Single PON port
AirLive GPON OLT-121
WEB USER MANUAL
For Dual UI FW.



V1.0

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Chapter 1 System Description

1.1 Overview

1.1.1 OLT Introduction

The Web management user manual is for the OLT listed in Table 1-1. After you have completed installation, connection and commissioning of the equipment, you can start on configuring various services and functions for the equipment.

Table 1-1 OLT interfaces

Products		Single PON port GPON OLT
Chassis	Racks	1U
1G/10G Uplink Port	QTY	3
	Copper	2*100/1000M auto-negotiation
	SFP(Independent)	1*SFP+ (SFP+ is compatible with 10GE)
GPON Port	QTY	1
	Fiber Type	SMF
Management Mode		Console, WEB, Telnet, SSH and SNMP

1.1.2 OS Requirement

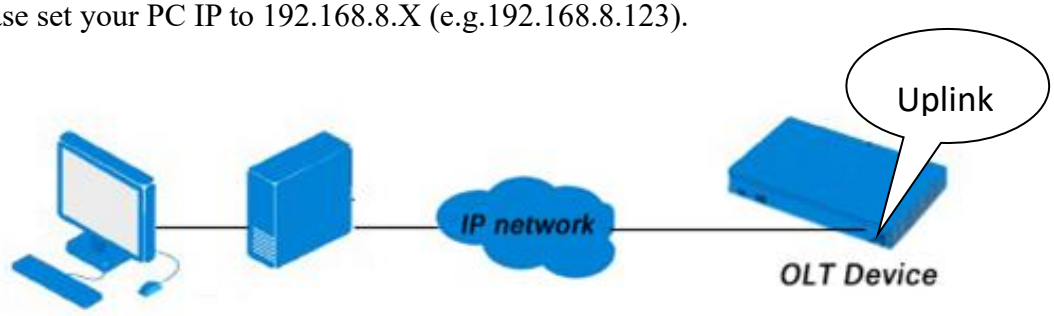
For OLT management, it supports or requires the following operation system.

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	Windows 10 Windows 11

1.2 Connection

Connect the OLT Uplink 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 Monitor

2.1 Login

Follow the steps to login:
1. Follow the step in “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. A login prompt will appear. Enter the default login User Name and Password.
The default username and password is "**admin/Xpon@Olt9417#**".

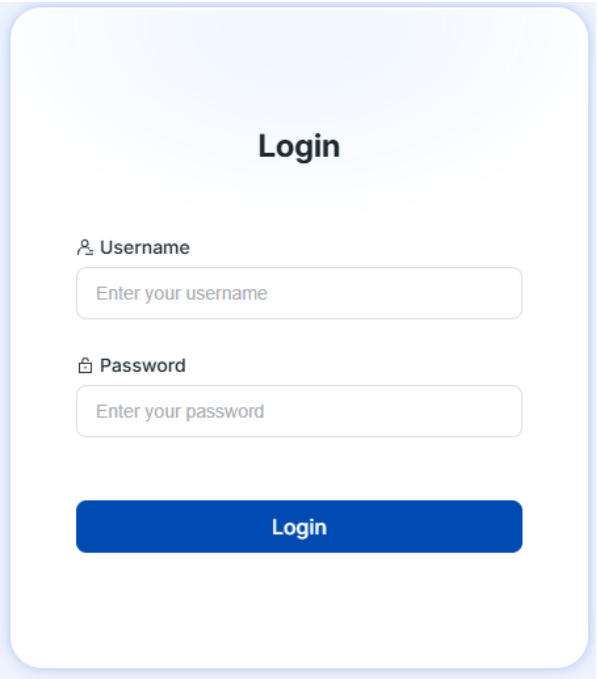


Figure 2.1-1: Login

2.2 Overview

The OLT ports connection status is shown in the top of the interface, below are port and ONU device statistics, protocol switch status, and some performance monitoring data, and the right is about the OLT basic information.
Monitor → Overview
This part allows you to view the port status, such as the number of uplink ports, PON, and ONU, and monitor some performance, such as Temperature, CPU Usage, and Memory Usage. It also 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 in need.

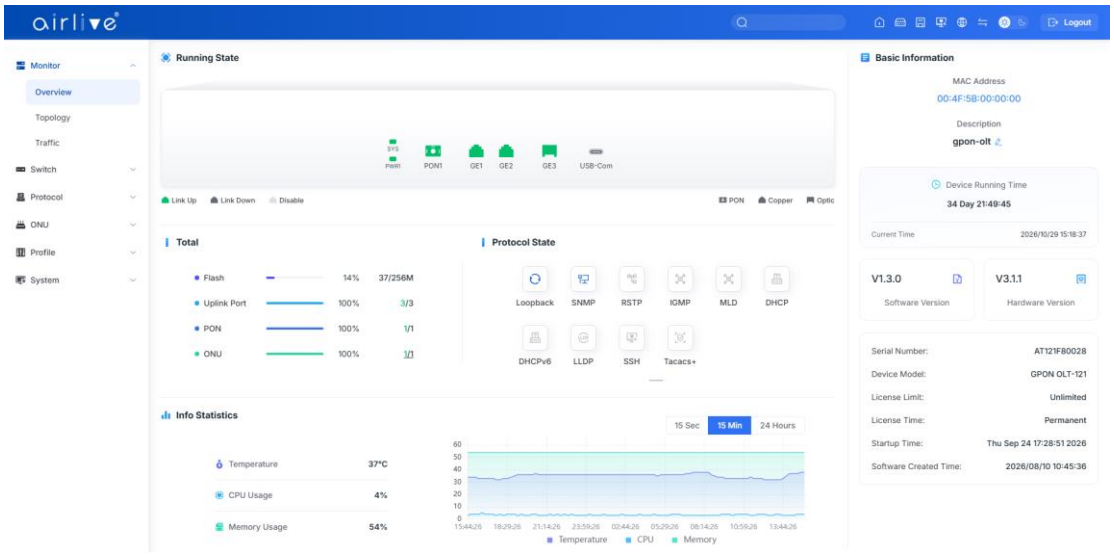


Figure 2.2-1: Overview

2.3 Traffic

The Traffic page can be used to configure traffic monitoring for OLT ports and ONU, allowing us to understand the reception and transmission of data by different ports or ONU devices over a period of time, and directly see the speed of traffic loading.

2.3.1 Port Traffic

Monitor → Traffic → Port Traffic
In this page, you can view the traffic information of all uplink ports. When Method selects Rate, you can view InOctetsRate and OutOctetsRate. When Method selects Total, you can view values such as InOctets, OutOctets, InPkts, and OutPkts. Of course, you can also view the situation of Hourly, Daily, and Monthly by modifying the Period. This page provides flexible traffic data queries.

