# AirLive
# XG(S)-PON OLT-2XGS
# XG(S)-PON OLT-2XGS-WDM
# 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 (WDM) |
|---|---|---|
| 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) |
| PON Port | QTY | 2 |
| | Physical Interface | 2*XG(S)-PON |
| Management Ports | | 1*10/100/1000BASE-T out-band port(AUX), 1*CONSOLE port, 1*USB2.0, 1*Type-C USB console. |
| Management Mode | | SNMP, WEB, and CLI (Console/Telnet/SSH) |

### 1.1.2 OS Requirement

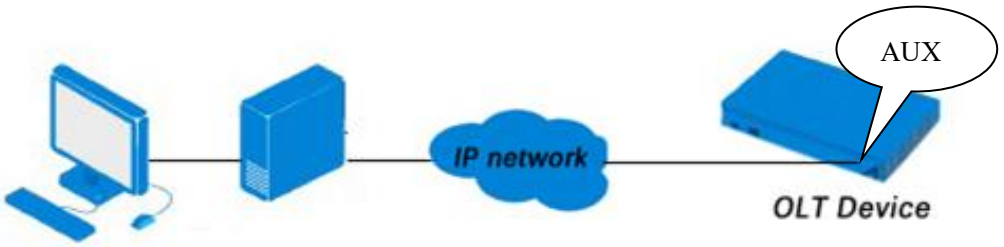
For OLT management, it supports or requires the following operation system.

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 the 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#**".

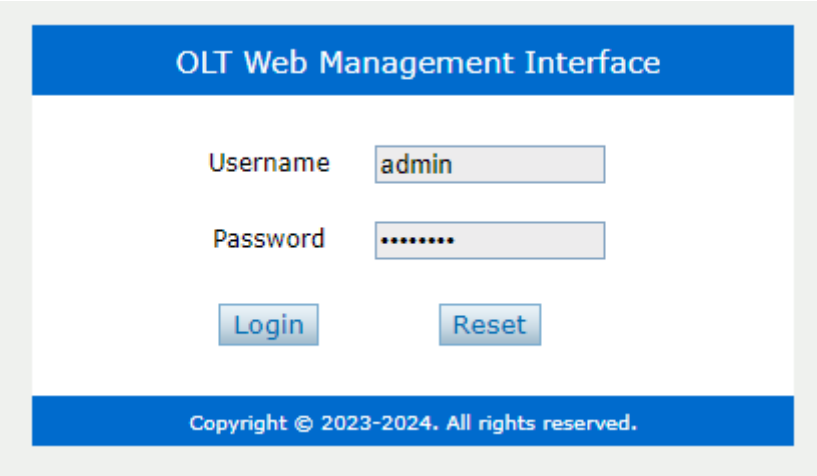



Figure 2.1-1: Login

## 2.2 Device Information

The OLT ports connection status are shown at 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 needed.

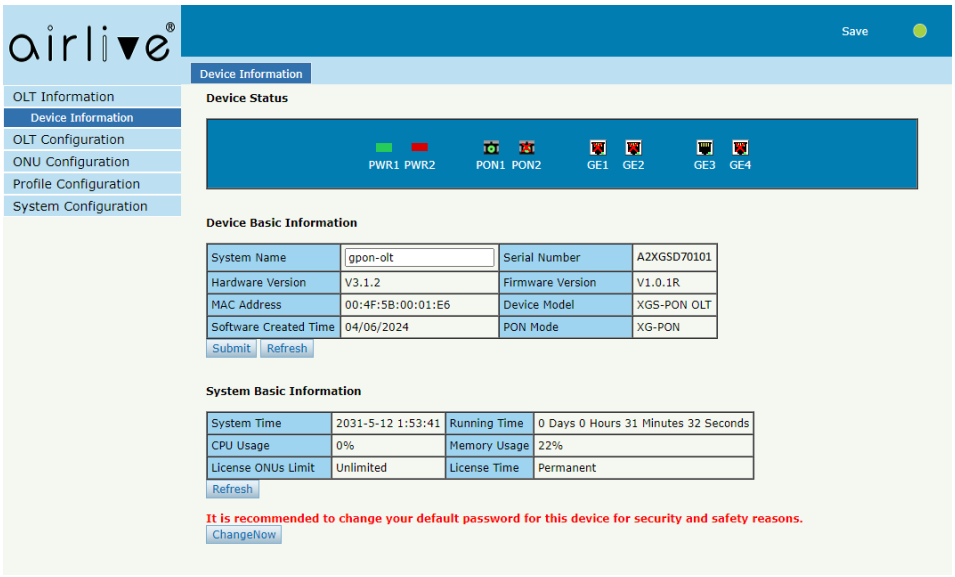



Figure 2.2-1: Device Information

# 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.

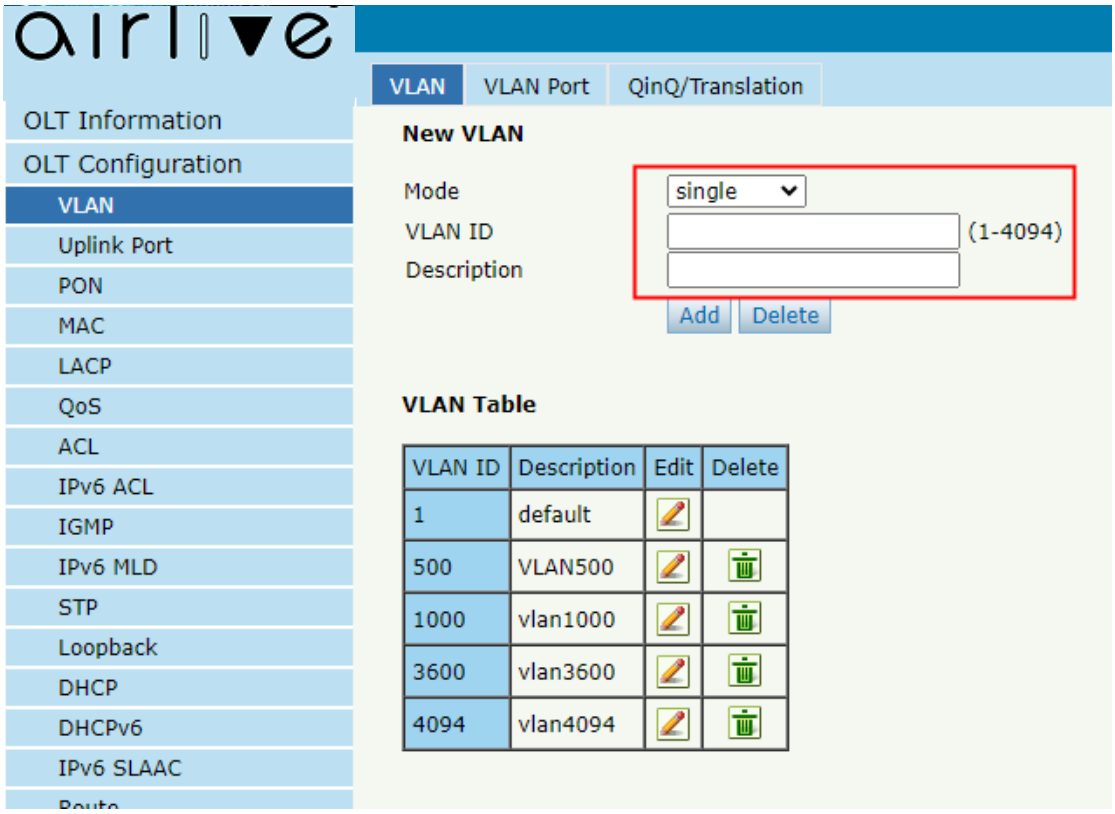



Figure 3.1-1: Create New VLAN

## 3.1.2 VLAN Port

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

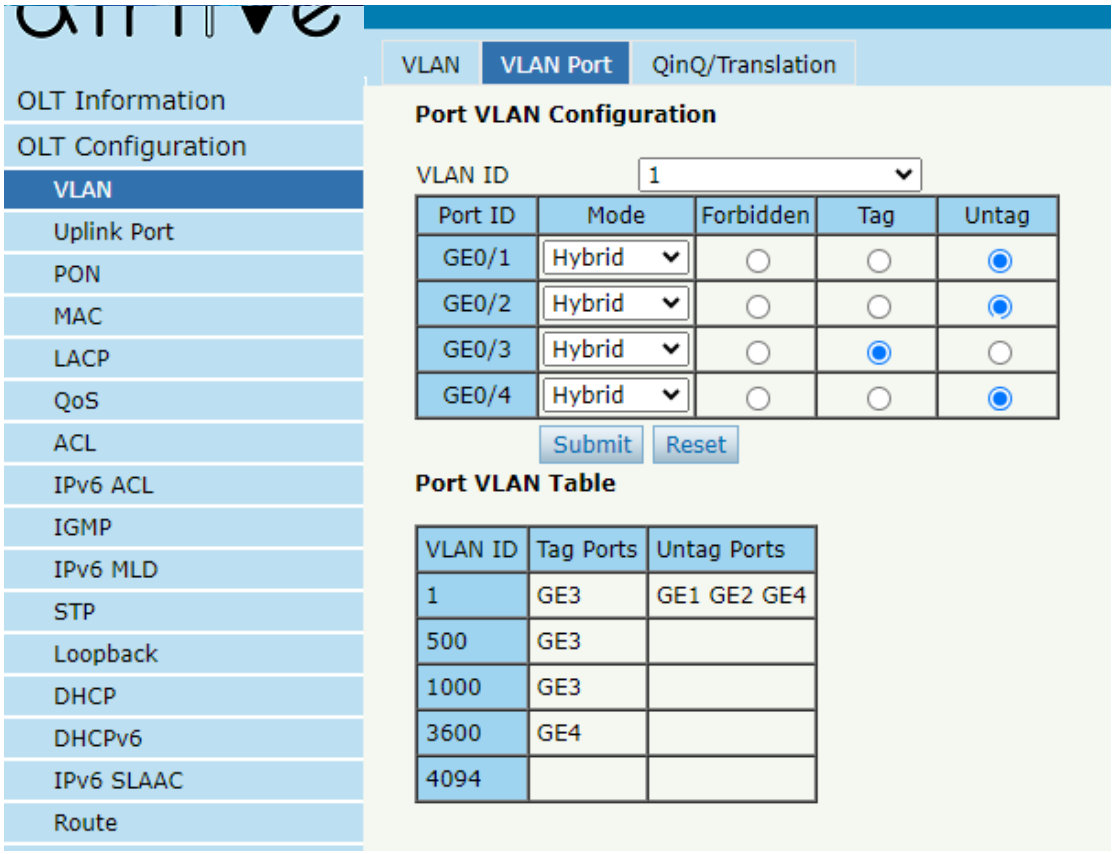



Figure 3.1-2: Add VLAN Port

## 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.

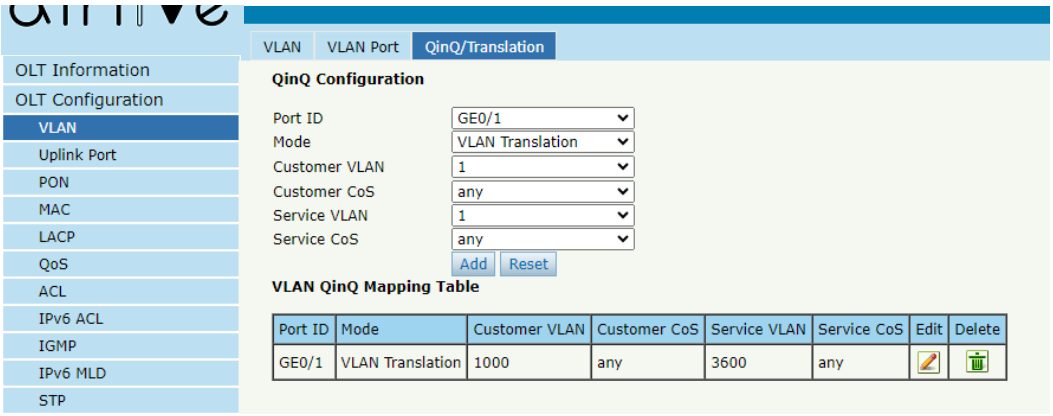



Figure 3.1-3: QinQ/Translation Configuration

# 3.2 Uplink Port

Uplink 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.

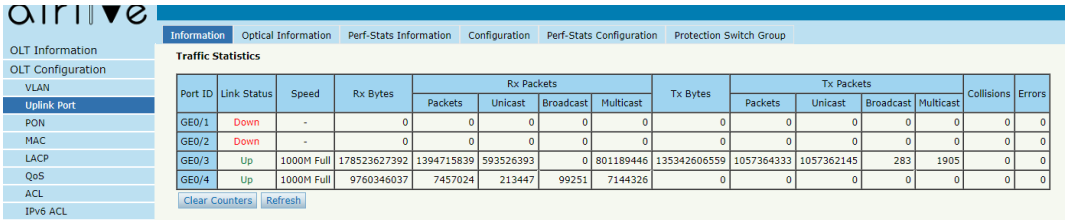



Figure3.2-1: Uplink Ports Traffic Statistics

## 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.

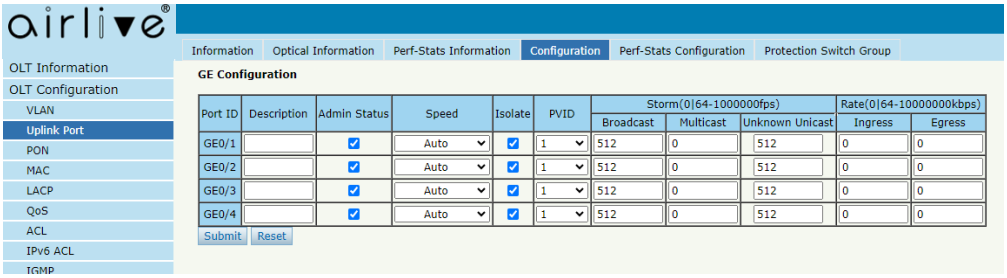



Figure3.2-2: Uplink Ports Configuration

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.

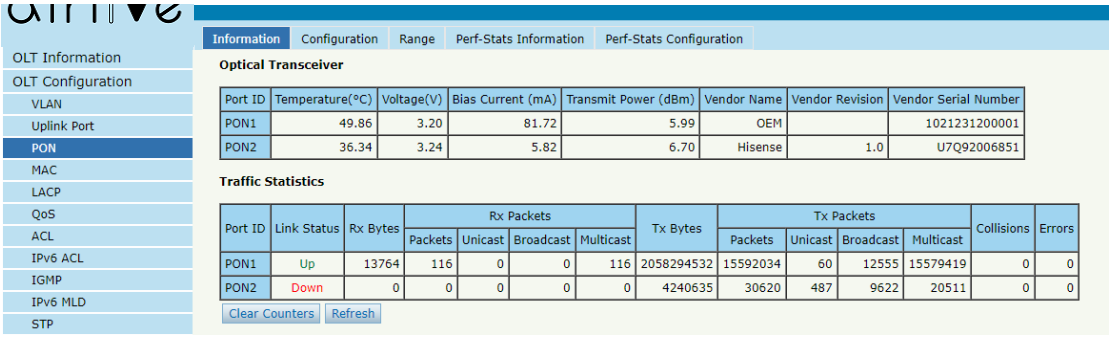



Figure3.3-1: PON Information

## 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.

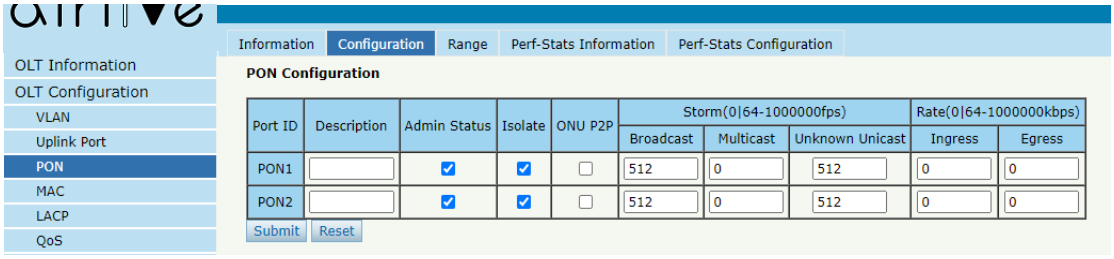



Figure3.3-2: PON configuration

## 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.

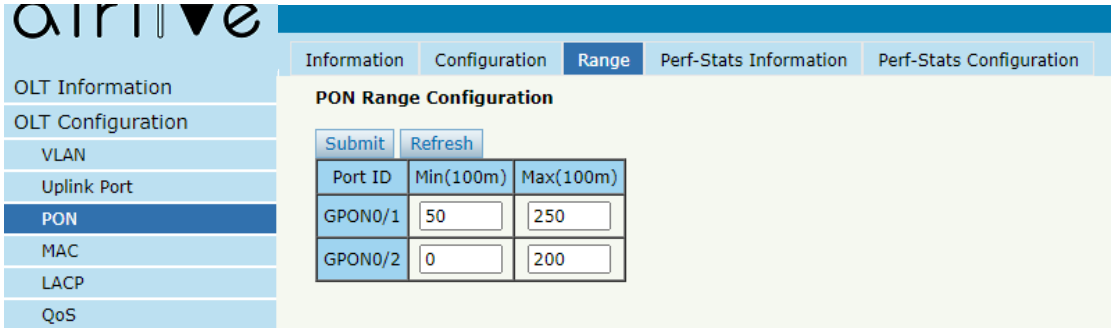



Figure3.3-3: PON Range Configuration

## 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.

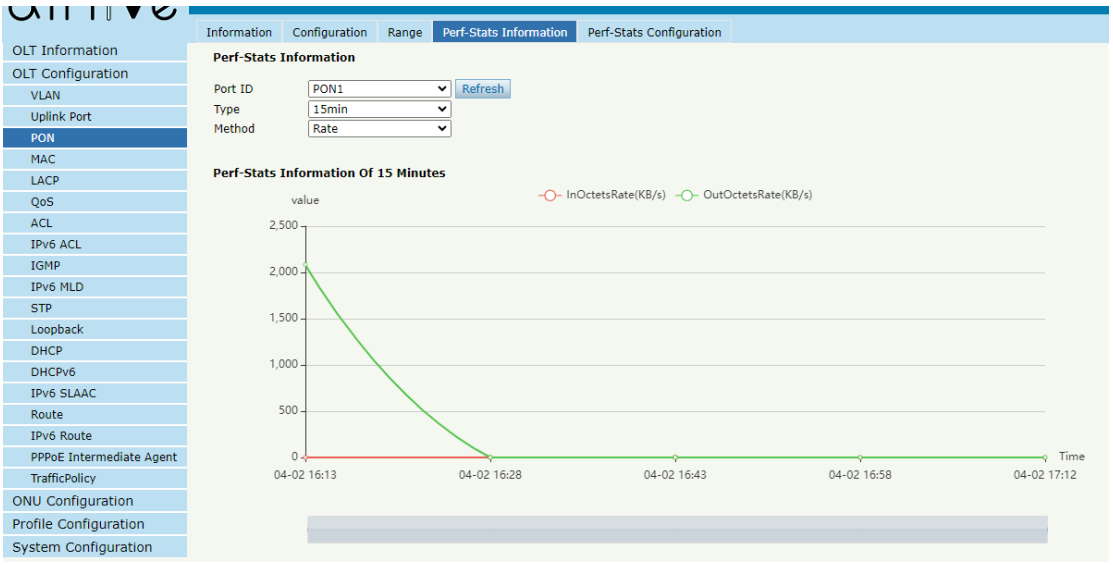



Figure3.3-4: PON Perf-Stats Information

## 3.3.5 Perf-Stats Configuration

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

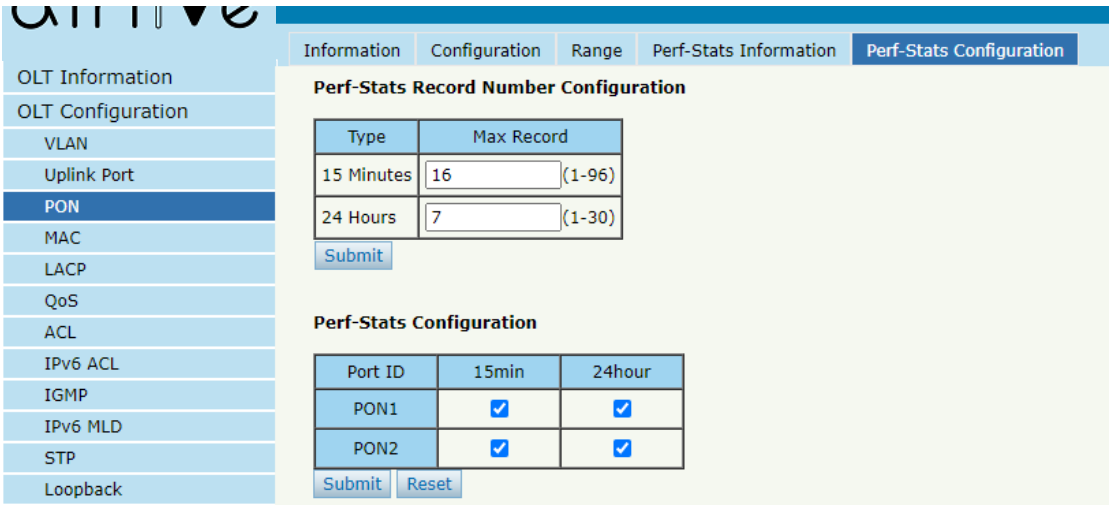



Figure3.3-5: PON Perf-Stats Configuration

# 3.4 MAC

In this section, you can check the MAC address table of the 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.

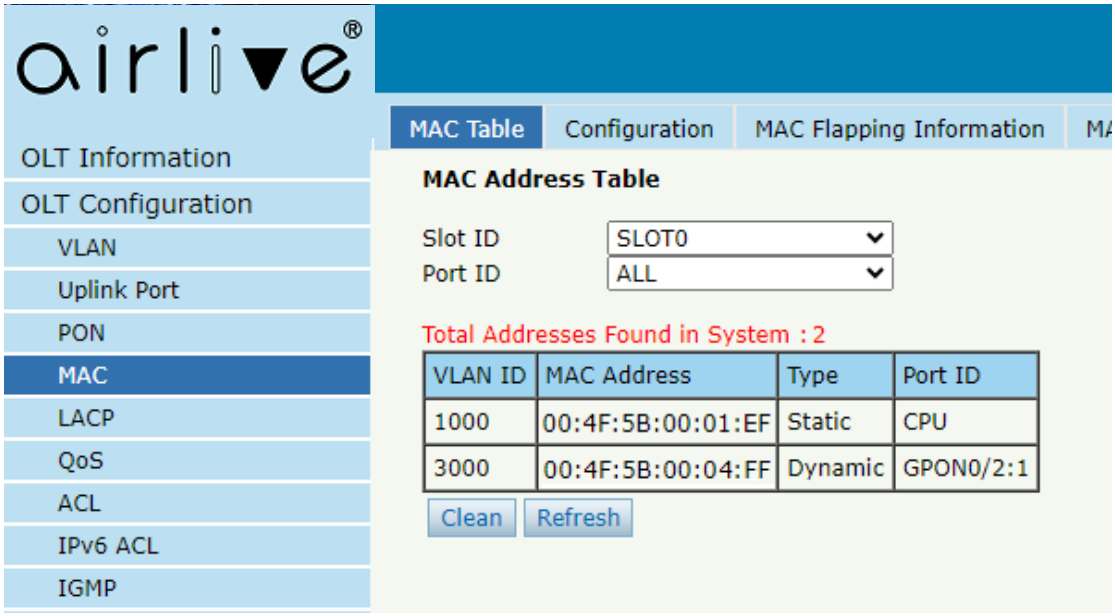



Figure3.4-1: MAC Address Table

## 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.

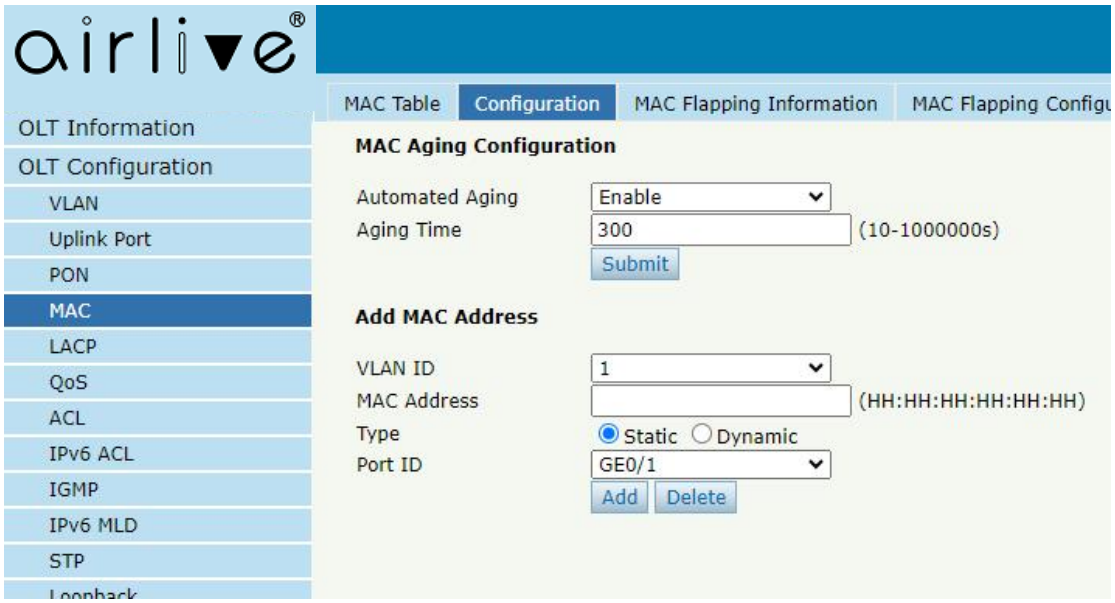



Figure 3.4-2: MAC Configuration

## 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.

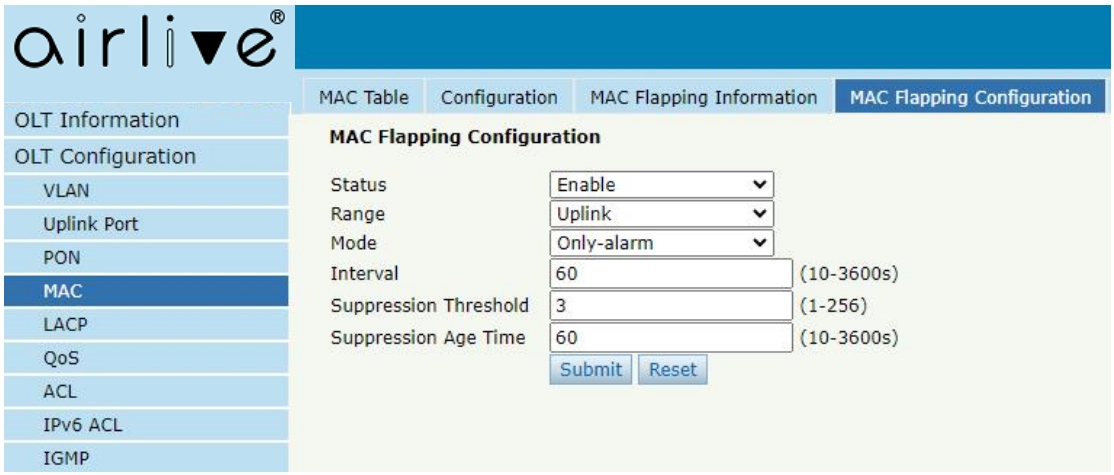



Figure 3.4-4: MAC Flapping Configuration

### 3.4.5 MAC Flapping Port Configuration

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

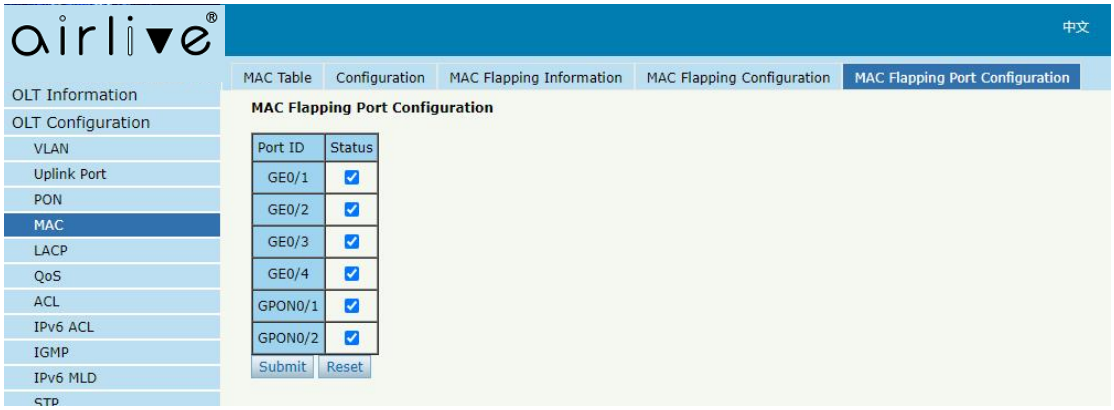



Figure 3.4-5: MAC Flapping Port Configuration

## 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.

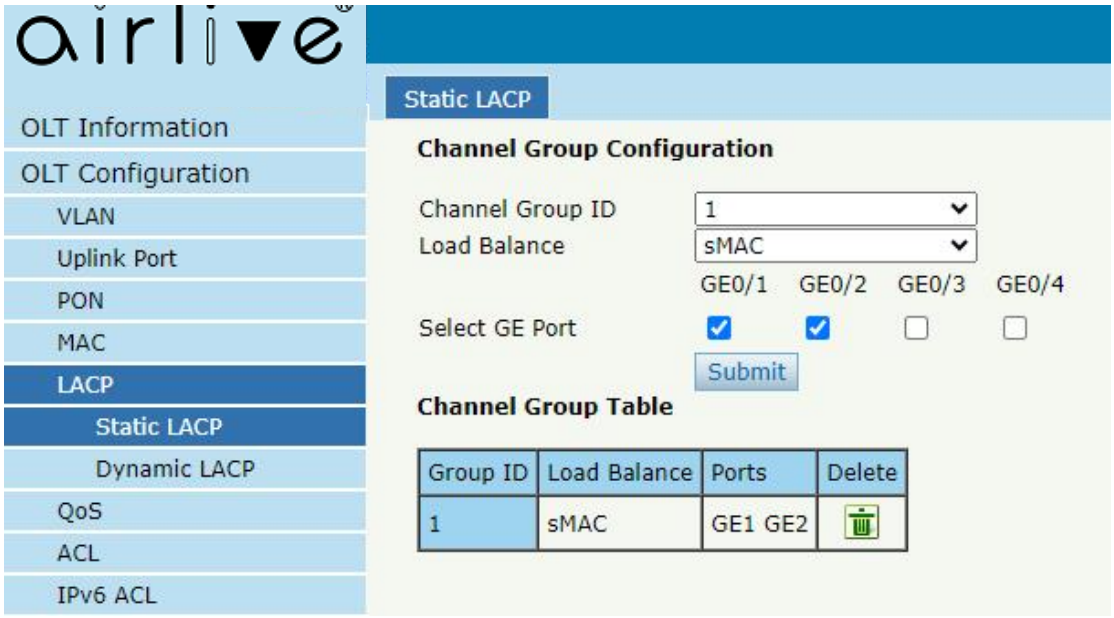



Figure 3.5-1: Create Static LACP

## 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 different channel group.

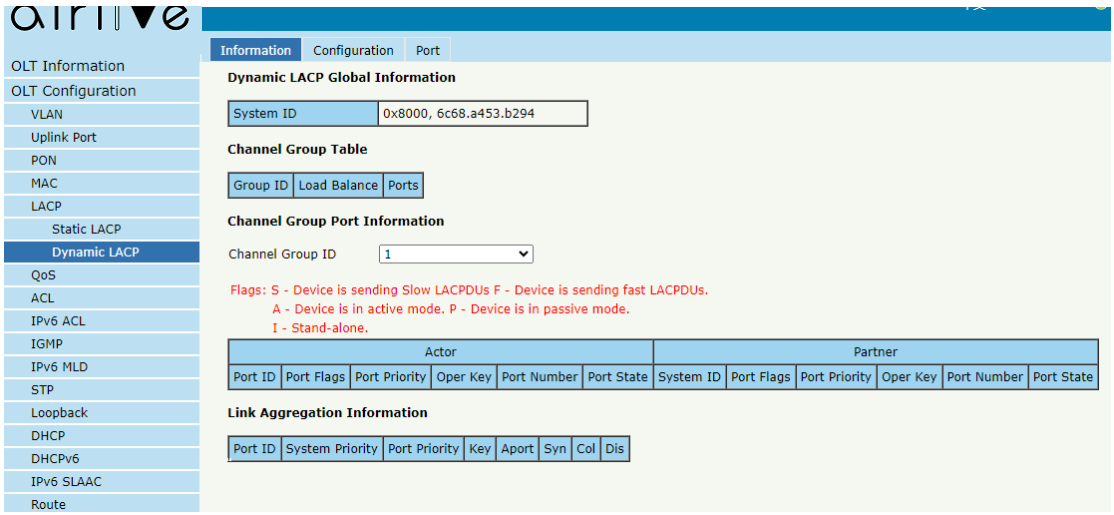



Figure 3.5-2: Dynamic LACP Information

# 3.6 QoS

OLT Configuration→QoS

When the 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 traffic passes though only when there is remaining bandwidth.

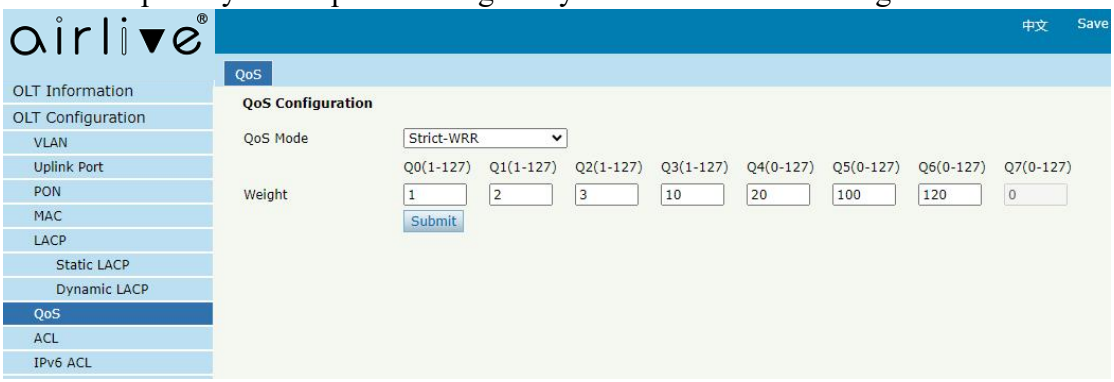



Figure 3.6-1: QoS Configuration

# 3.7 ACL

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

## 3.7.1 IP Filter

OLT Configuration→ACL→IP Filter
The filter is basic on the IP address, including source IP address and destination IP address.

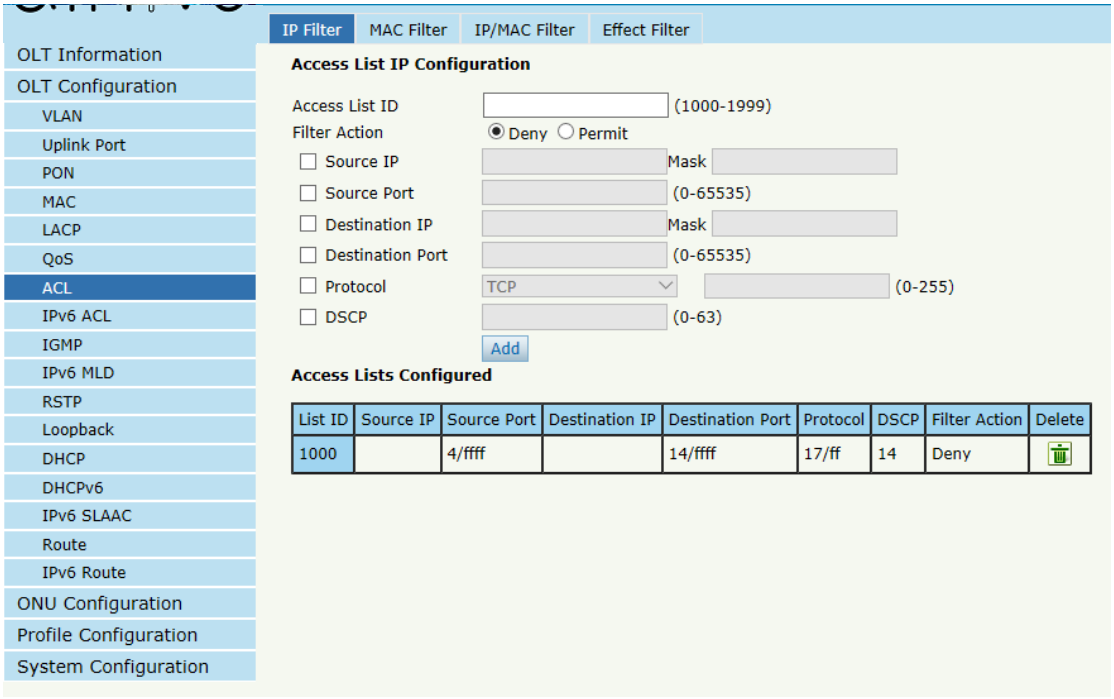



Figure 3.7-1: IP Filter

## 3.7.2 MAC Filter

OLT Configuration→ACL→MAC Filter
The filter is basic on the MAC address, including source MAC address and destination MAC address.

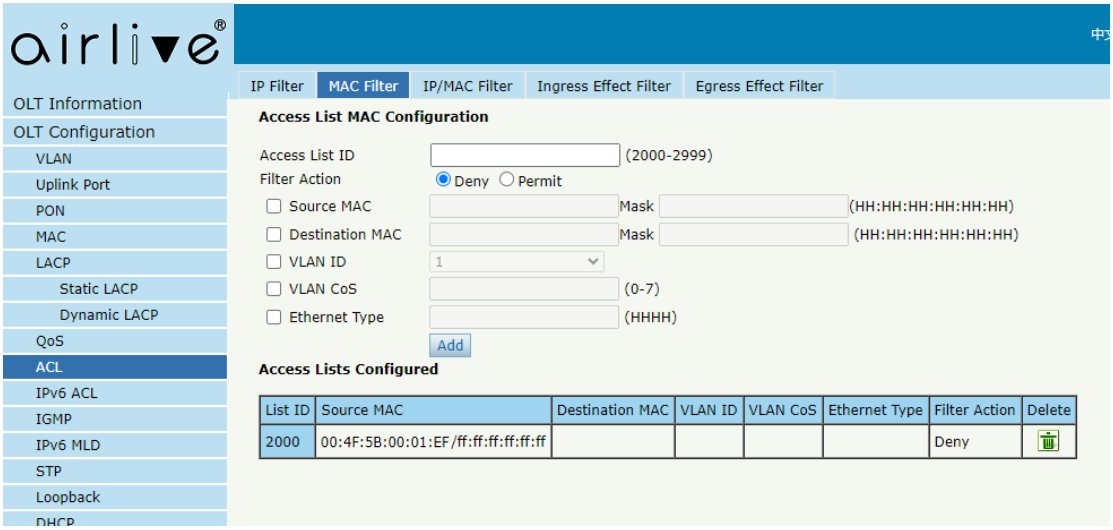



Figure 3.7-2: MAC Filter

## 3.7.3 IP/MAC Filter

OLT Configuration→ACL→IP/MAC Filter
This filter mix the IP address and MAC address, including source MAC address and

destination MAC address, source IP address and destination IP address.

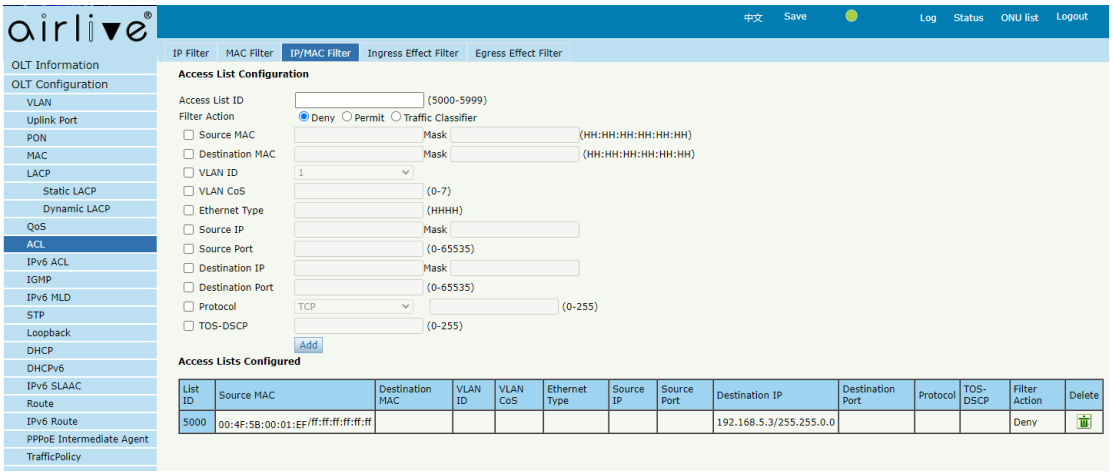



Figure 3.7-3: IP/MAC Filter

## 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.

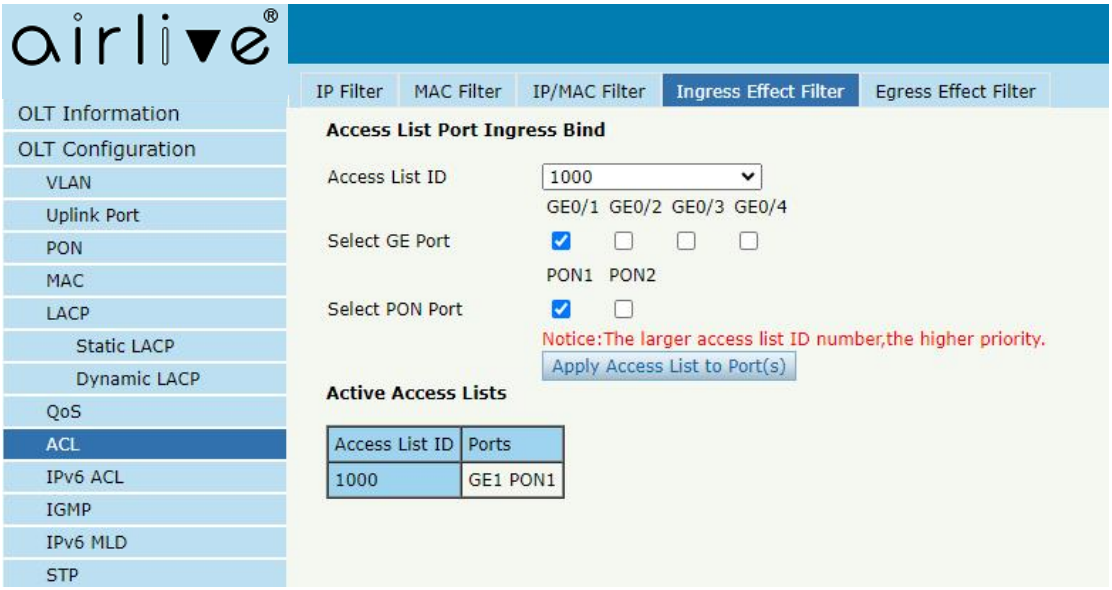



Figure 3.7-4: Bind Security Filter(Ingress)

## 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.

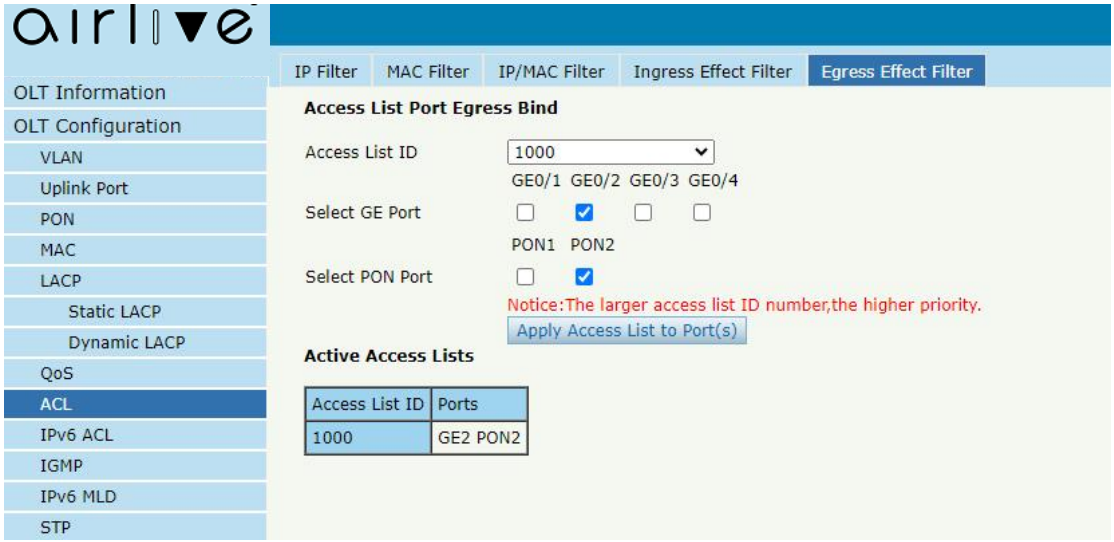



Figure 3.7-5: Bind Security Filter(Egress)

# 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.

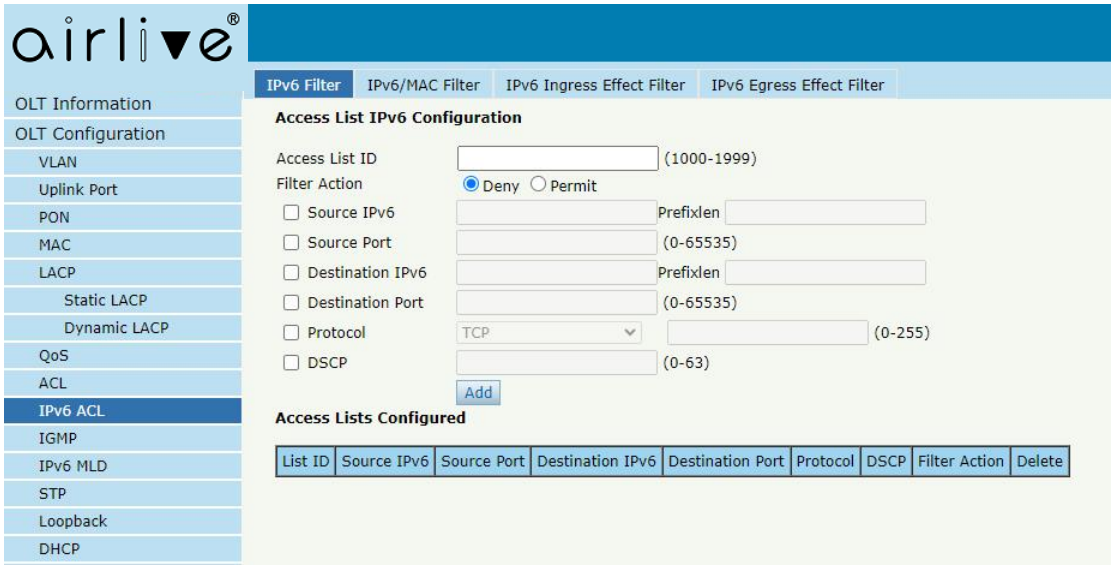



Figure 3.8-1: IPv6 Filter

## 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.

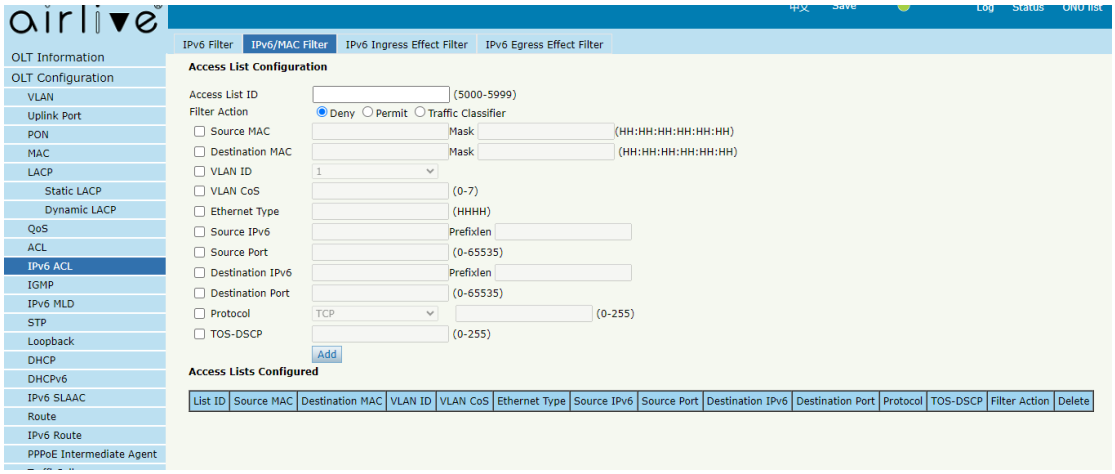



Figure 3.8-2: IPv6/MAC Filter

## 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.

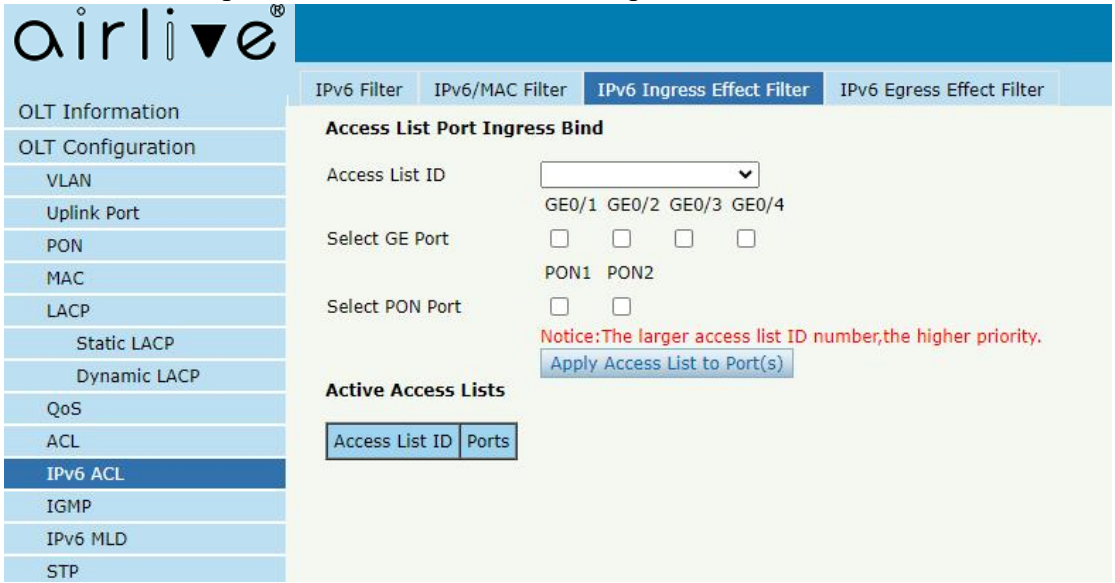



Figure 3.8-3: Bind IPv6 Security Filter(Ingress)

### 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.

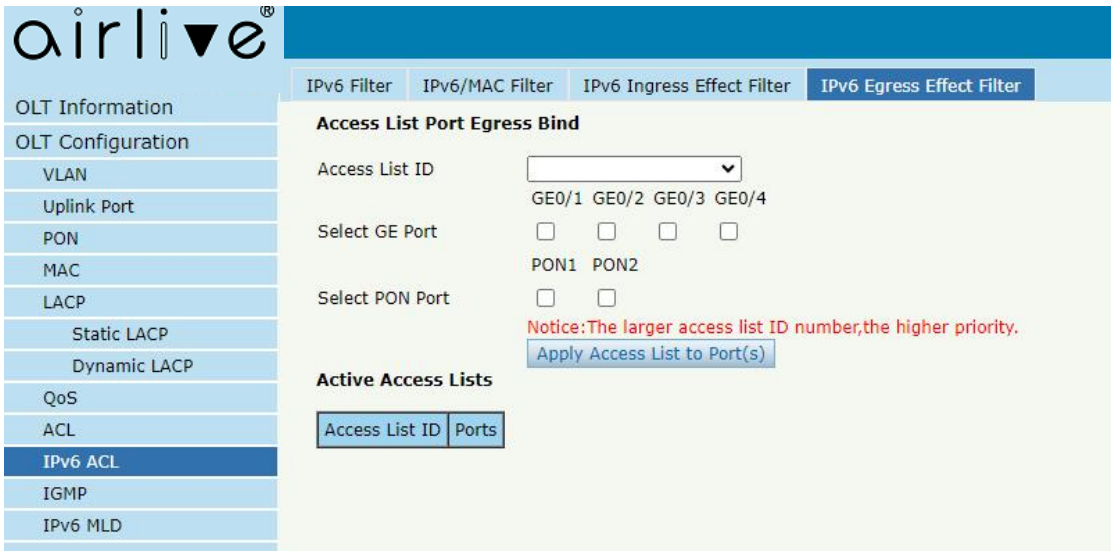



Figure 3.8-4: Bind IPv6 Security Filter(Egress)

## 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.

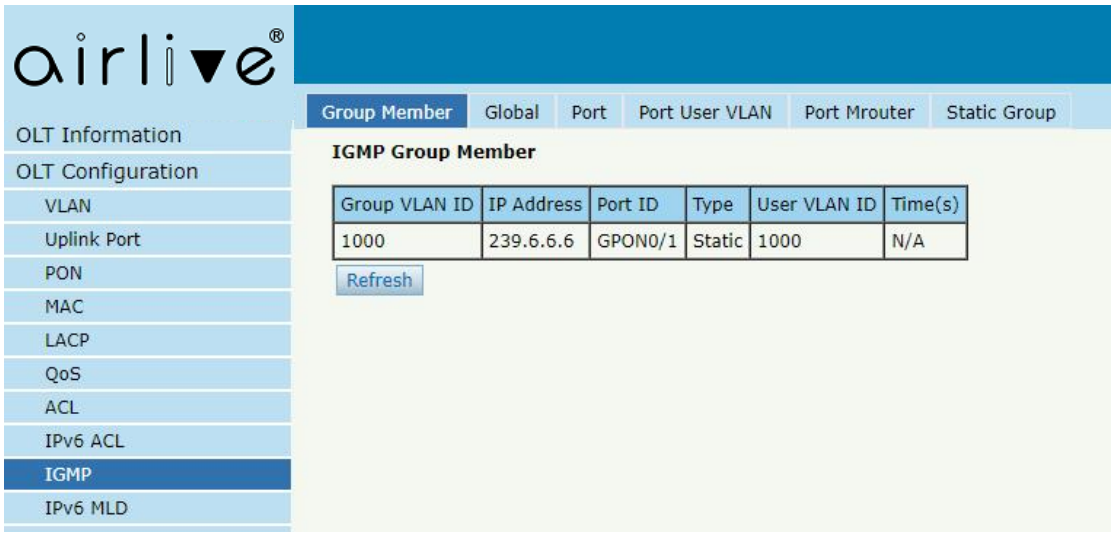



Figure 3.9-1: Group Member

## 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.

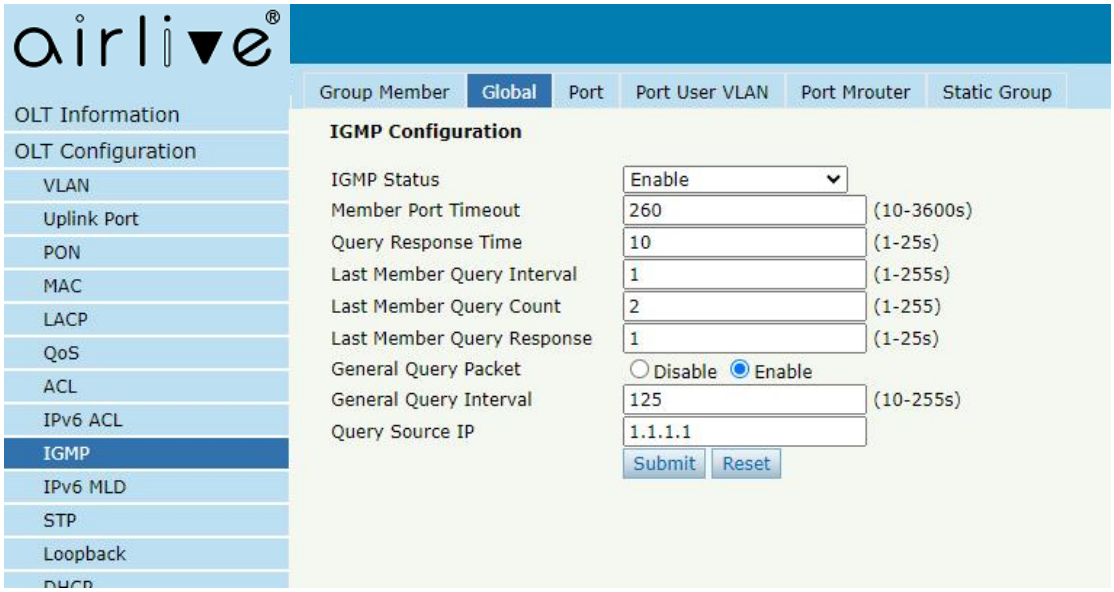



Figure 3.9-2: IGMP Global

## 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.

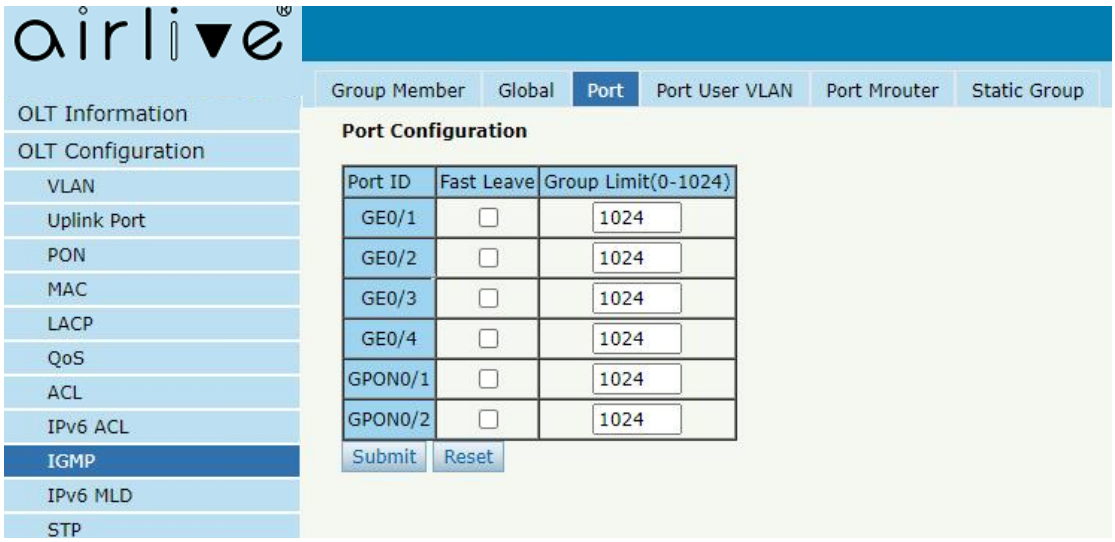



Figure 3.9-3: IGMP Port

## 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.

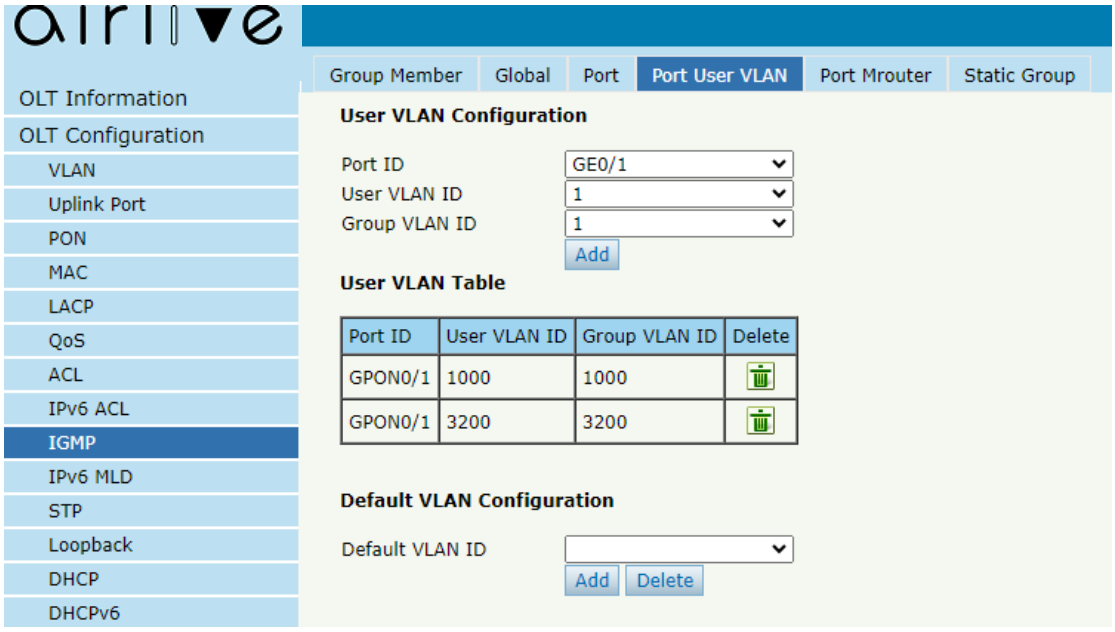



Figure 3.9-4: IGMP Port User VLAN

## 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.

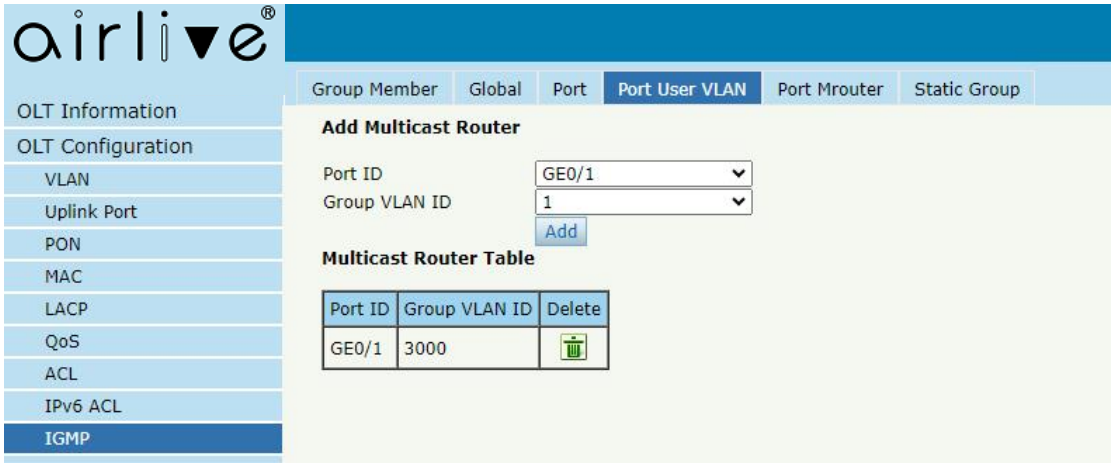



Figure 3.9-5: IGMP Port Mroute

## 3.9.6 Static Group

OLT Configuration →IGMP→Static Group
This configuration is used to bind multicast IP address and VLAN ID.

