Configure port VLAN mode

#### 4.1.1.1.6 Multicast

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

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

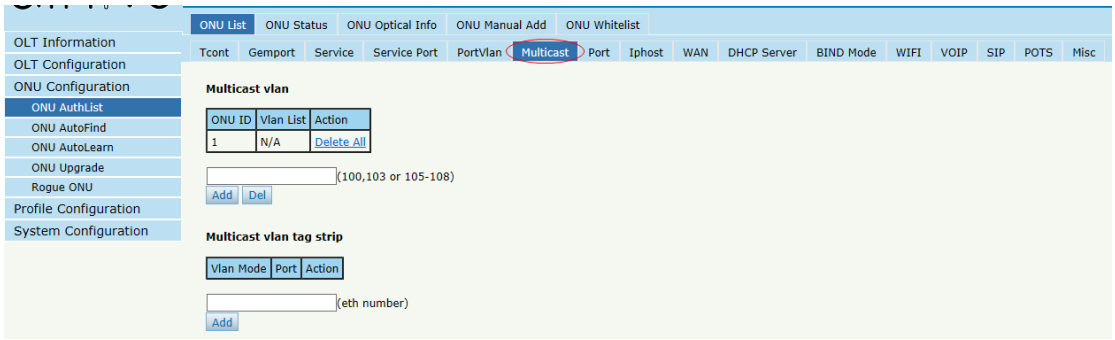



Figure 4.1-8: Configure multicast VLAN

#### 4.1.1.1.7 Port

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

Set attribute of ONU LAN port.

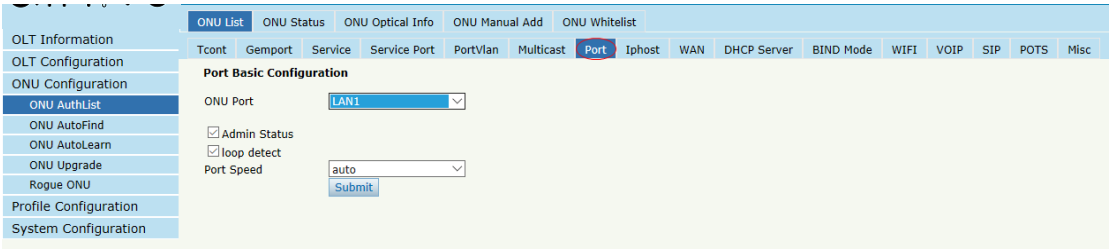



Figure 4.1-9: ONU port attibute

#### 4.1.1.1.8 Iphost

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

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

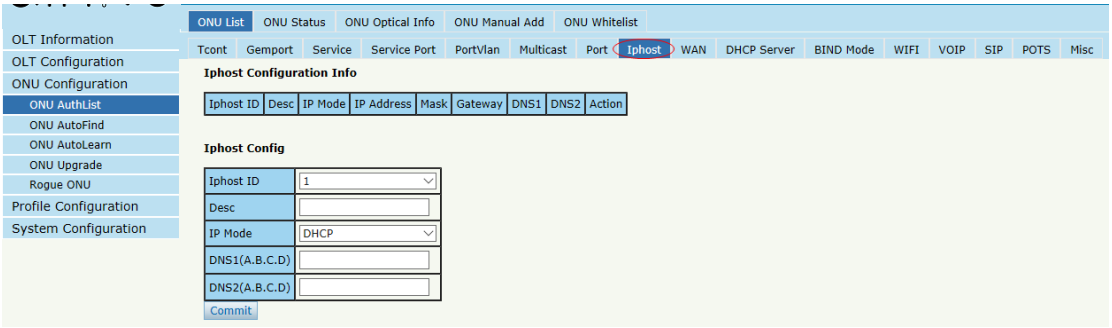



Figure 4.1-10: Configure IPhost

#### 4.1.1.1.9 WAN

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

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

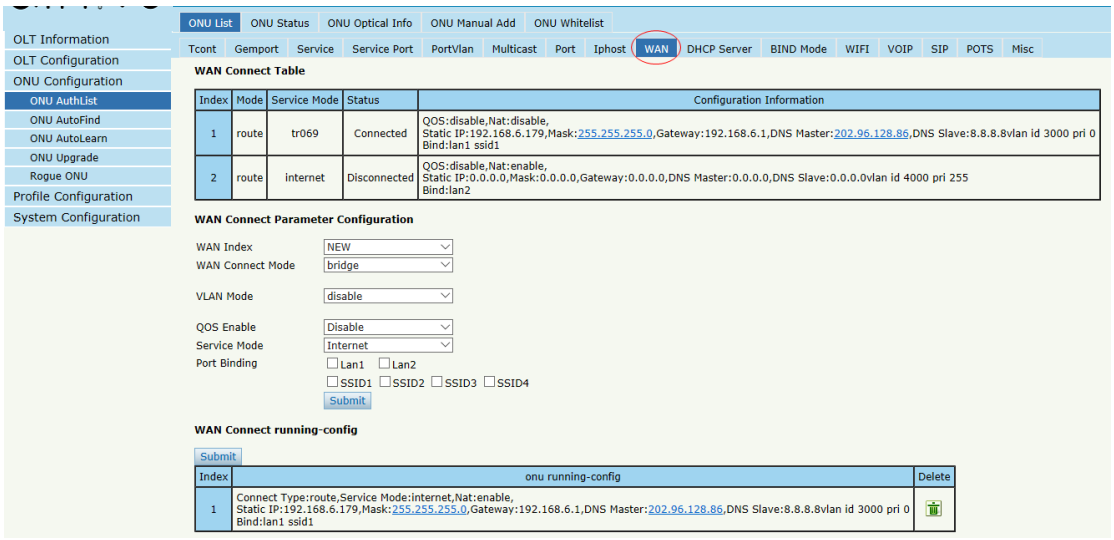



Figure 4.1-11: Configure WAN

### 4.1.1.1.10 DHCP Server

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

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

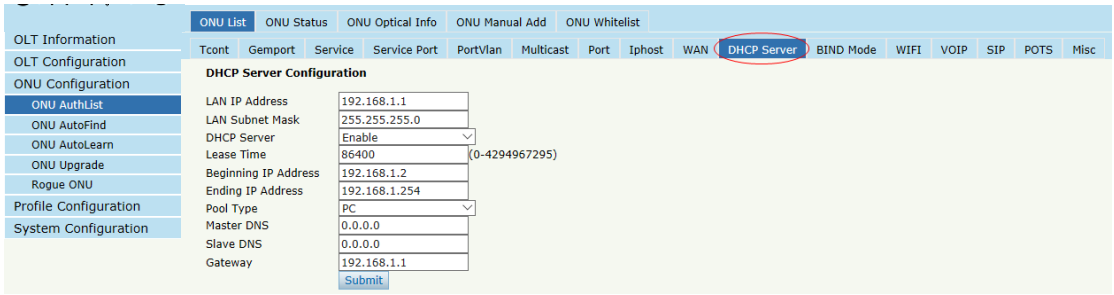



Figure 4.1-12: ONU DHCP Server

### 4.1.1.1.11 Bind Mode

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

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

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

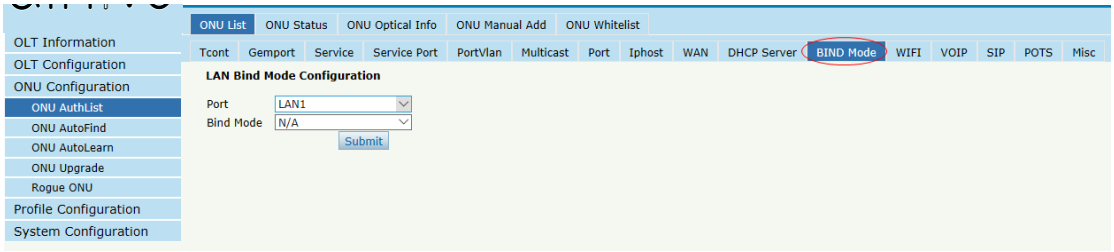



Figure 4.1-13: LAN Bind Mode Configuration

#### 4.1.1.1.12 WIFI

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

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

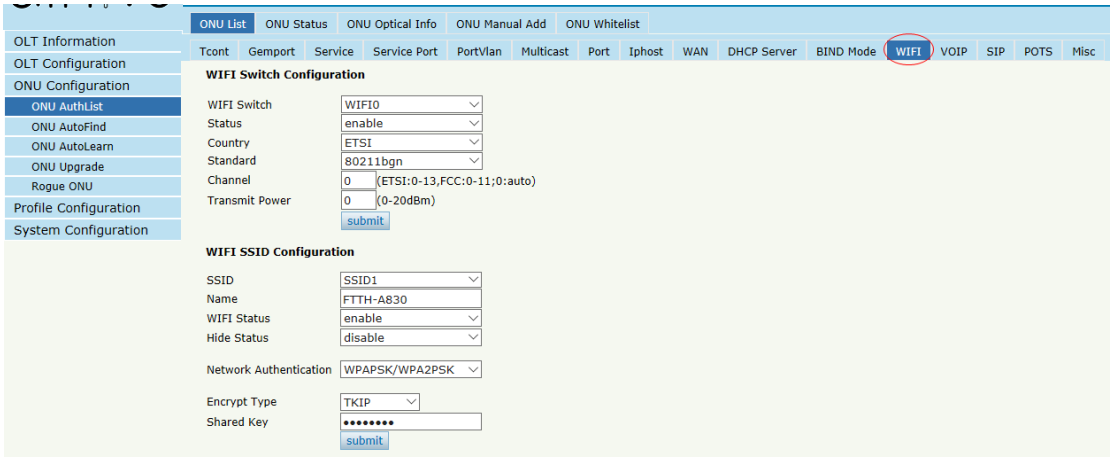



Figure 4.1-14: WIFI Configuration

#### 4.1.1.1.13 VOIP

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

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

page.


Figure 4.1-15: Voice Wan Information

#### 4.1.1.1.14 SIP

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

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

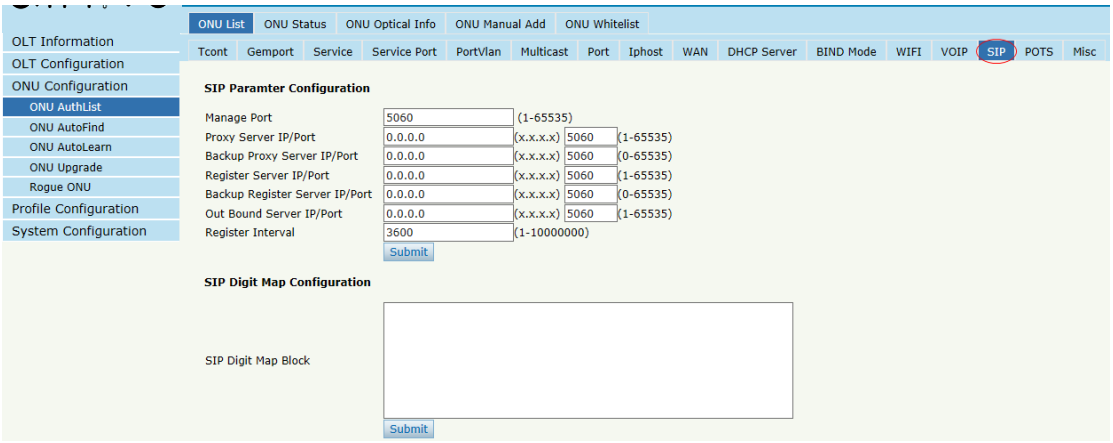



Figure 4.1-16: SIP Parameter

#### 4.1.1.1.15 POTS

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

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

"POTS" can be shown on this page.

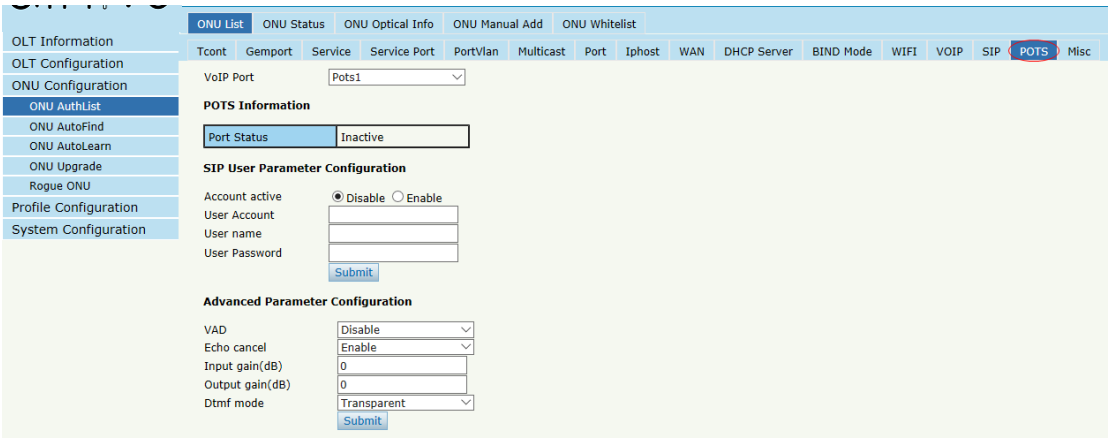



Figure 4.1-17: POTS Configuration

#### 4.1.1.1.16 Misc

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

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

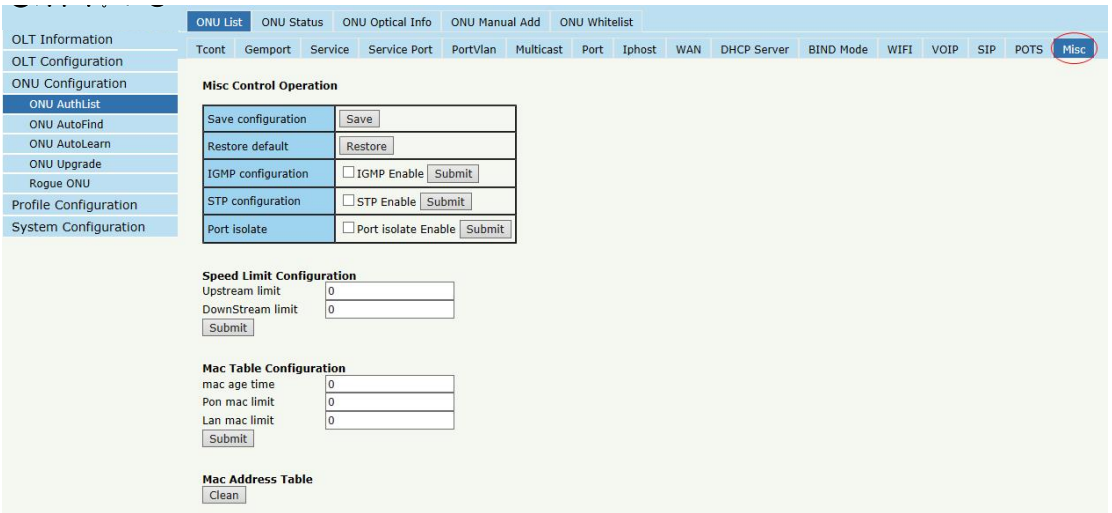



Figure 4.1-18: Misc Configuration

### 4.1.1.2 Deactivate

**ONU Configuration→ONU AuthList→ONU List→Deactivate**

**(Activate)**

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

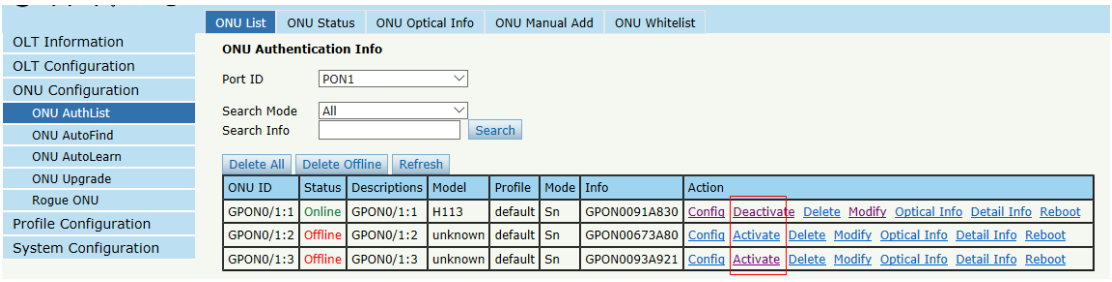



Figure 4.1-19: Deactivate/Activate ONU

### 4.1.1.3 Delete

**ONU Configuration→ONU AuthList→ONU List→Delete**

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

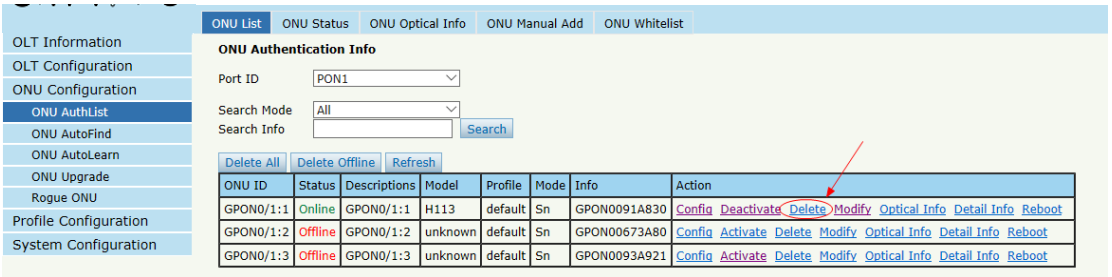



Figure 4.1-20: Delete ONU

### 4.1.1.4 Modify

**ONU Configuration→ONU AuthList→ONU List→Modify**

This is used to modify ONU authentication mode.

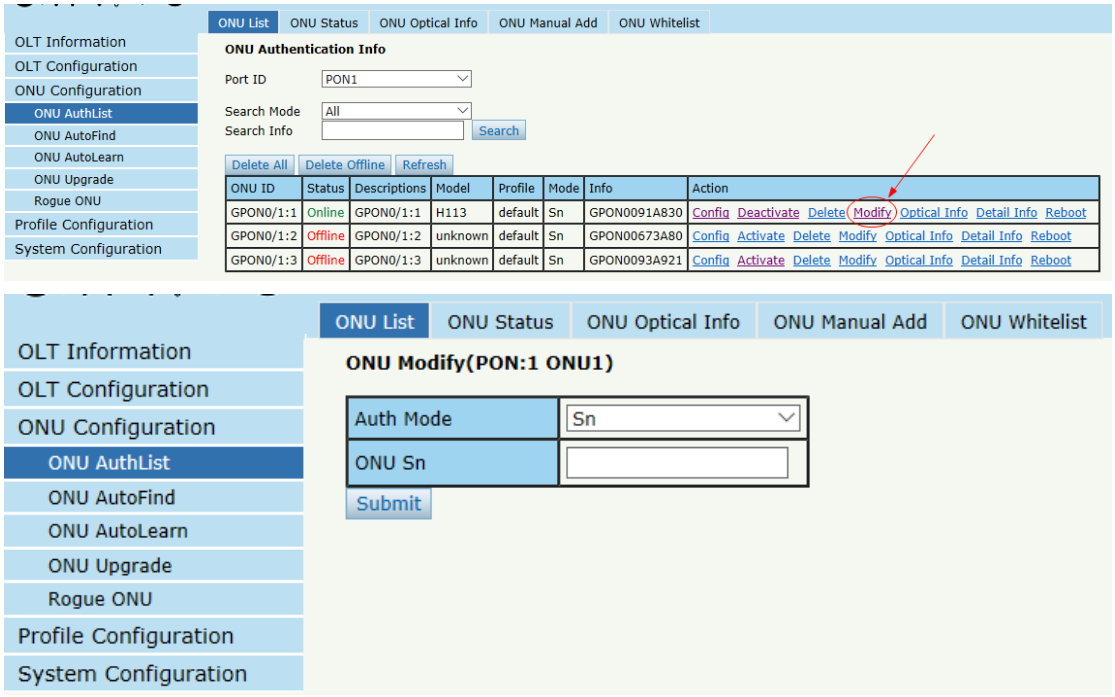
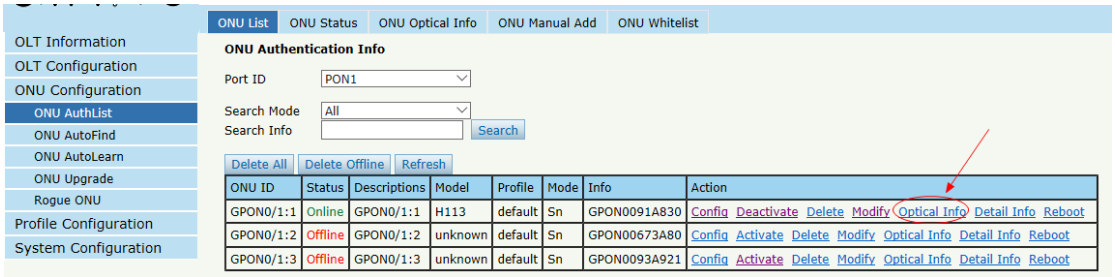



Figure 4.1-21: Modify ONU Authentication mode

## 4.1.1.5 Optical Info

**ONU Configuration→ONU AuthList→ONU List→Optical Info**

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



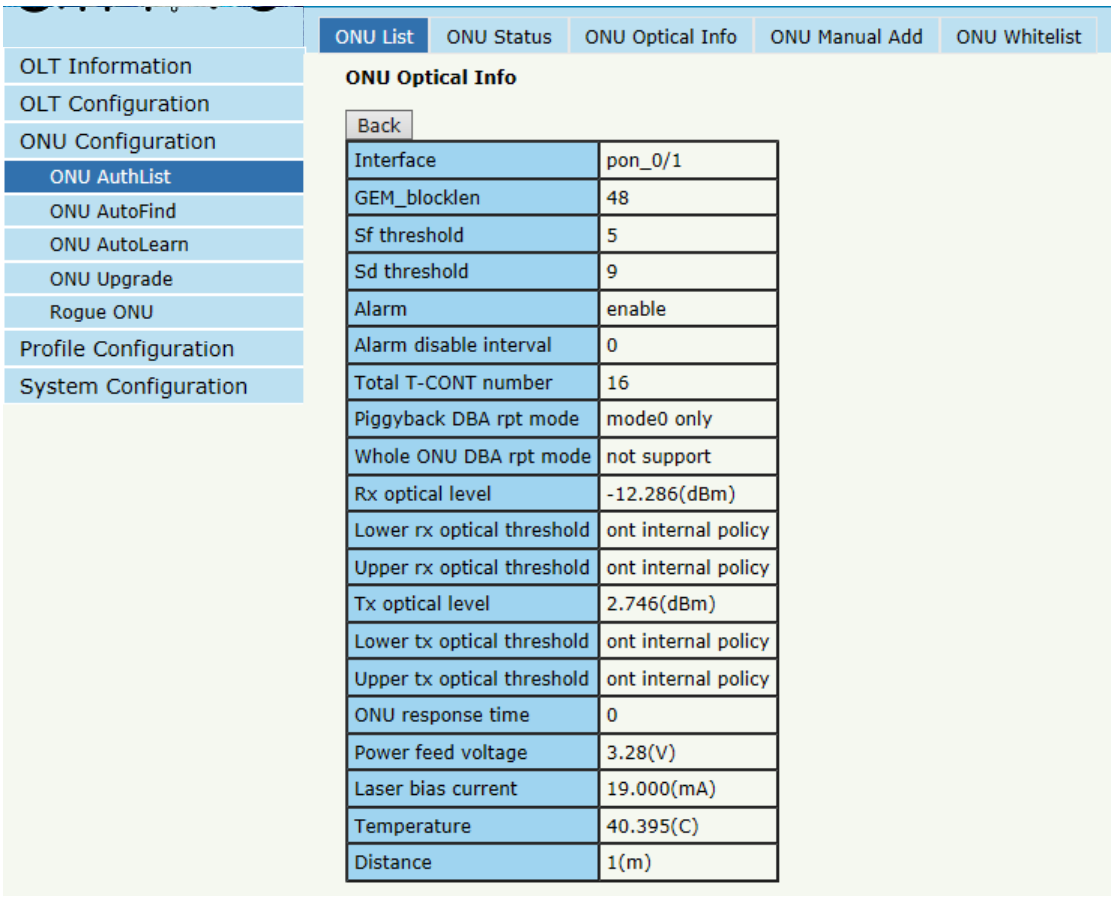
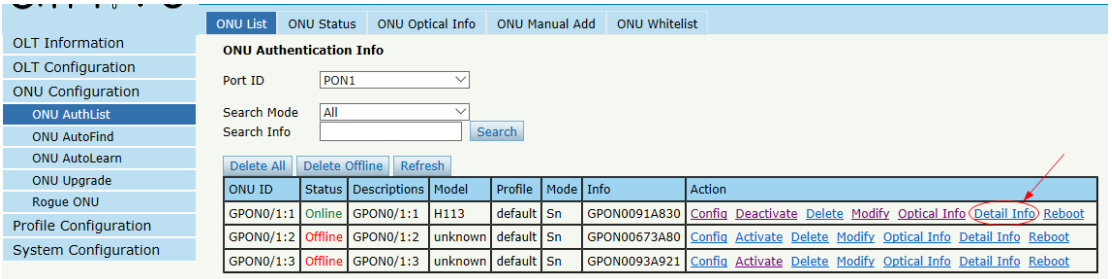



Figure 4.1-22: Optical info of ONU

### 4.1.1.6 Detail Info

**ONU Configuration→ONU AuthList→ONU List→Detail Info**

Check the Detail Info of ONU which you selected.



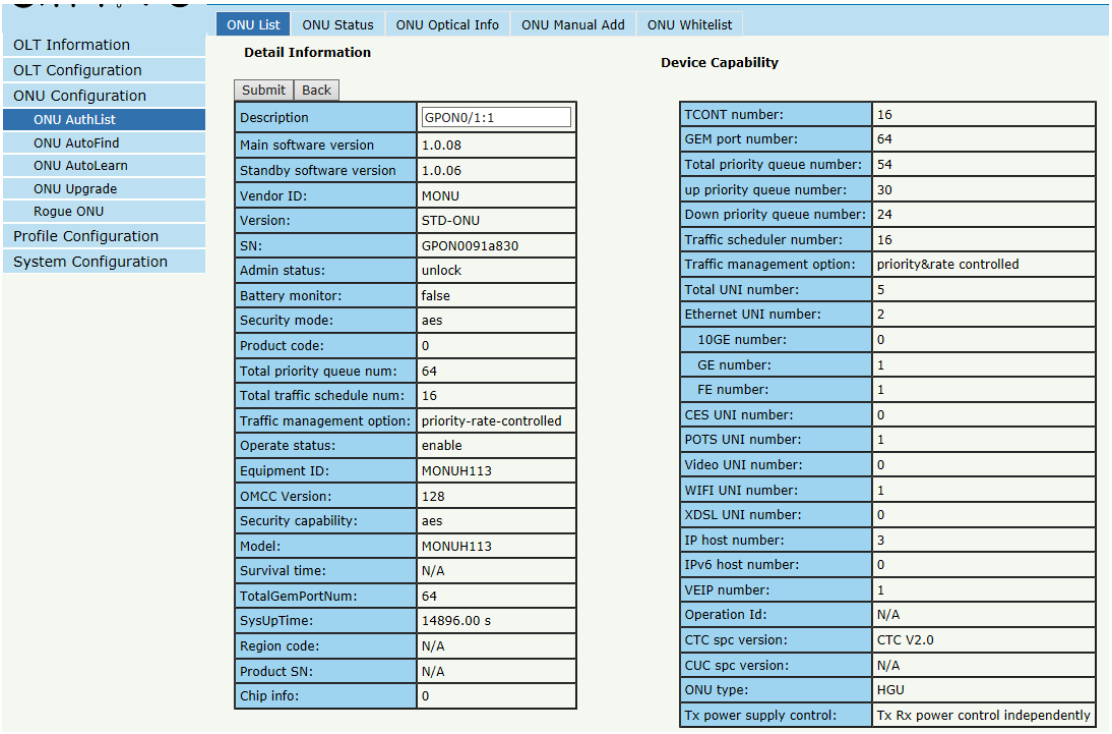



Figure 4.1-23: Detail info of ONU

### 4.1.1.7 Reboot

**ONU Configuration→ONU AuthList→ONU List→Reboot**

Reboot ONU which you selected.

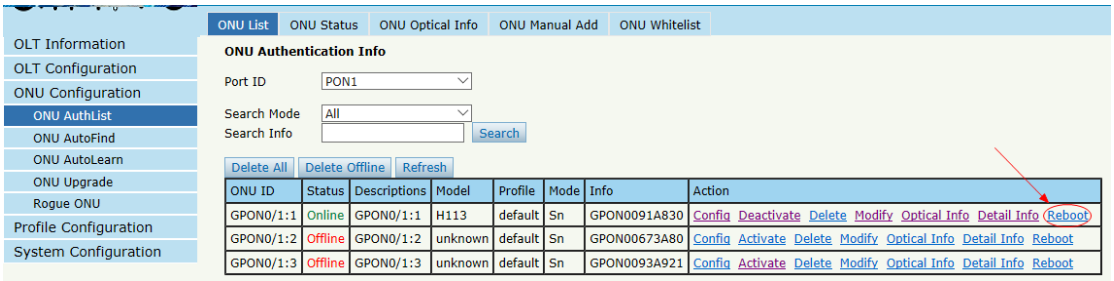



Figure 4.1-24: Reboot ONU

## 4.1.2 ONU Status

**ONU Configuration→ONU AuthList→ONU Status**

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

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

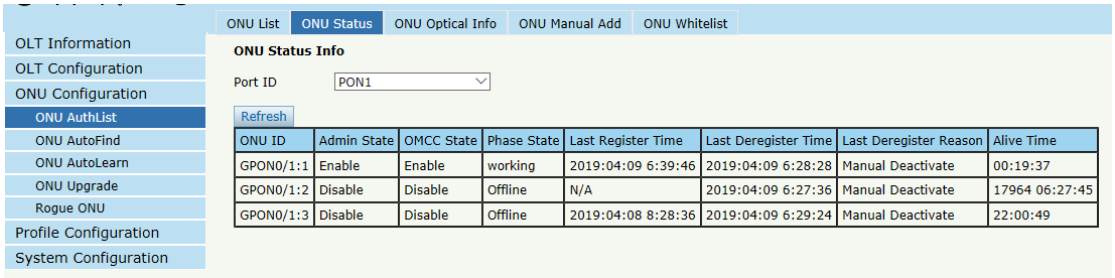



Figure 4.1-25: ONU Status

## 4.1.3 ONU Optical Info

**ONU Configuration→ONU AuthList→ONU Optical Info**

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

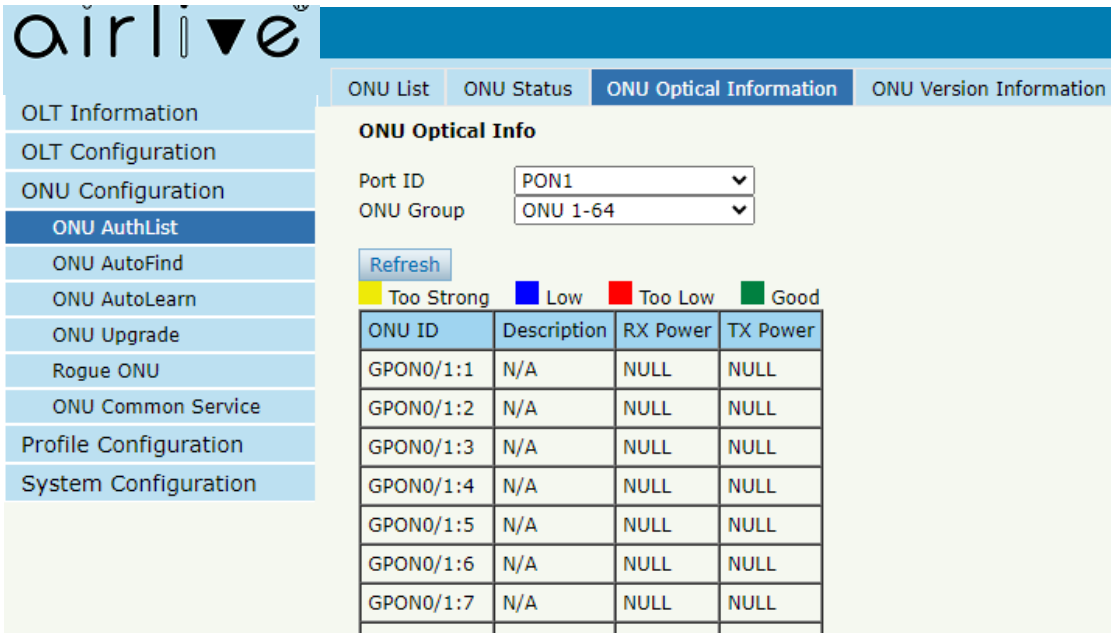



Figure 4.1-26: ONU Optical Info

### 4.1.4 ONU Version Information

**ONU Configuration→ONU AuthList→ONU Version Information**

This page allows you to view the optical power information of all online ONU.

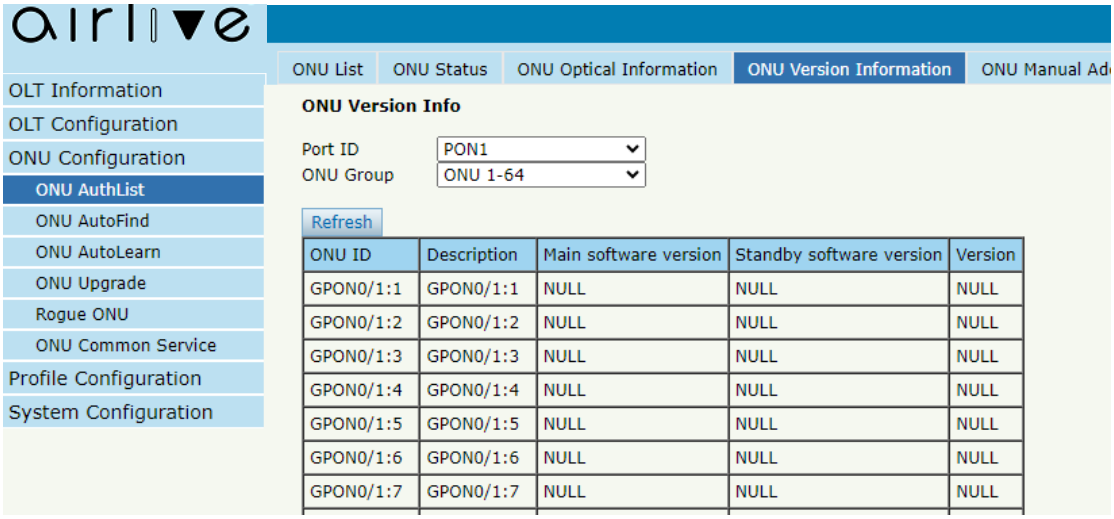



Figure 4.1-27: ONU Version Information

### 4.1.5 ONU Manual Add

**ONU Configuration→ONU AuthList→ONU Manual Add**

You can manually add ONU to a selected PON port. ONU will appear in the ONU list after you added.

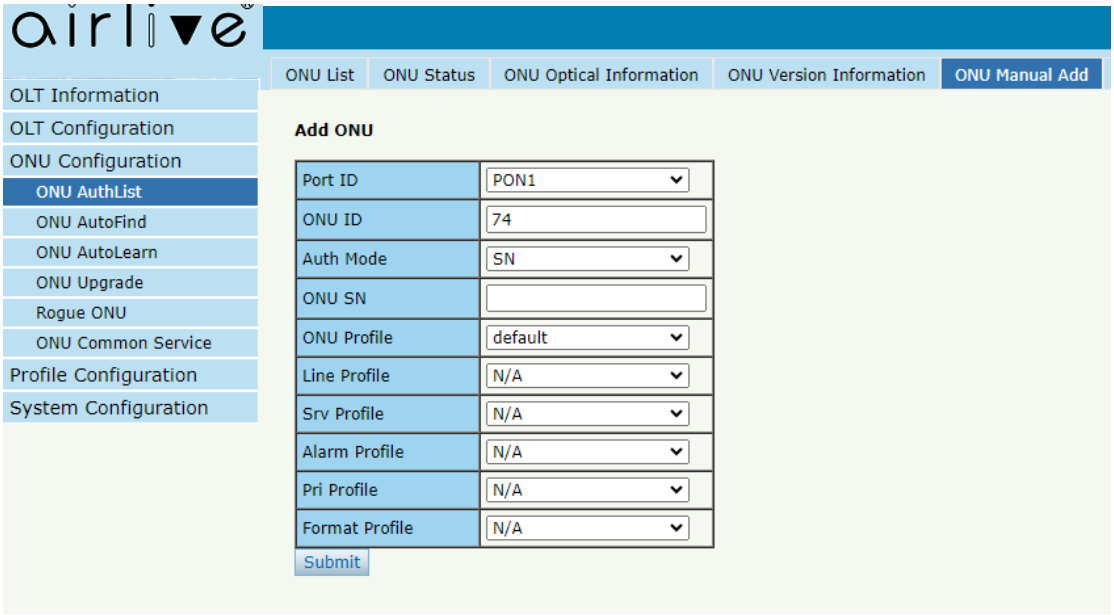



Figure 4.1-28: Add ONU Manually

## 4.1.6 ONU Allowist

**ONU Configuration→ONU AuthList→ONU Allowist**

You can set up Allowist on this page.