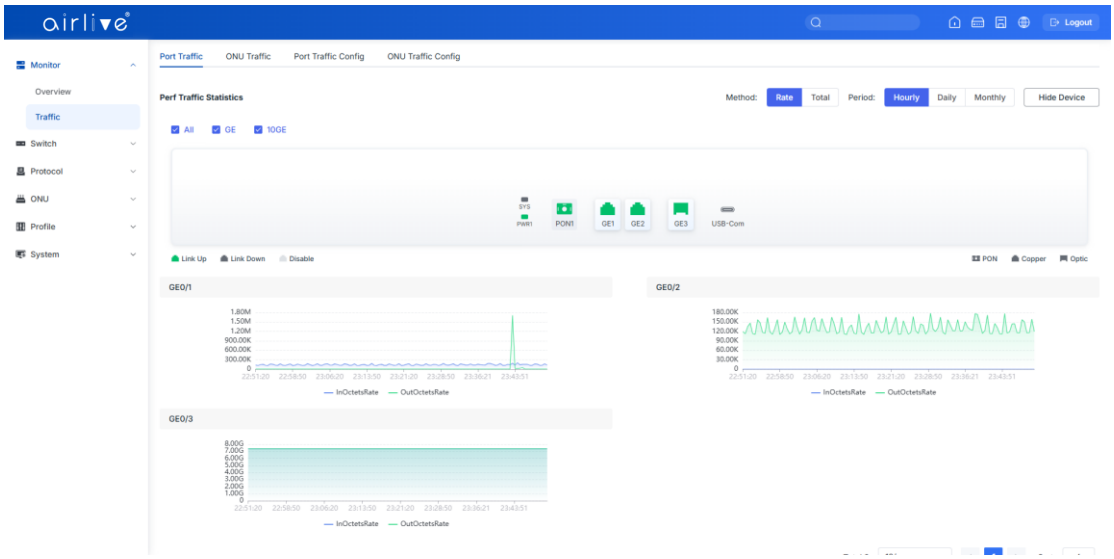


Figure 2.3-1: Port Traffic

2.3.2 ONU Traffic

Monitor → Traffic → ONU Traffic

This functions similarly to the Port Traffic page, but this page is for ONU devices under PON port. We can view the traffic data of each ONU.

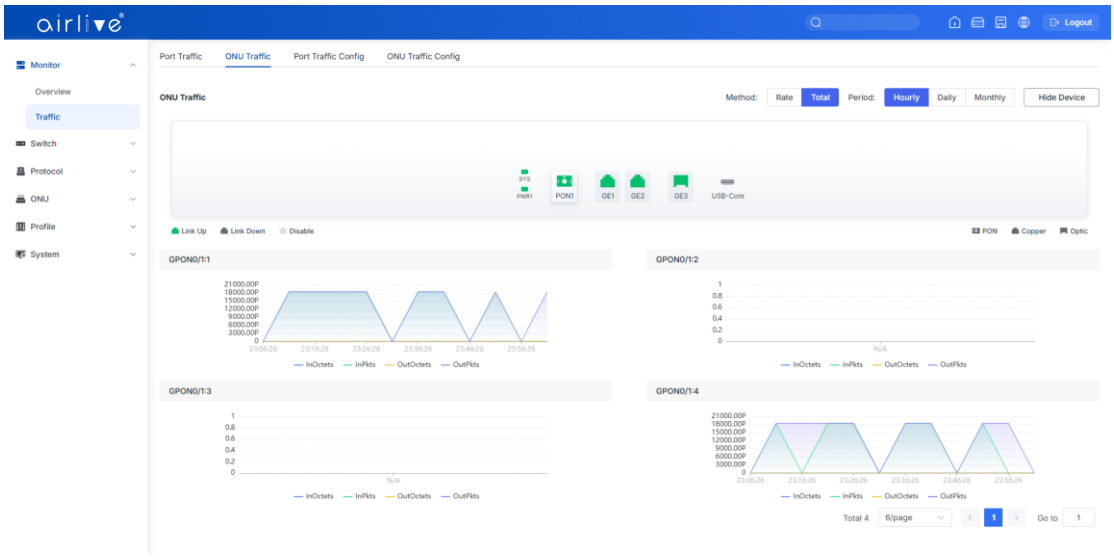


Figure 2.3-2: ONU Traffic

2.3.3 Port Traffic Config

Monitor → Traffic → Port Traffic Config

This page is used for turn enable/disable the traffic statistics function of OLT ports.

When the status is turned on, it will monitor the traffic data of the port. When it is turned off, it will stop monitoring.

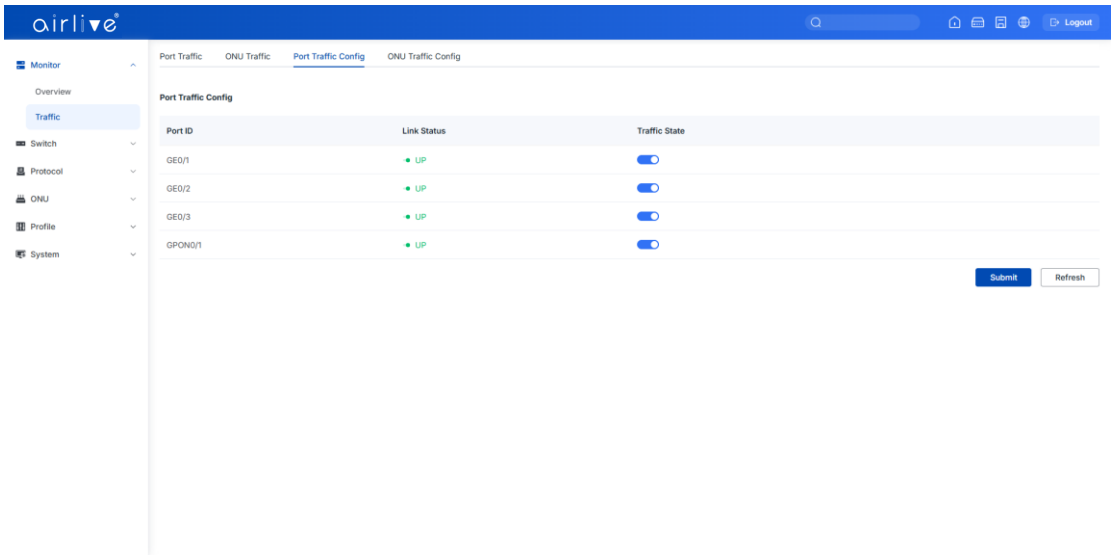


Figure 2.3-3: Port Traffic Config

2.3.4 ONU Traffic Config

Monitor → Traffic → ONU Traffic Config

This page is used for turn enable/disable the traffic statistics function of ONU. When the status is turned on, it will monitor the traffic data of the port. When it is turned off, it will stop monitoring.