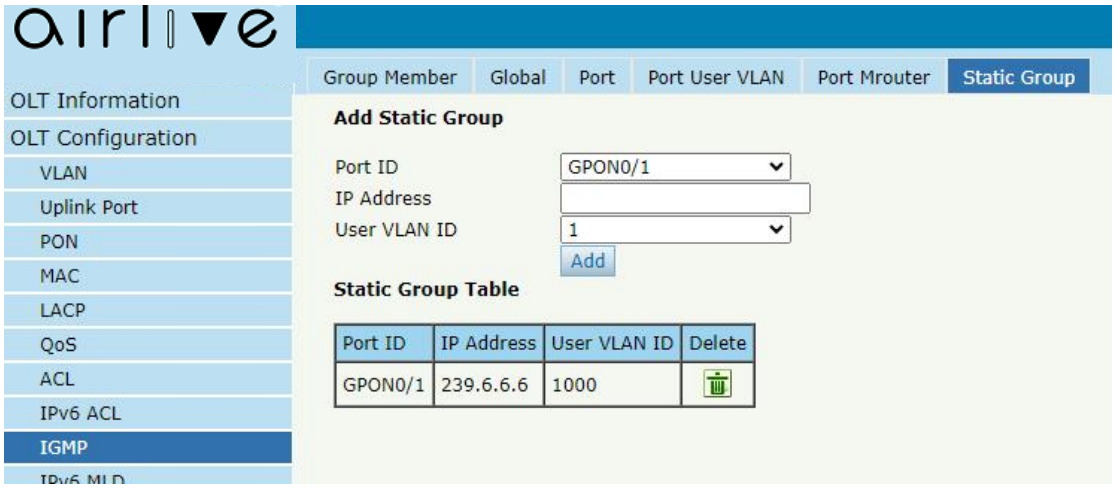



Figure 3.9-6: IGMP Static Group

# 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.

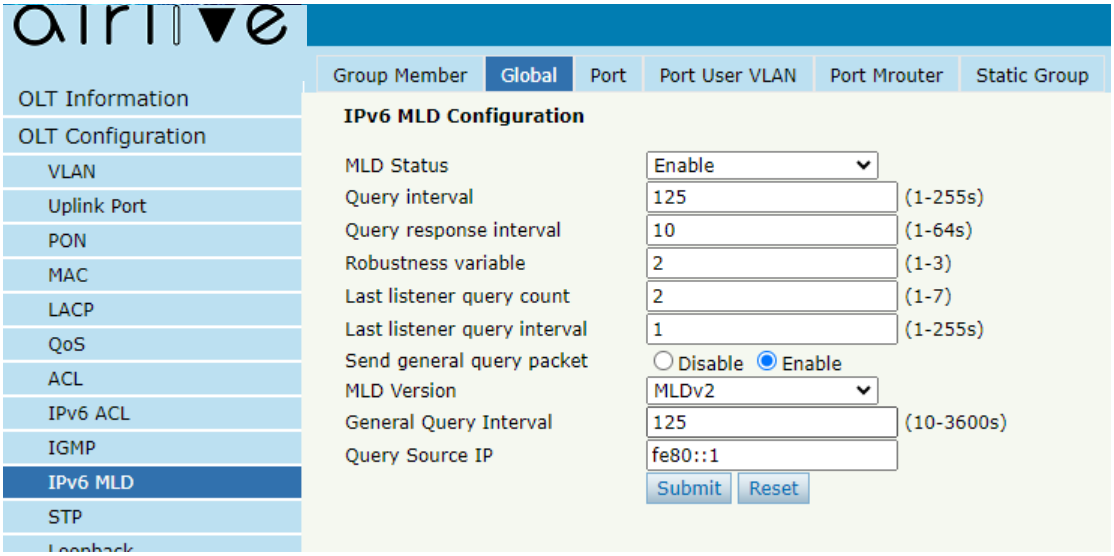



Figure 3.10-2: IPv6 MLD Global

## 3.10.3 Port

OLT Configuration → IPv6 MLD → Port
This page is used to configure group limit value, fast leave for each port.

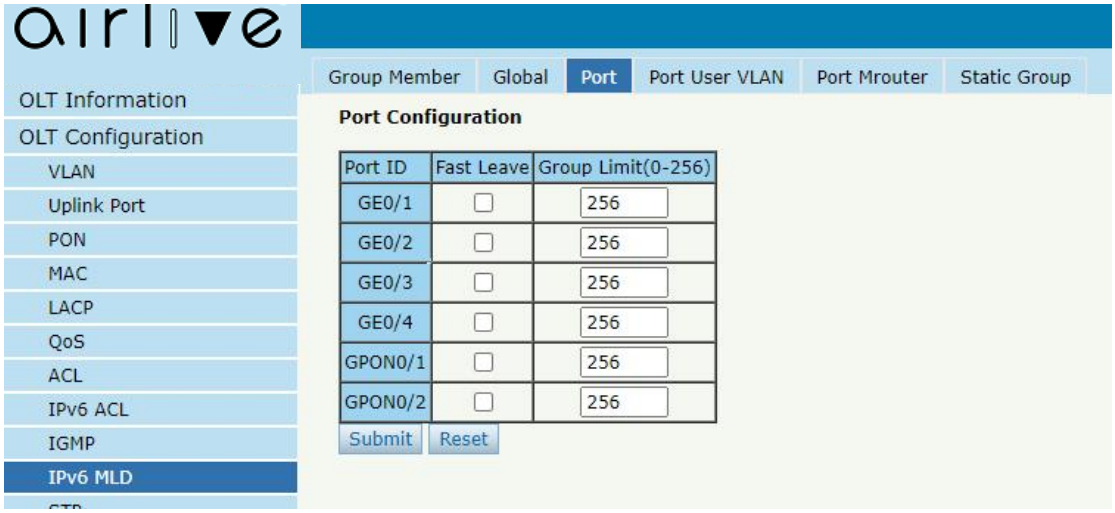



Figure 3.10-3: IPv6 MLD Port

## 3.10.4 Port User VLAN

OLT Configuration→IPv6 MLD→Port User VLAN
This page is used to configure MLD VLAN for OLT.

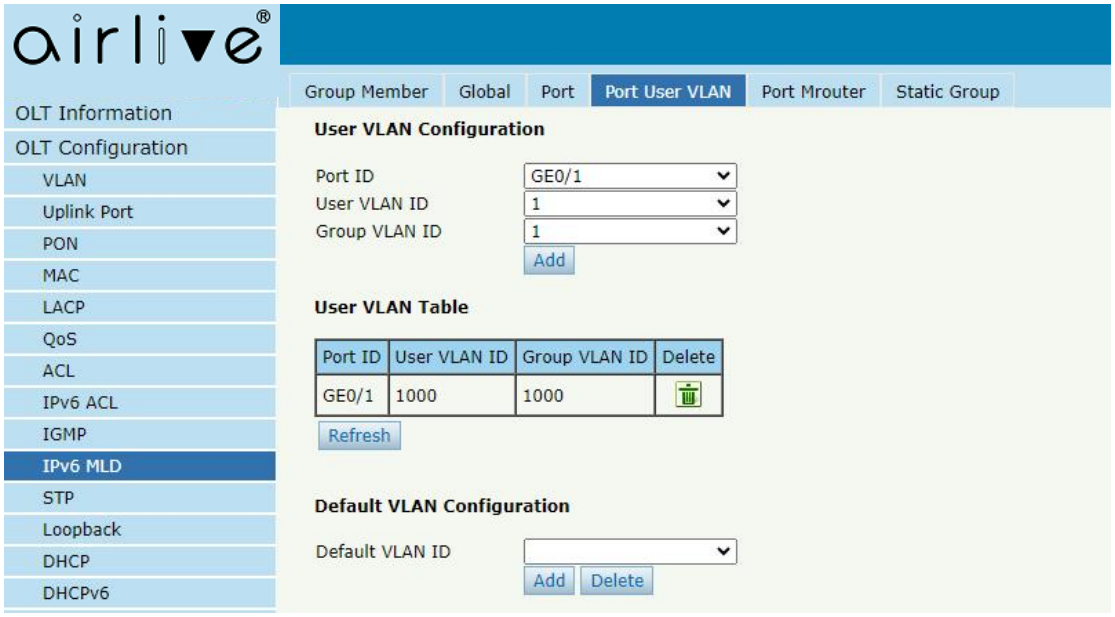



Figure 3.10-4: IPv6 Port User VLAN

## 3.10.5 Port Mrouter

OLT Configuration → IPv6 MLD → Port Mrouter
This page is used to set a port as IPv6 multicast router port.

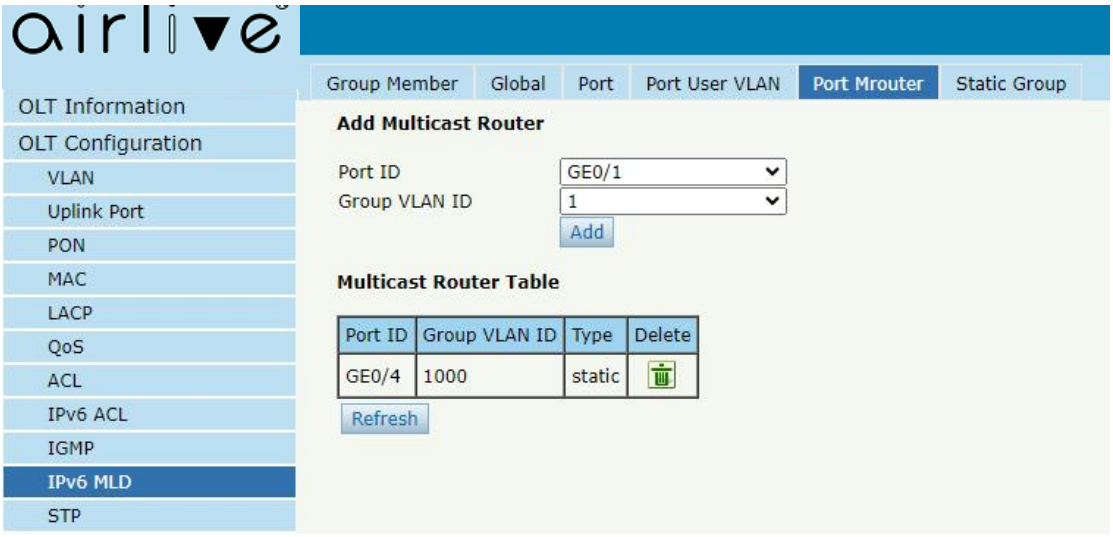



Figure 3.10-5: IPv6 MLD Port Mrouter

## 3.10.6 Static Group

OLT Configuration → IPv6 MLD →Static Group
This configuration is used to bind multicast IPv6 address and VLAN ID.

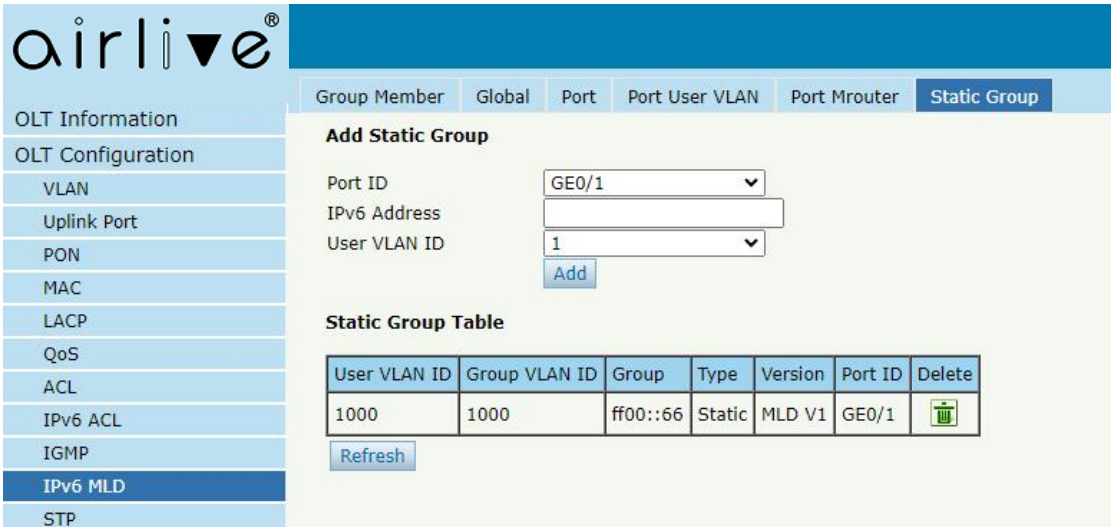



Figure 3.10-6: MLD Static Group

# 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.

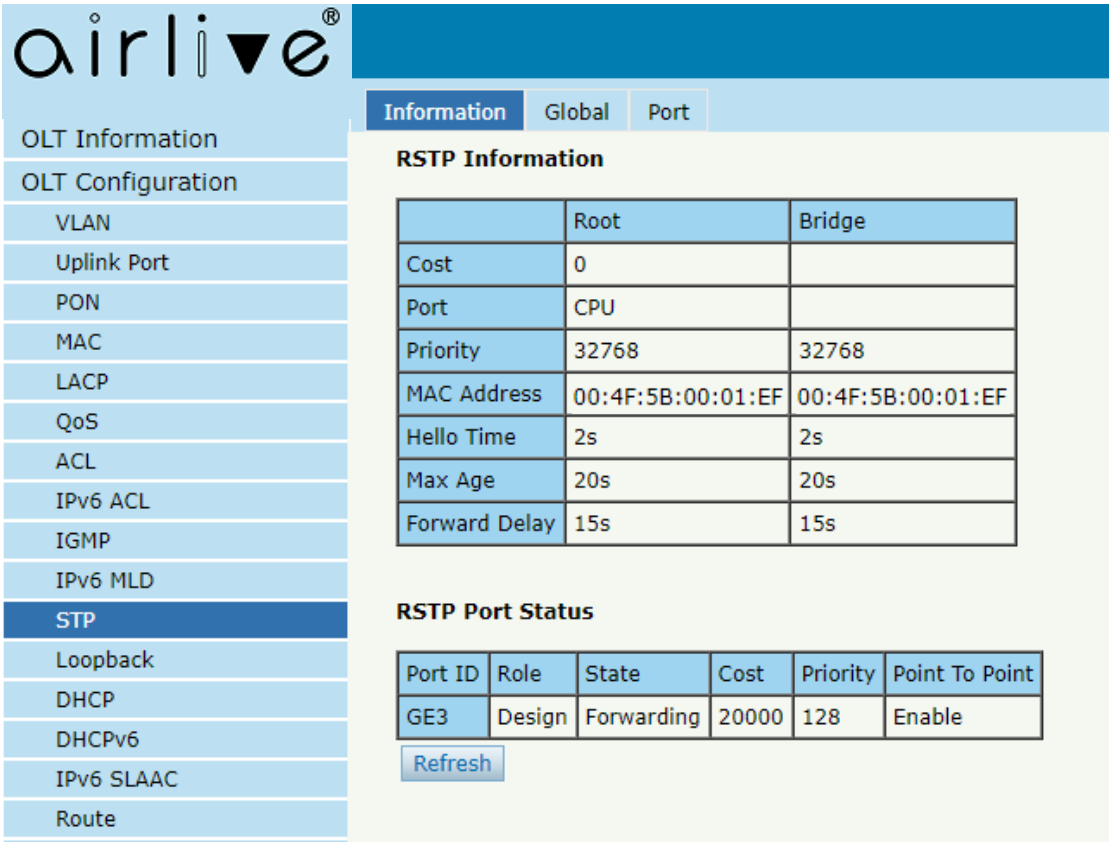



Figure 3.11-1: STP Information

## 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.

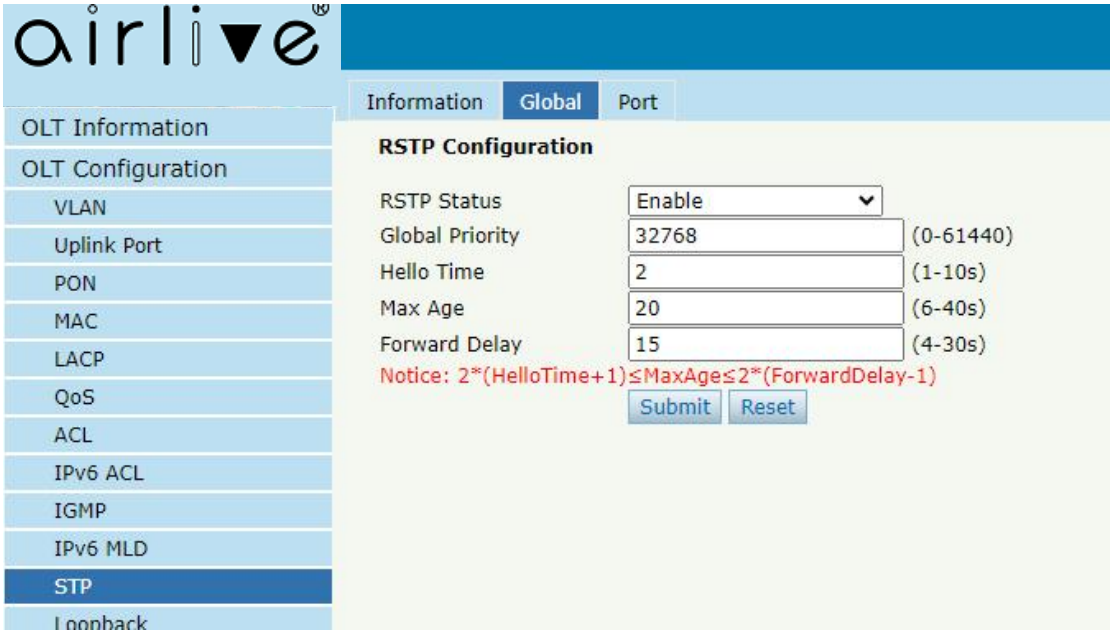



Figure 3.11-2: STP Global Setup

## 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.

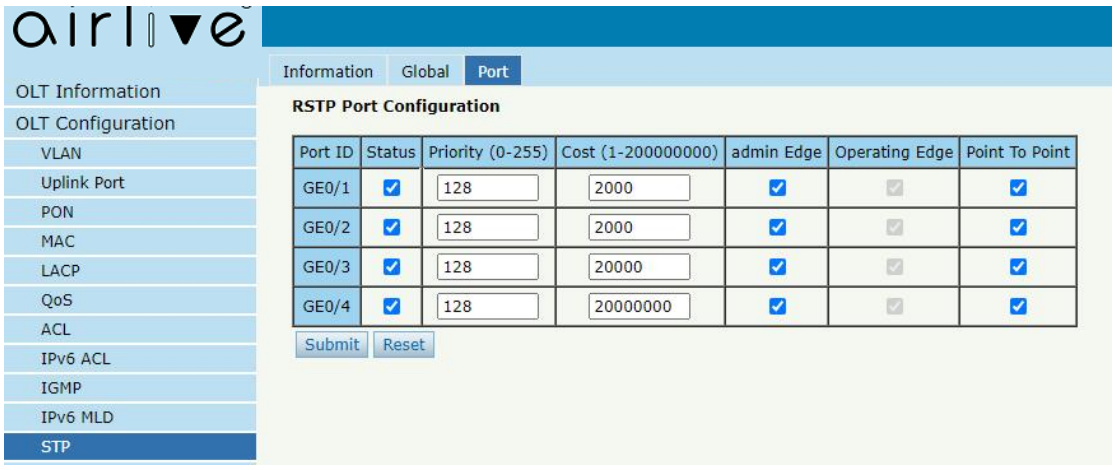



Figure 3.11-3: STP Port Settings

# 3.12 Loopback

Loopback can detect loop ports and process loop ports.

## 3.12.1 Information

OLT Configuration→Loopback→Information

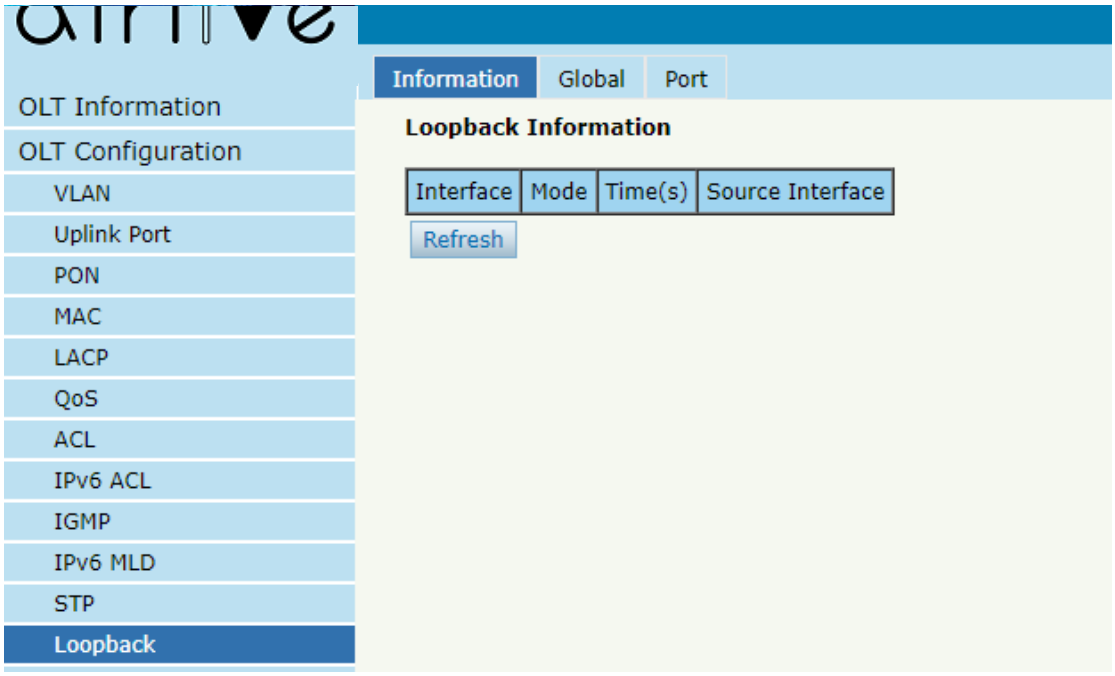



Figure 3.12-1: Loopback Information

## 3.12.2 Global

OLT Configuration→Loopback→Global

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

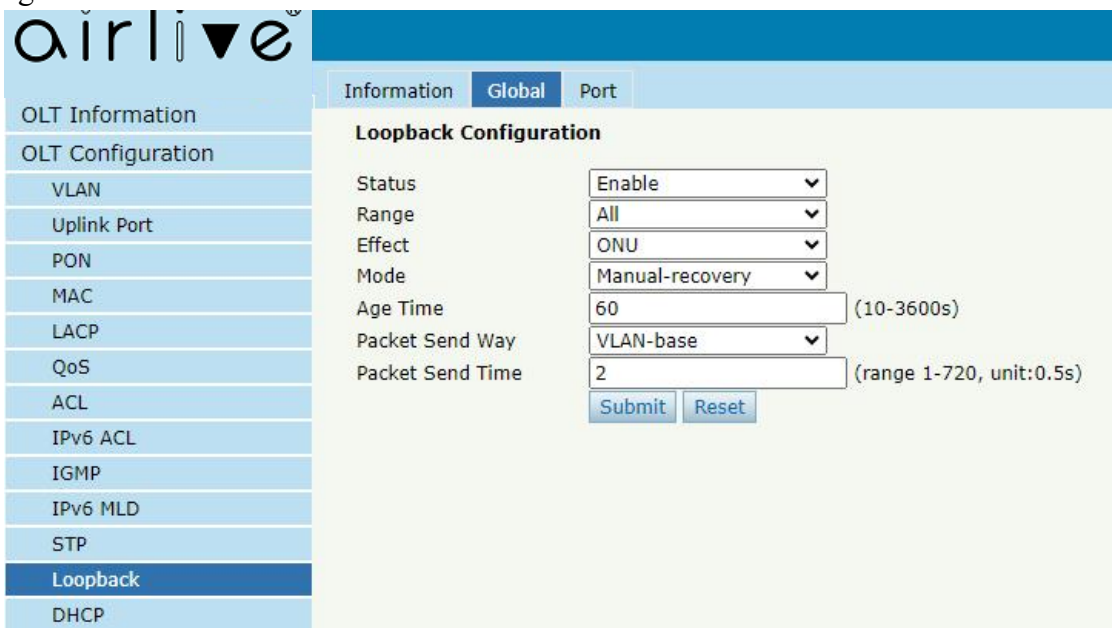



Figure 3.12-2: Loopback Global

### 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.

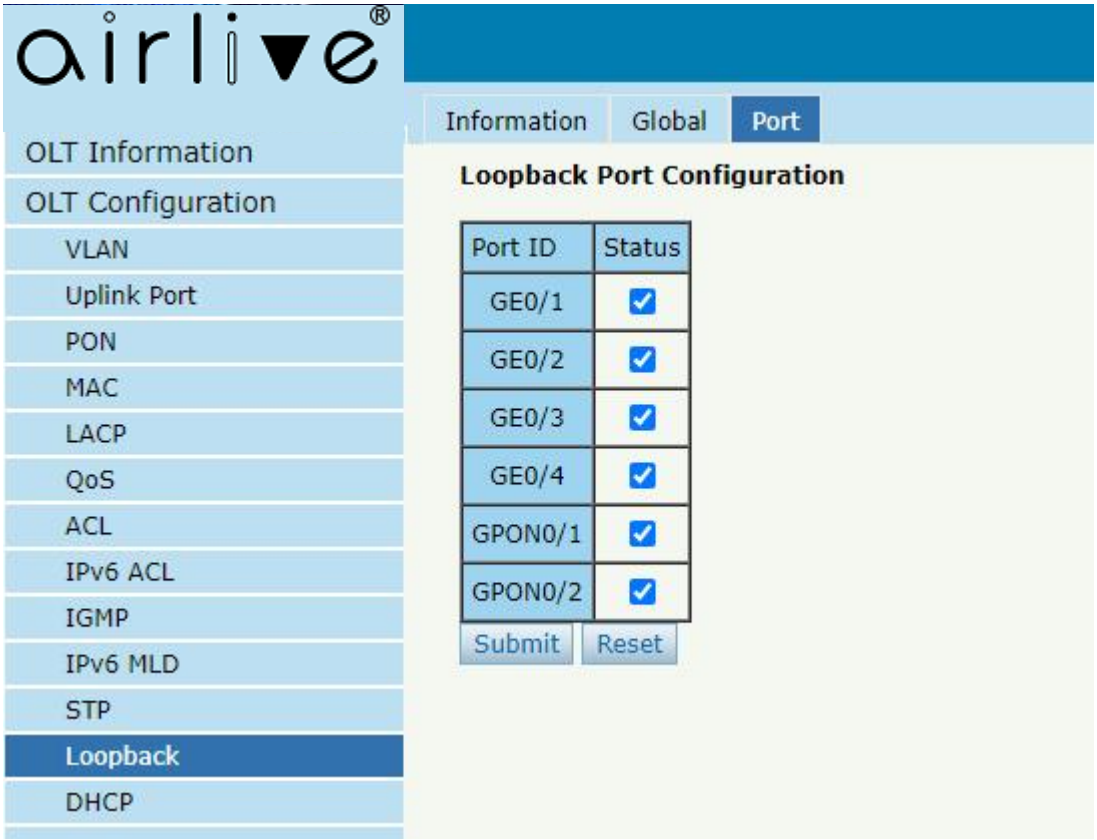



Figure 3.12-3: Loopback Port

## 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.

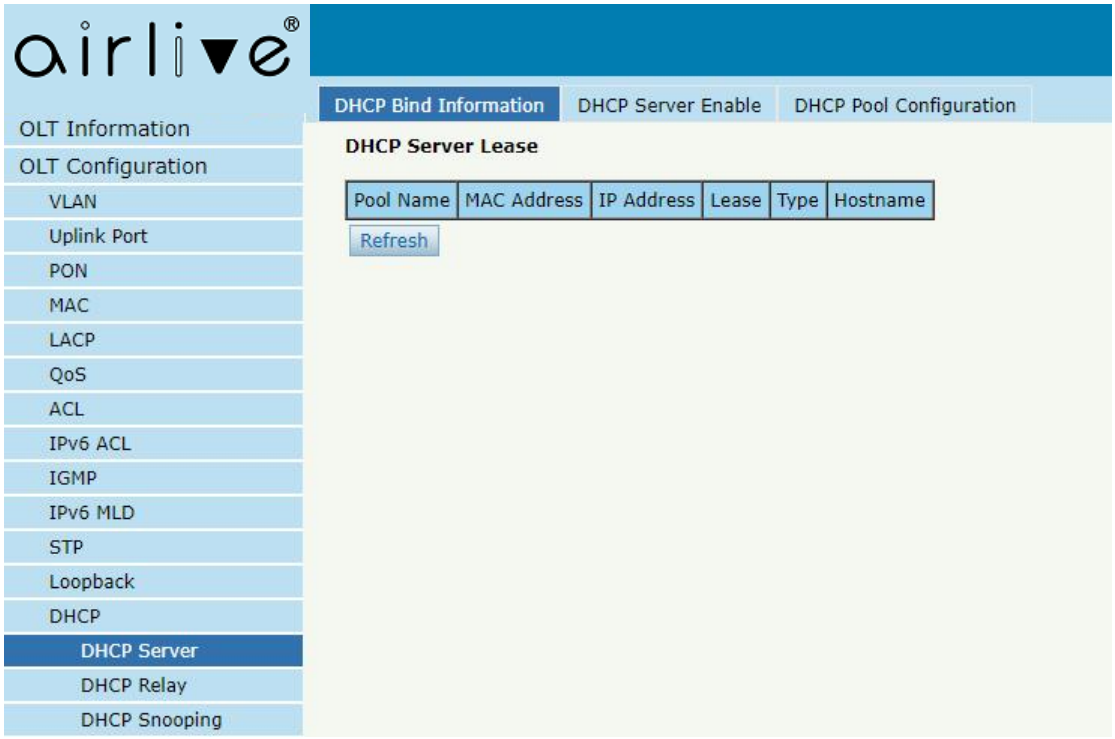



Figure 3.13-1: DHCP Bind Information

## 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 the IP address for the VLAN.

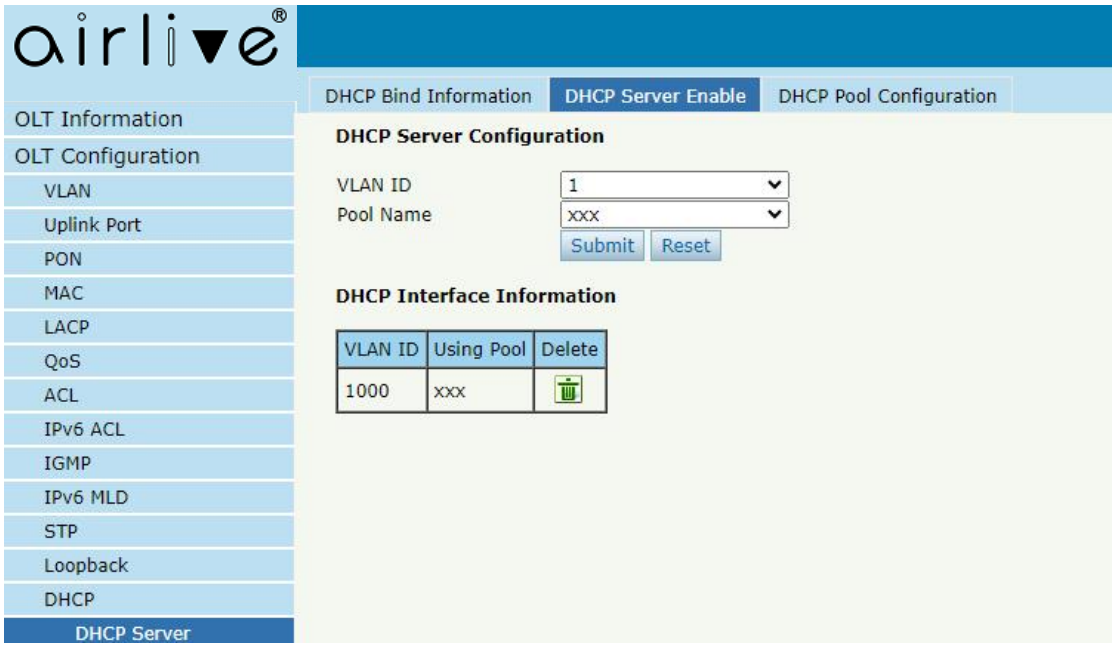



Figure 3.13-2: DHCP Server Enable

### 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.

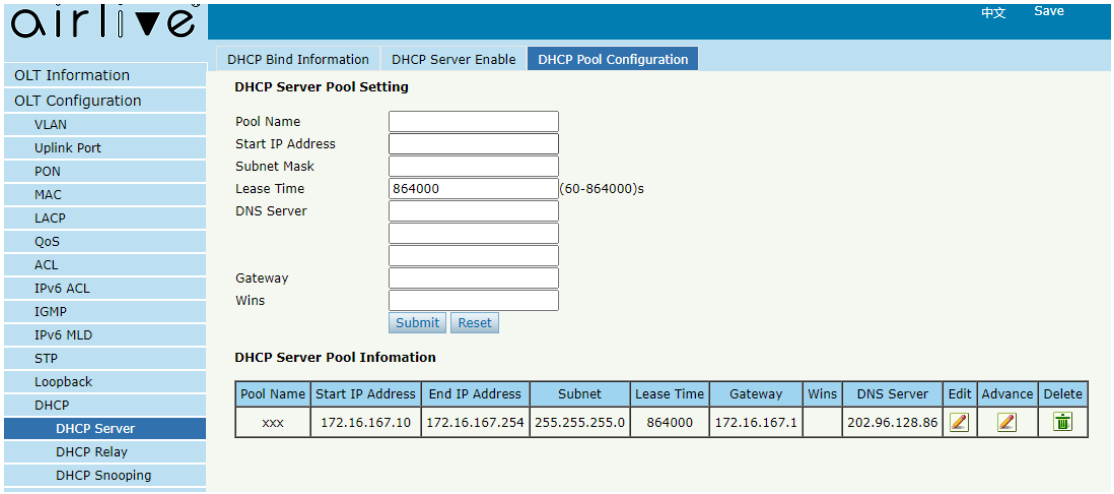



Figure 3.13-3: DHCP Pool Configuration

## 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.

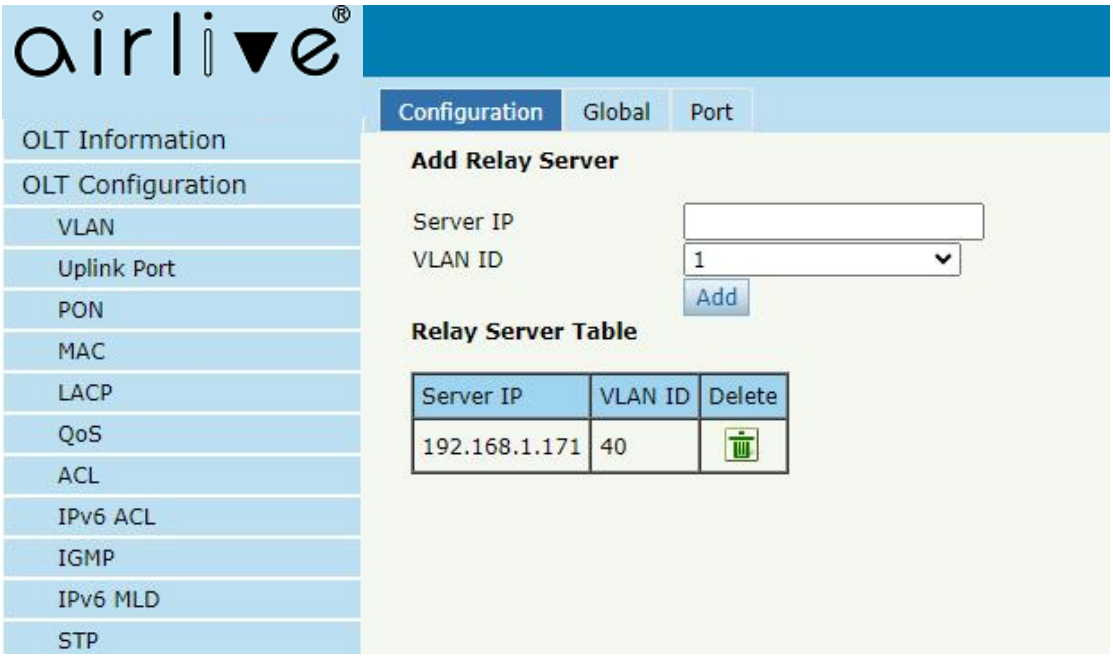



Figure 3.13-4: DHCP Relay Configuration

### 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.

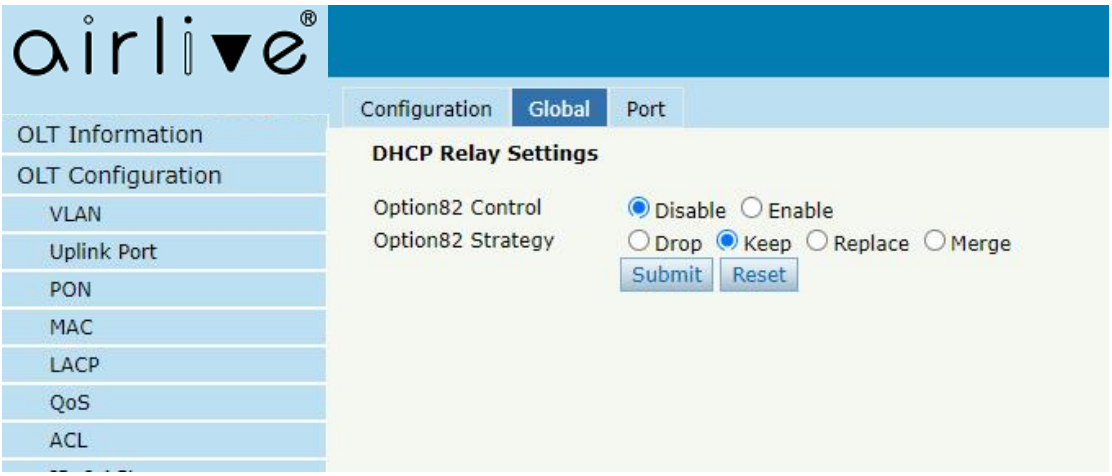



Figure 3.13-5: DHCP Relay Global

### 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.

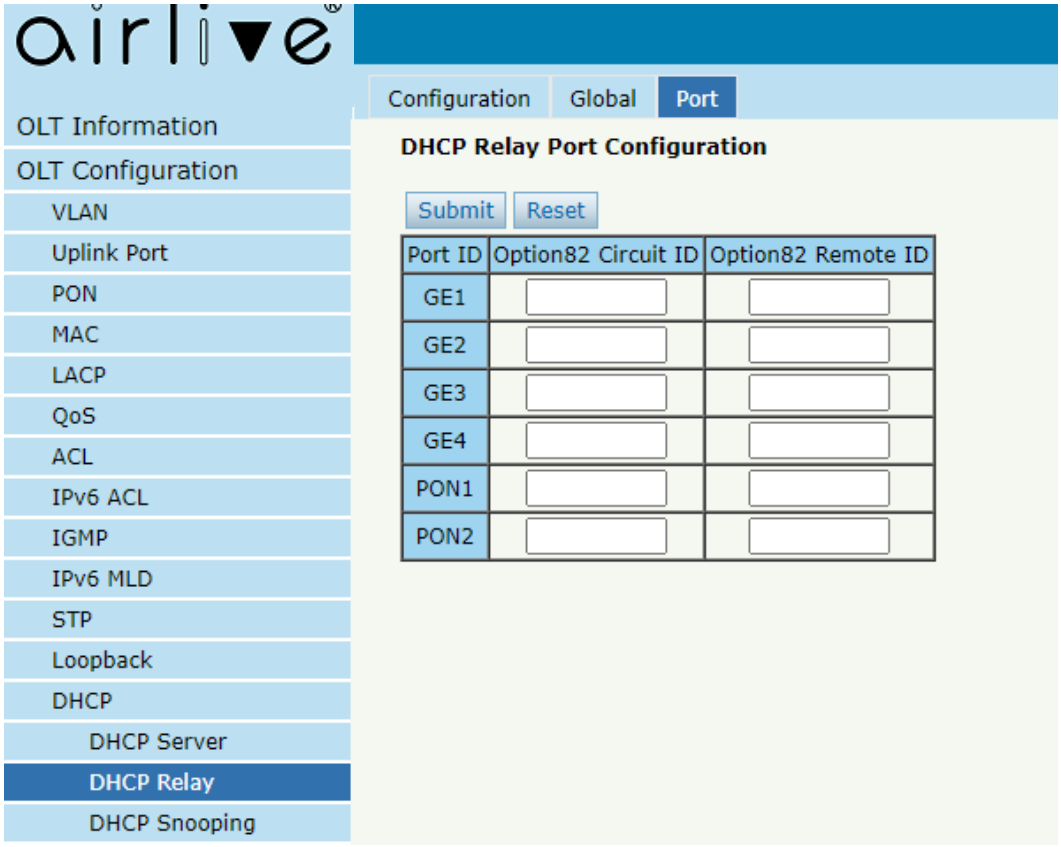



Figure 3.13-6: DHCP Relay Port

## 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.

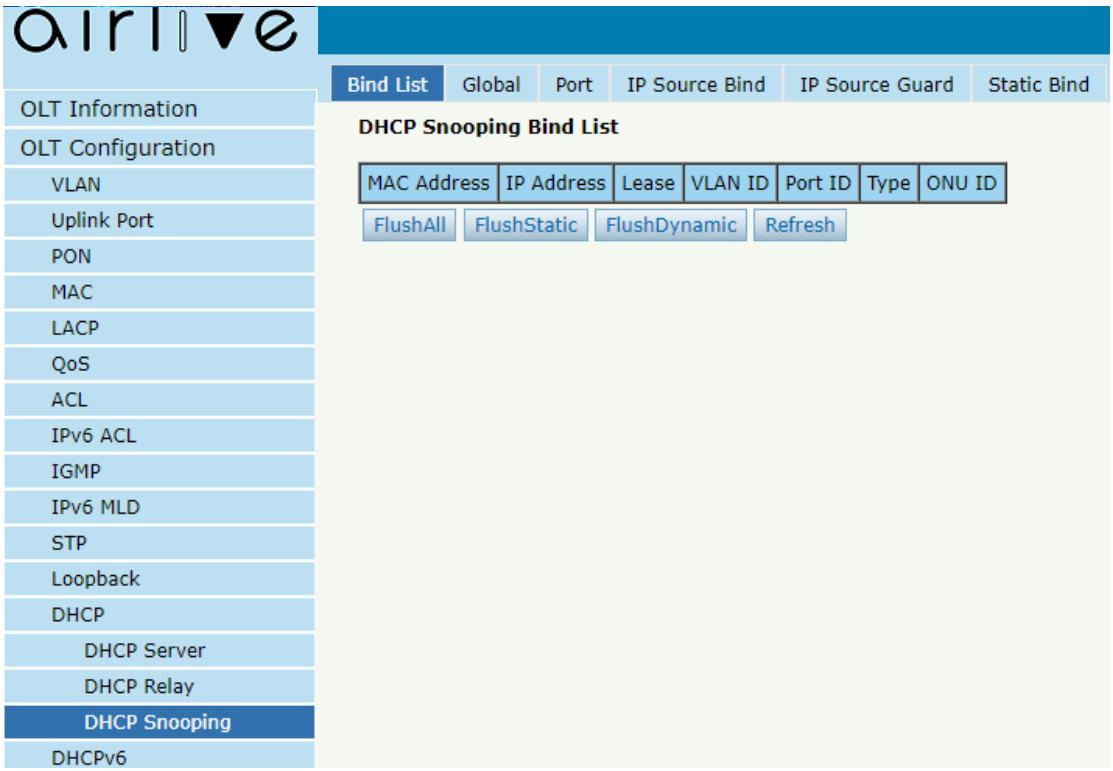



Figure 3.13-7: DHCP Snooping Bind List

### 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.

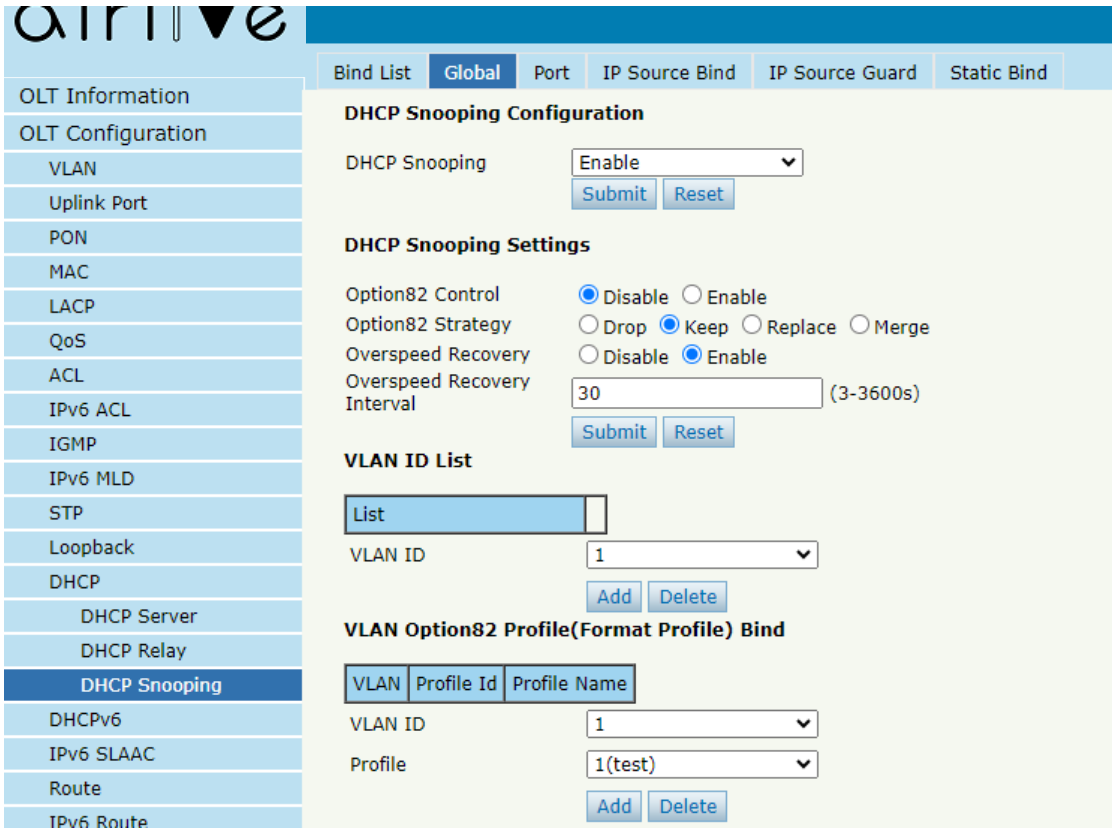



Figure 3.13-8: DHCP Snooping Global

### 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.

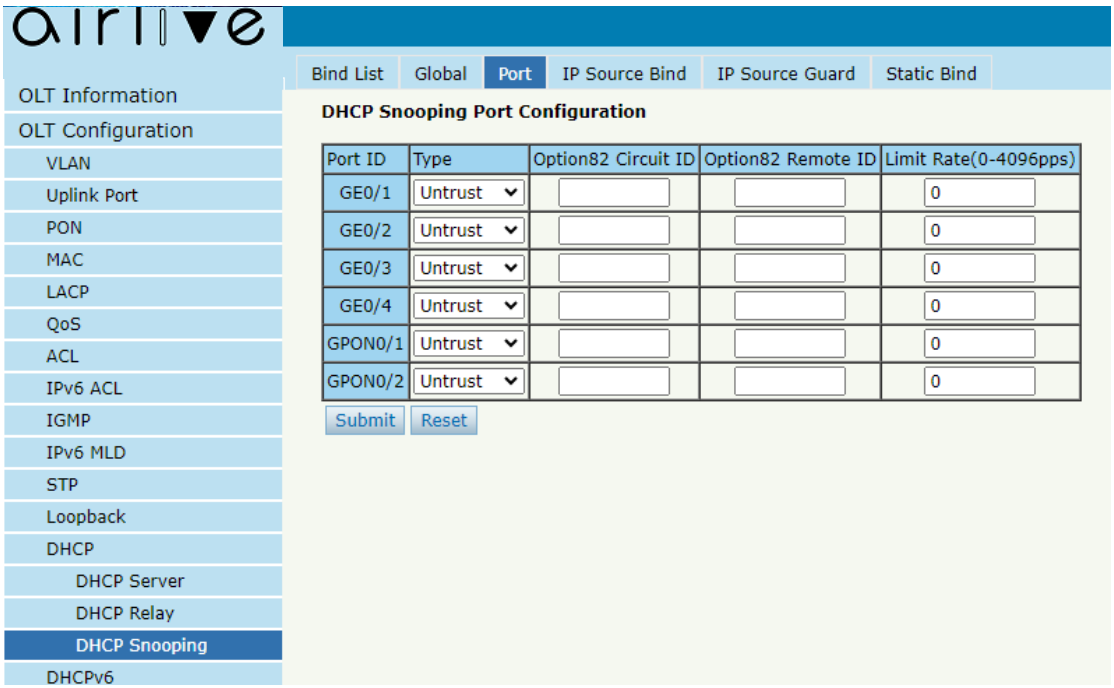



Figure 3.13-9: DHCP Snooping Port Setup

## 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.

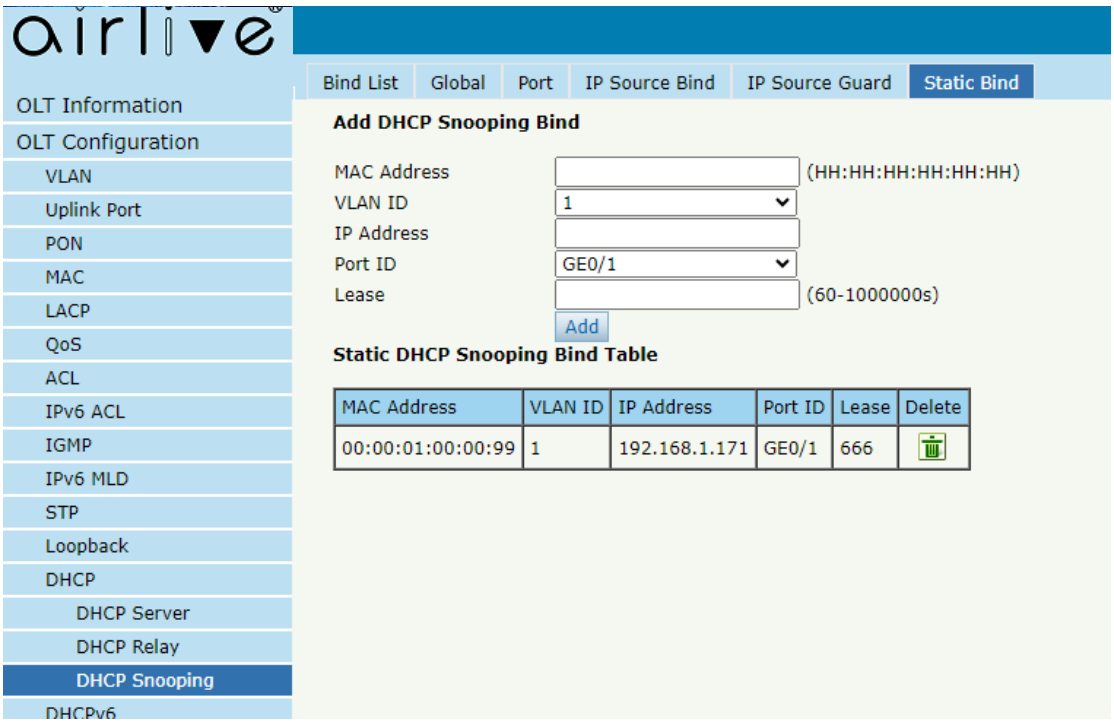



Figure 3.13-10: DHCP Snooping Static Bind

### 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

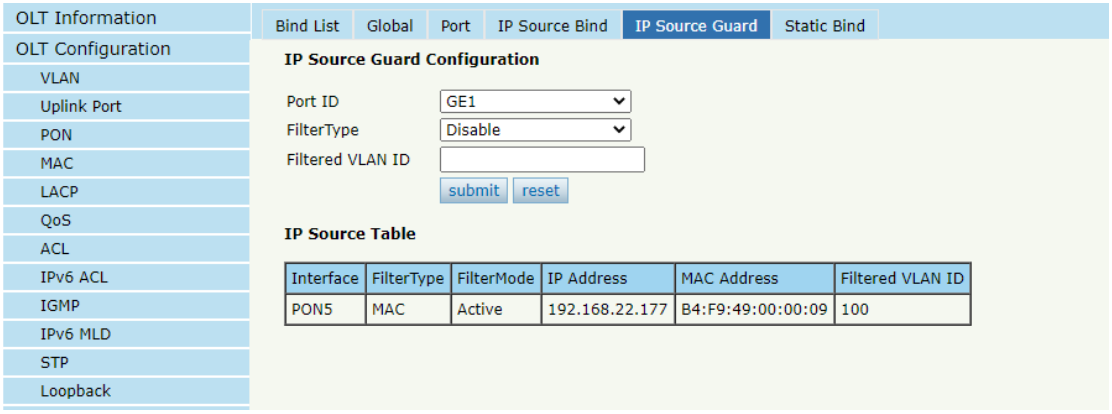



Figure 3.13-11: DHCP Snooping IP Source Guard

### 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.

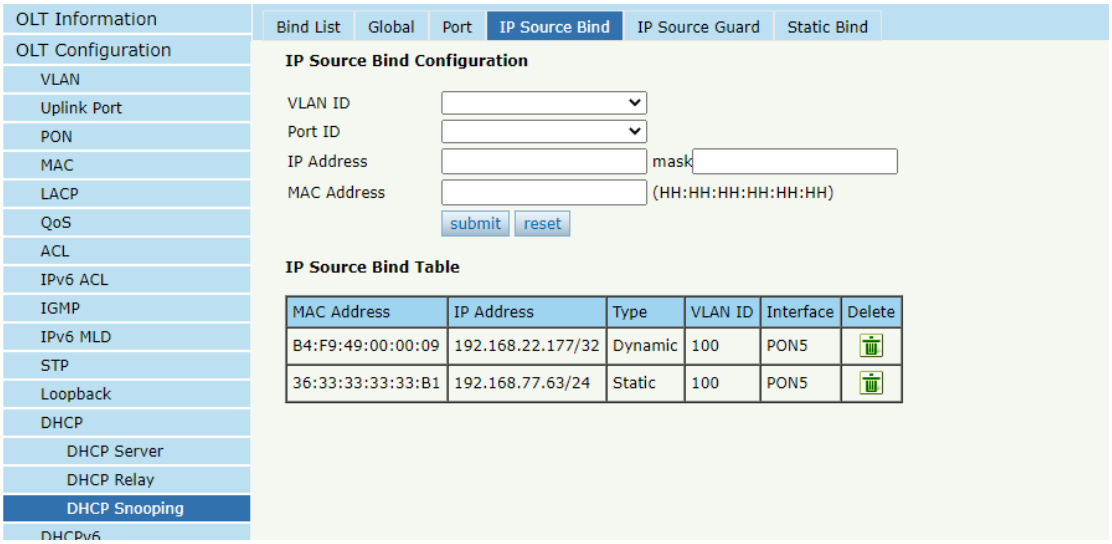



Figure 3.13-12: DHCP Snooping IP Source Bind

# 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.

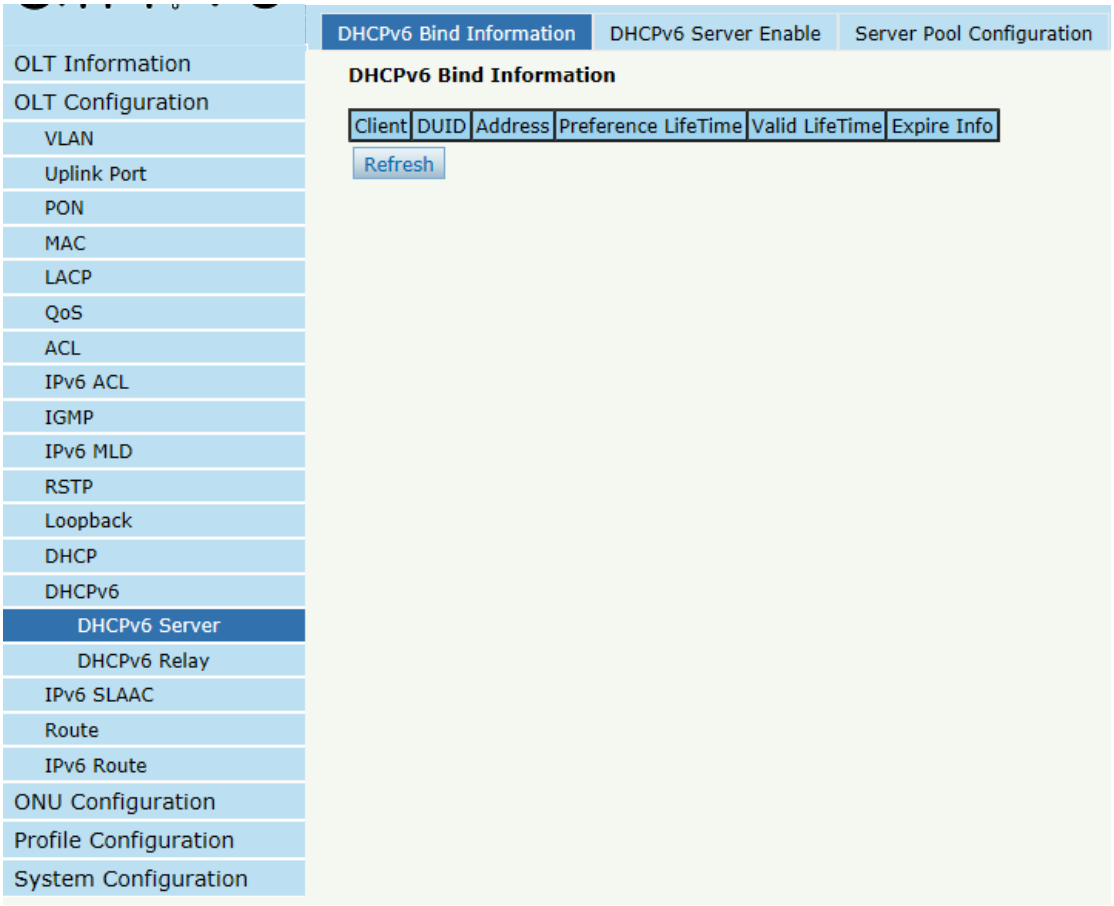



Figure 3.14-1: DHCPv6 Bind Information

### 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.

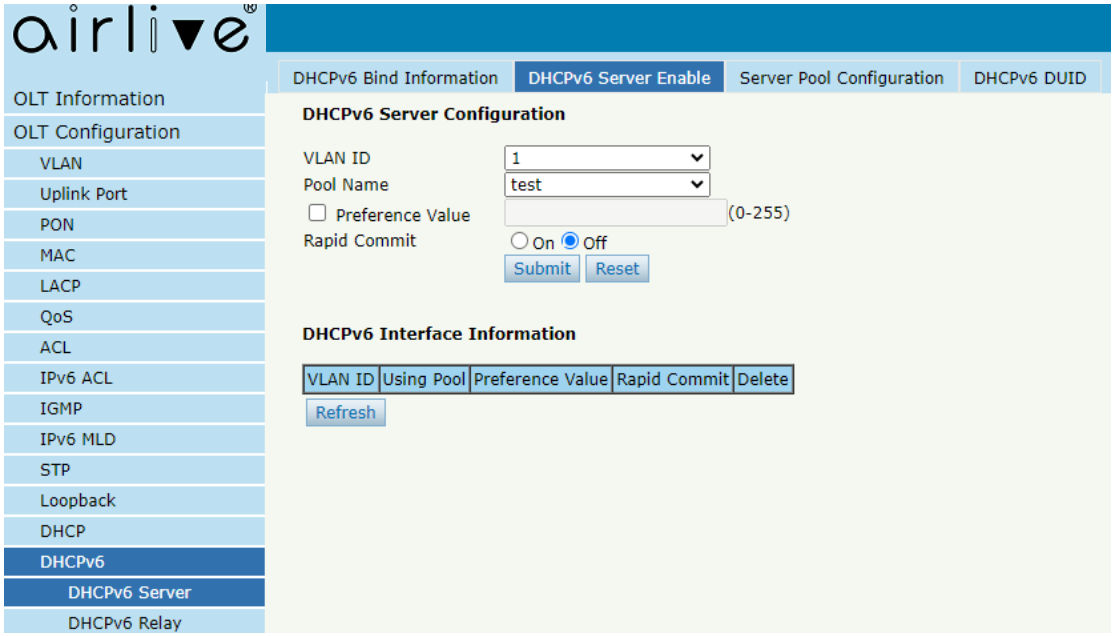



Figure 3.14-2: DHCPv6 Server

## 3.14.1.3 Server Pool Configuration

OLT Configuration → DHCPv6 → DHCPv6 Server → Server Pool Configuration
DHCPv6 pool specifies the range of assigned IPv6 addresses. Lifetime, DNS and domain also can be specified here for DHCPv6 client.

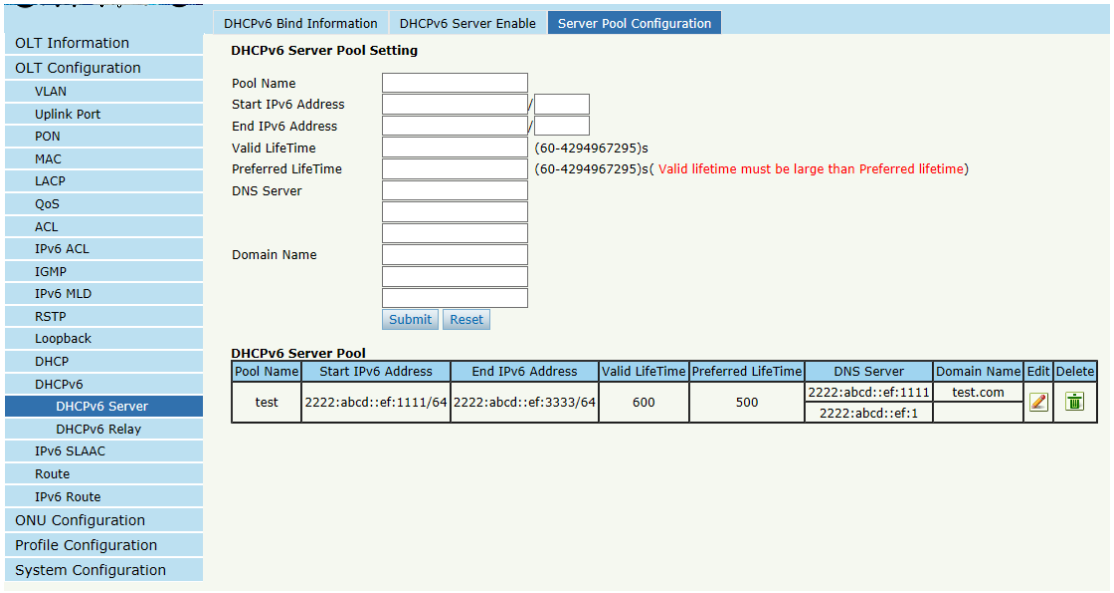



Figure 3.14-3: DHCPv6 Pool

## 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.

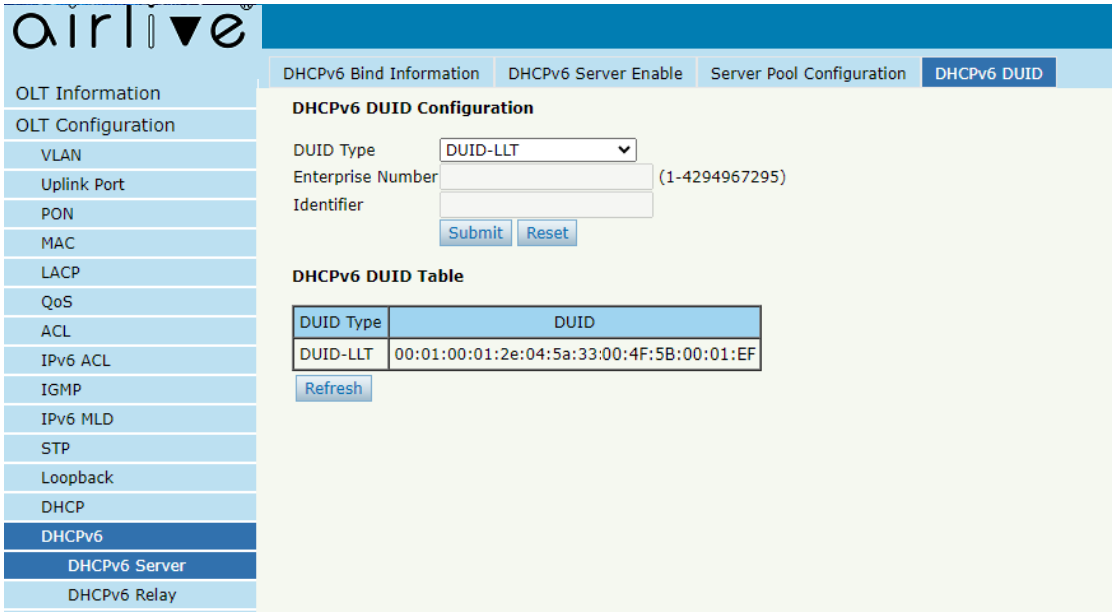



Figure 3.14-4: DHCPv6 DUID

## 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.

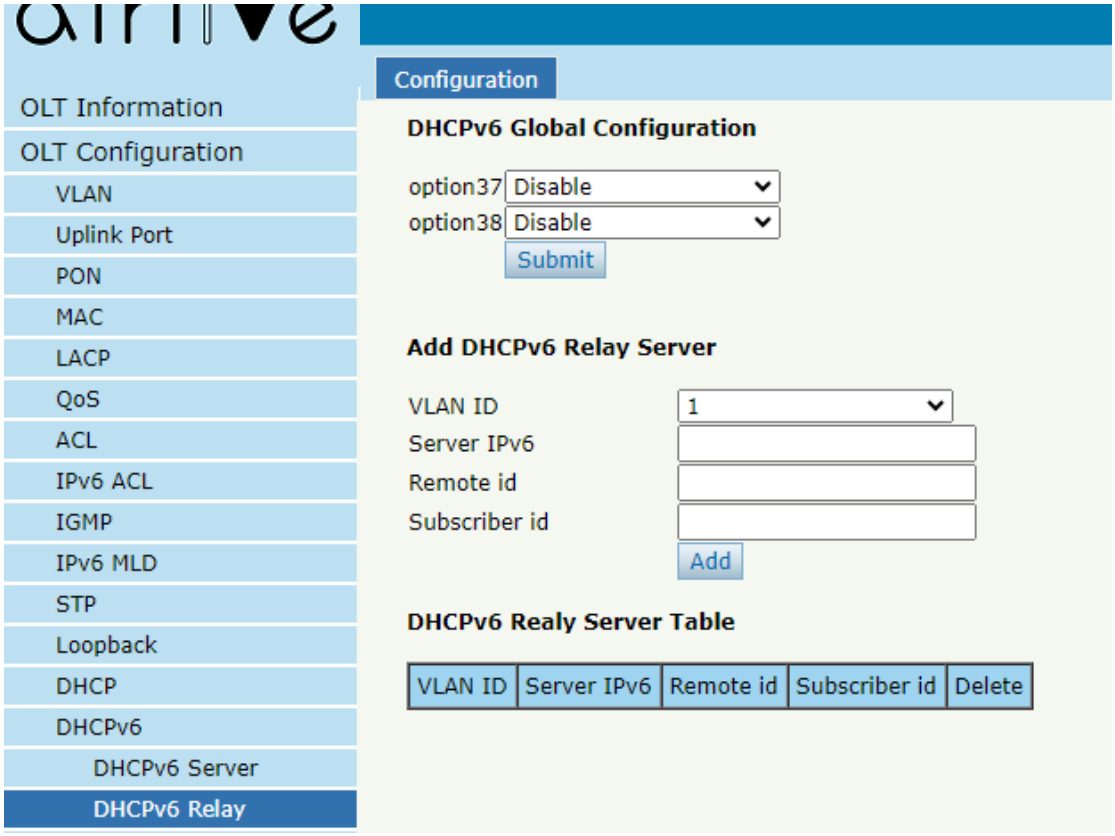



Figure 3.14-5: DHCPv6 Relay

# 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.

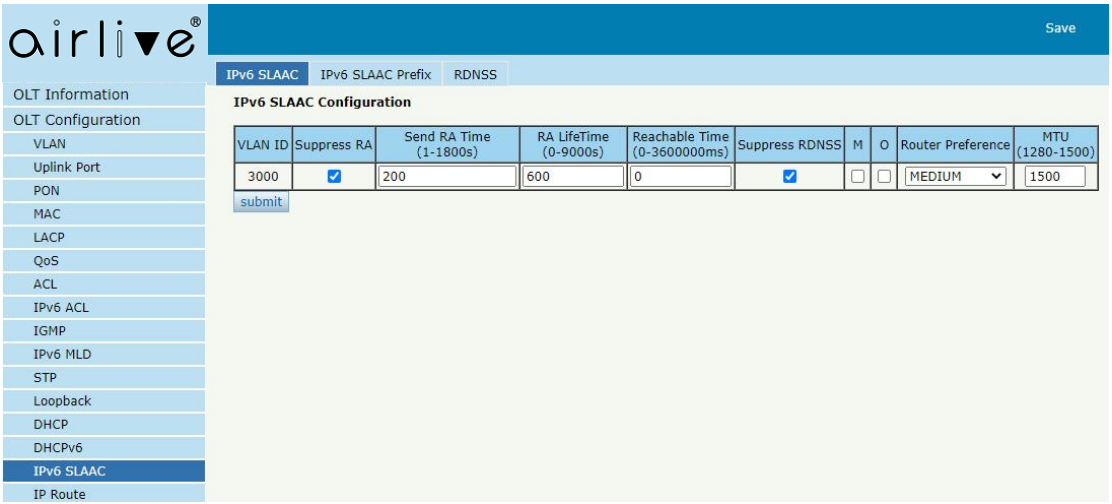



Figure 3.15-1: IPv6 SLAAC

## 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.

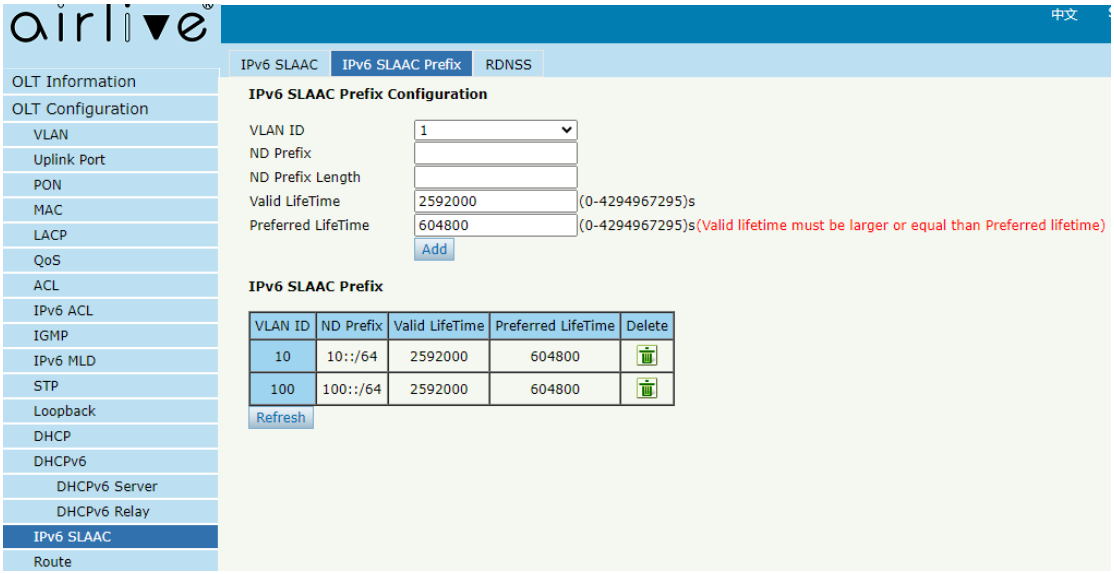



Figure 3.15-2: IPv6 SLAAC Prefix

## 3.15.3 RDNSS

OLT Configuration → IPv6 SLAAC → RDNSS
OLT will send the route advertisement packet with the DNS parameters you configured.