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

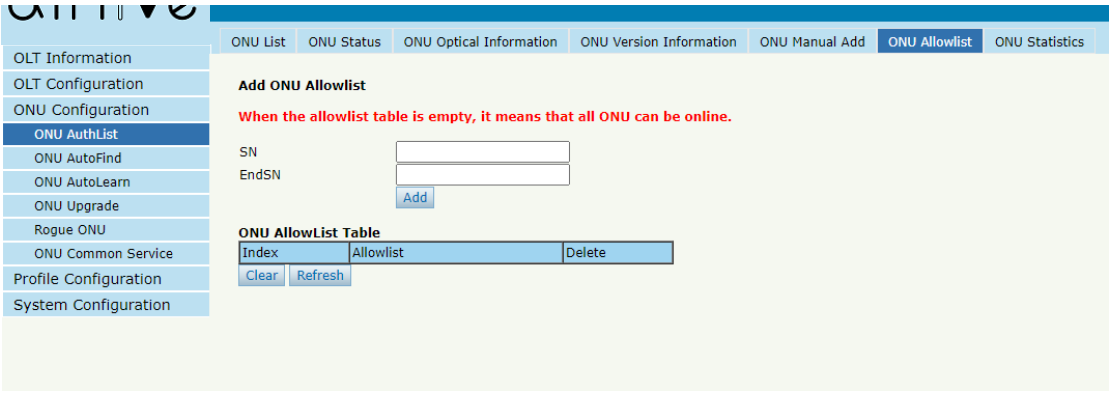



Figure 4.1-29: ONU Allowlist

### 4.1.7 ONU Statistics

**ONU Configuration→ONU AuthList→ONU Statistics**

This page displays the information of package count about ONU ports.

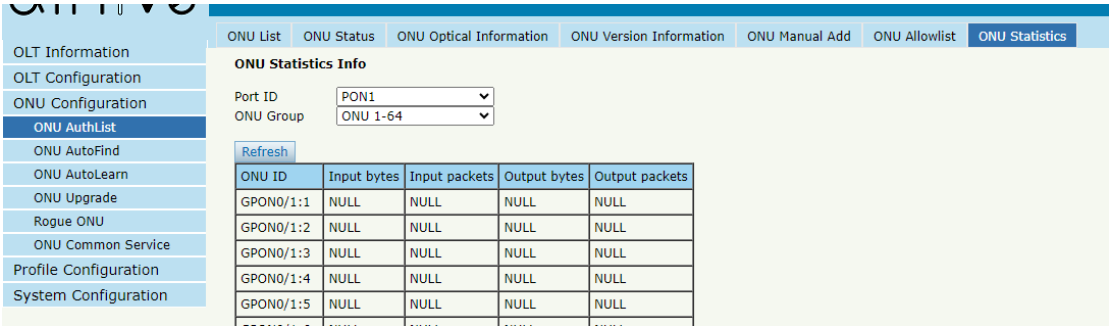



Figure 4.1-30: ONU Statistics

## 4.2 ONU AutoFind

### 4.2.1 Automatic Discovery

**ONU Configuration→ONU AutoFind→ Automatic Discovery**

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

More information will be shown under the ONU Detail menu.

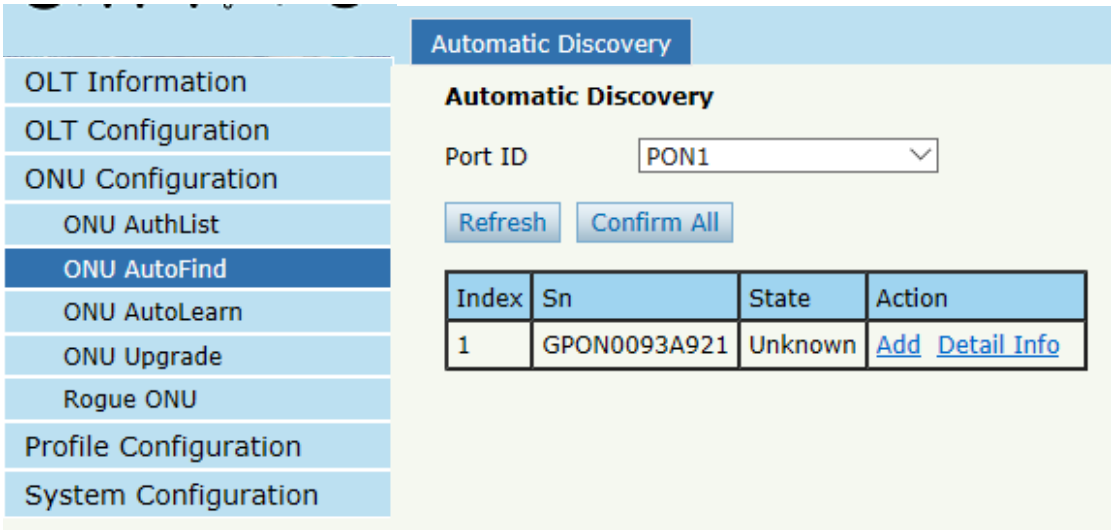



Figure4.2-1: Automatic Discovery

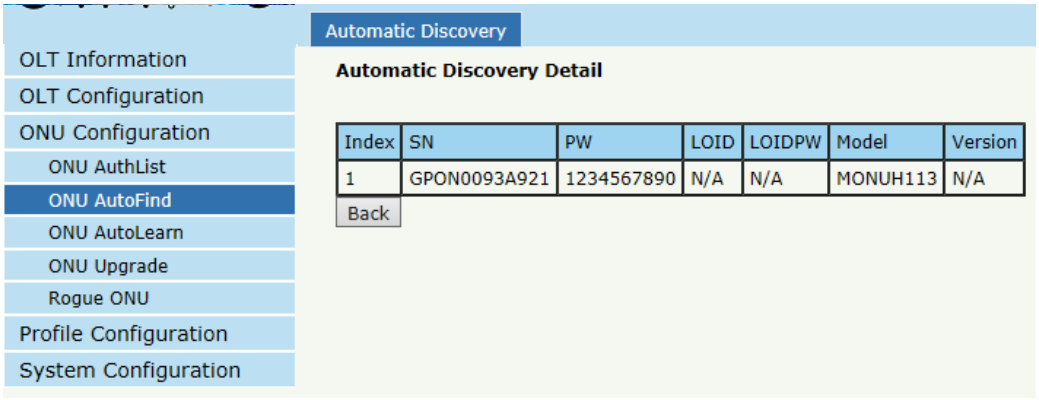



Figure 4.2-2: Detail info

## 4.2.2 Aging Time

**ONU Configuration→ONU AutoFind→ Aging Time**

Through this page, you can modify the aging time after discovering ONU through the PON port.

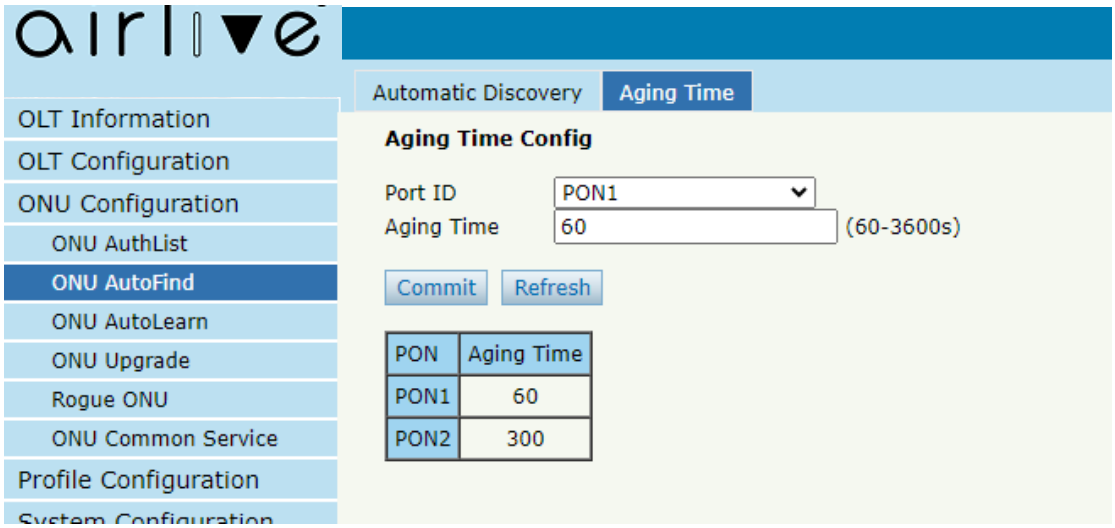



Figure4.2-3: Aging Time

## 4.3 ONU AutoLearn

### 4.3.1 ONU AutoLearn

**Configuration→AutoLearn→ONU AutoLearn**

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

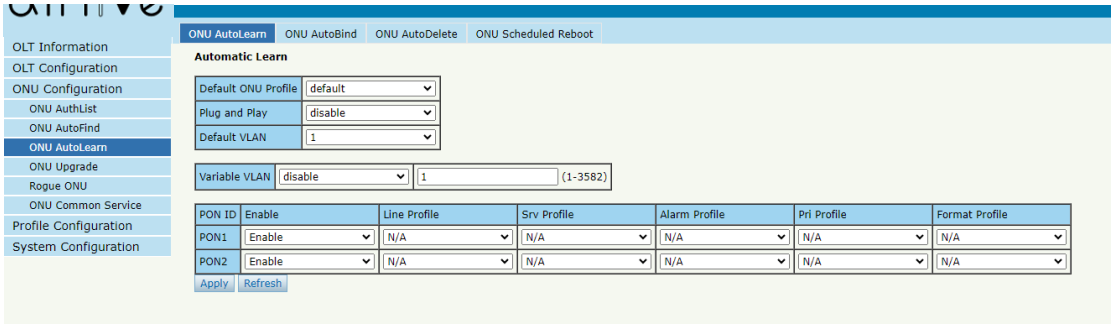



Figure 4.3-1: Automatic learn

### 4.3.2 ONU AutoBind

**Configuration→AutoLearn→ONU AutoBind**

Input the Equipment ID and bind the profile you need

*Note: you must create profile first.*

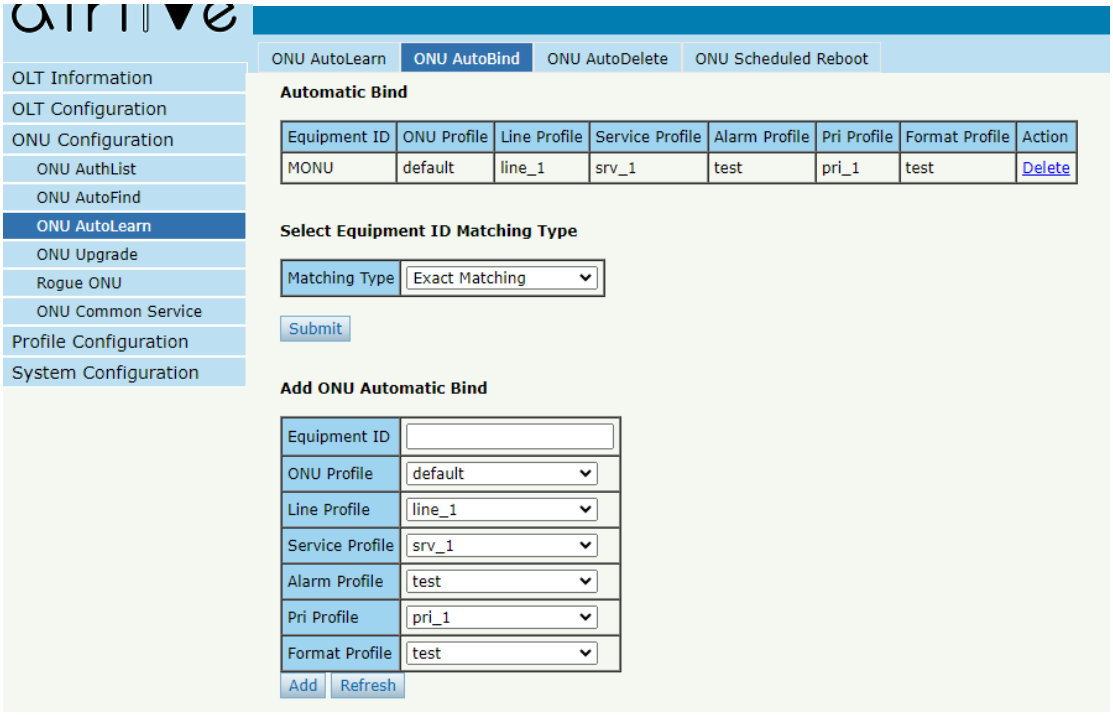



Figure 4.3-2: Bind profile

## 4.3.3 ONU AutoDelete

**Configuration→AutoLearn→ONU AutoDelete**

After this function is enabled, ONU registrations that are offline but remain offline for a certain period of time will be deleted.

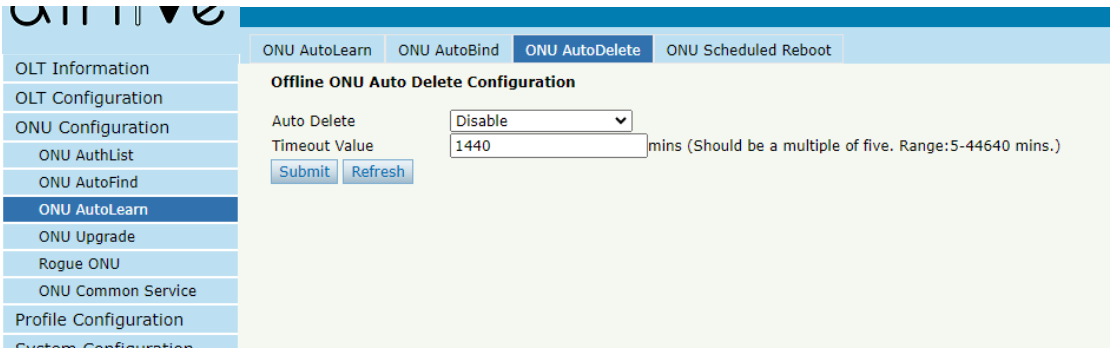



Figure 4.3-3: ONU AutoDelete

### 4.3.4 ONU Scheduled Reboot

**Configuration→AutoLearn→ONU Scheduled Reboot**

Through this page, you can set the scheduled restart function of ONU, it can specify one or more ONU to restart at a certain time.

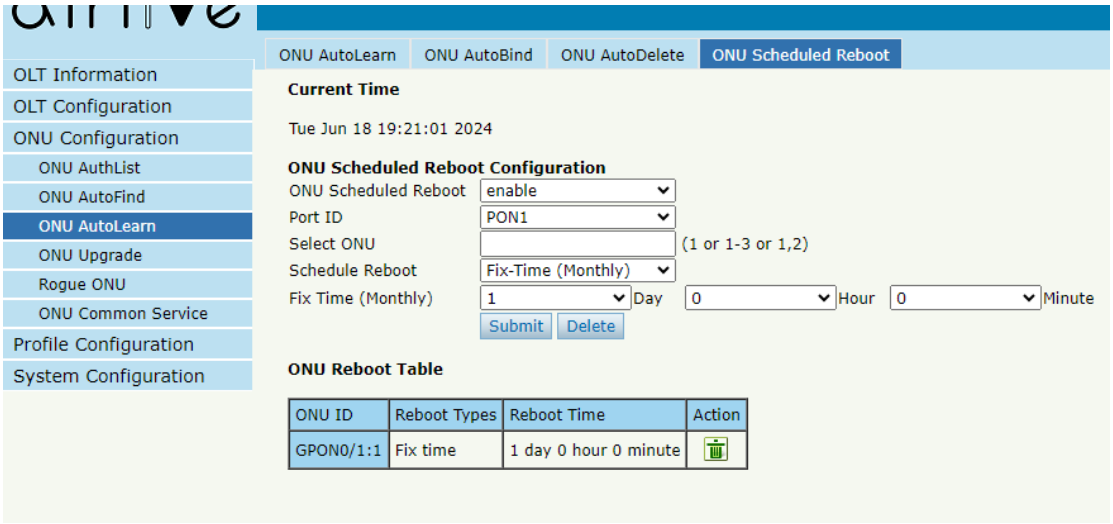



Figure 4.3-4: ONU Scheduled Reboot

## 4.4 ONU Upgrade

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

### 4.4.1 UpLoad Image

**Configuration→ONU Upgrade→ONU Image**

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

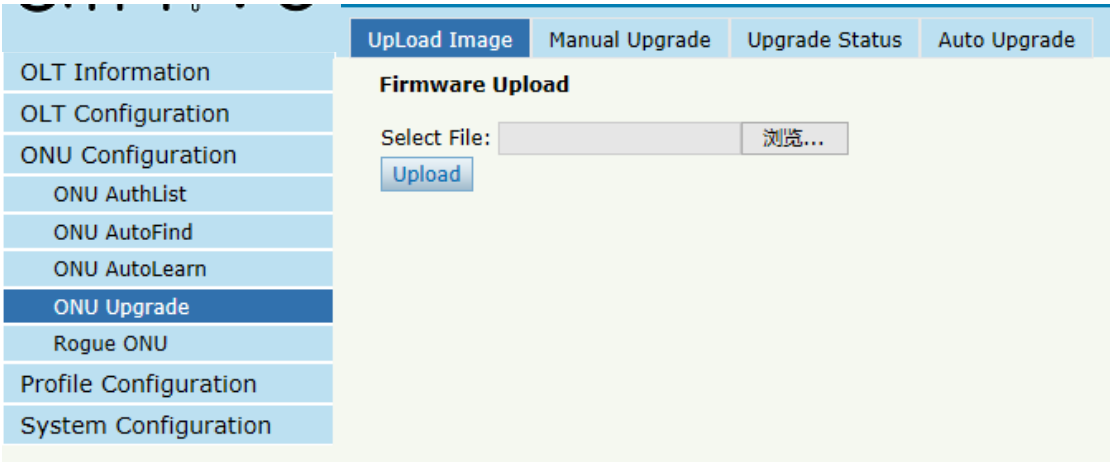



Figure 4.4-1: Upload image

## 4.4.2 Manual Upgrade

**Configuration→ONU Upgrade→Manual Upgrade**

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

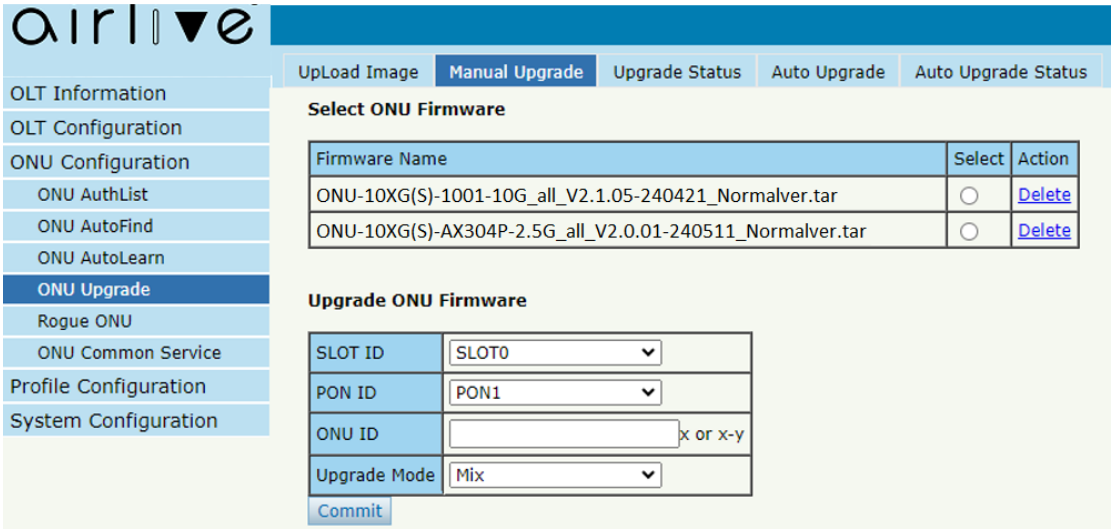



Figure 4.4-2: Manual Upgrade

## 4.4.3 Upgrade Status

**Configuration→ONU Upgrade→Upgrade Status**

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

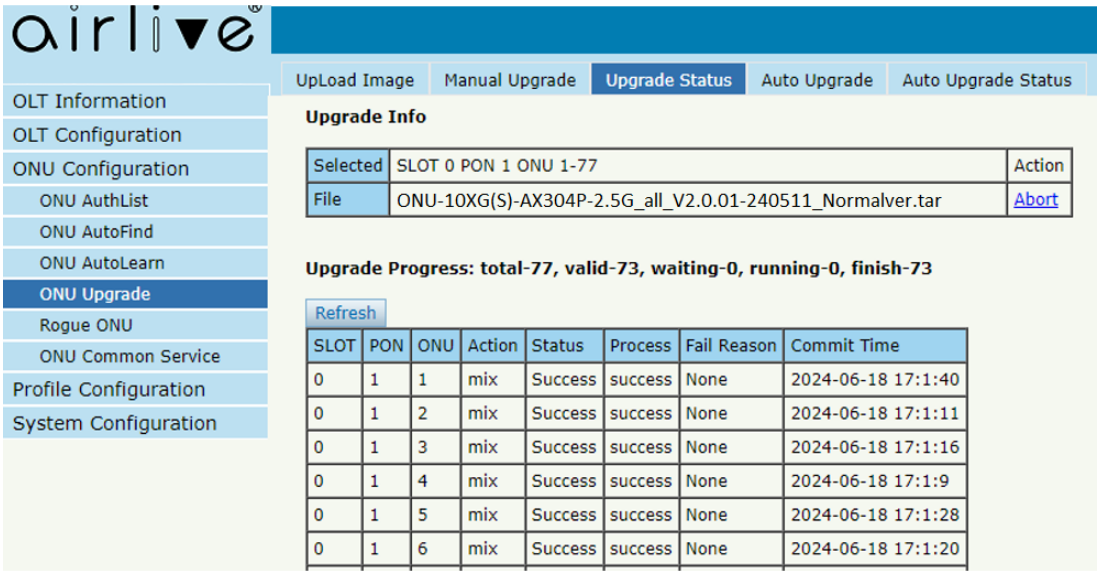



Figure 4.4-3: ONU Upgrade Status

## 4.4.4 Auto Upgrade

**Configuration→ONU Upgrade→Auto Upgrade**

After uploaded the ONU firmware image, configured automatic upgrade conditions, once the ONU which has the same equipment ID and different software version come online, they will be upgraded automatically.

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

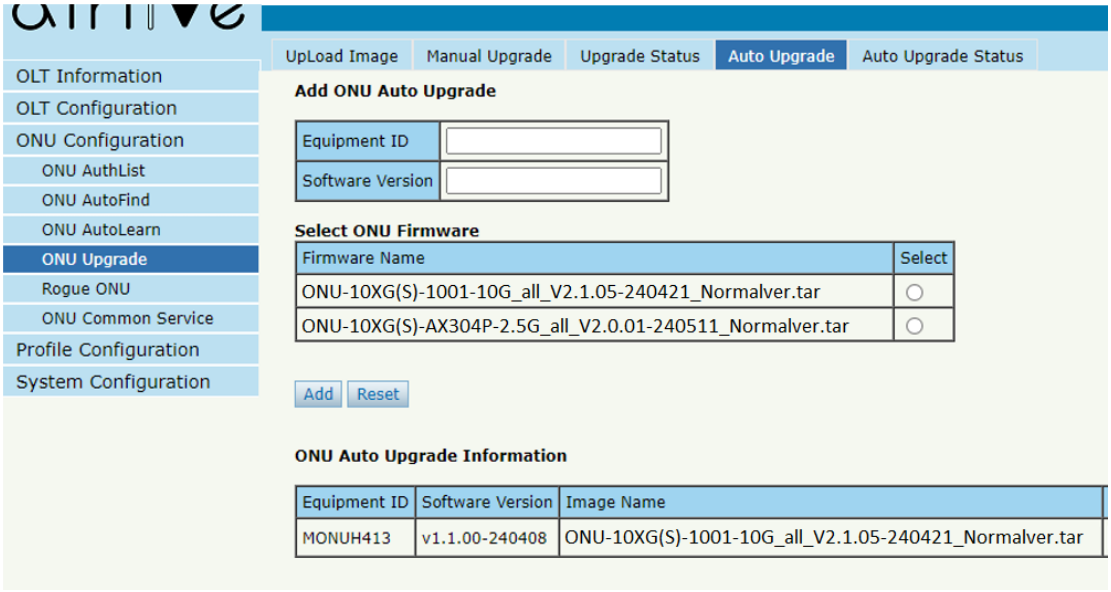



Figure 4.4-4: Auto Upgrade

## 4.4.5 Auto Upgrade Status

**Configuration→ONU Upgrade→Auto Upgrade Status**

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

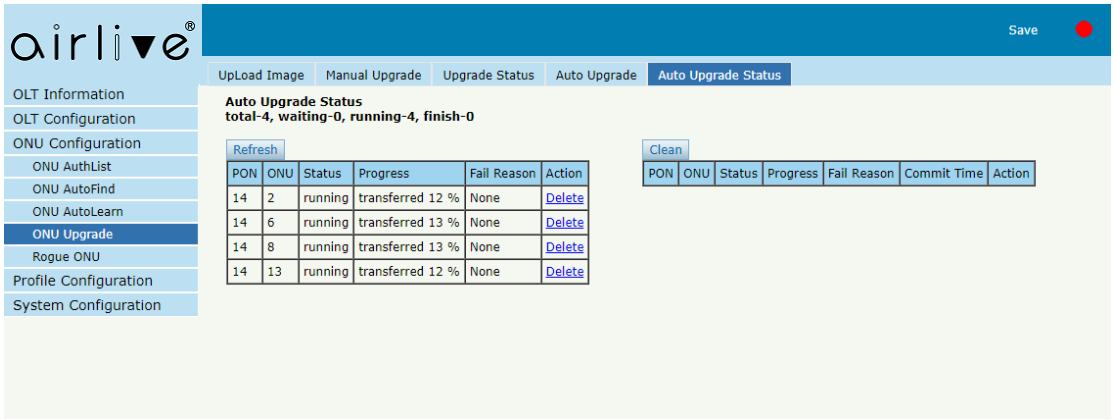



Figure 4.4-5: Auto Upgrade Status

## 4.5 Rogue ONU

### ONU Configuration→Rogue ONU

After enabled rogue ONU detect, if there is a rogue ONU trying to register, it will appear in the list. (Function not in OLT-2XGS).

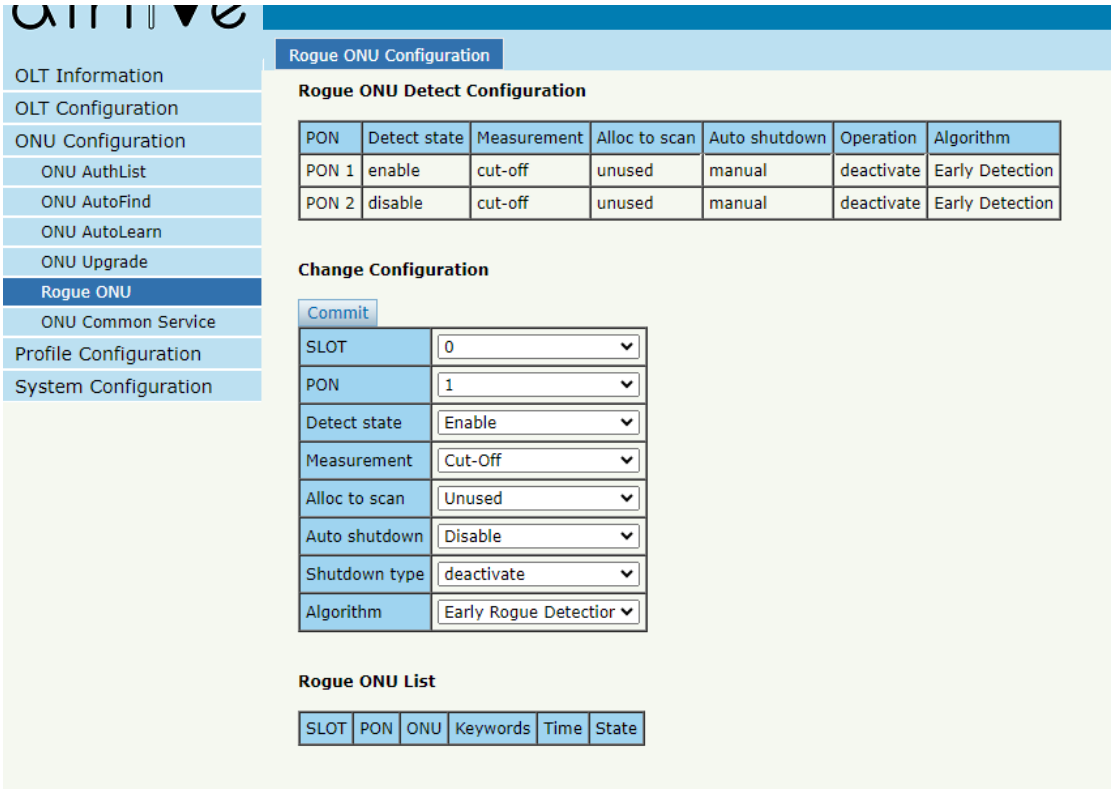



Figure 4.5-1: Rogue ONU detect

## 4.6 ONU Common Service

### ONU Configuration→ONU Common Service

You have more flexibility to create TCONT ID, Gemport, Service, Service port and Port Vlan for the specified ONU you select.