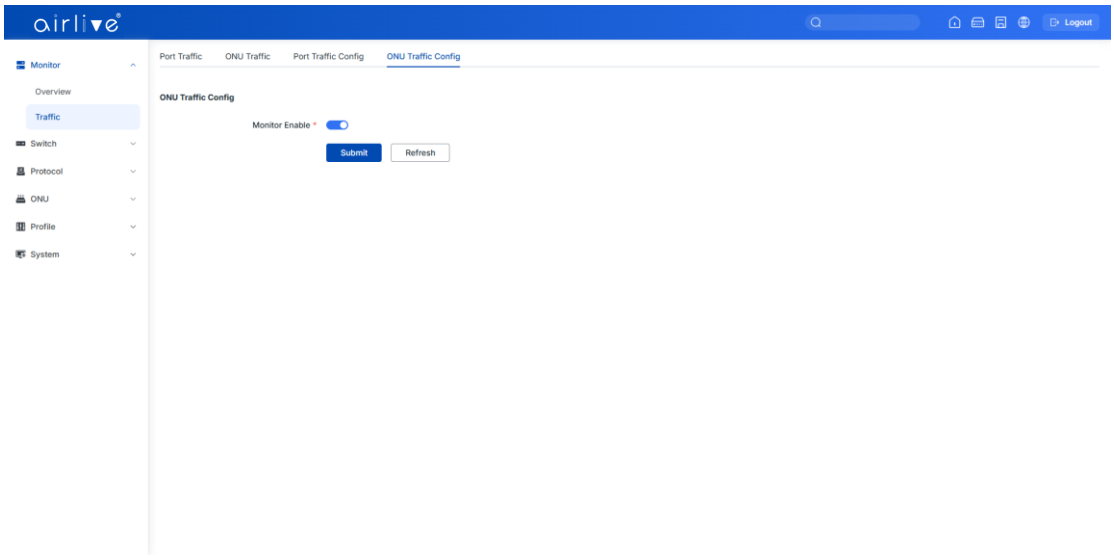


Figure 2.3-4: ONU Traffic Config

Chapter 3 Switch

3.1 VLAN

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

- Support Port-based VLAN and IEEE802.1Q VLAN.
- Support maximum 512 VLANs concurrently (VLAN range: 1-4094).

All switch ports, including uplink ports and downlink ports, support VLAN assignment and IEEE 802.1Q tagging.

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

3.1.1 VLAN

Switch → VLAN → VLAN

In this user interface, you can create new VLAN.

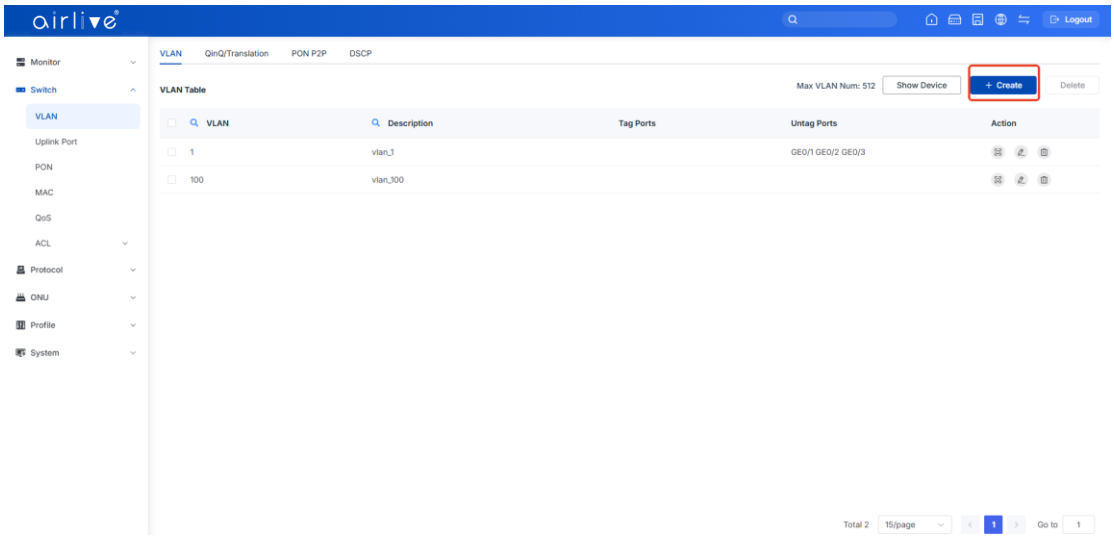


Figure 3.1-1: Create New VLAN

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

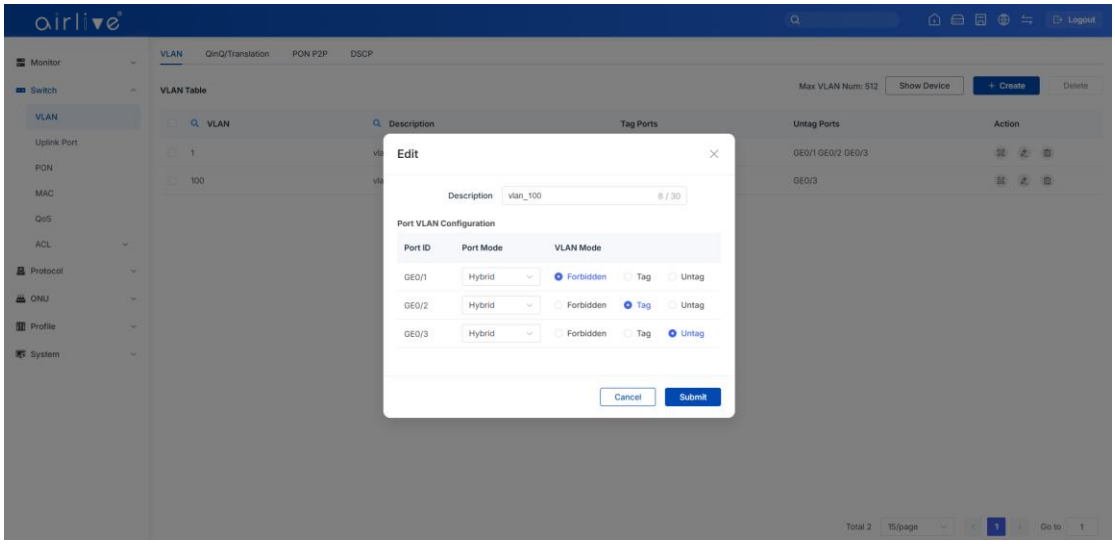


Figure 3.1-2: Add VLAN Port

3.1.2 QinQ/Translation

Switch → VLAN → QinQ/Translation

In this page, VLAN QinQ and VLAN translation can be configured. VLAN QinQ and translation are applied to the incoming direction of port traffic.

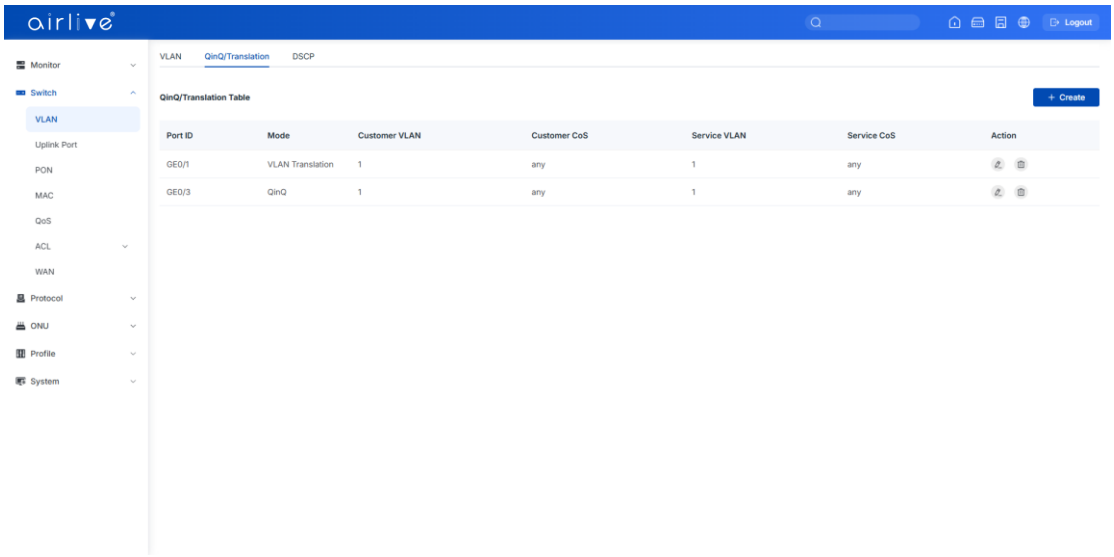


Figure 3.1-3: VLAN QinQ/Translation

As shown in Figure 3.1-4, VLAN 100 of the data traffic will be replaced by VLAN 200 when they are received by the GE1 port.