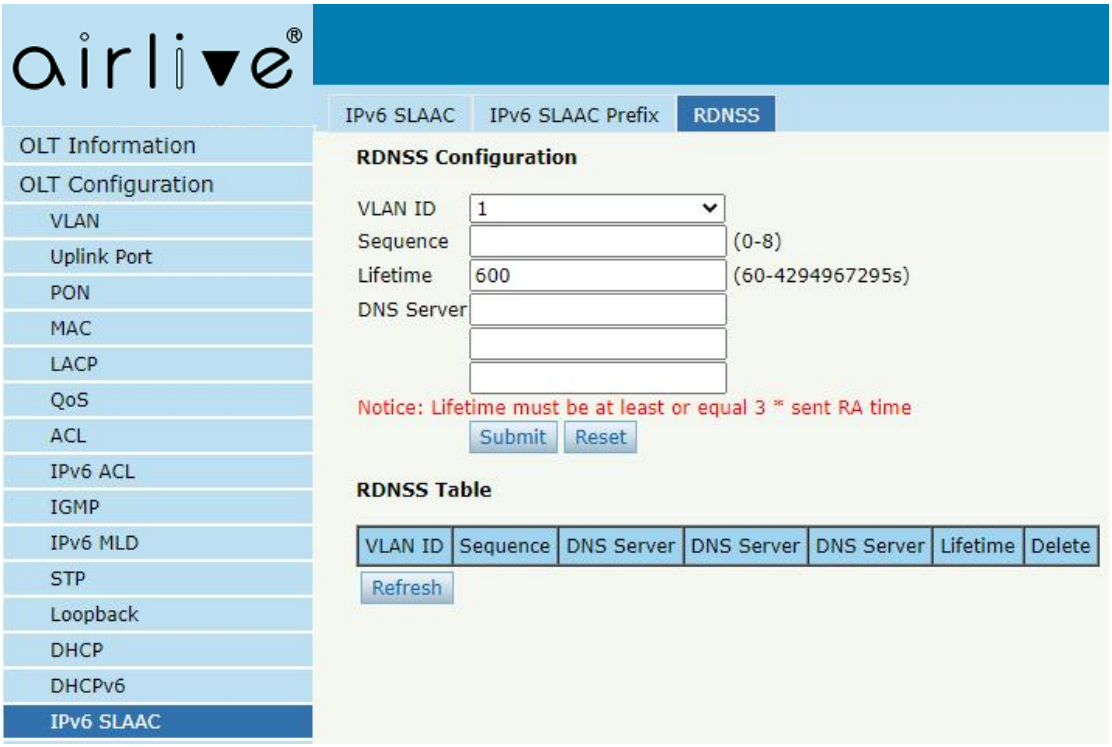



Figure 3.15-3: RDNSS

# 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.

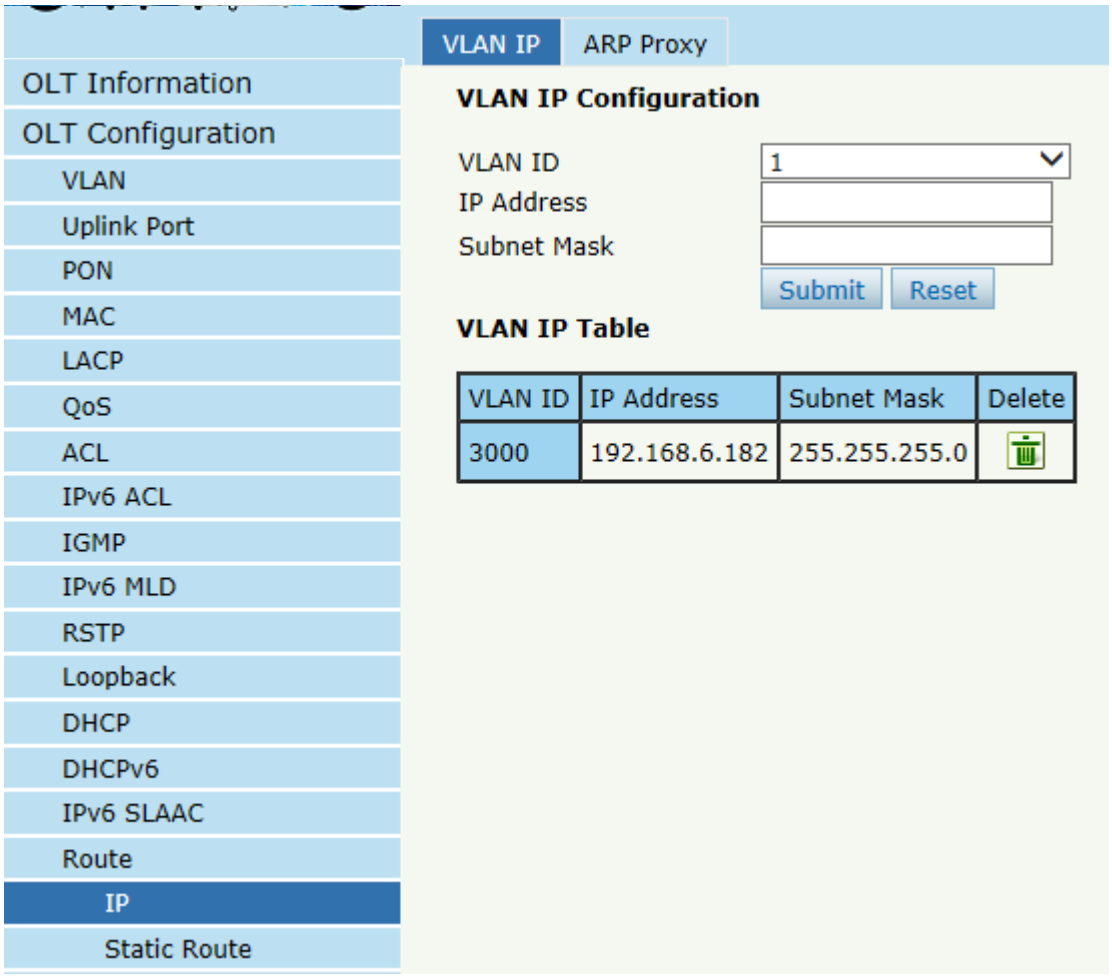



Figure 3.16-1: VLAN IP

### 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'. Not all OLT models support ARP Proxy.

OLT Configuration→Route→IP→ARP Proxy

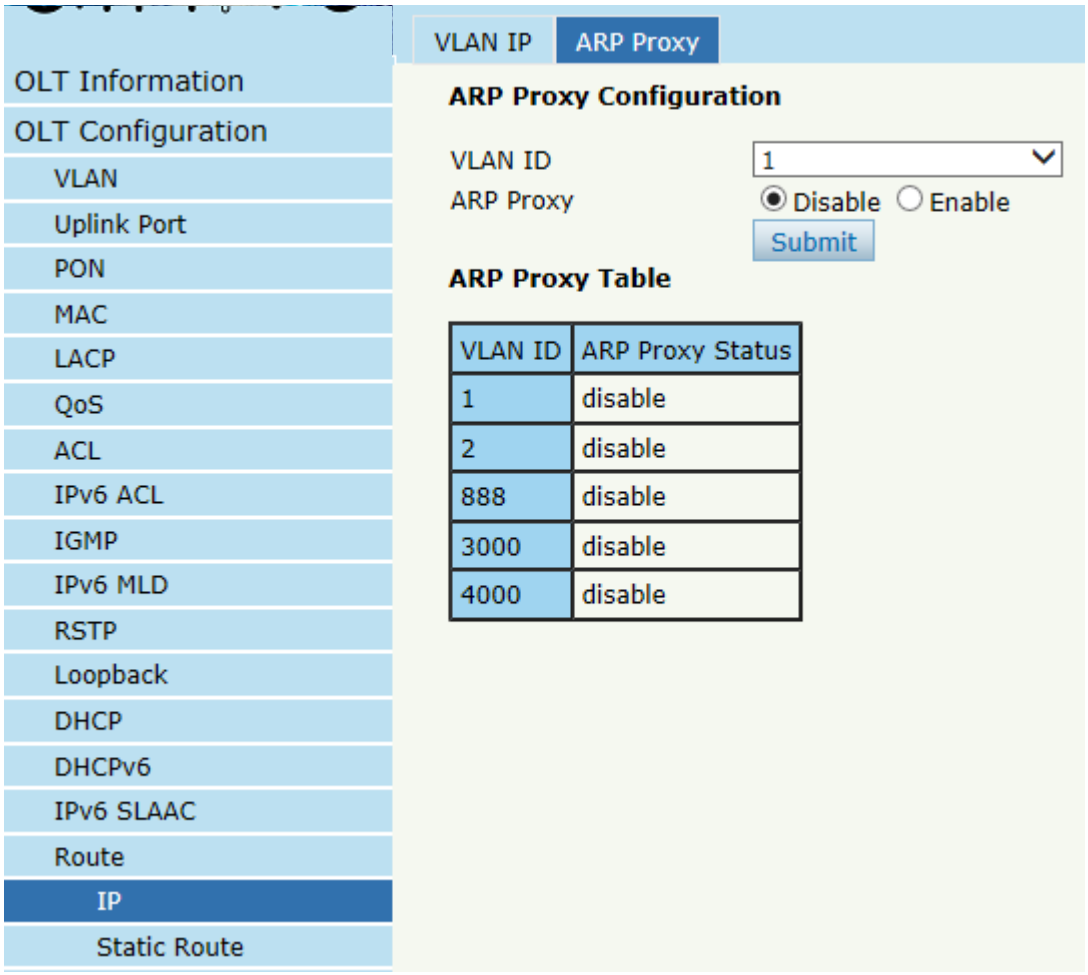



Figure 3.16-2: ARP proxy configuration

## 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

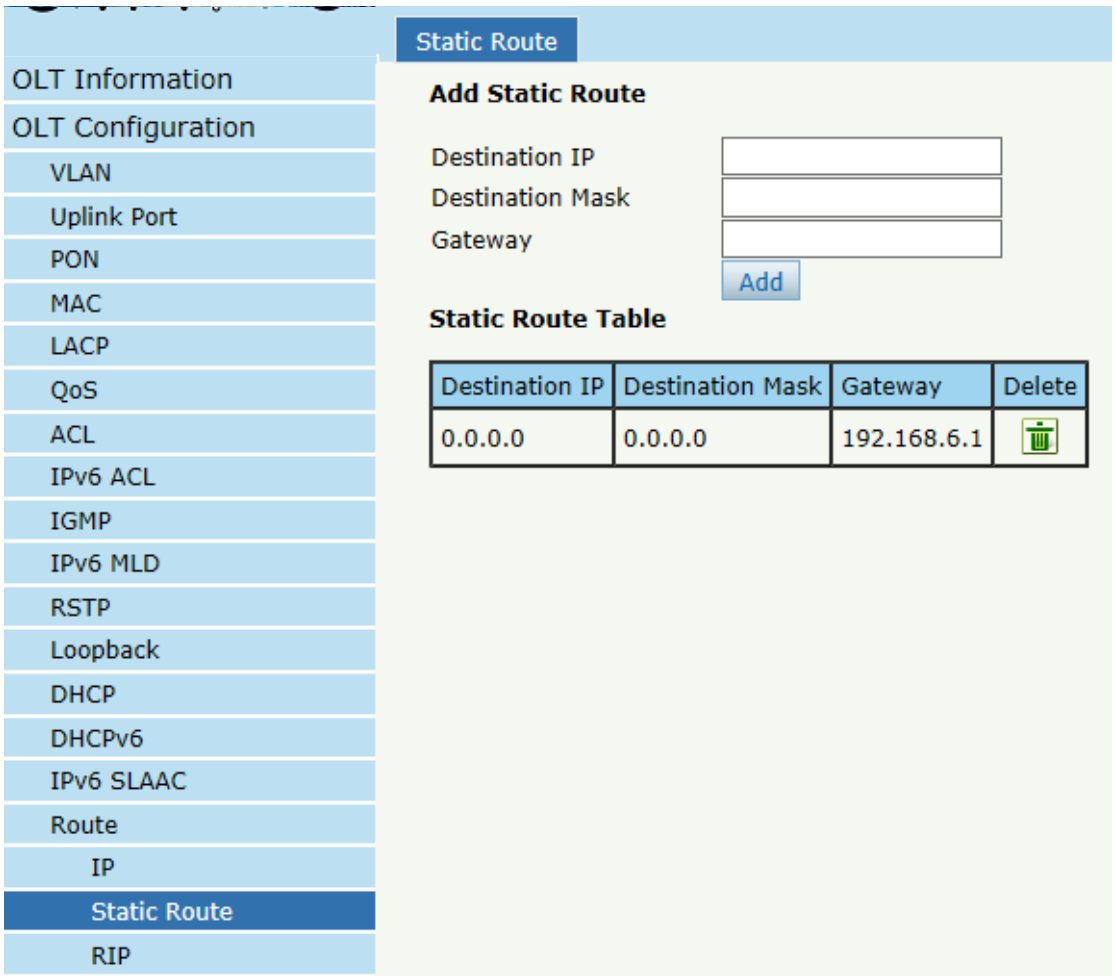



Figure 3.16-3: Static Route

## 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.

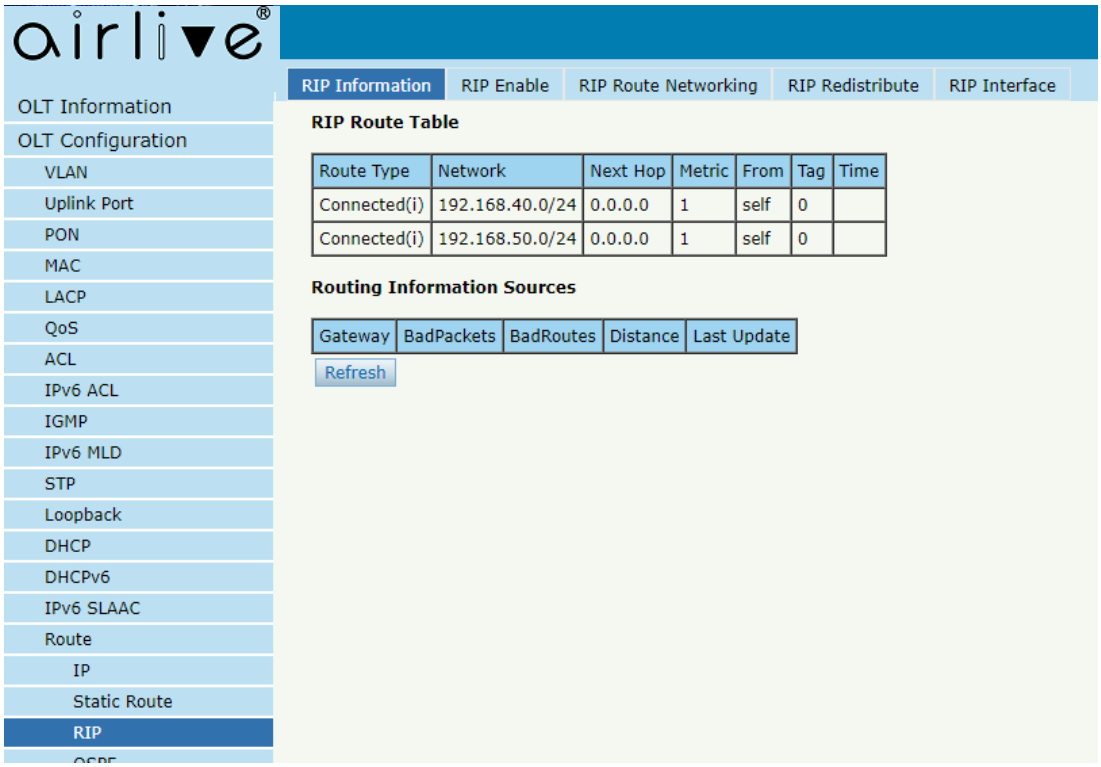



Figure 3.16-4: RIP Information

## 3.16.3.2 RIP Enable

OLT Configuration → Route → RIP → RIP Enable
Enable RIP protocol and configure RIP parameters.

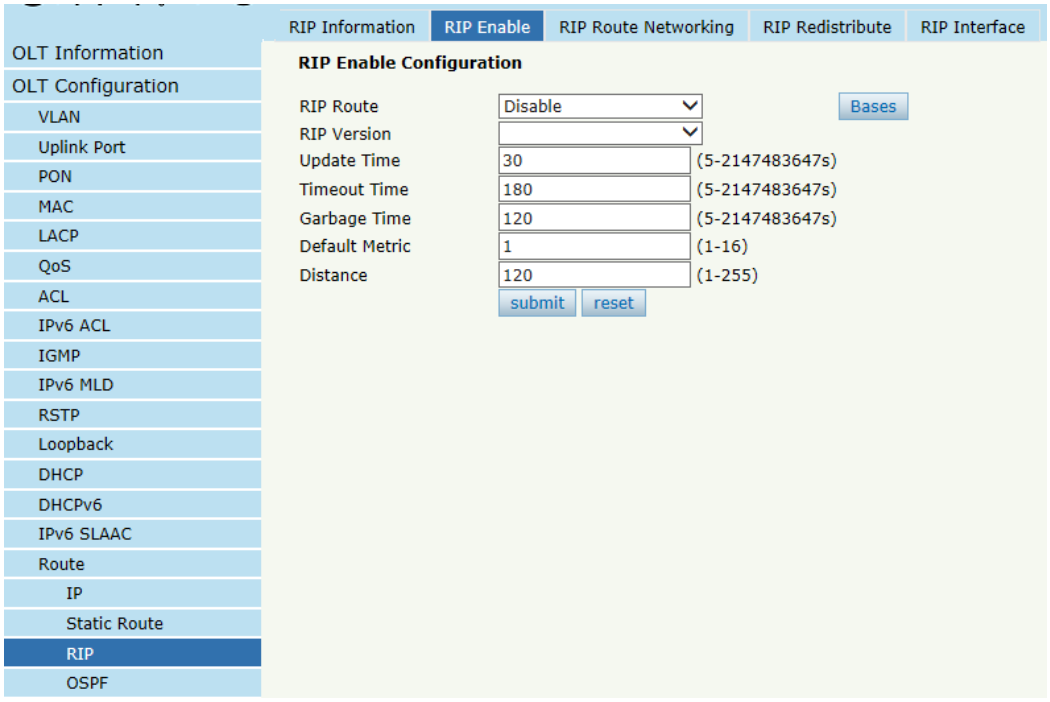



Figure 3.16-5: RIP Enable

### 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.

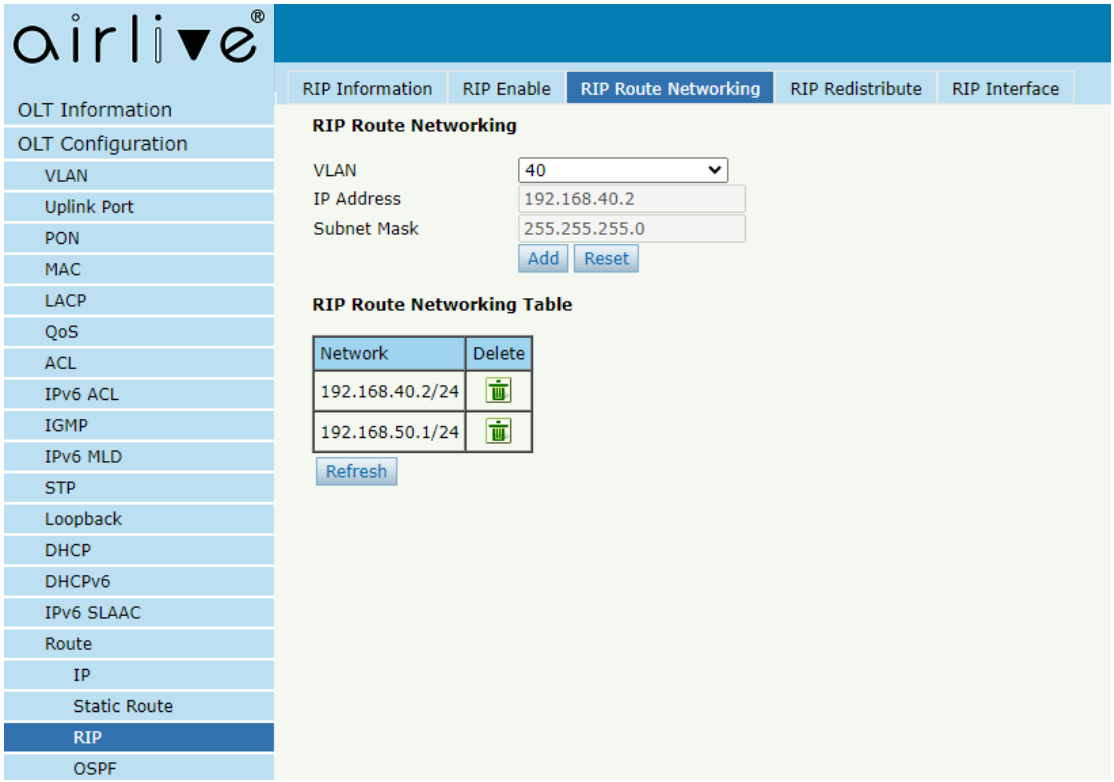



Figure 3.16-6: RIP Route Networking

### 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.

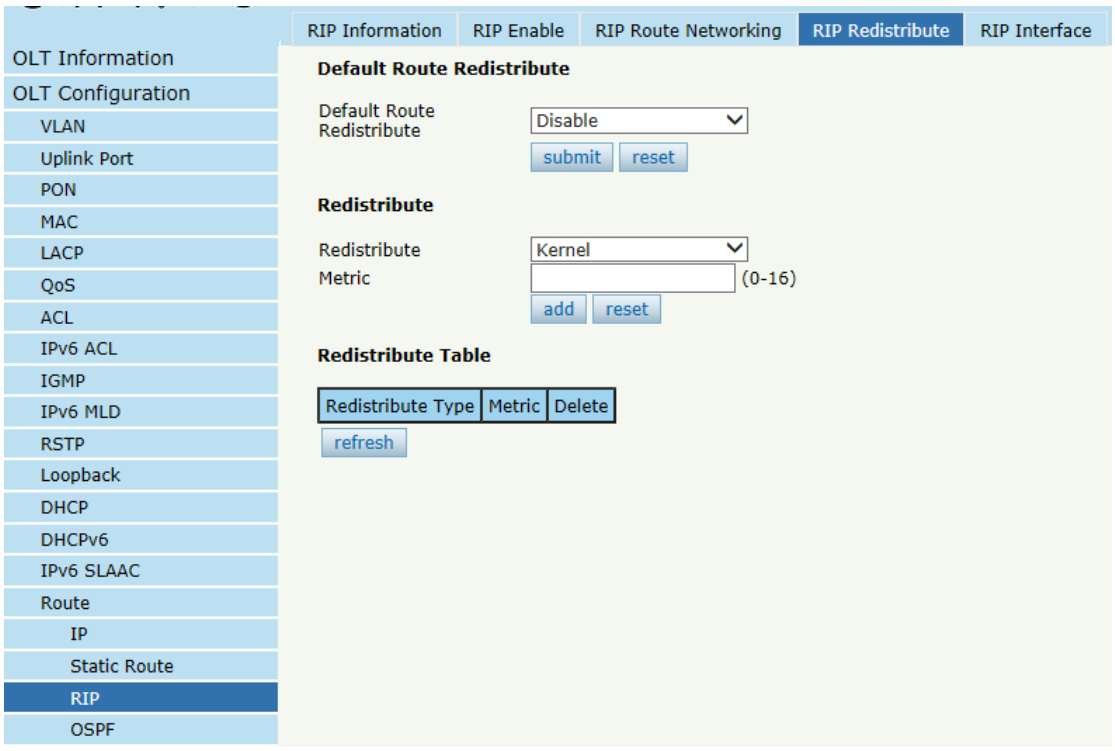



Figure 3.16-7: RIP Redistribute

## 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.

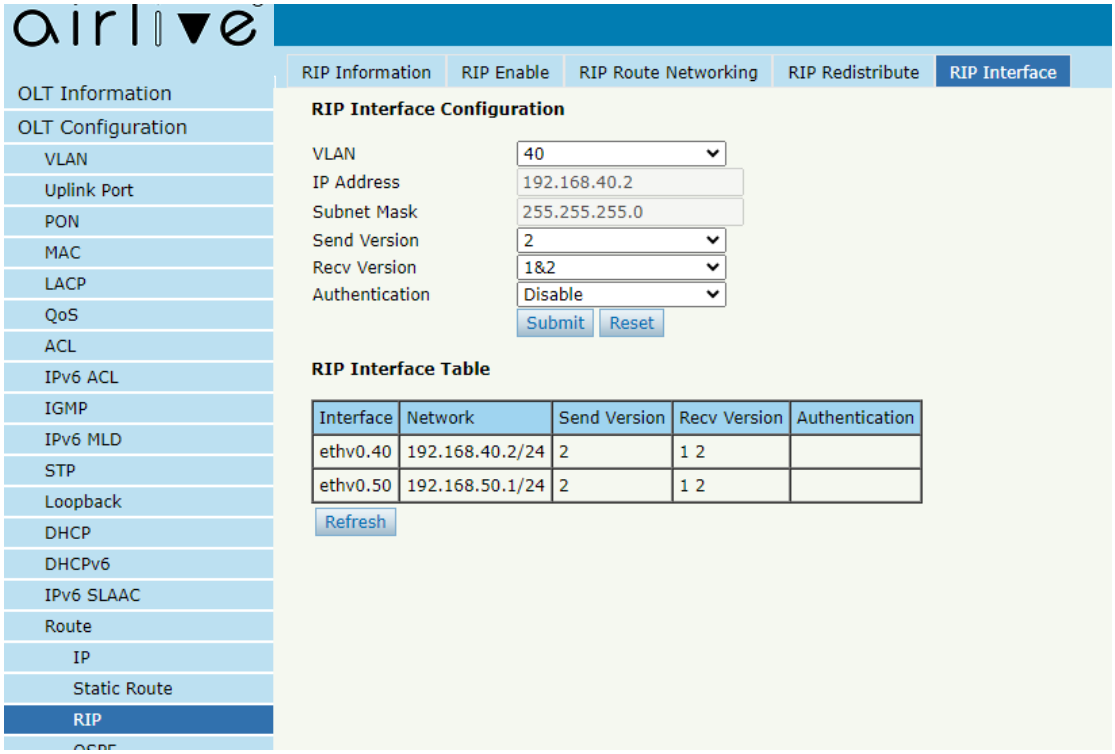



Figure 3.16-8: RIP Interface

## 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.

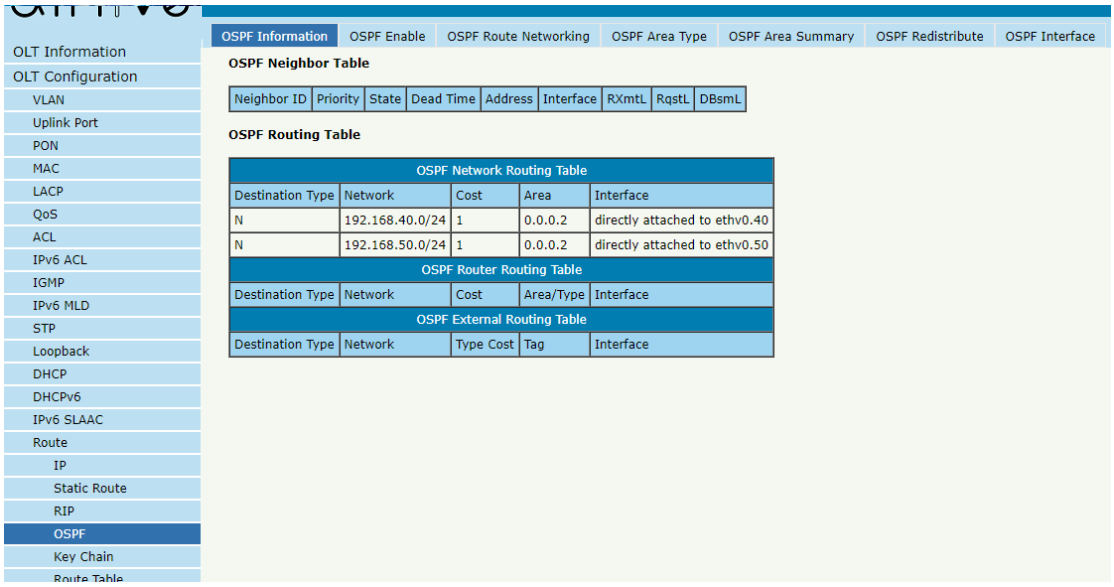



Figure3.16-9: OSPF Information

## 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.

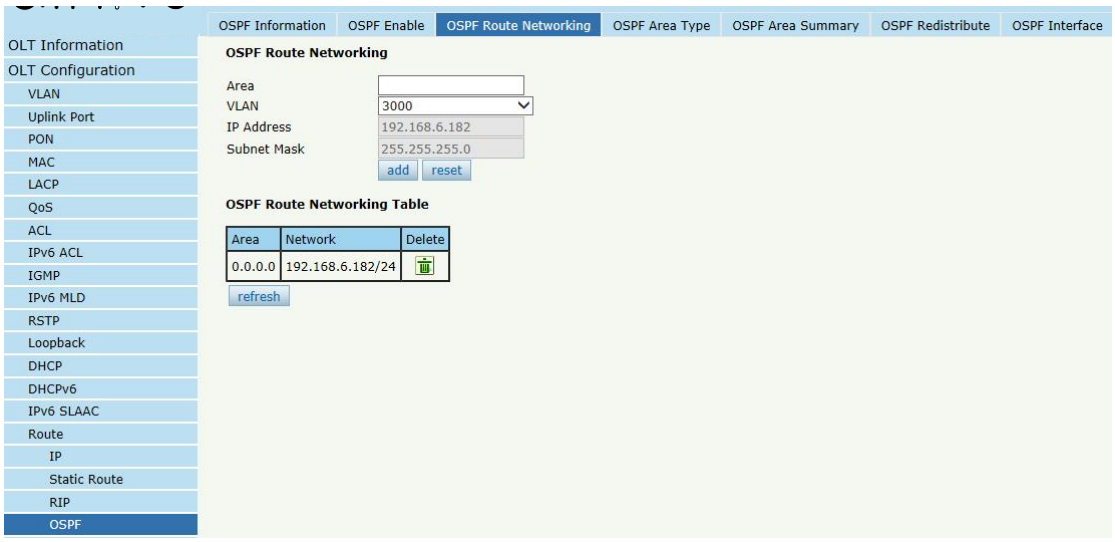



Figure 3.16-11: OSPF Route Networking

## 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.

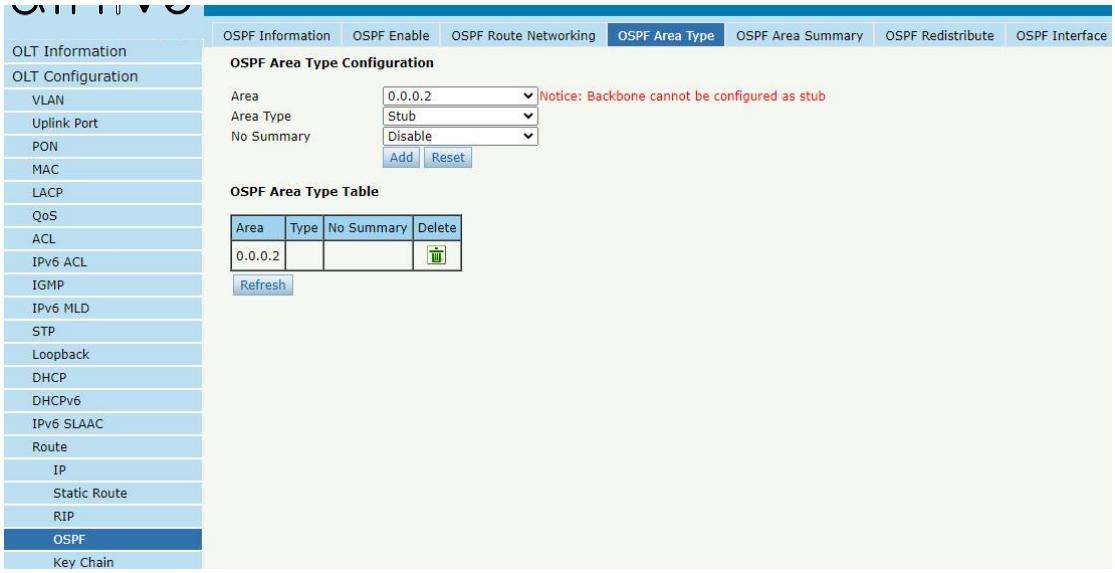



Figure 3.16-12: OSPF Area Type

## 3.16.4.5 OSPF Area Summary

OLT Configuration → Route → OSPF → OSPF Area Summary
This page is used to configure area IP address summary.

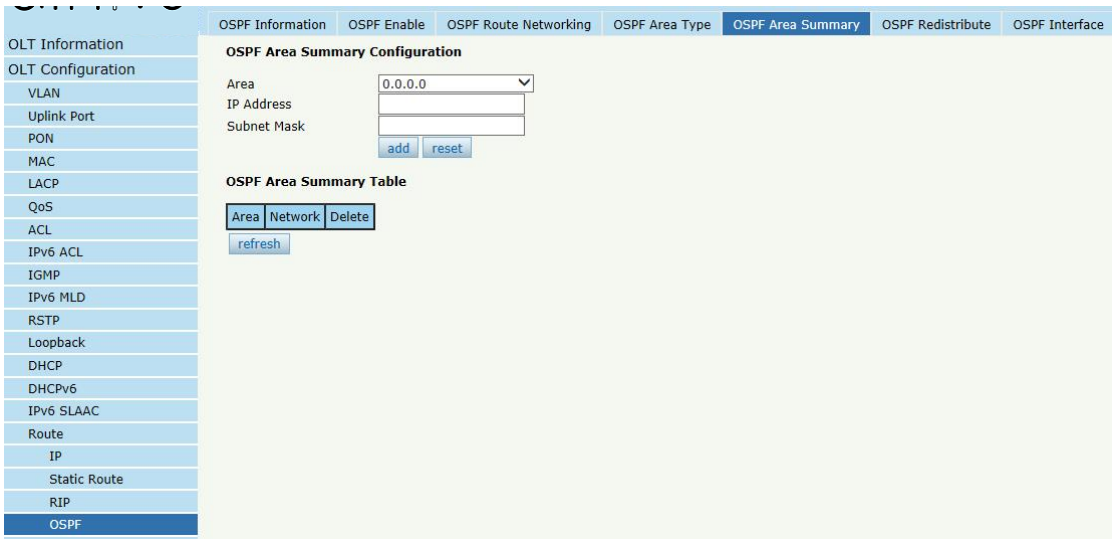



Figure 3.16-13: OSPF Area Summary

## 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

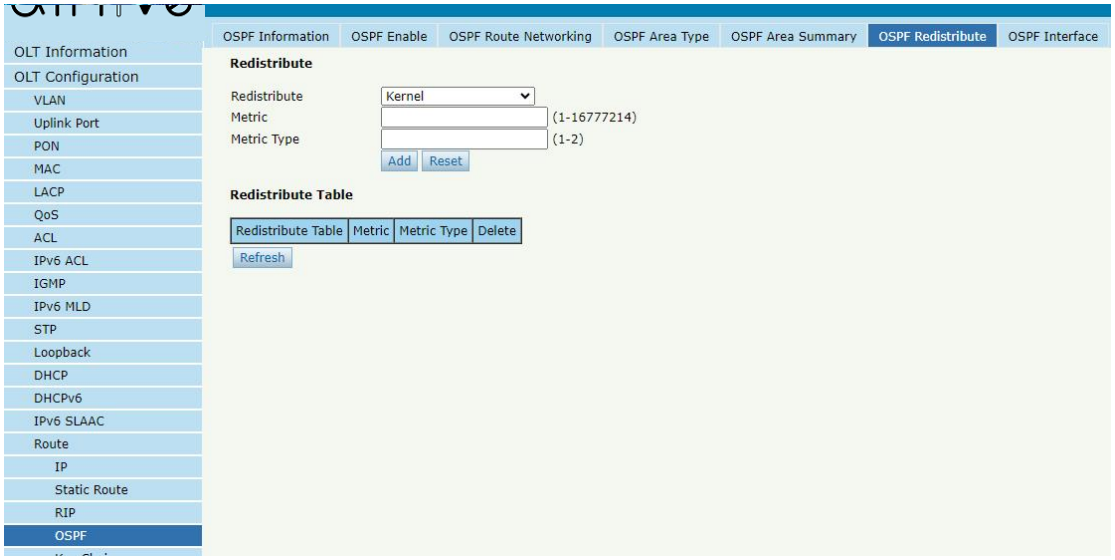



Figure 3.16-14: OSPF Redistribute

## 3.16.4.7 OSPF Interface

OLT Configuration → Route → OSPF → OSPF Interface

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

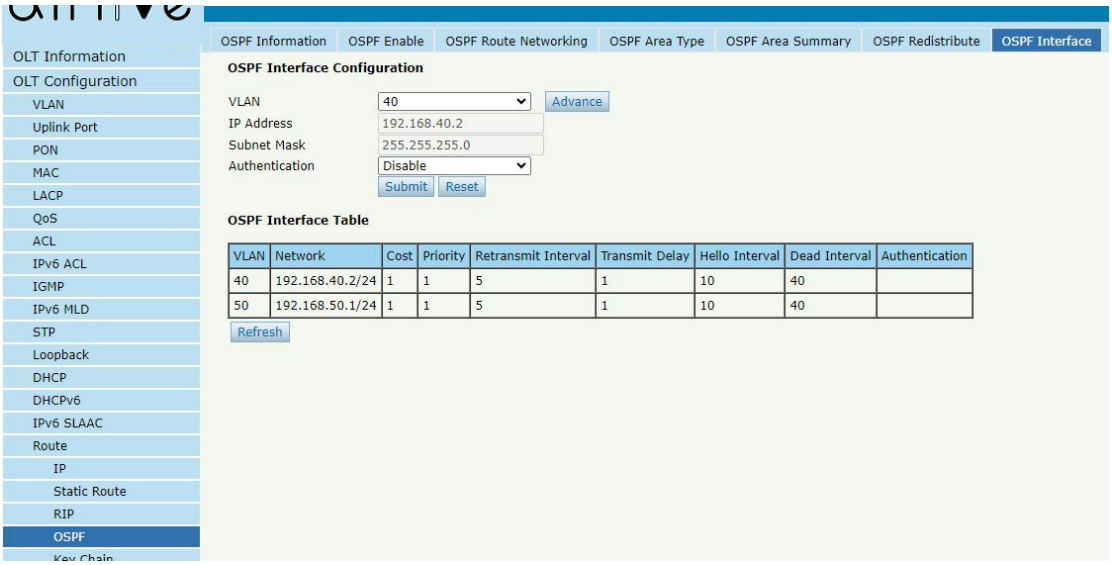



Figure 3.16-15: OSPF Interface

## 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

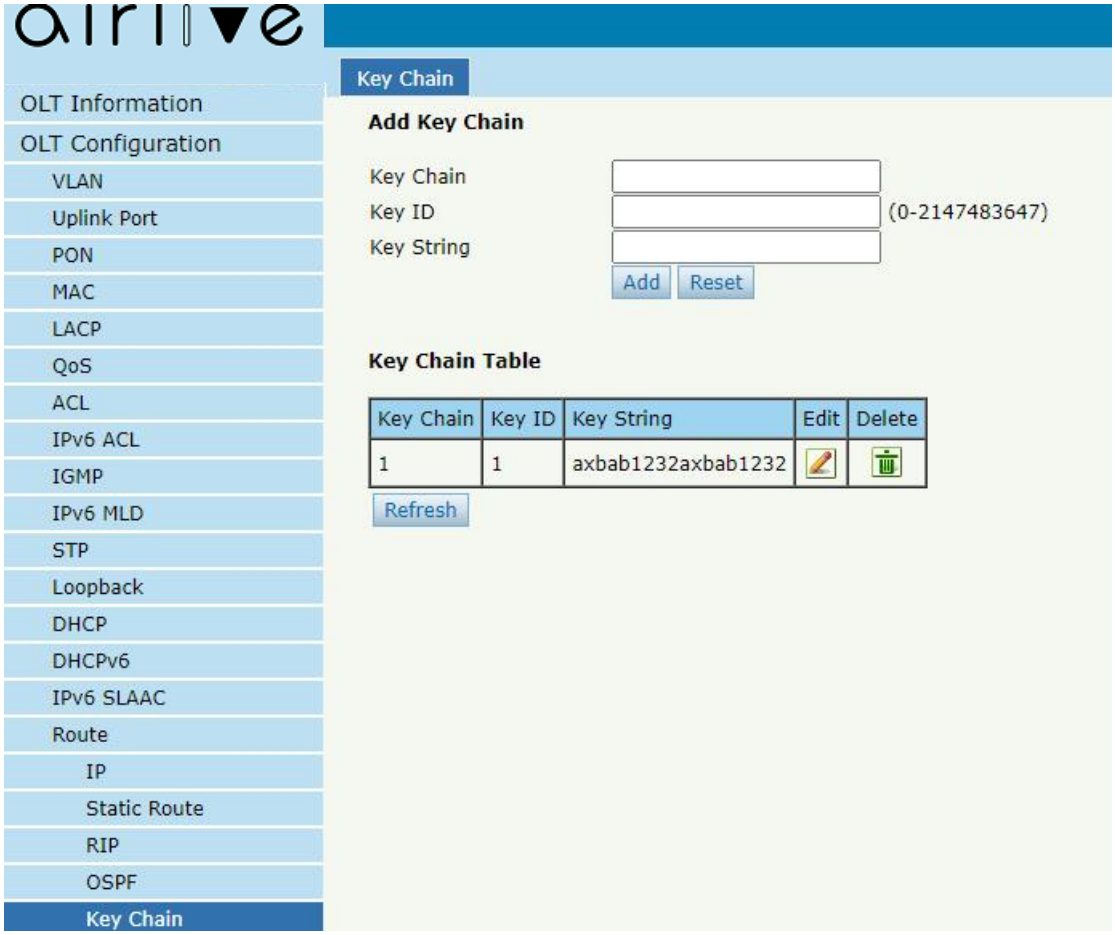



Figure 3.16-16: Key Chain

## 3.16.6 Route Table

OLT Configuration → Route → Route Table
This page displays routing items of OLT.

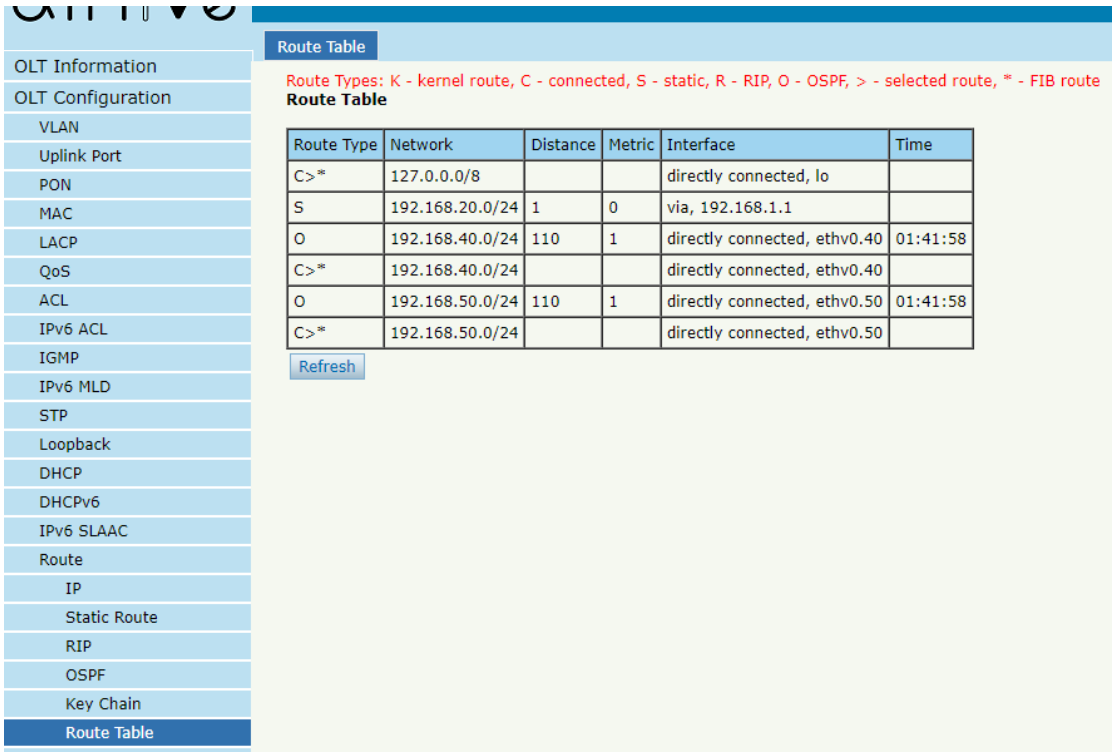



Figure 3.16-17: Route Table

# 3.17 IPv6 Route

## 3.17.1 IPv6

OLT Configuration → IPv6 Route → IPv6 → VLAN IPv6
Configure IPv6 address for VLAN that has been created.