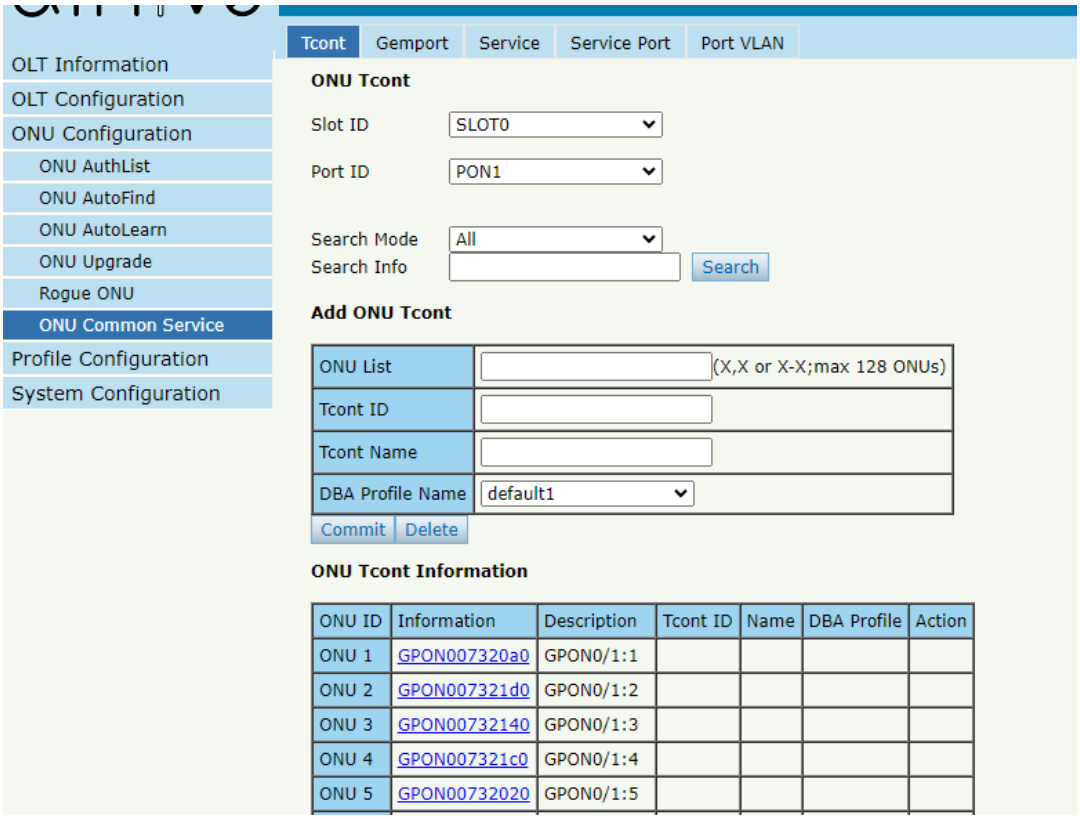



Figure 4.6-1: Create TCONT ID

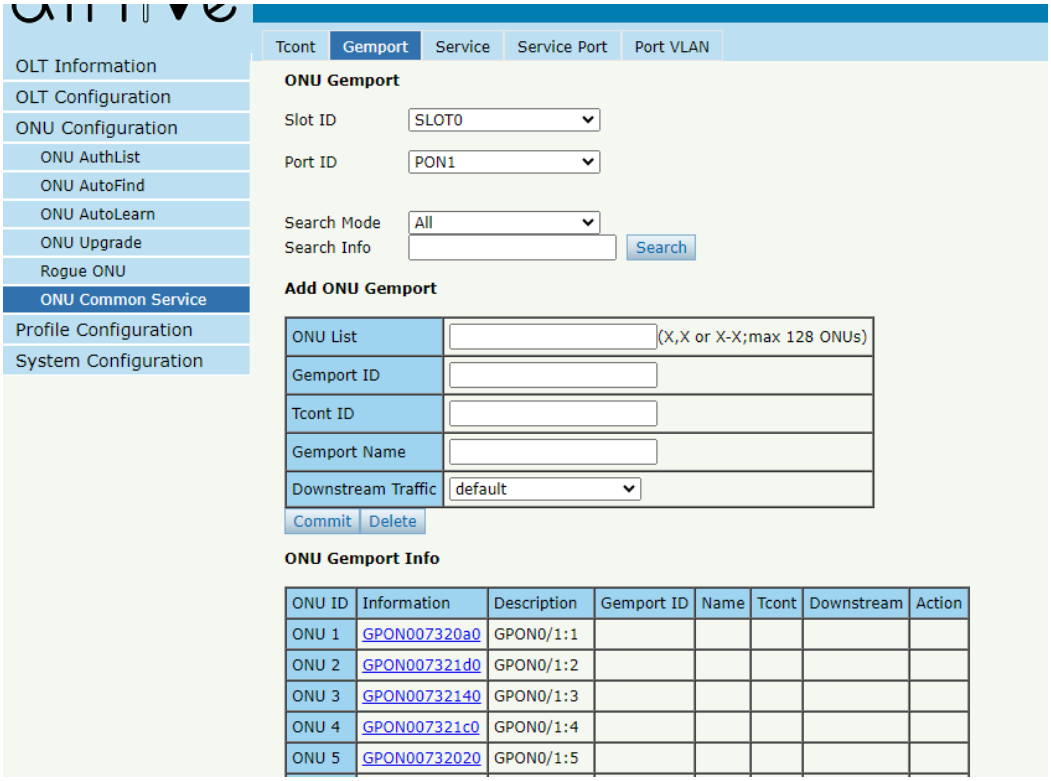



Figure 4.6-2: Create Gemport

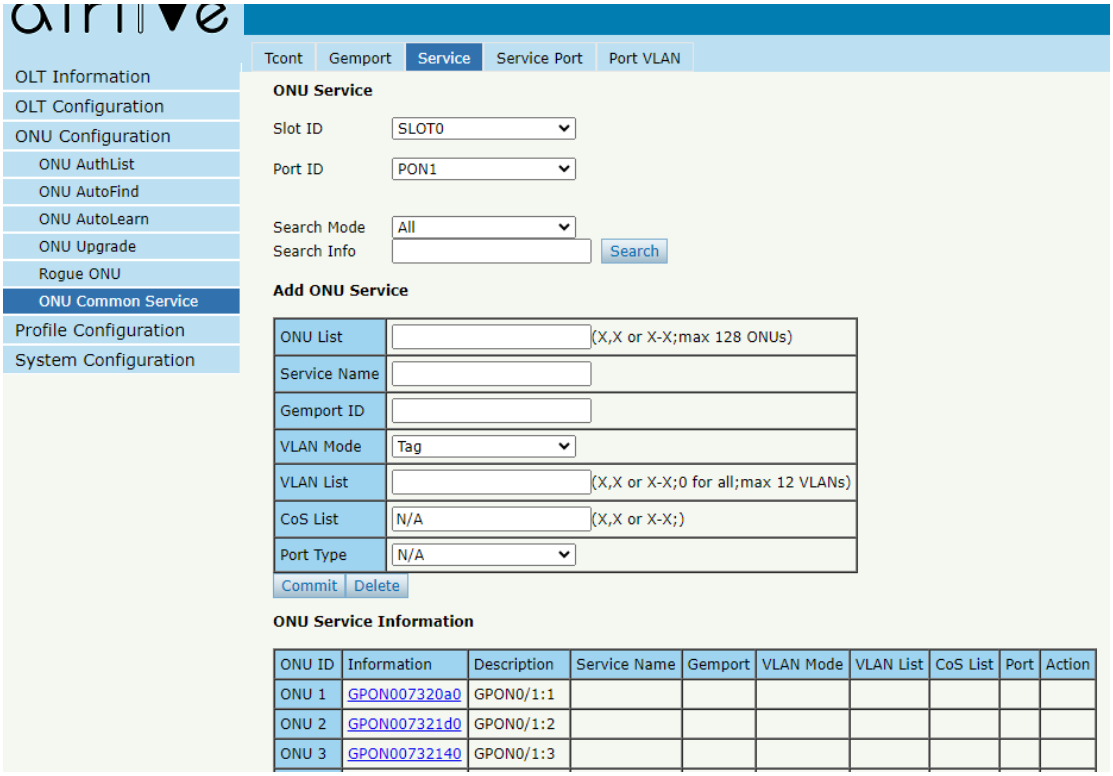



Figure 4.6-3: Create Service

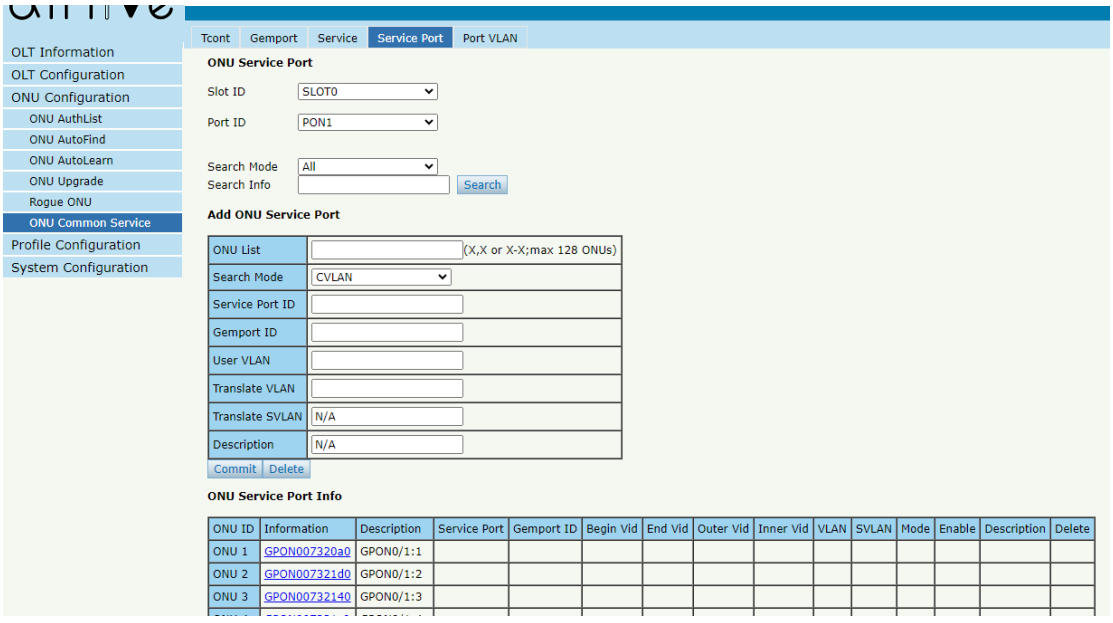



Figure 4.6-4: Create Service port

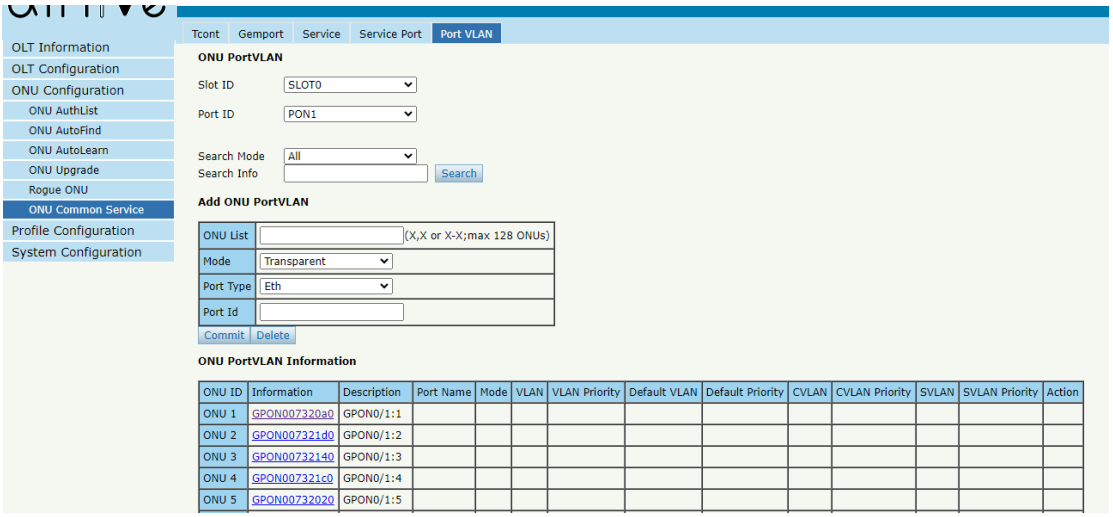



Figure 4.6-5: Create Port Vlan

# Chapter 5 Profile Configuration

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

## 5.1 ONU Profile

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

### 5.1.1 Information

**Profile Configuration→ ONU profile→Information**

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

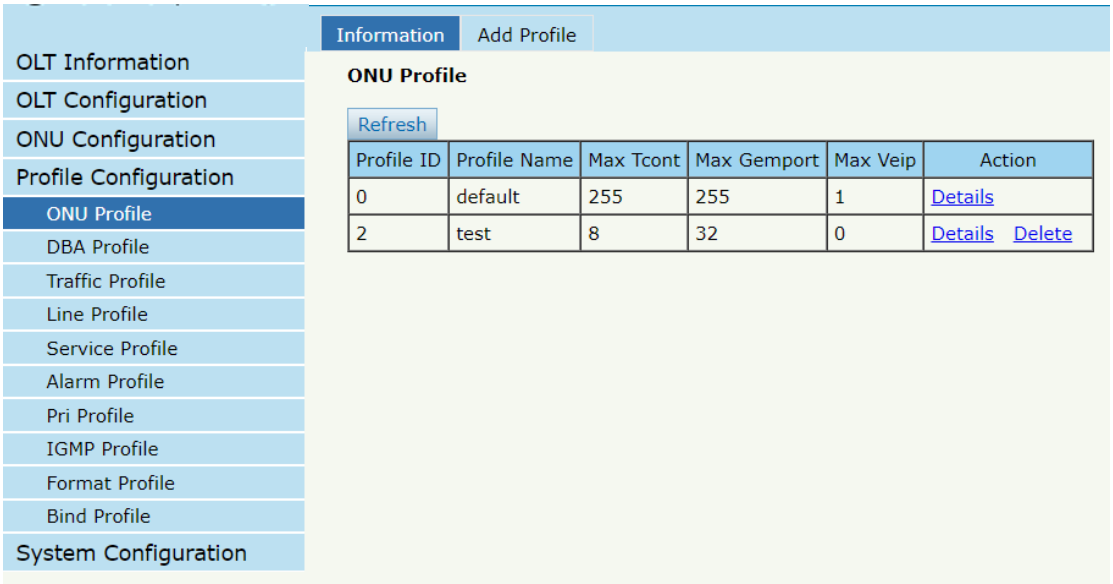



Figure 5.1-1: ONU profile list

### 5.1.2 Add profile

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

SFU mode (only using bridge mode):

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

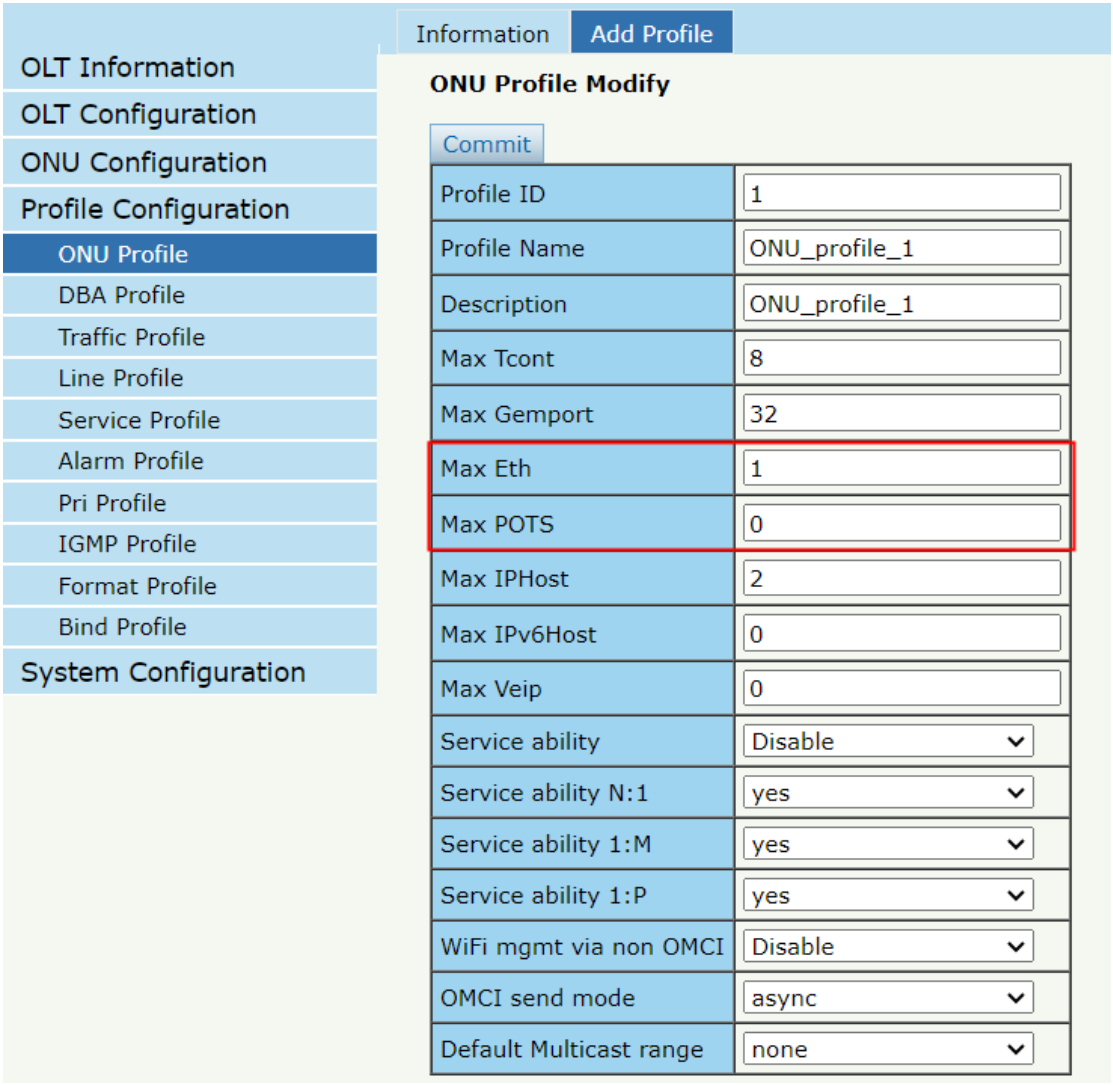



Figure 5.1-2: Add SFU profile

HGU mode (with the routing wan connection mode):

For HGU mode, need to set correct eth port and POTS port number and

set veip to be 1, keep others default.

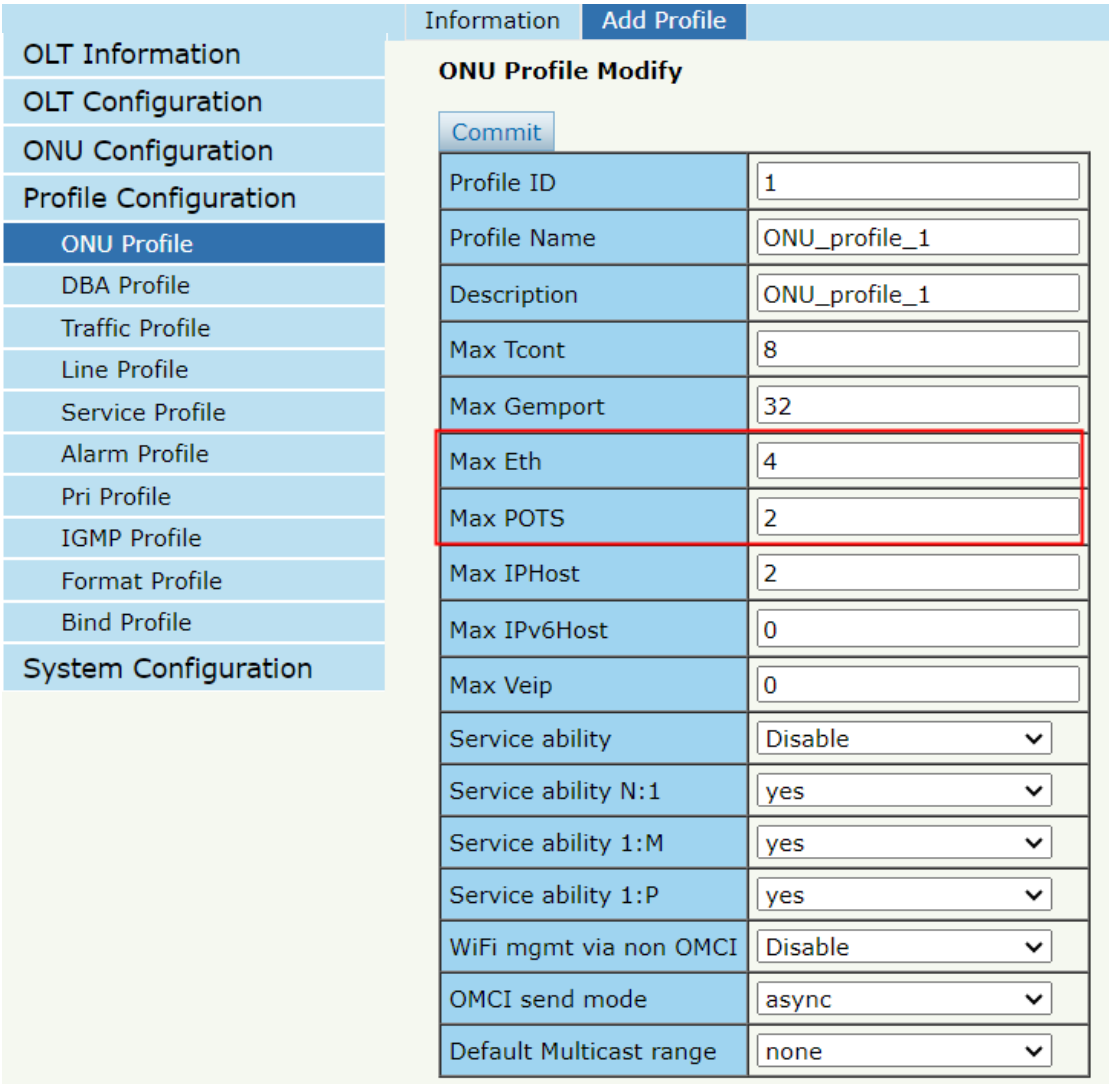



Figure 5.1-3: Add HGU profile

## 5.2 DBA Profile

DBA is a bandwidth allocation strategy that changes uplink bandwidth assigned to each T-CONT in real time according to the instant service status of each ONU. There are five BW types supported and make sure that fixed <= assured <= max.

## 5.2.1 DBA profiles

### Profile Configuration→DBA Profile →DBA Profiles

The table displays DBA profile list. You can also do some operations, such as delete and modify.Default1 Profile defines bandwidth allocation for each of the three modes.

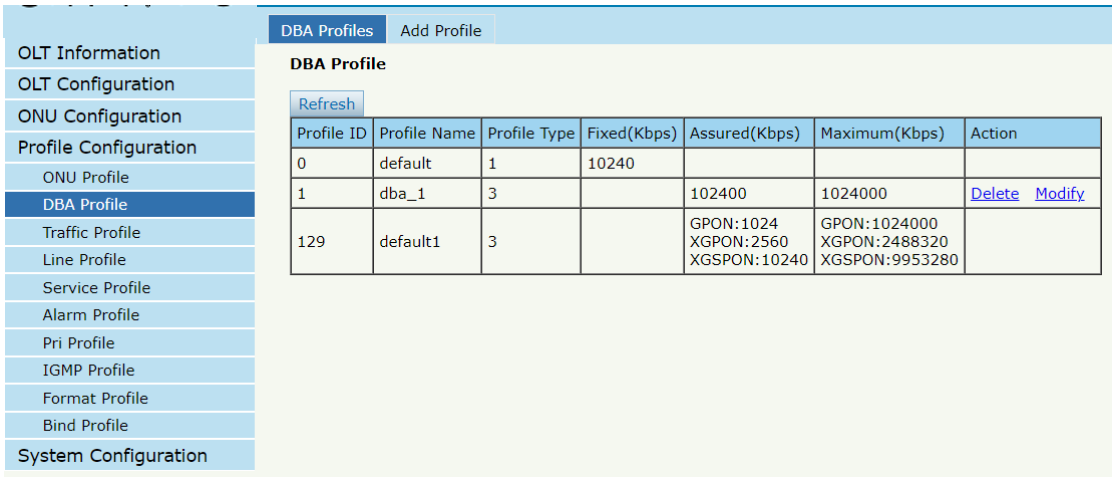



Figure 5.2-1: DBA profile list

## 5.2.2 Add profile

### Profile Configuration→DBA Profile → Add profile

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

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

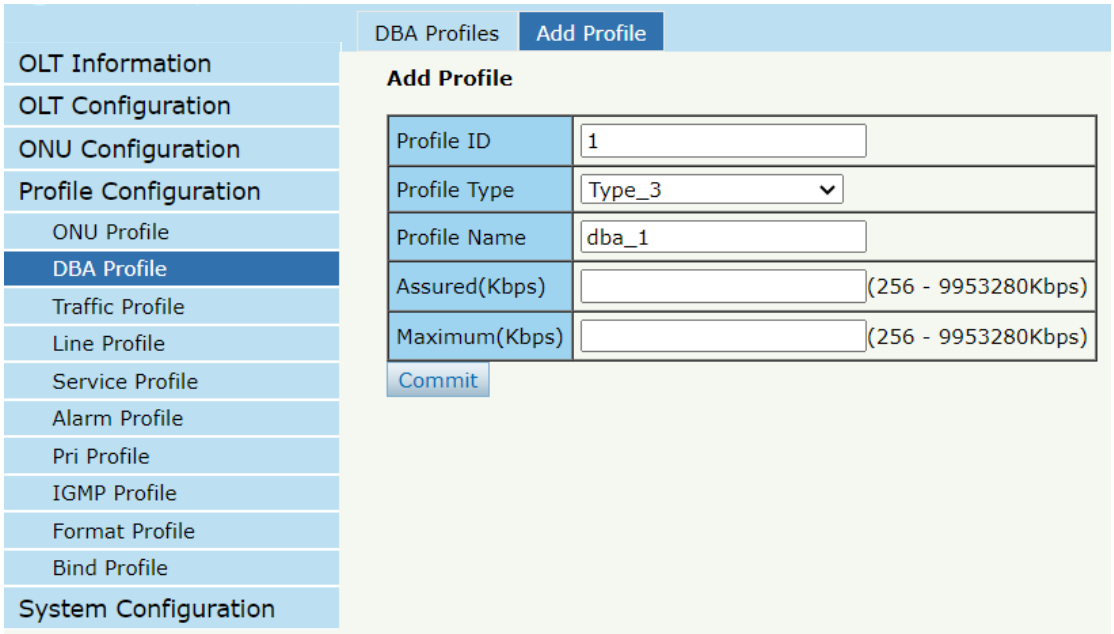



Figure 5.2-2: Add a DBA profile

## 5.3 Traffic Profile

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

### 5.3.1 Traffic profiles

**Profile Configuration→Traffic Profile → Traffic Profiles**

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

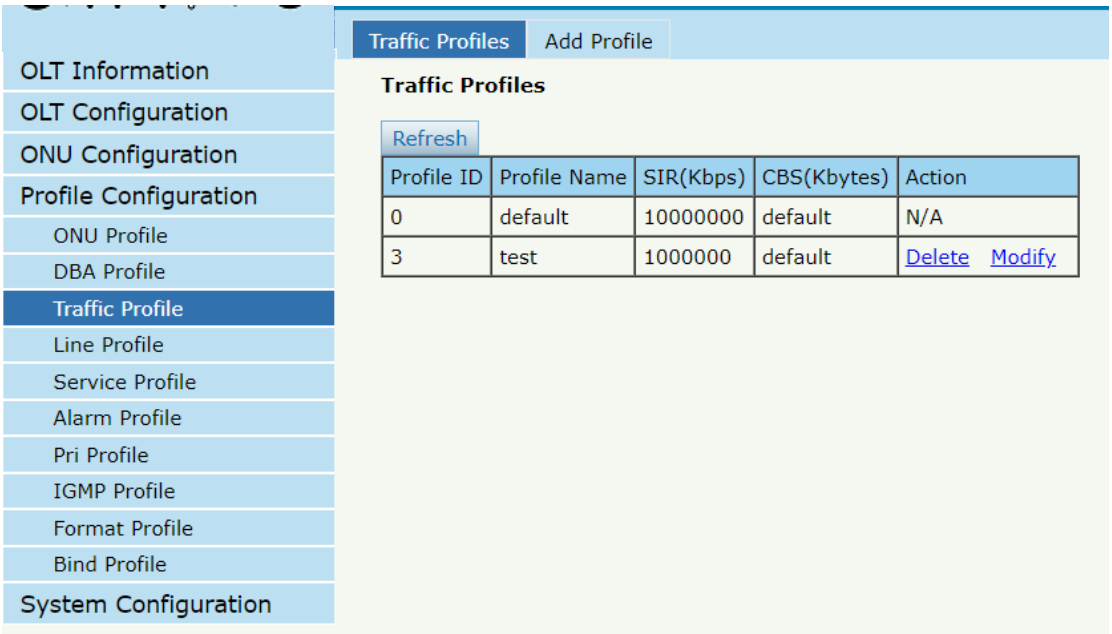



Figure 5.3-1: Traffic Profile list

## 5.3.2 Add profile

**Profile Configuration→Traffic Profile → Add Profile**

Configure gemport to specify the upstream/downstream bandwidth.

SIR: Committed Information Rate

CBS: Committed Burst Size

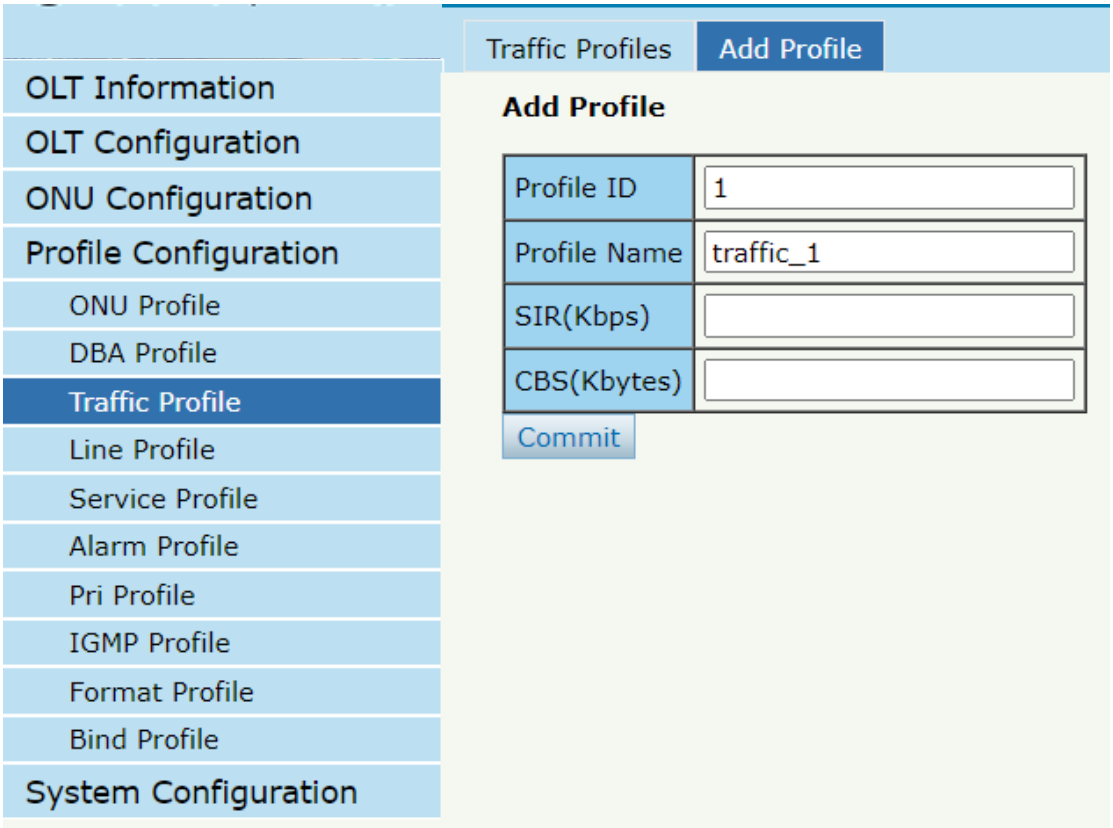



Figure 5.3-2: Add a traffic Profile

## 5.4 Line Profile

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

### 5.4.1 Line profile

**Profile Configuration→Line Profile → Line Profile**

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

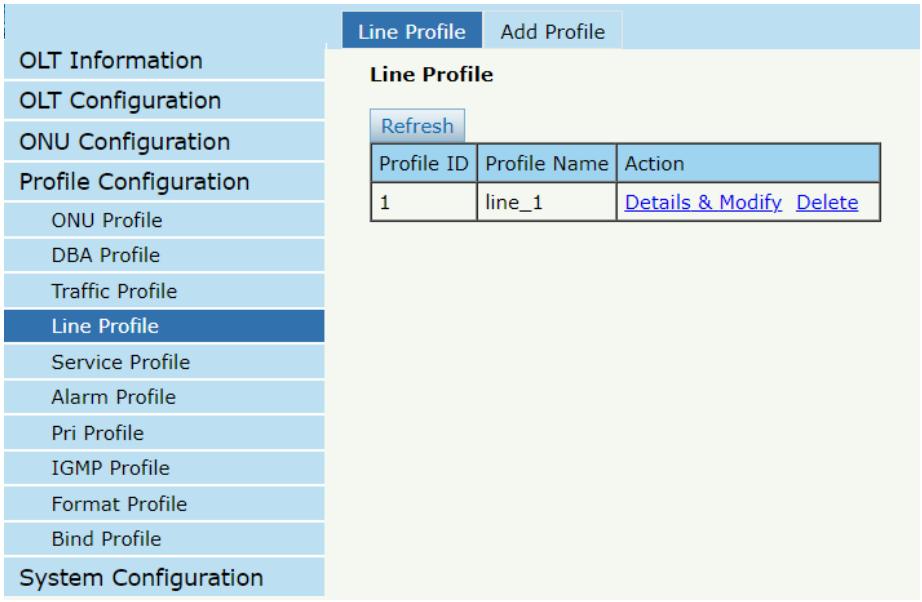



Figure 5.4-1: Line Profile list

## 5.4.2 Add profile

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

Create a new line profile.

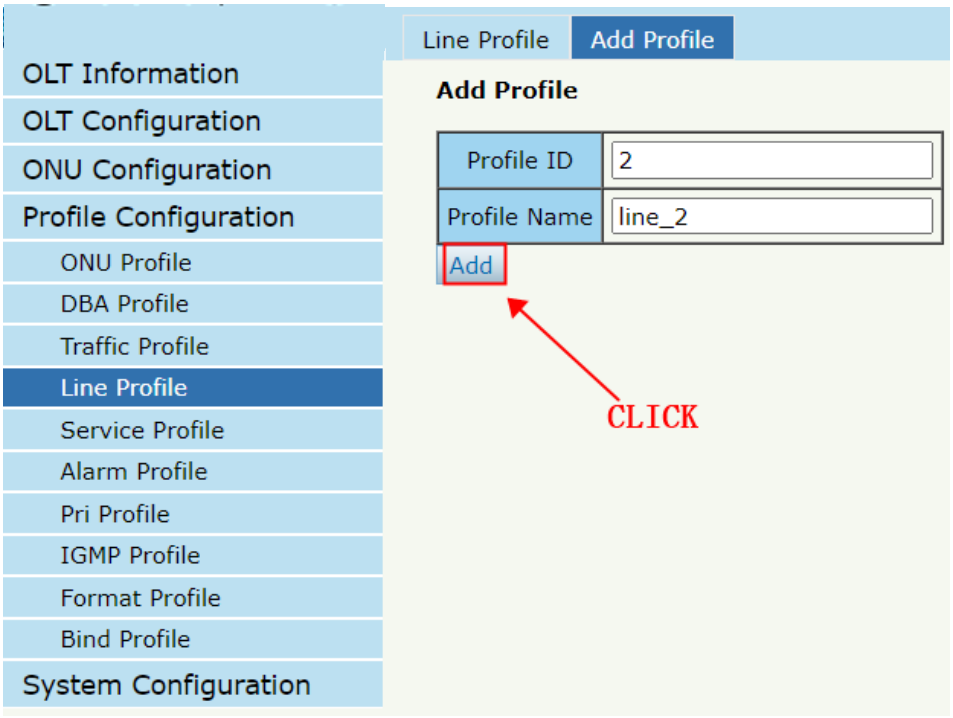



Figure 5.4-2: Add Line Profile

Modify the line profile parameters.

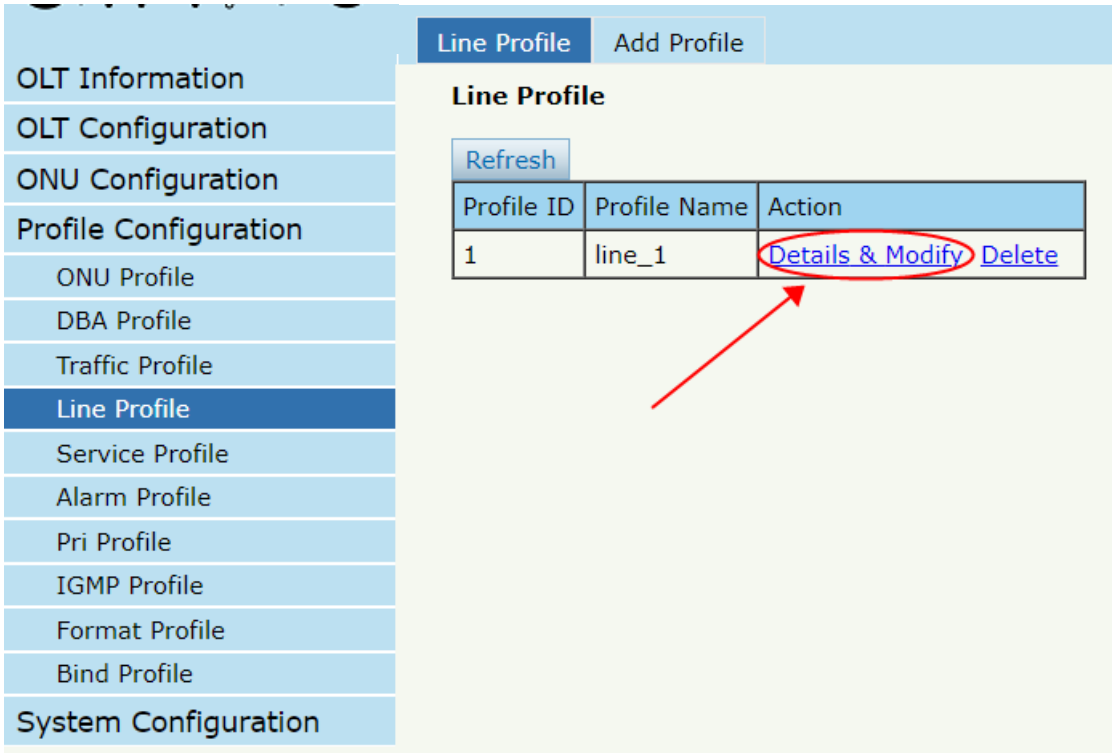



Figure 5.4-3: Modify Line Profile

### 5.4.2.1 Tcont

Add tcont ID and bind DBA profile.

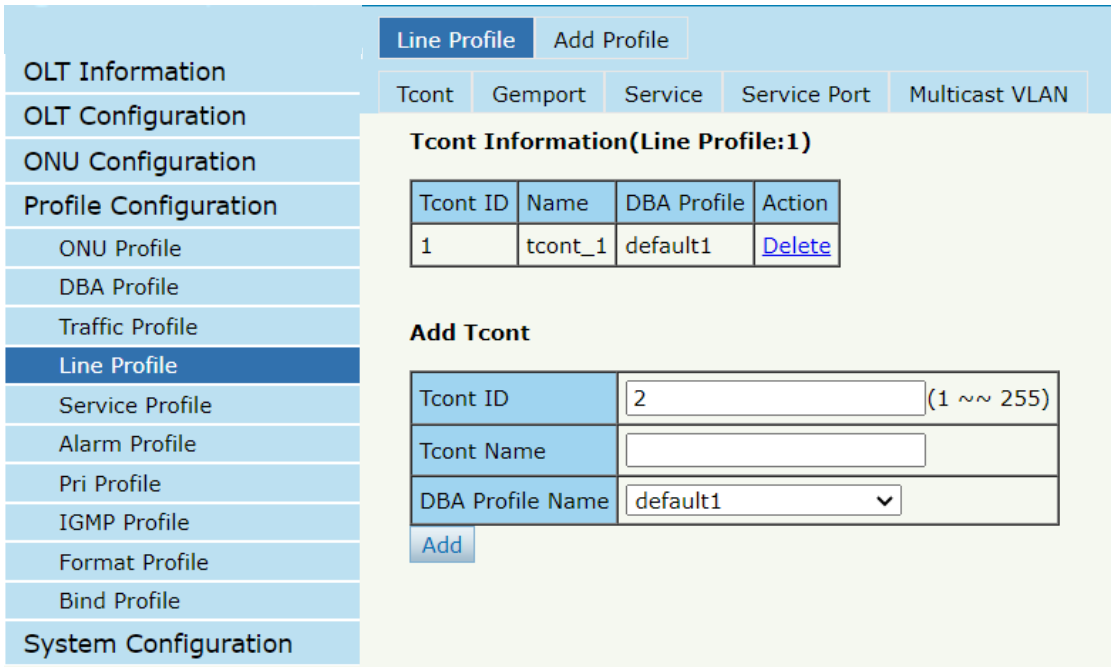


Figure 5.4-4: Add Tcont

### 5.4.2.2 Gemport

Add gemport ID and bind tcont ID.