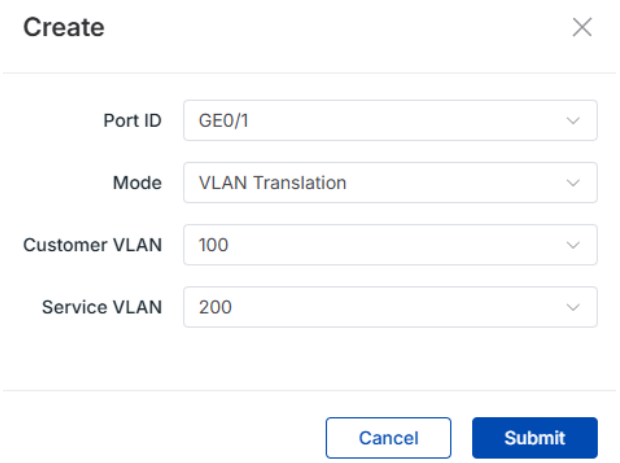


Figure 3.1-4: Create VLAN QinQ/Translation rule

3.1.3 PON P2P

Switch → VLAN → PON P2P

After a specified VLAN is added on the PON P2P interface, ONUs configured with this VLAN under the OLT PON port can access each other.

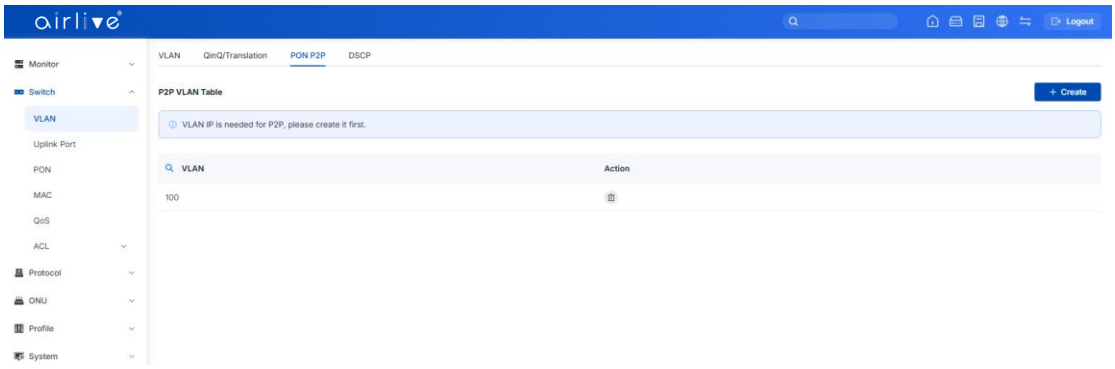


Figure 3.1-5: PON P2P

3.1.4 DSCP

Switch → VLAN → DSCP

In this page, you can manually configure the DSCP value of IP packets, set the DSCP mapping to a new DSCP, and support the configuration of IP DSCP mapping VLAN priority.

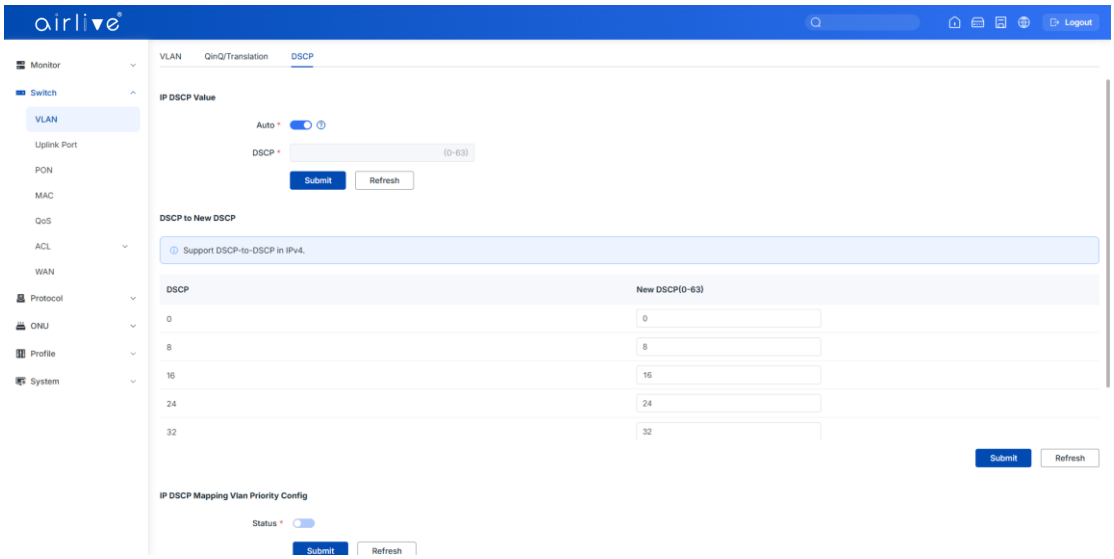


Figure 3.1-6: DSCP Configuration

3.2 Uplink Port

Uplink ports traffic statistics and basic configuration setting.

3.2.1 Traffic Statistics

Switch → Uplink Port → Traffic Statistics
This page displays traffic statistics of Uplink ports.

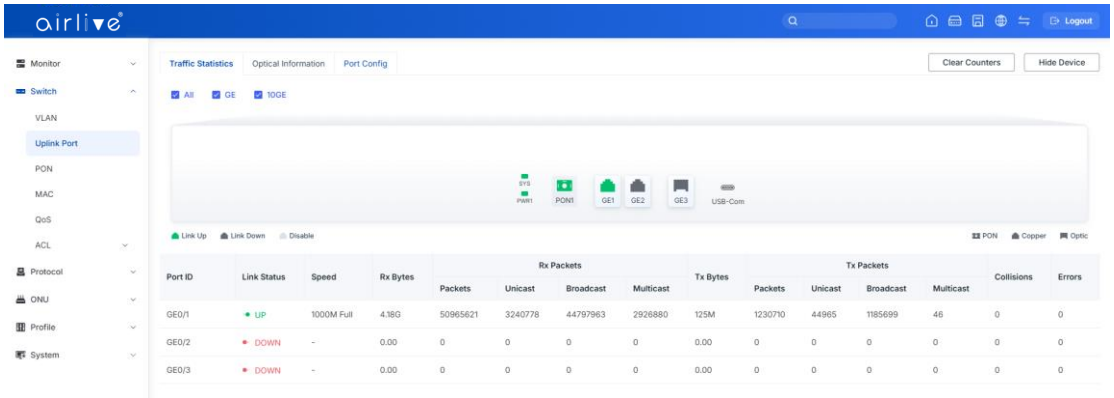


Figure 3.2-1: Uplink Ports Traffic Statistics

3.2.2 Optical Information

Switch → Uplink Port → Optical Information
This page can be used to view the optical port temperature, voltage, current,

transmitted and received optical power and other parameters.