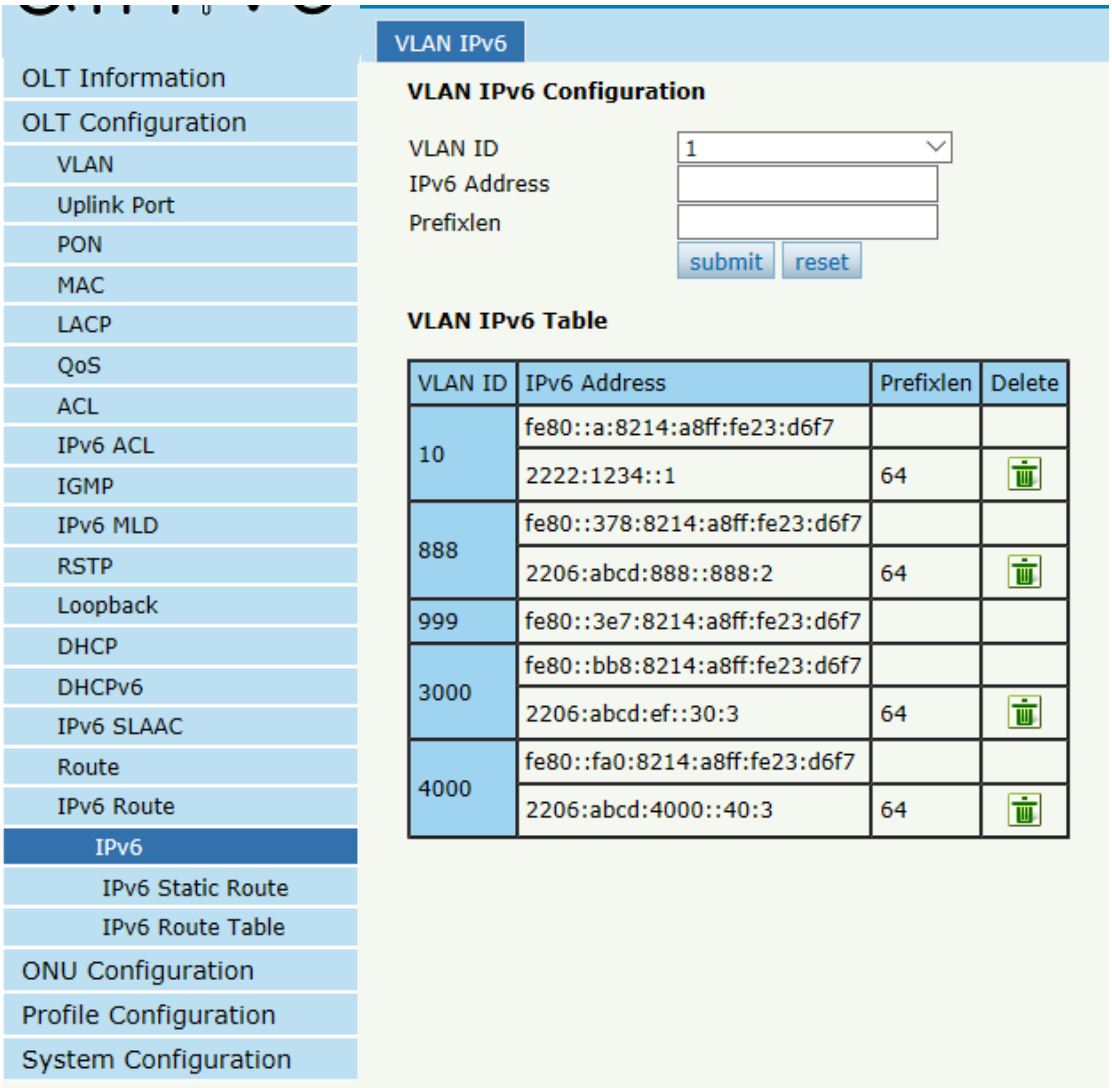



Figure 3.17-1: VLAN IPv6

## 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.

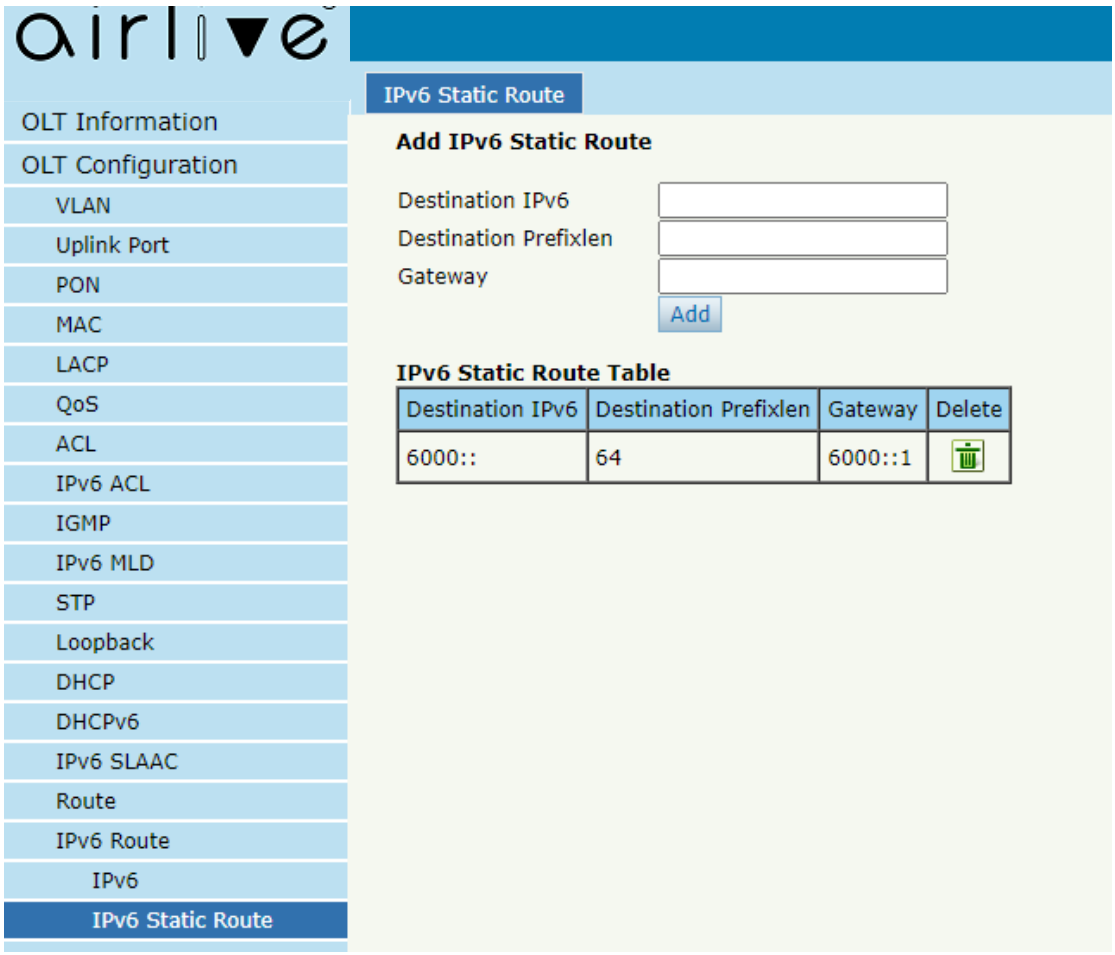



Figure 3.17-2: IPv6 Static Route

## 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.

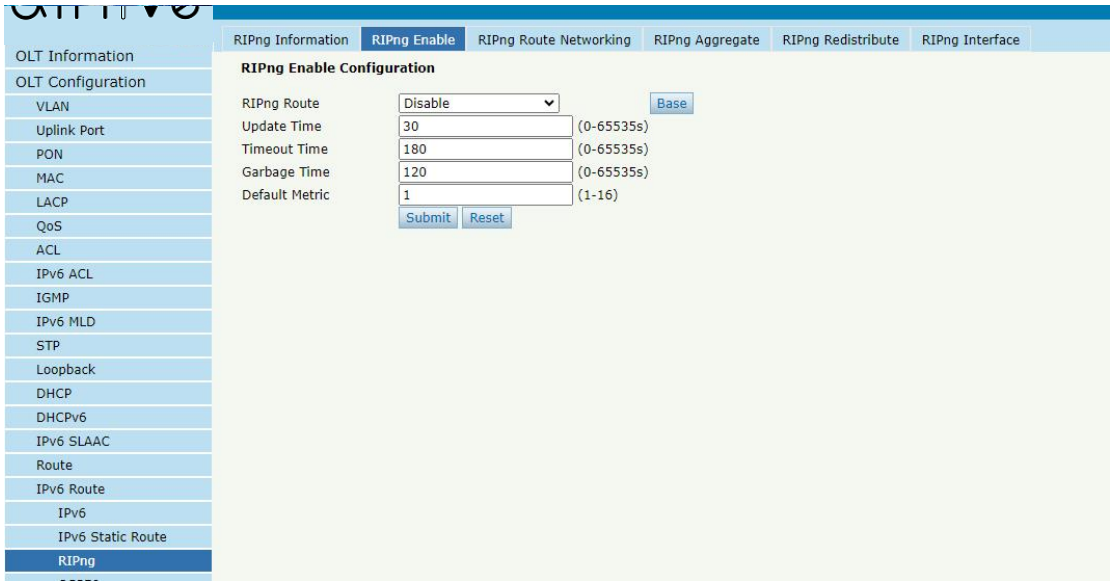



Figure 3.17-4: RIPng Enable

## 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.

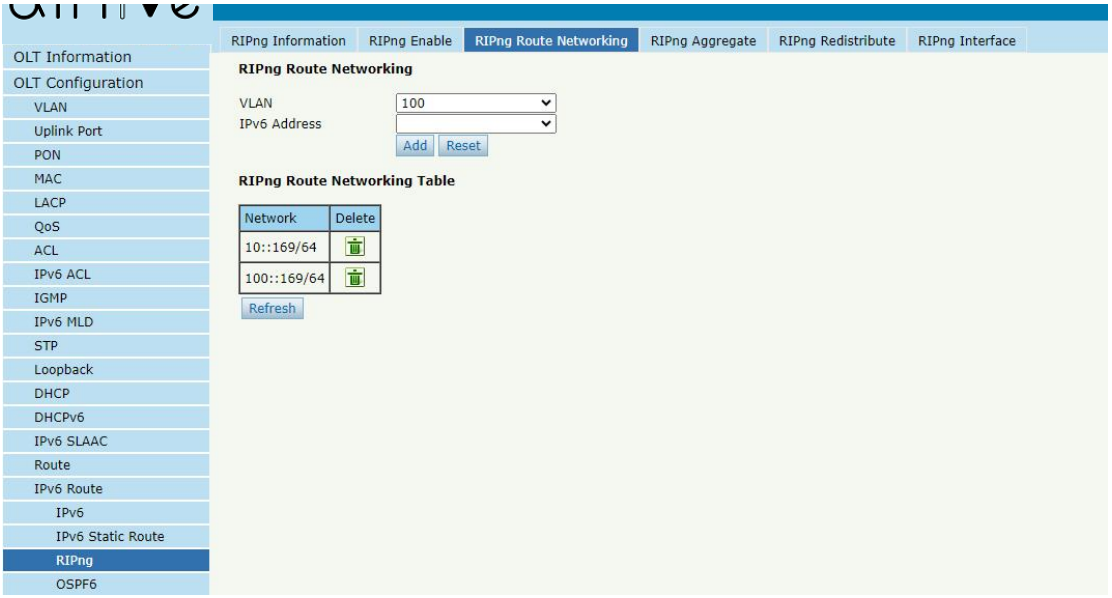



Figure 3.17-5: RIPng Route Networking

## 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.

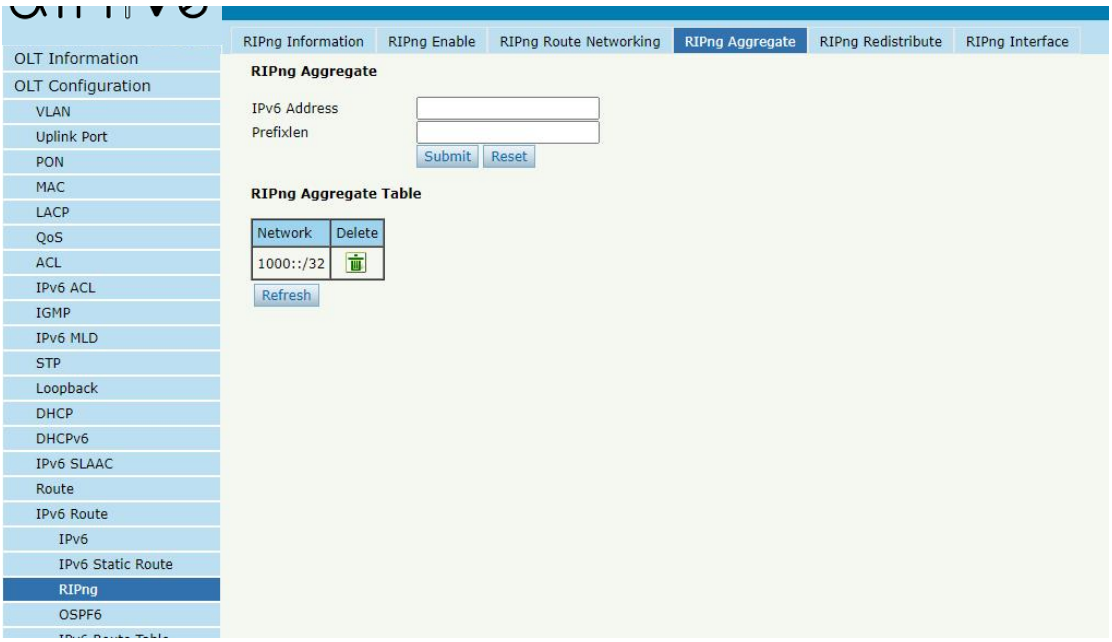



Figure 3.17-6: RIPng Aggregate

### 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.

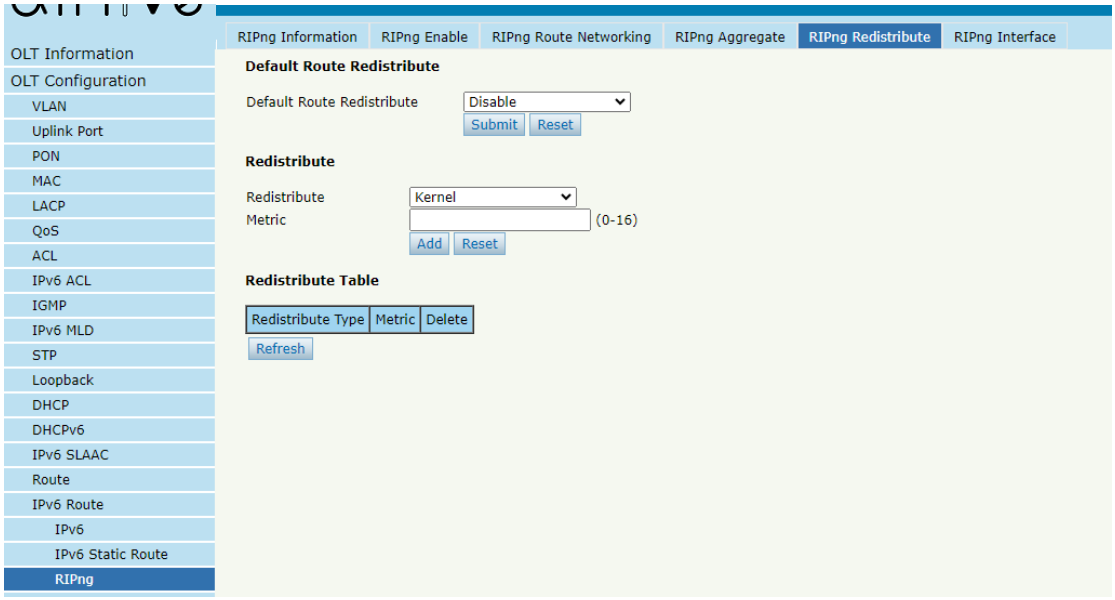



Figure 3.17-7: RIPng Redistribute

### 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.

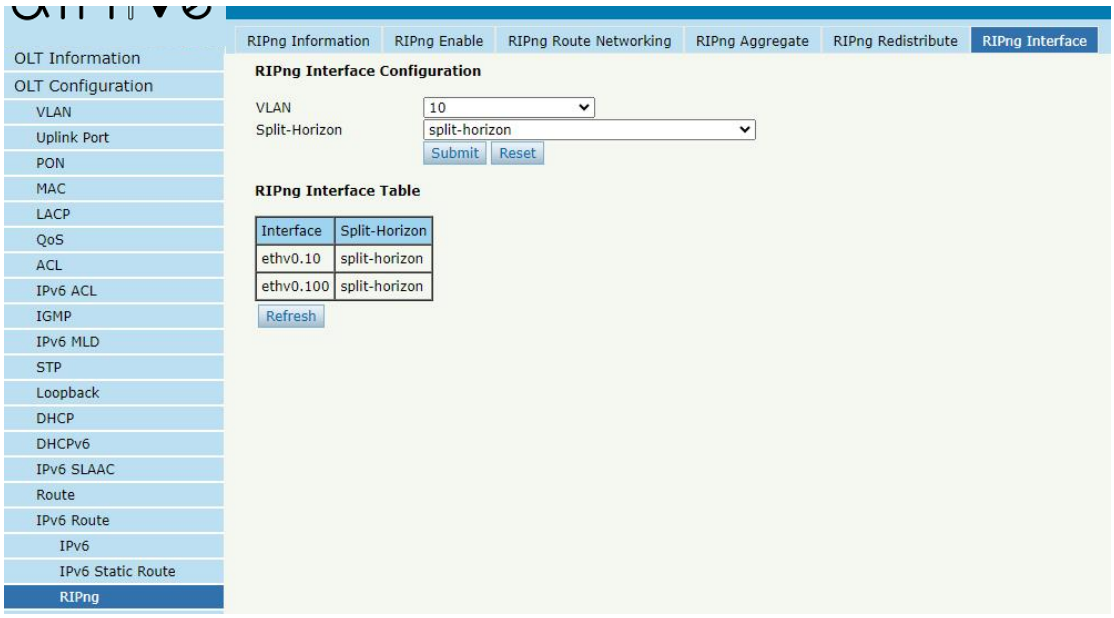



Figure 3.17-8: RIPng Interface

## 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.

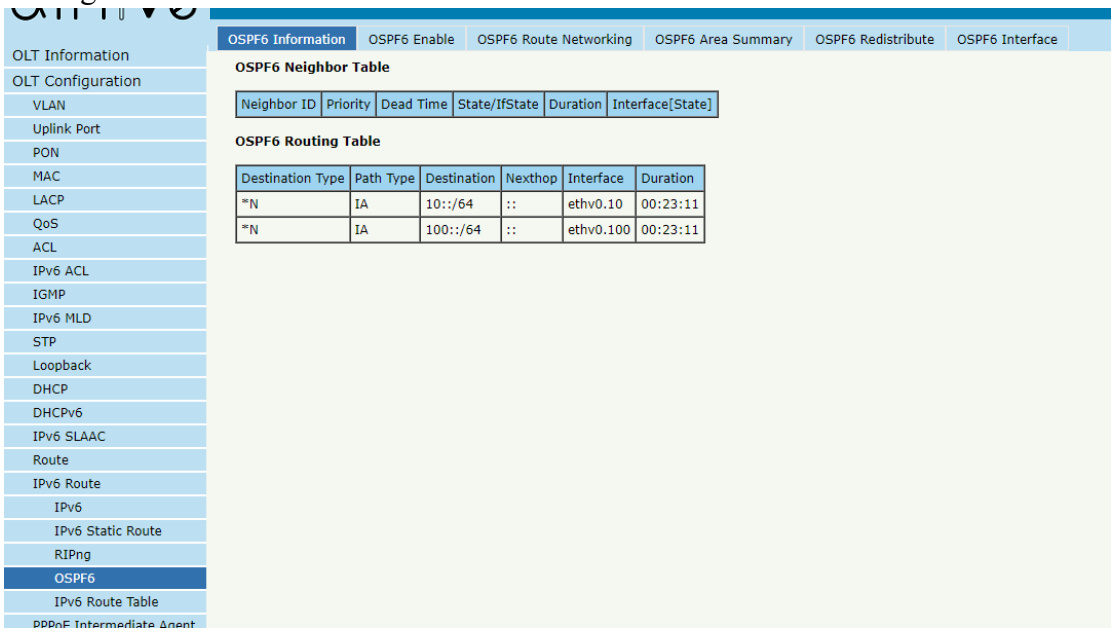



Figure3.17-9: OSPF6 Information

### 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.

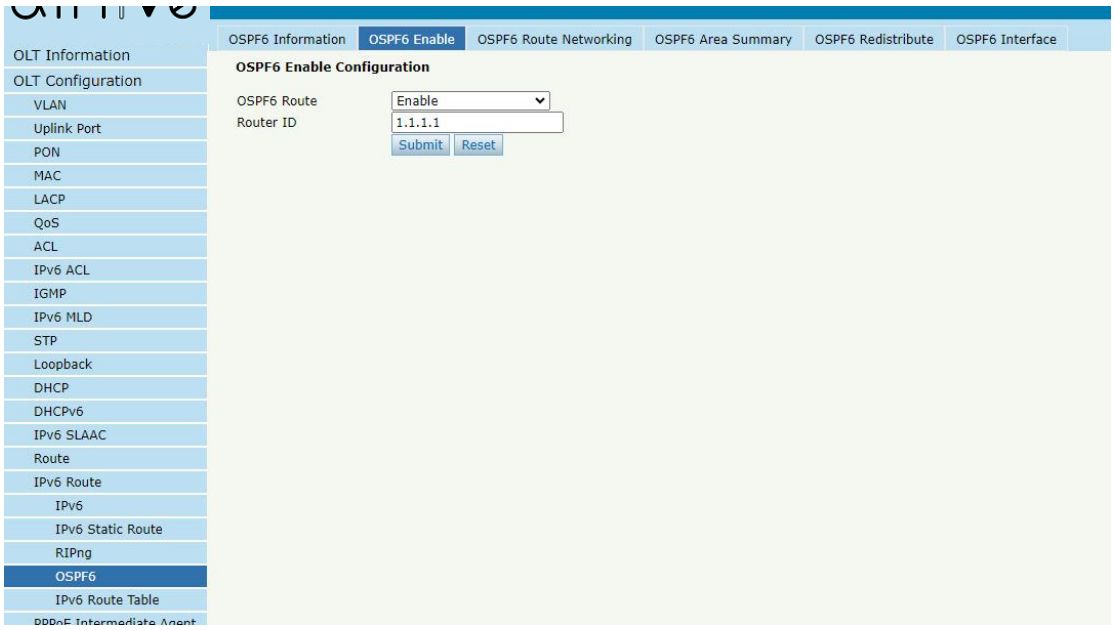



Figure 3.17-10: OSPF6 Enable

## 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.

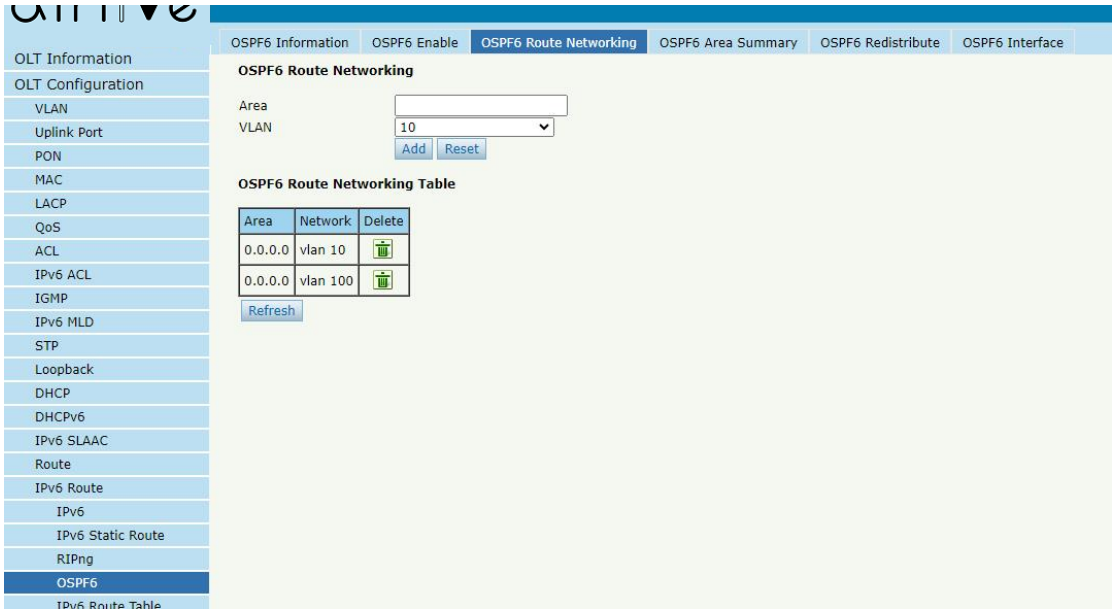



Figure 3.17-11: OSPF6 Route Networking

## 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.

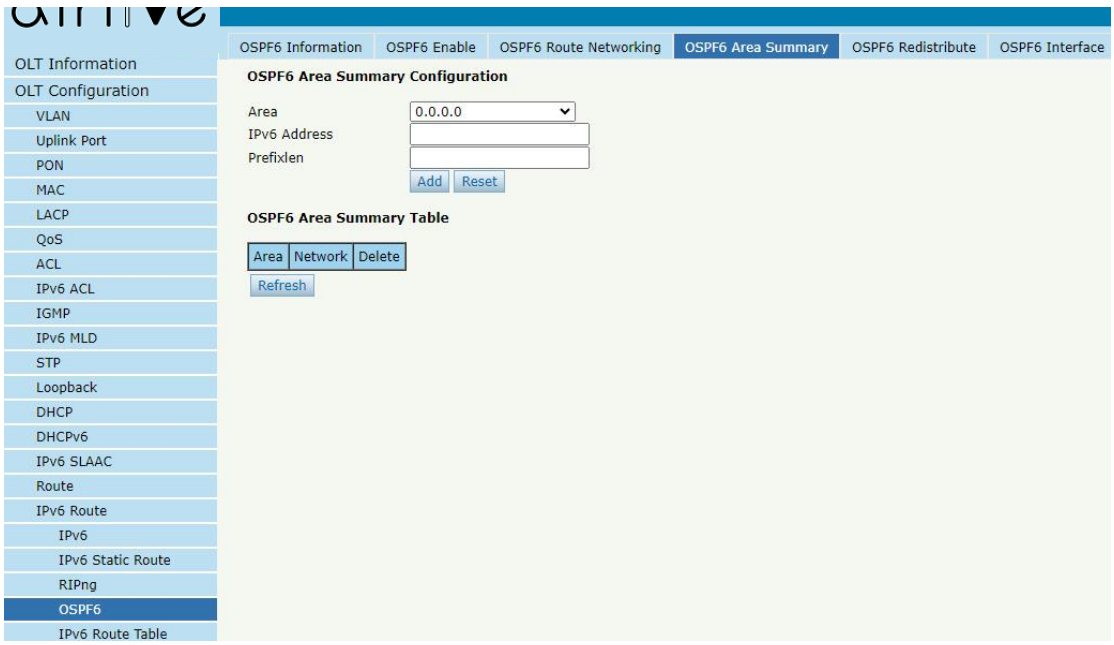



Figure 3.17-12: OSPF6 Area Summary

## 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

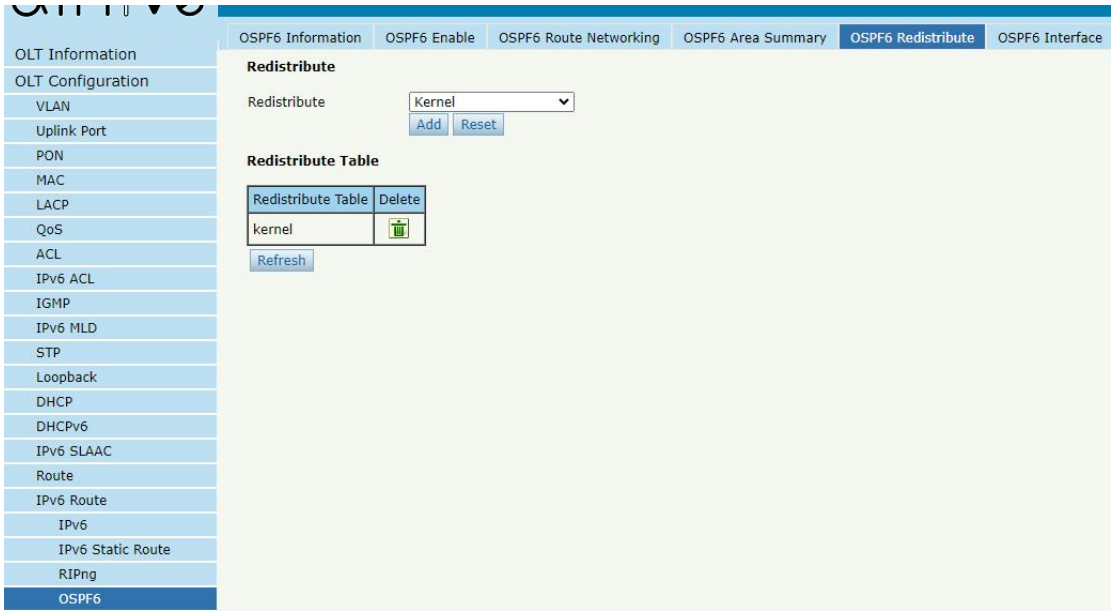



Figure 3.17-13: OSPF6 Redistribute

### 3.17.4.6 OSPF6 Interface

OLT Configuration → IPv6 Route → OSPF6 → OSPF6 Interface
This page is used for OSPF6 interface parameters such as cost, time, priority, authentication, and so on.

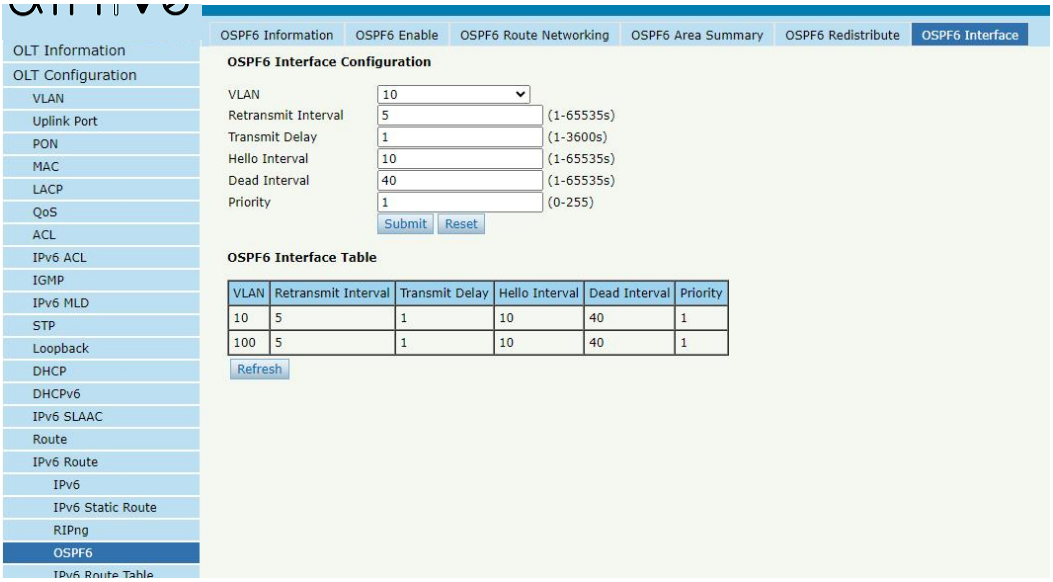



Figure 3.17-14: OSPF6 Interface

## 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.

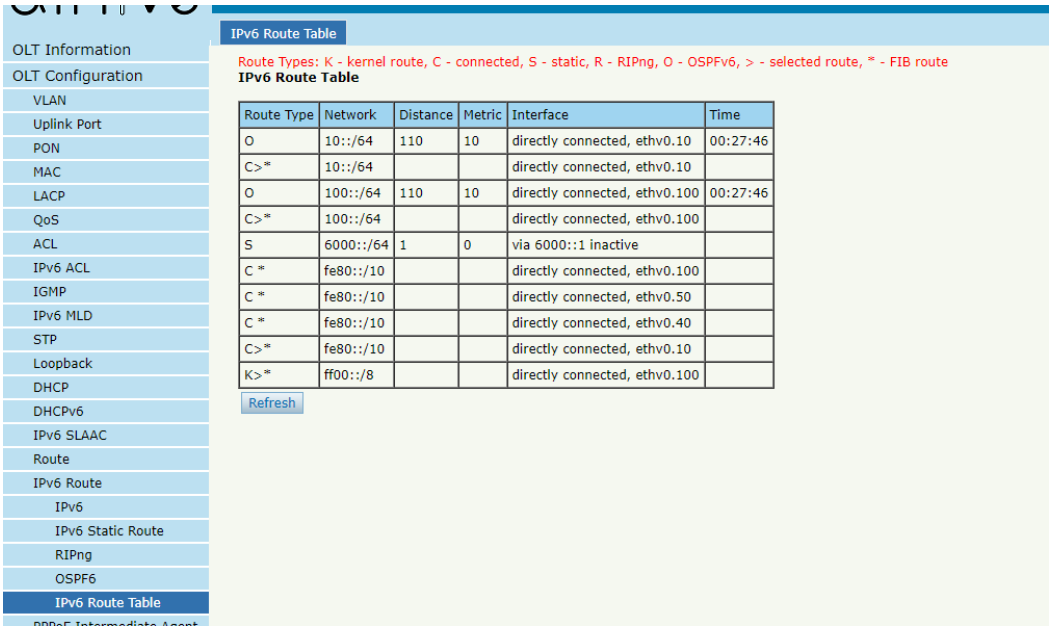



Figure 3.17-15: IPv6 Route Table

# 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.

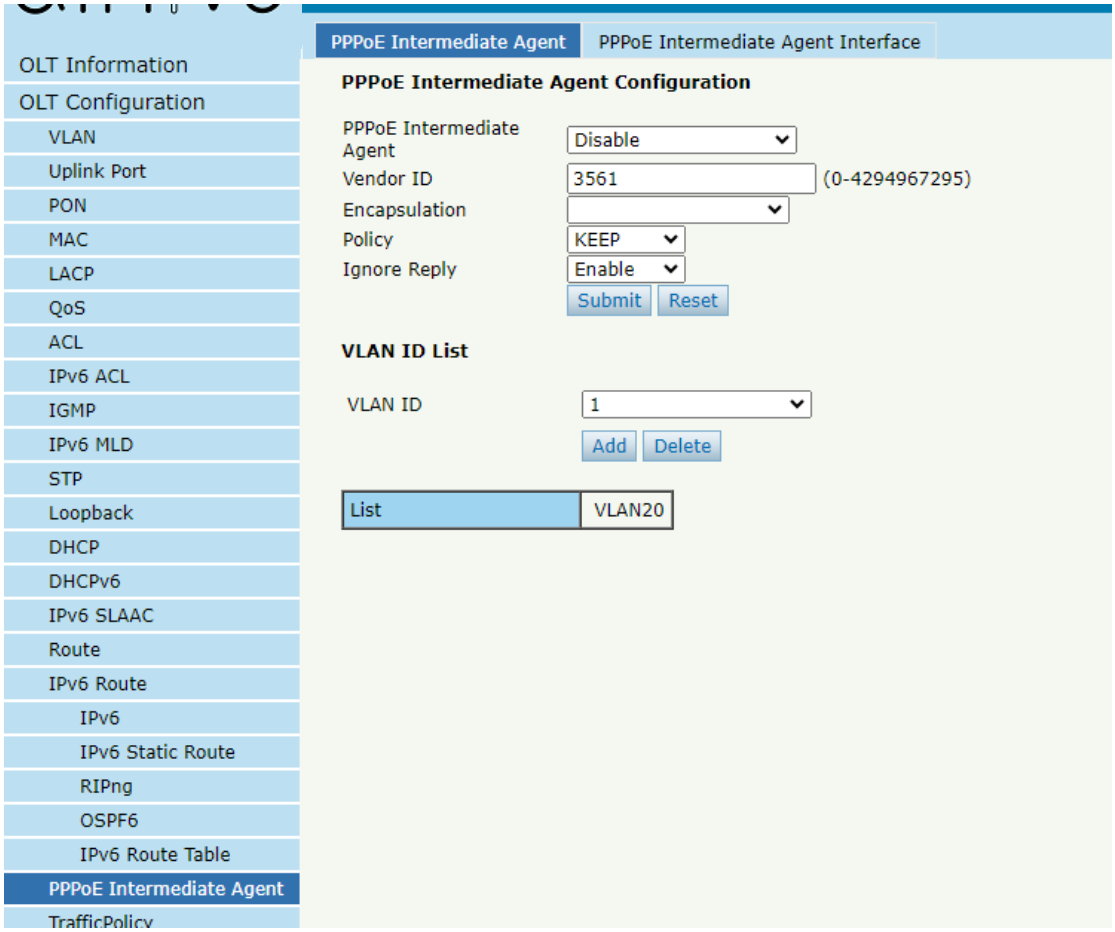



Figure 3.18-1: PPPoE Intermediate Agent

## 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.

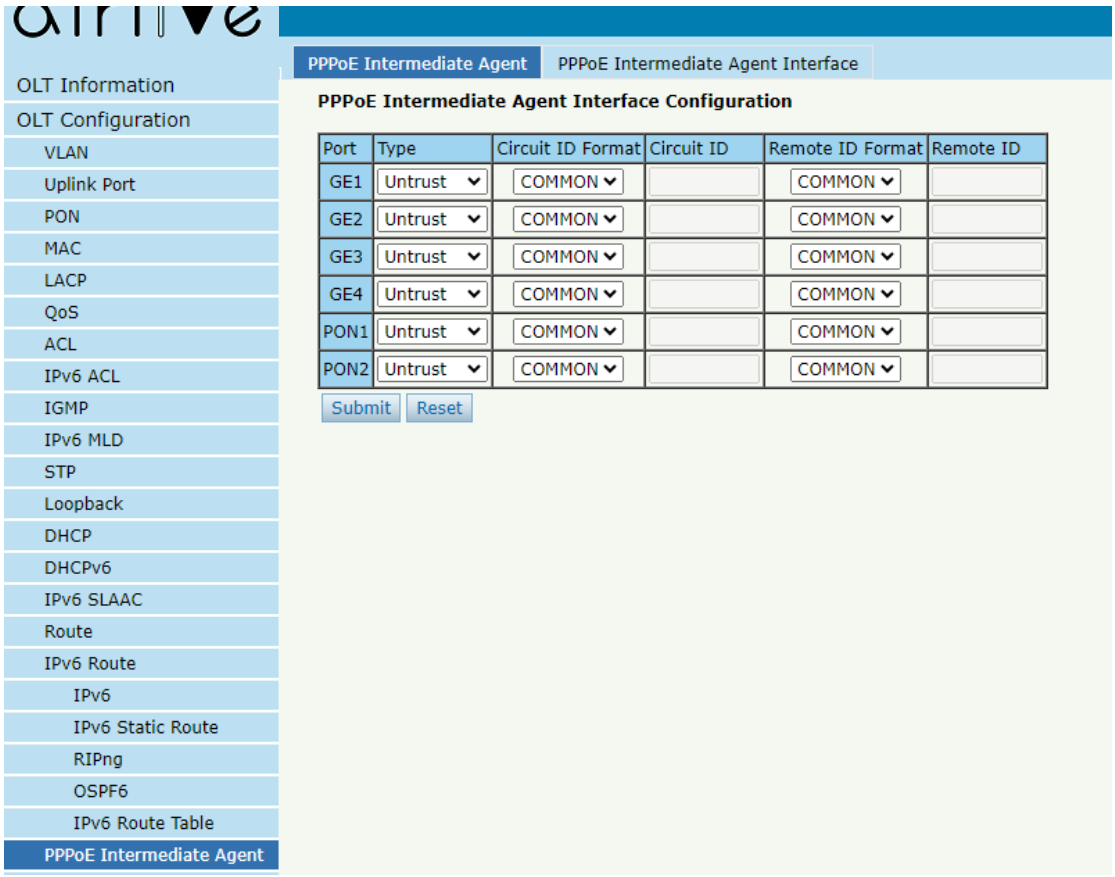



Figure 3.18-2: PPPoE Intermediate Agent Interface

# 3.19 Traffic Policy

## 3.19.1 Policy

OLT Configuration → Traffic Policy → Policy

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

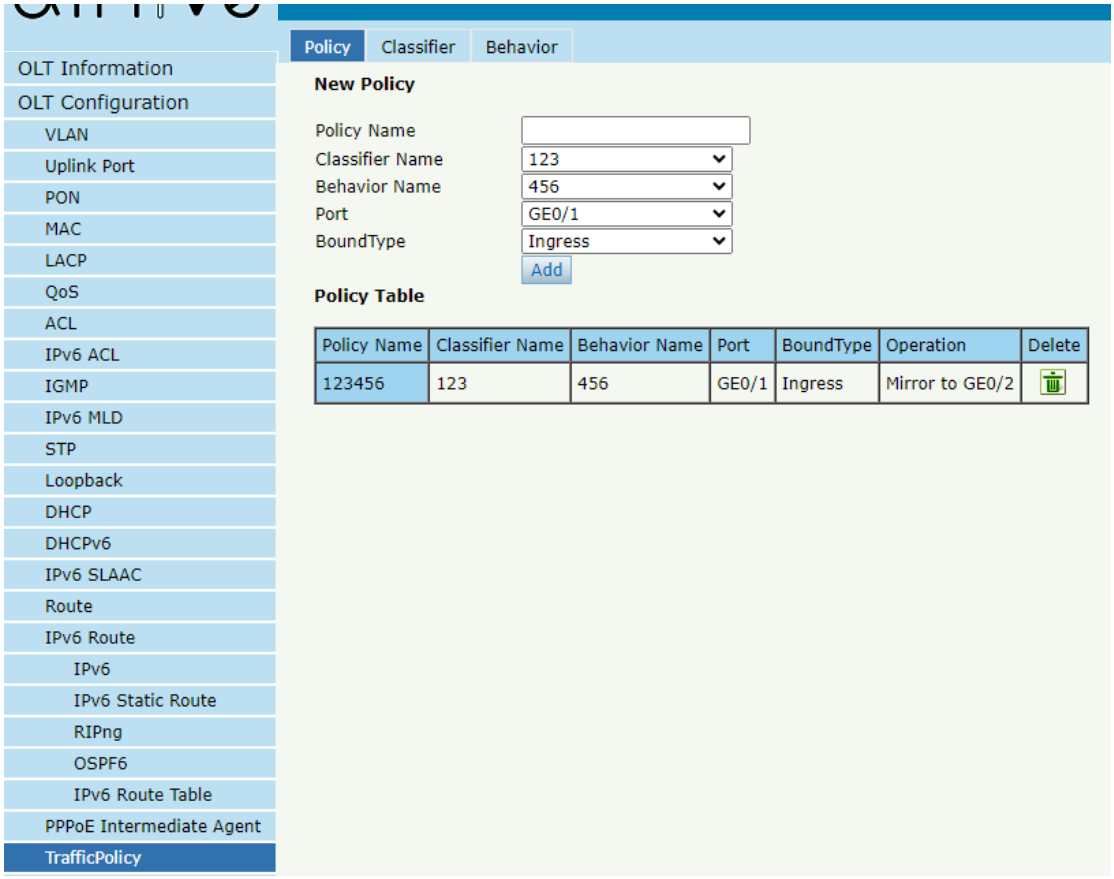



Figure 3.19-1: Policy

## 3.19.2 Classifier

OLT Configuration → TrafficPolicy → Classifier
This page is used to configure flow classifier, It is created based on ACL.

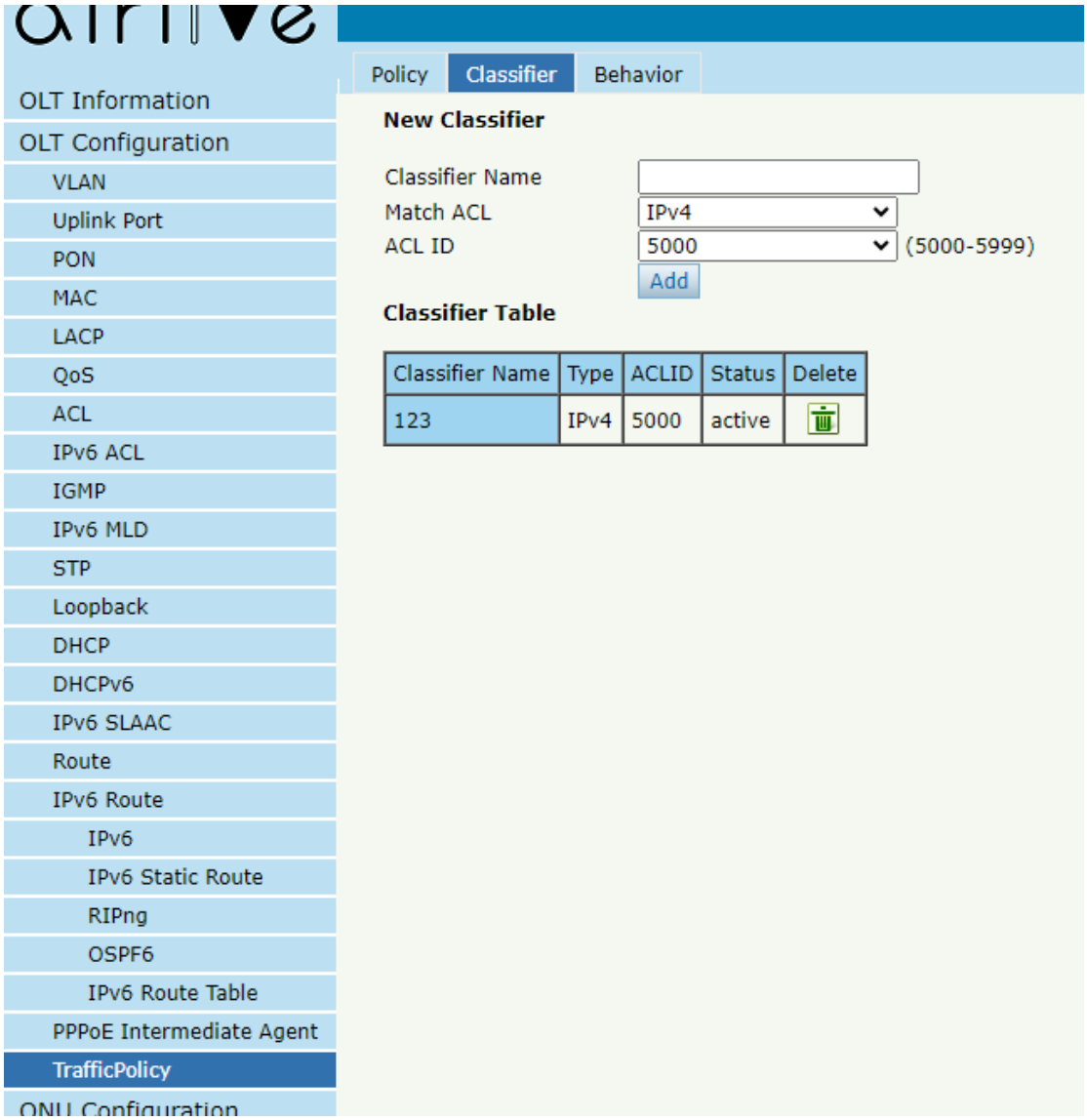



Figure 3.19-2: Classifier

## 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.

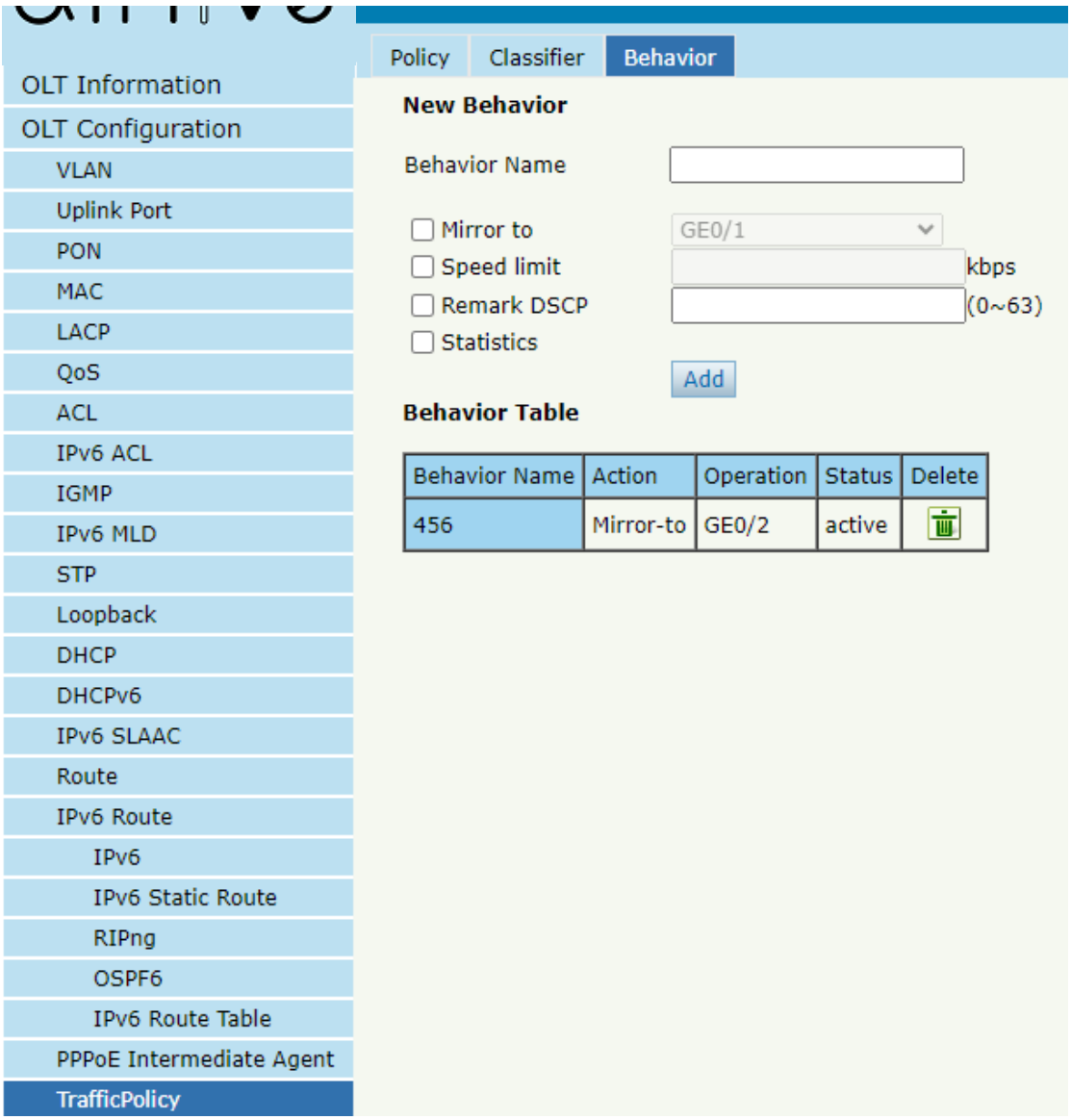



Figure 3.19-3: Behavior

# 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.

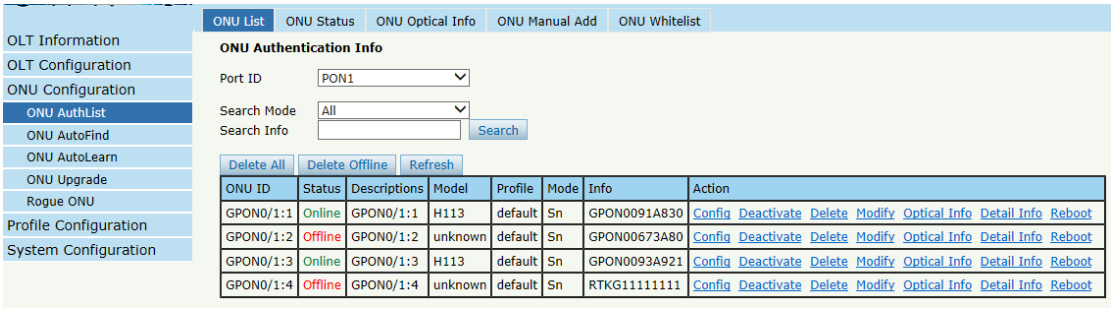



Figure 4.1-1: ONU List

#### 4.1.1.1 Config

ONU Configuration→ONU AuthList→ONU List→Config
Configure ONU parameter information which you selected.

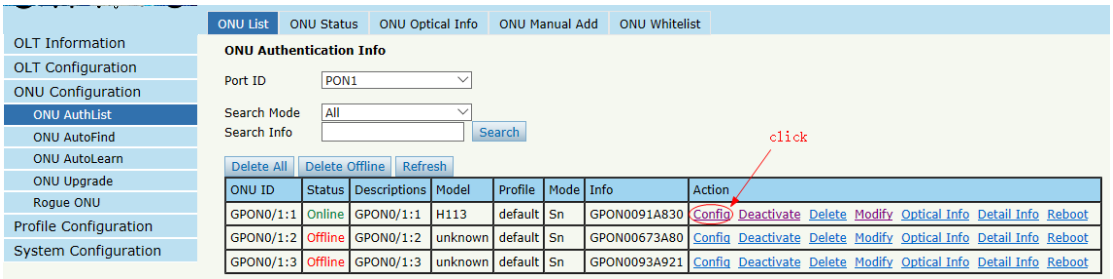



Figure 4.1-2: Configure ONU

##### 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.

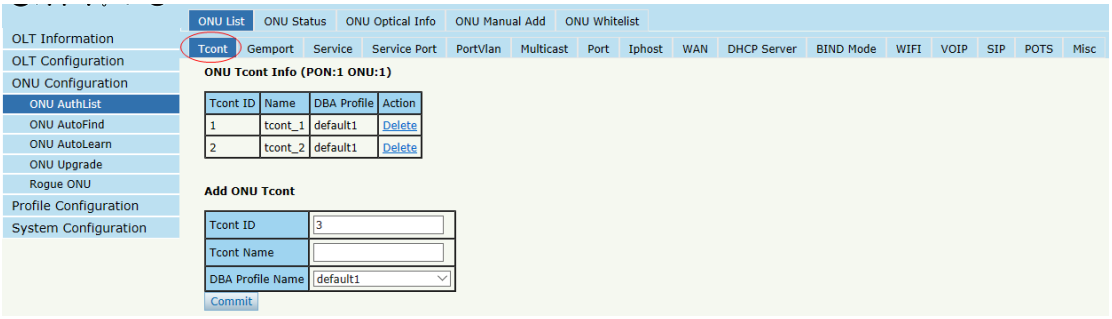



Figure 4.1-3: Create Tcont

## 4.1.1.1.2 Gemport

ONU Configuration→ONU AuthList→ONU List→Config→Gemport
Create gemport ID and bind tcont ID.

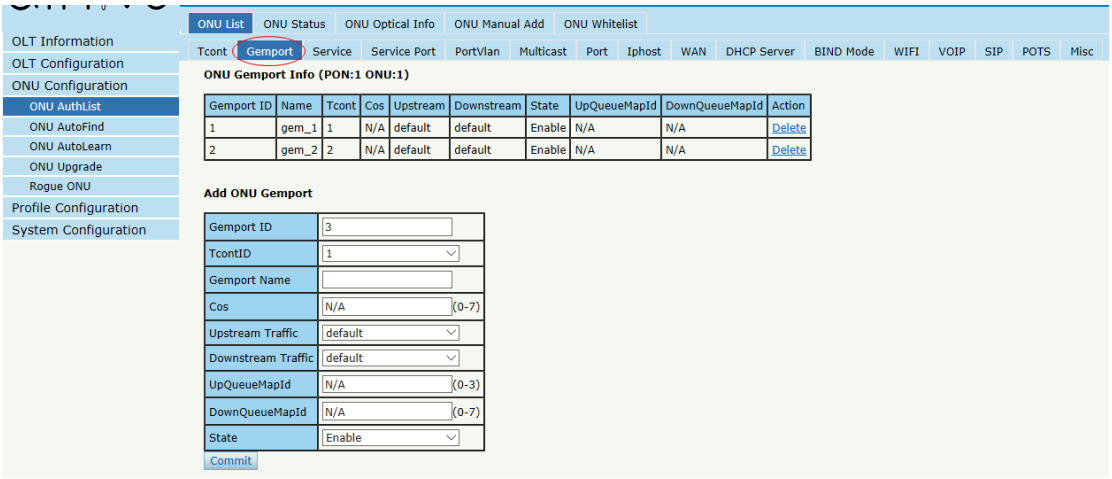



Figure 4.1-4: Create gemport

## 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.

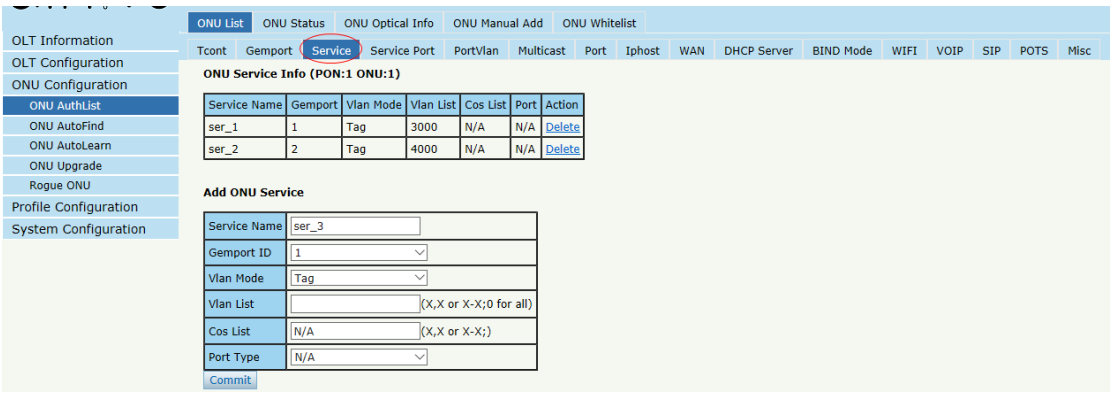



Figure 4.1-5: Create service

## 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.

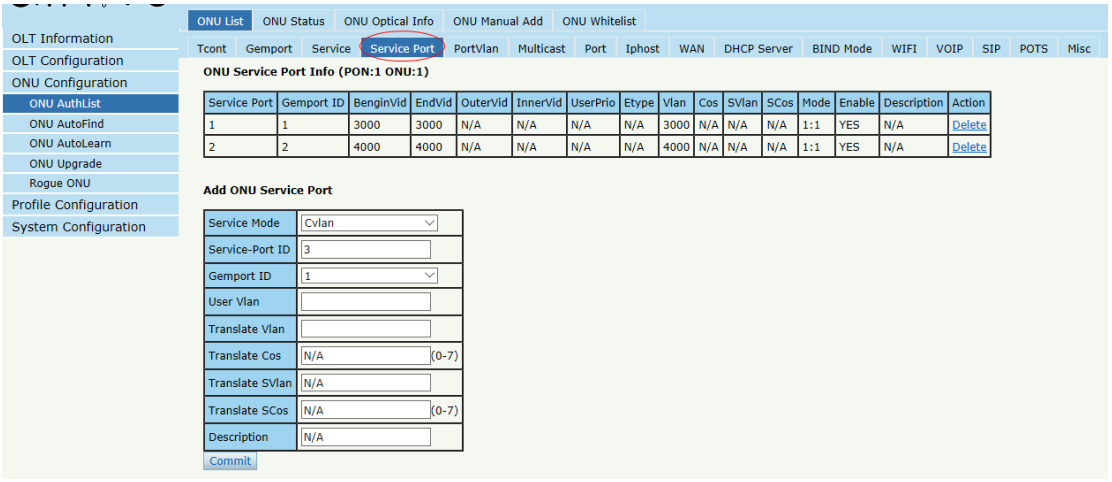



Figure 4.1-6: Create service port

## 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.

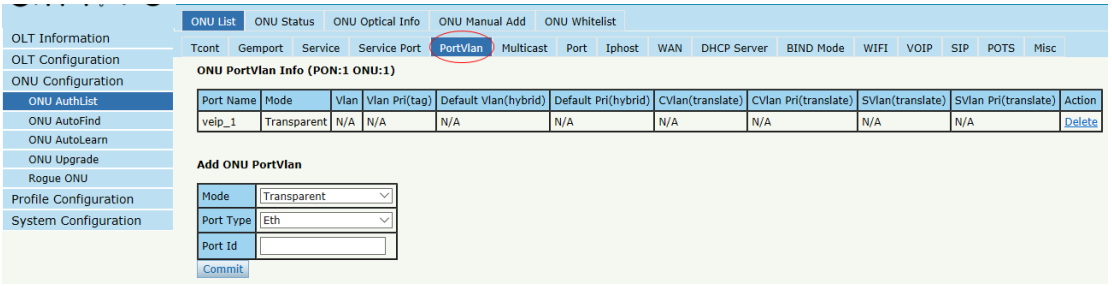



Figure 4.1-7: Configure port VLAN mode

## 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.

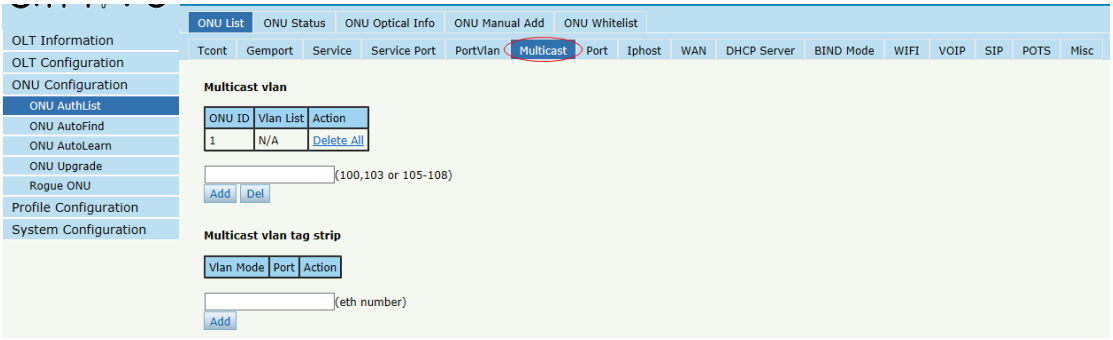



Figure 4.1-8: Configure multicast VLAN

#### 4.1.1.1.7 Port

ONU Configuration→ONU AuthList→ONU List→Config→Port
Set attribute of ONU LAN port.

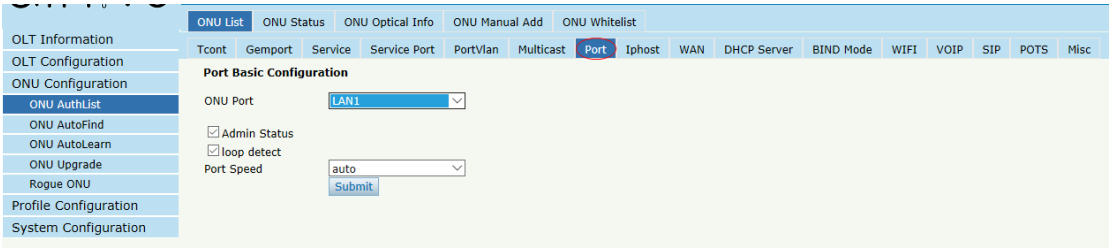



Figure 4.1-9: ONU port attibute

#### 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.

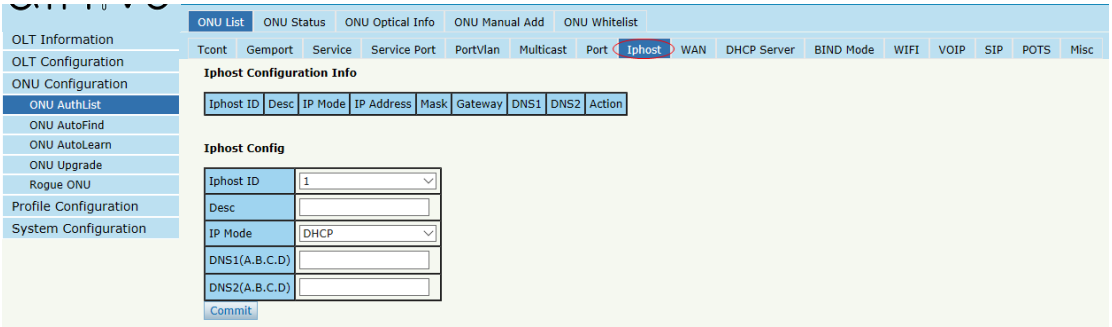



Figure 4.1-10: Configure IPhost

#### 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.

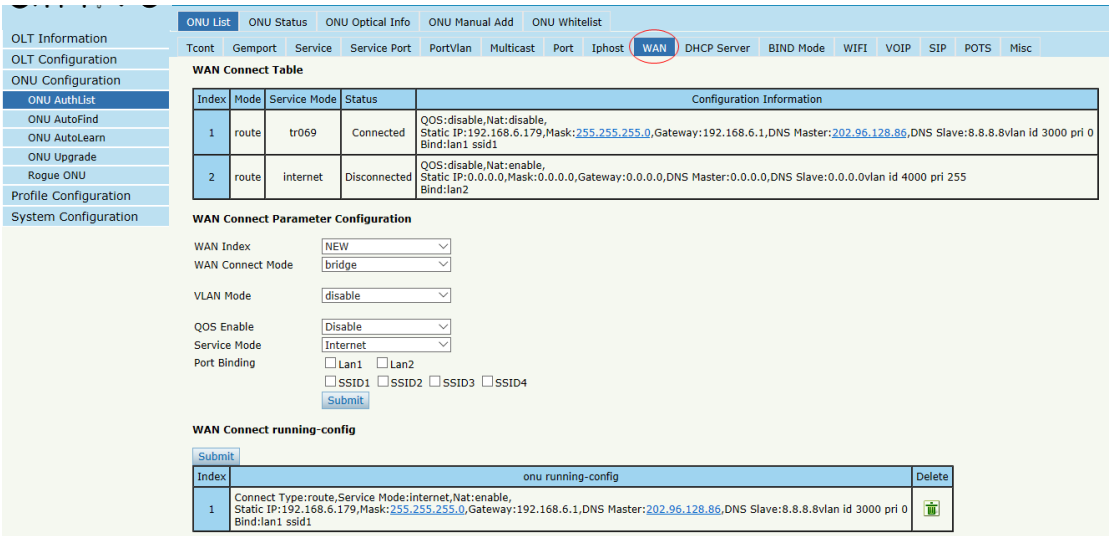



Figure 4.1-11: Configure WAN

## 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.

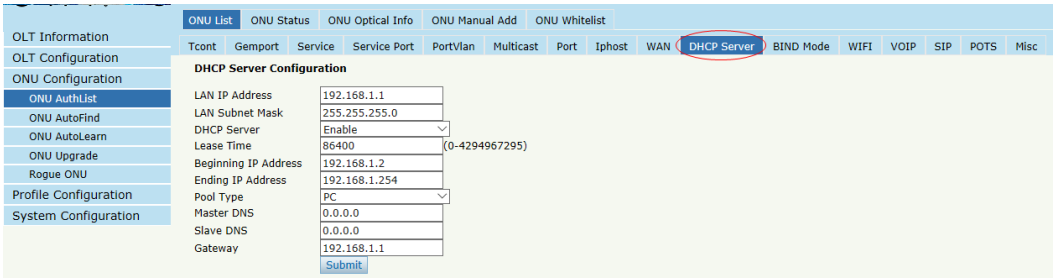



Figure 4.1-12: ONU DHCP Server

## 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.

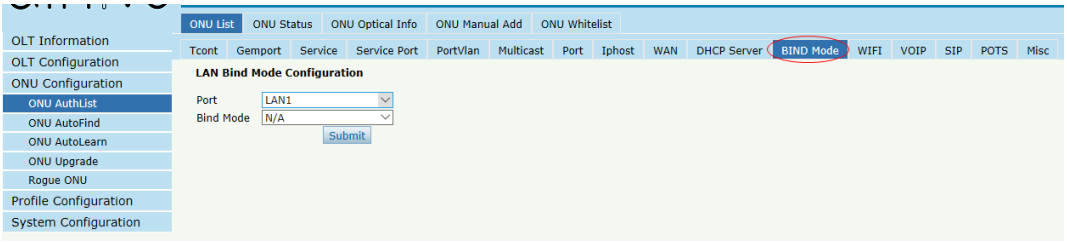



Figure 4.1-13: LAN Bind Mode Configuration

## 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.

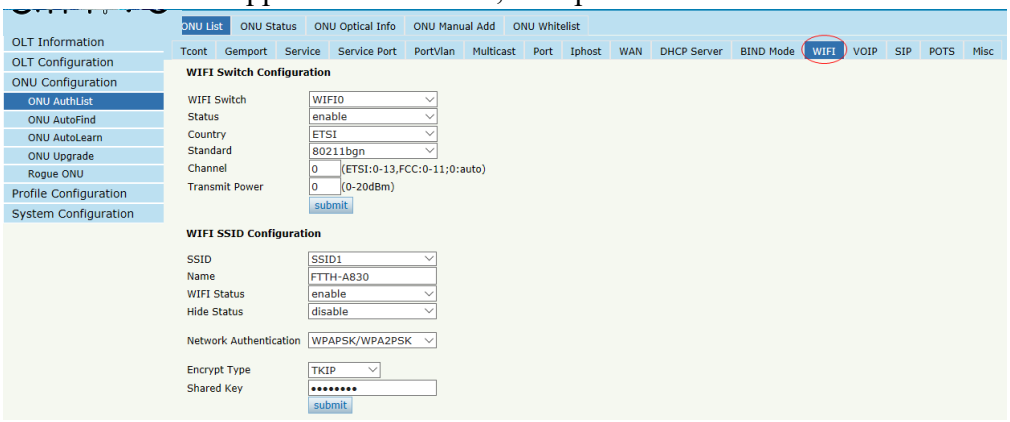



Figure 4.1-14: WIFI Configuration

## 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.

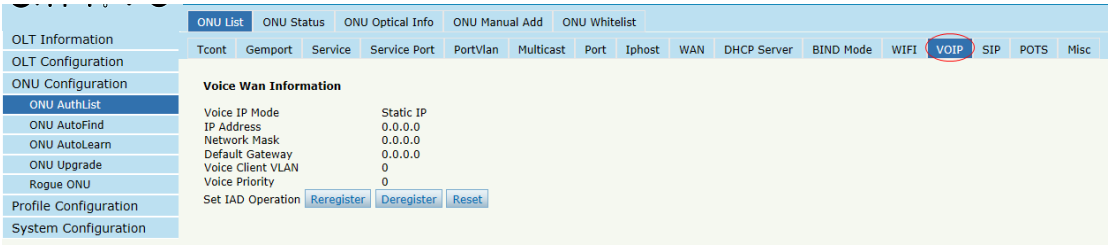



Figure 4.1-15: Voice Wan Information

## 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.

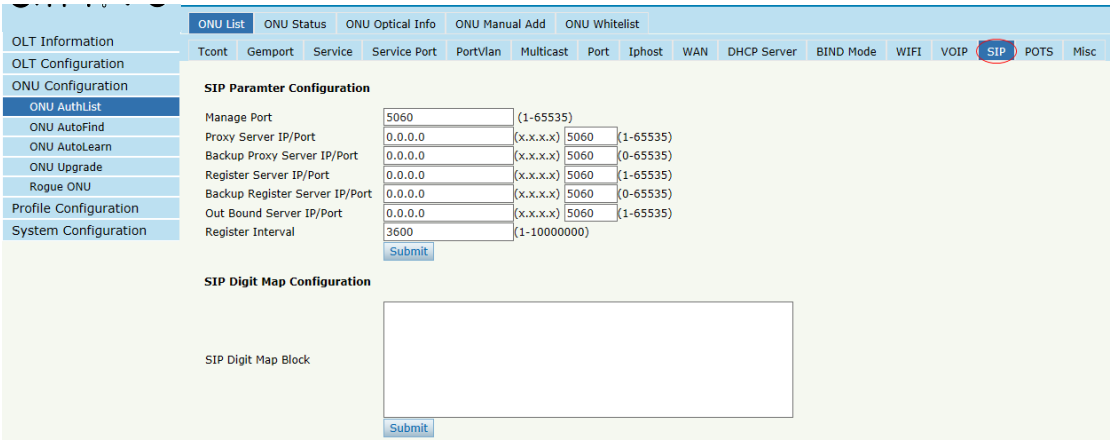



Figure 4.1-16: SIP Parameter

## 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.

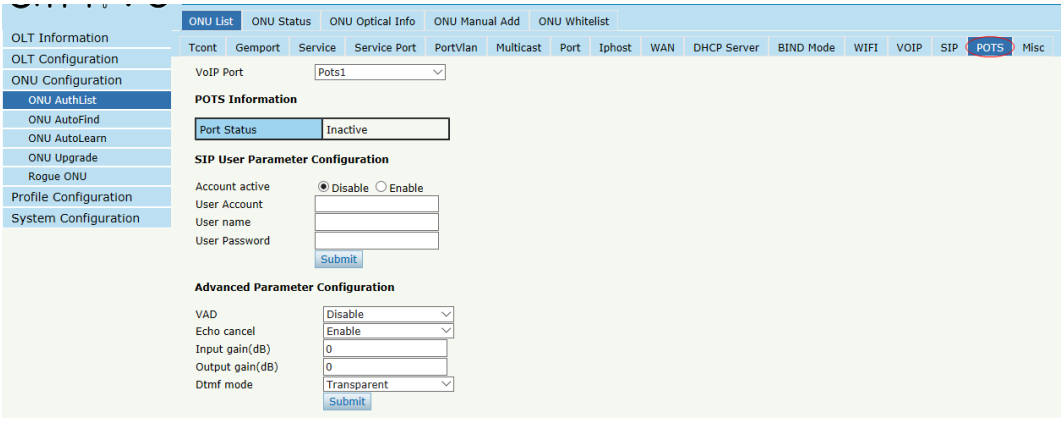



Figure 4.1-17: POTS Configuration

## 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.

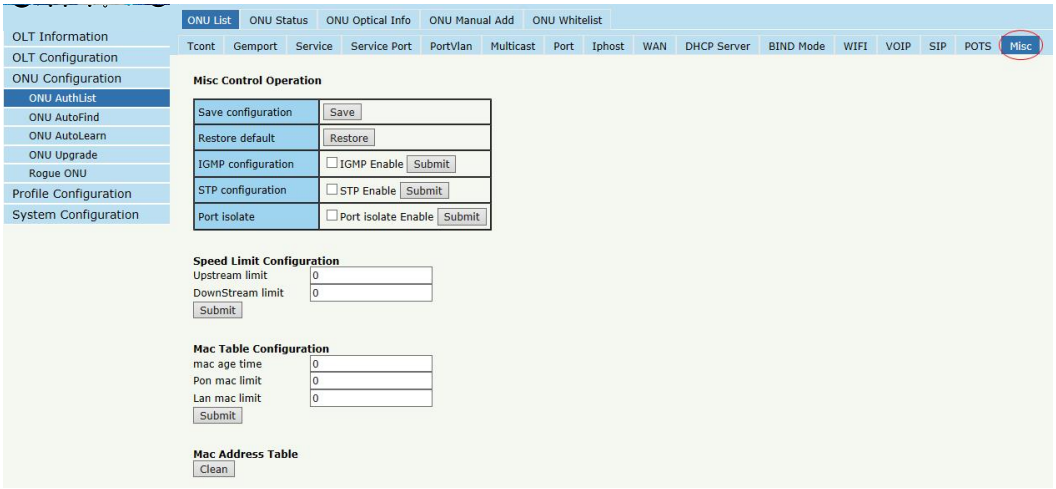



Figure 4.1-18: Misc Configuration

## 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.

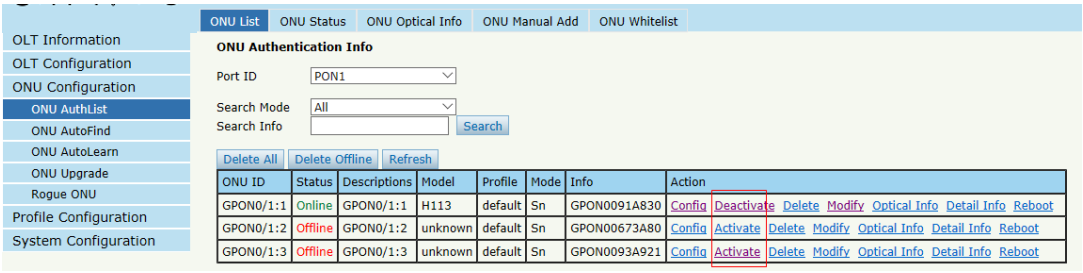



Figure 4.1-19: Deactivate/Activate ONU

### 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.

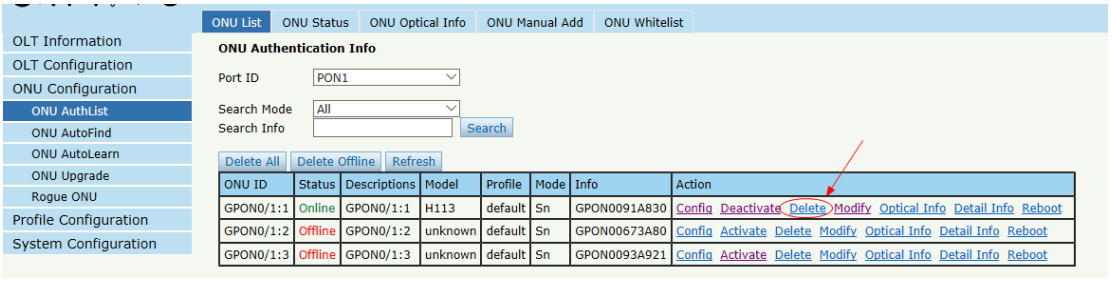



Figure 4.1-20: Delete ONU

### 4.1.1.4 Modify

ONU Configuration→ONU AuthList→ONU List→Modify
This is used to modify ONU authentication mode.