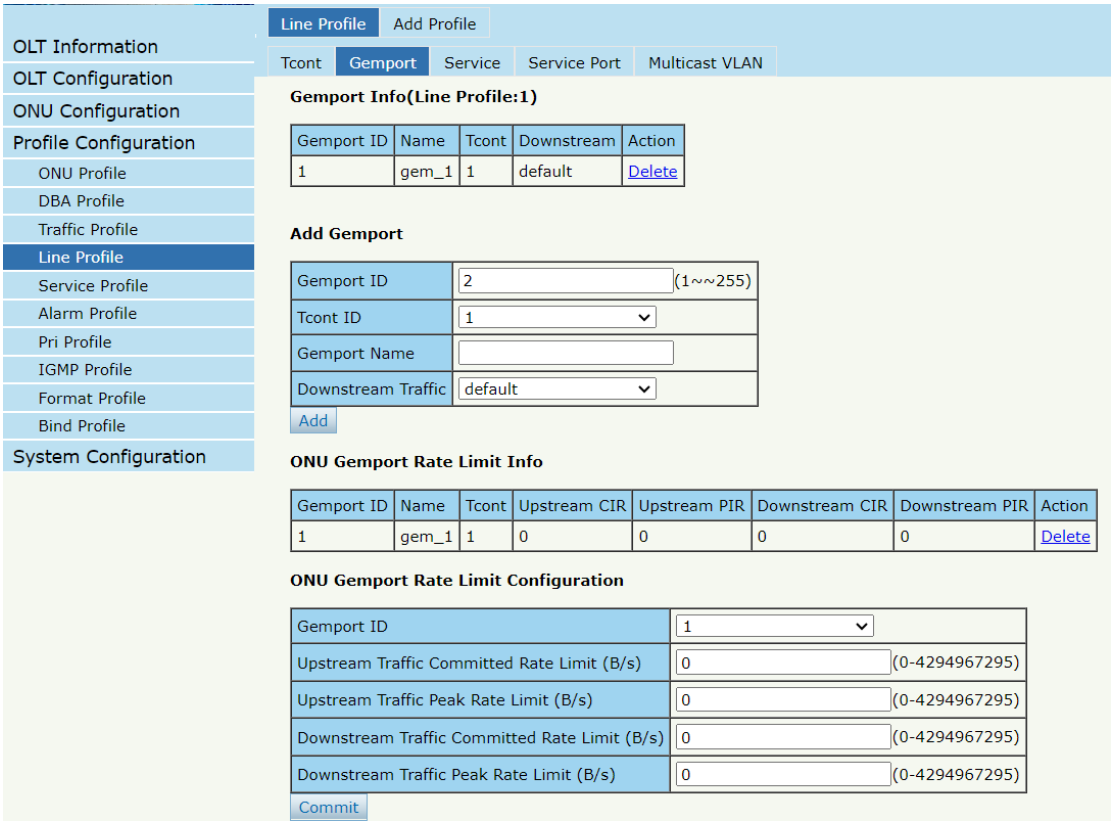



Figure 5.4-5: Add Gemport

### 5.4.2.3 Service

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

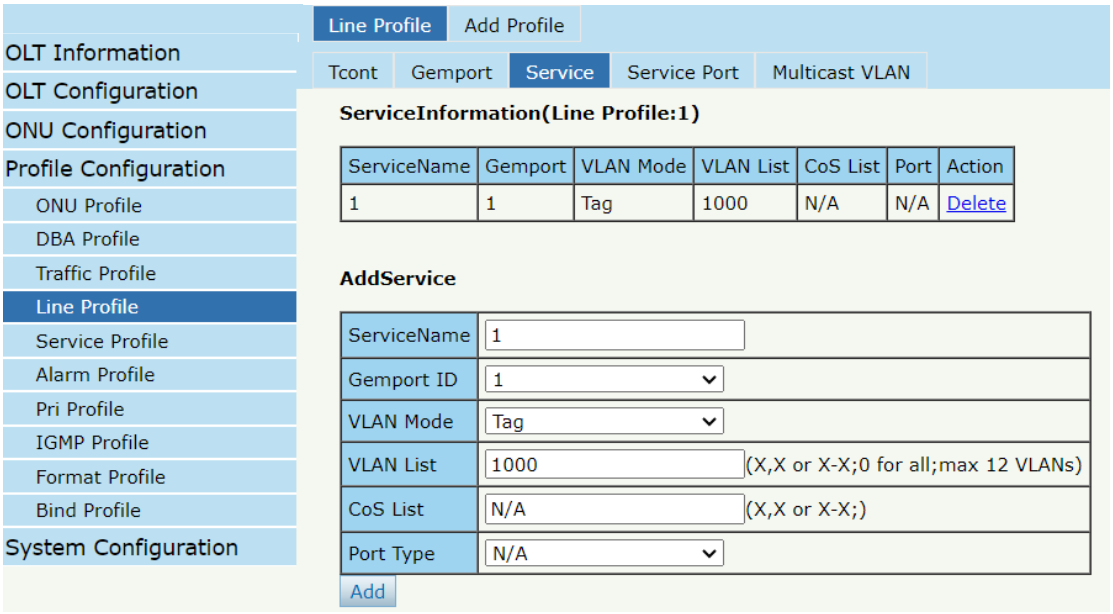



Figure 5.4-6: Add Service

### 5.4.2.4 Service Port

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

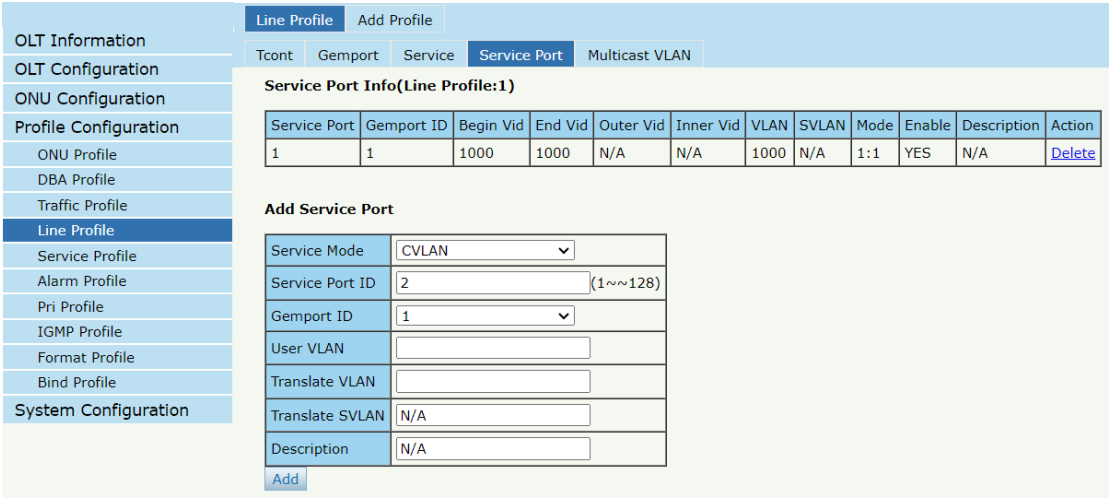



Figure 5.4-7: Add Service Port

### 5.4.2.5 Multicast Vlan

Set the Multicast VLAN of ONU.

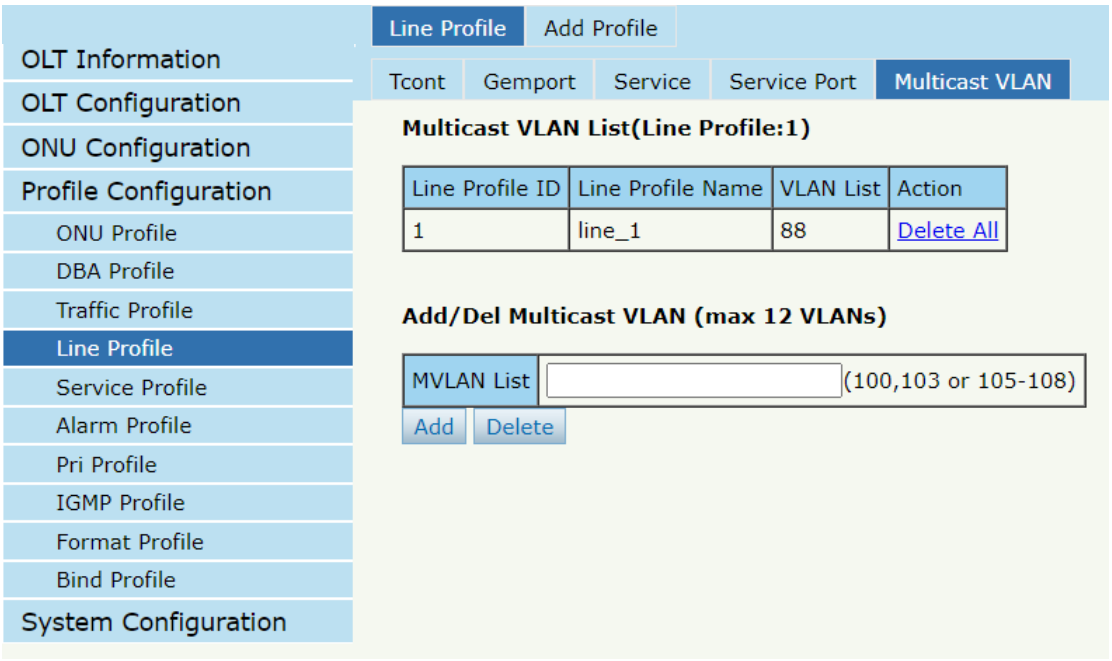



Figure 5.4-8: Configure Multicast VLAN

## 5.5 Service Profile

Service profile is used to configure the UNI side services of onu, such as Ethernet port, wifi, veip, and so on.

### 5.5.1 Service profile

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

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

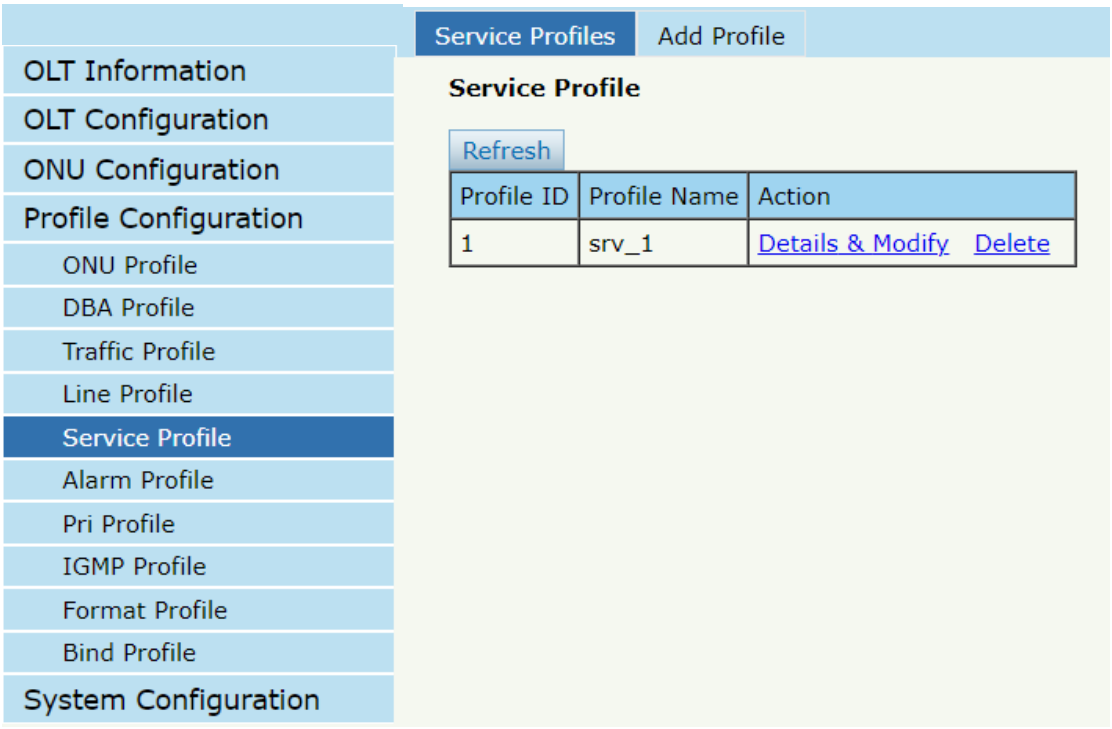



Figure 5.5-1: Service Profile List

## 5.5.2 Add profile

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

Add a new service profile.

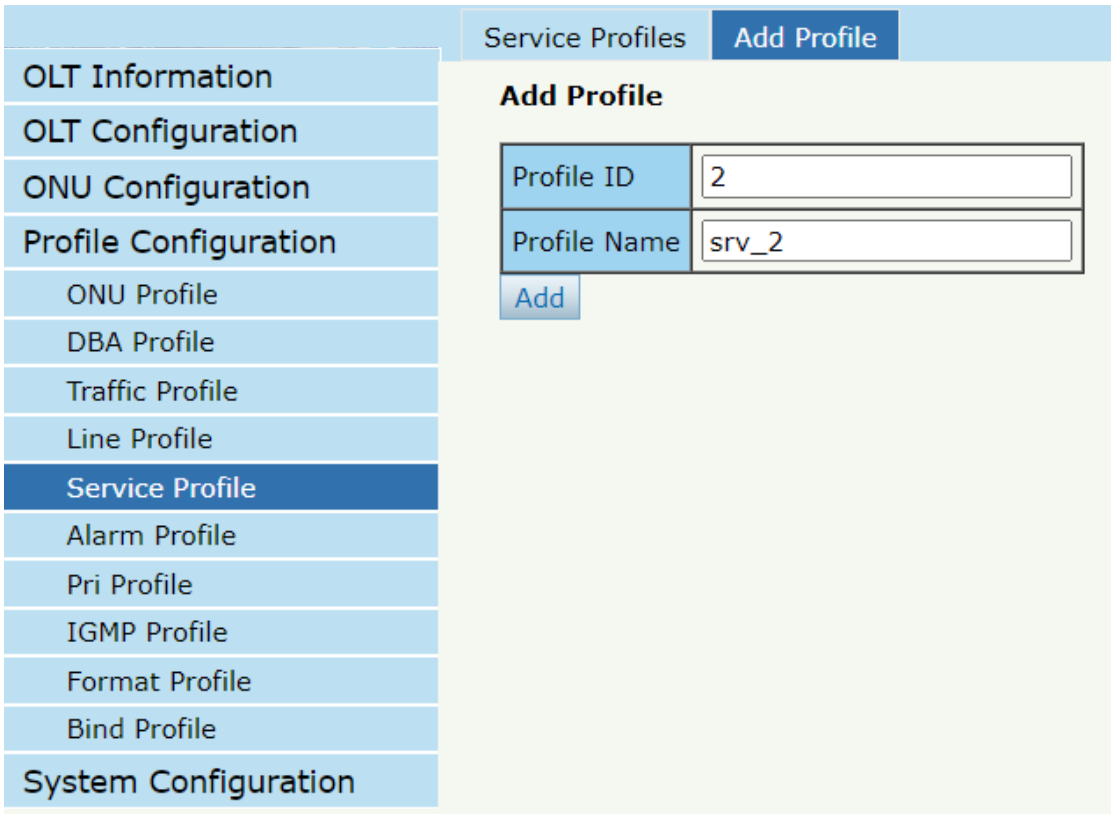



Figure 5.5-2: Add Service profile

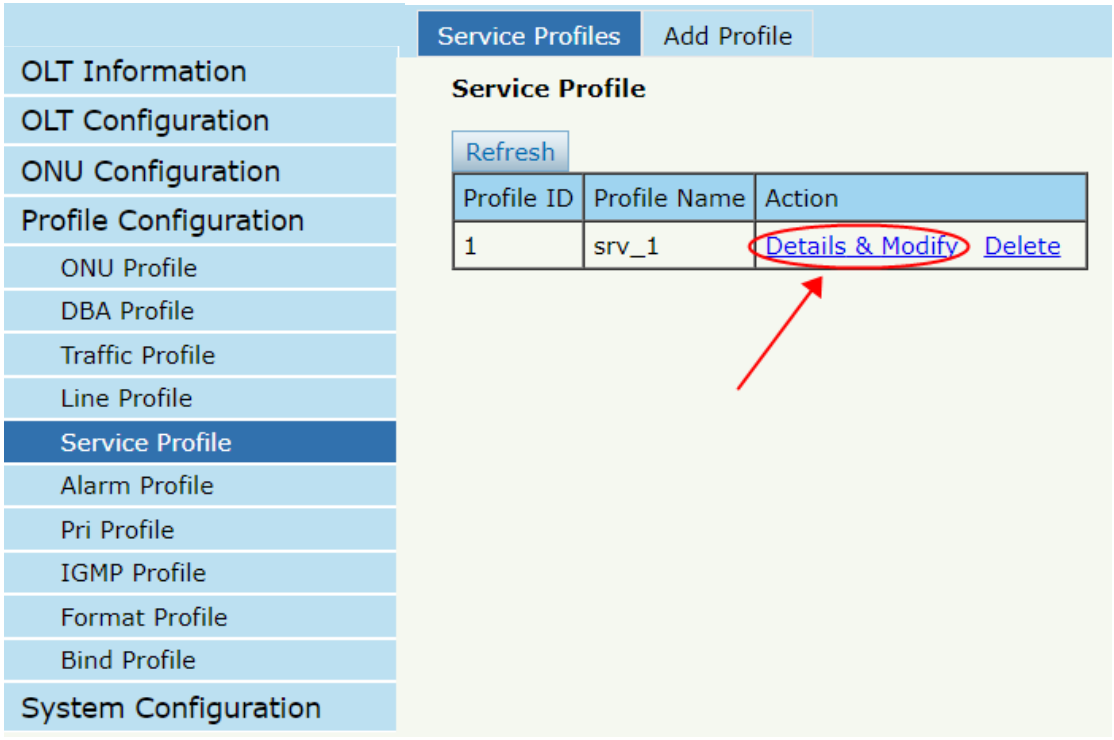



Figure 5.5-3: Modify Service Profile

### 5.5.2.1 PortVlan

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

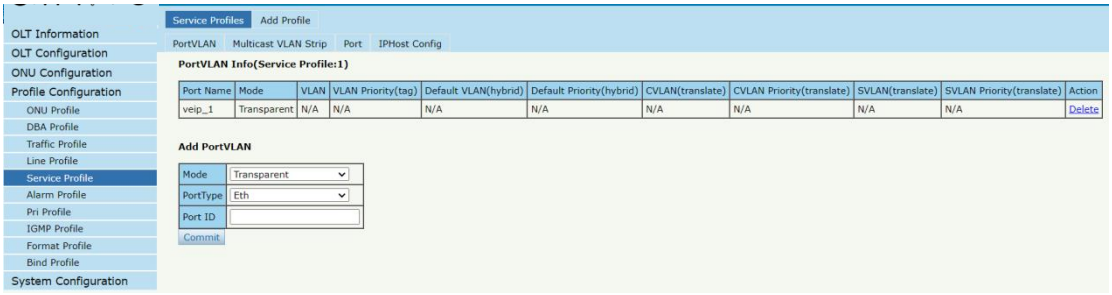



Figure 5.5-4: Port VLAN mode

### 5.5.2.2 Multicast Vlan Strip

Set the multicast VLAN mode of ONU's port.

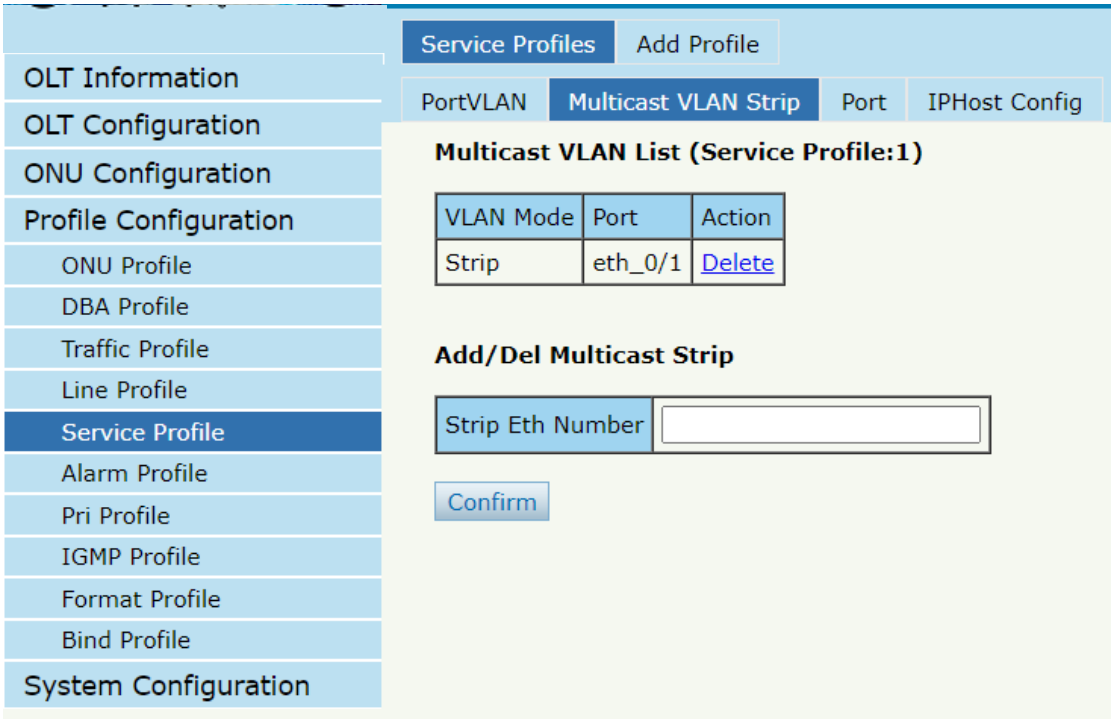



Figure 5.5-5: Port Multicast VLAN Mode

### 5.5.2.3 Port

Configure the status and rate of the onu port

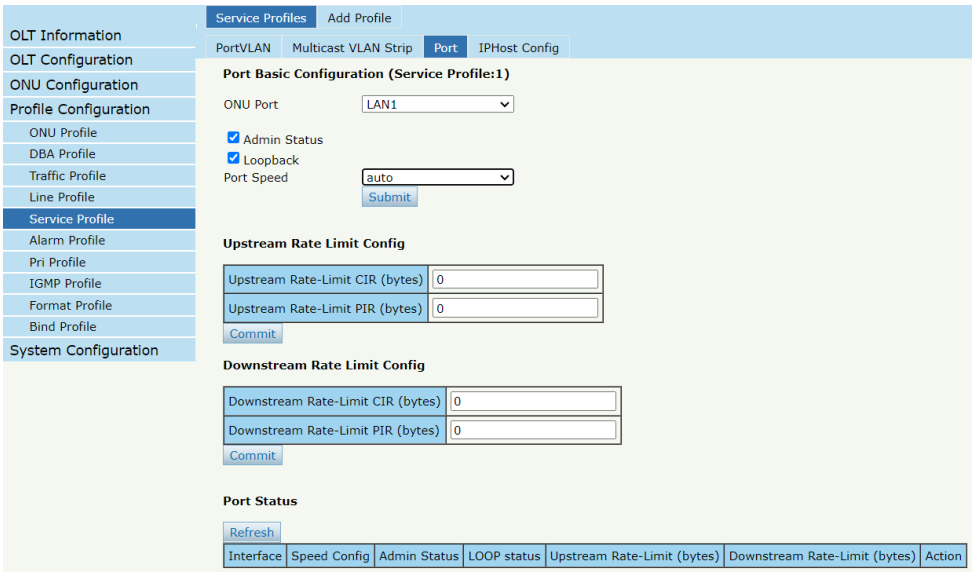



Figure 5.5-6: Port status

### 5.5.2.4 Iphost Config

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

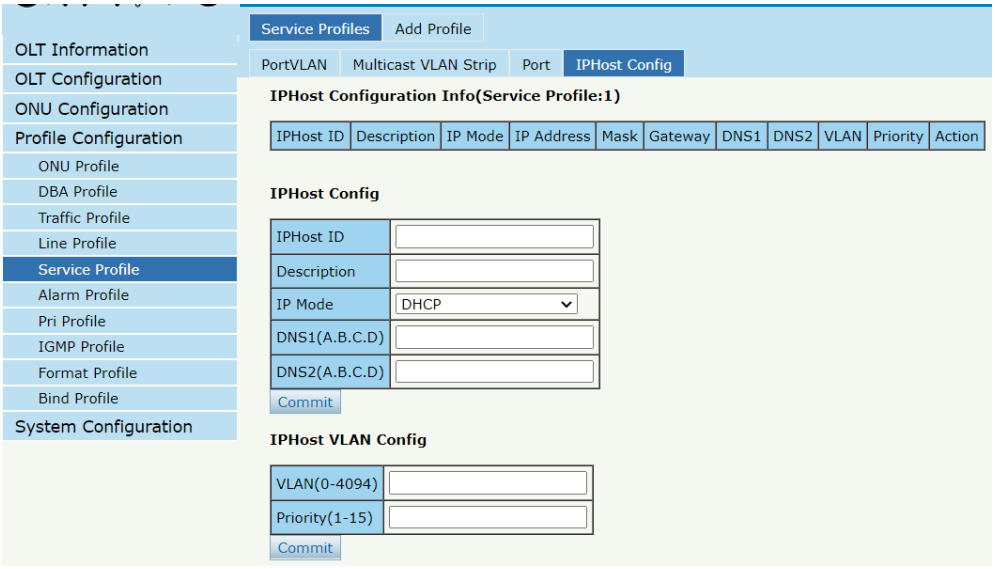



Figure 5.5-7: Add IPhost

## 5.6 Alarm Profile

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

### 5.6.1 Profile Infomation

**Profile Configuration→Alarm Profile →profile infomation**

The table displays alarm profile list.

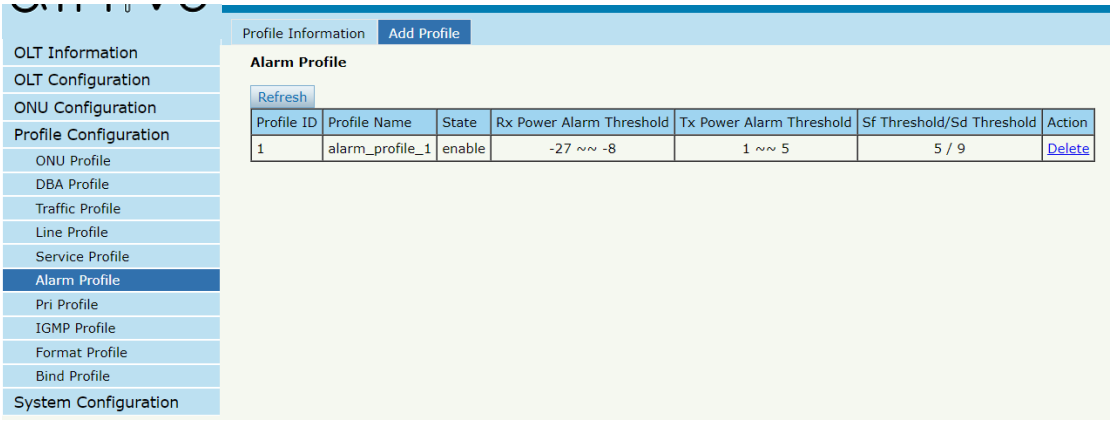



Figure 5.6-1: Alarm Profile List

### 5.6.2 Add Profile

**Profile Configuration→Alarm Profile →Add profile**

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

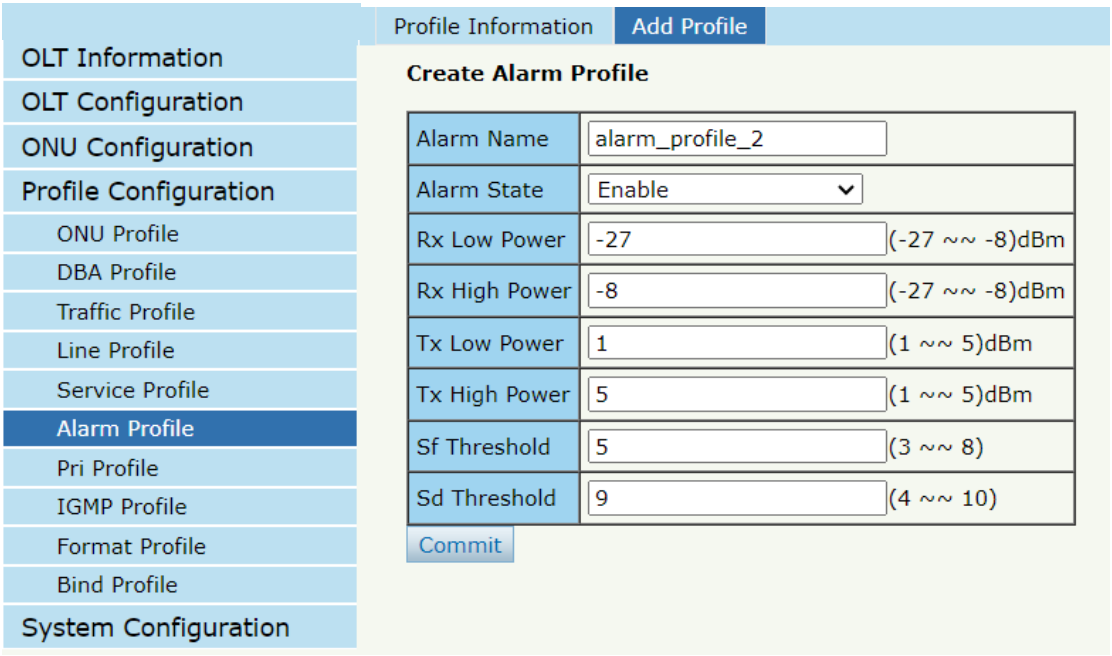



Figure 5.6-2: Add Alarm Profile

## 5.7 Pri Profile

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

### 5.7.1 Pri Profile

**Profile Configuration→Pri Profile**

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

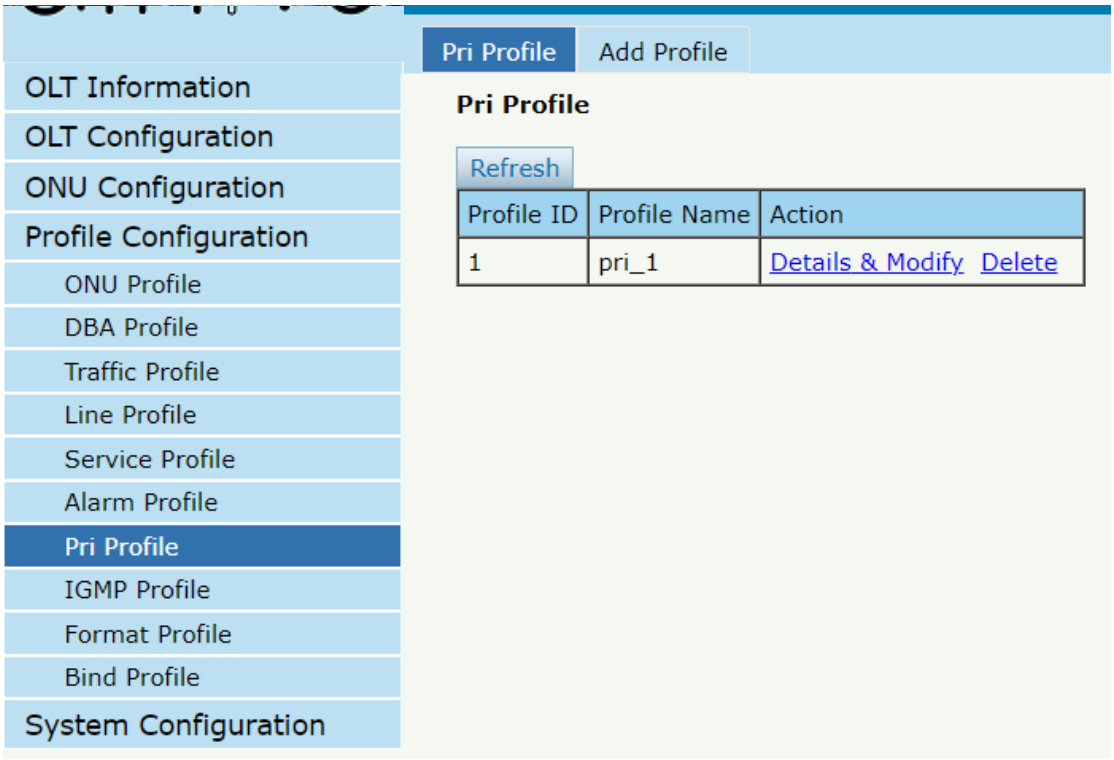



Figure 5.7-1: Pri Profile

## 5.7.2 Add Profile

**Profile Configuration→Pri Profile →Add profile**

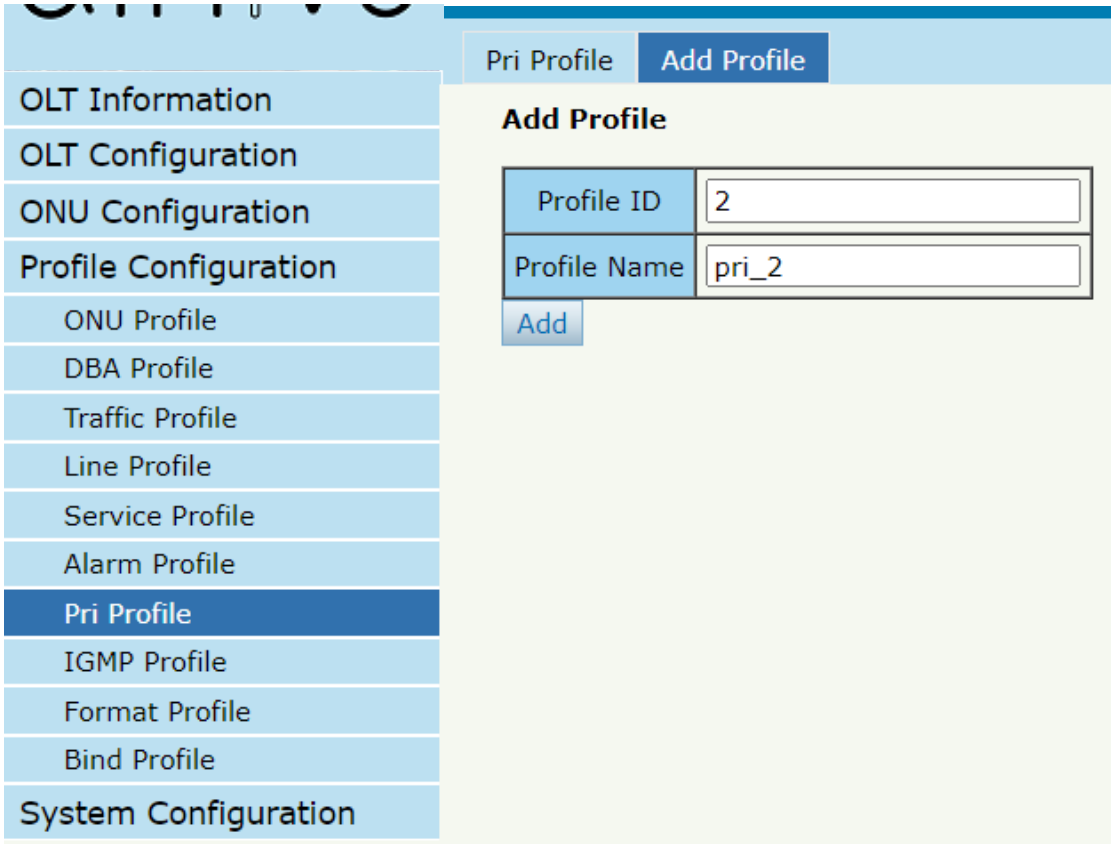



Figure 5.7-2: Add Private Profile

## 5.8 IGMP Profile

IGMP profile is used to configure the parameters of ONU multicast .

### 5.8.1 IGMP Profile

**Profile Configuration→IGMP Profile →IGMP Profile**

The table displays IGMP profile list.