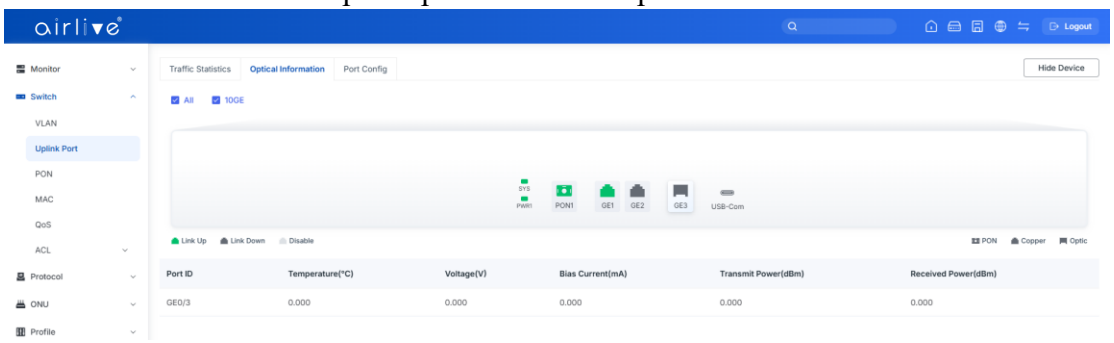


Figure 3.2-2: Optical Information

3.2.3 Port Config

Switch → Uplink Port → Port Config

This user interface is used to configure port related functions and characteristic parameters of Uplink port, such as port attributes, PVID, flow control, rate limit, storm suppression and so on.

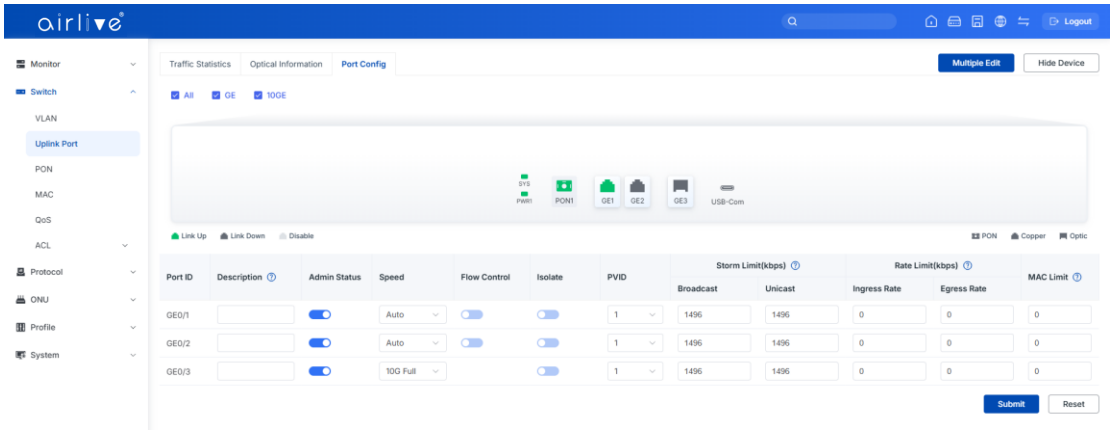


Figure 3.2-3: Port Config

Parameter descriptions:

Parameters	Descriptions
Port ID	GE port has two types, RJ45 (GE1 and GE2) and SFP+ (GE3).
Description	Descriptions or remarks of port.
Admin Status	Active or inactive status of port. It is enabled by default.
Speed	Configuring Port Rate.
Isolate	When enabled, the port cannot communicate with other ports which are also enabled for isolation.
Flow Control	Enable or disable flow control function of uplink port to

	control congestion. It is disabled by default.
PVID	Default VLAN ID of the port.
Broadcast	Broadcast storm suppression.
Unknown Unicast	Unknown unicast storm suppression.
Ingress Rate	Limit the ingress traffic rate of the port.
Egress Rate	Limit the egress traffic rate of the port.
MAC limit	Number of MAC address can be learnt in the port.

3.3 PON

PON ports traffic statistics and basic configuration setting.

3.3.1 Information & Config

3.3.1.1 Traffic Statistics

Switch → PON → Information & Config → Traffic Statistics
This user interface displays traffic statistics of PON ports.

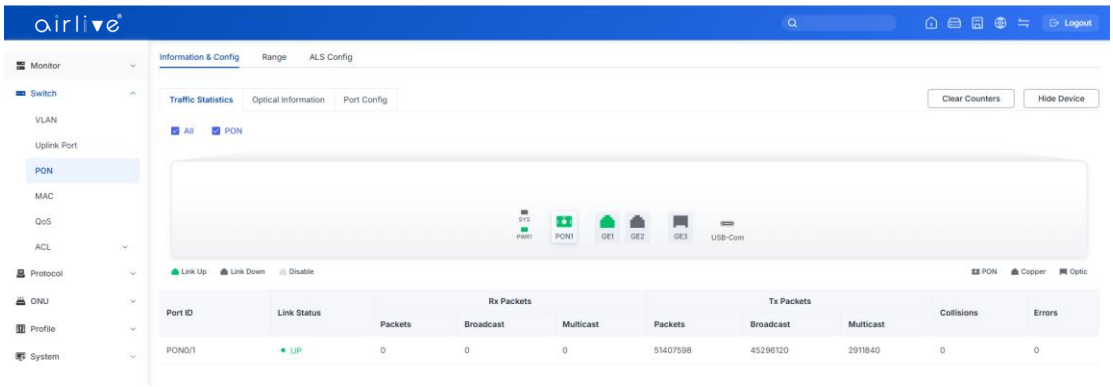


Figure 3.3-1: Traffic Statistics

3.3.1.2 Optical Information

Switch → PON → Information & Config → Optical Information
This user interface is used to display parameters of PON ports, such as PON module Temperature, Voltage, Bias Current, Transmit Power.

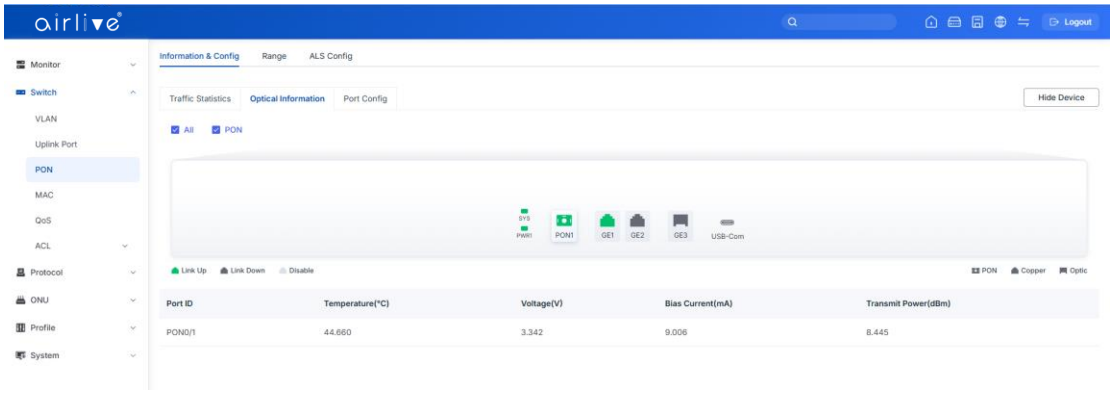


Figure 3.3-2: Optical Information

3.3.1.3 Port Config

Switch → PON → Information & Config → Port Config

This page is used to configure functions and characteristic parameters of the PON port, such as port attributes, storm suppression, and rate limiting.