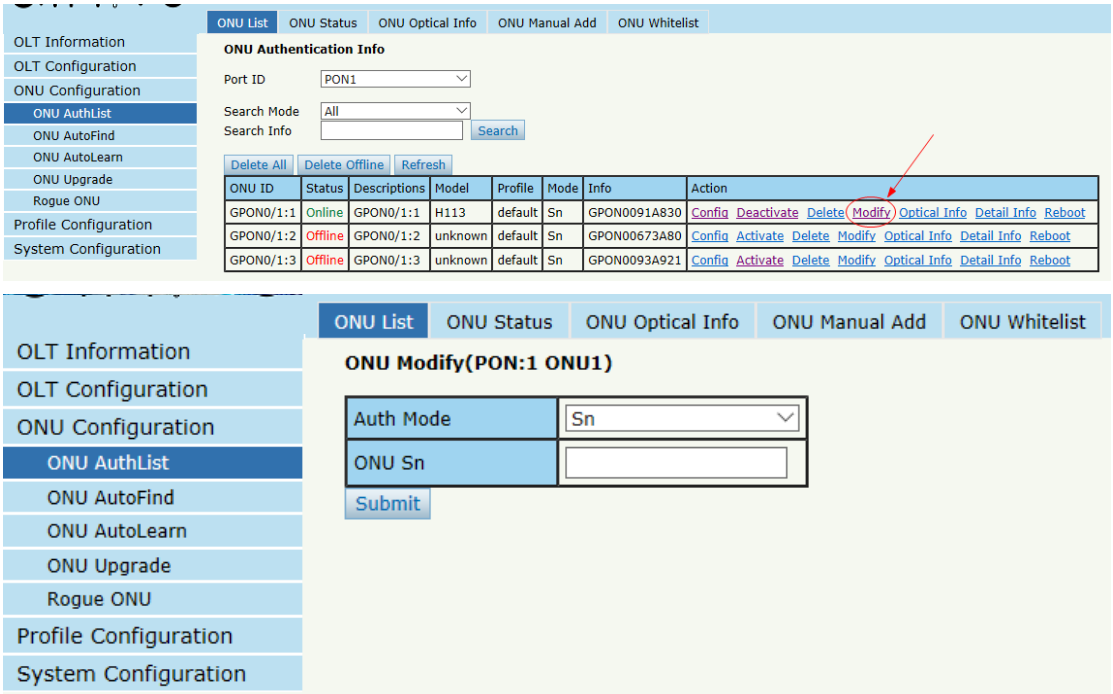



Figure 4.1-21: Modify ONU Authentication mode

### 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.

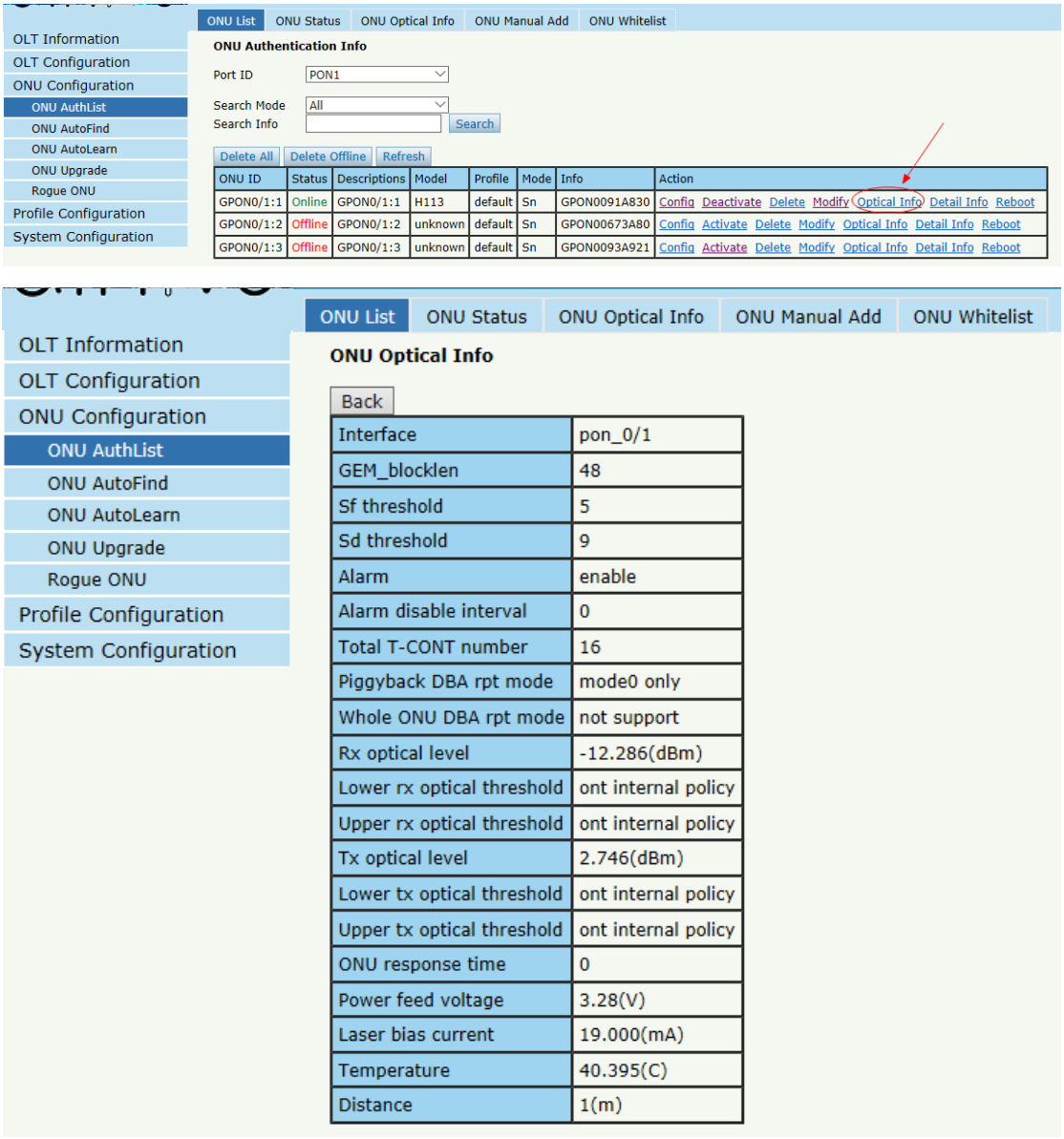
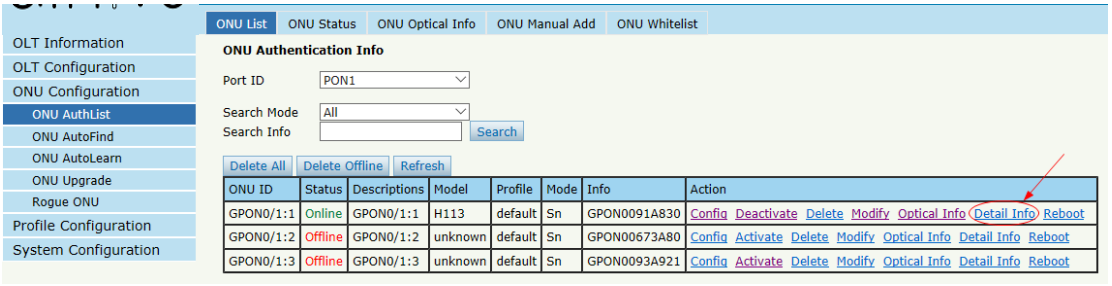



Figure 4.1-22: Optical info of ONU

## 4.1.1.6 Detail Info

ONU Configuration→ONU AuthList→ONU List→Detail Info
Check the Detail Info of ONU which you selected.



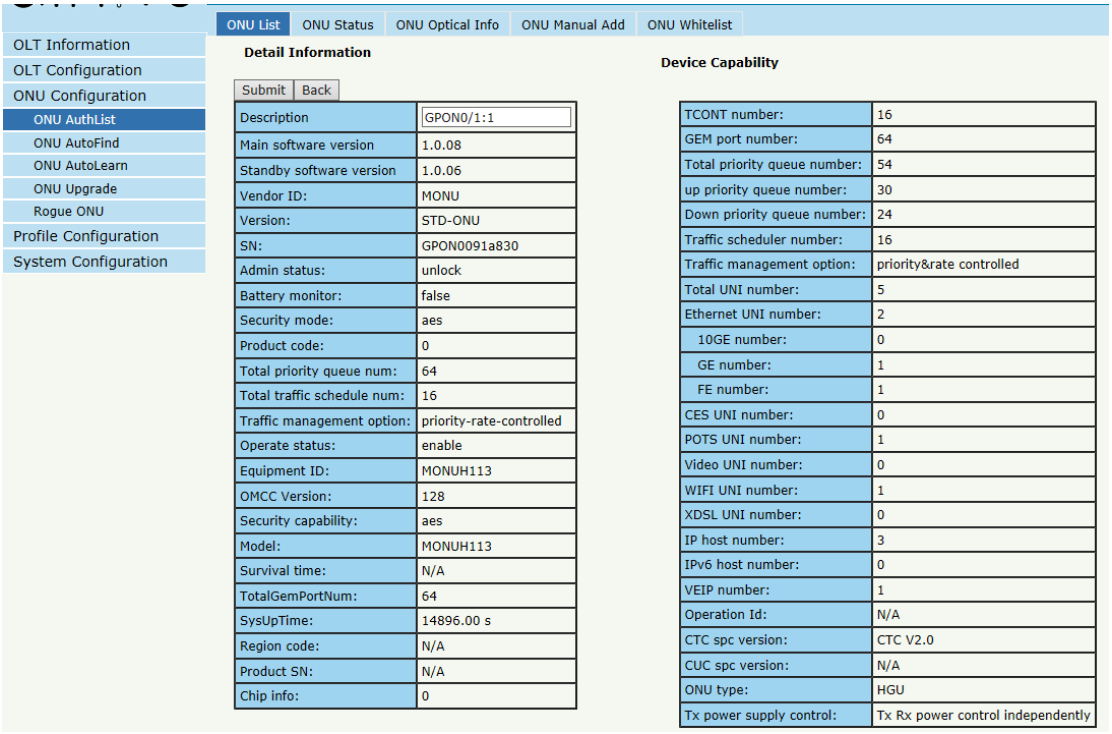



Figure 4.1-23: Detail info of ONU

### 4.1.1.7 Reboot

ONU Configuration→ONU AuthList→ONU List→Reboot
Reboot ONU which you selected.

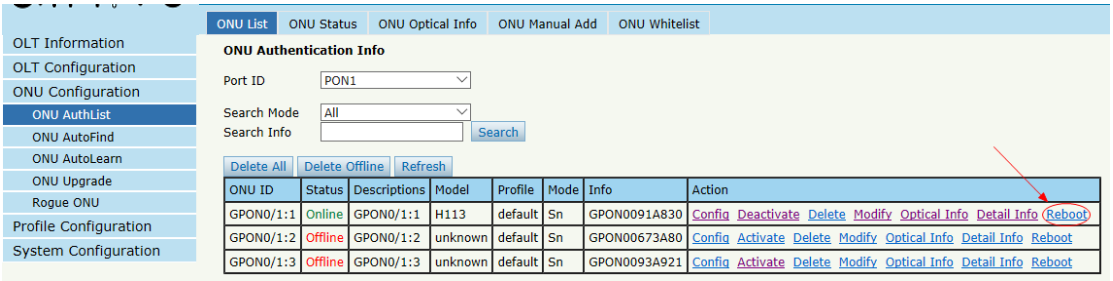



Figure 4.1-24: Reboot ONU

## 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.

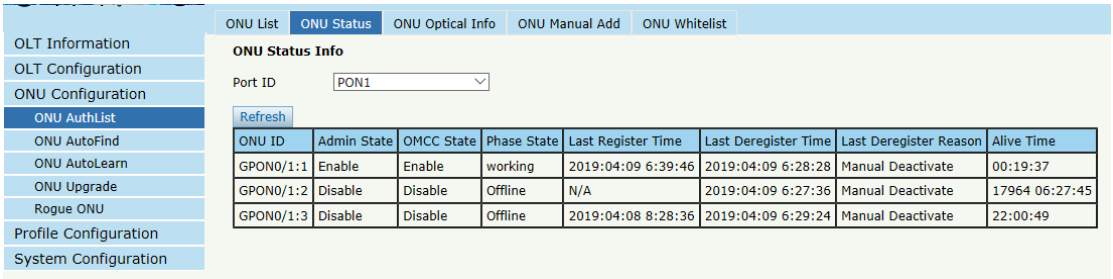



Figure 4.1-25: ONU Status

## 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.

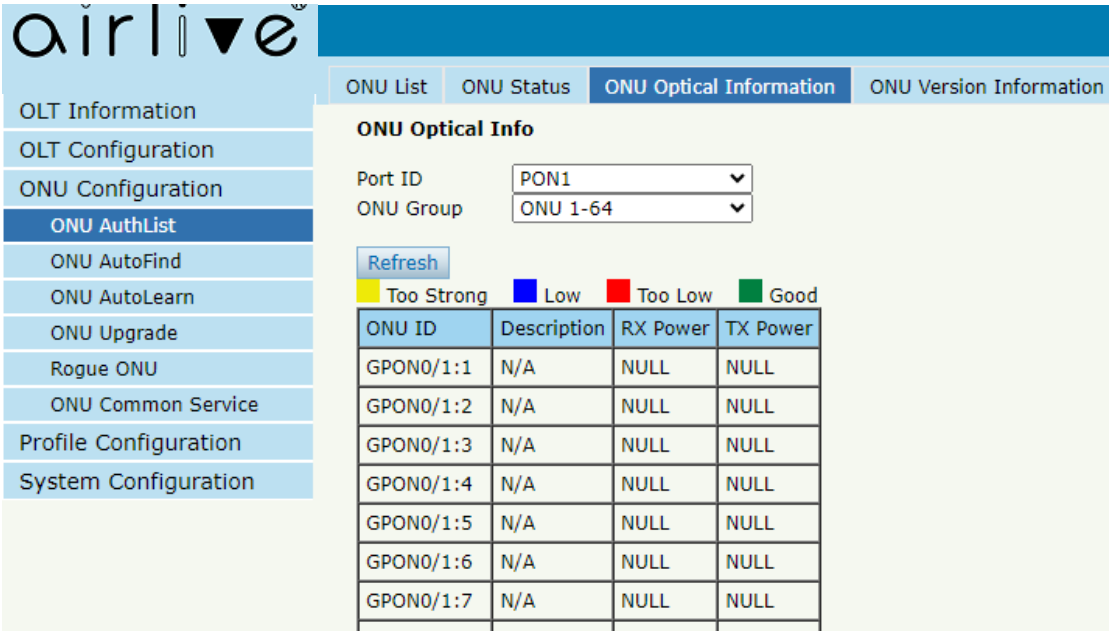



Figure 4.1-26: ONU Optical Info

## 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.

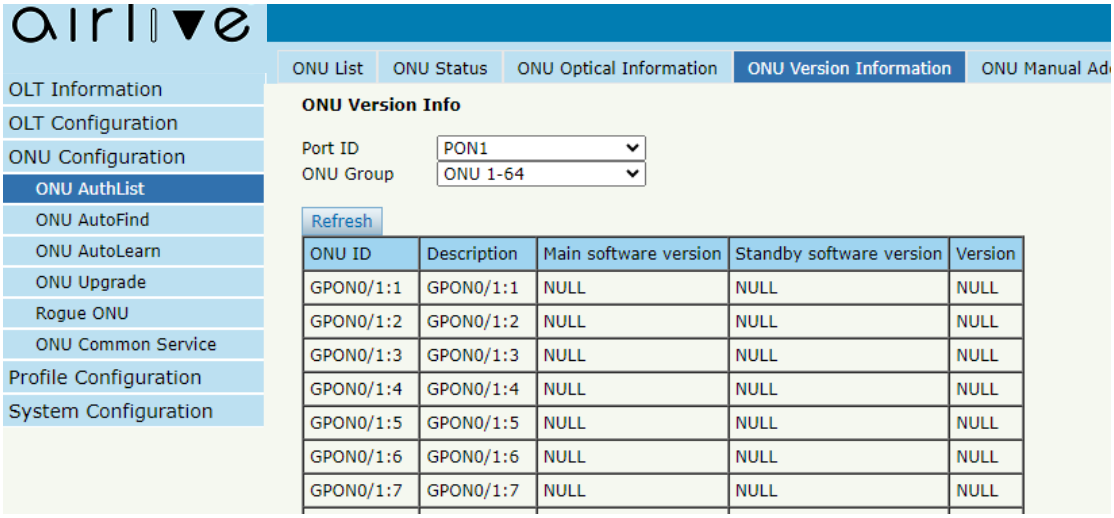



Figure 4.1-27: ONU Version Information

## 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.

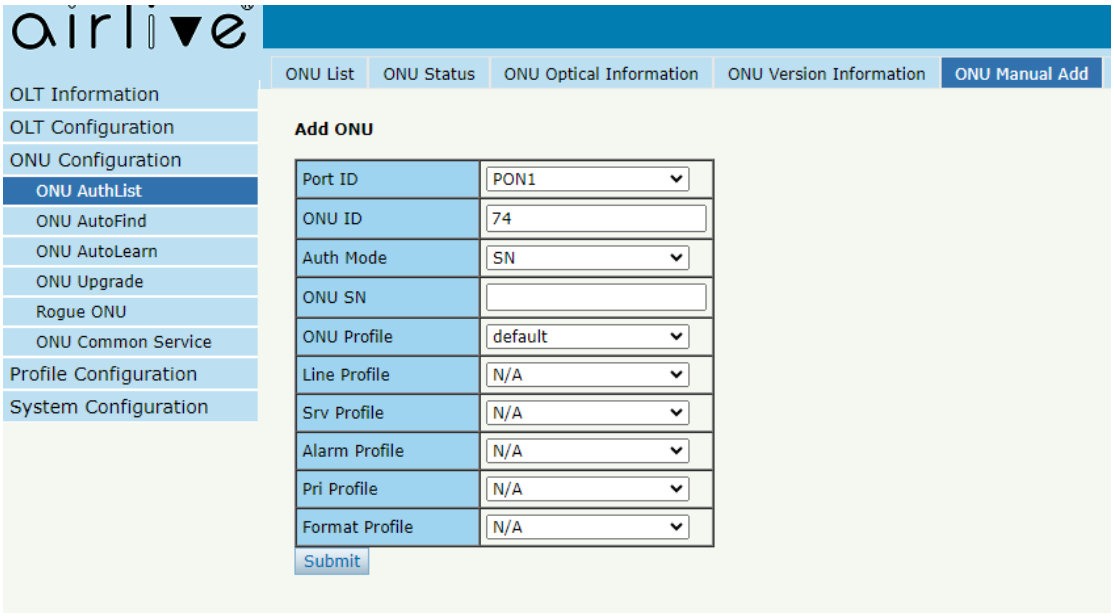



Figure 4.1-28: Add ONU Manually

## 4.1.6 ONU Allowlist

ONU Configuration→ONU AuthList→ONU Allowlist
You can set up Allowlist on this page.
Whitelist can limit illegal ONU to register. Only the GPON SN in the Allowlist can register, but only effective for the ONU which has not been added to OLT.

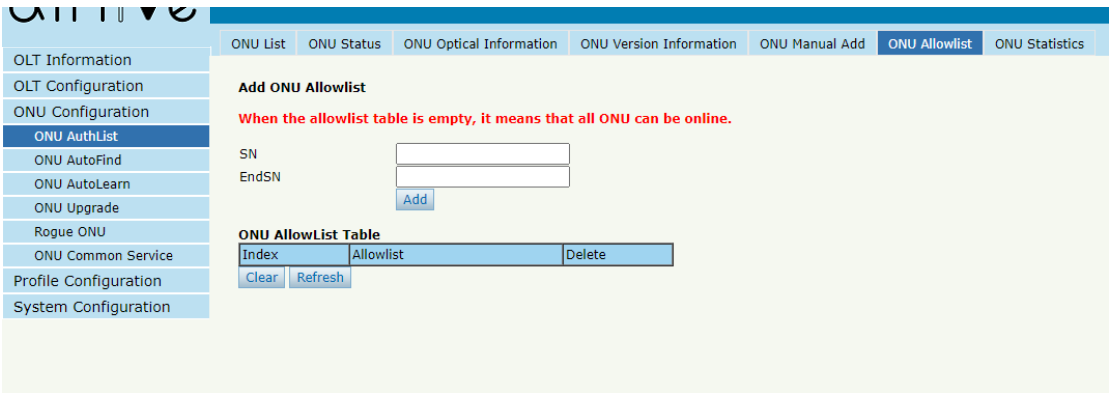



Figure 4.1-29: ONU Allowlist

## 4.1.7 ONU Statistics

ONU Configuration→ONU AuthList→ONU Statistics
This page displays the information of package count about ONU ports.

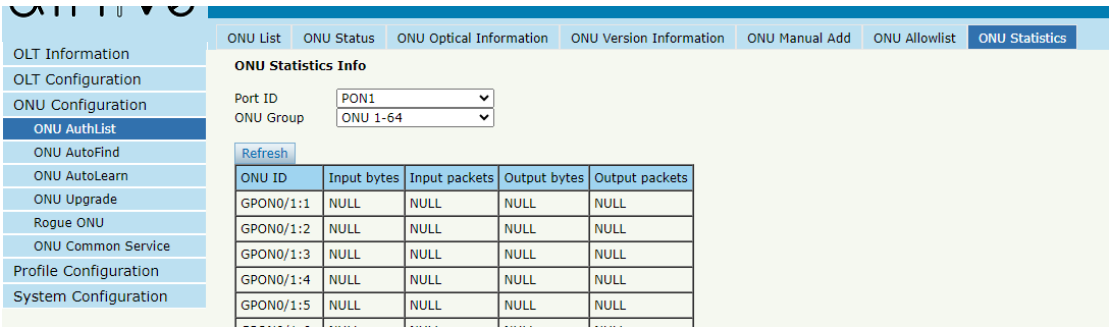



Figure 4.1-30: ONU Statistics

# 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.

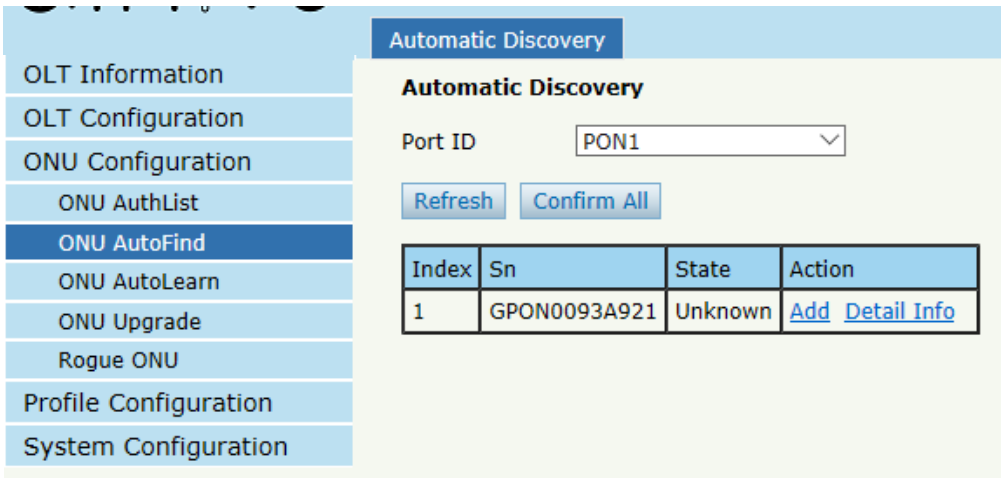



Figure4.2-1: Automatic Discovery

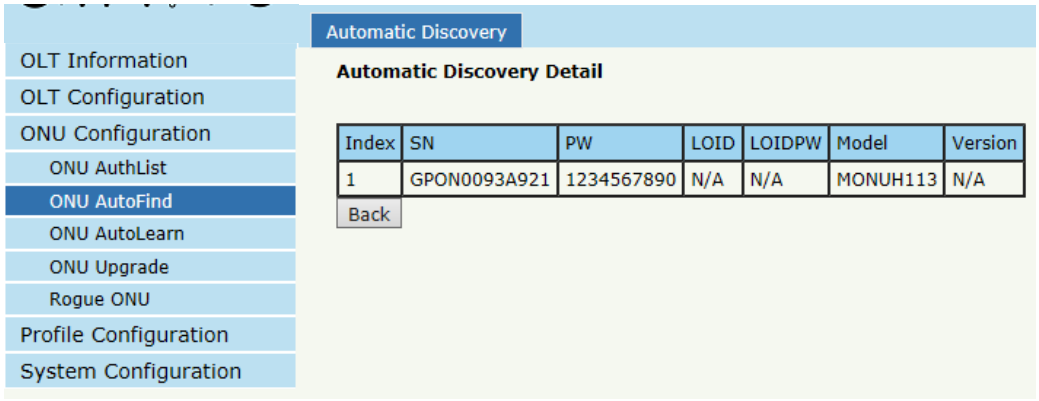



Figure 4.2-2: Detail info

## 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.

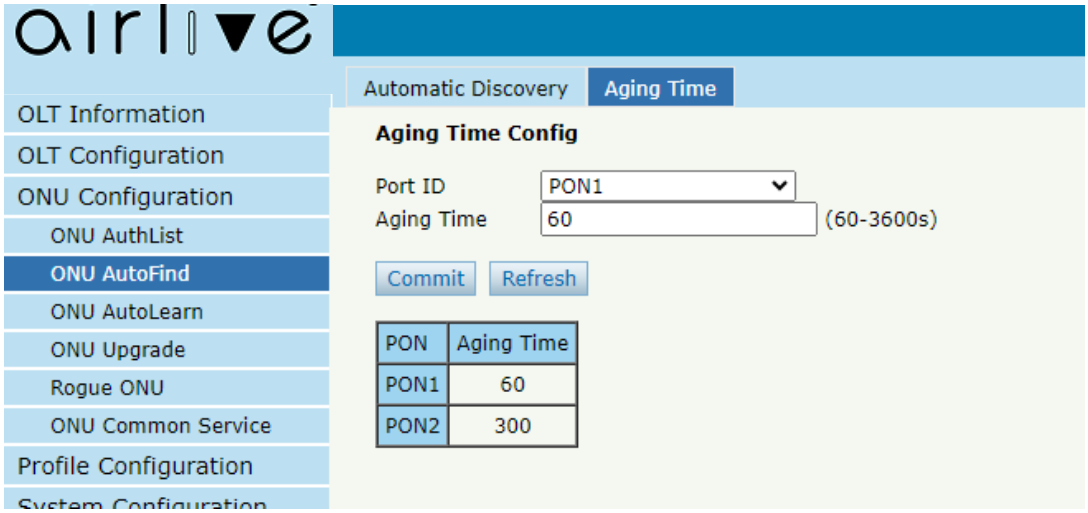



Figure4.2-3: Aging Time

# 4.3 ONU AutoLearn

## 4.3.1 ONU AutoLearn

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

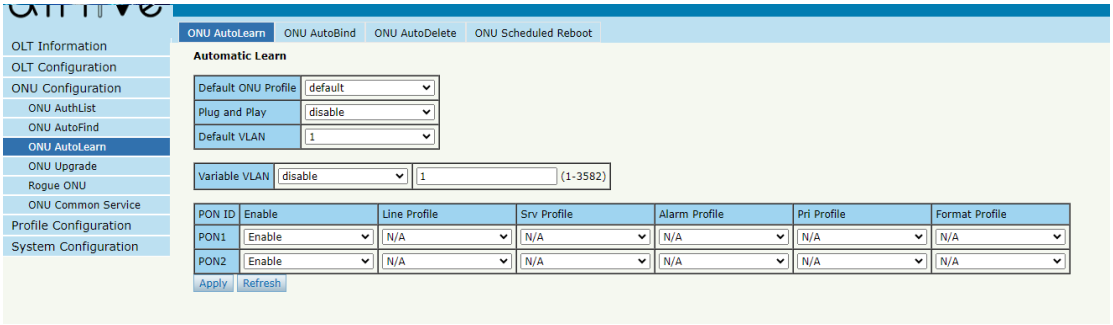



Figure 4.3-1: Automatic learn

## 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.

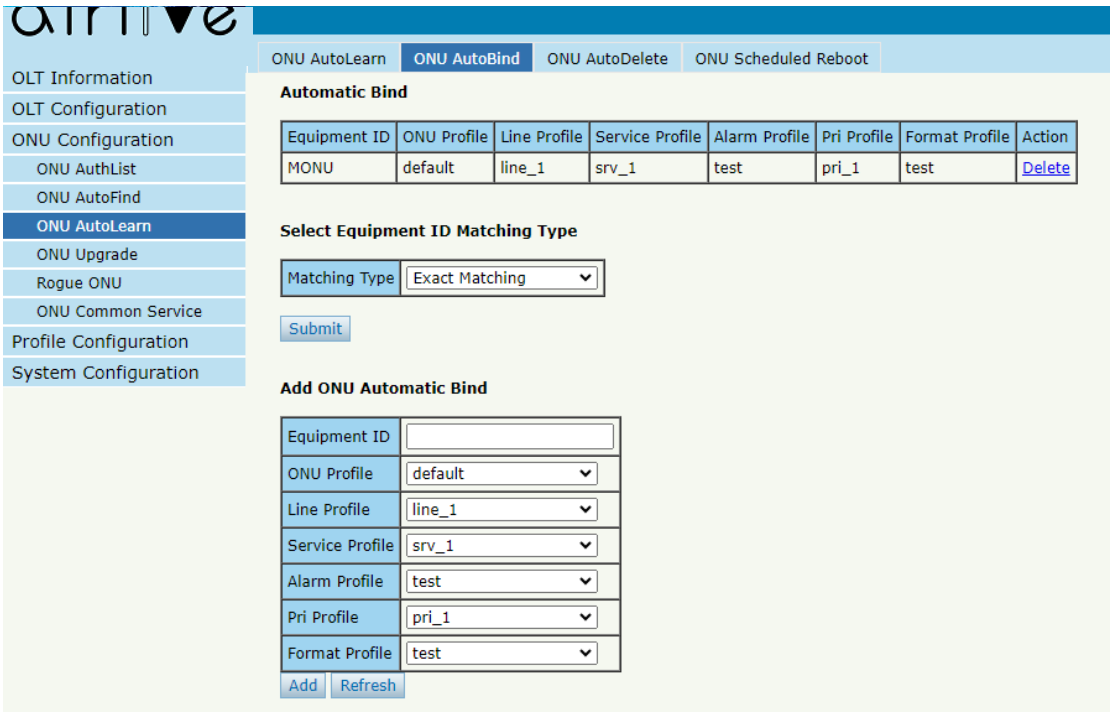



Figure 4.3-2: Bind profile

## 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.

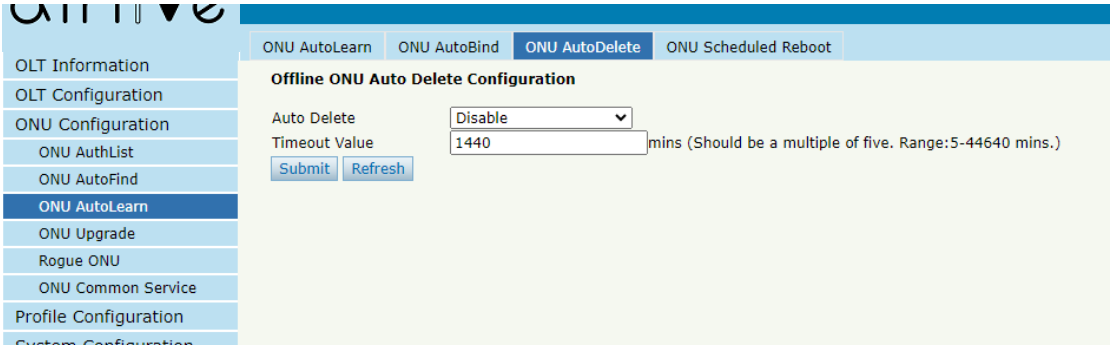



Figure 4.3-3: ONU AutoDelete

## 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.

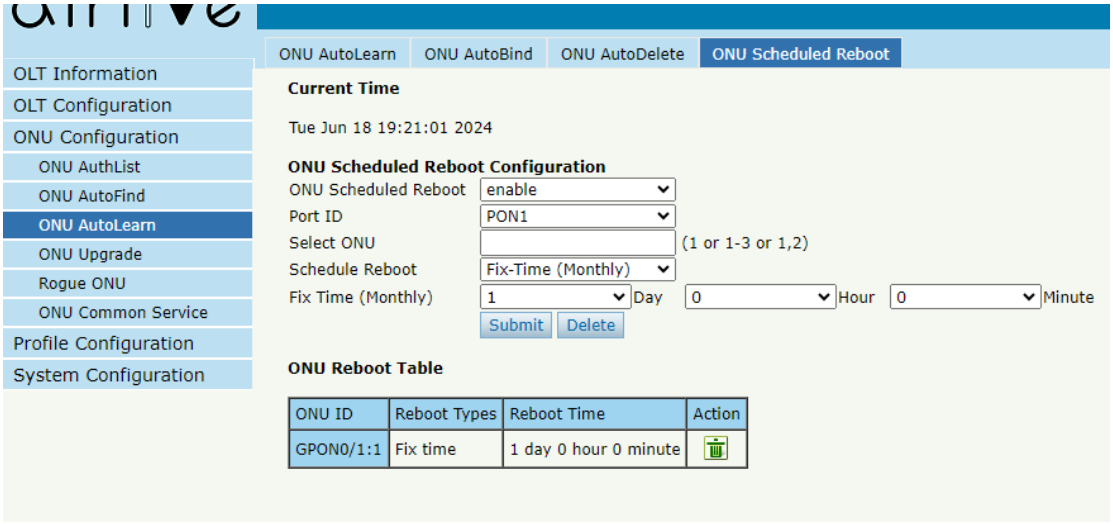



Figure 4.3-4: ONU Scheduled Reboot

# 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.

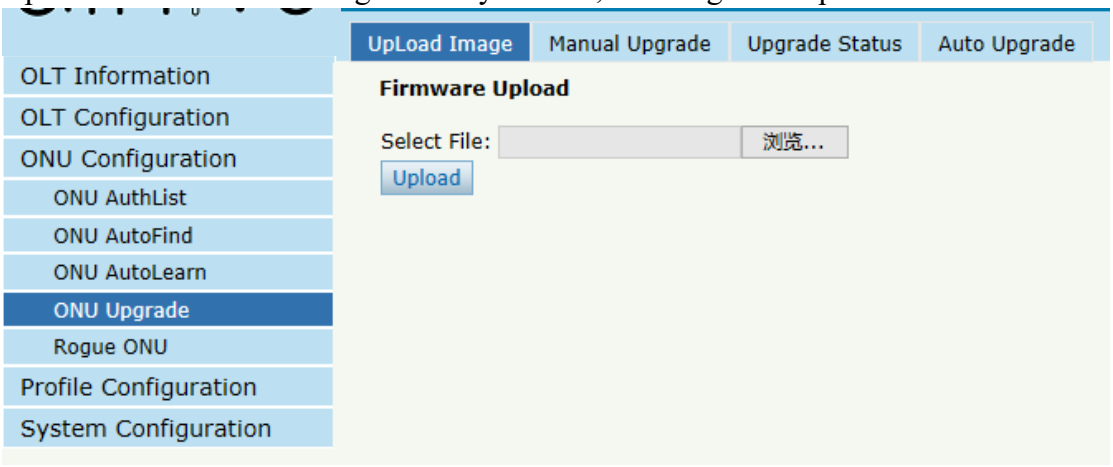



Figure 4.4-1: Upload image

## 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.

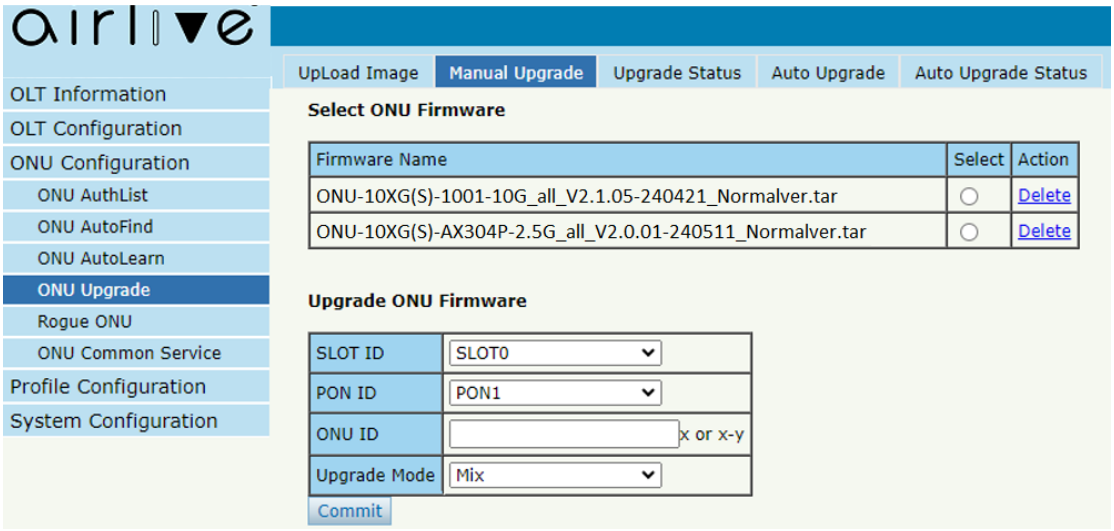



Figure 4.4-2: Manual Upgrade

## 4.4.3 Upgrade Status

Configuration→ONU Upgrade→Upgrade Status
When ONU is upgrading, the upgrading status will be shown on this page.

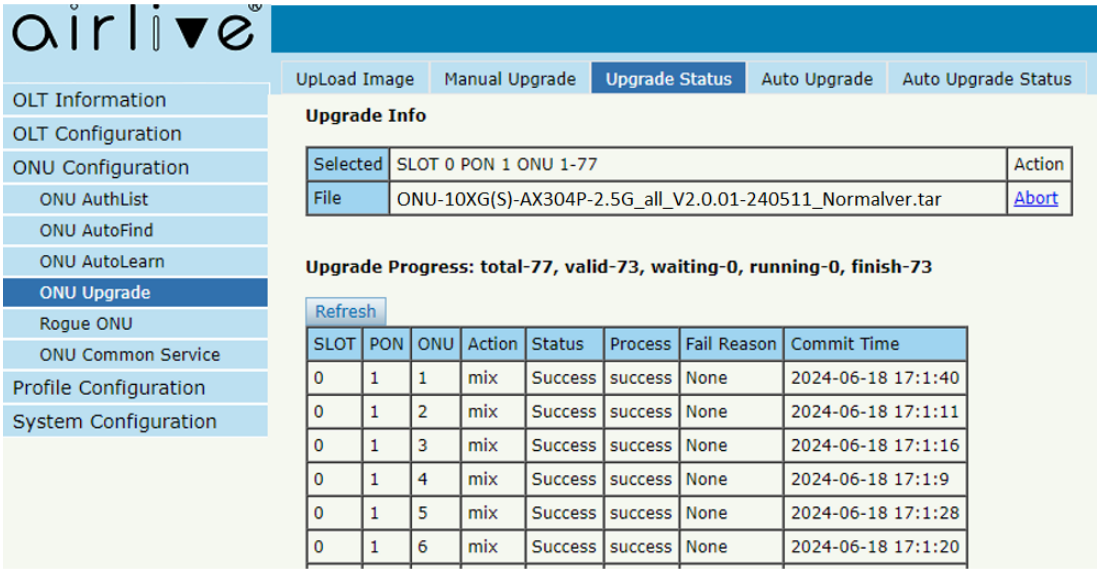



Figure 4.4-3: ONU Upgrade Status

## 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.

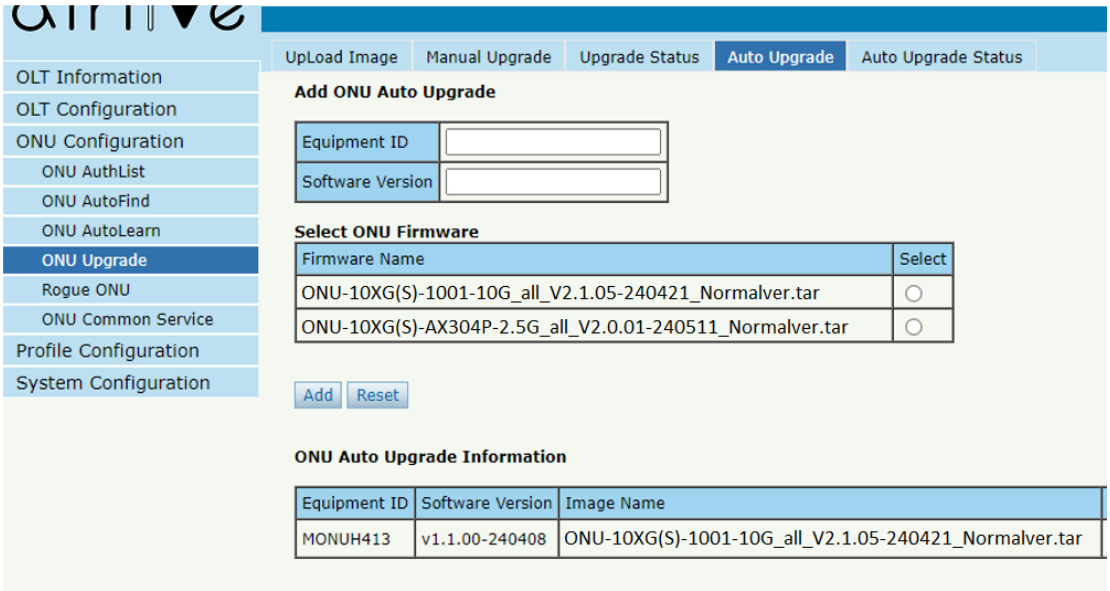



Figure 4.4-4: Auto Upgrade

## 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.

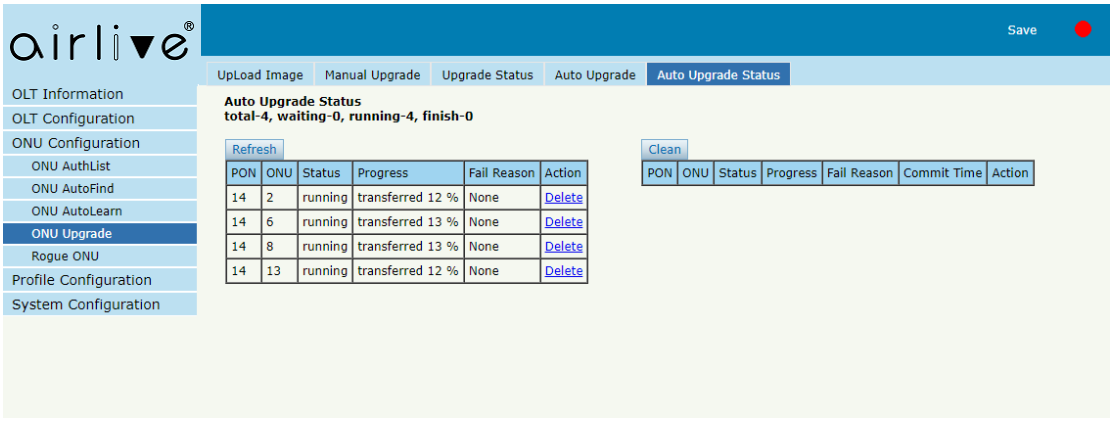



Figure 4.4-5: Auto Upgrade Status

# 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.

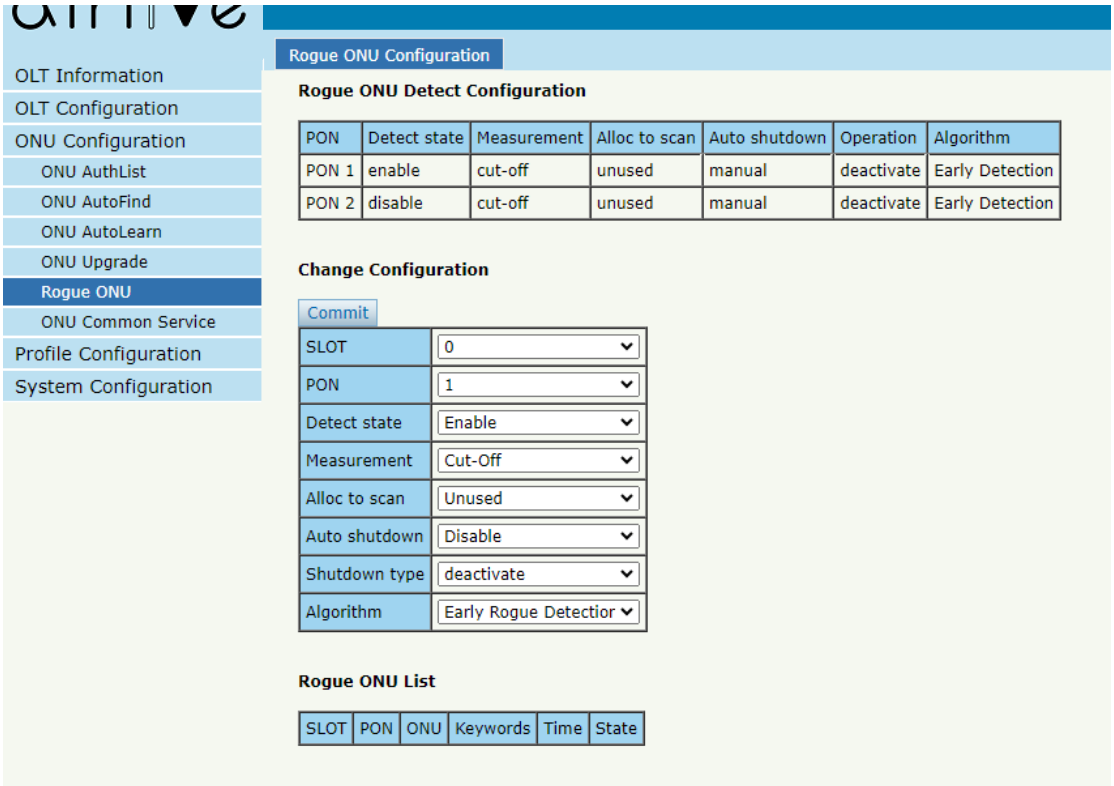


Figure 4.5-1: Rogue ONU detect

# 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.

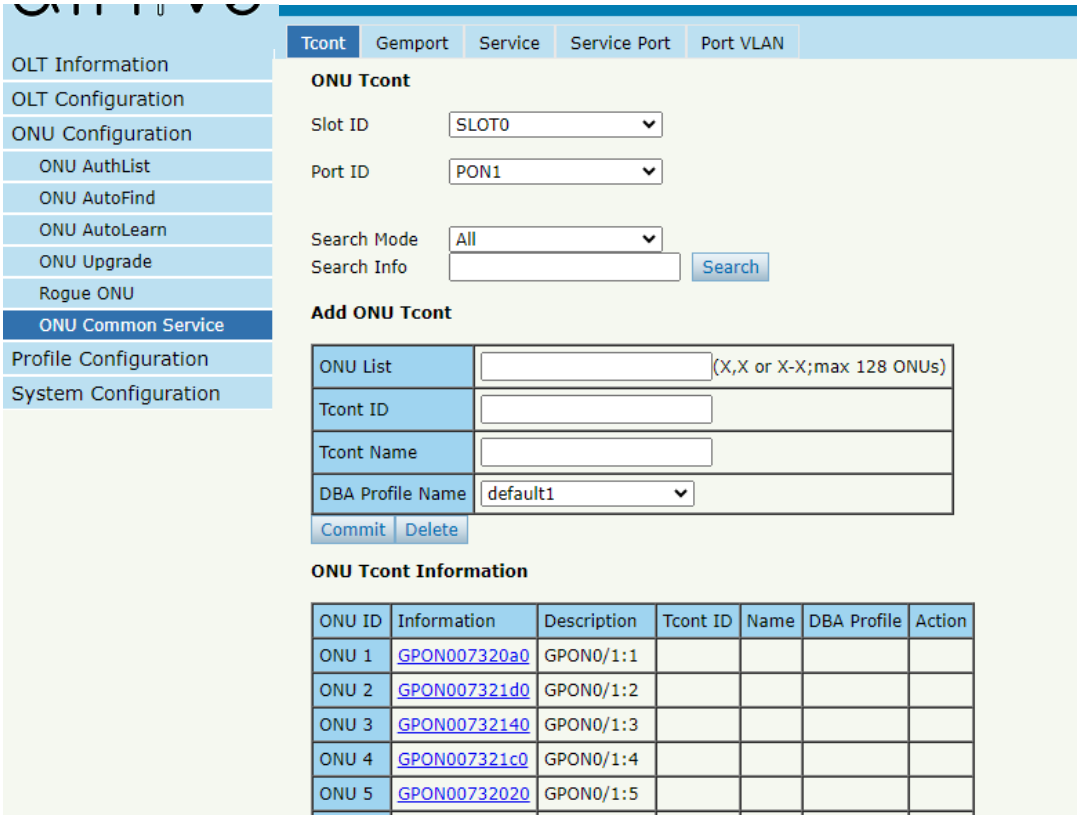



Figure 4.6-1: Create TCONT ID

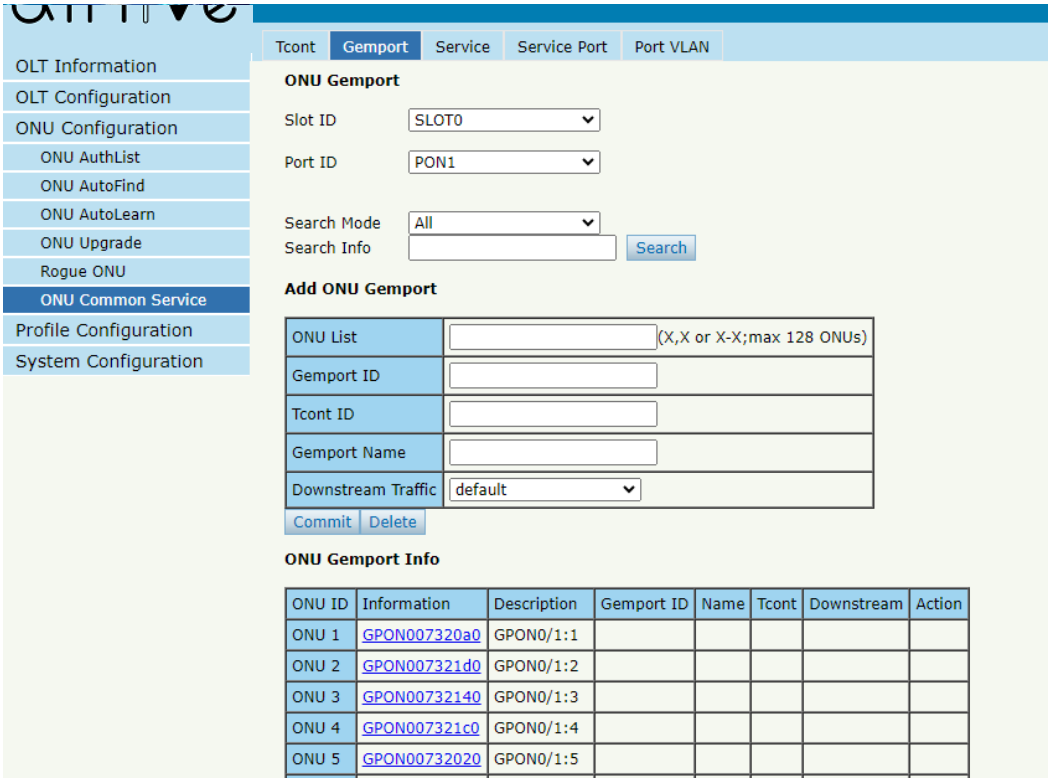



Figure 4.6-2: Create Gemport

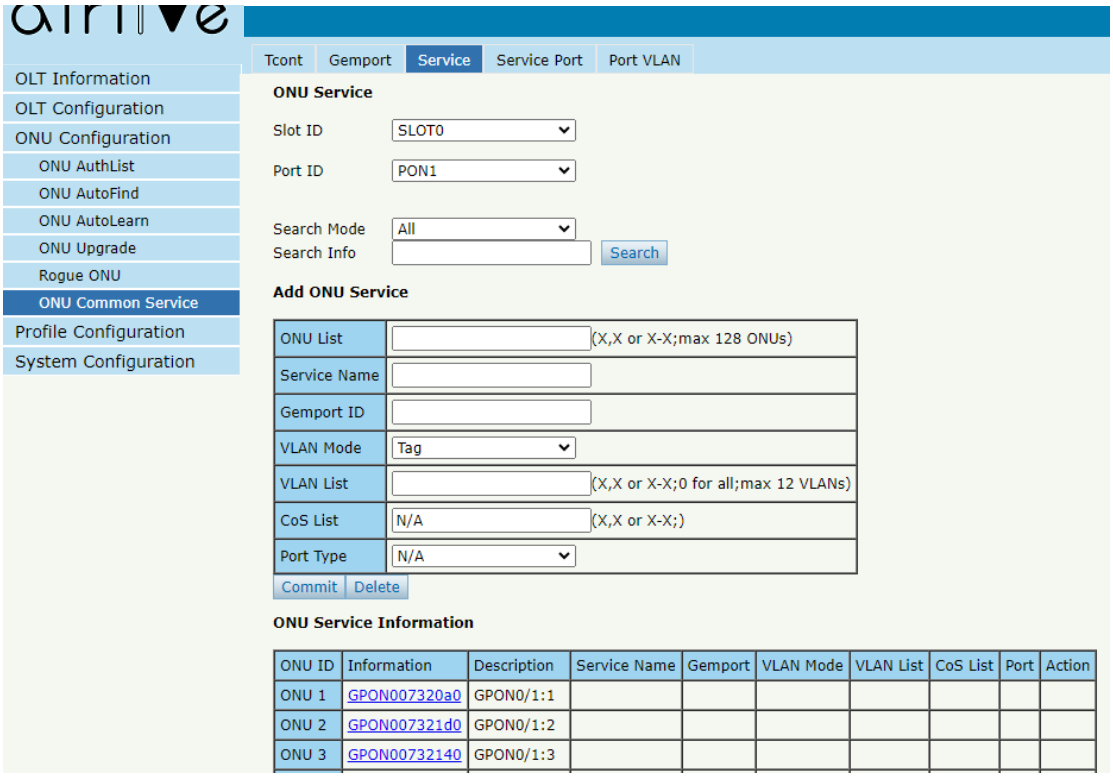



Figure 4.6-3: Create Service

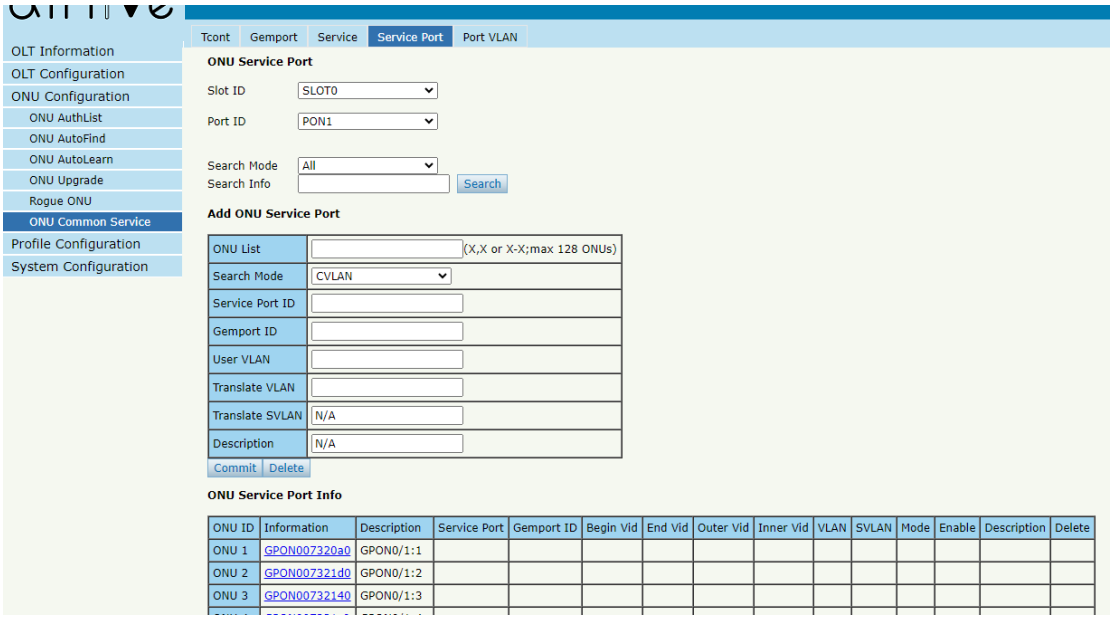



Figure 4.6-4: Create Service port

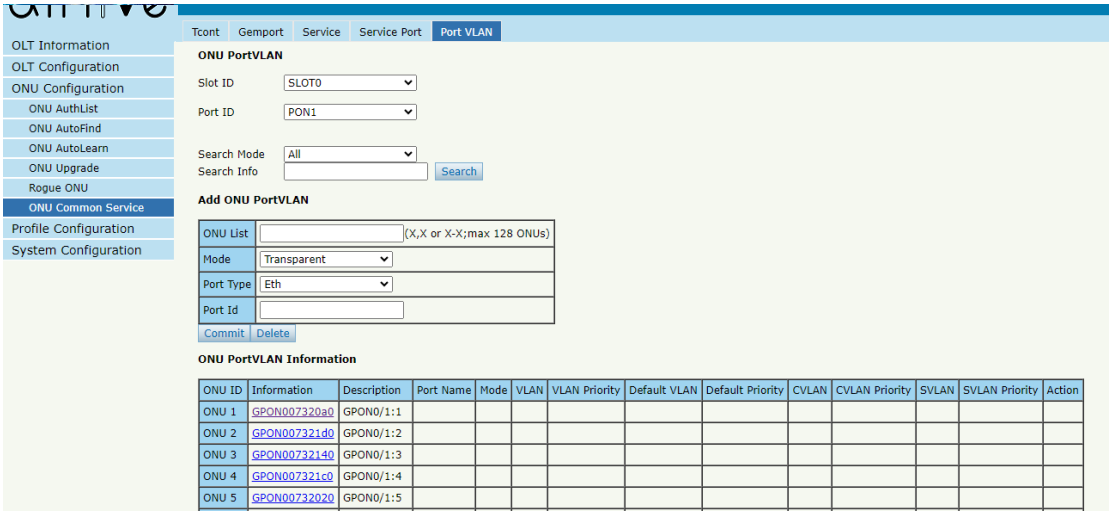



Figure 4.6-5: Create Port Vlan

# 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.

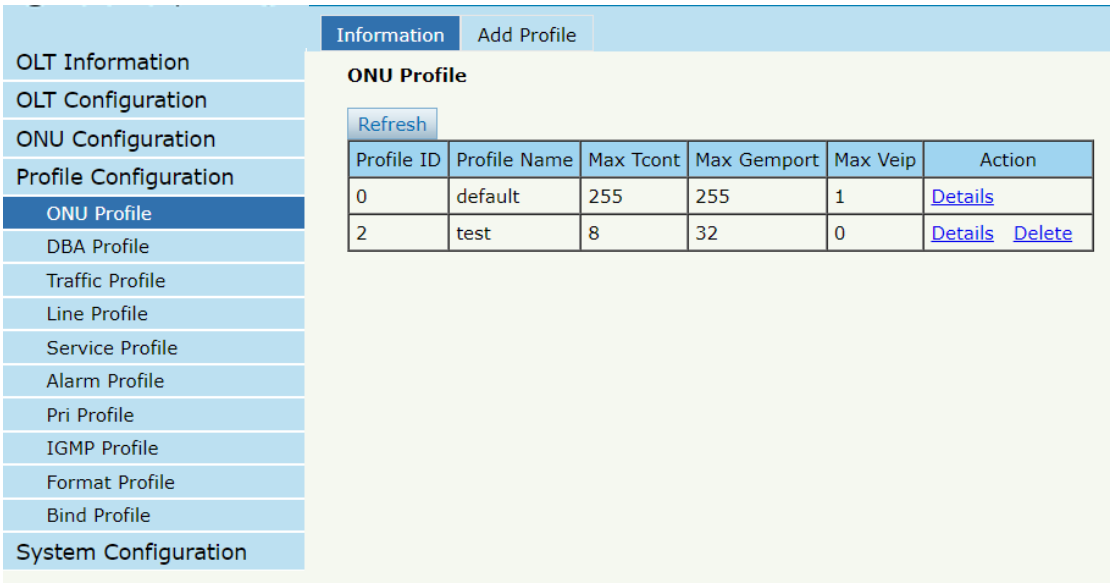



Figure 5.1-1: ONU profile list

### 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.

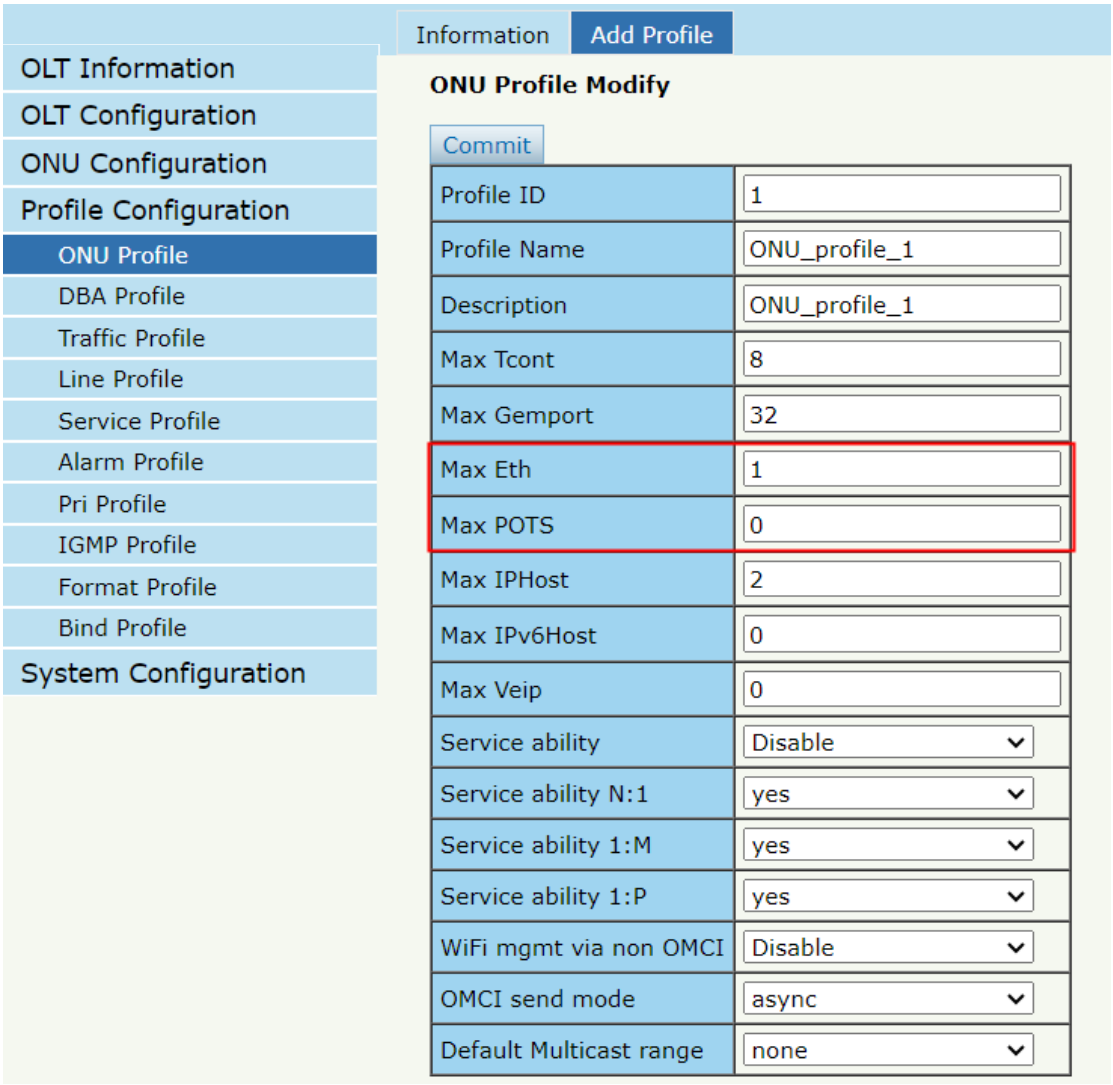



Figure 5.1-2: Add SFU profile

HGU mode (with the routing wan connection mode):