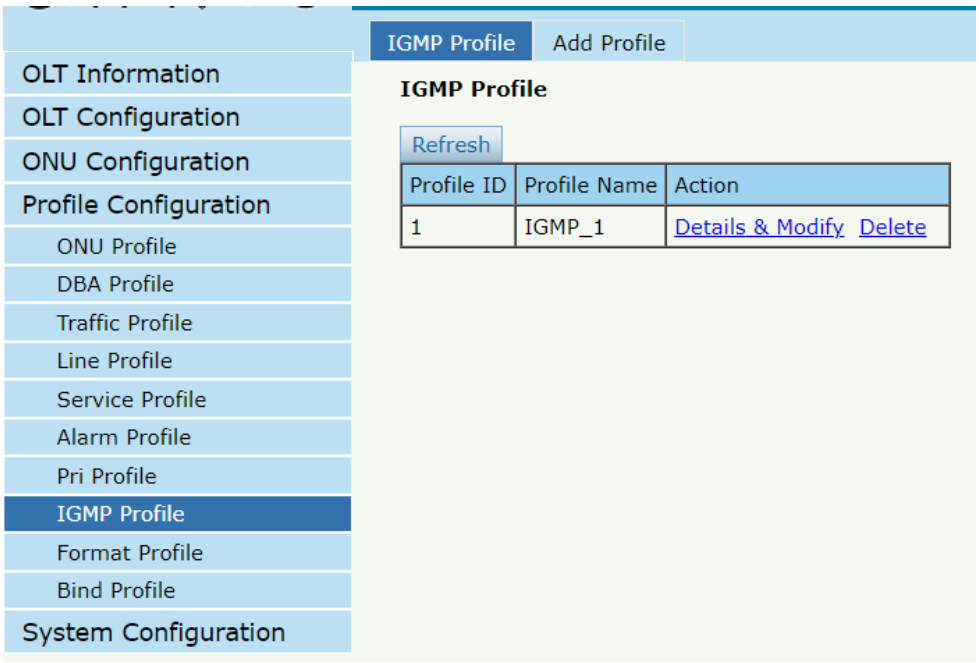



Figure 5.8-1: IGMP Profile List

## 5.8.2 Add Profile

**Profile Configuration→IGMP Profile →Add profile**

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

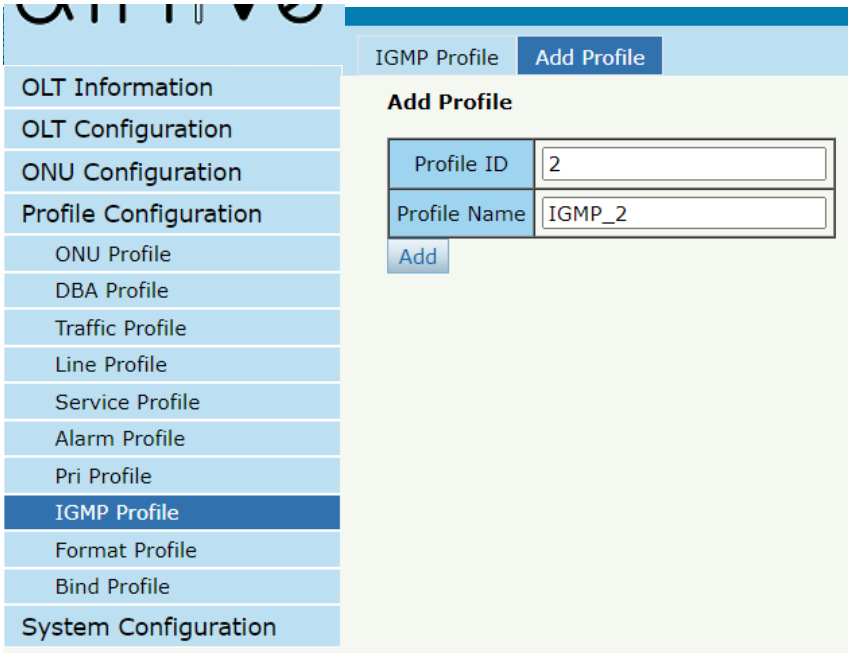



Figure 5.8-2: Add IGMP Profile

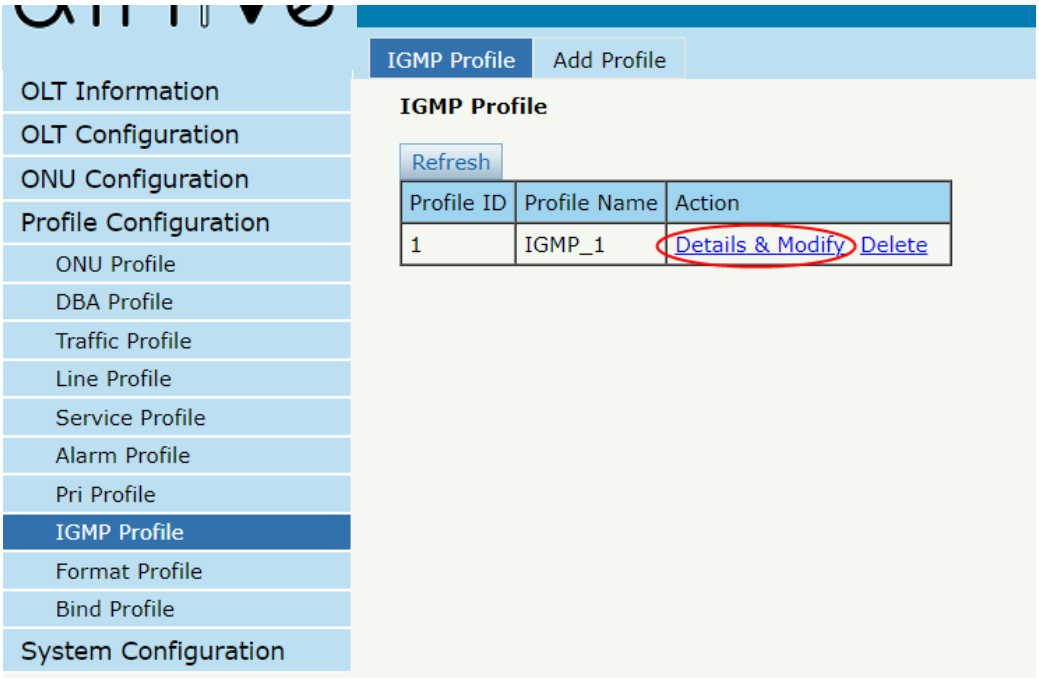



Figure 5.8-3: Modify IGMP Profile

### 5.8.2.1 Config

Configure multicast related data.

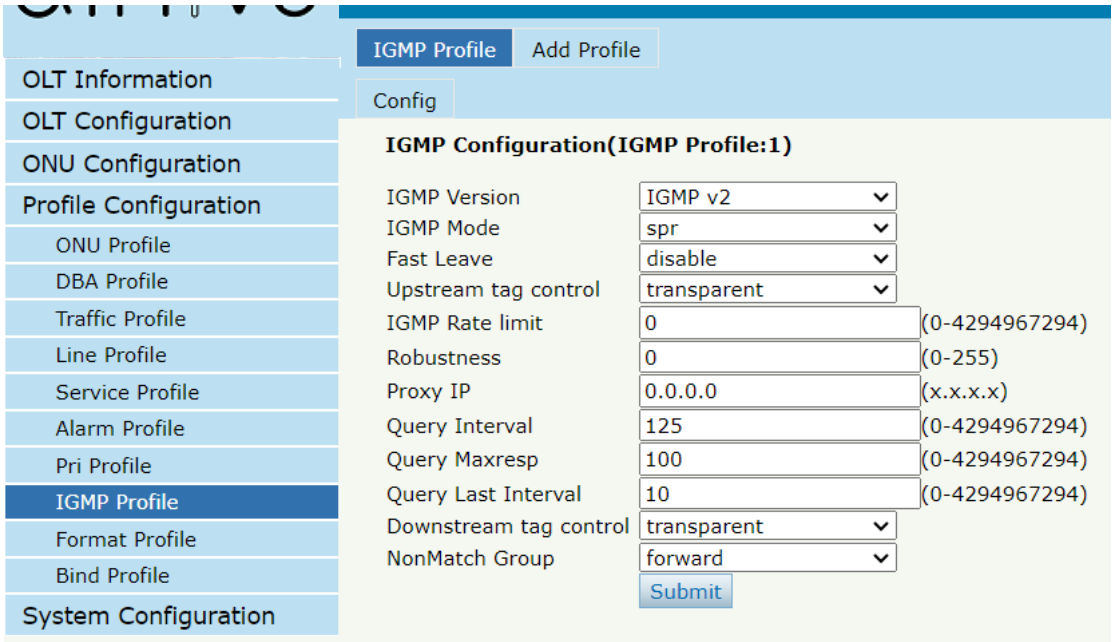



Figure 5.8-4: Config

## 5.9 Format Profile

Format profile is used to configure the parameters of ONU DHCP related information .

### 5.9.1 Format Profile

**Profile Configuration→Format Profile →Format Profile**

The table displays Format profile list.

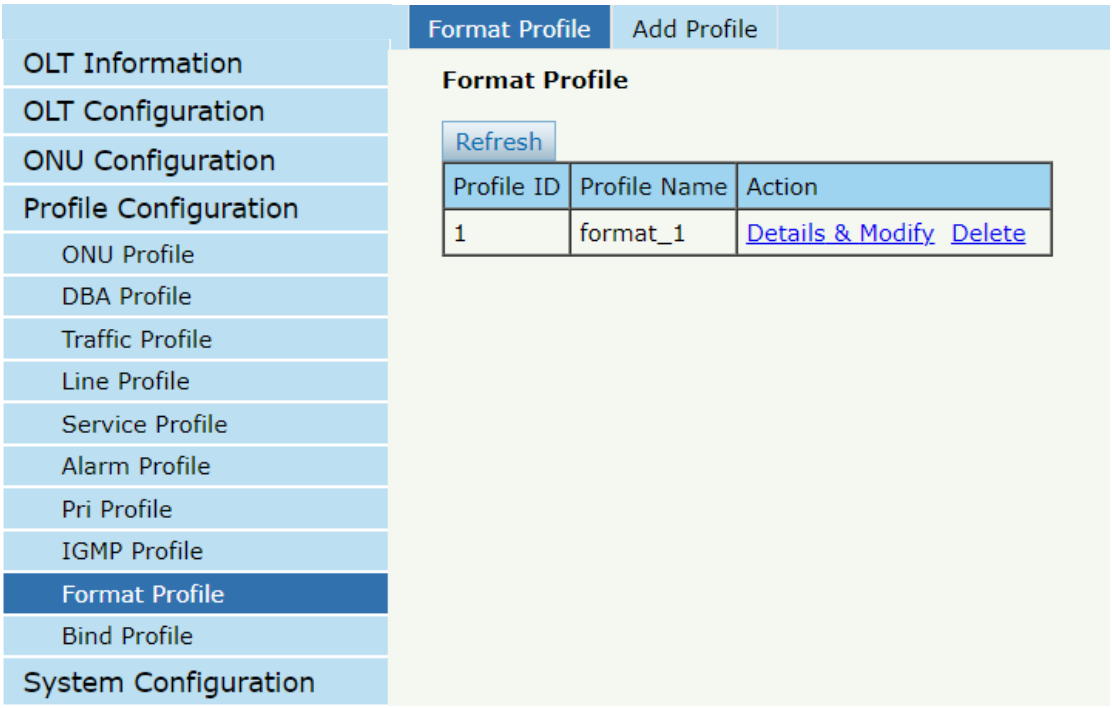



Figure 5.9-1: Format Profile List

### 5.9.2 Add Profile

**Profile Configuration→Format Profile →Add profile**

Add new Format profile.

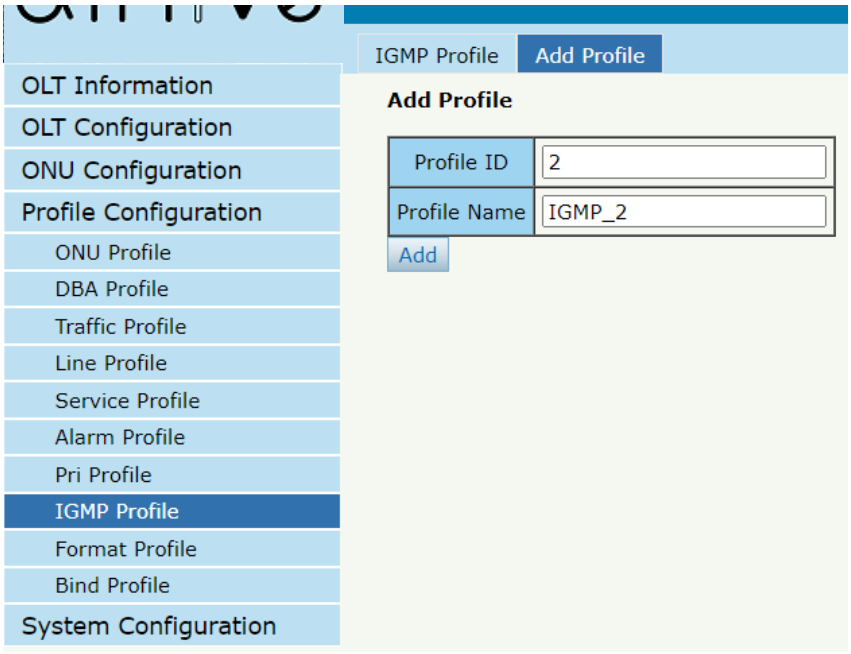



Figure 5.9-2: Add Format Profile

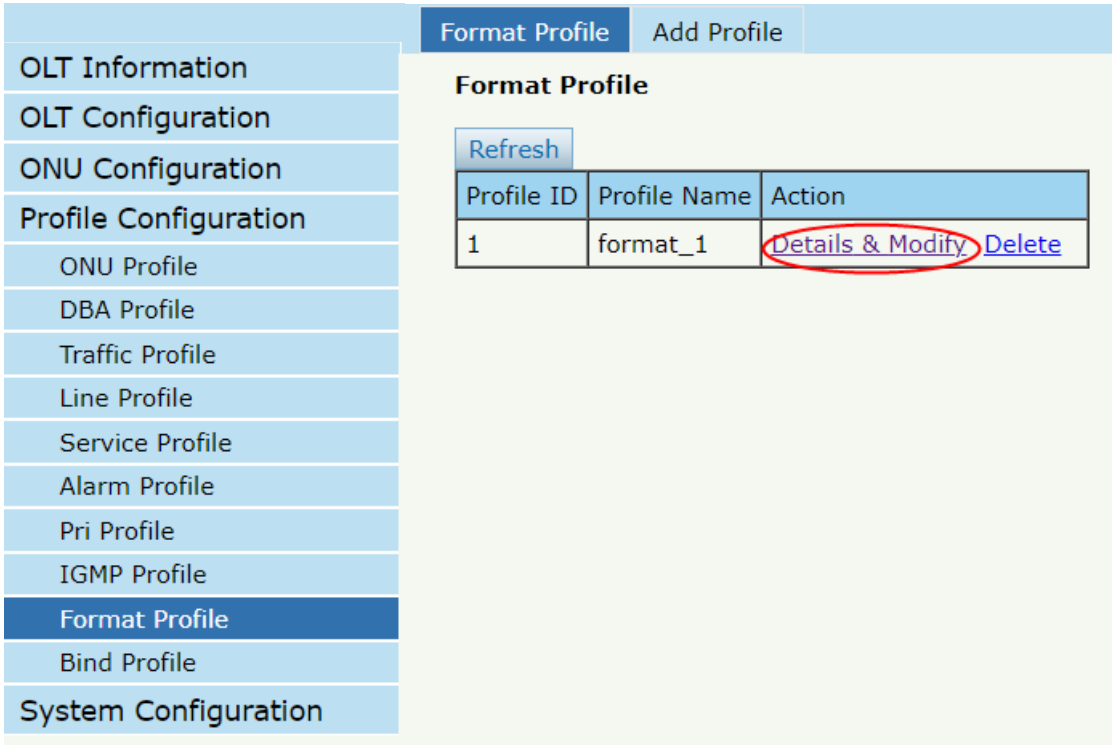



Figure 5.9-3: Modify Format Profile

### 5.9.2.1 Config

Configure Format related data.

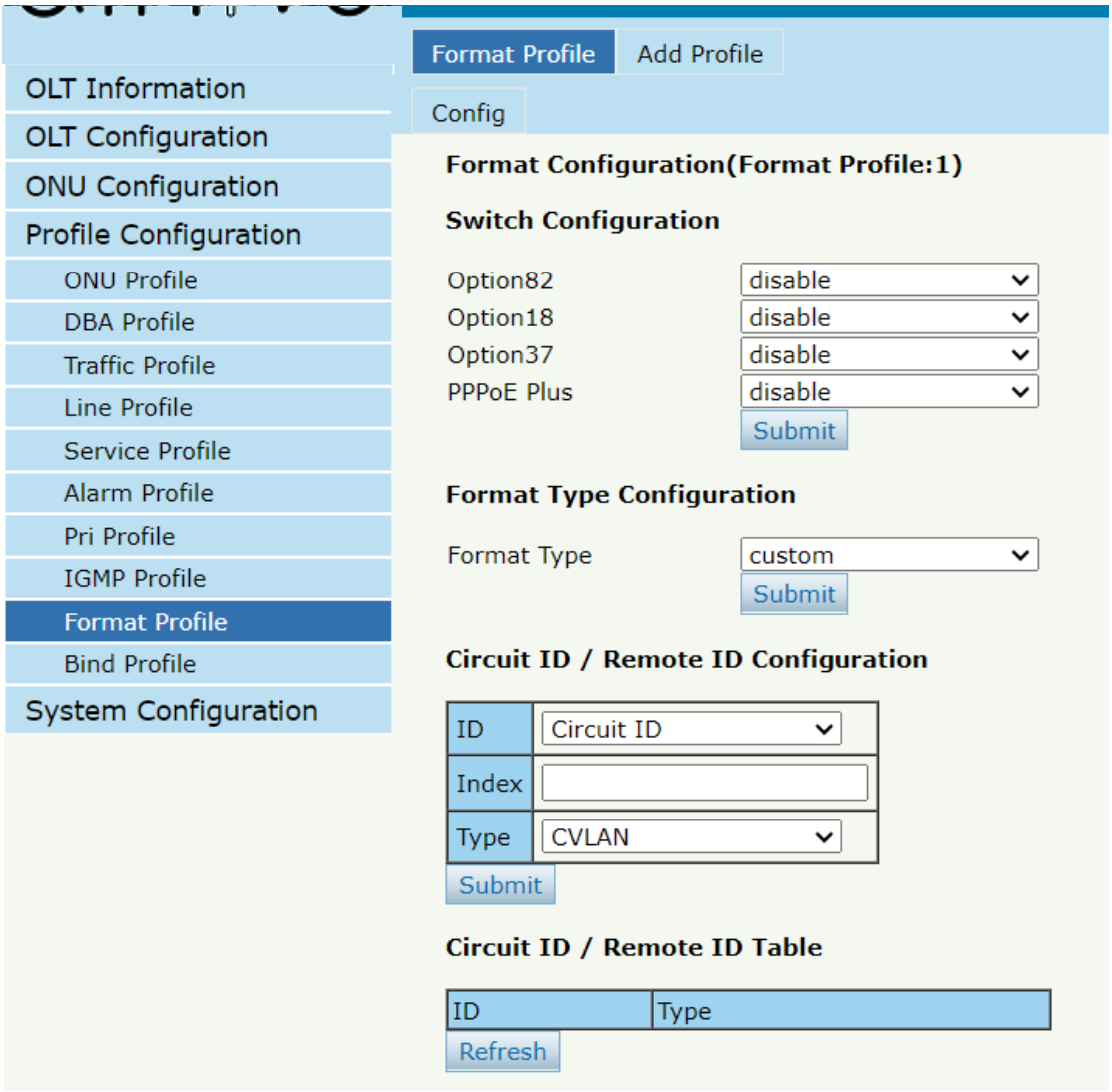



Figure 5.9-4: Config

## 5.10 Bind Profile

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

**Profile Configuration→Bind Profile**

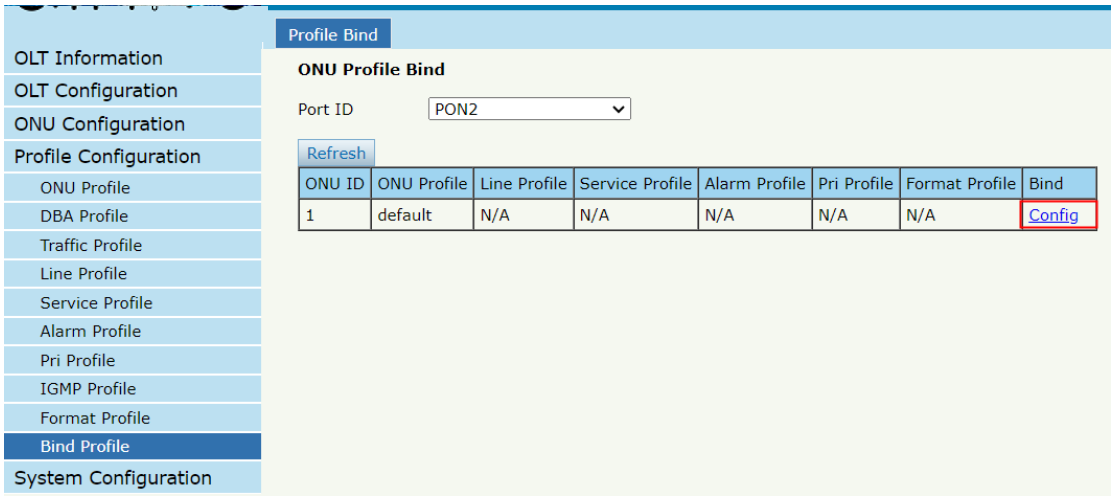



Figure 5.10-1: Bind profile

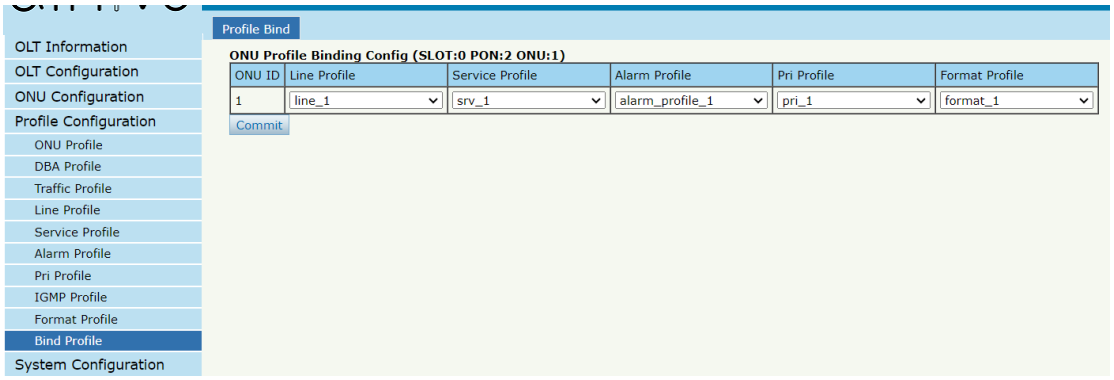



Figure 5.10-2: Select Profile

# Chapter 6 System Configuration

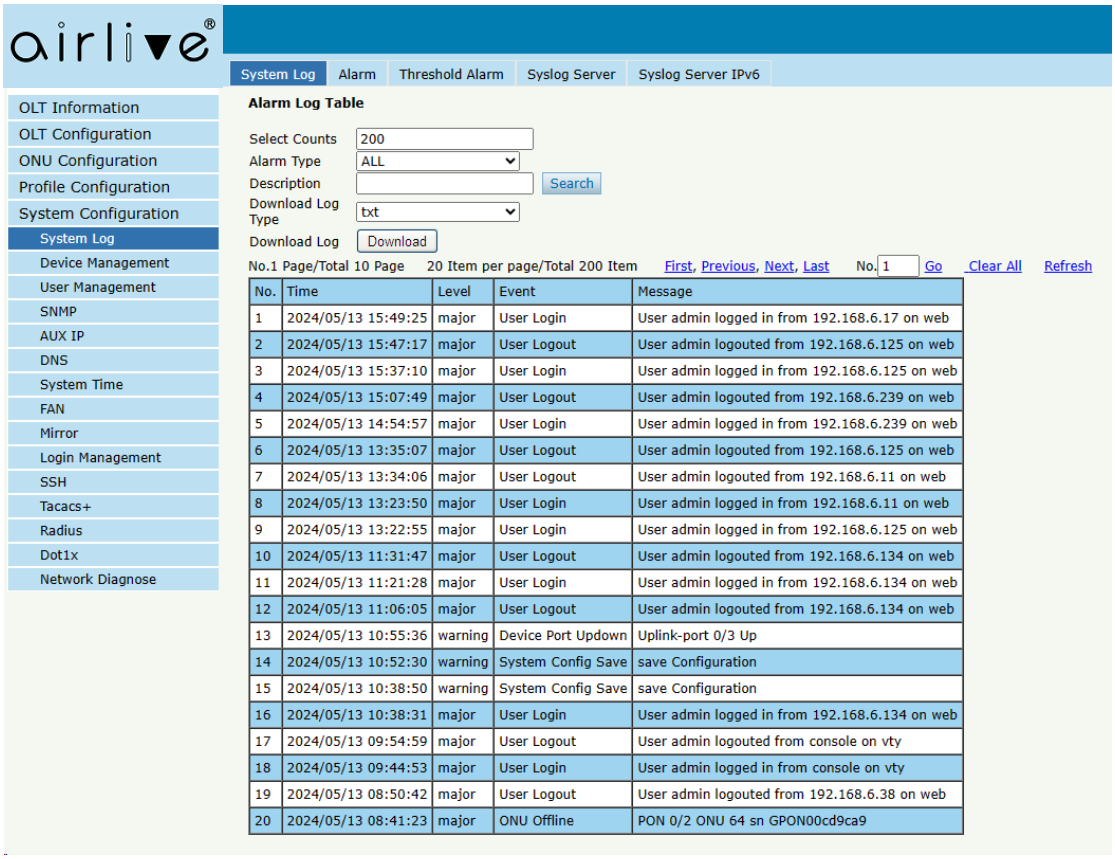
This chapter is about the global management of OLT.

## 6.1 System Log

### 6.1.1 System Log

#### System Configuration→System Log

This page displays OLT system alarms and events.




| No. | Time | Level | Event | Message |
|---|---|---|---|---|
| 1 | 2024/05/13 15:49:25 | major | User Login | User admin logged in from 192.168.6.17 on web |
| 2 | 2024/05/13 15:47:17 | major | User Logout | User admin logouted from 192.168.6.125 on web |
| 3 | 2024/05/13 15:37:10 | major | User Login | User admin logged in from 192.168.6.125 on web |
| 4 | 2024/05/13 15:07:49 | major | User Logout | User admin logouted from 192.168.6.239 on web |
| 5 | 2024/05/13 14:54:57 | major | User Login | User admin logged in from 192.168.6.239 on web |
| 6 | 2024/05/13 13:35:07 | major | User Logout | User admin logouted from 192.168.6.125 on web |
| 7 | 2024/05/13 13:34:06 | major | User Logout | User admin logouted from 192.168.6.11 on web |
| 8 | 2024/05/13 13:23:50 | major | User Login | User admin logged in from 192.168.6.11 on web |
| 9 | 2024/05/13 13:22:55 | major | User Login | User admin logged in from 192.168.6.125 on web |
| 10 | 2024/05/13 11:31:47 | major | User Logout | User admin logouted from 192.168.6.134 on web |
| 11 | 2024/05/13 11:21:28 | major | User Login | User admin logged in from 192.168.6.134 on web |
| 12 | 2024/05/13 11:06:05 | major | User Logout | User admin logouted from 192.168.6.134 on web |
| 13 | 2024/05/13 10:55:36 | warning | Device Port Updown | Uplink-port 0/3 Up |
| 14 | 2024/05/13 10:52:30 | warning | System Config Save | save Configuration |
| 15 | 2024/05/13 10:38:50 | warning | System Config Save | save Configuration |
| 16 | 2024/05/13 10:38:31 | major | User Login | User admin logged in from 192.168.6.134 on web |
| 17 | 2024/05/13 09:54:59 | major | User Logout | User admin logouted from console on vty |
| 18 | 2024/05/13 09:44:53 | major | User Login | User admin logged in from console on vty |
| 19 | 2024/05/13 08:50:42 | major | User Logout | User admin logouted from 192.168.6.38 on web |
| 20 | 2024/05/13 08:41:23 | major | ONU Offline | PON 0/2 ONU 64 sn GPON00cd9ca9 |

Figure 6.1-1: System Log

## 6.1.2 Alarm

**System Configuration →System Log →Alarm**

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

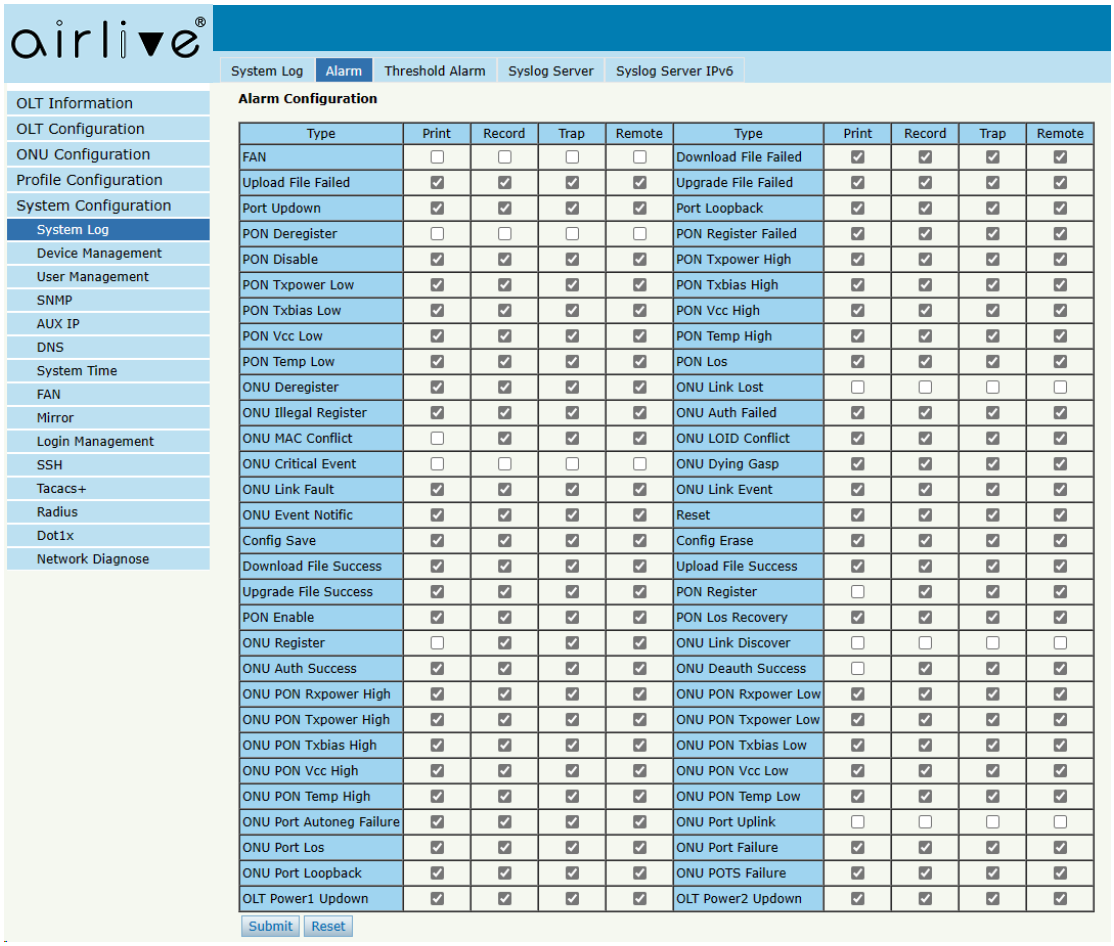



Figure 6.1-2: Alarm

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

| | |
|---|---|
| Trap | Alarm and event show in EMS, but not show in console, telnet, syslog and remote log server. |
| Remote | Alarm and event show in remote log server, but not show in console, telnet, syslog and EMS. |