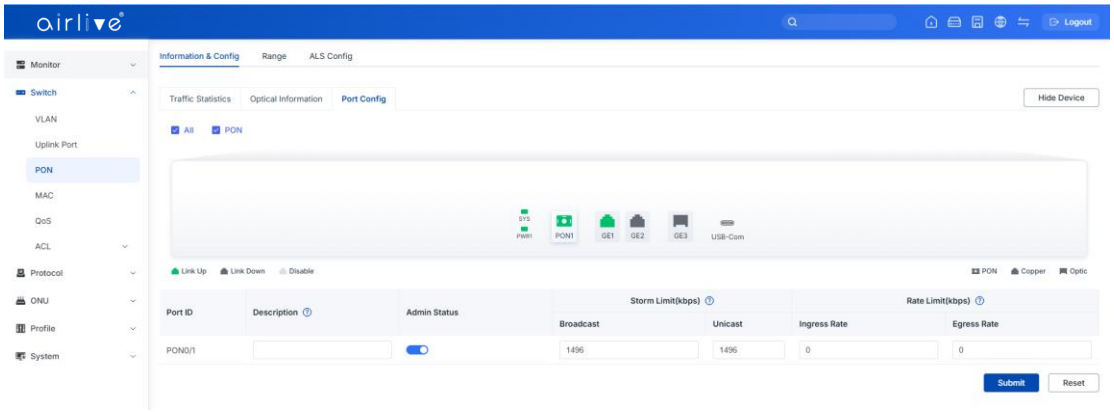


Figure 3.3-3: Port Config

3.3.2 PON Range Config

Switch → PON → Range

This interface is used to configure the ONU registration range; only ONUs whose ranging results fall within this range can register properly.

The unit is 100m, The default range is 0 to 200. Please configure based on the actual deployed fiber distance to avoid unauthorized ONUs being unable to register due to exceeding the range.

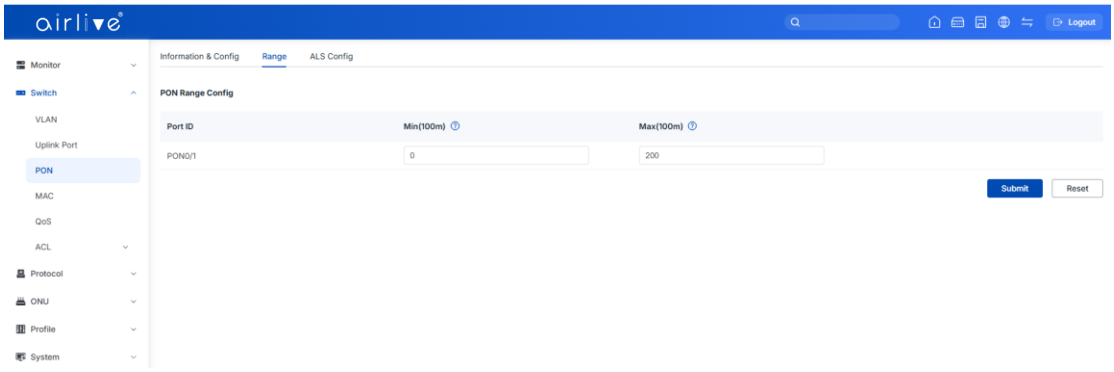


Figure 3.3-4: PON Range Config

3.3.3 ALS Config

Switch → PON → ALS Config

This page is used to configure port status. When the function is turned on and "PON LOS" is detected, the laser will be turned off. If the restart mode is "auto", set the number of cycles to turn on the laser and the duration for how many seconds. If an ONU is found during the turning on of the laser, keep the laser on until the "PON LOS" signal is received again.

If it is in "manual" mode, after turning off the laser, it needs to be manually restarted using the "no shutdown" command.

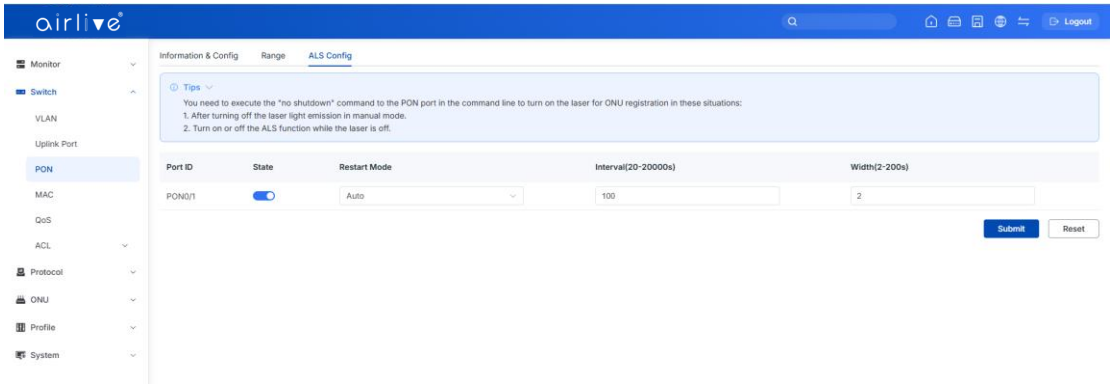


Figure 3.3-5: ALS Config

3.4 MAC

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

3.4.1 MAC Table

Switch → MAC → MAC Table

This table displays MAC addresses that OLT has learned at PON ports and GE ports. Also, user can add MAC address to the OLT manually.

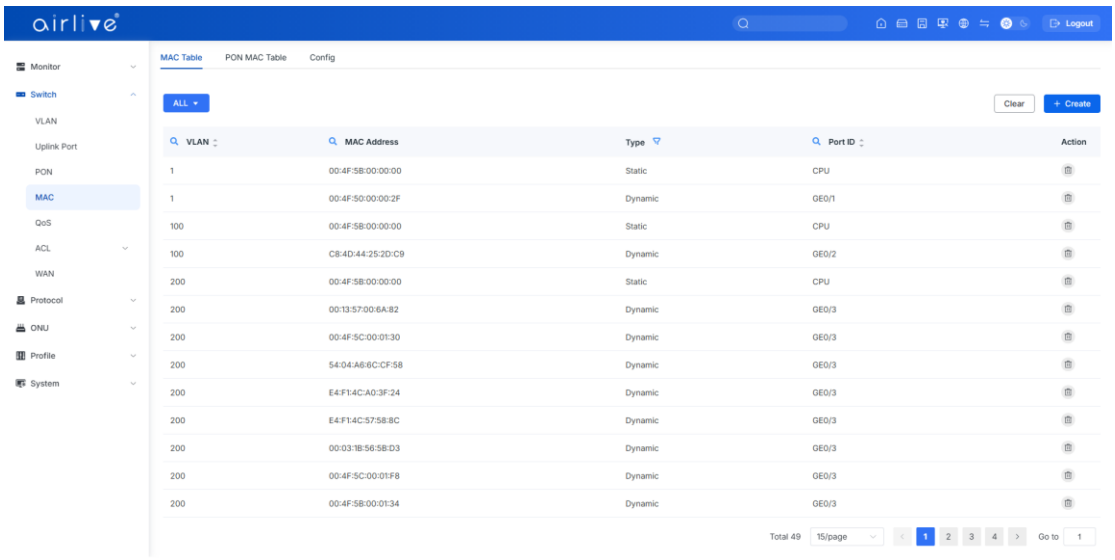


Figure 3.4-1: MAC Address Table

3.4.2 PON MAC Table

Switch → MAC → PON MAC Table

This table displays MAC addresses that OLT has learned at PON ports.