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

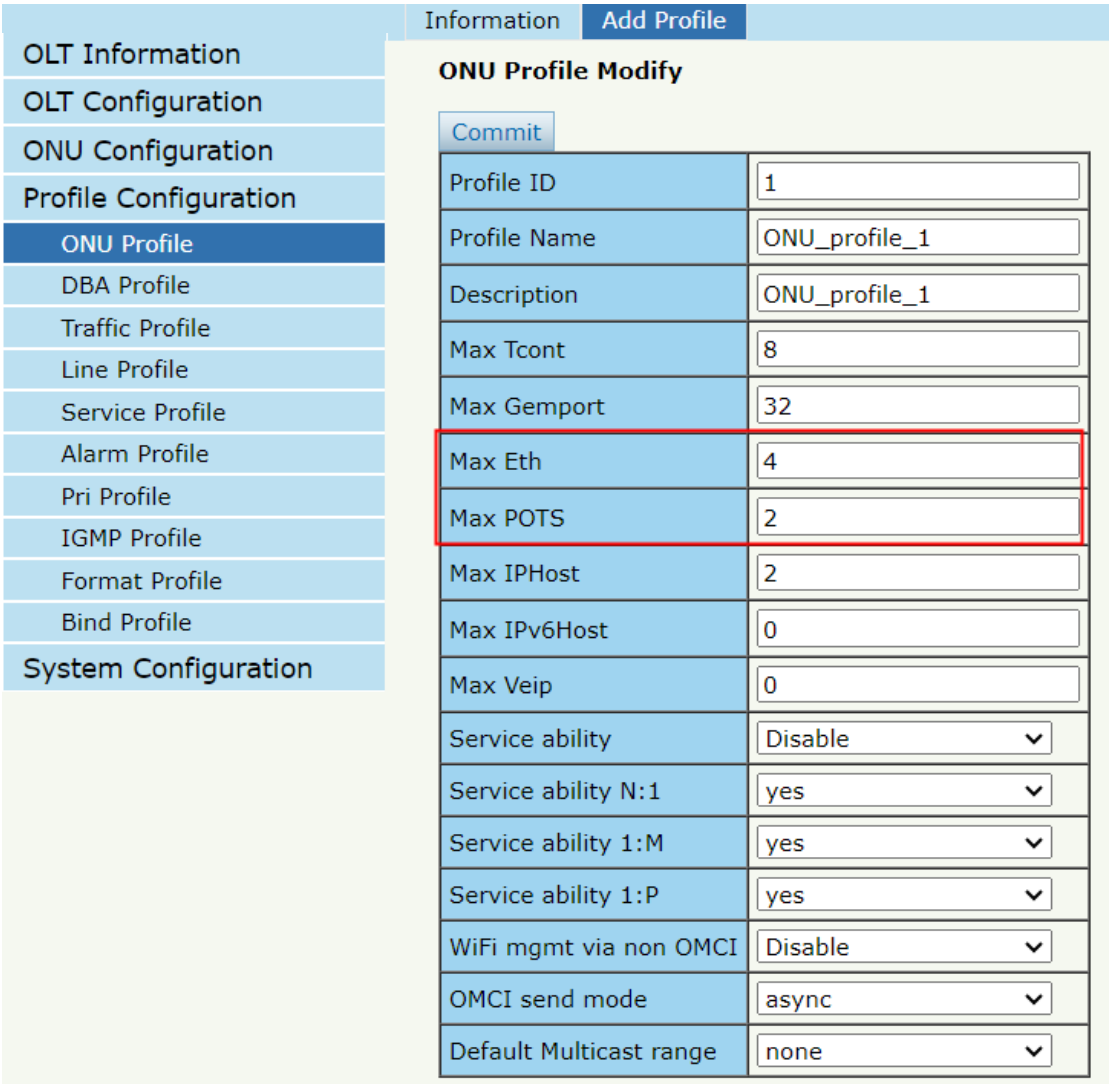



Figure 5.1-3: Add HGU profile

# 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.

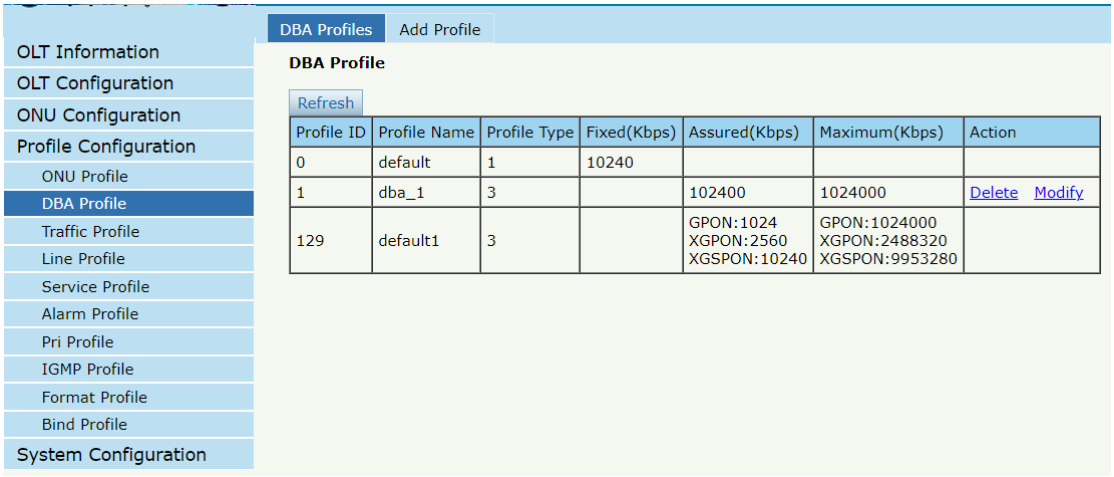



Figure 5.2-1: DBA profile list

## 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 |

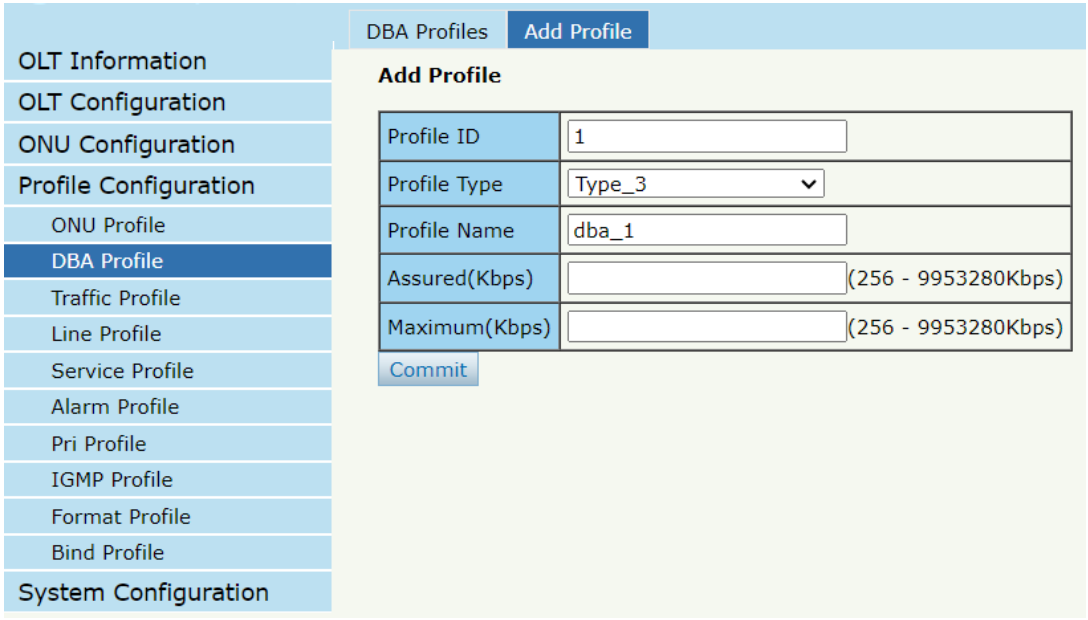



Figure 5.2-2: Add a DBA profile

# 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.

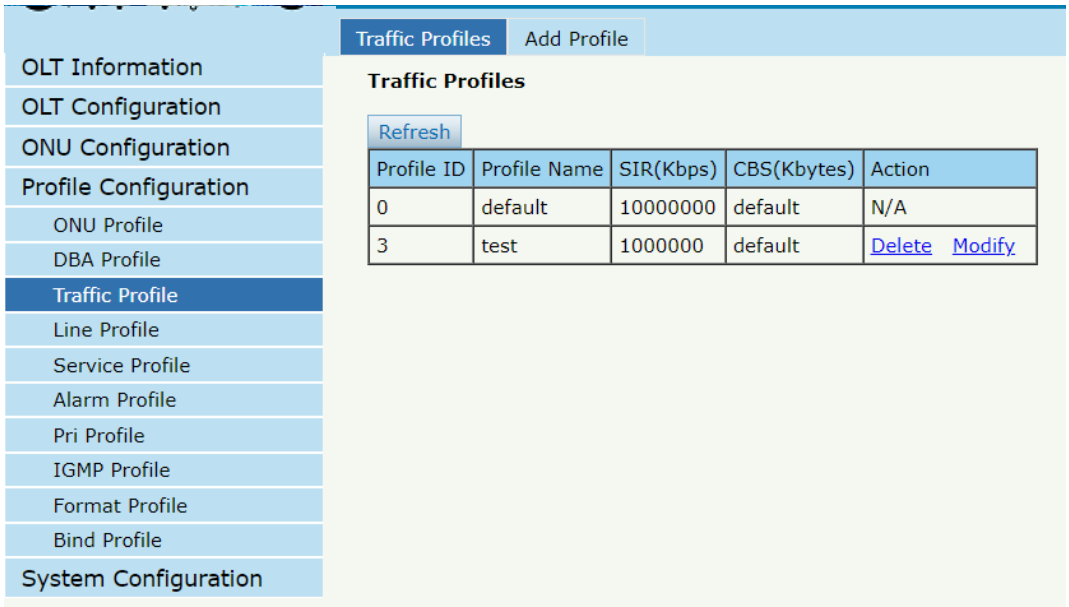



Figure 5.3-1: Traffic Profile list

### 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

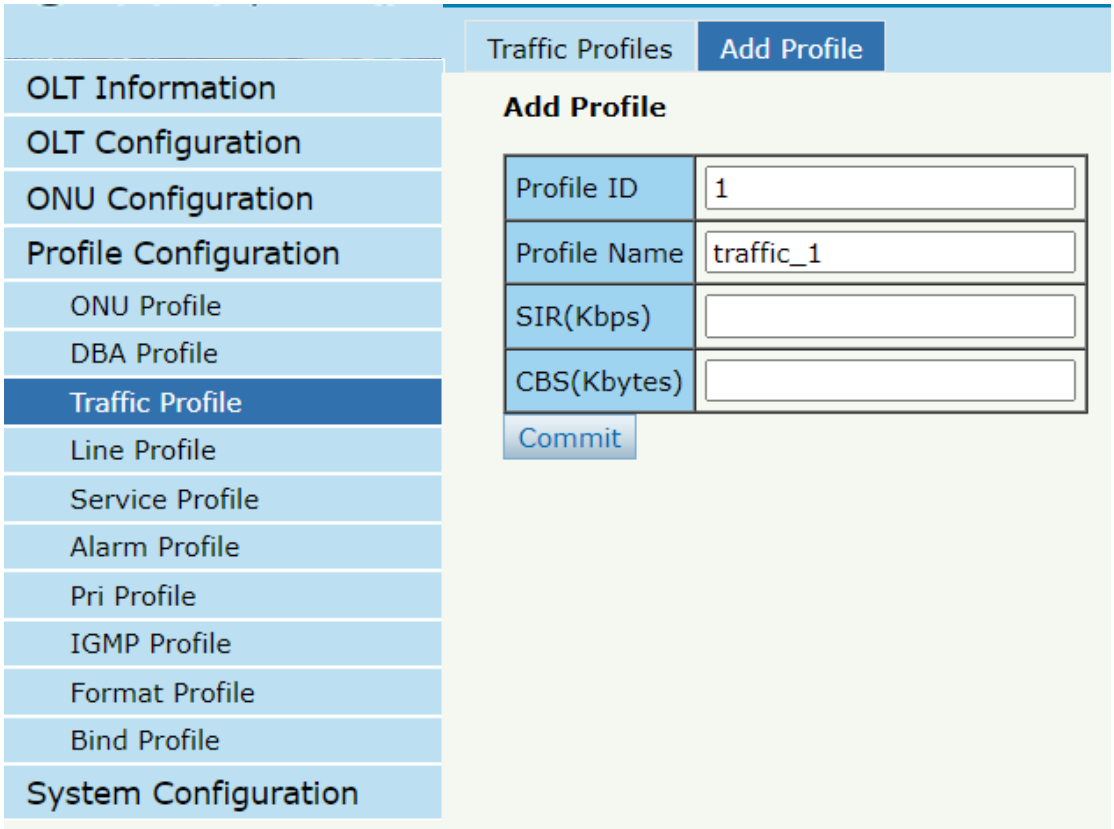



Figure 5.3-2: Add a traffic Profile

## 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.

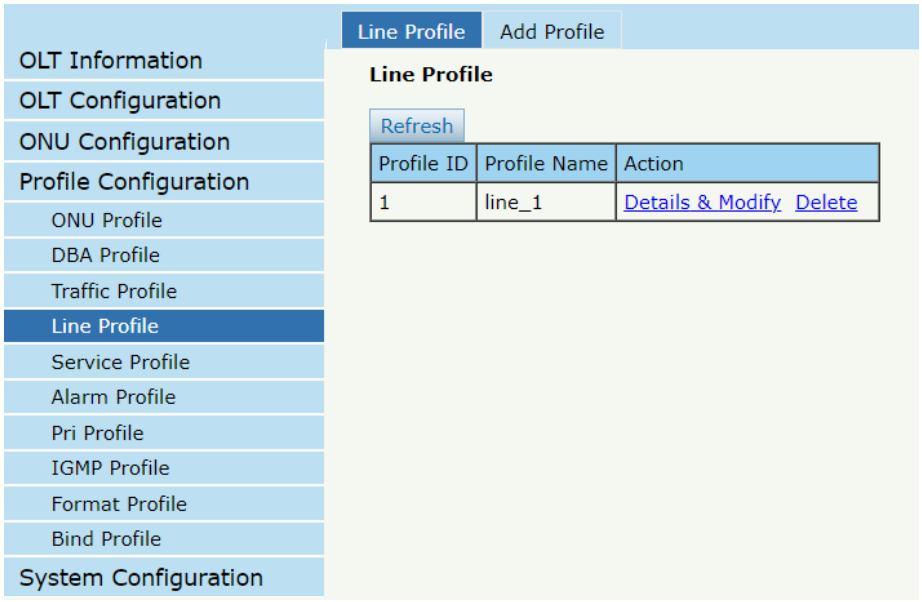



Figure 5.4-1: Line Profile list

## 5.4.2 Add profile

Profile Configuration→Line profile→Add profile
Create a new line profile.

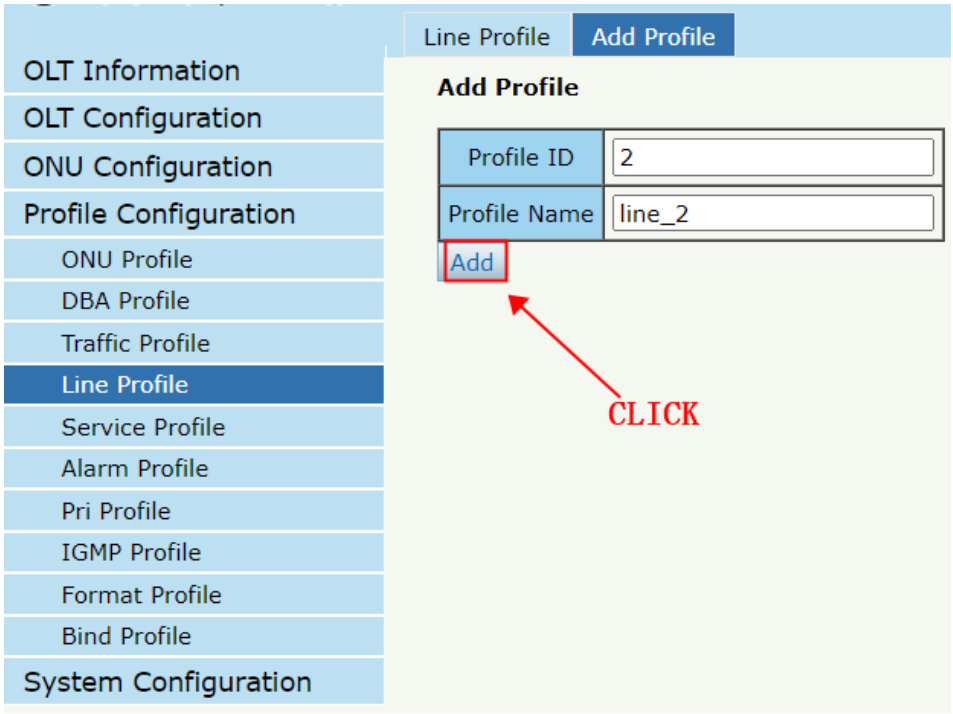



Figure 5.4-2: Add Line Profile

Modify the line profile parameters.

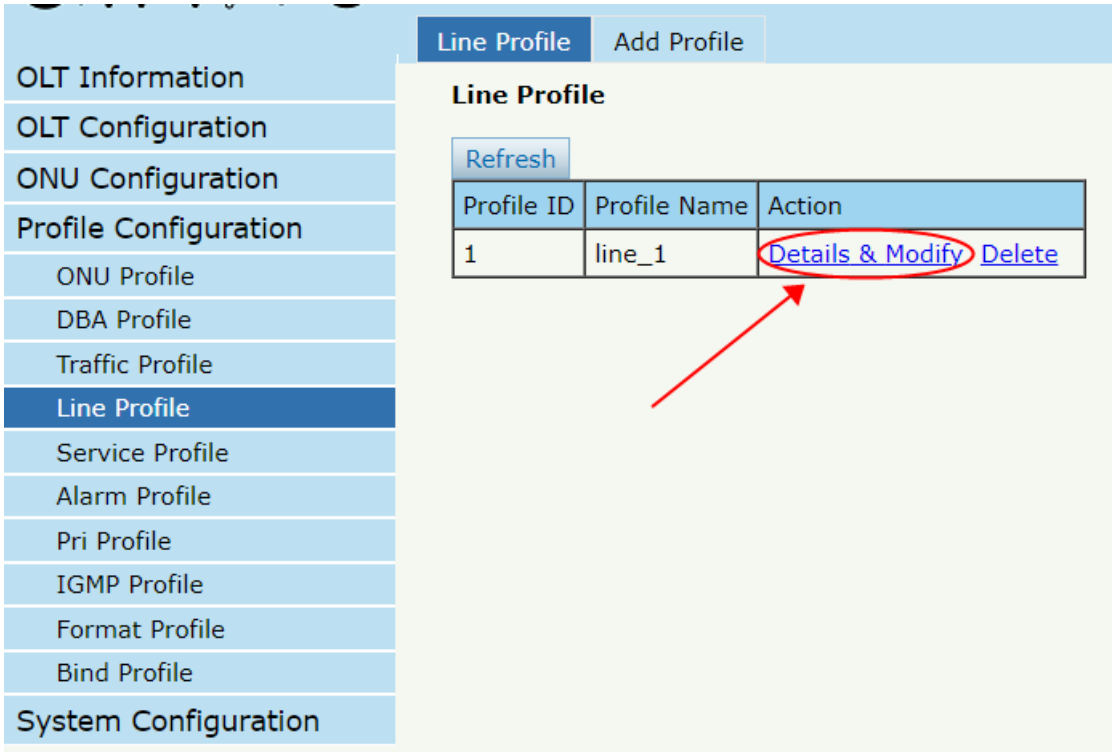



Figure 5.4-3: Modify Line Profile

### 5.4.2.1 Tcont

Add tcont ID and bind DBA profile.

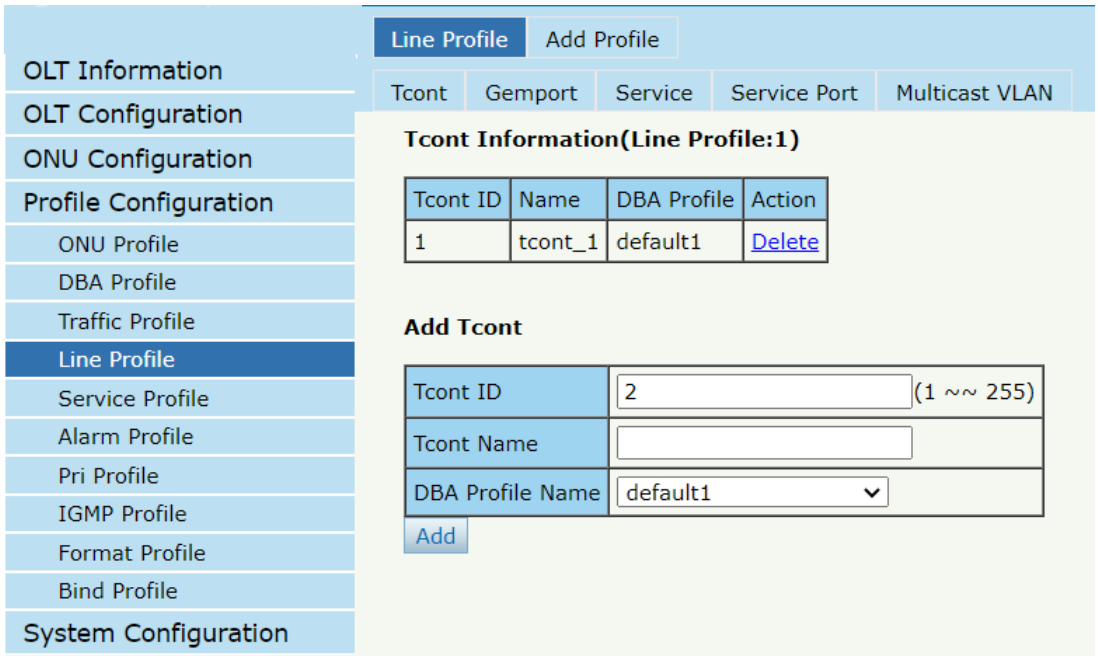



Figure 5.4-4: Add Tcont

## 5.4.2.2 Gemport

Add gemport ID and bind tcont ID.

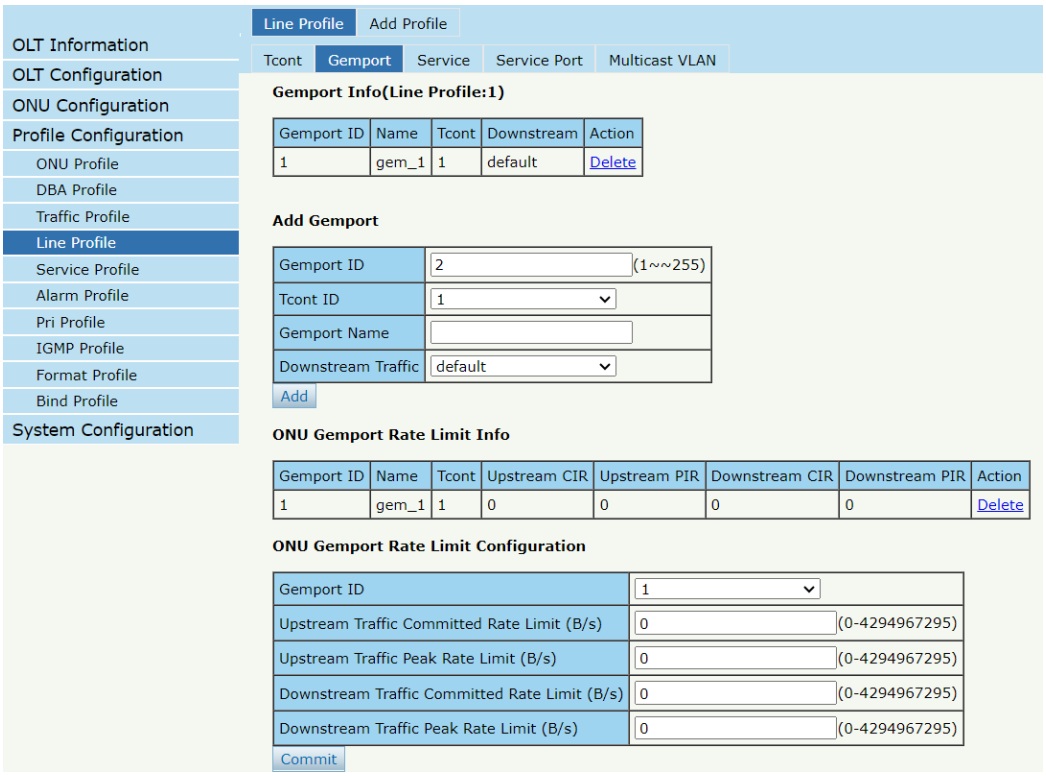



Figure 5.4-5: Add Gemport

## 5.4.2.3 Service

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

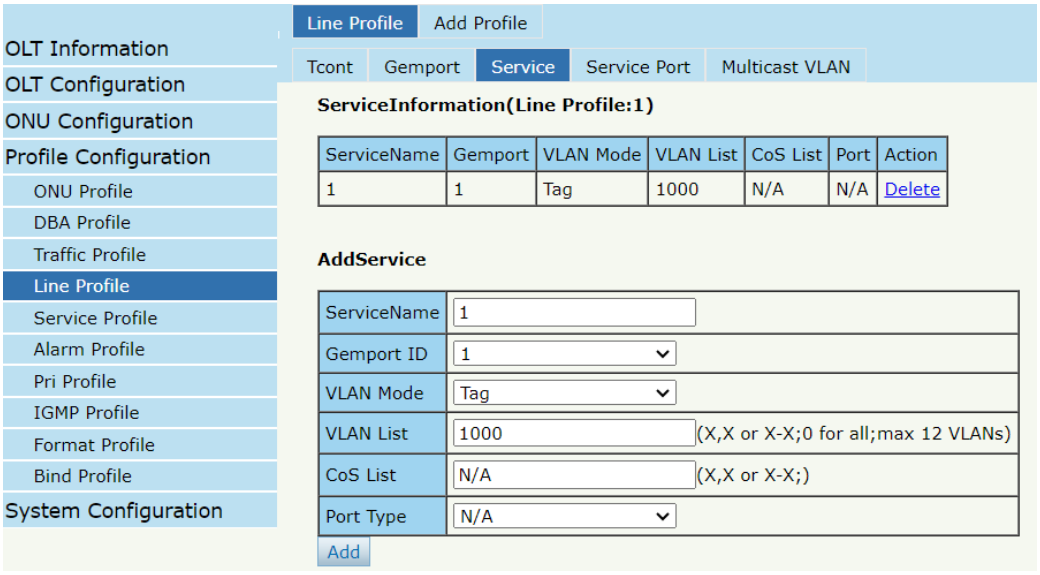



Figure 5.4-6: Add Service

### 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.

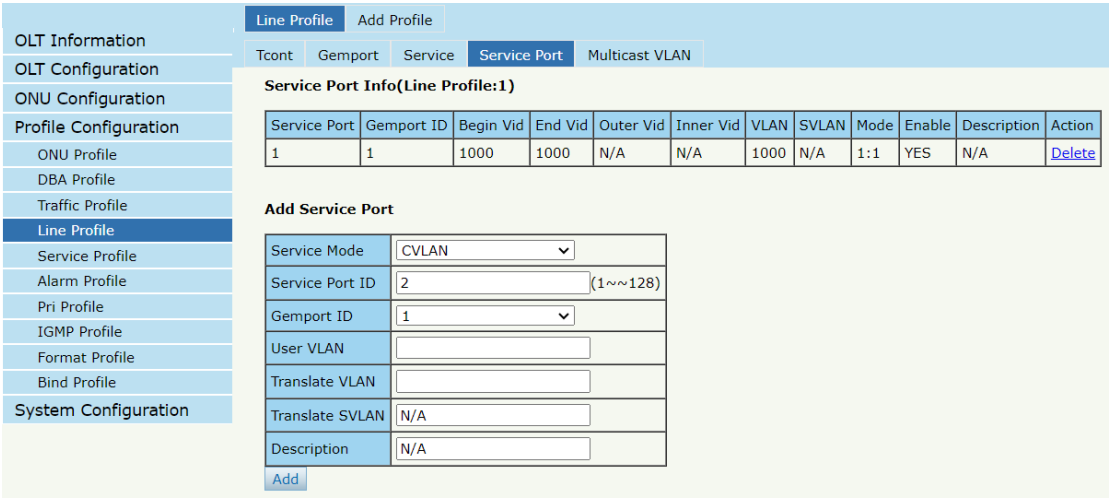



Figure 5.4-7: Add Service Port

### 5.4.2.5 Multicast VLAN

Set the Multicast VLAN of ONU.

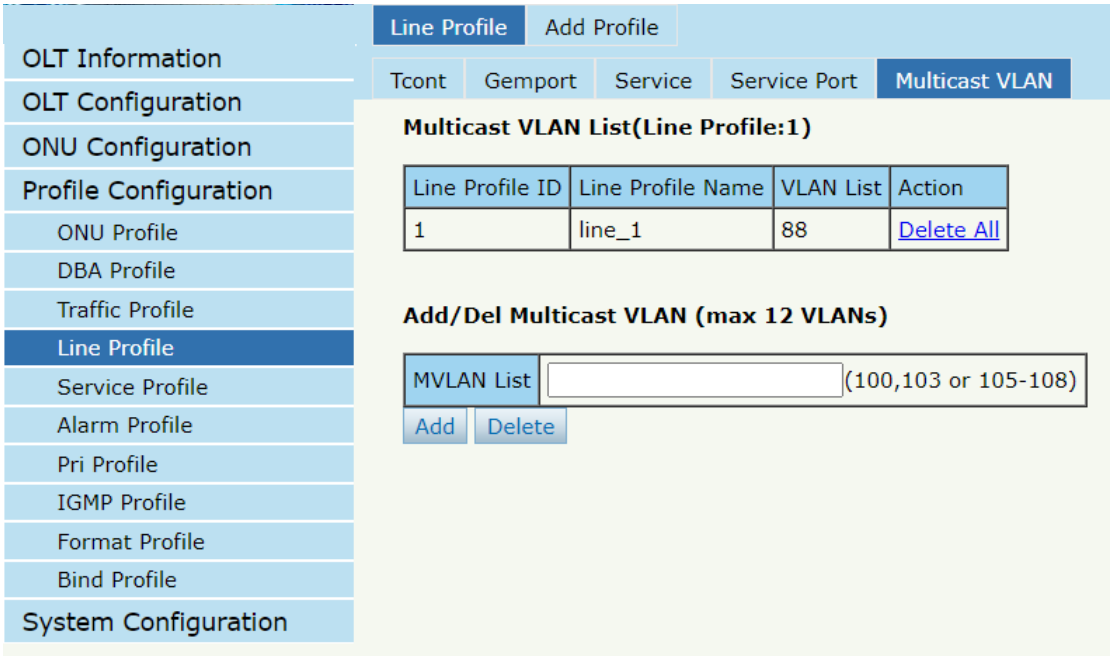



Figure 5.4-8: Configure Multicast VLAN

# 5.5 Service Profile

Service profile is used to configure the UNI side services of onu, such as Ethernet port, Wi-Fi, 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.

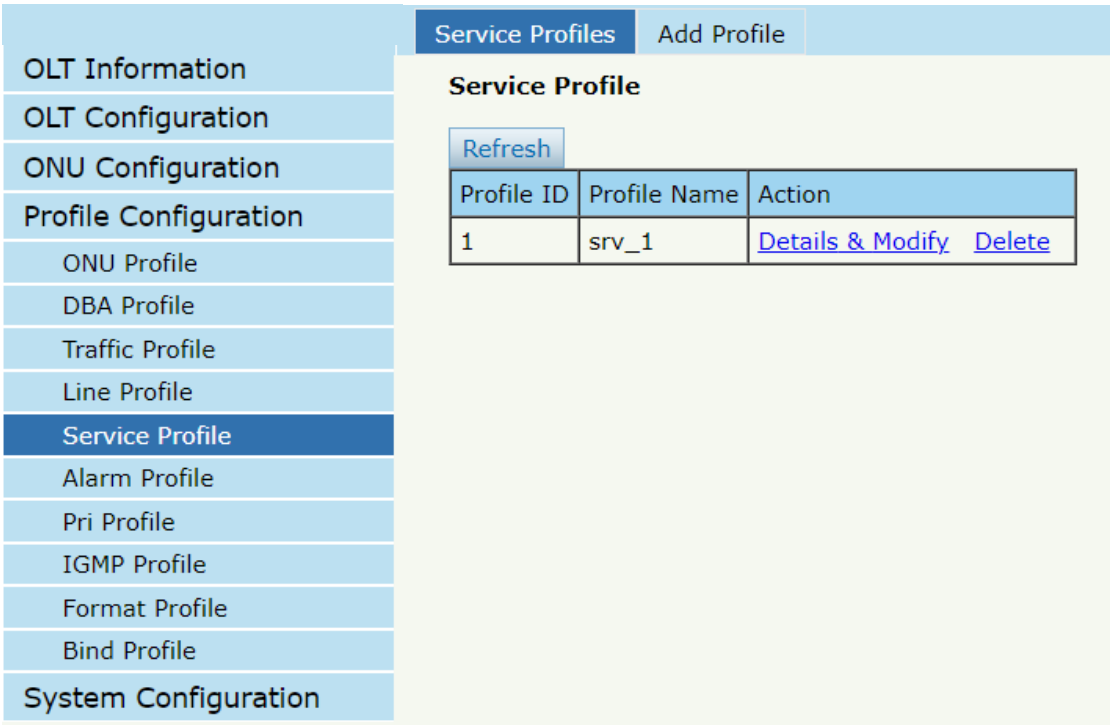



Figure 5.5-1: Service Profile List

## 5.5.2 Add profile

Profile Configuration→Service Profile →Add Profile
Add a new service profile.

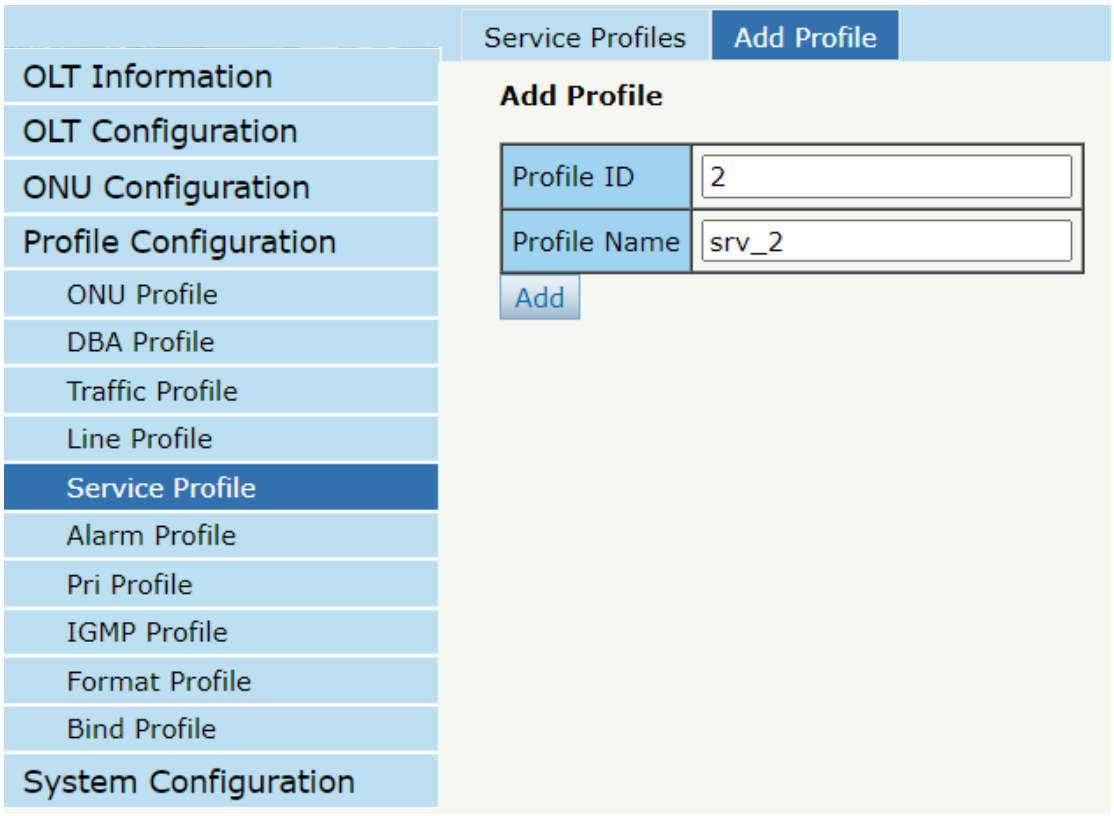



Figure 5.5-2: Add Service profile

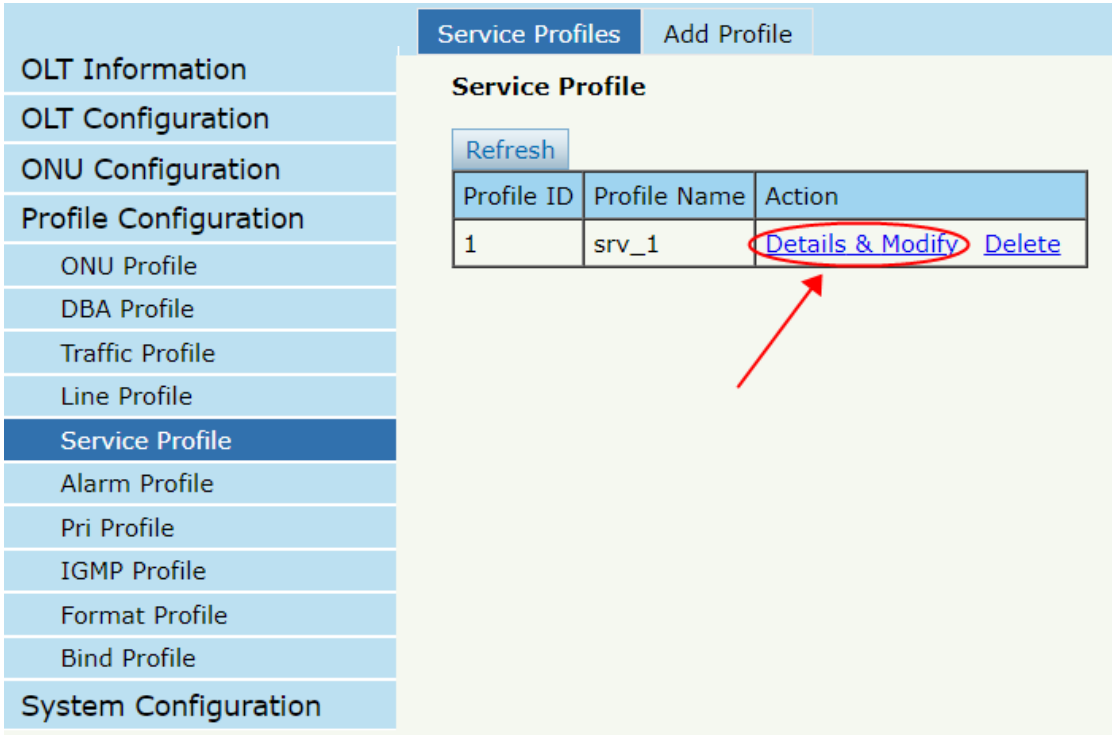



Figure 5.5-3: Modify Service Profile

### 5.5.2.1 PortVLAN

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

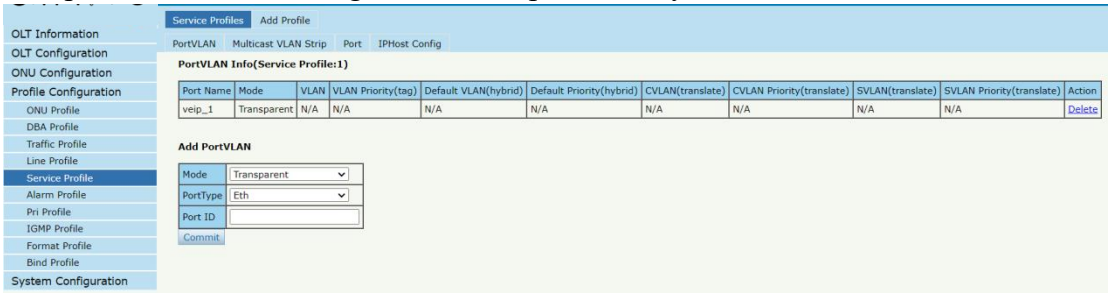



Figure 5.5-4: Port VLAN mode

### 5.5.2.2 Multicast VLAN Strip

Set the multicast VLAN mode of ONU's port.

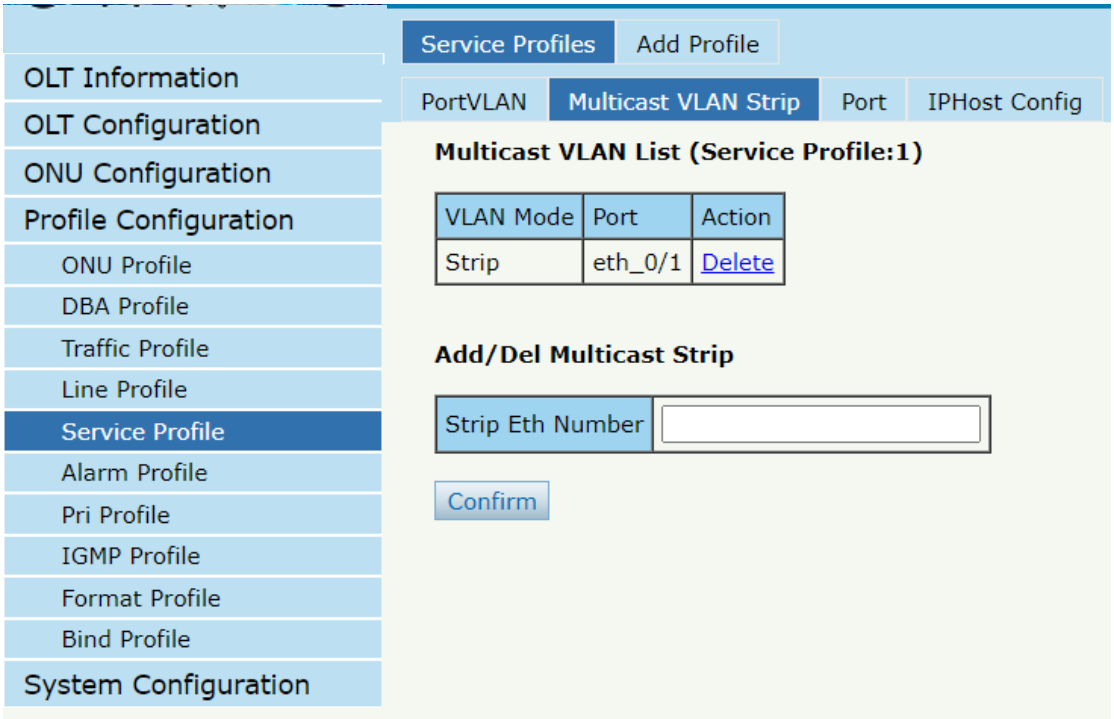



Figure 5.5-5: Port Multicast VLAN Mode

### 5.5.2.3 Port

Configure the status and rate of the onu port

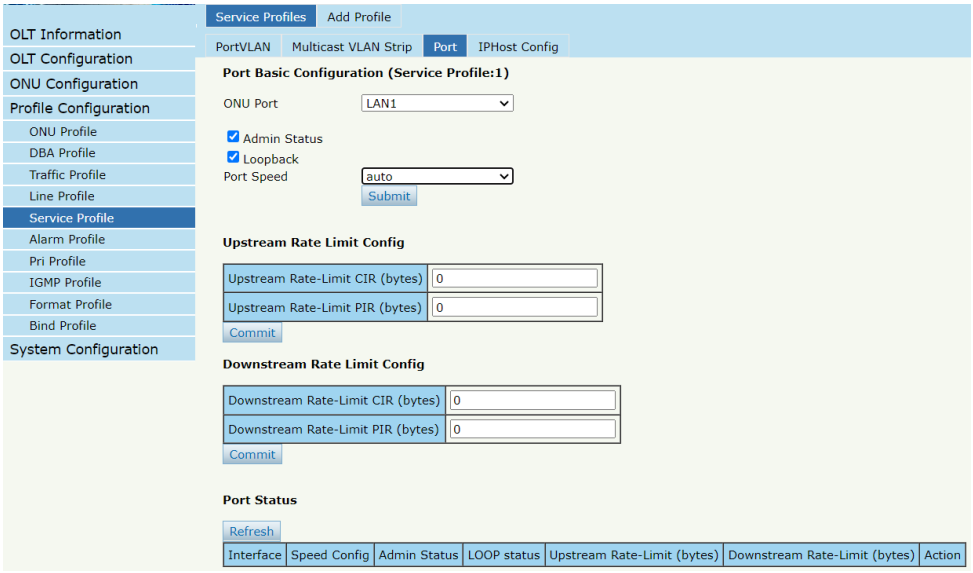



Figure 5.5-6: Port status

### 5.5.2.4 Iphost Config

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

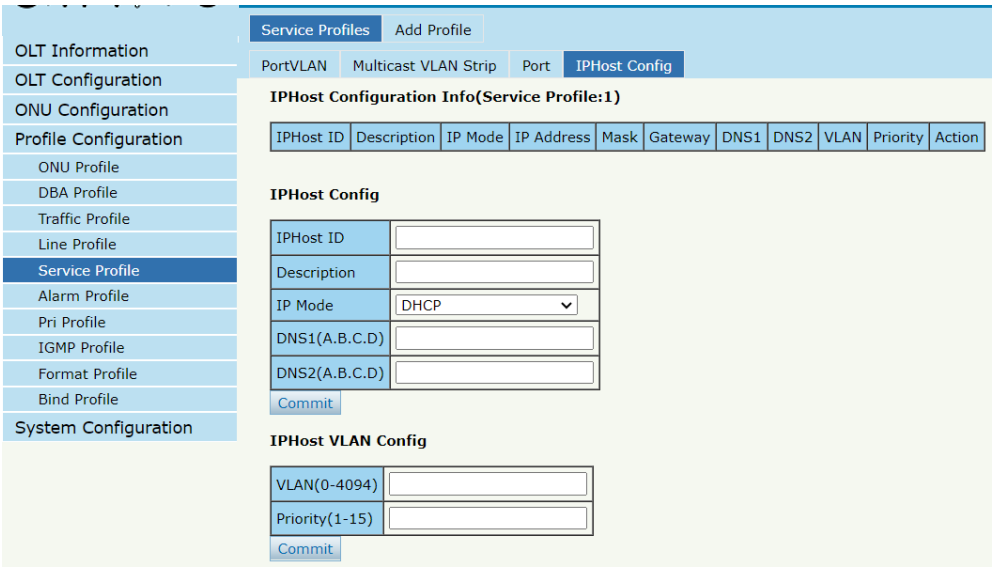



Figure 5.5-7: Add IPhost

# 5.6 Alarm Profile

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

## 5.6.1 Profile Information

Profile Configuration→Alarm Profile →profile information

The table displays alarm profile list.

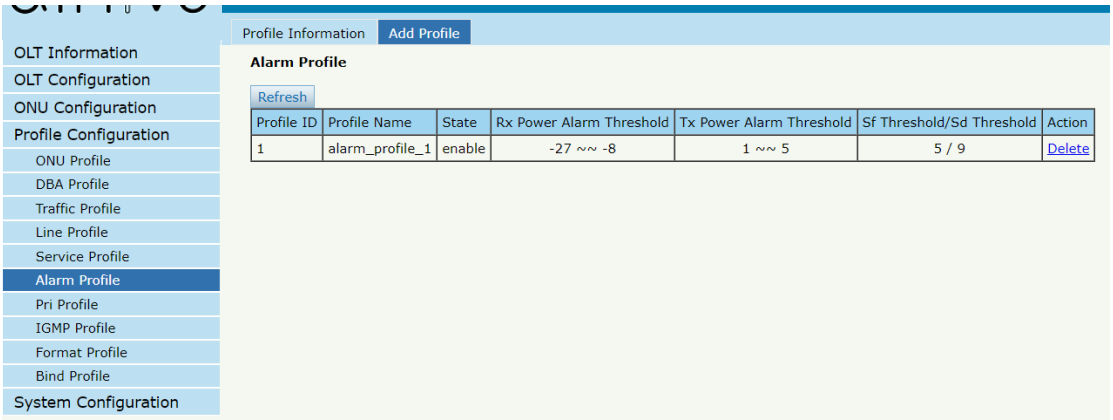



Figure 5.6-1: Alarm Profile List

## 5.6.2 Add Profile

Profile Configuration→Alarm Profile →Add profile
Add new alarm profile, set the threshold of alarm generation.

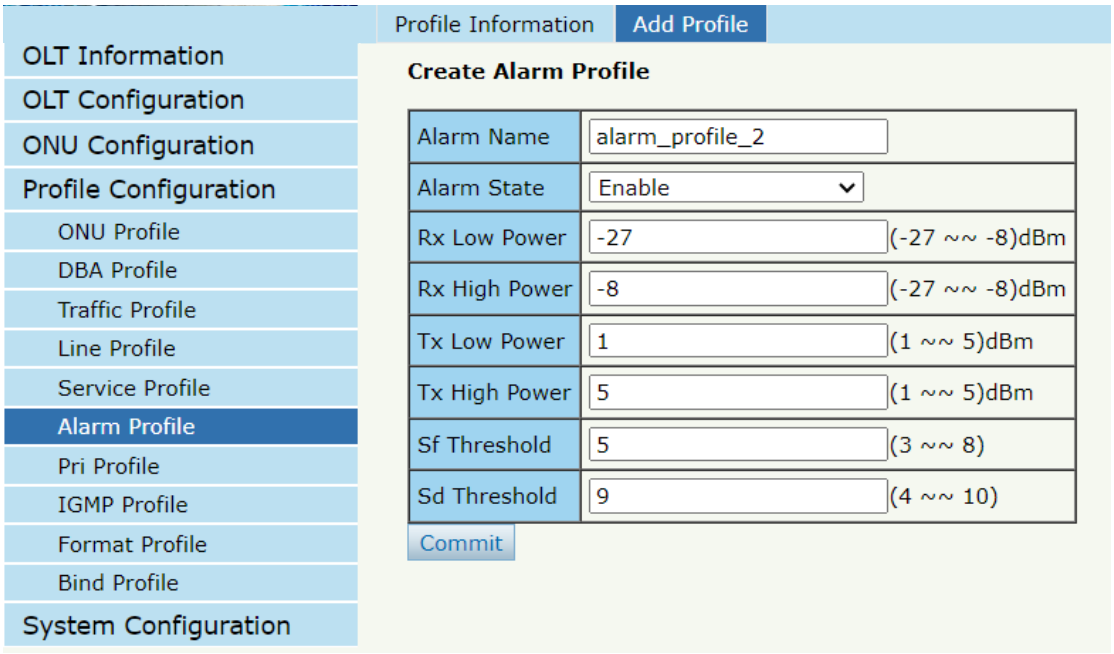



Figure 5.6-2: Add Alarm Profile

# 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.

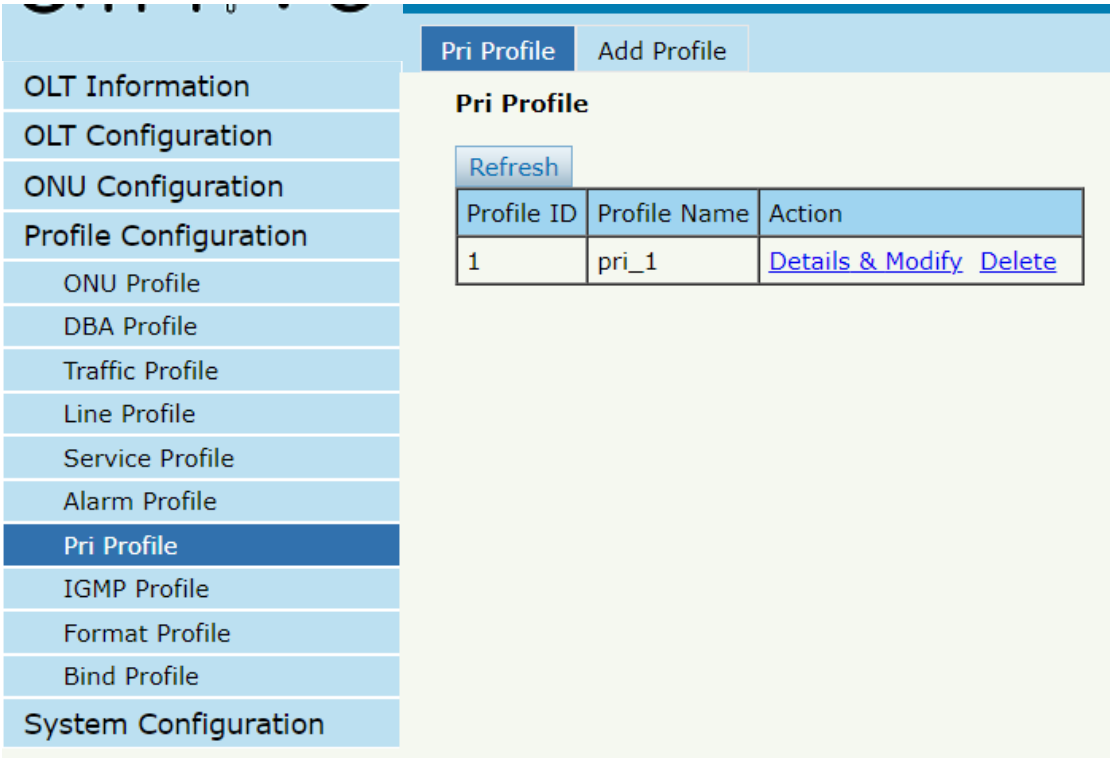



Figure 5.7-1: Pri Profile

## 5.7.2 Add Profile

Profile Configuration→Pri Profile →Add profile

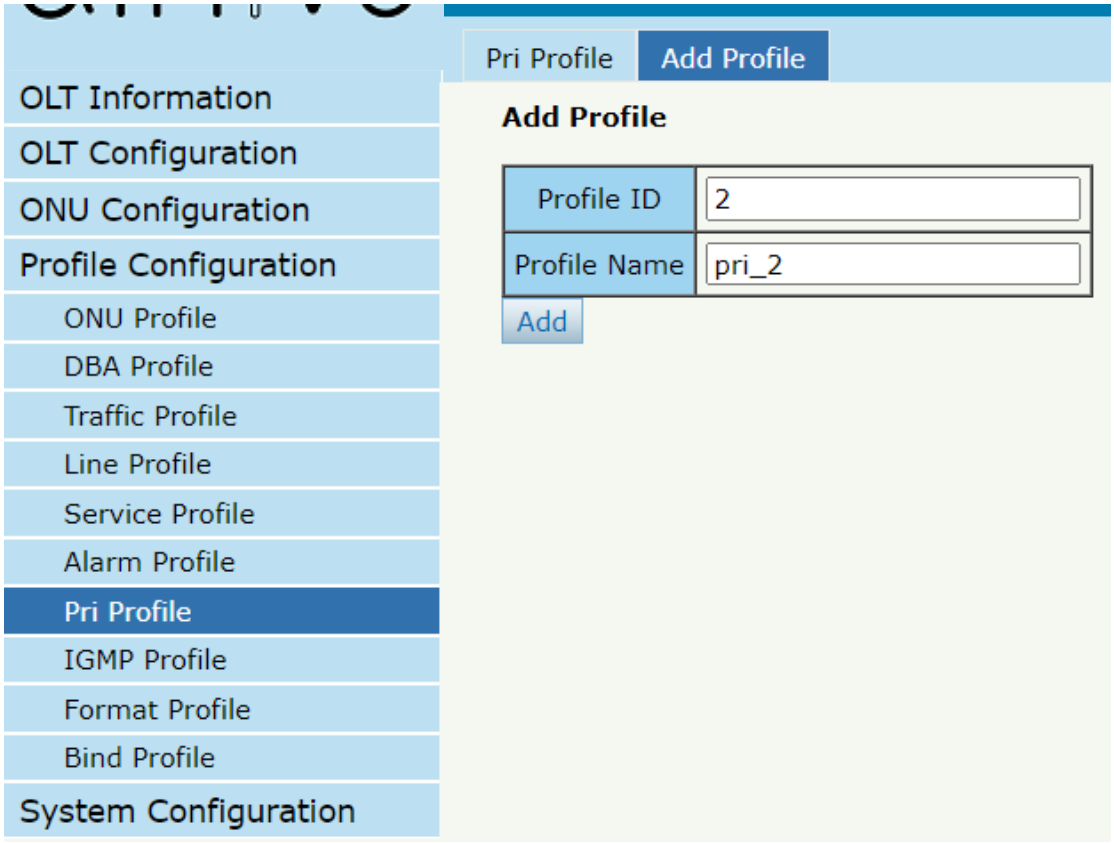



Figure 5.7-2: Add Private Profile

# 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.

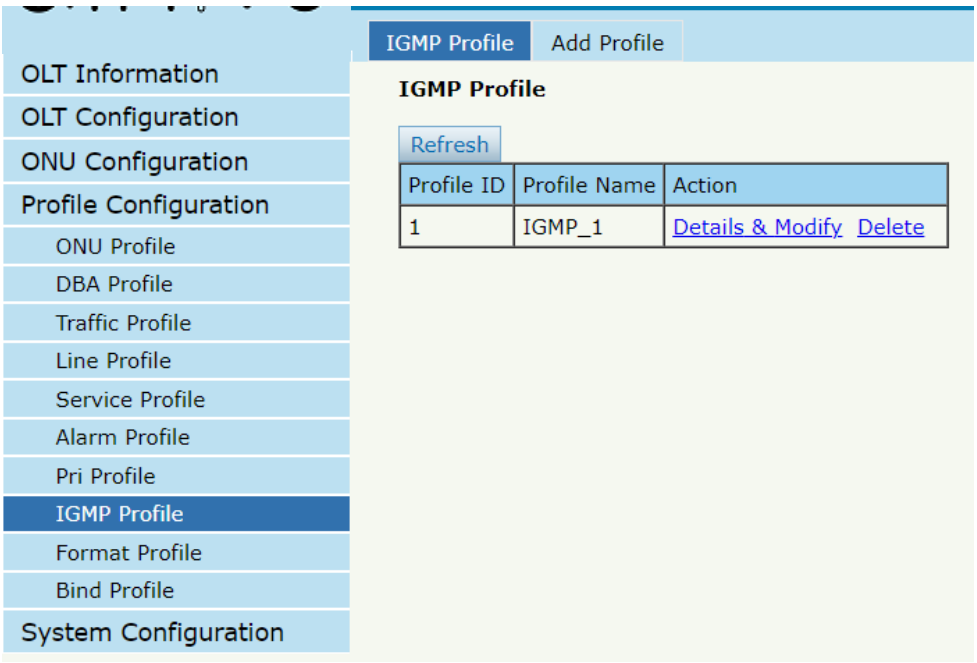



Figure 5.8-1: IGMP Profile List

## 5.8.2 Add Profile

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

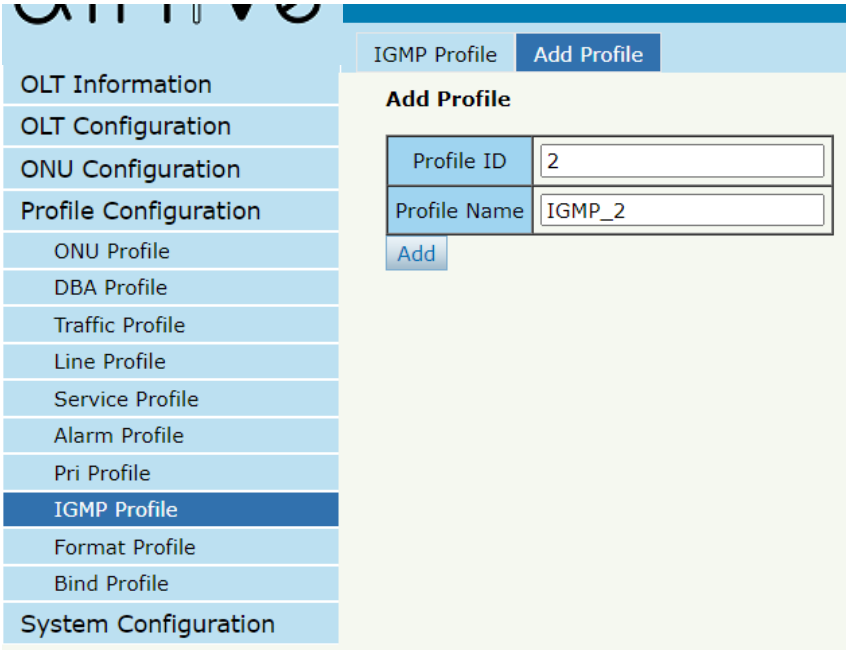



Figure 5.8-2: Add IGMP Profile

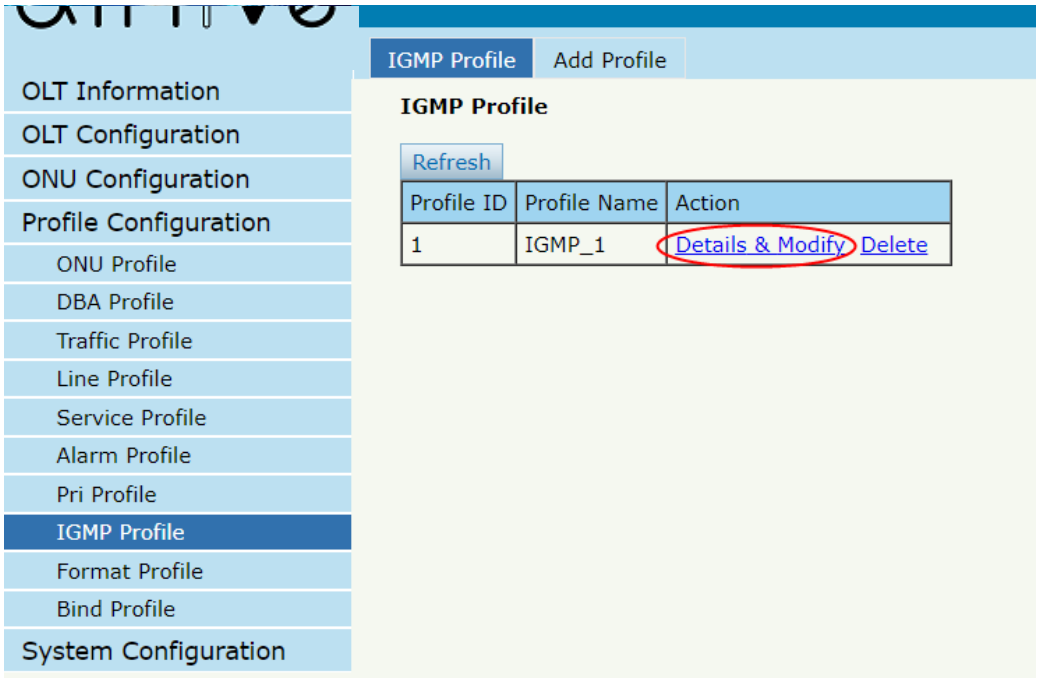



Figure 5.8-3: Modify IGMP Profile

### 5.8.2.1 Config

Configure multicast related data.

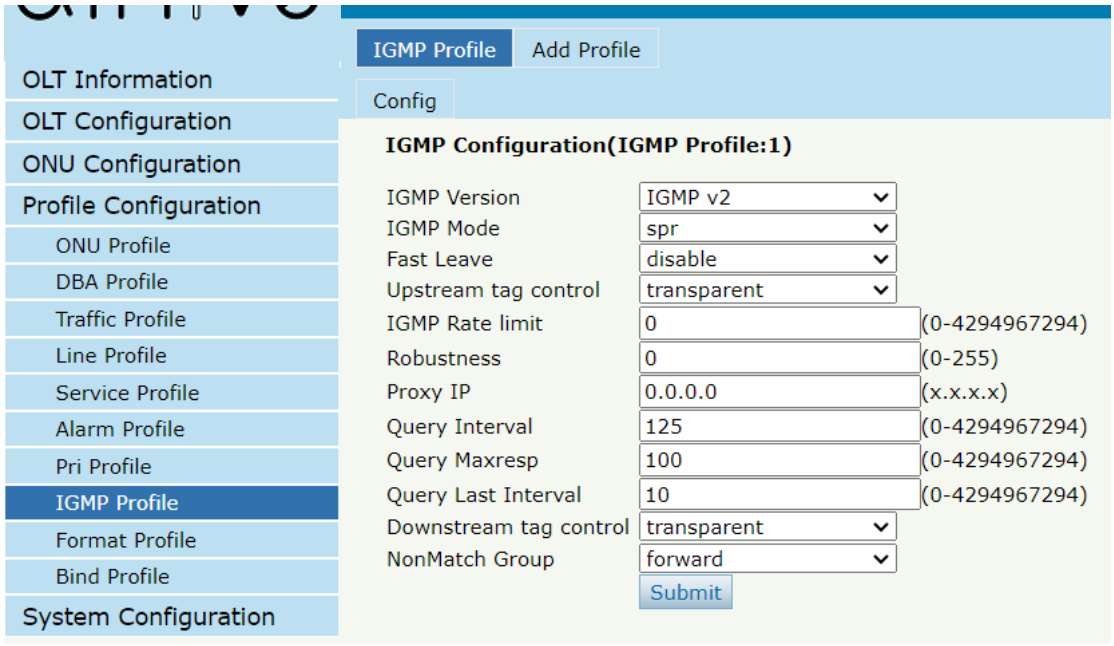



Figure 5.8-4: Config

# 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.

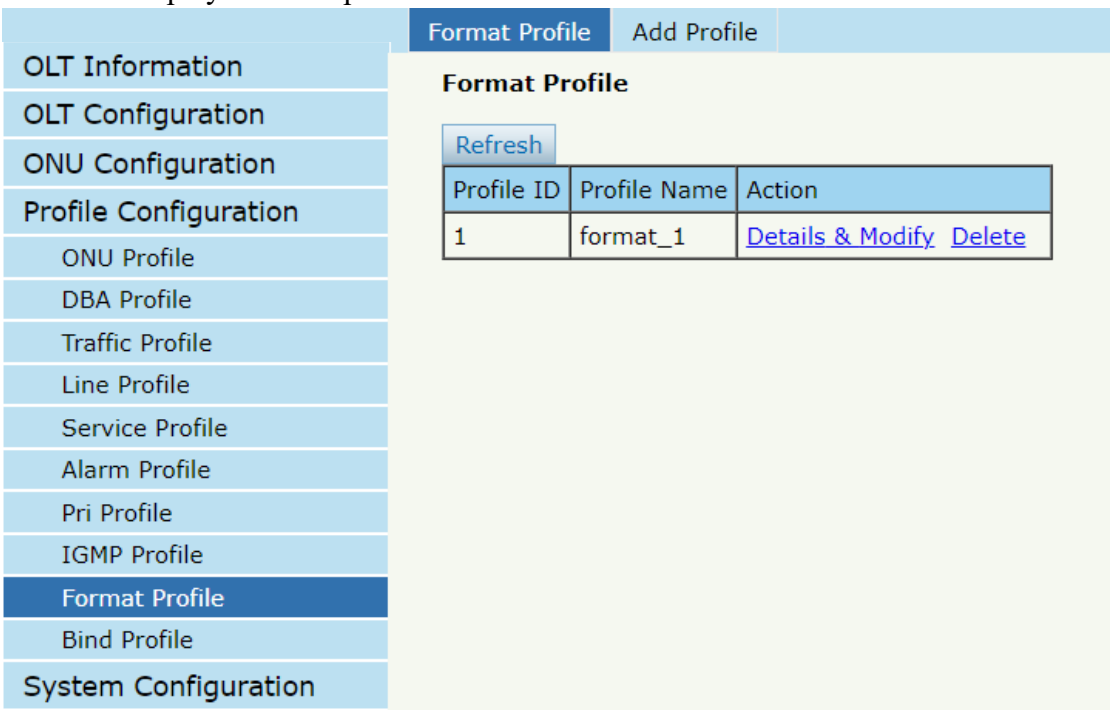



Figure 5.9-1: Format Profile List

## 5.9.2 Add Profile

Profile Configuration→Format Profile →Add profile
Add new Format profile.