### 6.1.3 Threshold Alarm

**System Configuration →System Log →Threshold Alarm**

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

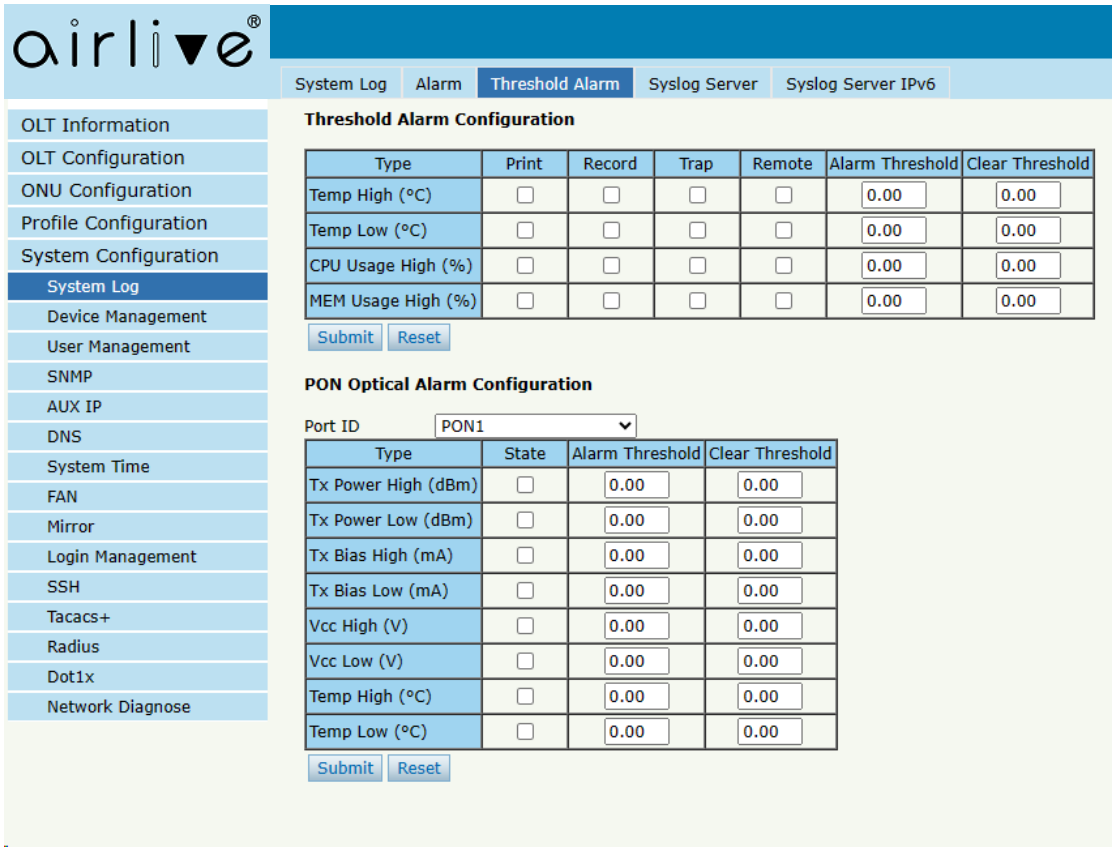



Figure 6.1-3: Threshold Alarm

## 6.1.4 Syslog Server

### System Configuration→System Log →Syslog Server

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

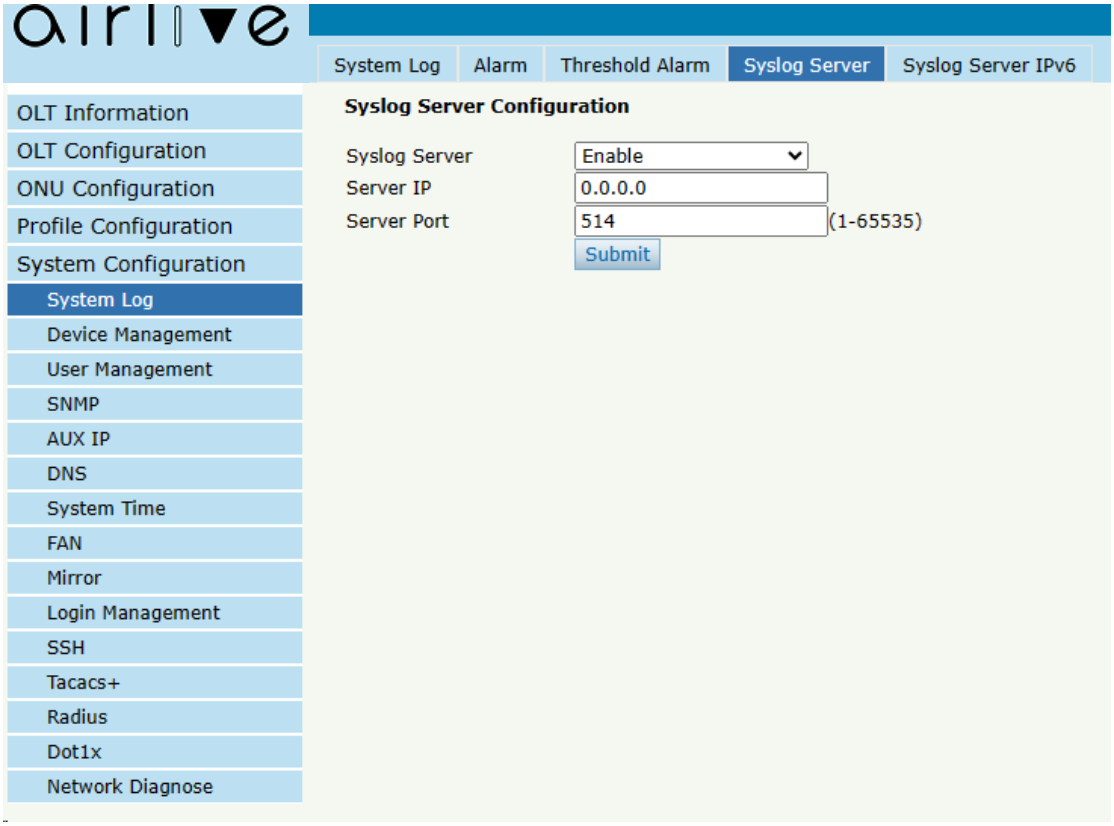



Figure 6.1-4: Syslog Server

## 6.1.5 Syslog Server IPv6

### System Configuration→System Log →Syslog Server IPv6

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

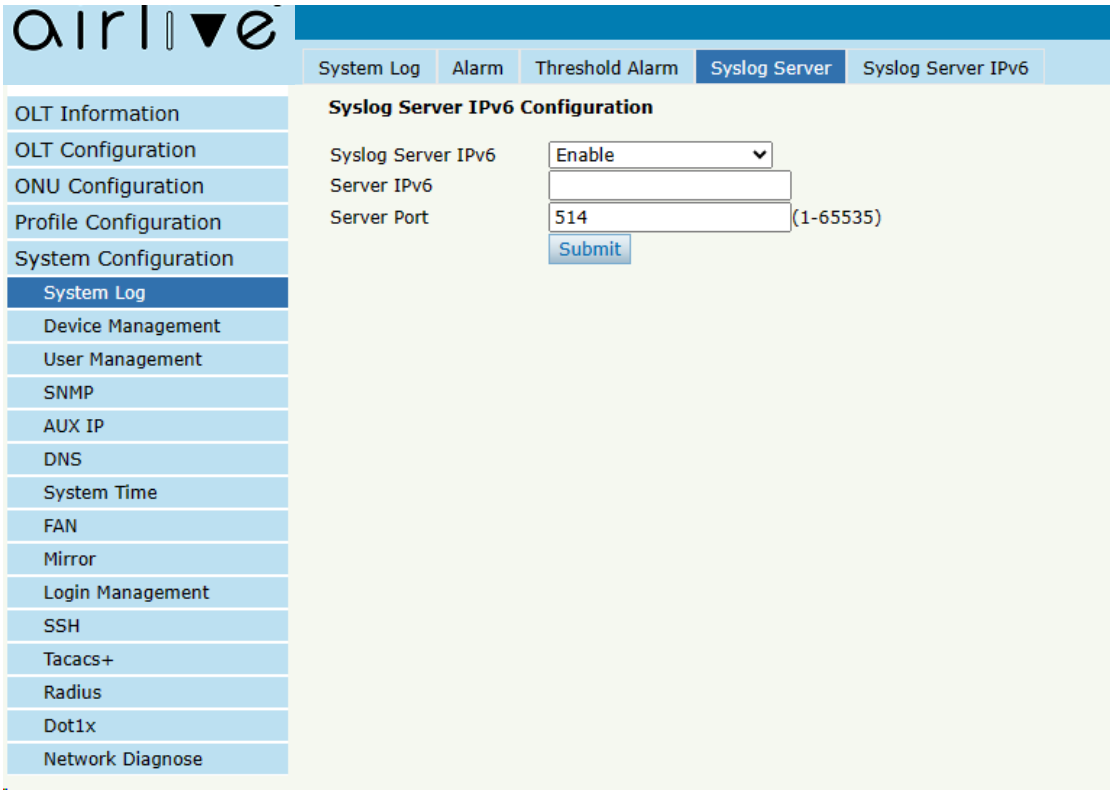



Figure 6.1-5: Syslog Server IPv6

## 6.2 Device Management

### 6.2.1 Firmware Upgrade

**System Configuration→Device Management →Firmware Upgrade**

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

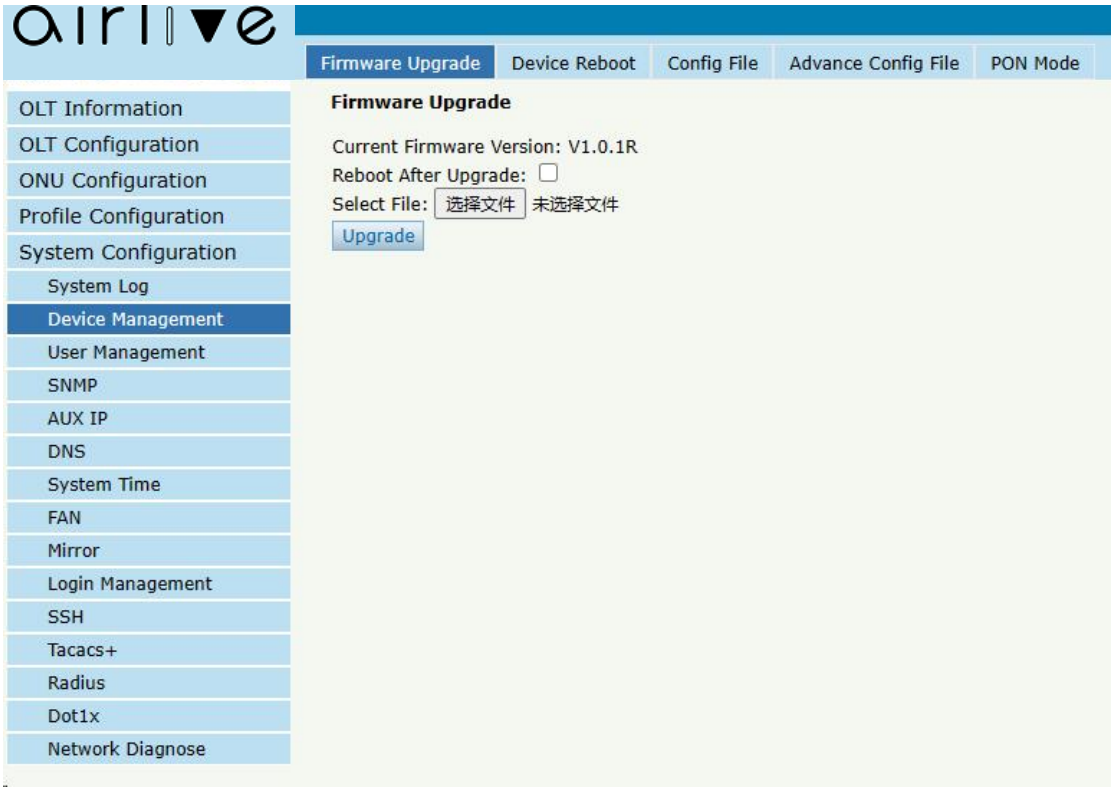



Figure 6.2-1: Firmware Upgrade

## 6.2.2 Device Reboot

**System Configuration→Device Management →Device Reboot**

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

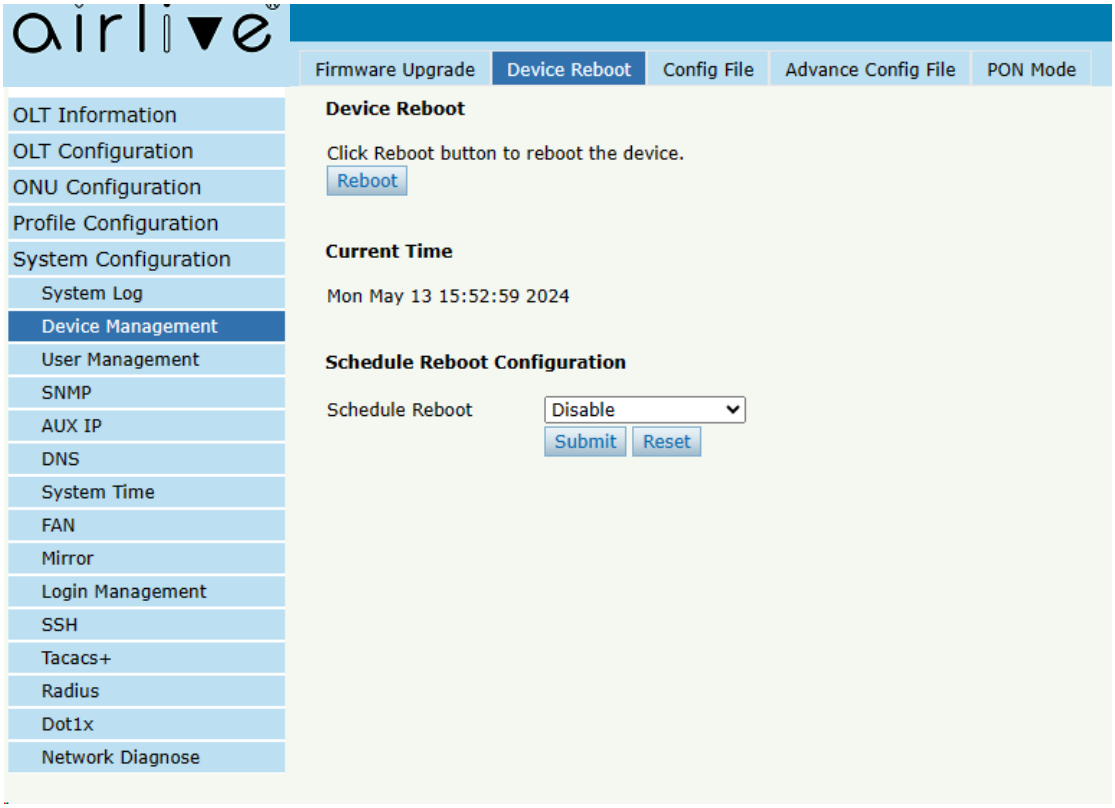



Figure 6.2-2: Device Reboot

### 6.2.3 Config File

**System Configuration→Device Management →Config File**

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

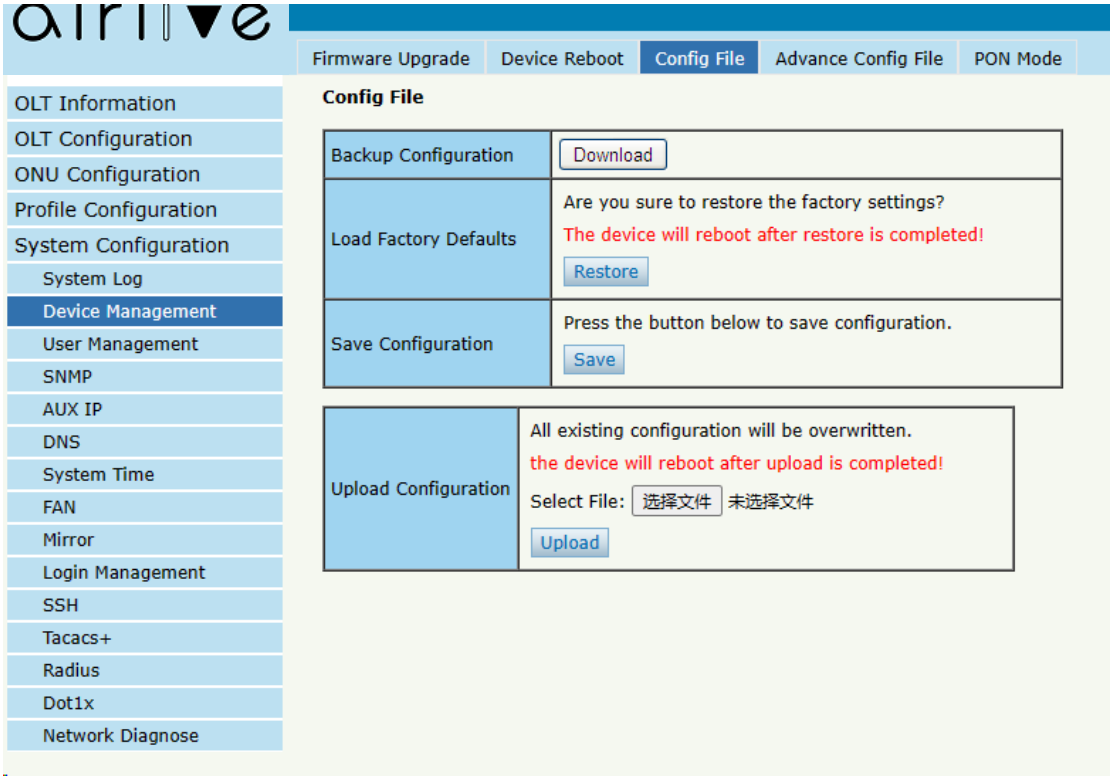



Figure 6.2-3: File Configuration

## 6.2.4 Advance Config File

**System Configuration→Device Management →Advance Config File**

You can choose between periodic auto-save configuration and periodic auto-backup configuration, There are three modes: Timeout, Fix-Time and Week-Day.

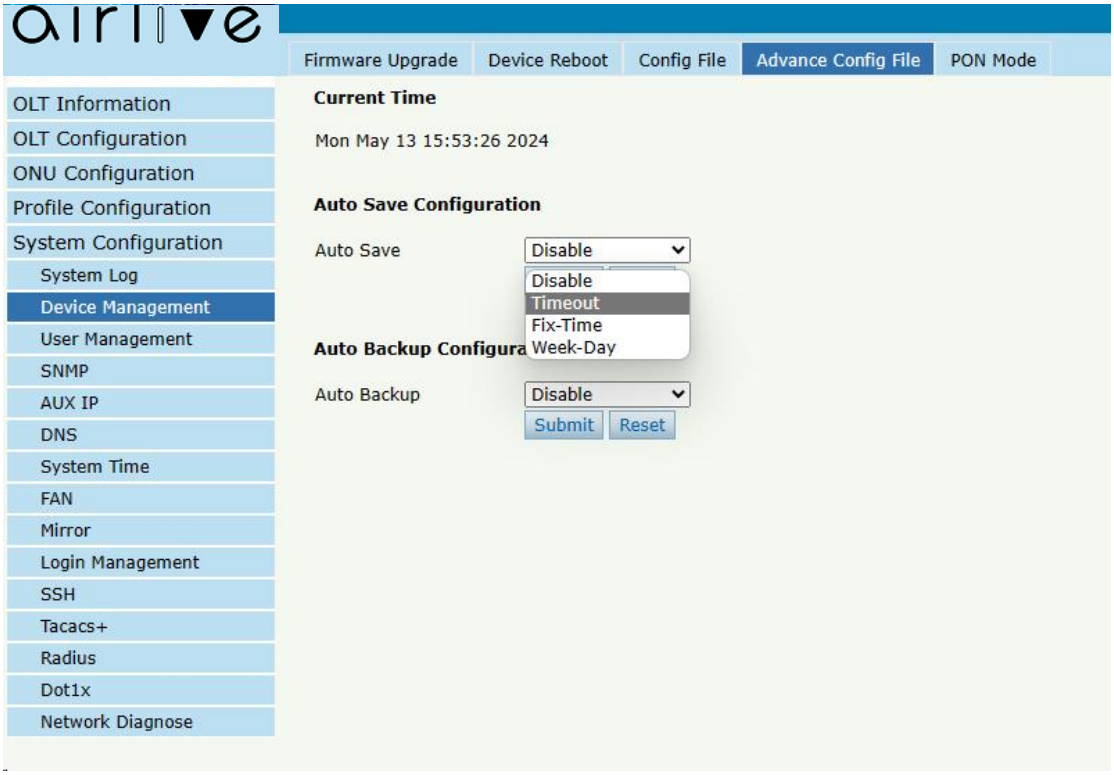



Figure 6.2-4: Auto Save

## 6.2.5 Pon Mode

**System Configuration→Device Management →Pon Mode**

Here you can select the PON mode for OLT, There are three modes: GPON, XG-PON and XGS-PON.

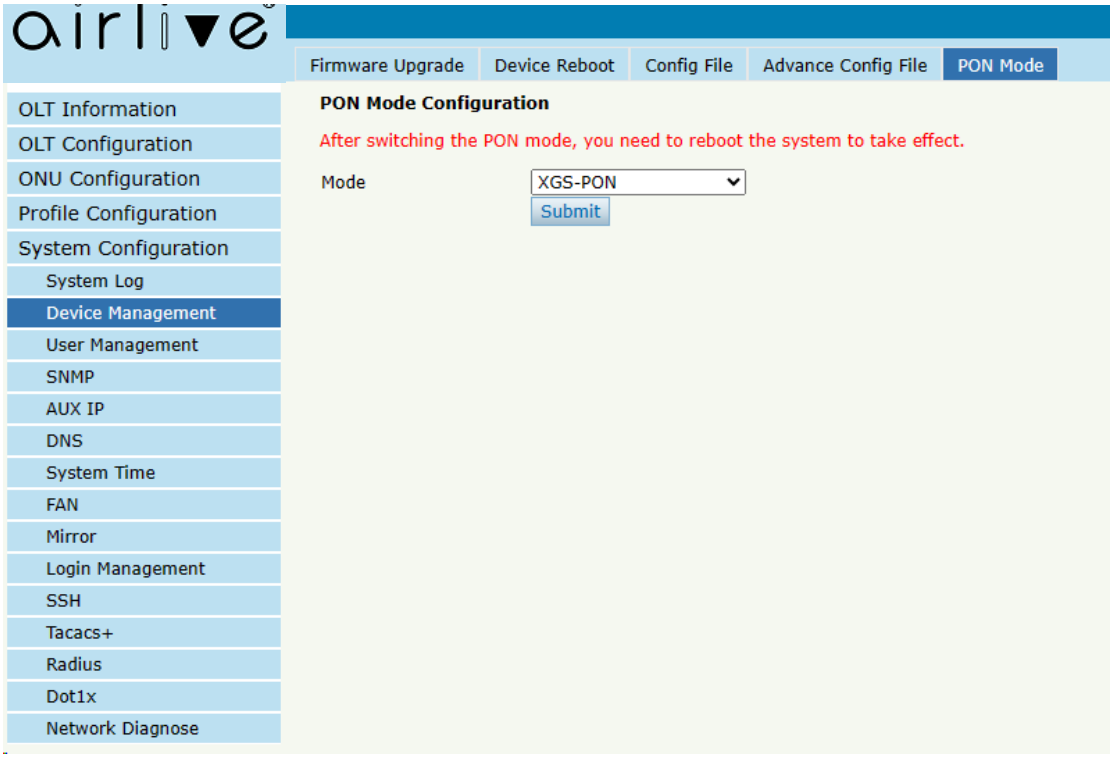



Figure 6.2-5: PON MODE

## 6.3 User Management

### 6.3.1 User manage

**System Configuration→User management→User manage**

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

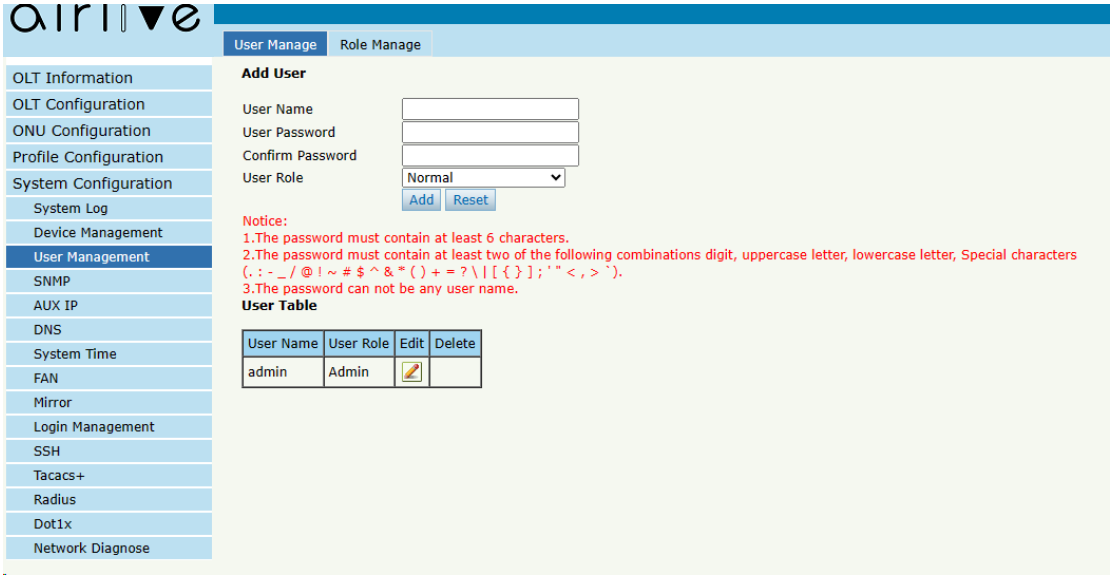



Figure6.3-1: User Manage

## 6.3.2 Role manage

**System Configuration→User management→Role manage**

You can add roles and assign different permissions to different roles.

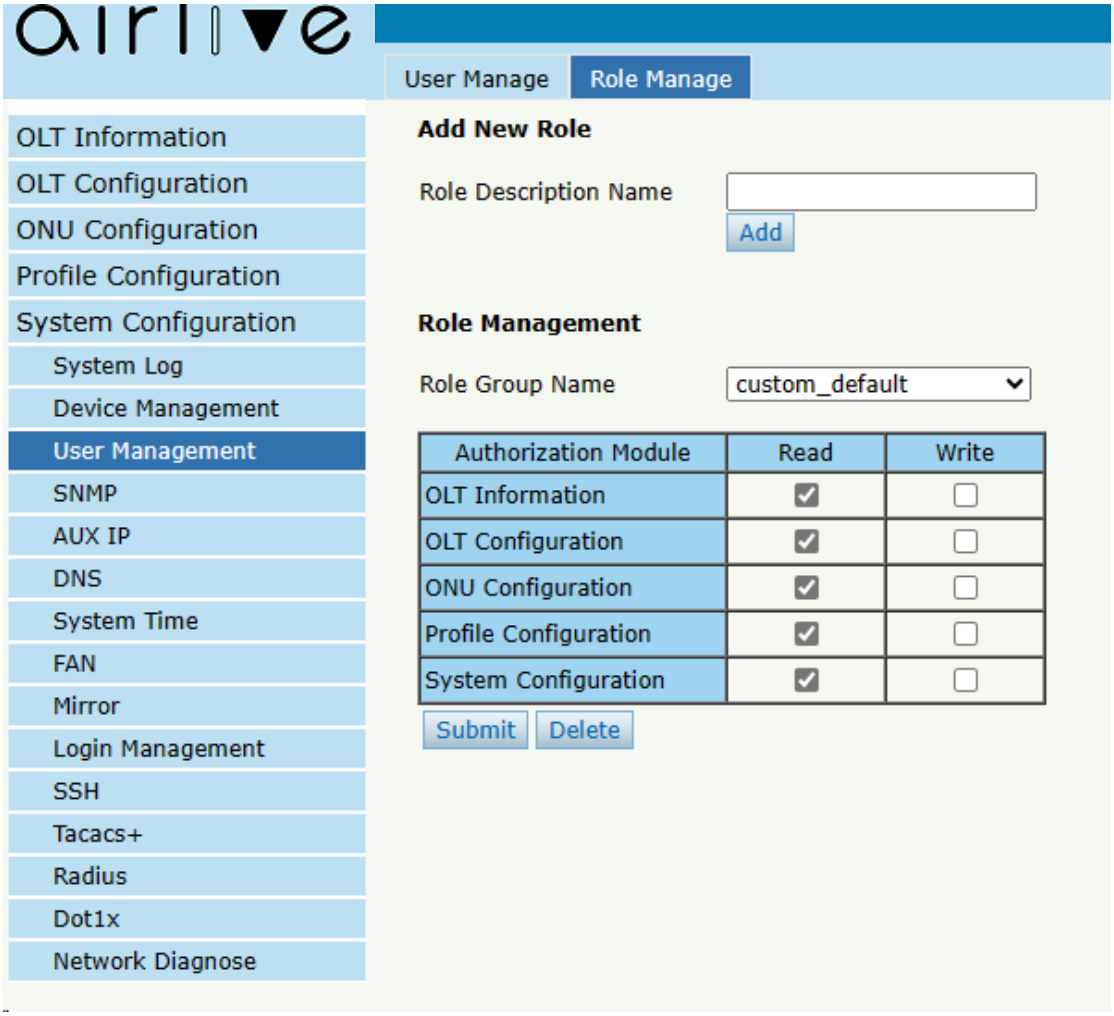



Figure6.3-2: Role Manage

# 6.4 SNMP

## 6.4.1 SNMP V1/V2

**System Configuration → SNMP →SNMP V1/V2**

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

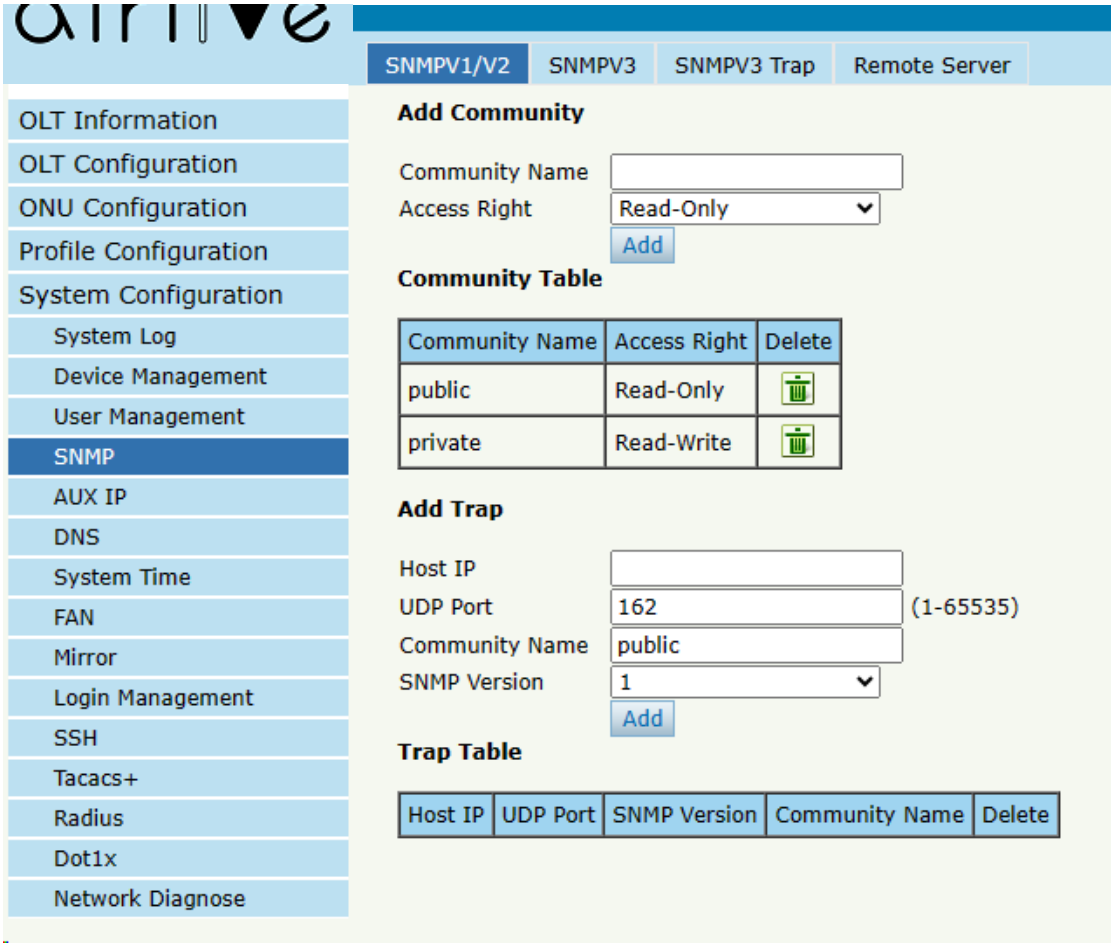



Figure6.4-1: SNMP V1/V2

## 6.4.2 SNMP V3

**System Configuration → SNMP →SNMP V3**

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


Figure6.4-2: SNMP V3

## 6.4.3 SMNP V3 Trap

**System Configuration → SNMP →SNMP V3 Trap**

Configure the target host IP address of trap messages.

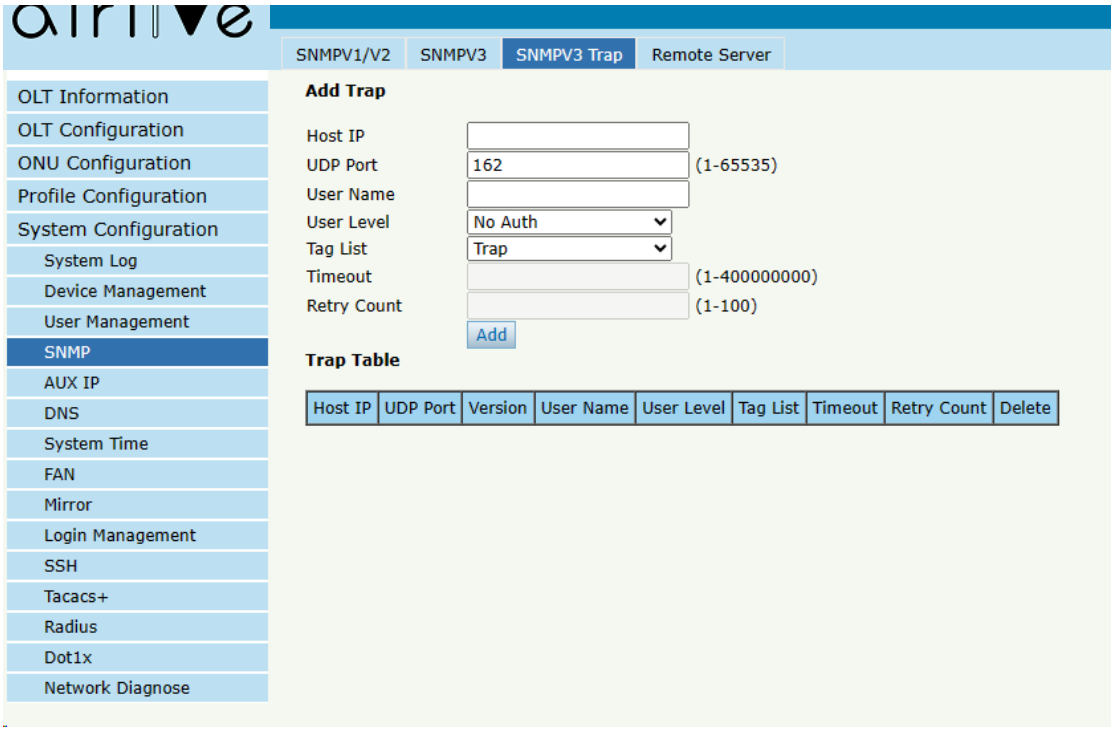



Figure 6.4-3: SNMP V3 Trap

## 6.4.4 Remote Server

**System Configuration → SNMP →Remote Server**

Configure the IP address of your SNMP network management server.

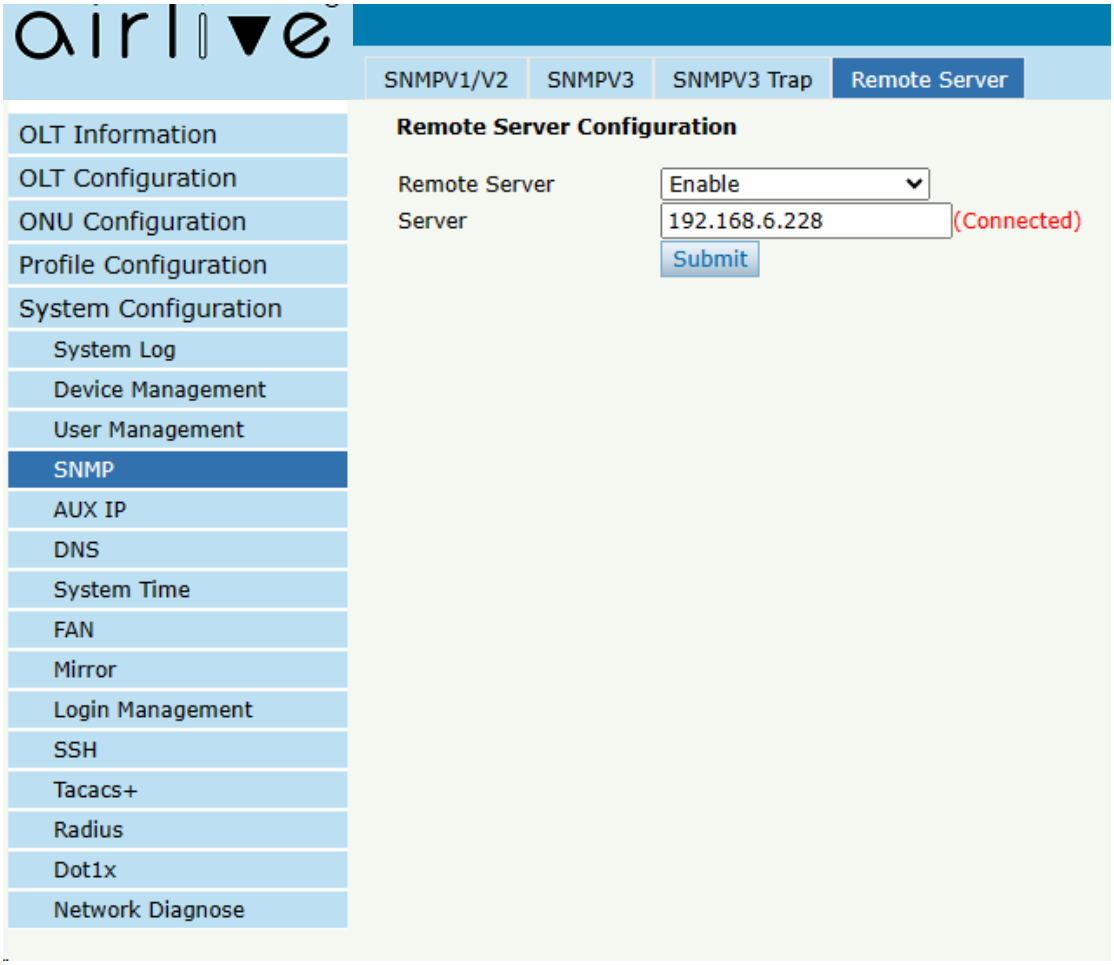



Figure 6.4-4: Remote Server

# 6.5 AUX IP

## 6.5.1 AUX IP

**System Configuration → AUX IP→ AUX IP**

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

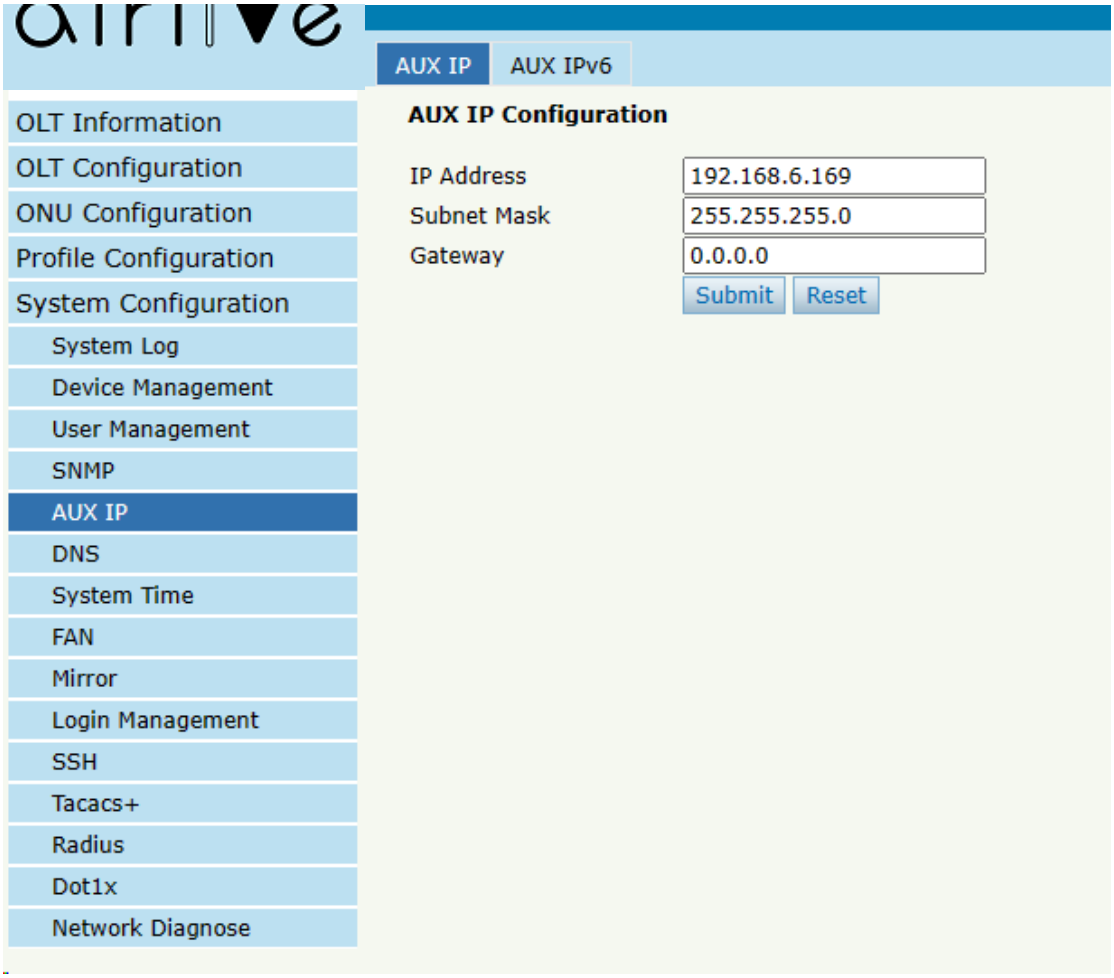



Figure 6.5-1: AUX IP

## 6.5.2 AUX IPv6

**System Configuration → AUX IP → AUX IPv6**

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

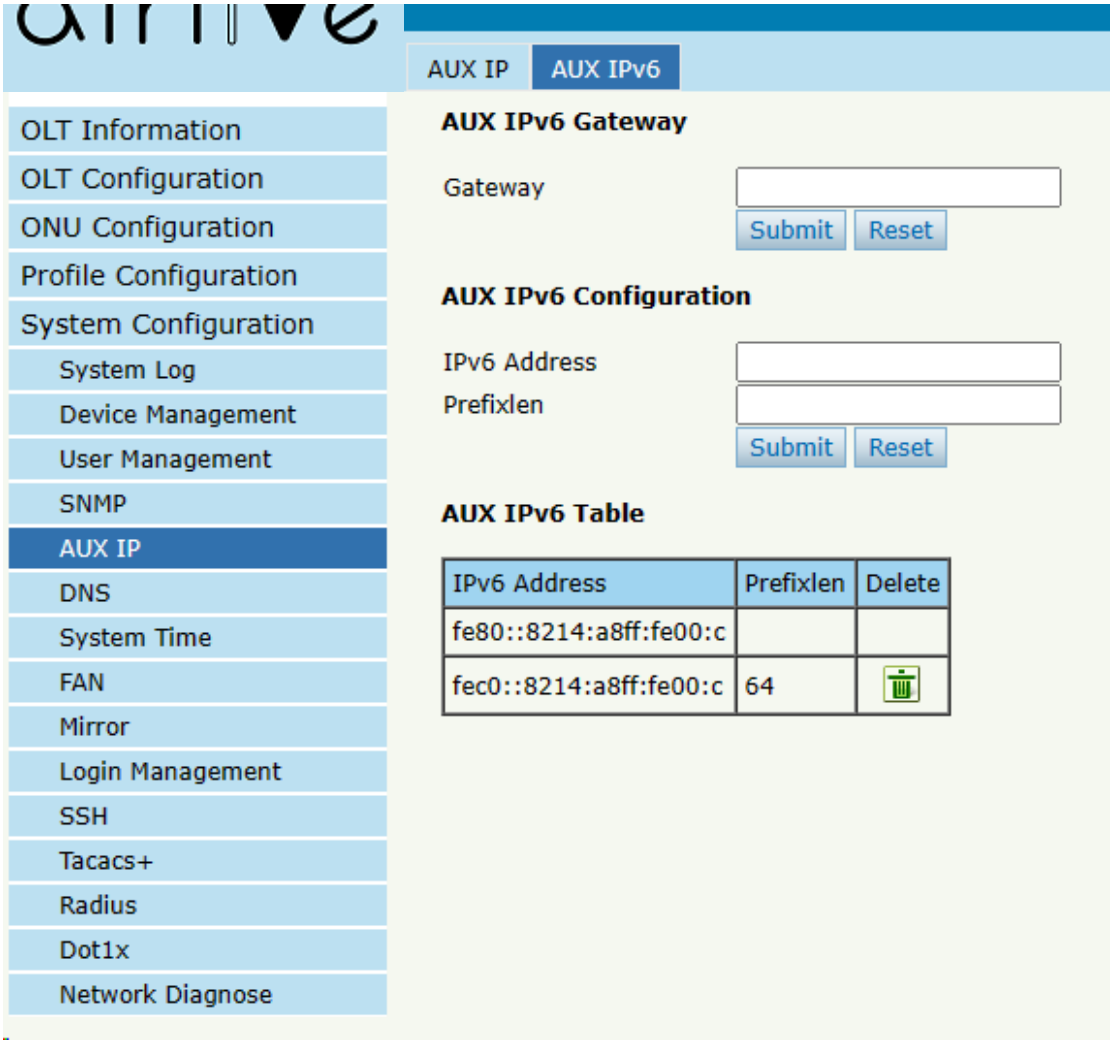



Figure 6.5-2: AUX IPv6

## 6. 6 DNS

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

### 6.6.1 IPv4 DNS

**System Configuration → DNS → IPv4 DNS**

This page is used to configure IPv4 DNS.