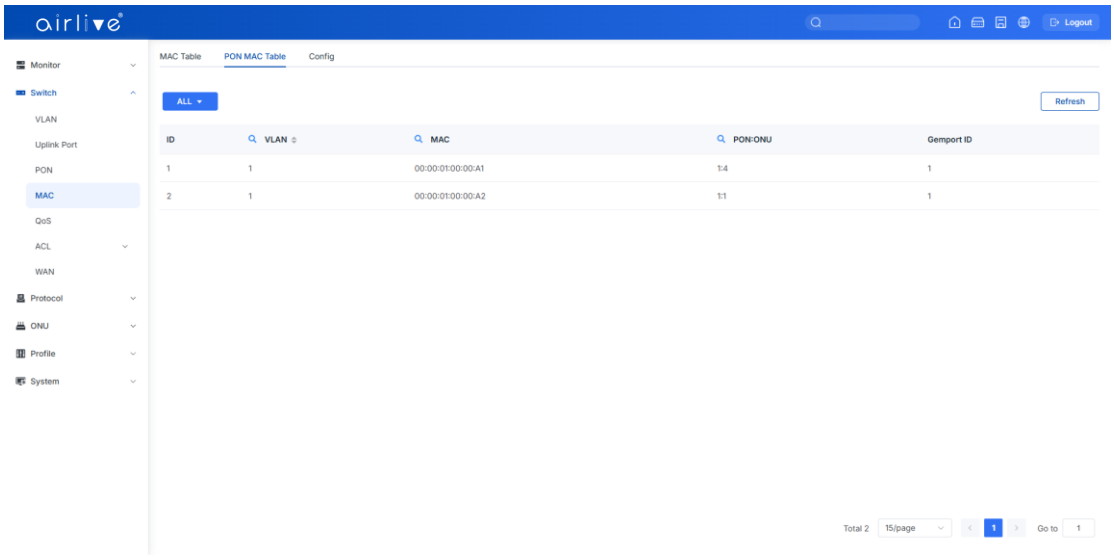


Figure 3.4-2: PON MAC Table

3.4.3 Config

Switch → MAC → Config

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

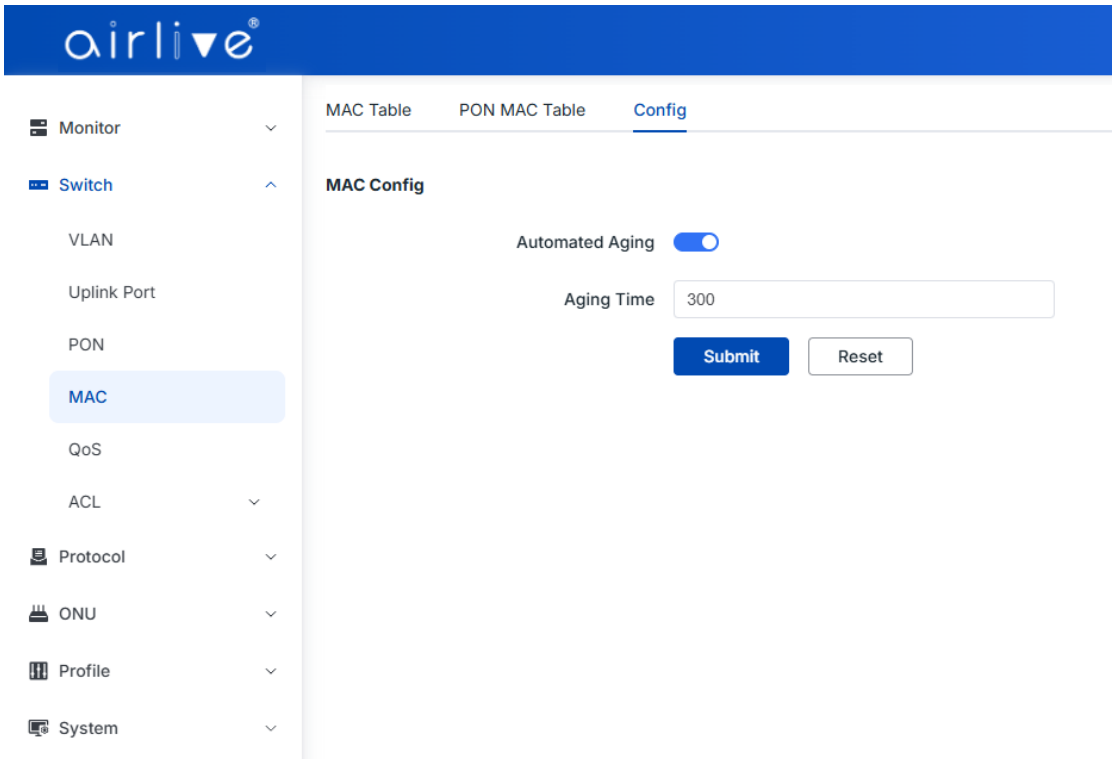


Figure 3.4-3: MAC Config

3.5 QoS

Switch → QoS

When bandwidth is insufficient or there is congestion in the network, queue scheduling can ensure that high priority data traffic passes through the device first. Traffic will be mapped to the queue based on its priority and transmitted within the queue.

OLT supports a total of 4 queues. The queue scheduling modes include Strict Priority (SP), Weighted Round Robin(WRR).

Strict priority scheduling ensures the bandwidth occupied by high priority traffic. Traffic with lower priority will only pass through when there is remaining bandwidth. Q1 is the highest-priority queue.The data streams in the same queue have the same forwarding priority.

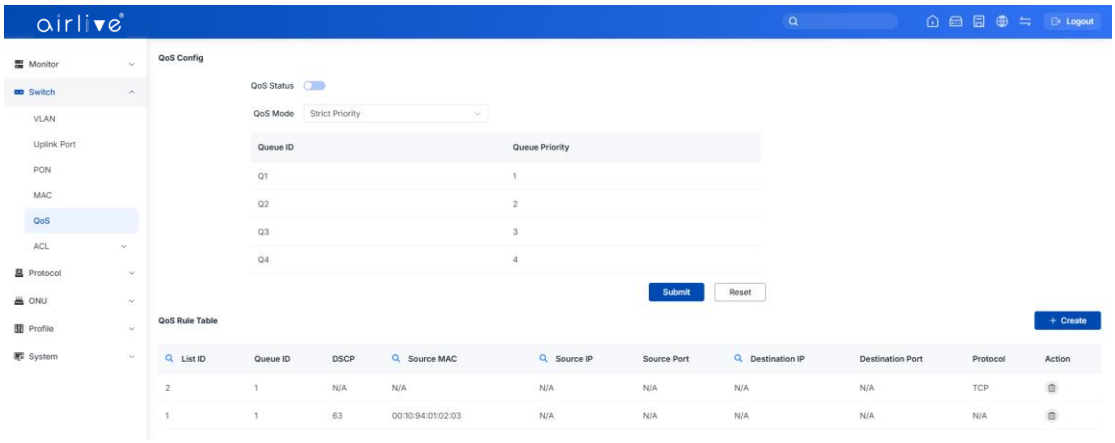


Figure 3.5-1: QoS Configuration

3.6 ACL

3.6.1 ACL IPv4

In order to filter packets, network devices need to set a series of rules to determine the content that needs to be filtered. These packets can only be filtered if they match the rules. Access control lists can achieve this function. The matching criteria for access control list rules can be source address, destination address, Ethernet type, VLAN, protocol port, etc. These access control list rules can also be used in other situations, such as the classification of flows in quality of service. Access control list rules can contain one or more sub rules with different matching conditions.
This device supports the following types of access control lists.