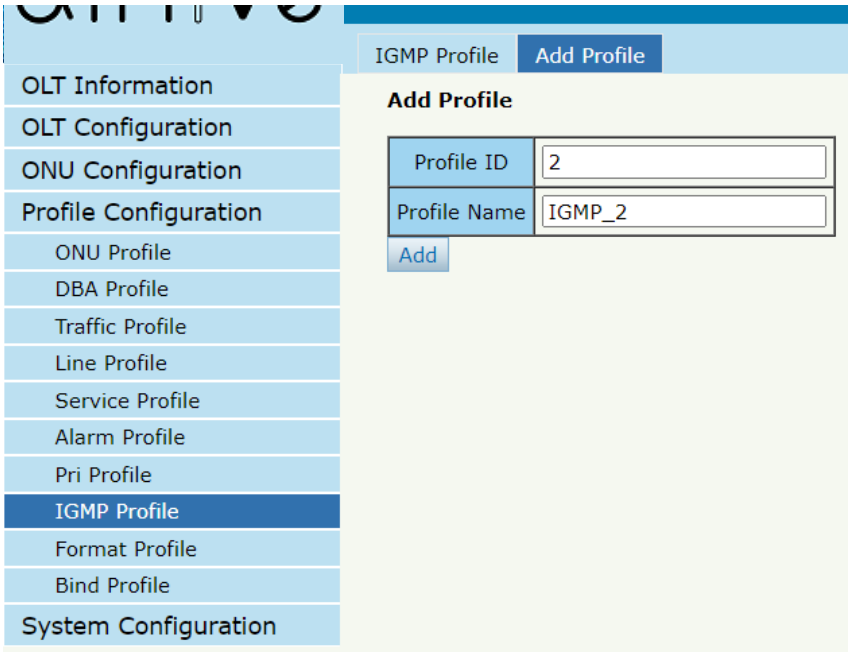


Figure 5.9-2: Add Format Profile

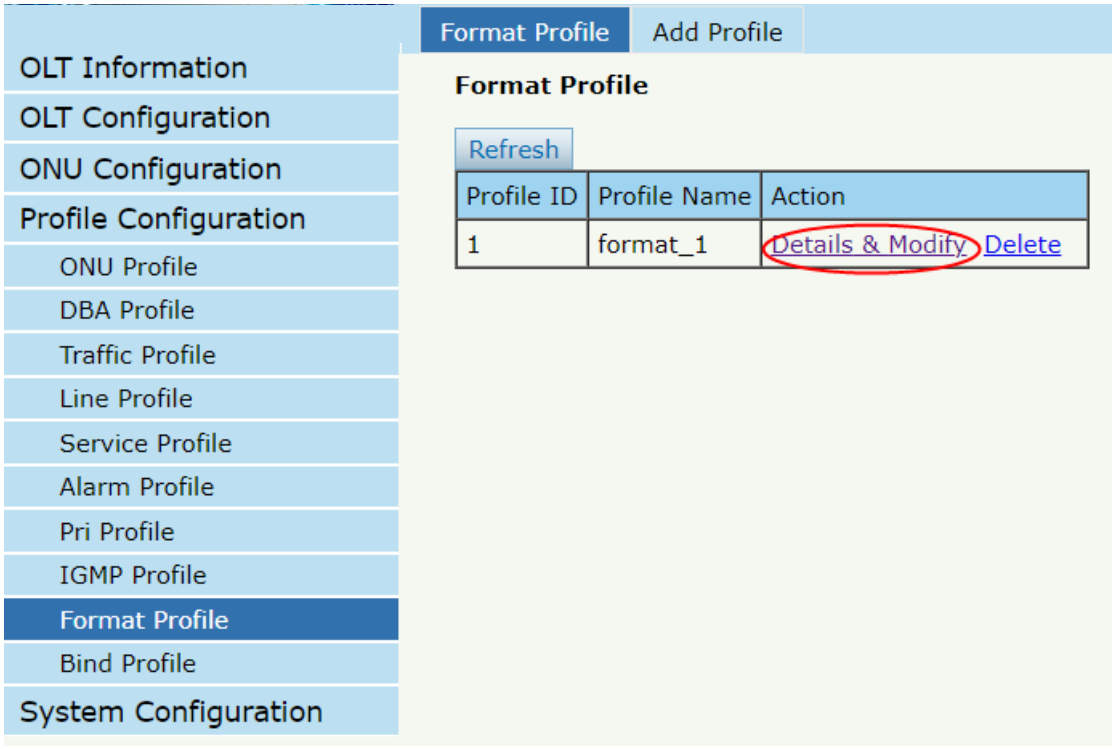



Figure 5.9-3: Modify Format Profile

### 5.9.2.1 Config

Configure Format related data.

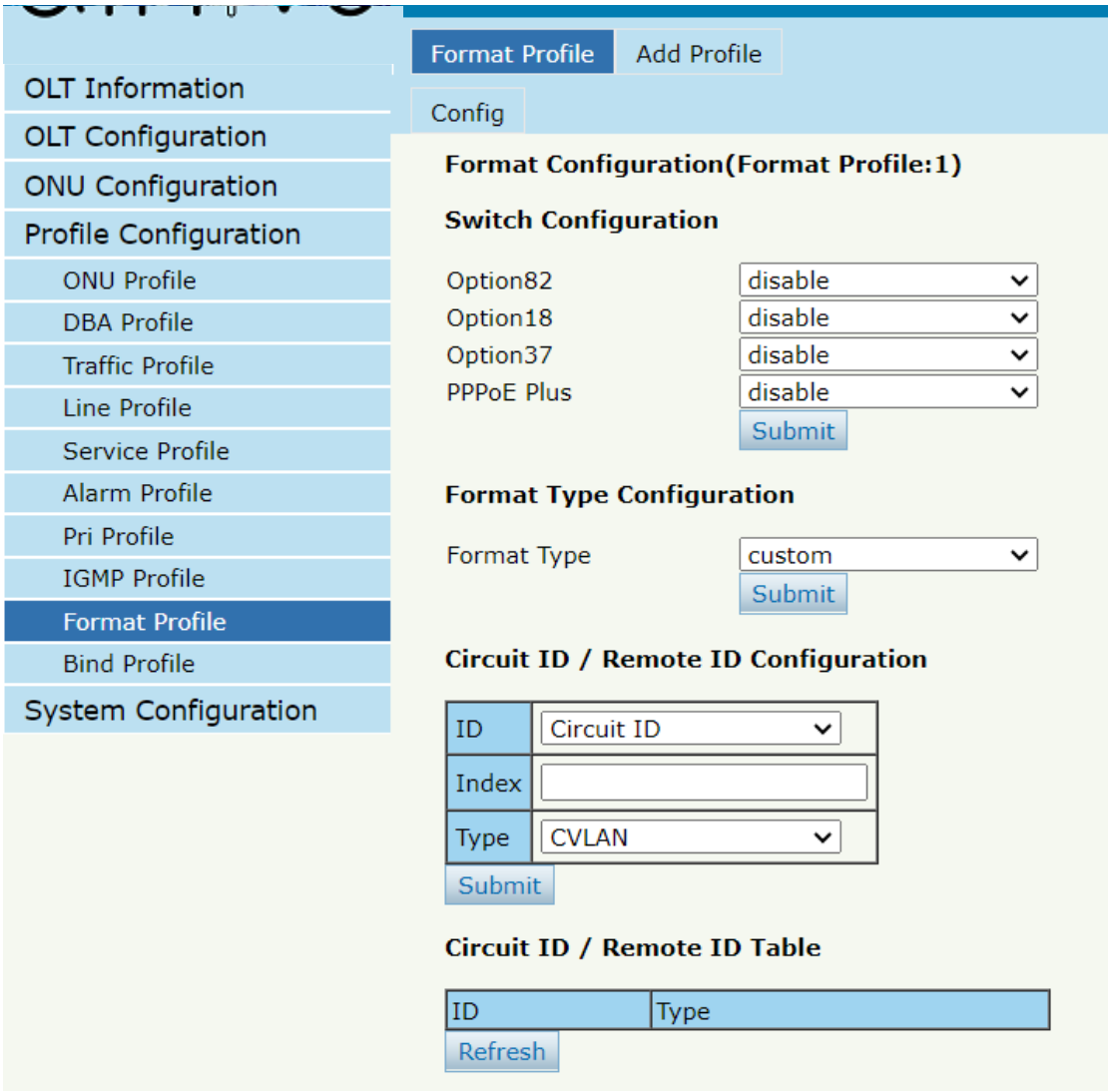



Figure 5.9-4: Config

# 5.10 Bind Profile

After profile is configured, it is necessary to bind it to ONU.
Profile Configuration→Bind Profile

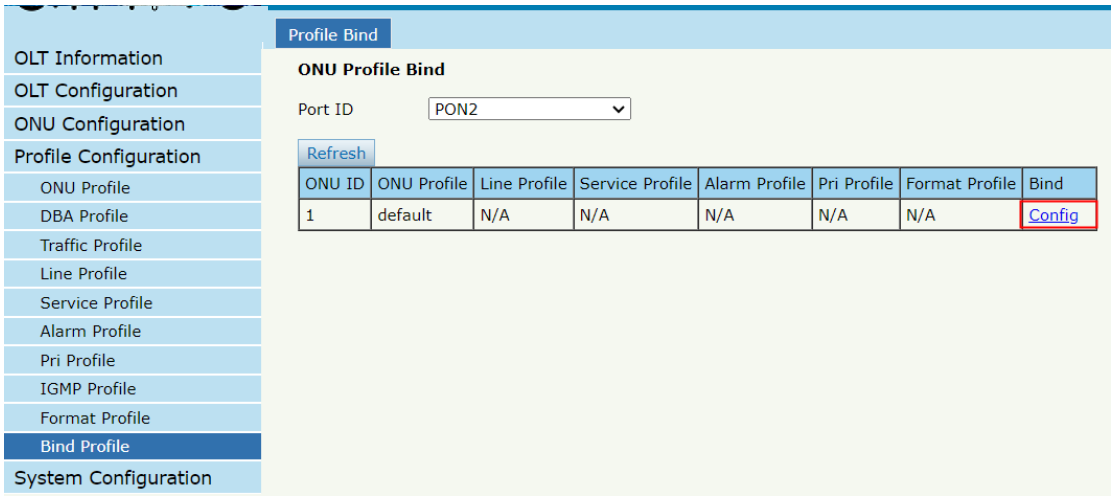



Figure 5.10-1: Bind profile

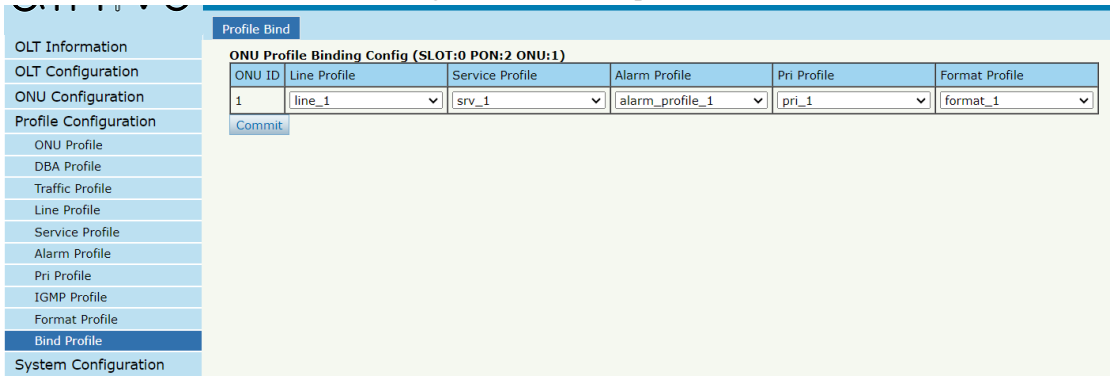



Figure 5.10-2: Select Profile

# 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.

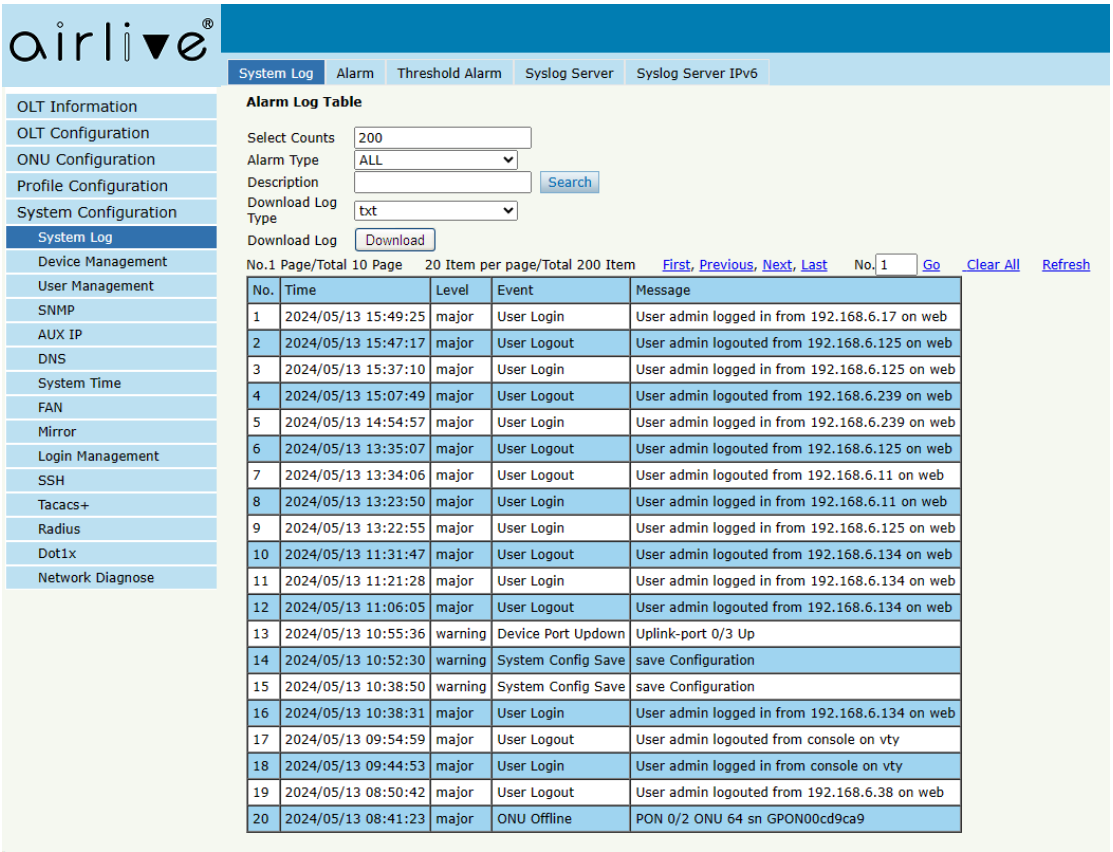



Figure 6.1-1: System Log

### 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".

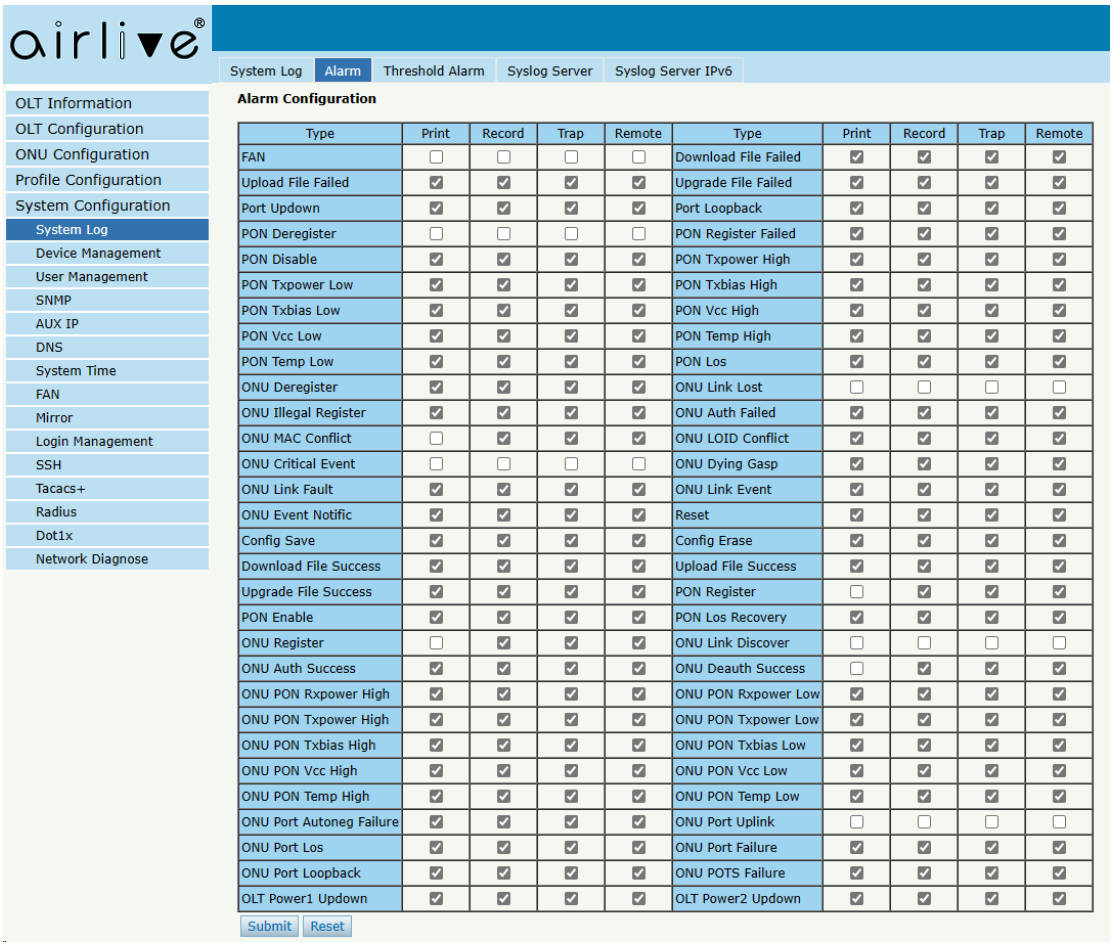



Figure 6.1-2: Alarm

| 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.

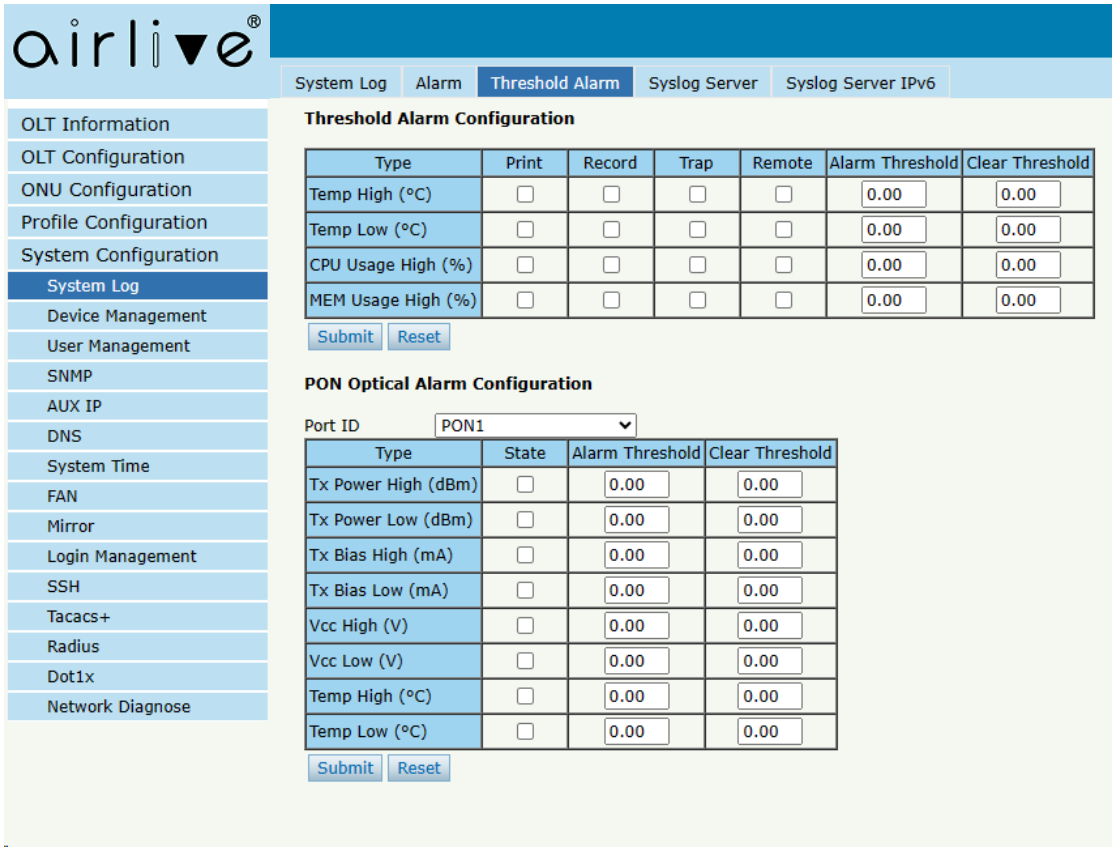



Figure 6.1-3: Threshold Alarm

## 6.1.4 Syslog Server

System Configuration→System Log →Syslog Server
This page is used to configure remote IPv4 server of OLT system log.

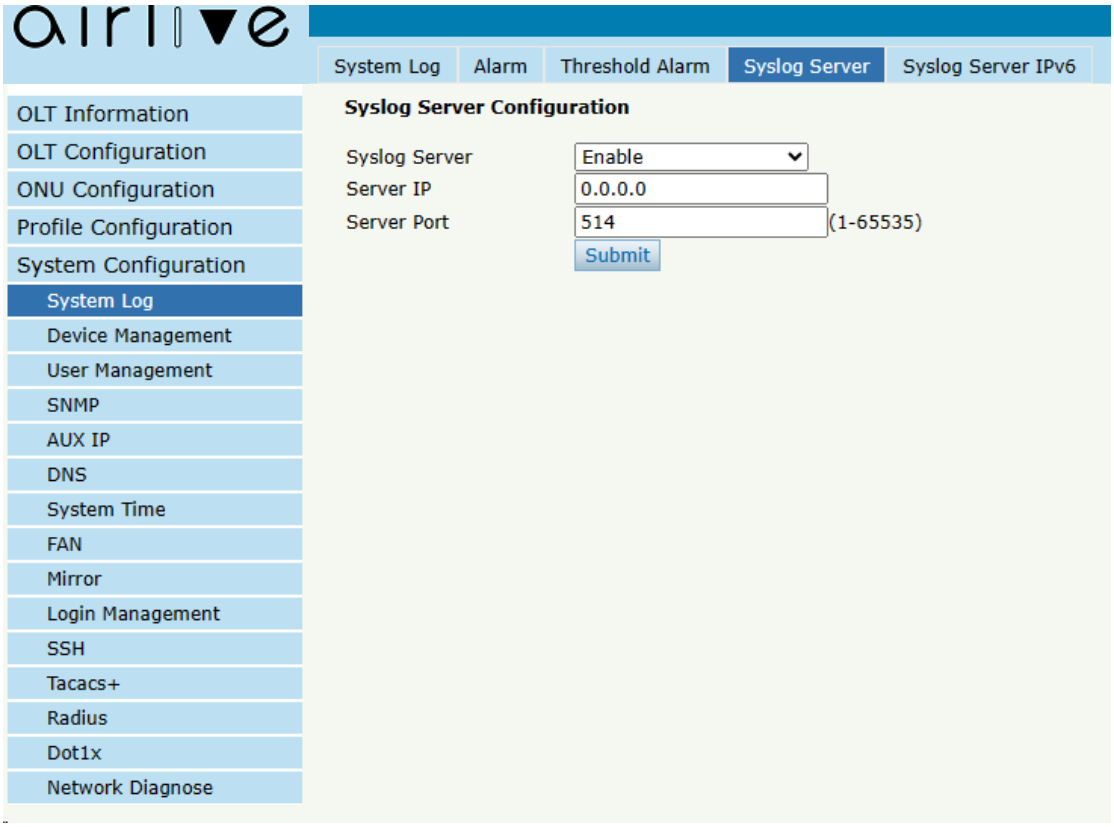



Figure 6.1-4: Syslog Server

## 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.

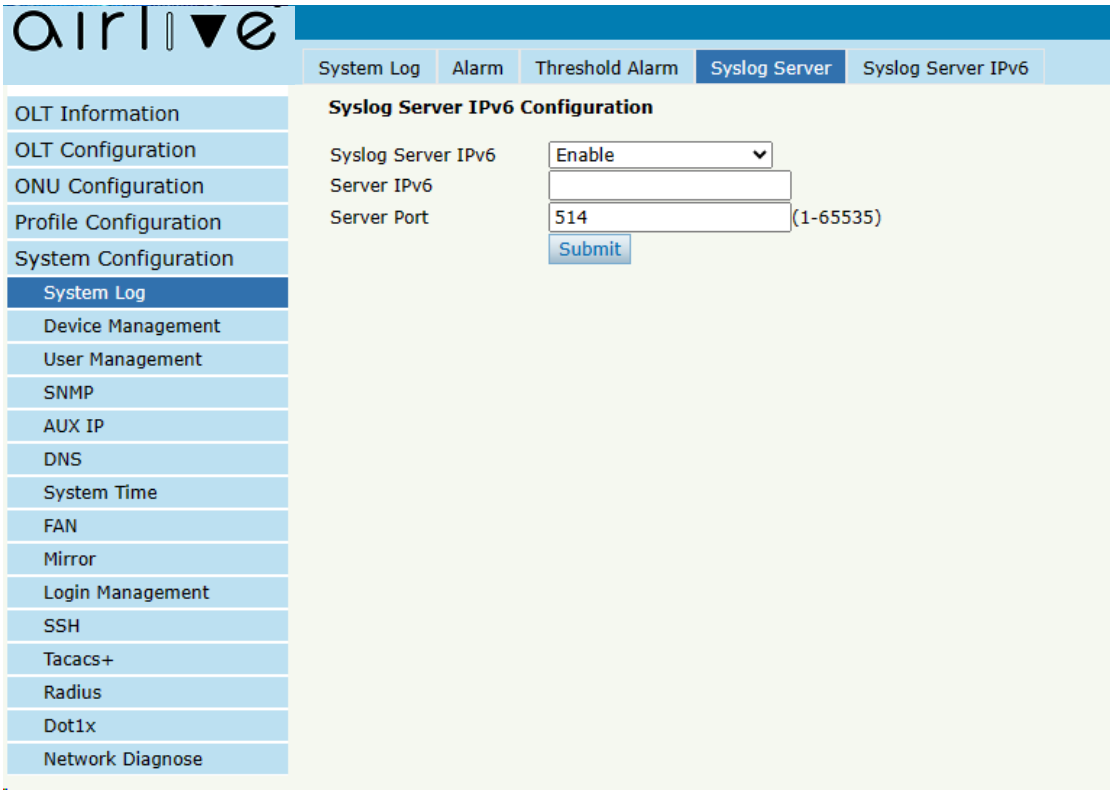



Figure 6.1-5: Syslog Server IPv6

# 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.

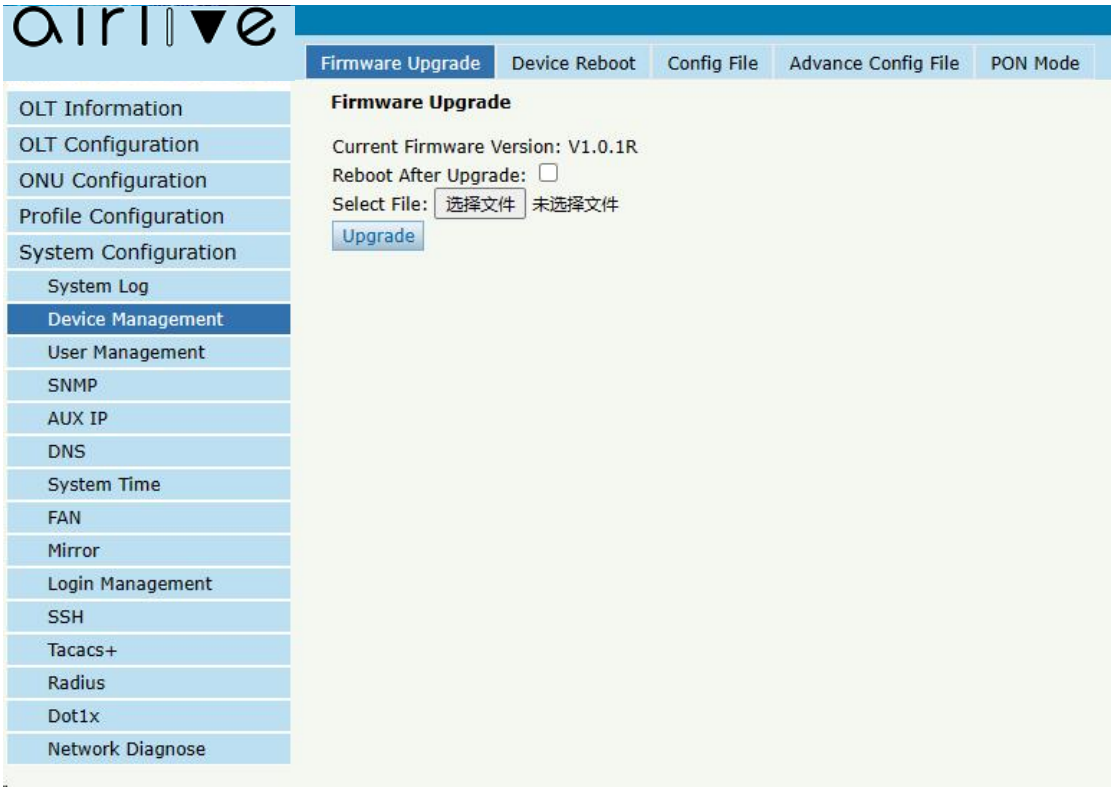



Figure 6.2-1: Firmware Upgrade

## 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.

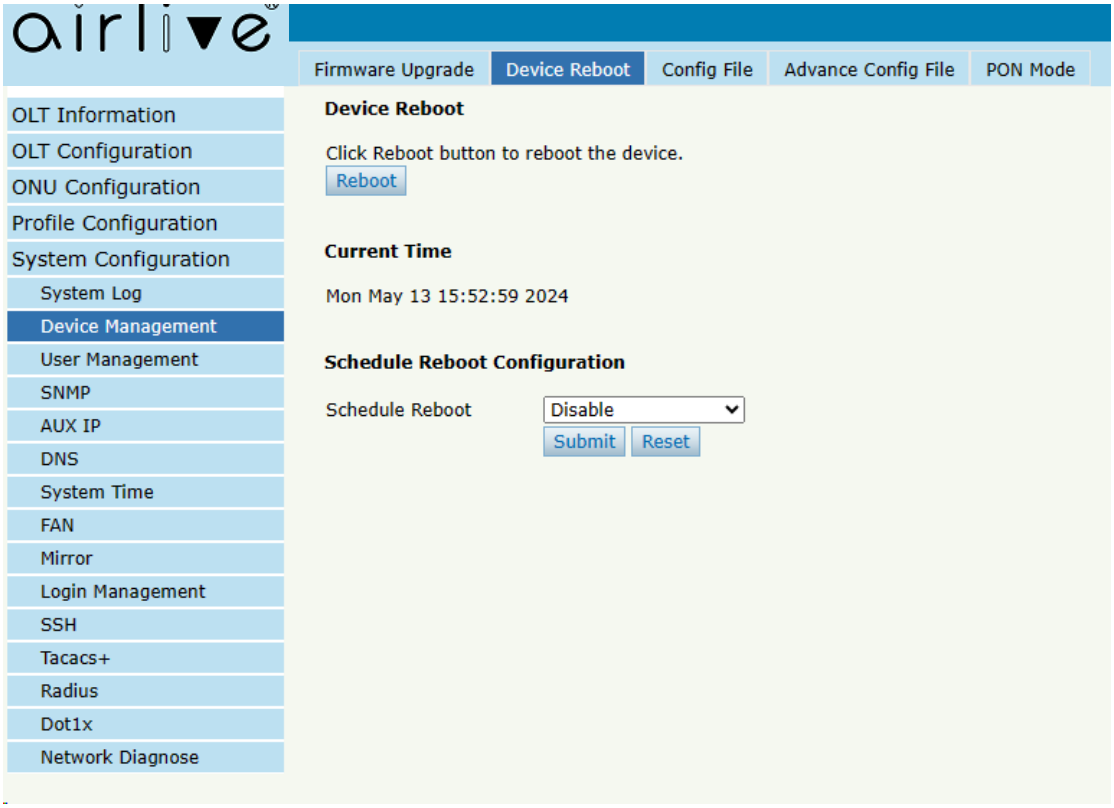



Figure 6.2-2: Device Reboot

## 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.

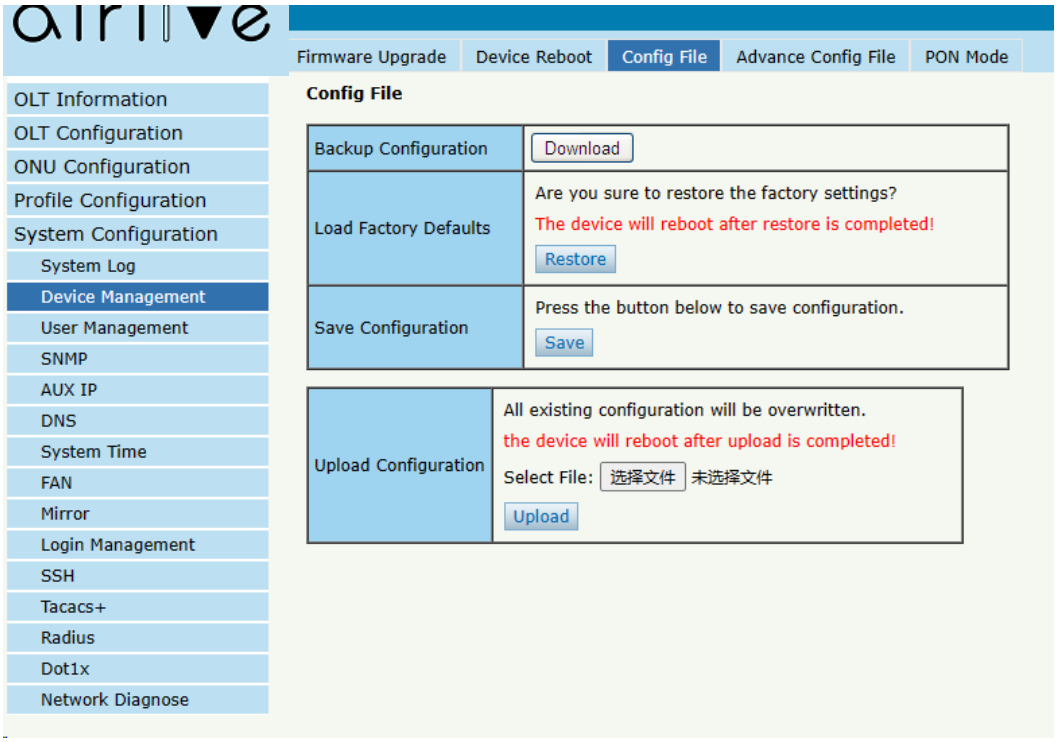



Figure 6.2-3: File Configuration

## 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.

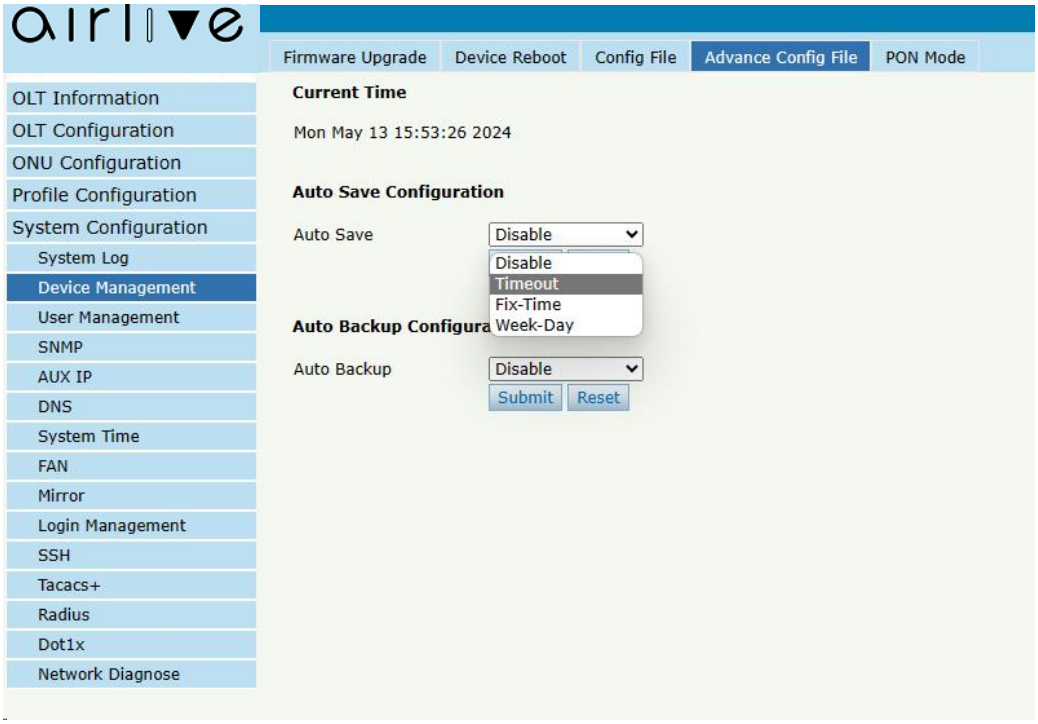



Figure 6.2-4: Auto Save

### 6.2.5 Pon Mode

System Configuration→Device Management →Pon Mode
Here you can select the PON mode for OLT, there are three modes: XG-PON, XGS-PON and GPON. (Only 1 mode can be used at any one-time, Correct PON module is also needed.

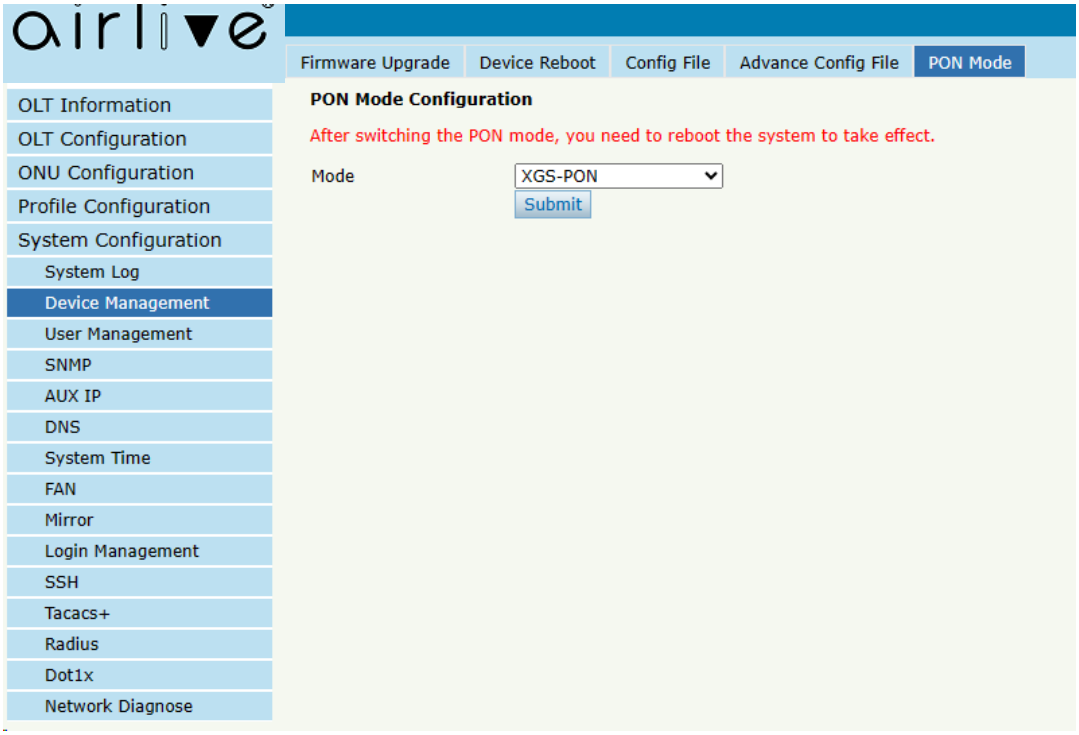



Figure 6.2-5: PON MODE

## 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.

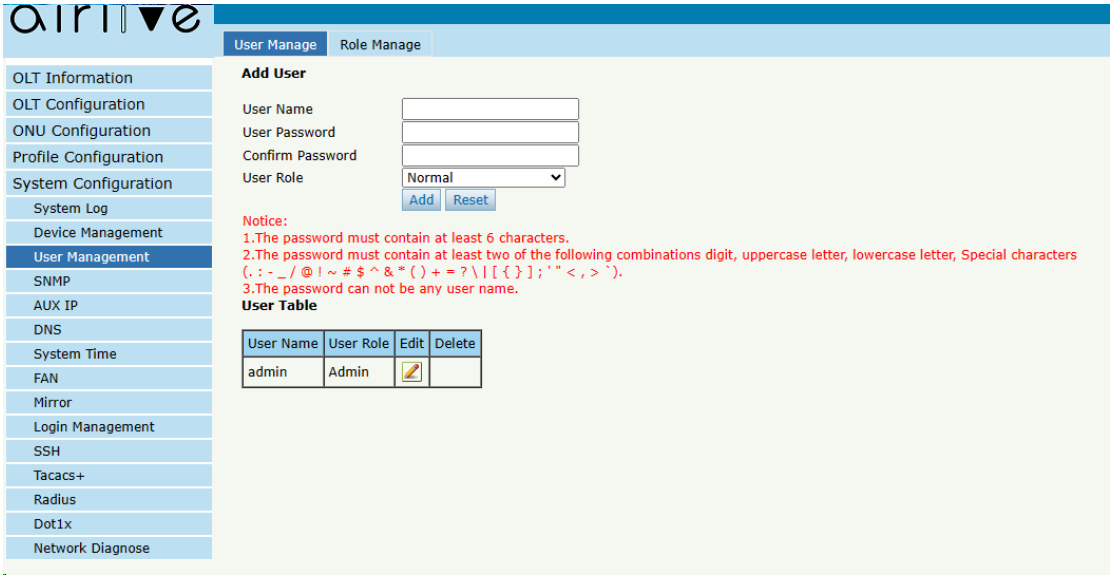



Figure6.3-1: User Manage

## 6.3.2 Role manage

System Configuration→User management→Role manage
You can add roles and assign different permissions to different roles.

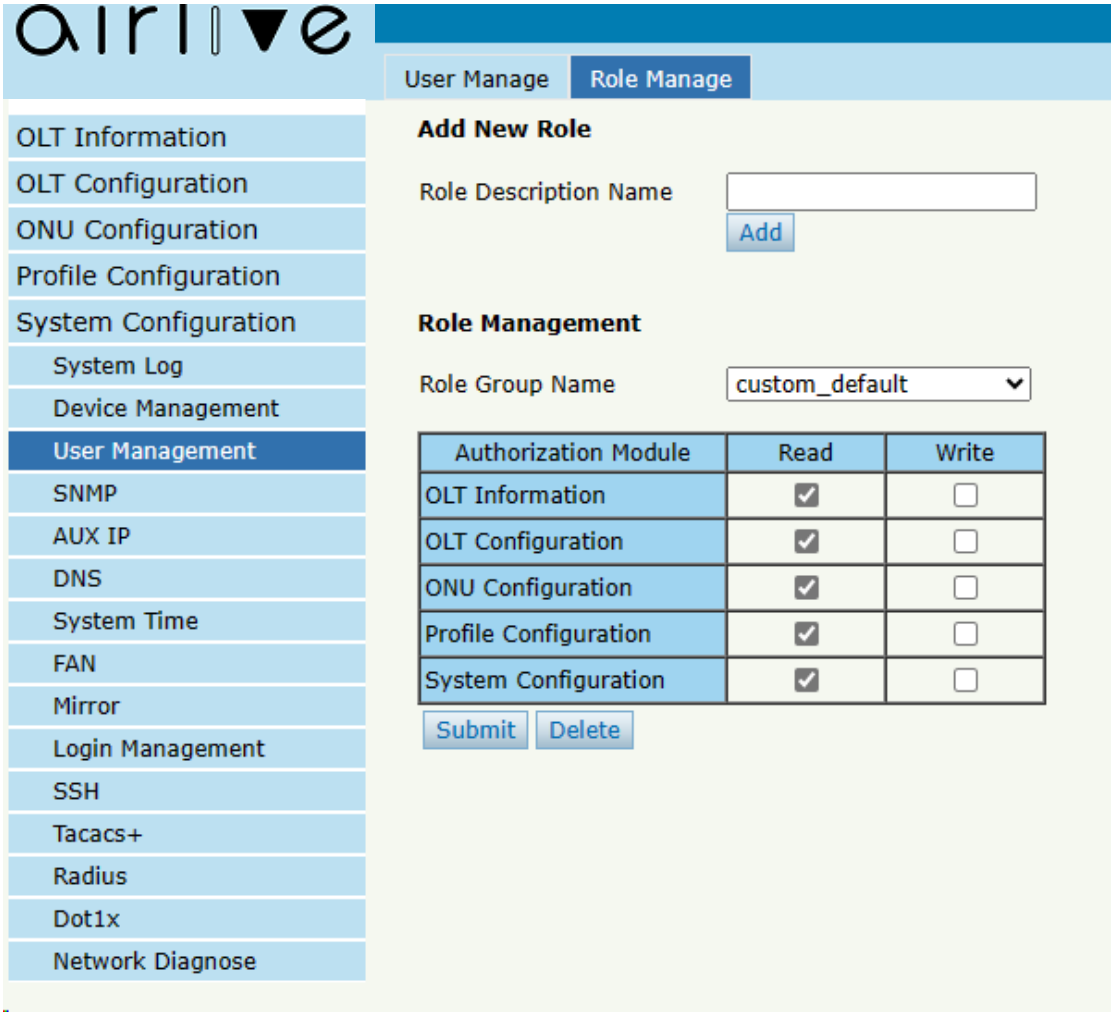



Figure6.3-2: Role Manage

# 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.

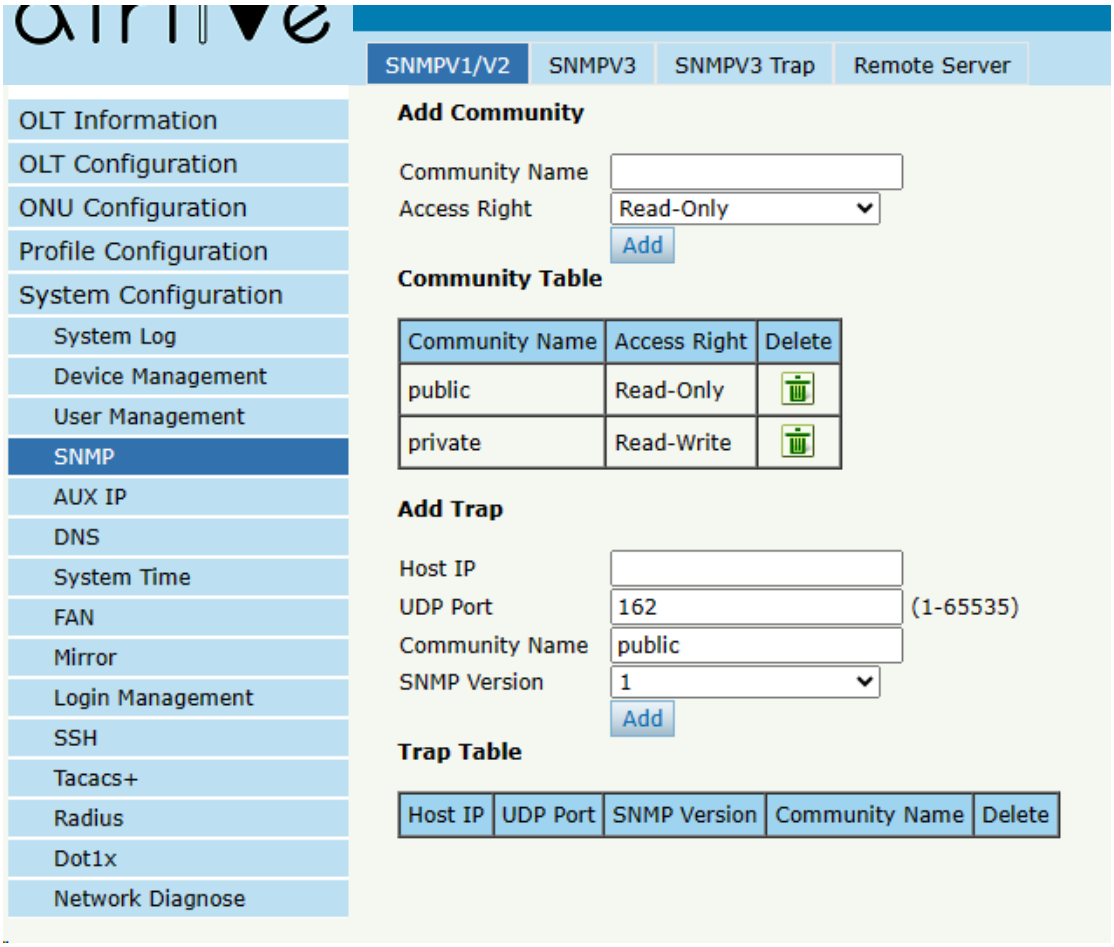



Figure6.4-1: SNMP V1/V2

## 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.

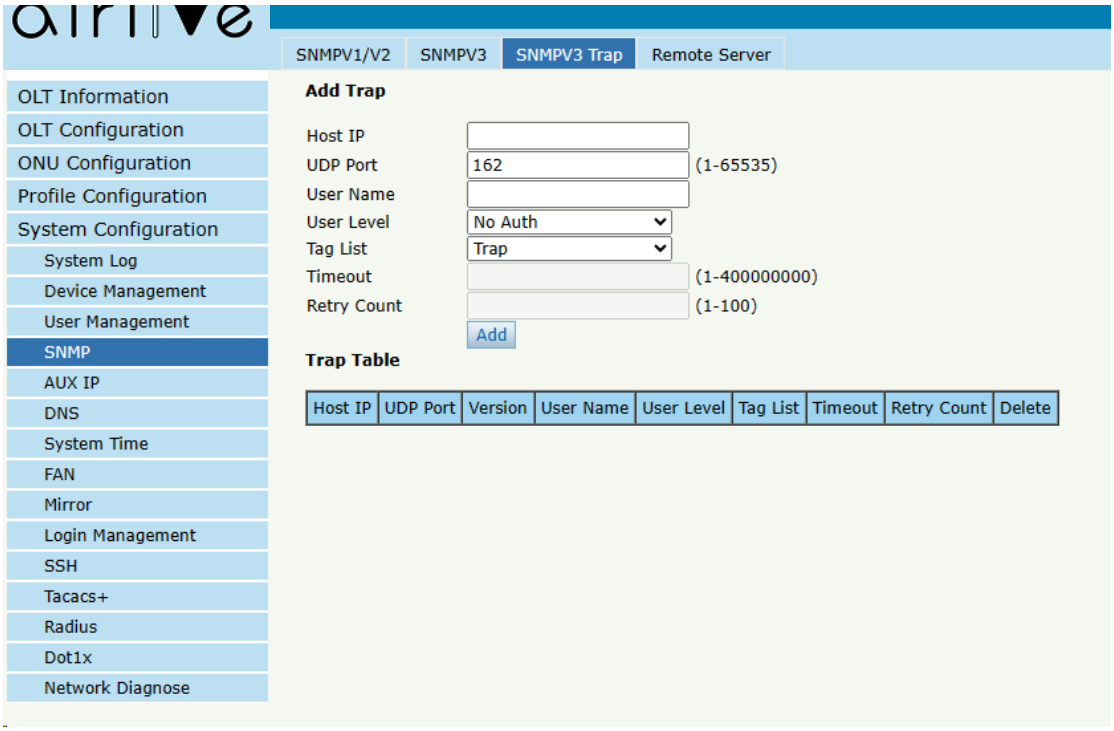



Figure 6.4-3: SNMP V3 Trap

## 6.4.4 Remote Server

System Configuration → SNMP →Remote Server
Configure the IP address of your SNMP network management server.

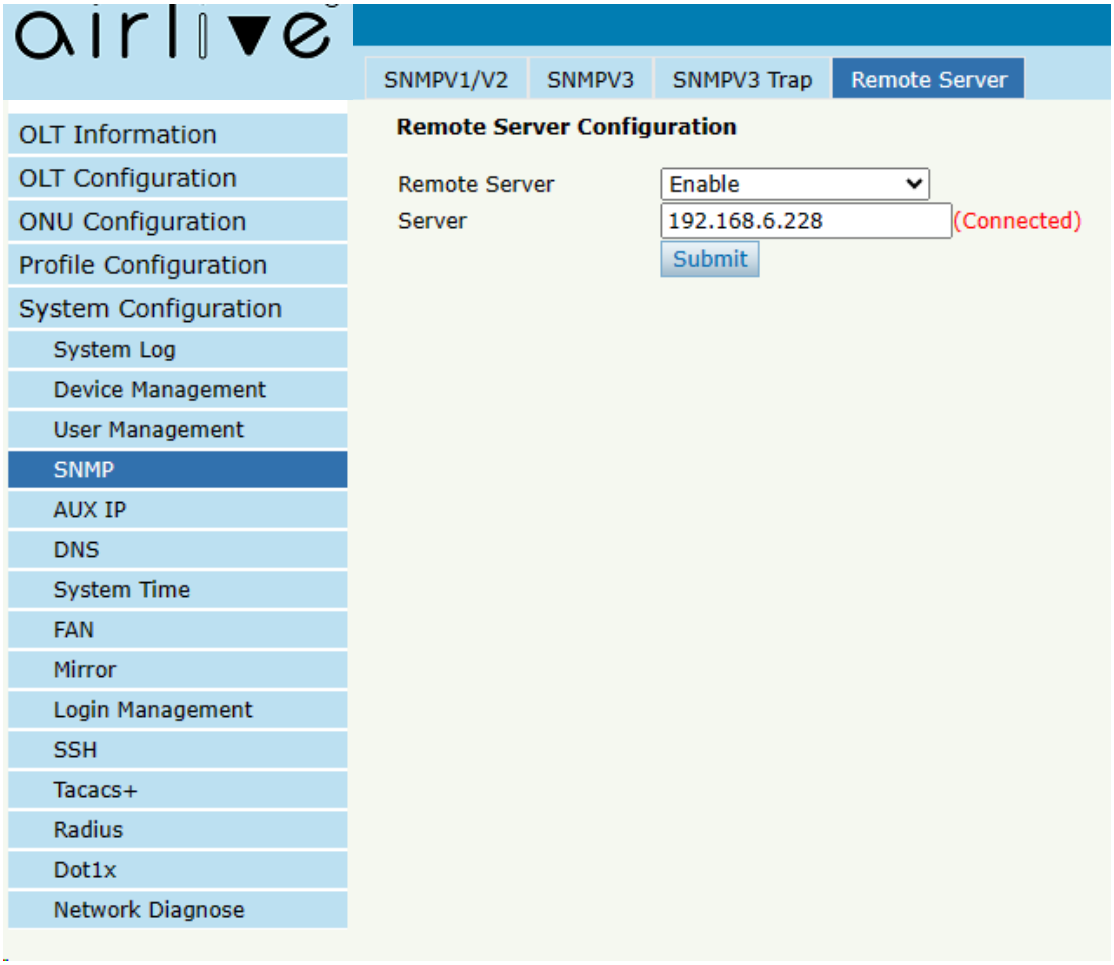



Figure 6.4-4: Remote Server

# 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.

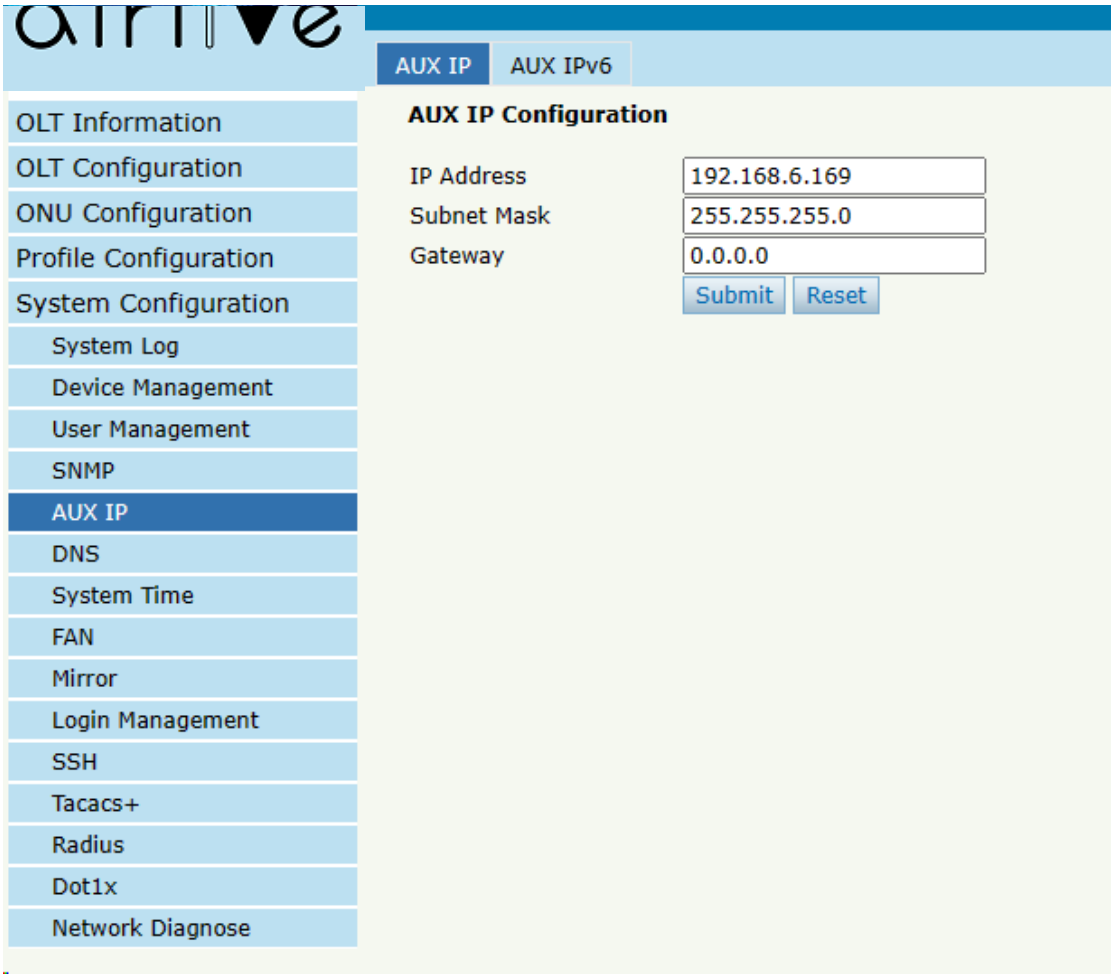



Figure 6.5-1: AUX IP

## 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.

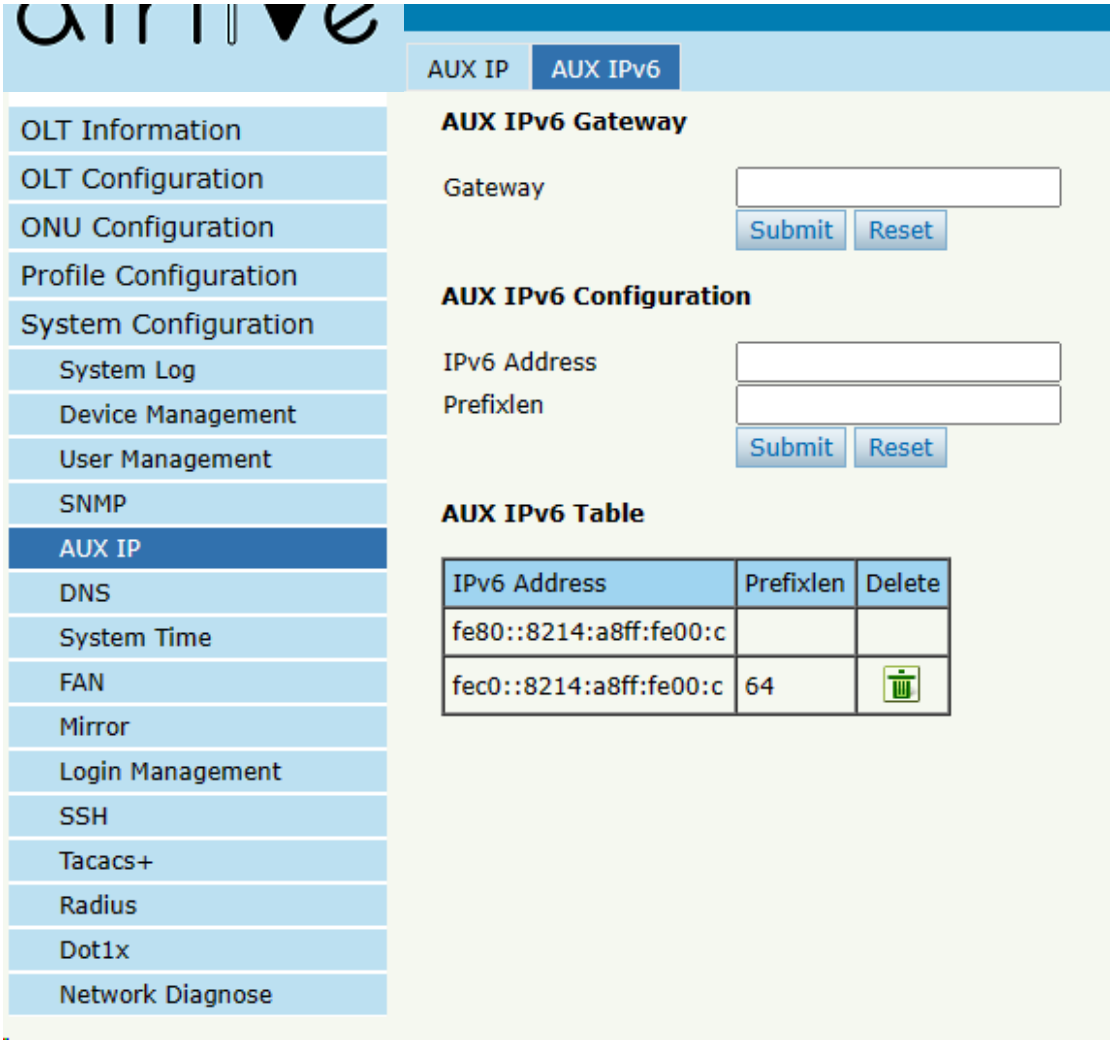



Figure 6.5-2: AUX IPv6

# 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.

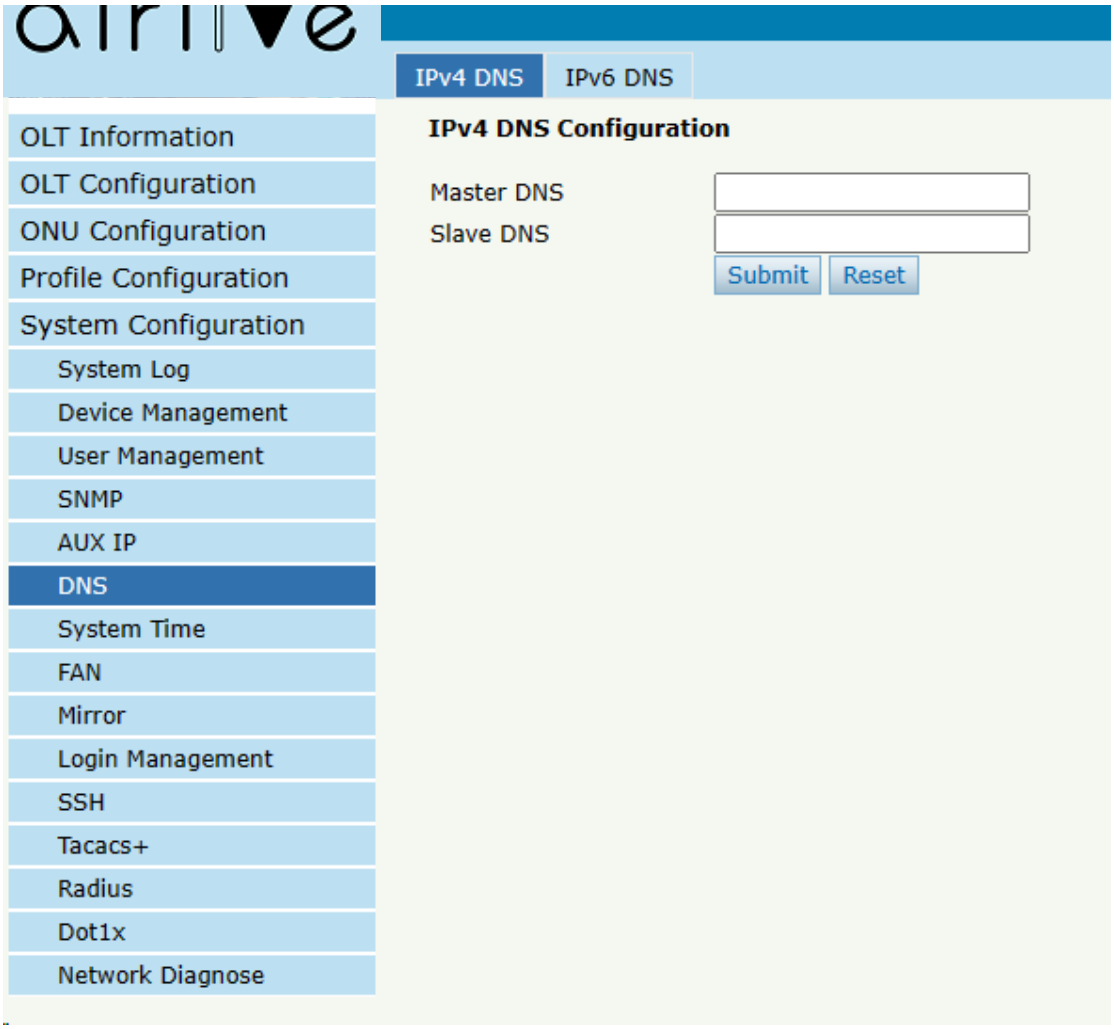



Figure 6.6-1: IPv4 DNS

## 6.6.2 IPv6 DNS

System Configuration → DNS → IPv6 DNS
This page is used to configure IPv6 DNS.