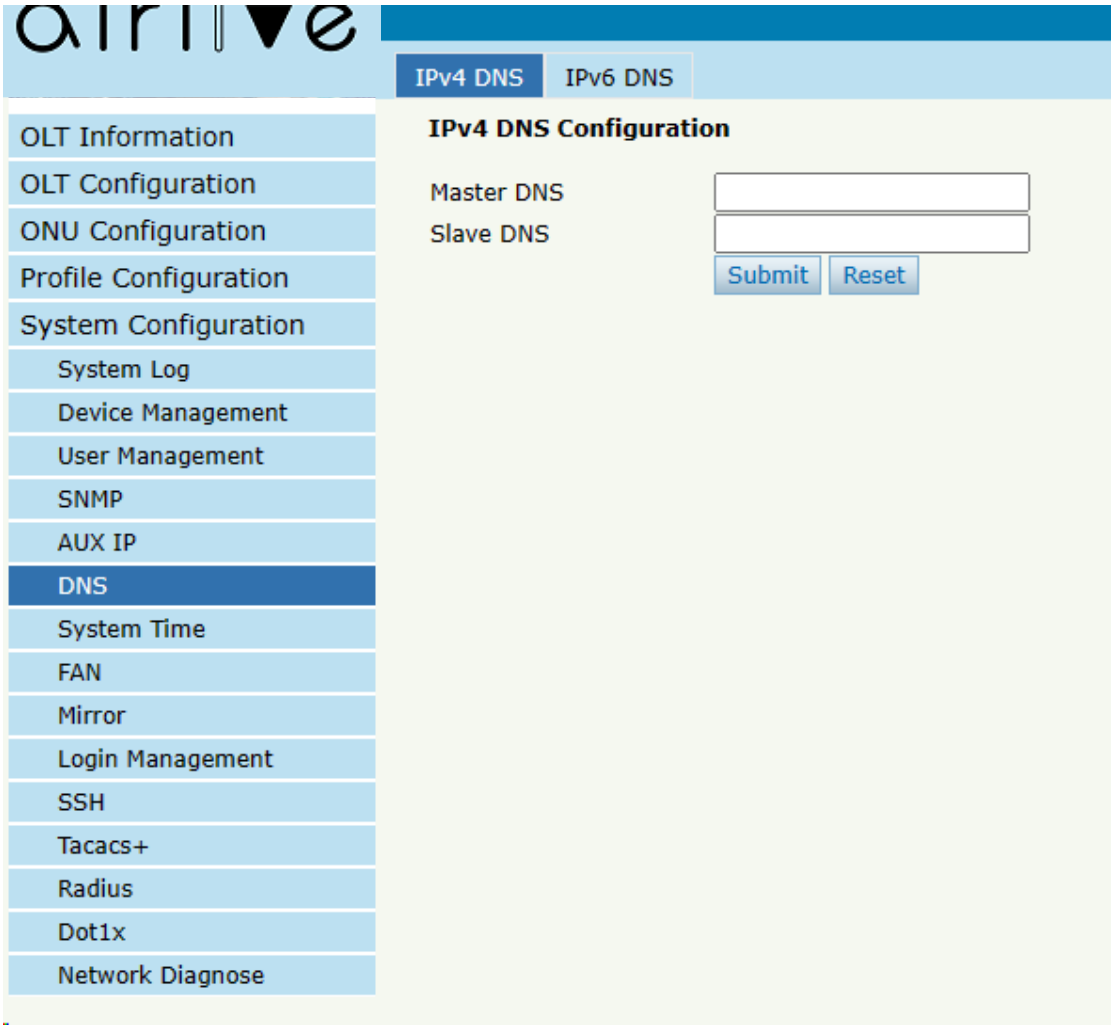



Figure 6.6-1: IPv4 DNS

## 6.6.2 IPv6 DNS

**System Configuration → DNS → IPv6 DNS**

This page is used to configure IPv6 DNS.

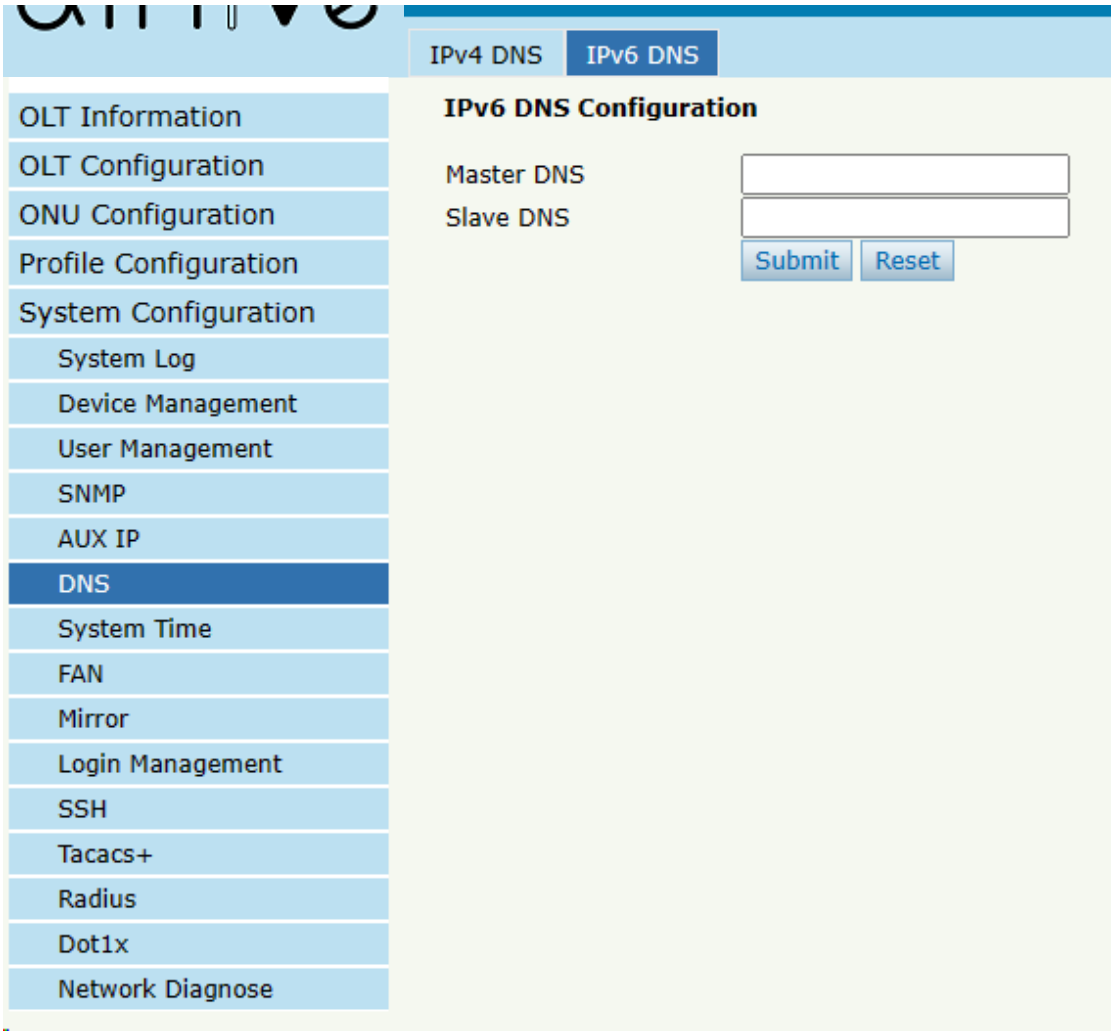



Figure 6.6-2: IPv6 DNS

## 6.7 System Time

### 6.7.1 RTC

**System Configuration → System Time→RTC**

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

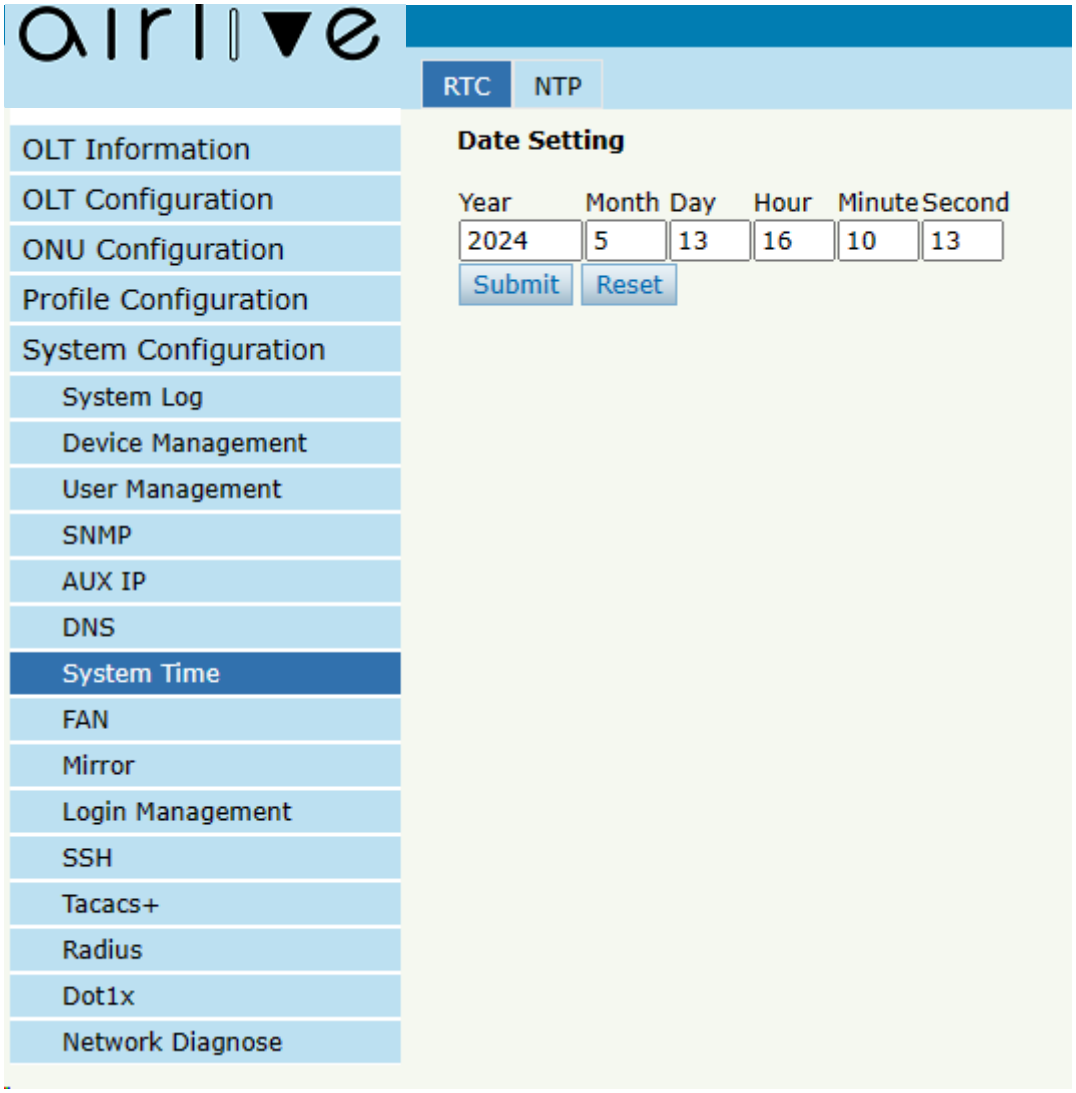



Figure 6.7-1: RTC Setting

## 6.7.2 NTP

**System Configuration → System Time→NTP**

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

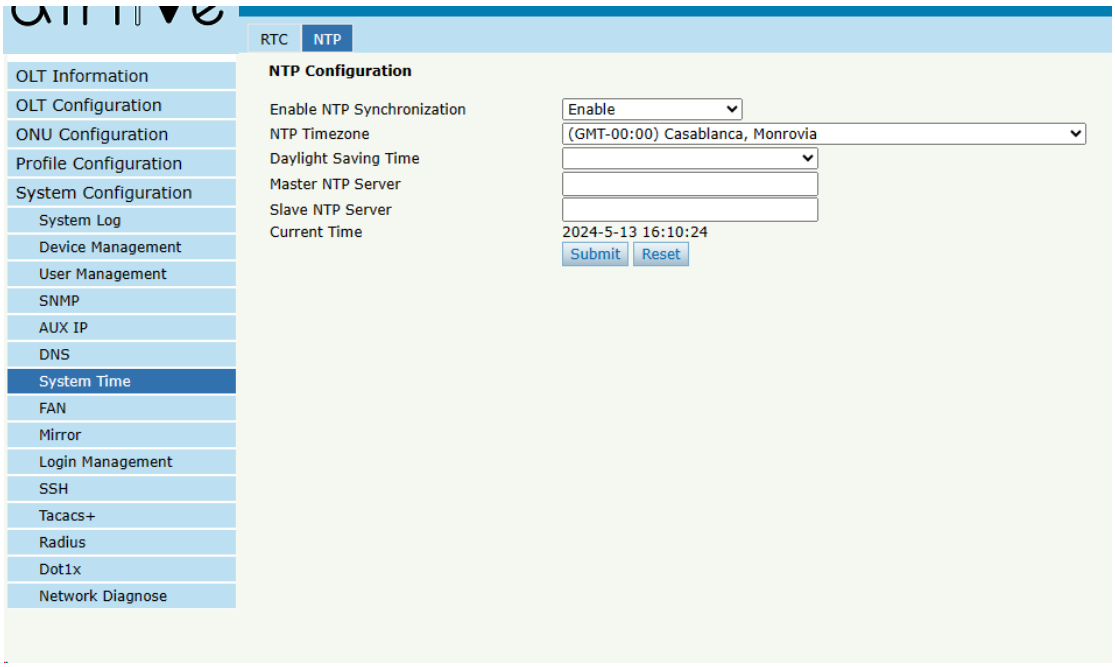



Figure 6.7-2: NTP Configuration

## 6.8 FAN

### System Configuration → FAN

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

This configuration will not be saved after reboot.

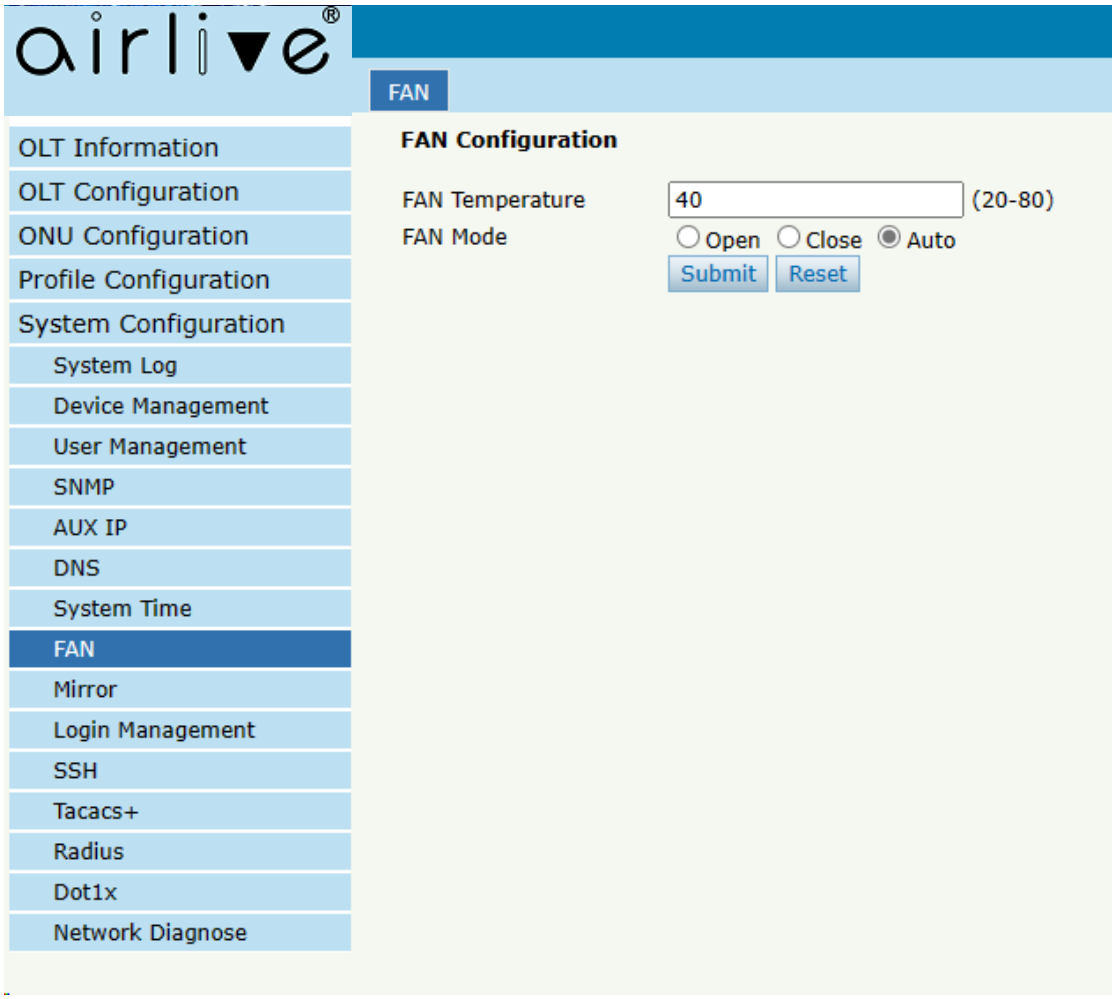



Figure 6.8-1: FAN Configuration

## 6.9 Mirror

### System Configuration → Mirror

Port mirror is usually used for troubleshooting. Each monitor session can be set with one destination port and up to 5 source ports.

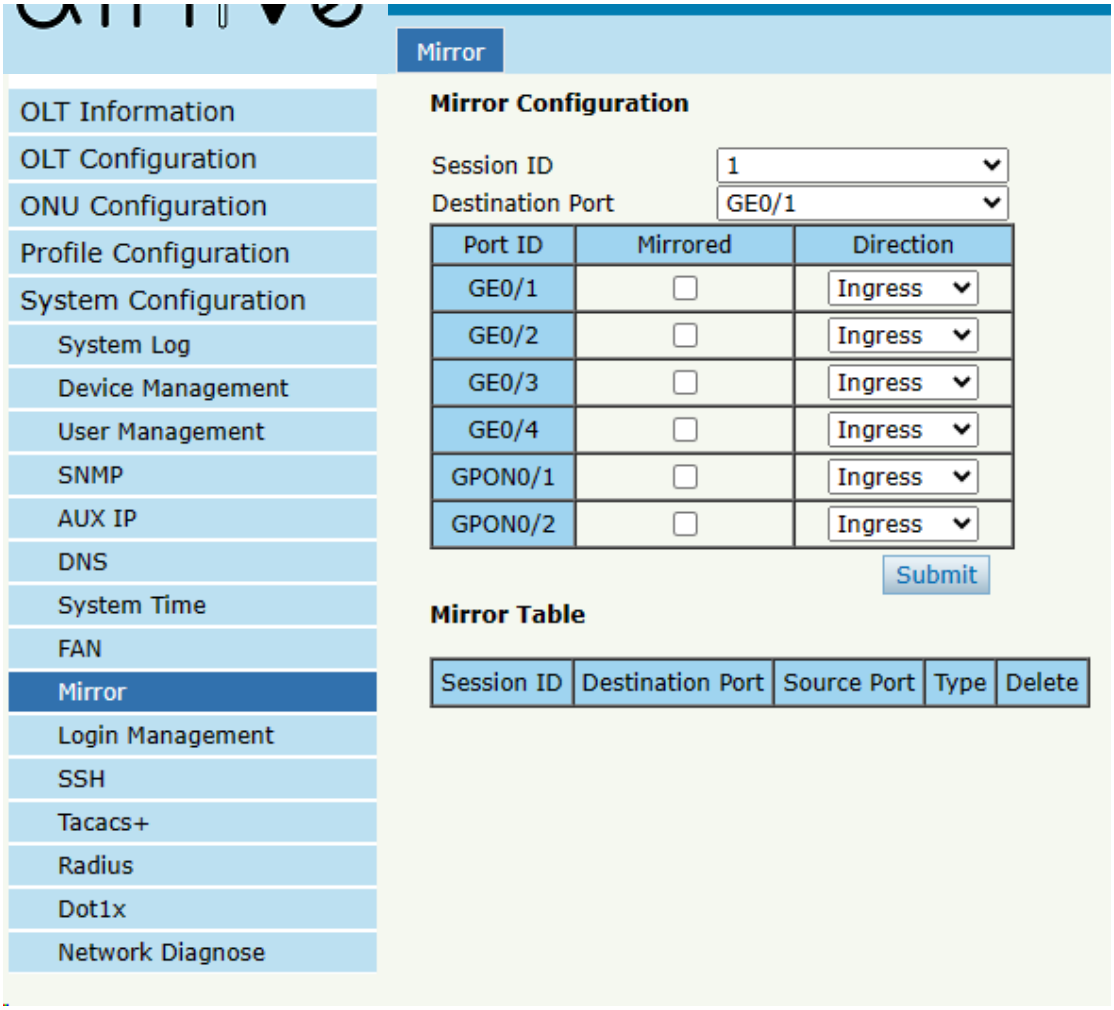



Figure 6.9-1: Mirror Configuration

## 6.10 Login Management

### 6.10.1 Login Access List

**System Configuration → Login Management→ Login Access List**

This page is used to configure access rights for management. You can configure access rights for telnet, web, SNMP, SSH according to source IP address.

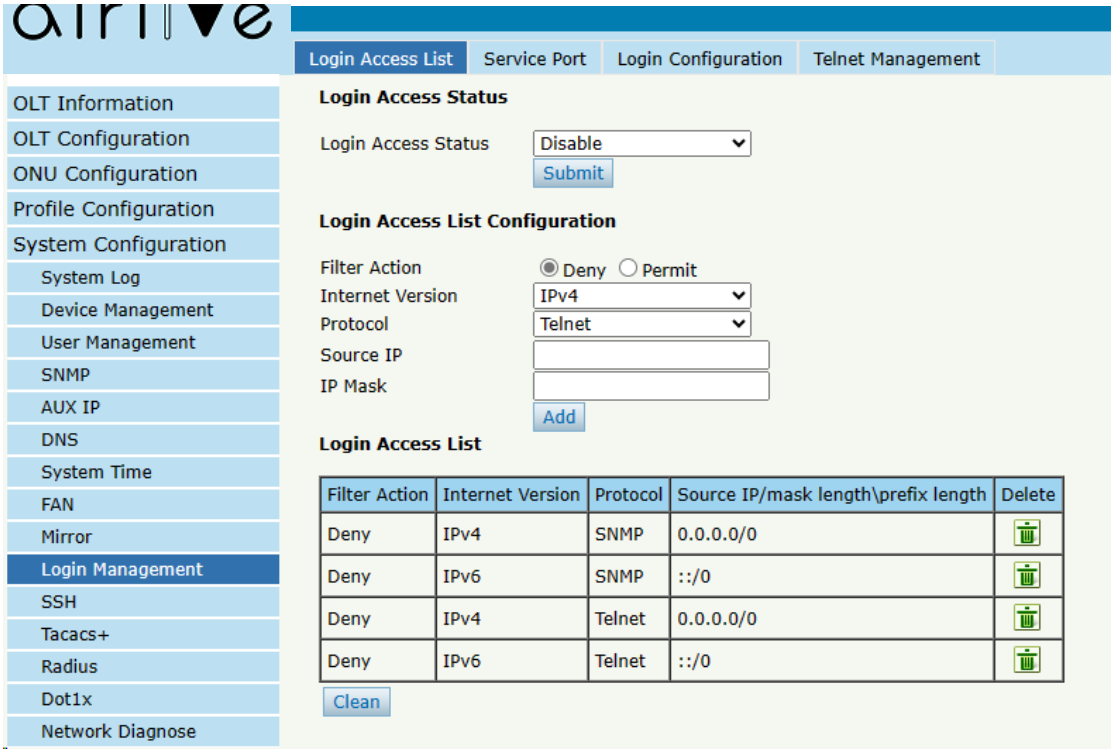



Figure 6.10-1: Login Access List Configuration

## 6.10.2 Service Port

**System Configuration → Login Management→ Service Port**

This user interface allows you to modify the default remote service port.

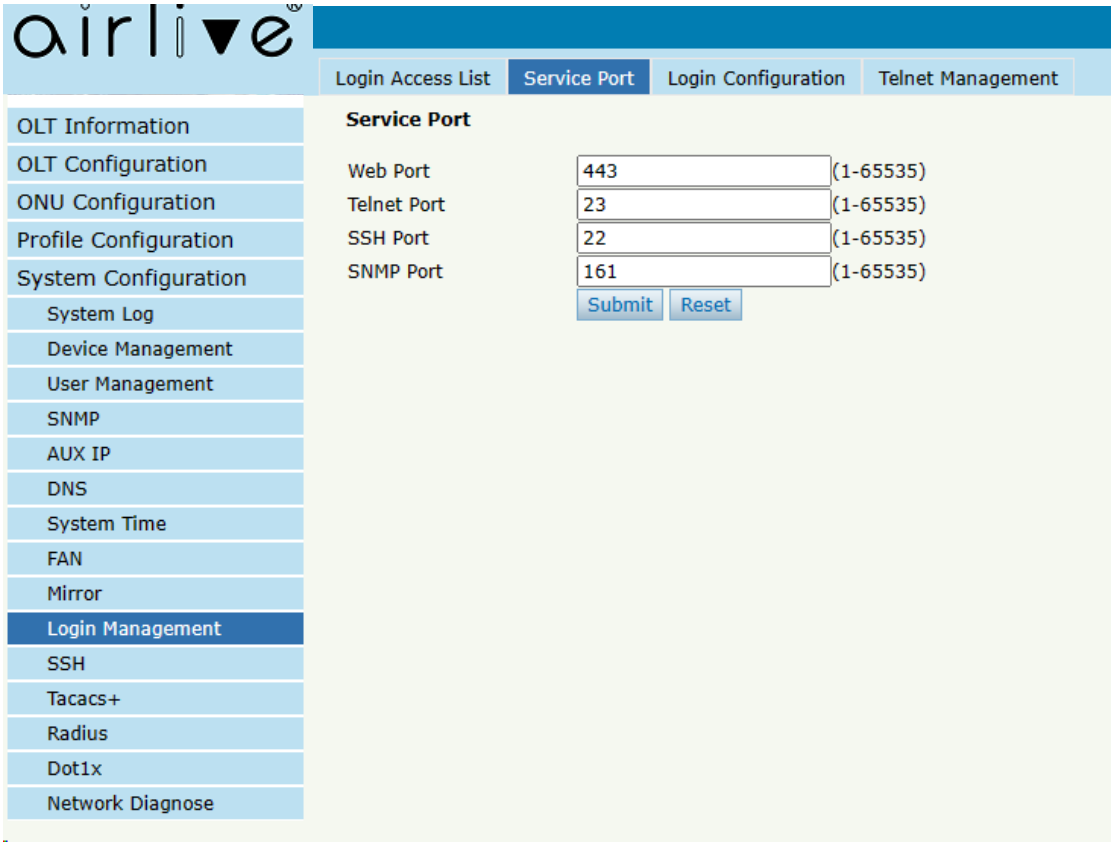



Figure 6.10-2: Service Port Configuration

## 6.10.3 Login Timeout

**System Configuration → Login Management→ Login Timeout**

This page is used to set web timeout.

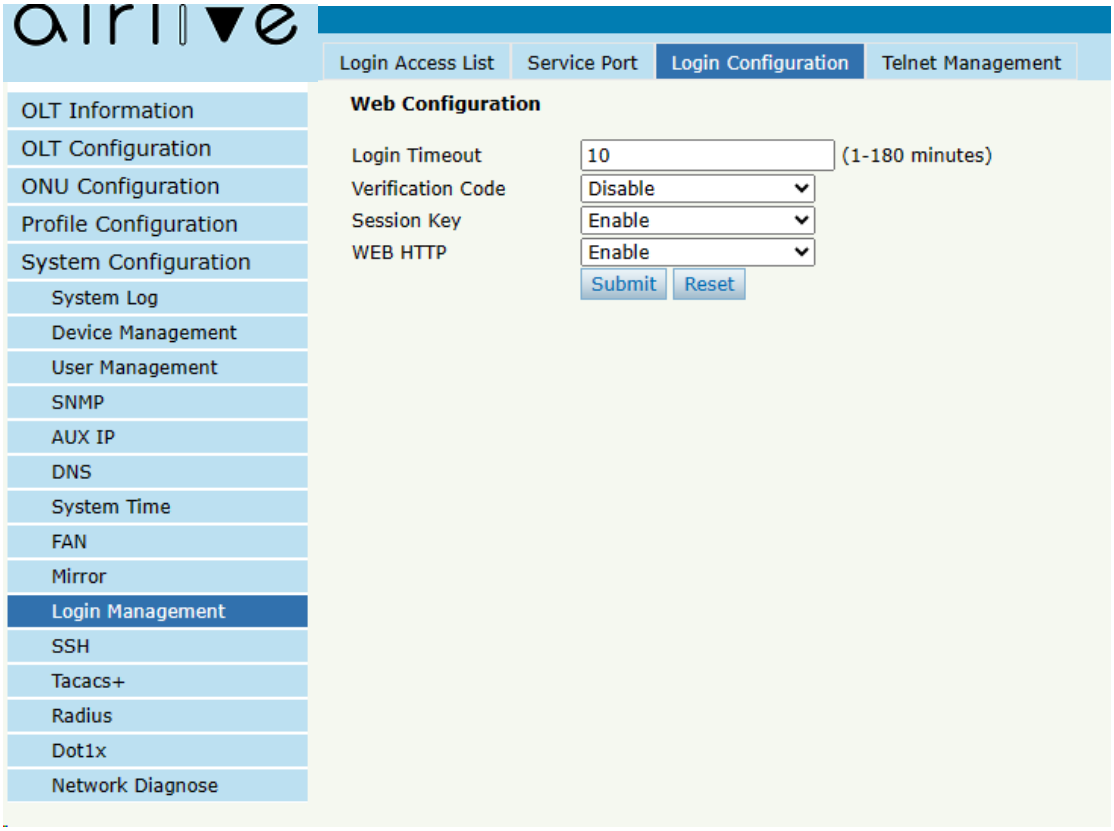



Figure 6.10-3: Login Timeout Configuration

## 6.10.4 Telnet Management

**System Configuration → Login Management→ Telnet Management**

Here you can see the user who telnet into OLT.