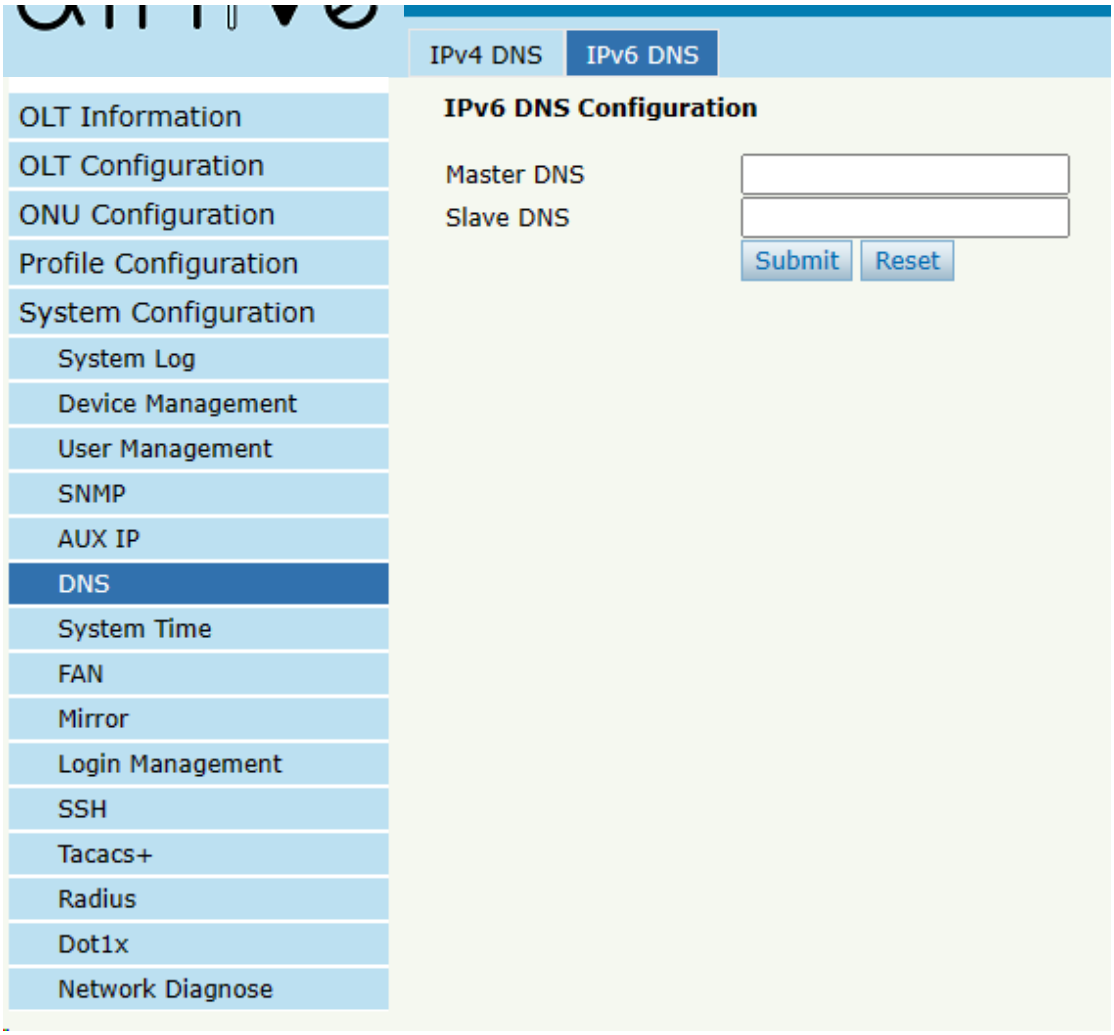



Figure 6.6-2: IPv6 DNS

# 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.

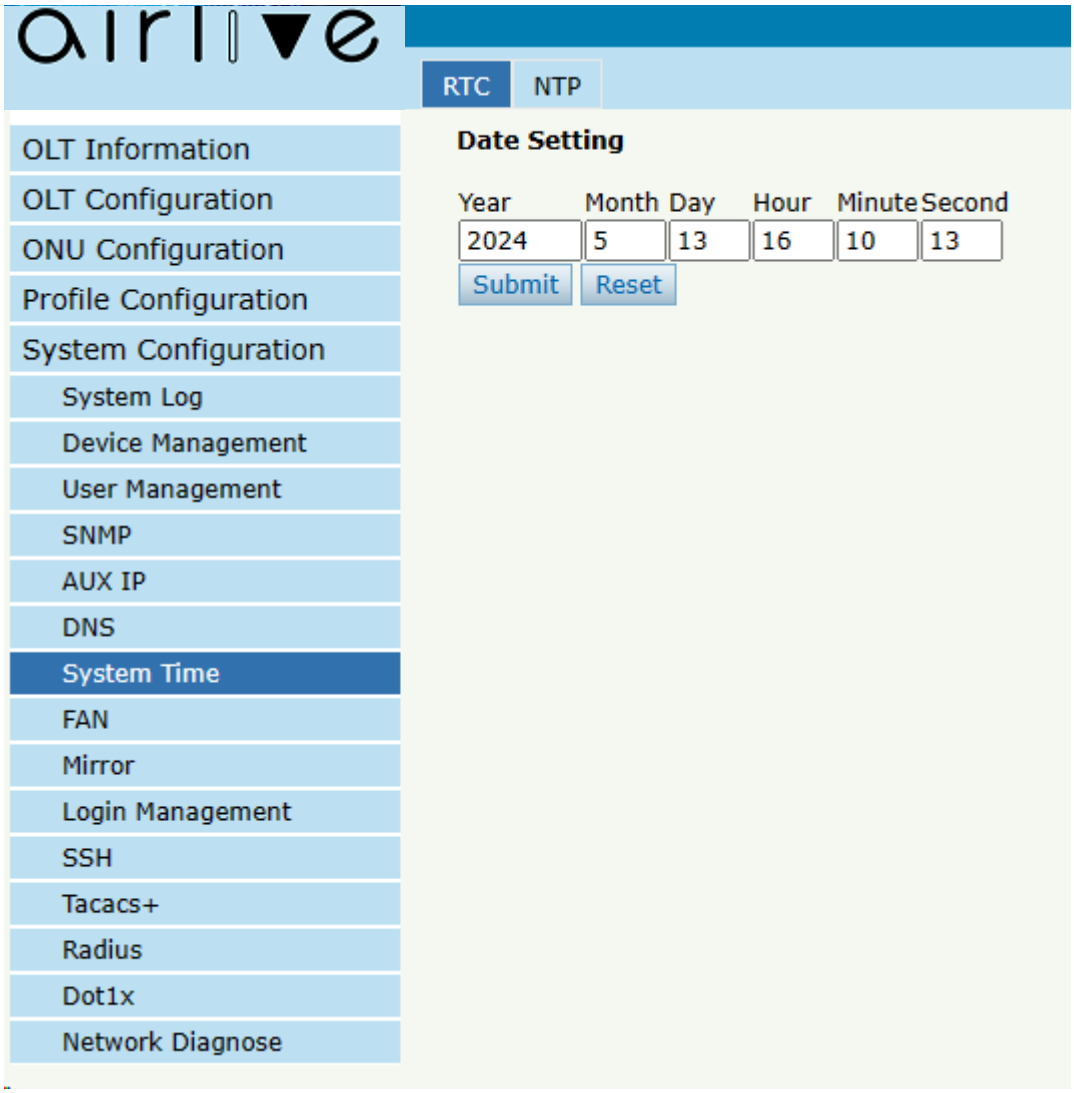



Figure 6.7-1: RTC Setting

## 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.

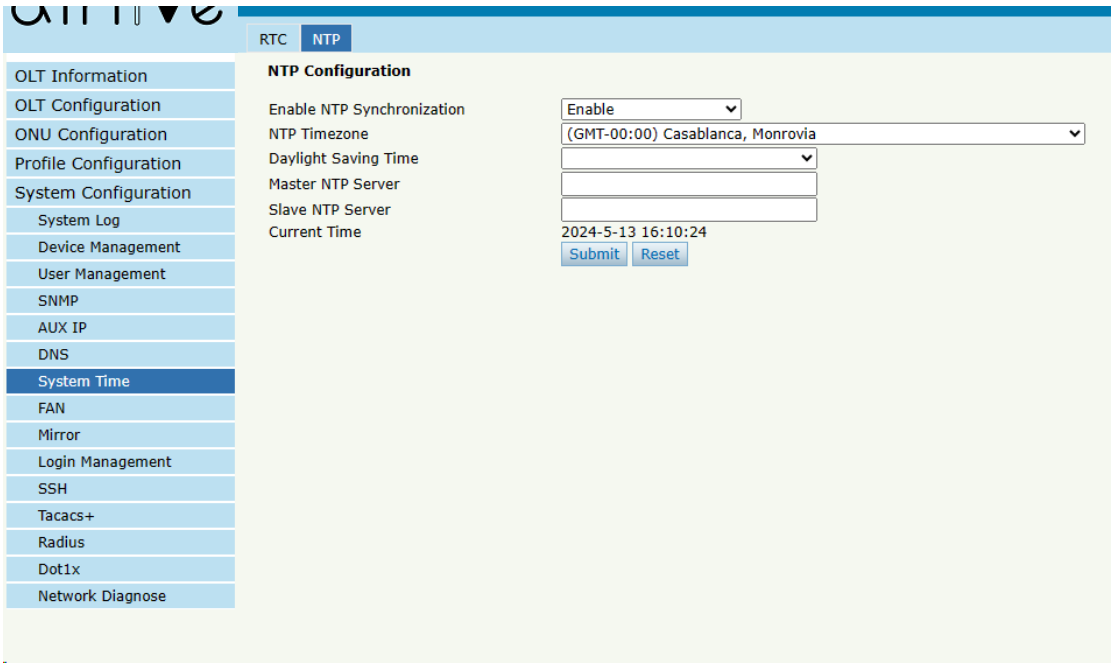



Figure 6.7-2: NTP Configuration

# 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.

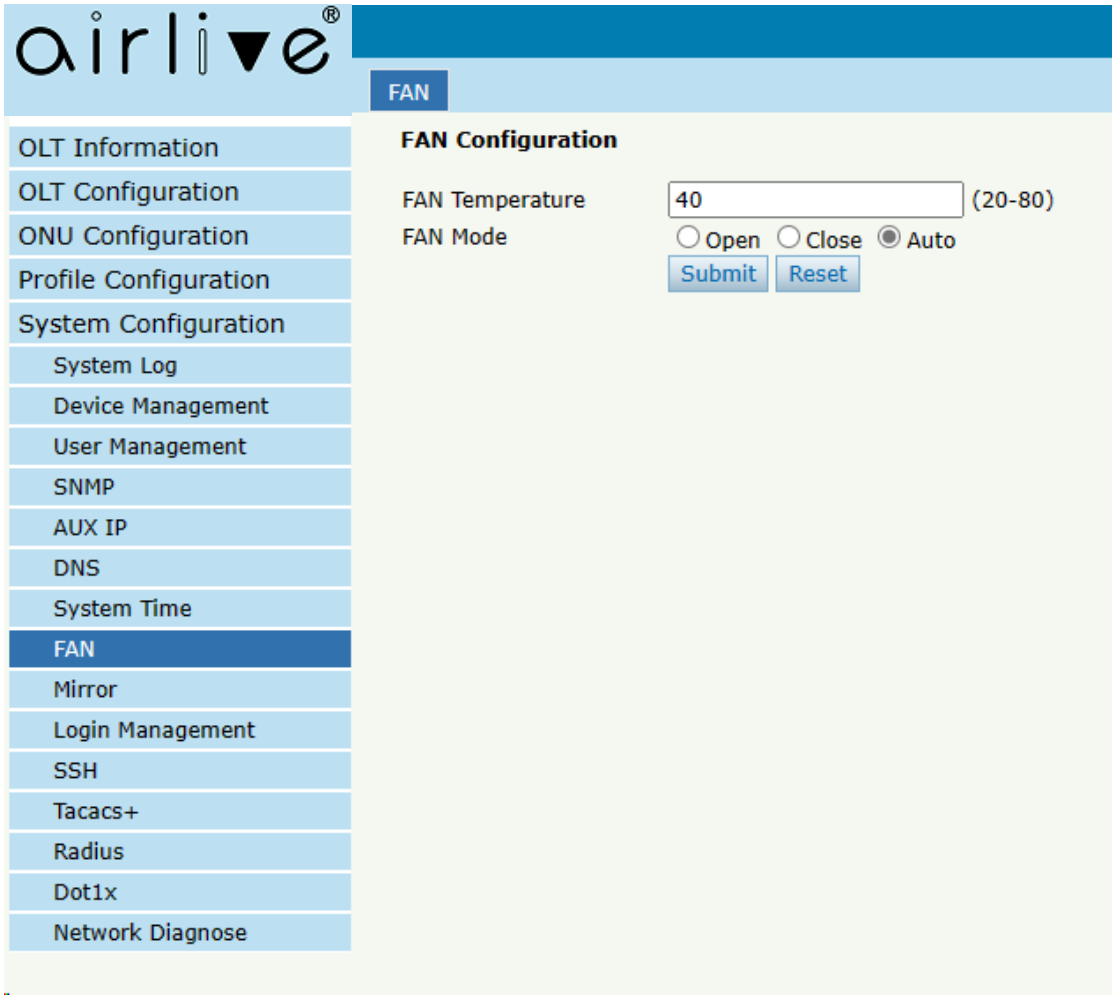



Figure 6.8-1: FAN Configuration

# 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.

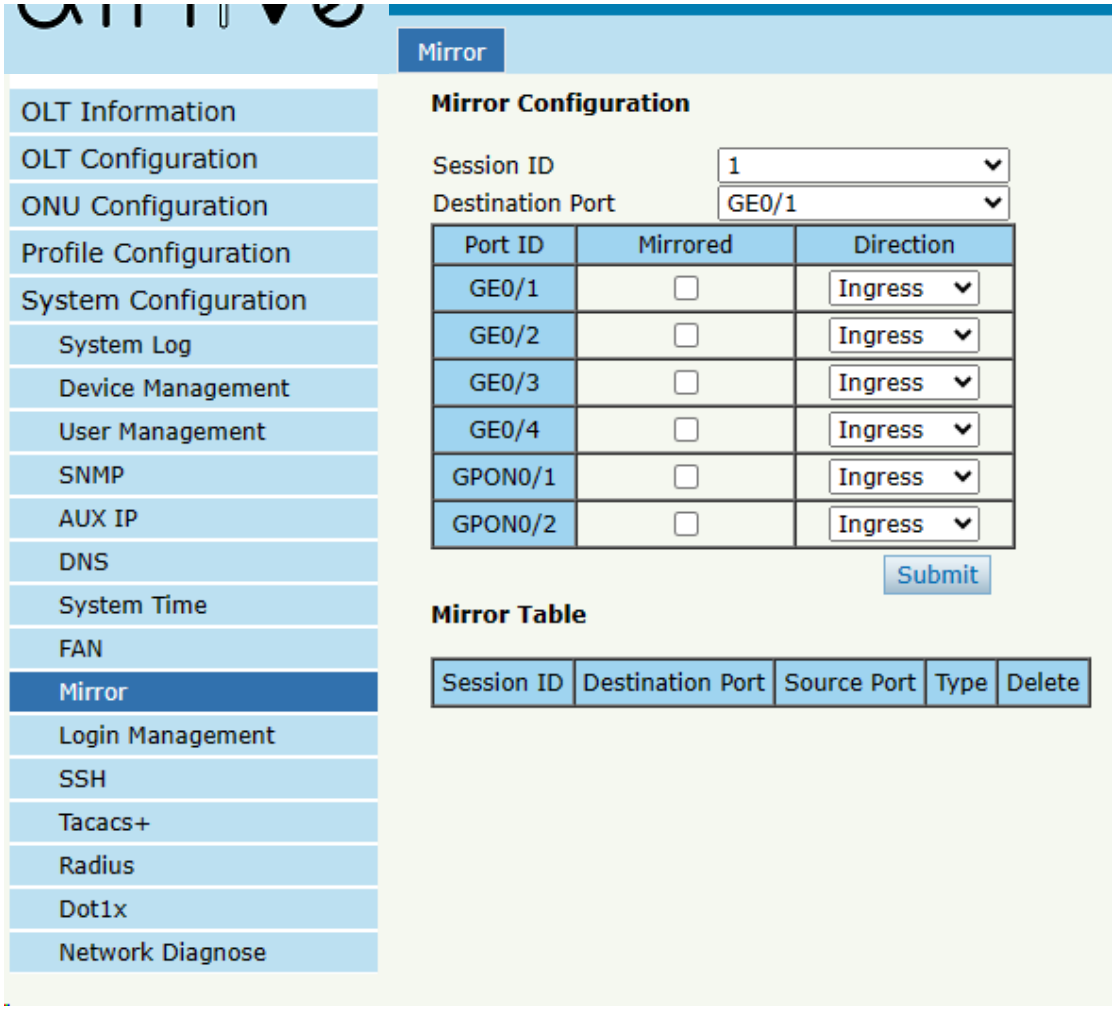



Figure 6.9-1: Mirror Configuration

# 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.

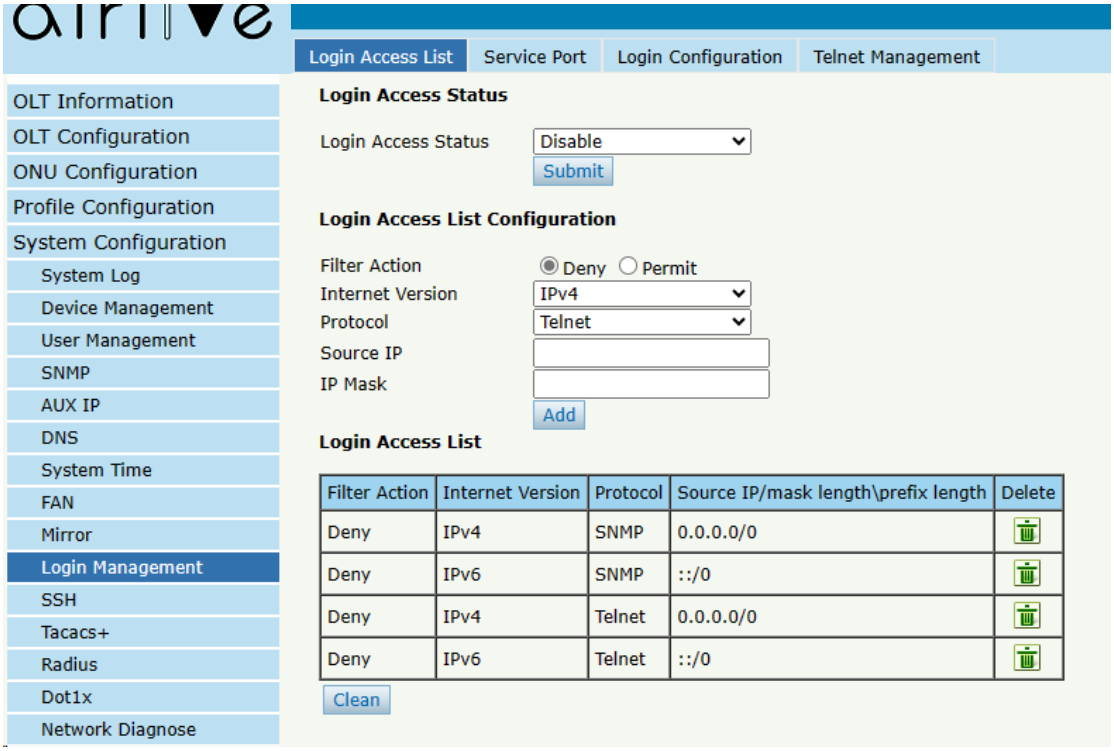



Figure 6.10-1: Login Access List Configuration

## 6.10.2 Service Port

System Configuration → Login Management→ Service Port
This user interface allows you to modify the default remote service port.

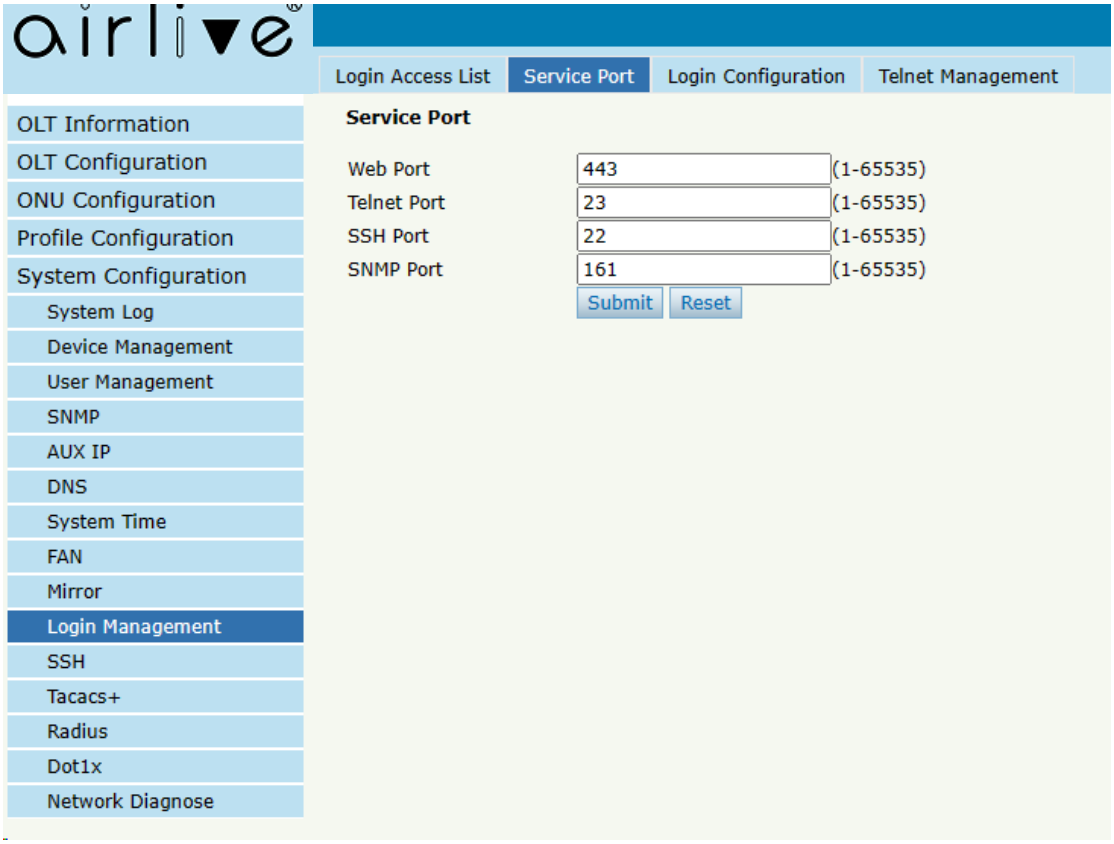



Figure 6.10-2: Service Port Configuration

## 6.10.3 Login Timeout

System Configuration → Login Management→ Login Timeout
This page is used to set web timeout.

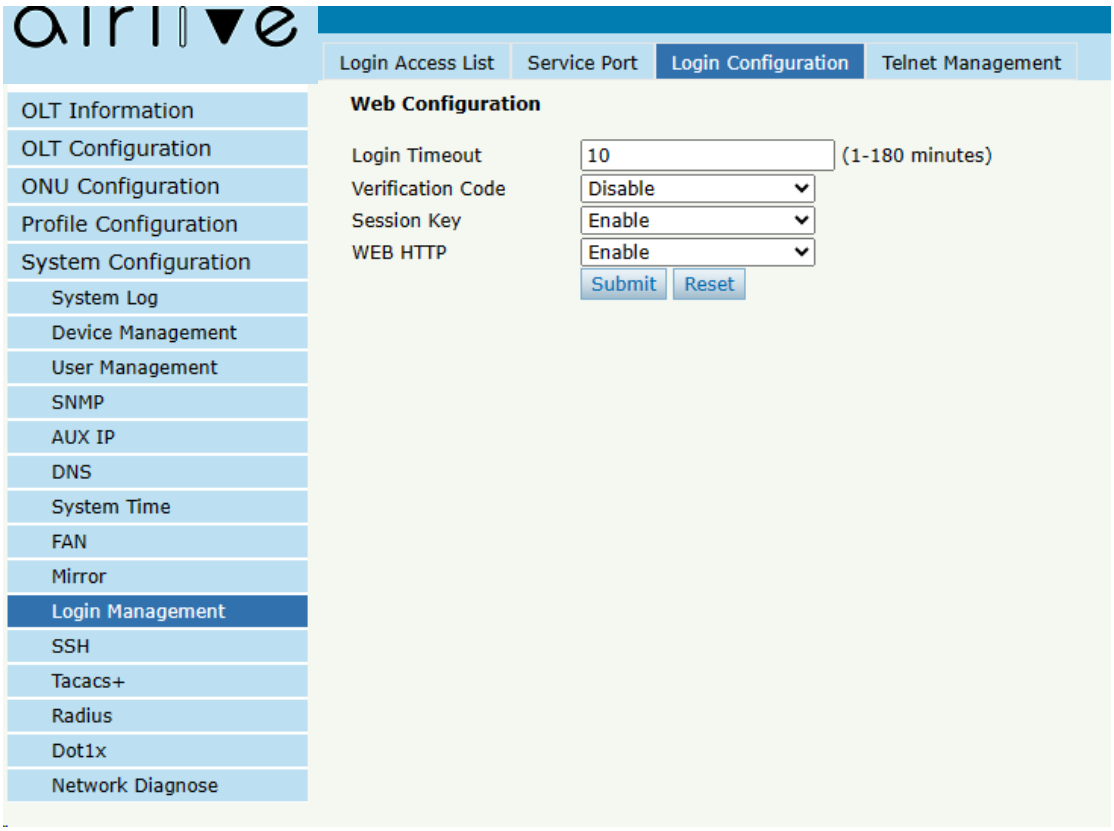



Figure 6.10-3: Login Timeout Configuration

## 6.10.4 Telnet Management

System Configuration → Login Management→ Telnet Management
Here you can see the user who telnet into OLT.

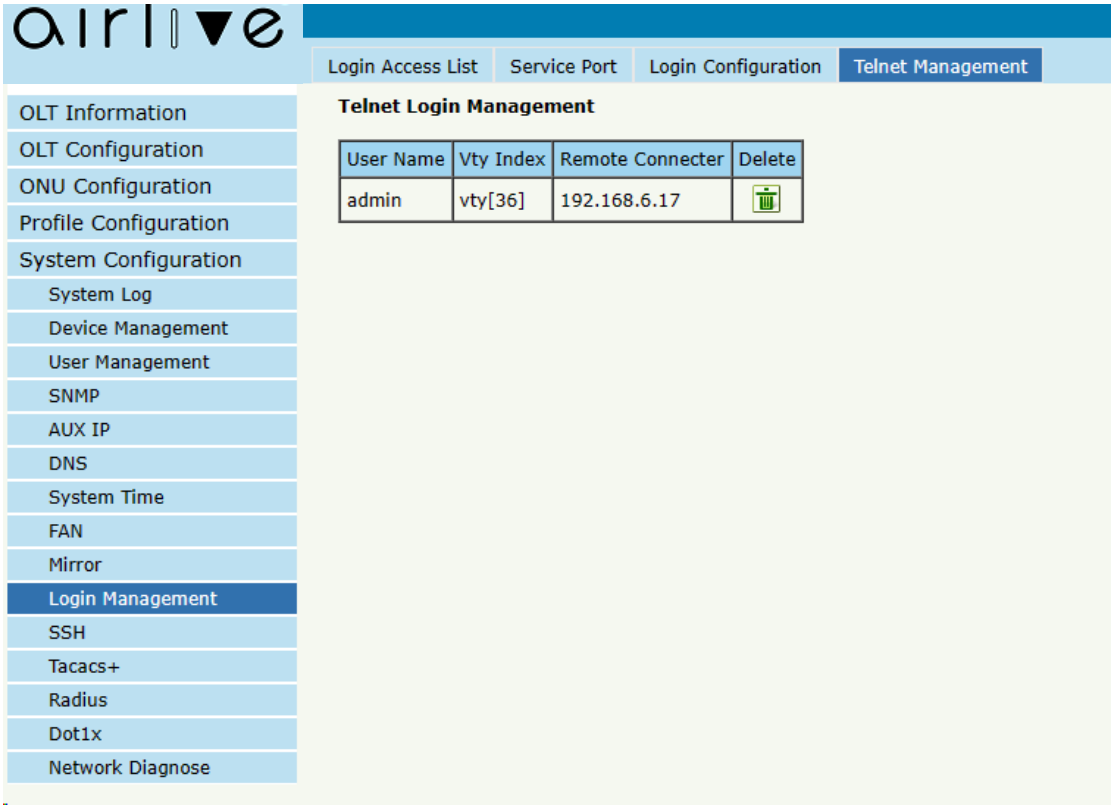



Figure 6.10-4: Telnet Management

# 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 been established by SSH protocol.

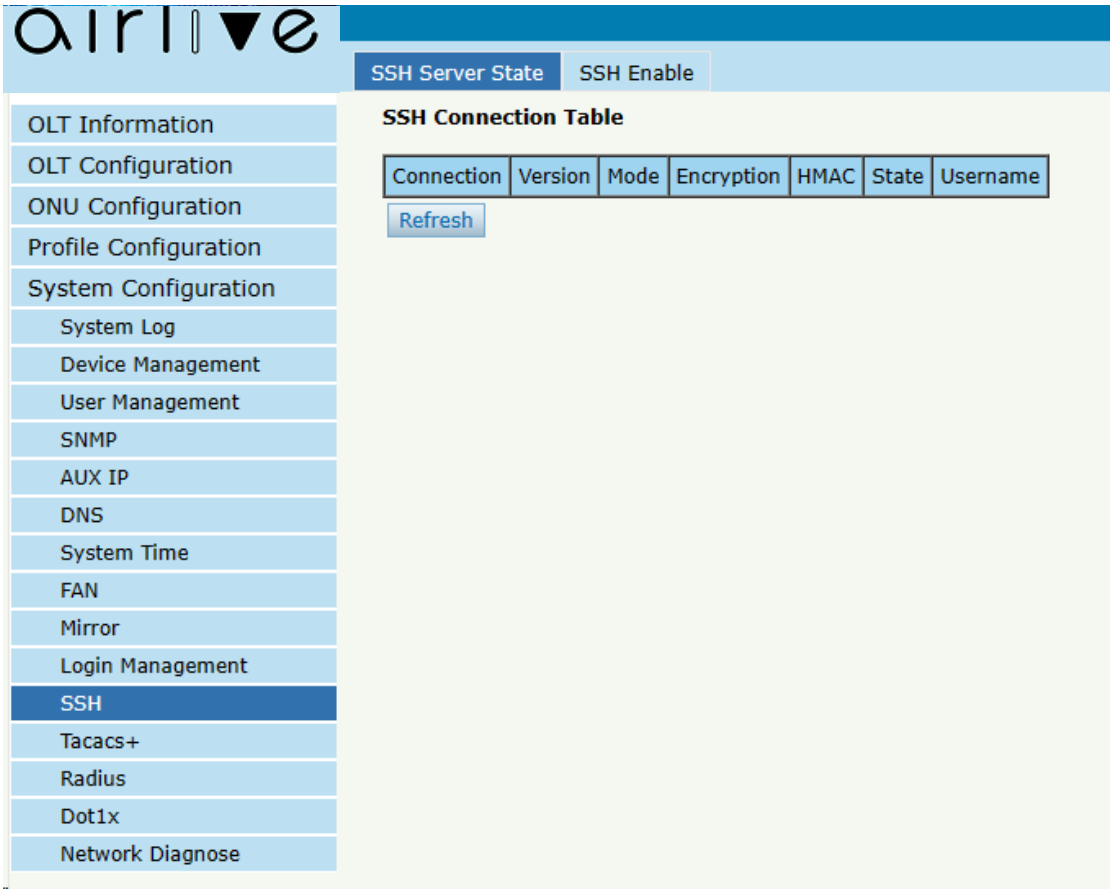



Figure 6.12-1: SSH State

## 6.11.2 SSH Enable

System Configuration → SSH→ SSH Enable
This page is used to configure SSH protocol related parameters.

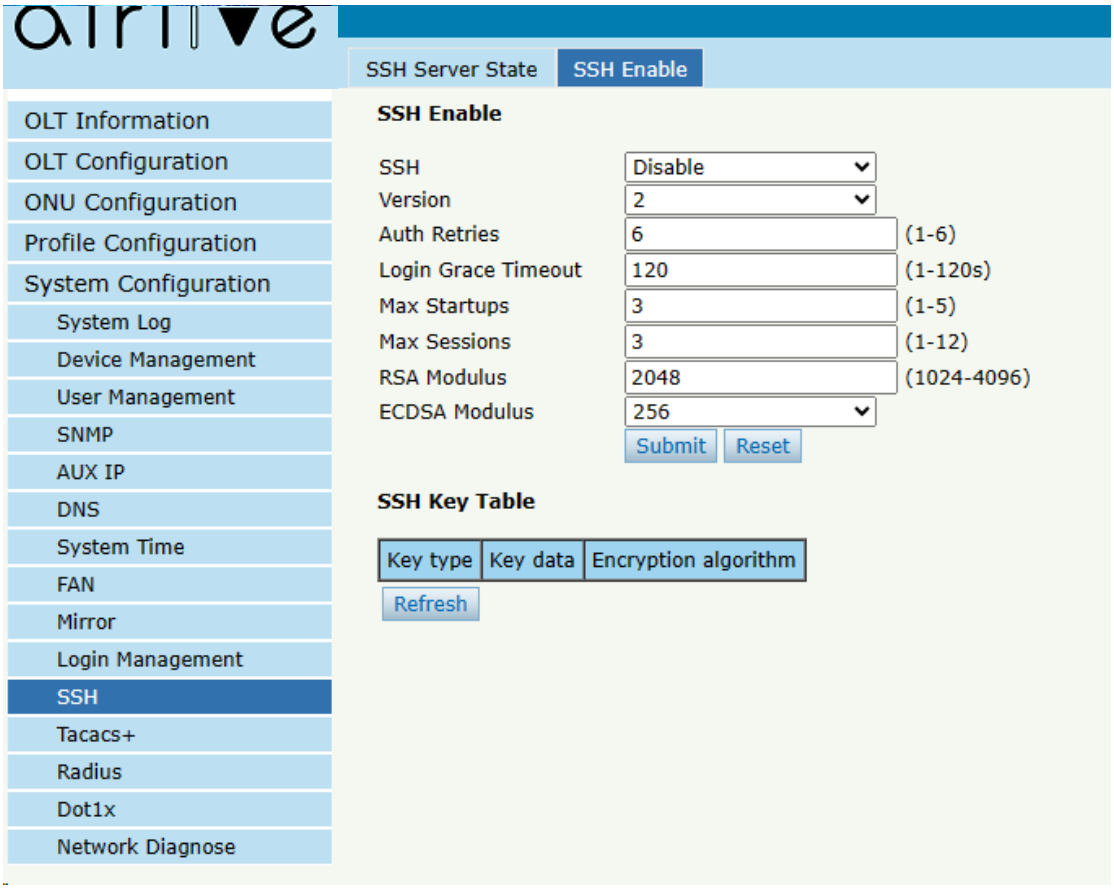



Figure 6.12-1: SSH Global Configuration

# 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.

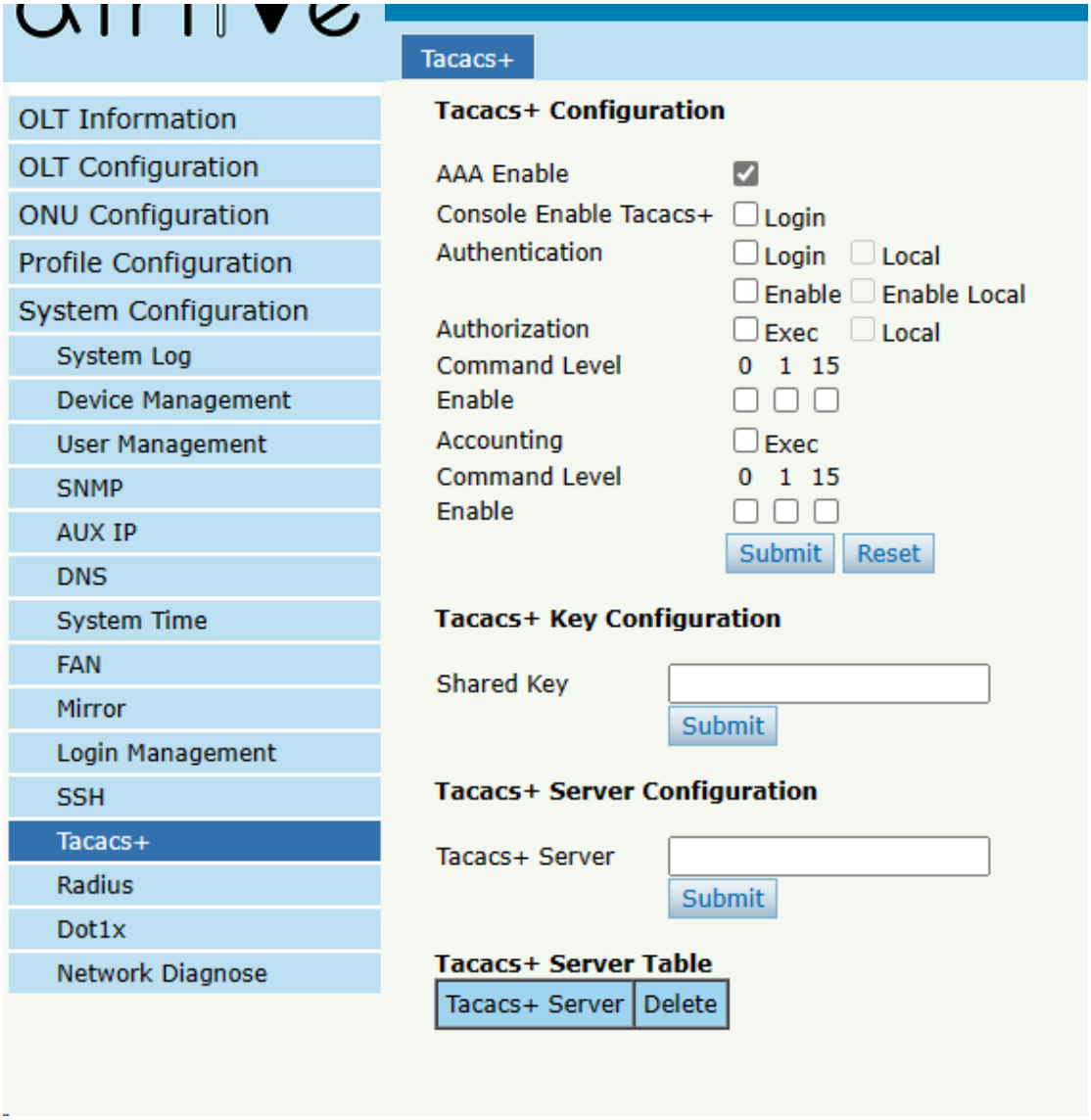



Figure 6.14-1: Tacacs+ Configuration

# 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.

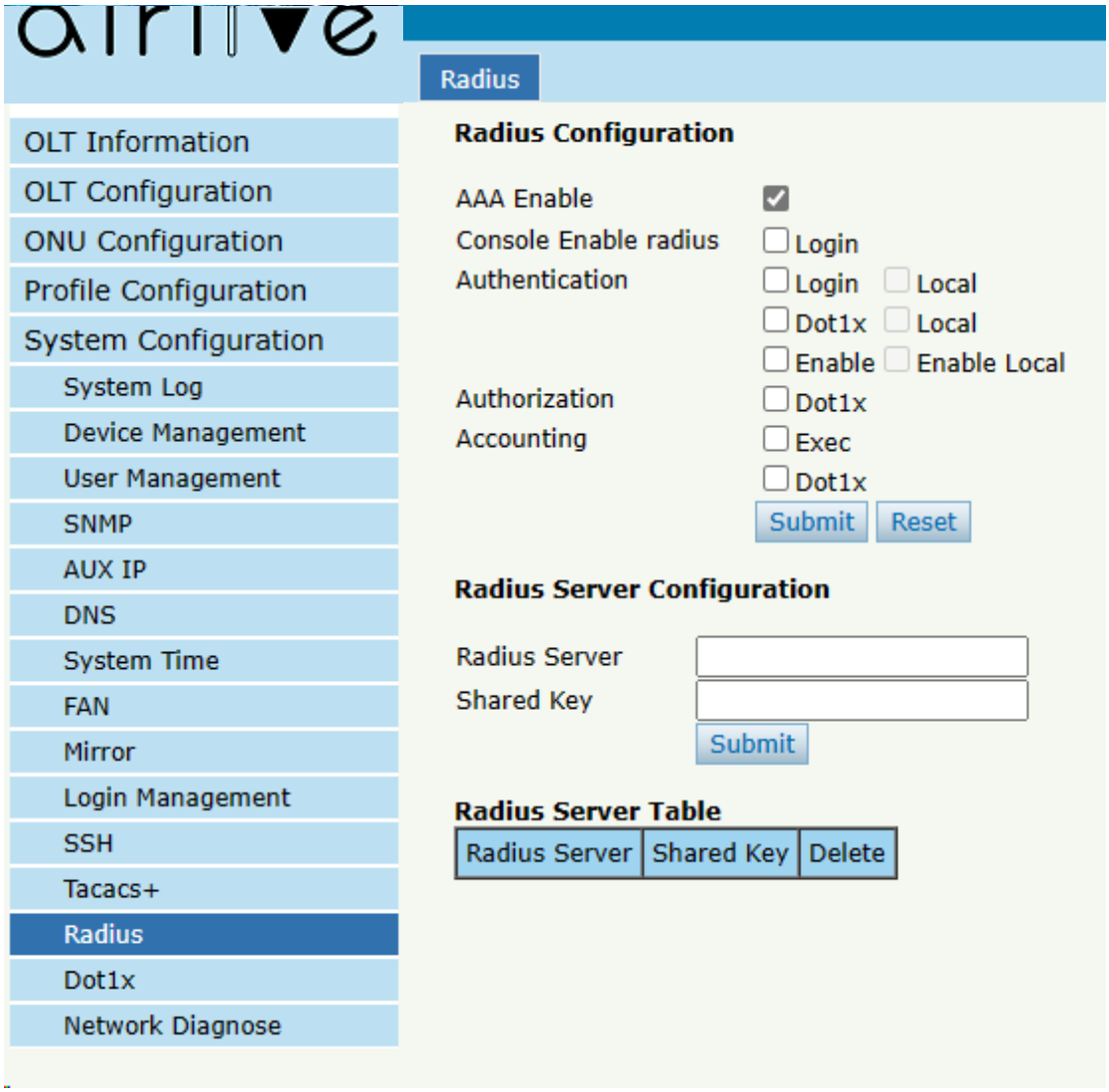



Figure 6.15-1: Radius Configuration

# 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.

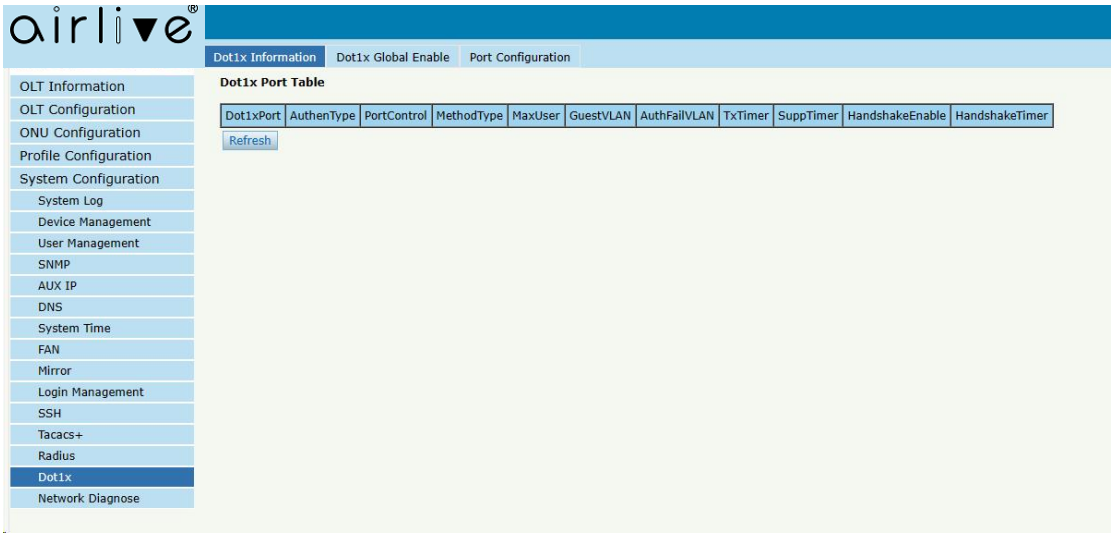



Figure 6.14-1:Dot1x Information

## 6.14.2 Dot1x Global Enable

You can enable Dot1x on this interface.

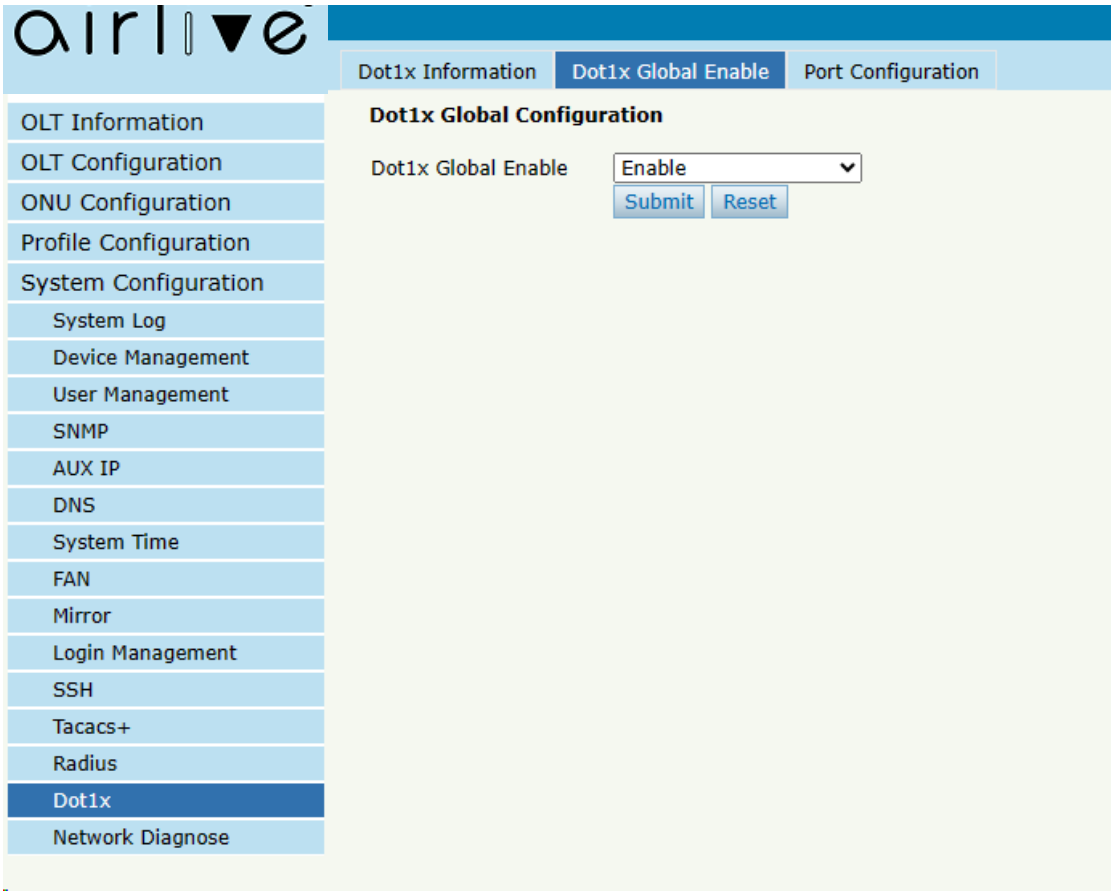



Figure 6.14-2:Dot1x Global Enable

## 6.14.3 Port Configuration

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

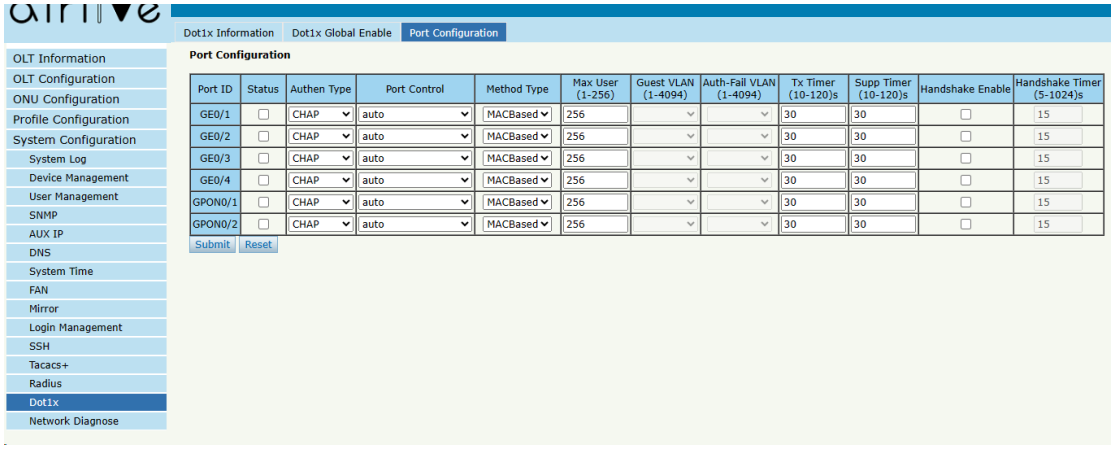



Figure 6.14-3:Port Configuration

# 6.15 Network Diagnose

## 6.15.1 Ping Diagnose

System Configuration → Diagnose→ Ping Diagnose
This interface is used to diagnose network connectivity.

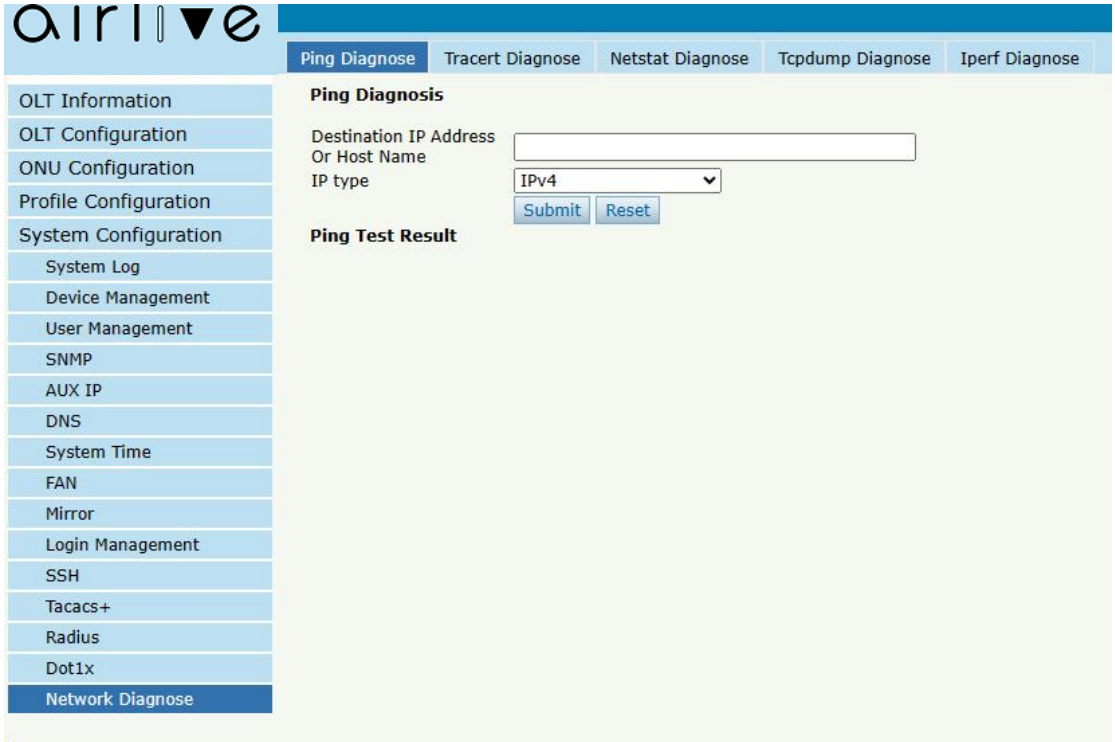



Figure 6.15-1: Ping Diagnose Configuration

## 6.15.2 Tracert Diagnose

System Configuration → Diagnose→ Tracert Diagnose
This interface is used to track and diagnose routing and forwarding.

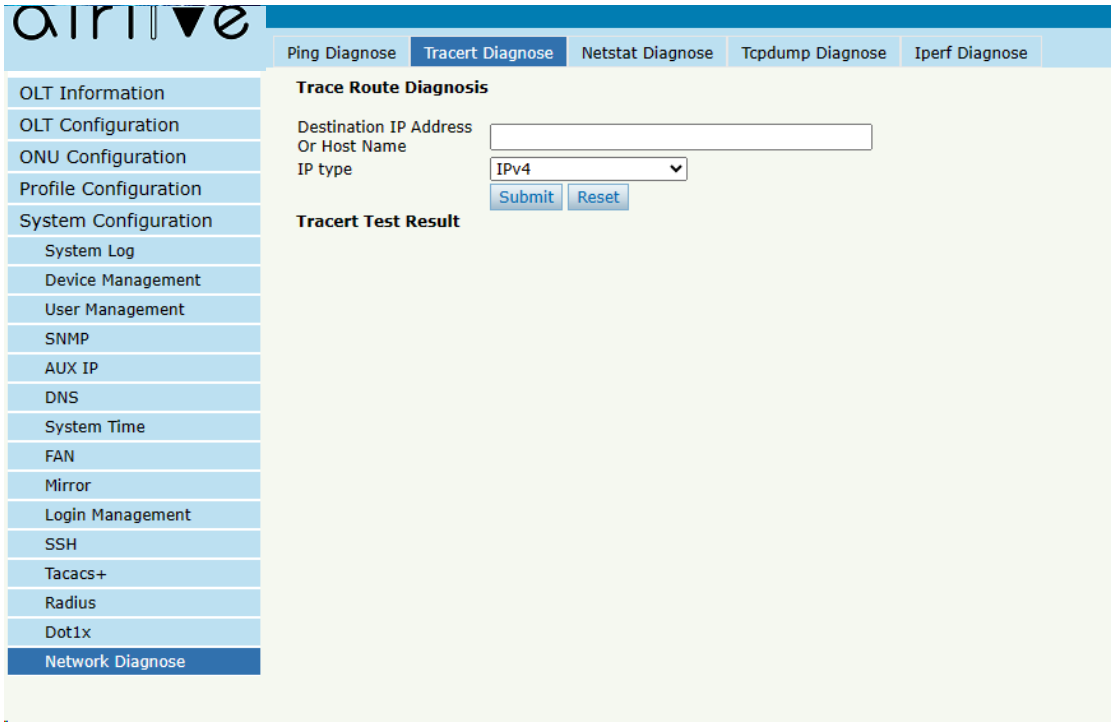



Figure 6.15-2: Tracert Diagnose Configuration

## 6.15.3 Netstat Diagnose

System Configuration → Diagnose→ Netstat Diagnose
This is a network test.

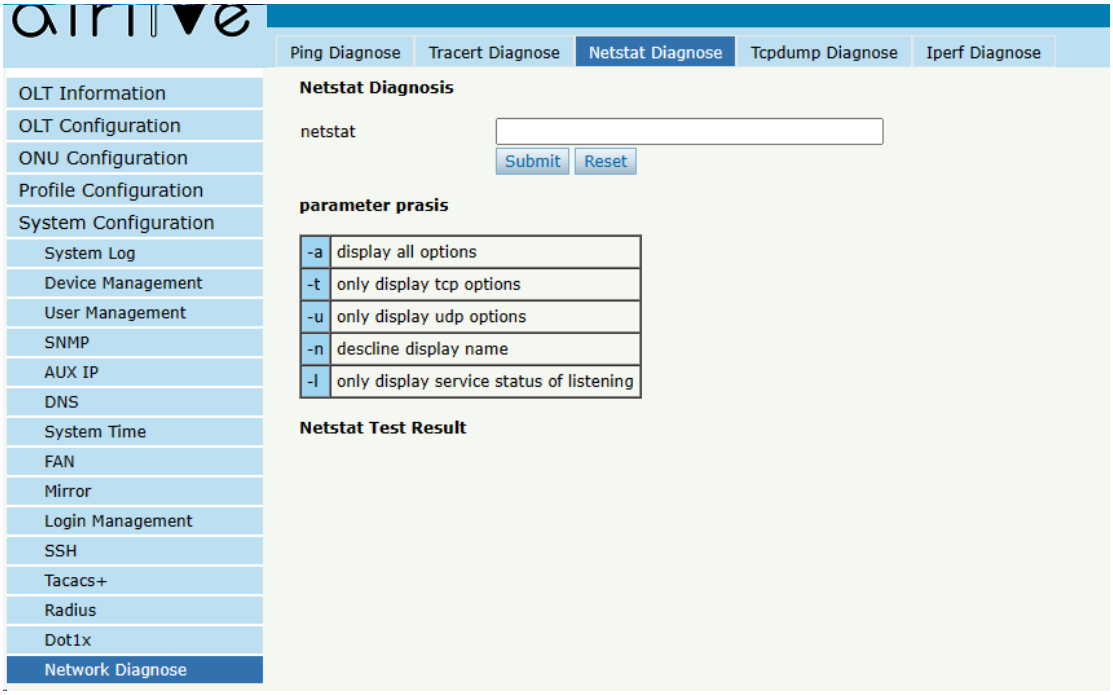



Figure 6.15-3: Netstat Diagnose Configuration

## 6.15.4 Tcpdump Diagnose

System Configuration → Diagnose→ Tcpdump Diagnose
This is the TCP link test.

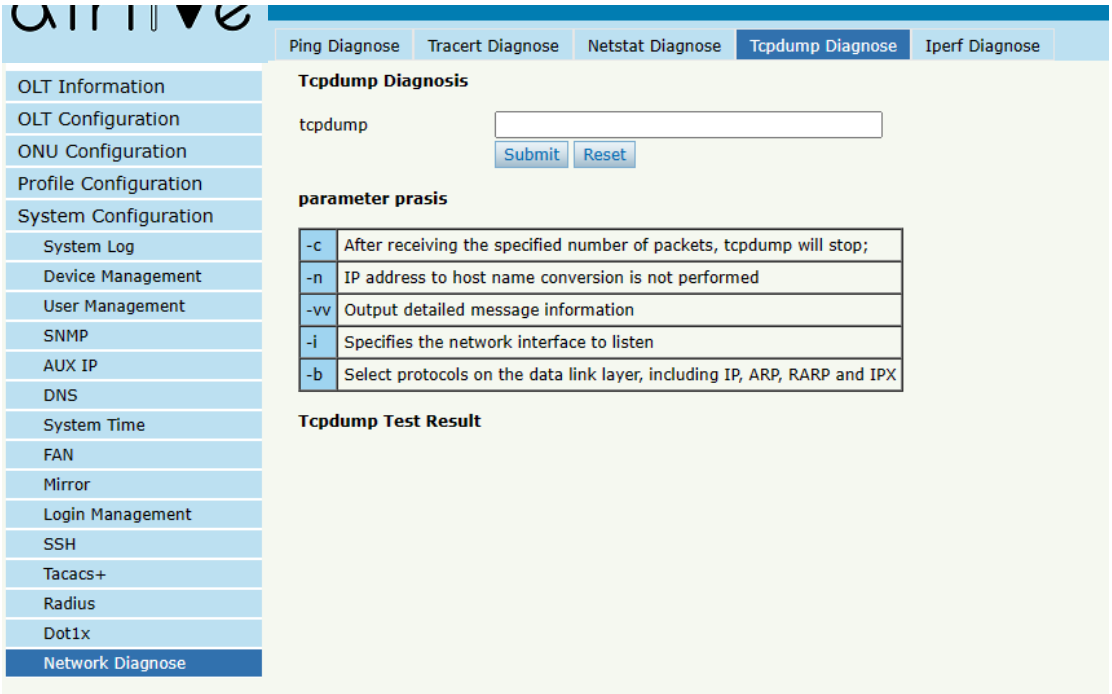



Figure 6.15-4: Tcpdump Diagnose Configuration

## 6.15.5 Iperf Diagnose

System Configuration → Diagnose→ Iperf Diagnose
This is Iperf-related testing.

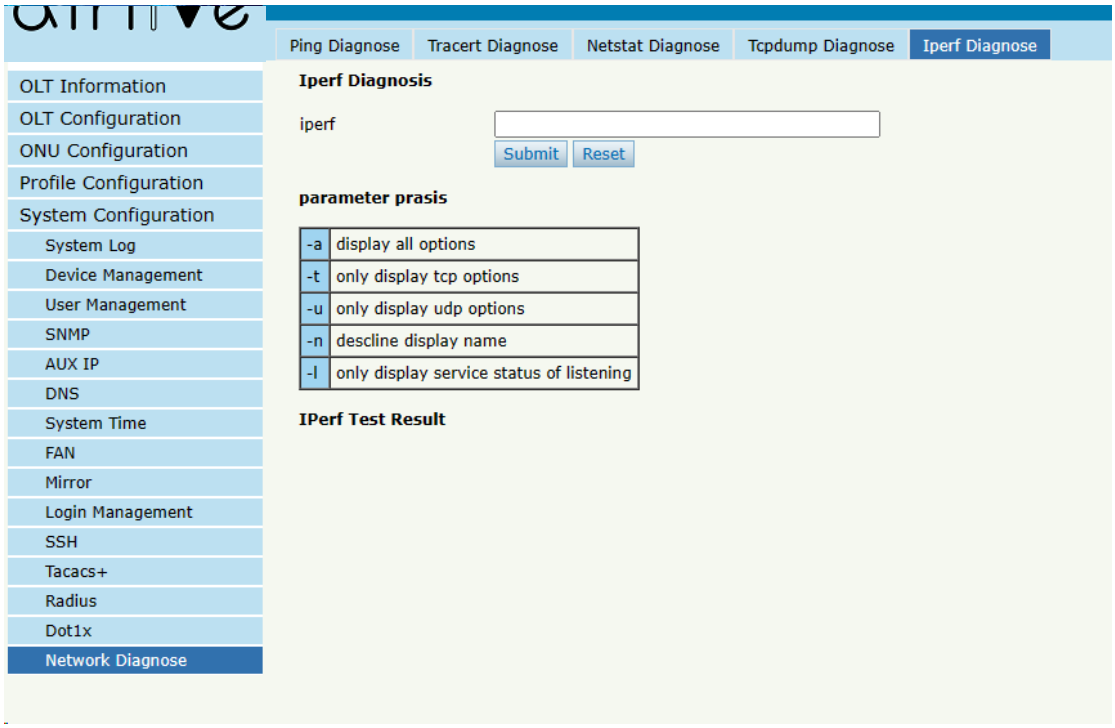



Figure 6.15-5: Iperf Diagnose Configuration