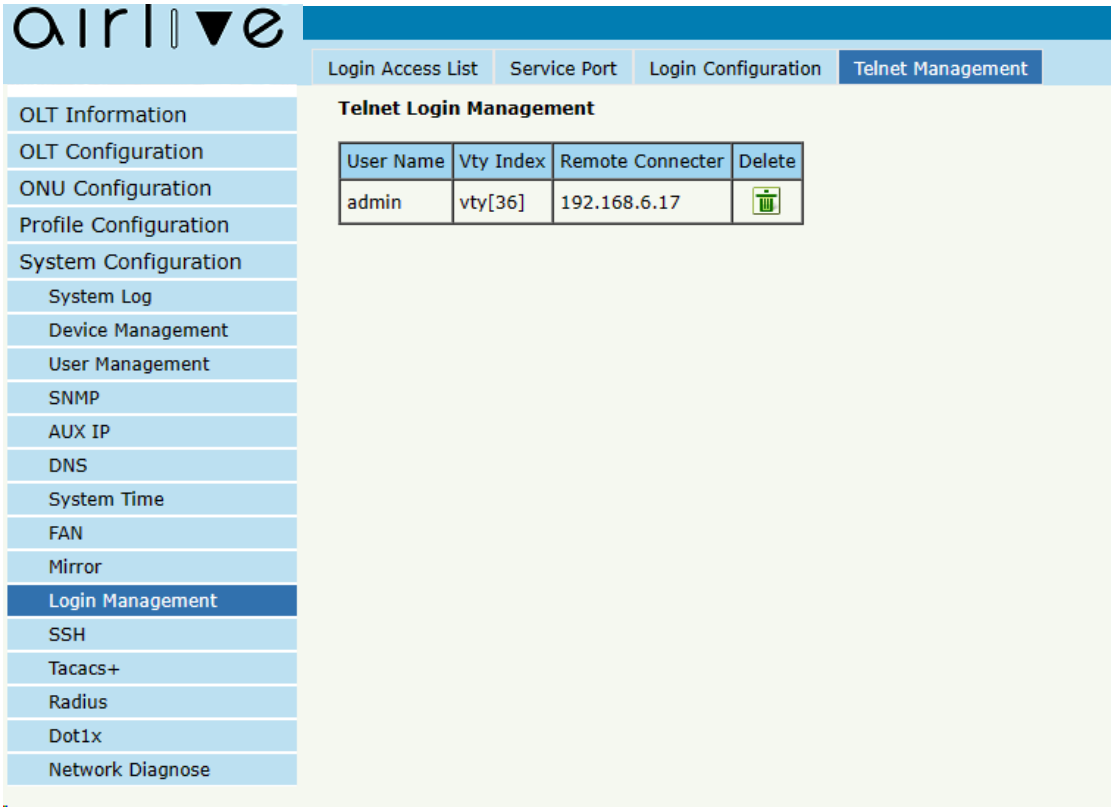



Figure 6.10-4: Telnet Management

## 6.11 SSH

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

### 6.11.1 SSH State

**System Configuration → SSH→ SSH State**

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

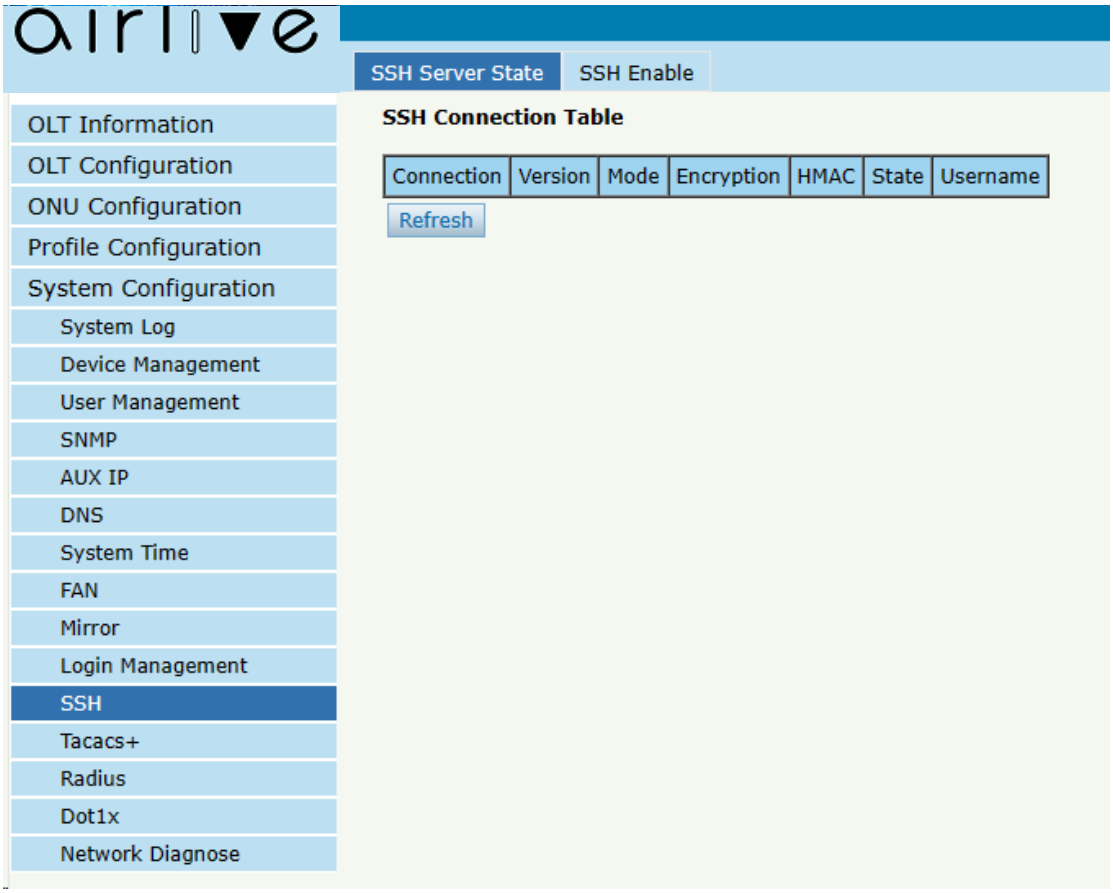



Figure 6.12-1: SSH State

## 6.11.2 SSH Enable

**System Configuration → SSH→ SSH Enable**

This page is used to configure SSH protocol related parameters.

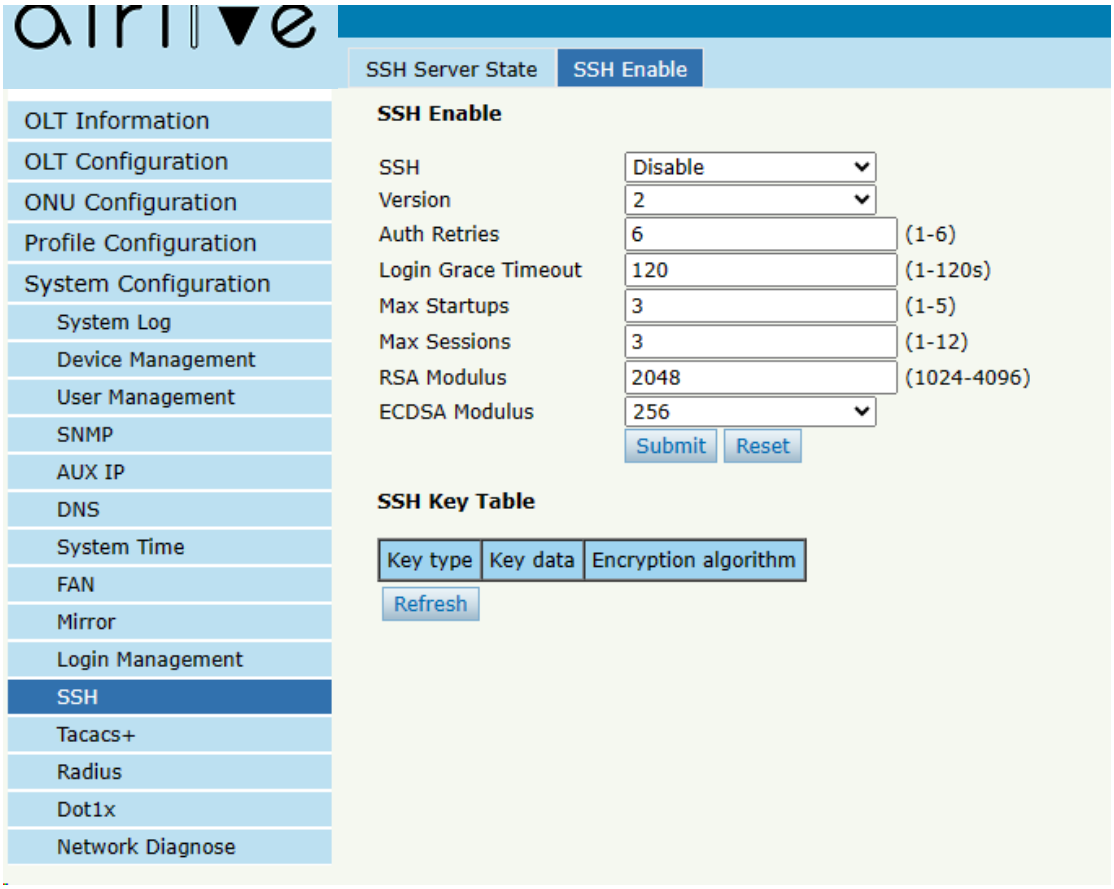



Figure 6.12-1: SSH Global Configuration

## 6.12 Tacacs+

Tacacs+ is a protocol that provides access control for routers, network access servers, and other interconnected computing devices through one or more centralized servers. Tacacs+ provides independent authentication, authorization, and billing services.This interface allows you to configure the Tacacs+ server IP address and other specific parameters.

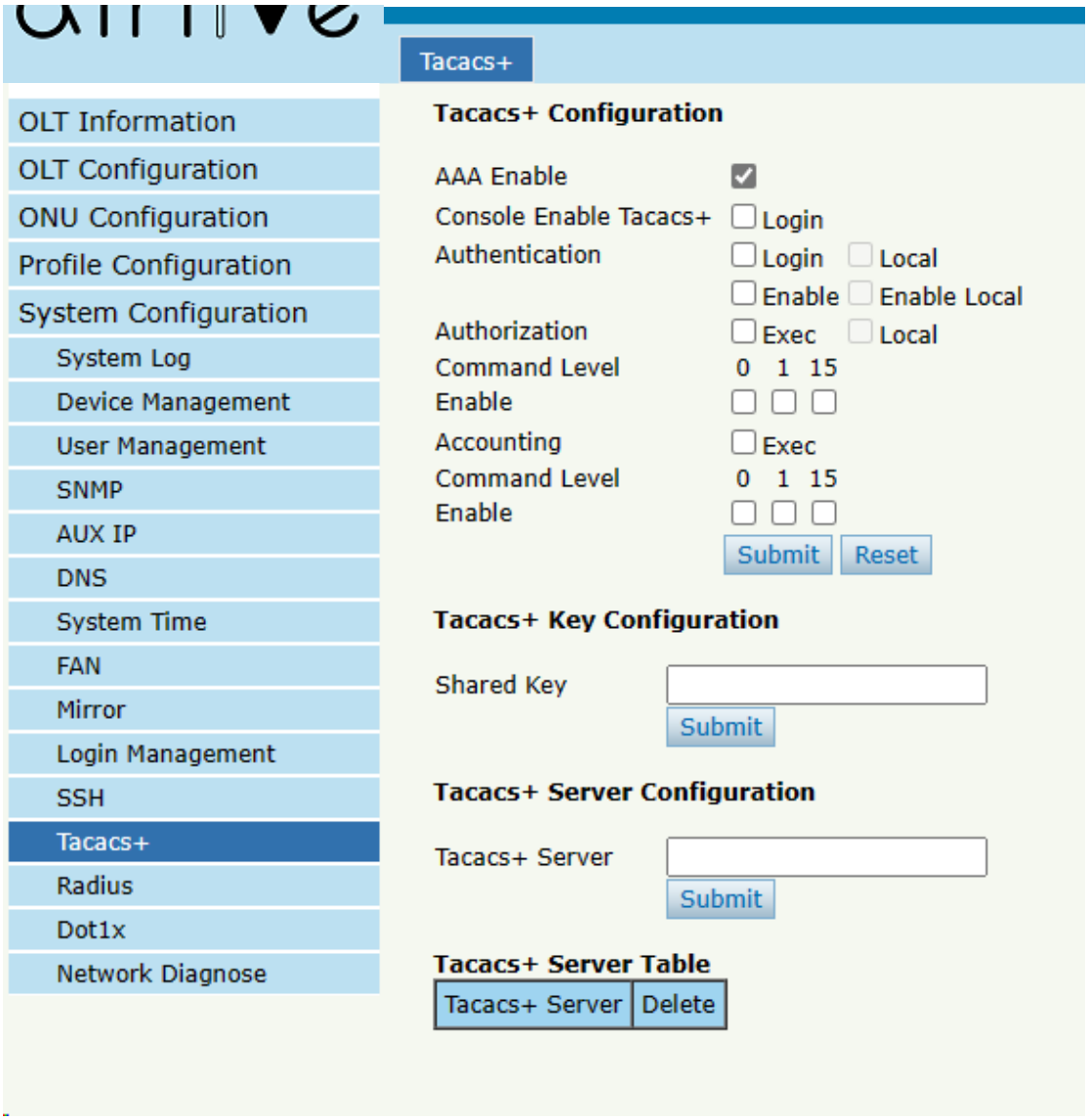



Figure 6.14-1: Tacacs+ Configuration

## 6.13 Radius

Radius is a protocol for authentication, authorization, and accounting information.The Radius server is responsible for receiving the user's connection request, authenticating the user, and then returning all the necessary configuration information to the client to send the service to the user.This interface allows you to configure the Radius server IP address

and other parameters.

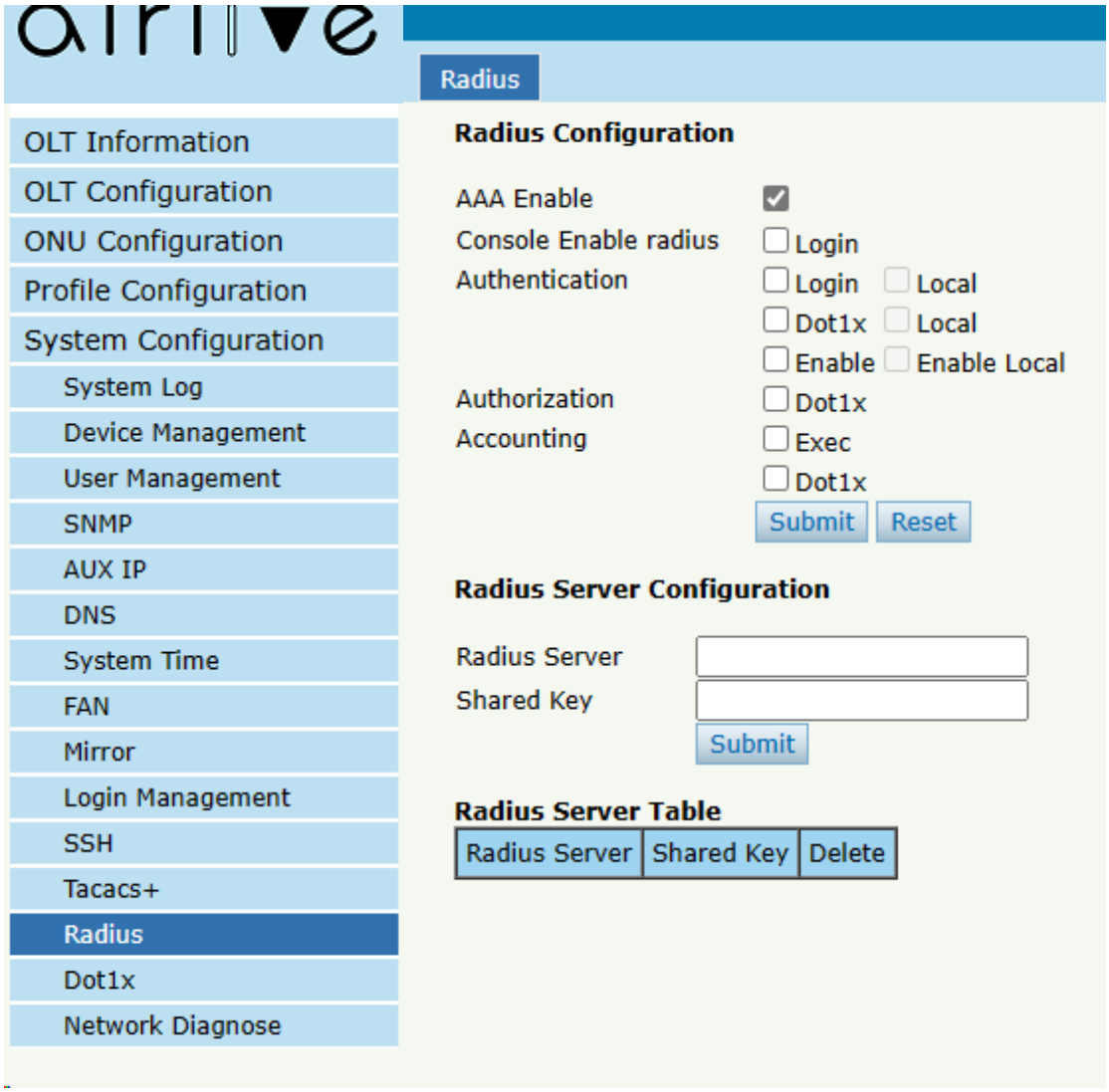



Figure 6.15-1: Radius Configuration

## 6.14 Dot1x

802.1x is a Client/ server-based access control and authentication protocol. It can restrict unauthorized users/devices from accessing a LAN/WLAN through an access port. After the authentication, normal data can pass through the Ethernet port.

## 6.14.1 Dot1x Information

This interface will display dot1x entry information when an 802.1x user passes authentication on the server, the server sends the authorization information to the device.

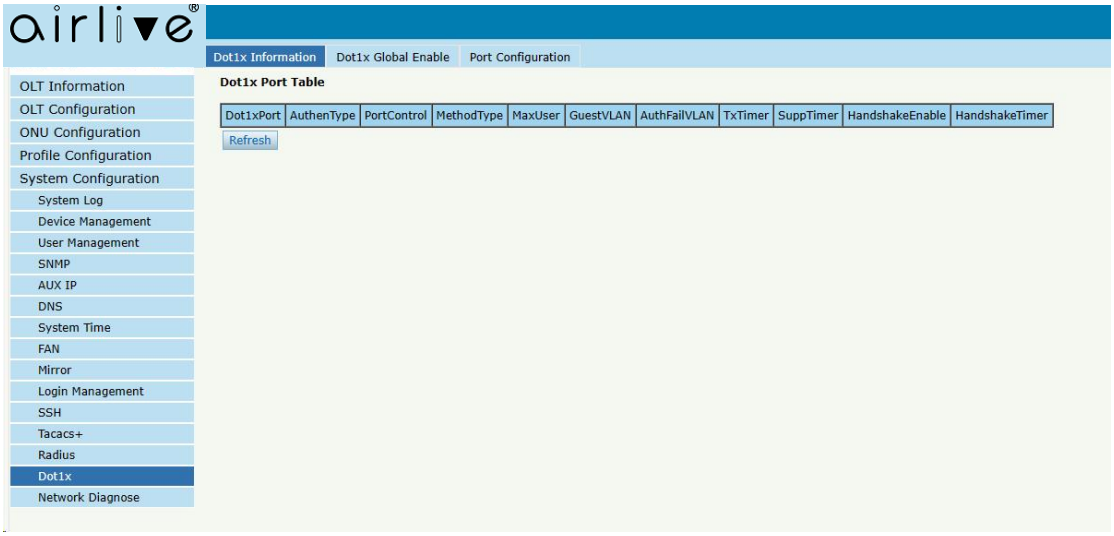



Figure 6.14-1:Dot1x Information

## 6.14.2 Dot1x Global Enable

You can enable Dot1x on this interface.

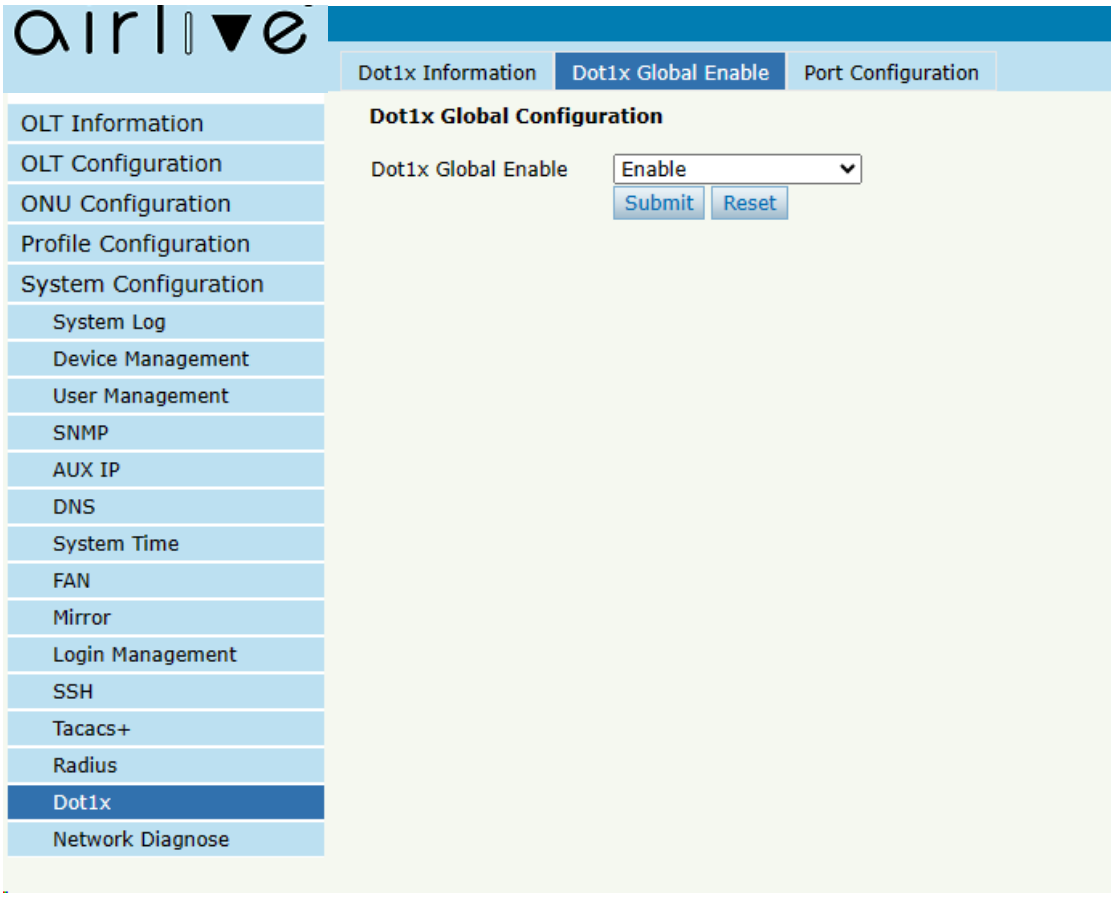



Figure 6.14-2:Dot1x Global Enable

## 6.14.3 Port Configuration

You can configure detailed Dot1x parameters for a specified port on this interface.

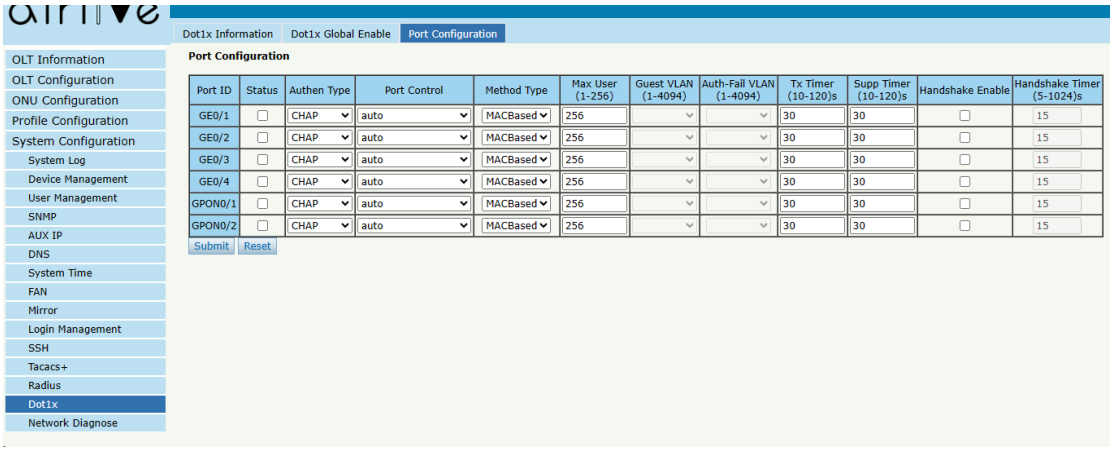



Figure 6.14-3:Port Configuration

## 6.15 Network Diagnose

### 6.15.1 Ping Diagnose

**System Configuration → Diagnose→ Ping Diagnose**

This interface is used to diagnose network connectivity.

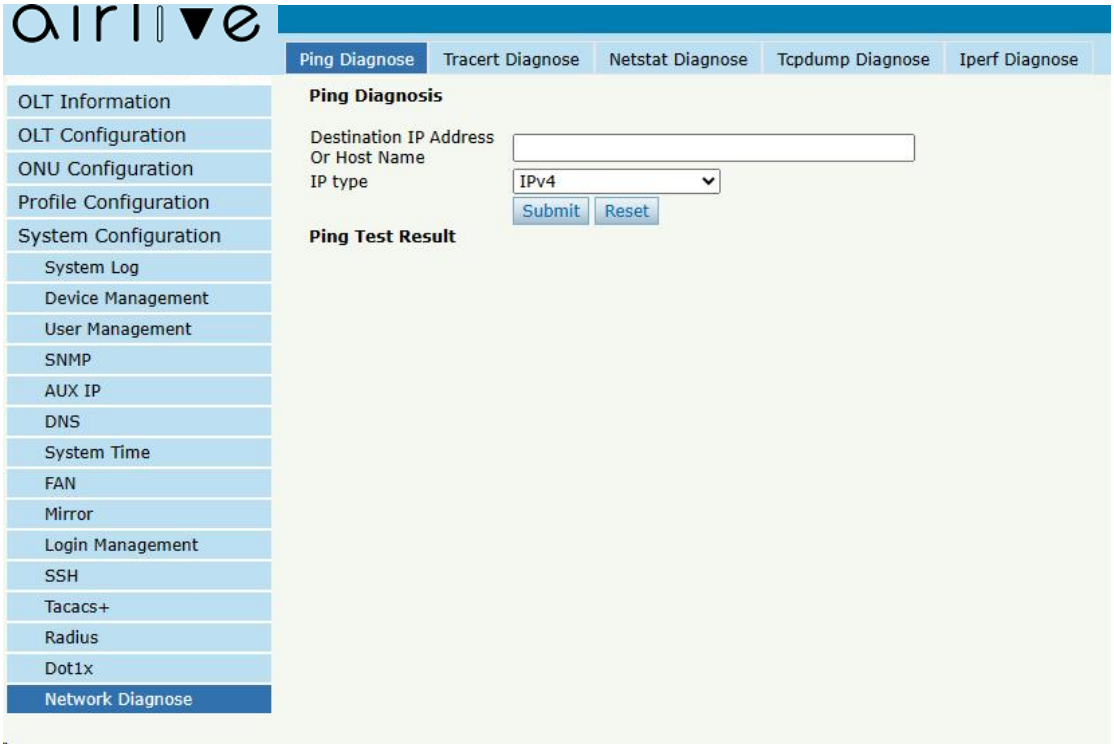



Figure 6.15-1: Ping Diagnose Configuration

### 6.15.2 Tracert Diagnose

**System Configuration → Diagnose→ Tracert Diagnose**

This interface is used to track and diagnose routing and forwarding.

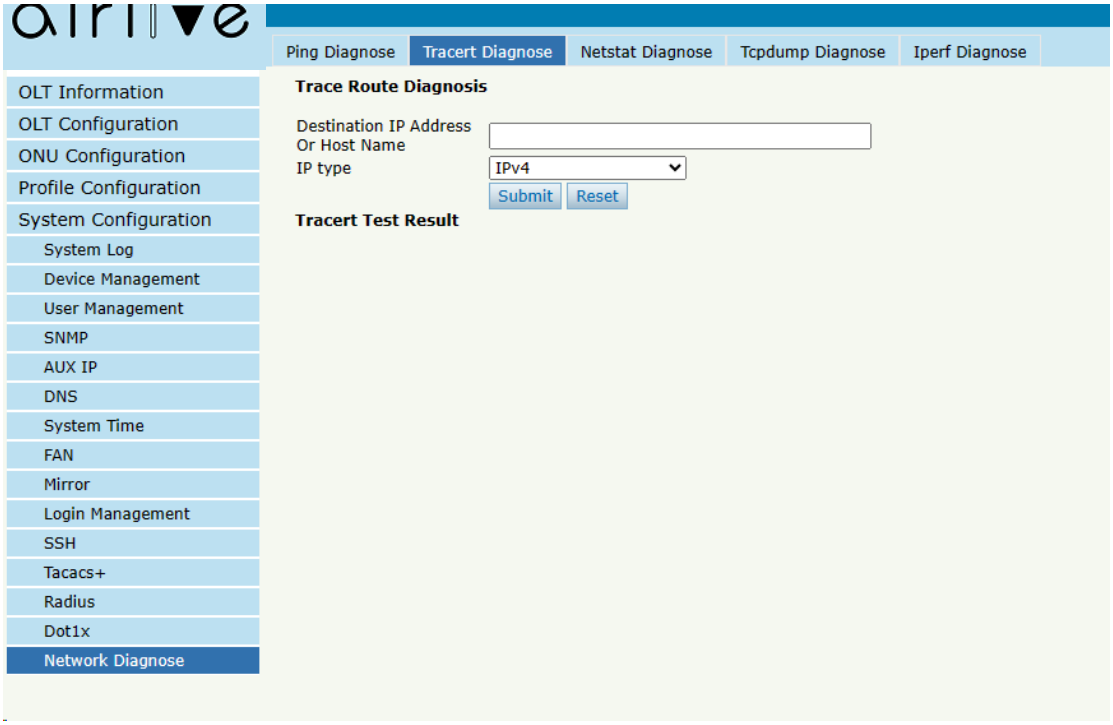



Figure 6.15-2: Tracert Diagnose Configuration

## 6.15.3 Netstat Diagnose

**System Configuration → Diagnose→ Netstat Diagnose**

This is a network test.

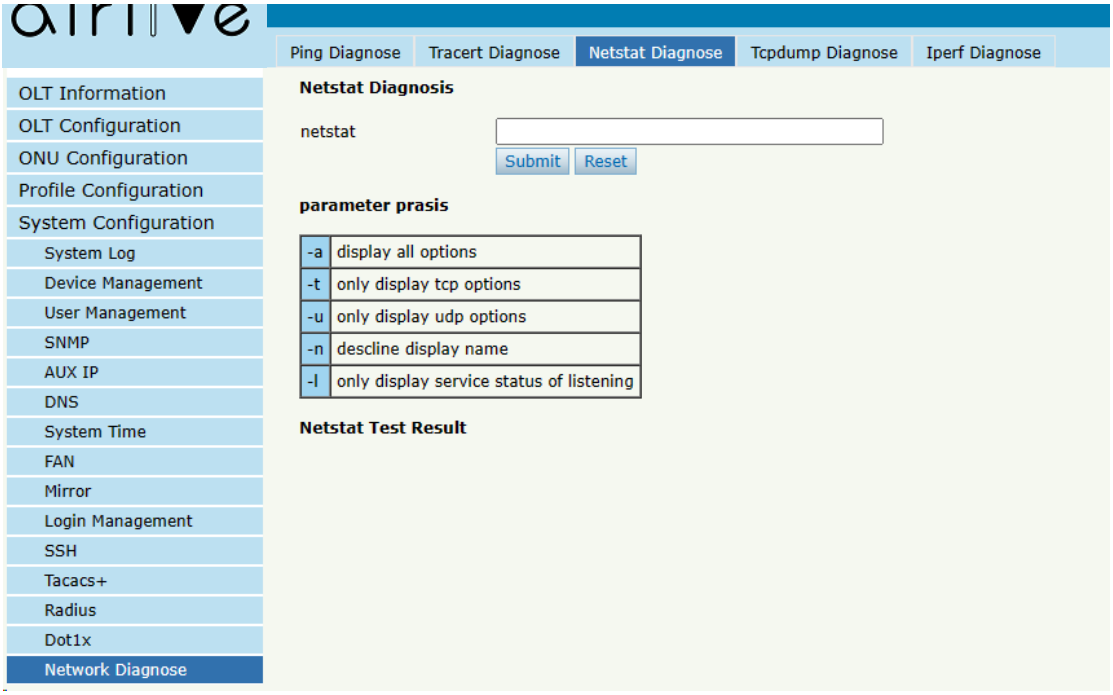



Figure 6.15-3: Netstat Diagnose Configuration

## 6.15.4 Tcpdump Diagnose

**System Configuration → Diagnose→ Tcpdump Diagnose**

This is the PCP link test.

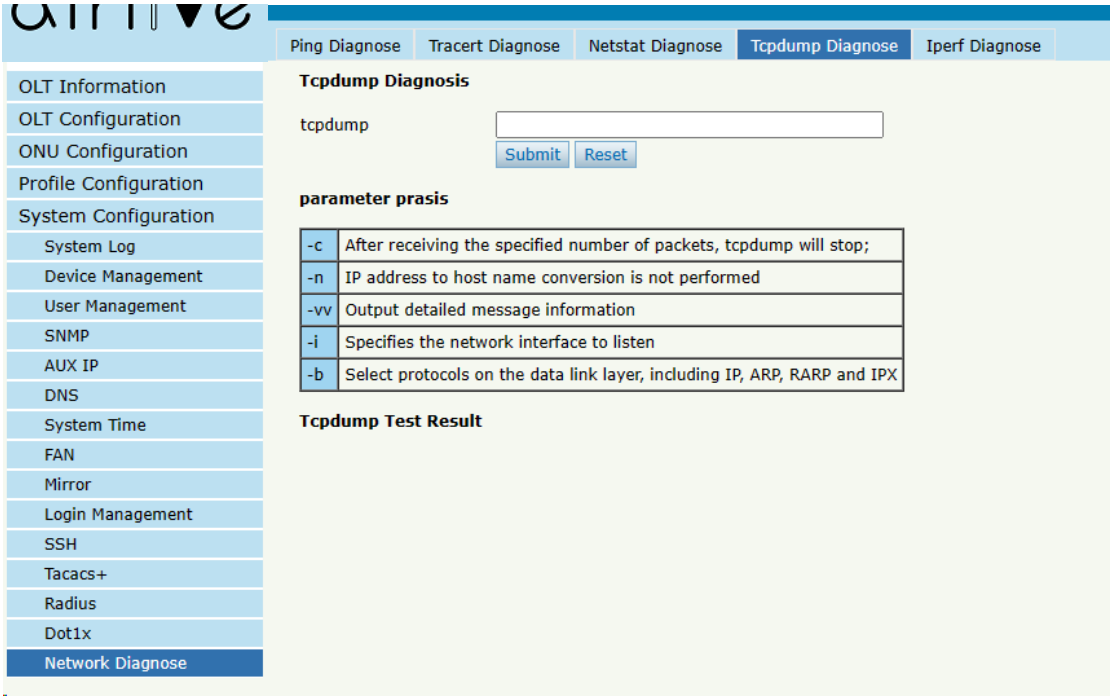


Figure 6.15-4: Tcpdump Diagnose Configuration

## 6.15.5 Iperf Diagnose

**System Configuration → Diagnose→ Iperf Diagnose**

This is Iperf-related testing.

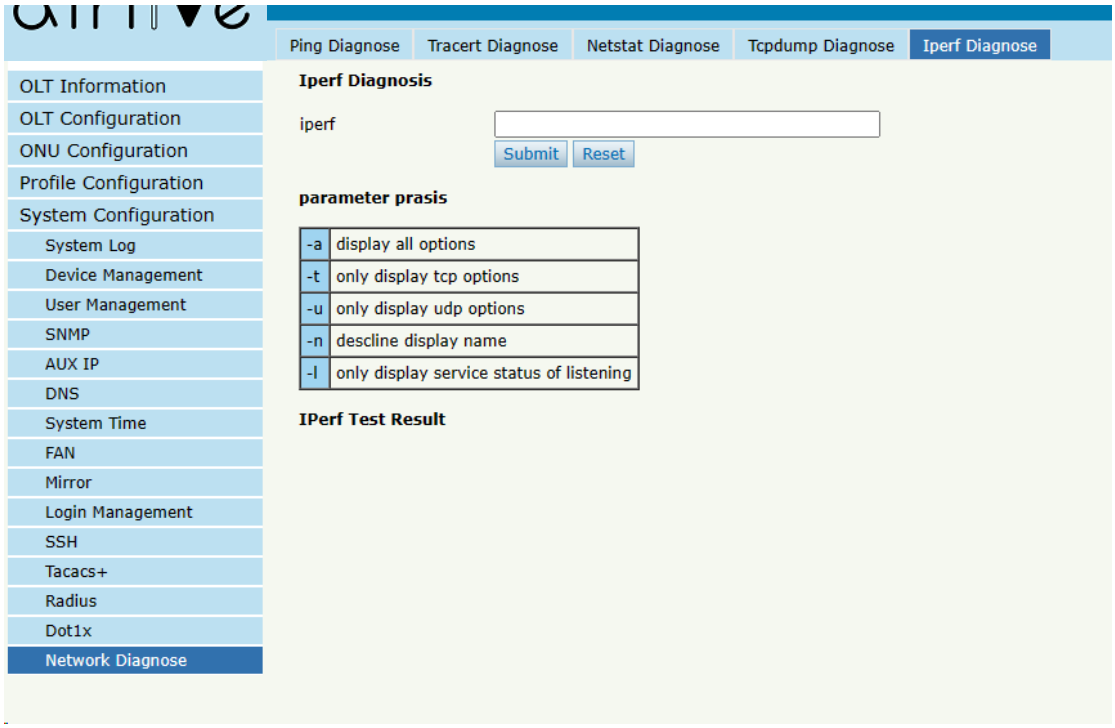



Figure 6.15-5: Iperf Diagnose Configuration