3.6.1.1 IP/MAC Filter

Switch → ACL → ACL IPv4 → IP/MAC Filter
The filter is mainly based on IP/MAC addresses, including source IP address and destination IP address, source MAC address and destination MAC address.

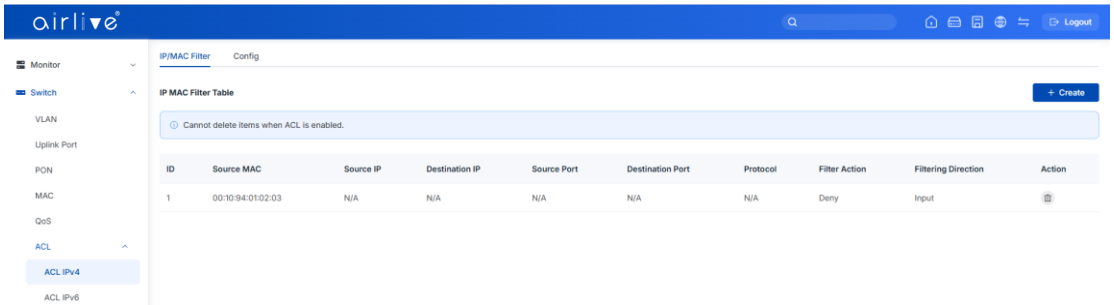


Figure 3.6-1: IP/MAC Filter

3.6.1.2 Config

Switch → ACL → ACL IPv4 → Config
The main configuration controls the access list status and effective period.

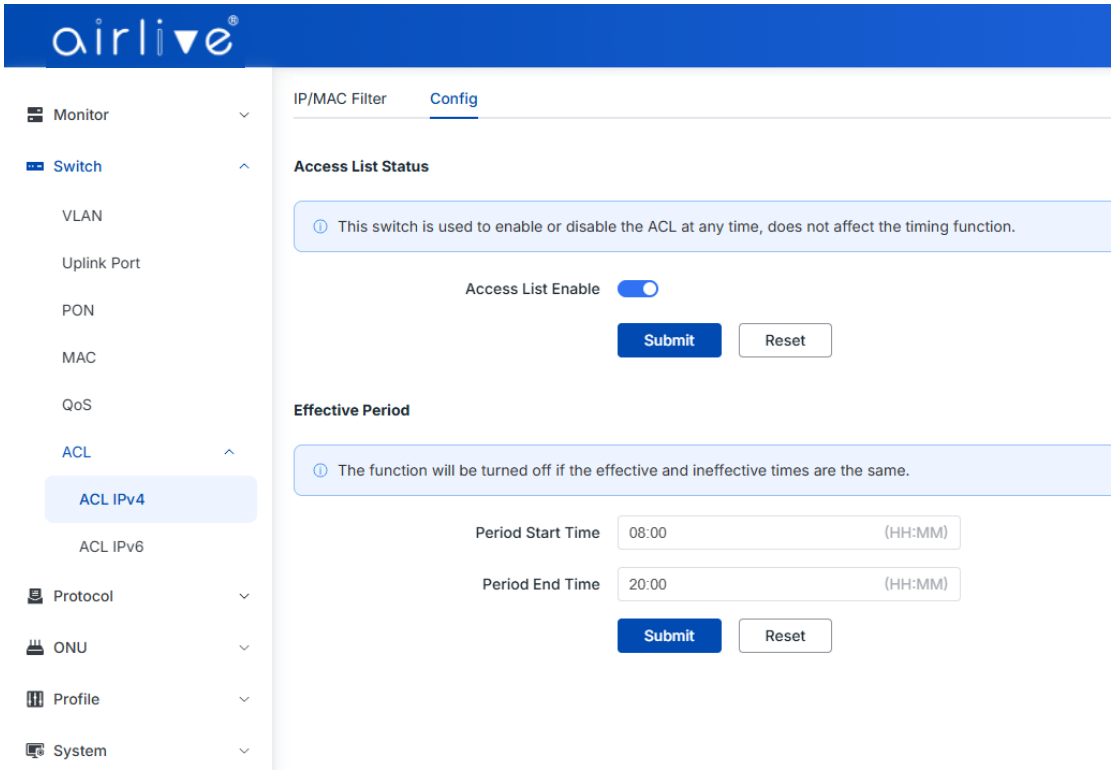


Figure 3.6-2: ACL IPv4 Config

3.6.2 ACL IPv6

This section is about the IPv6 security configuration of OLT. IPv6 access control lists can allow or deny data transmission or access through IPv6 packets.

3.6.2.1 IPv6/MAC Filter

Switch → ACL → ACL IPv6 → IPv6/MAC Filter
The filter is mainly based on IPv6/MAC addresses, including source and destination IPv6 addresses, as well as source and destination MAC addresses.

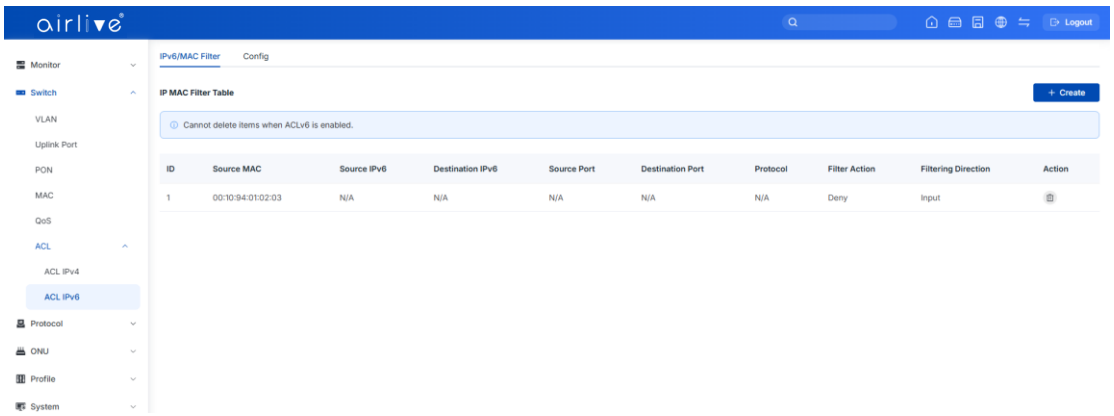


Figure 3.6-3: IPv6/MAC Filter

3.6.2.2 Config

Switch → ACL → ACL IPv6 → Config
The main configuration controls the access list status and effective period.

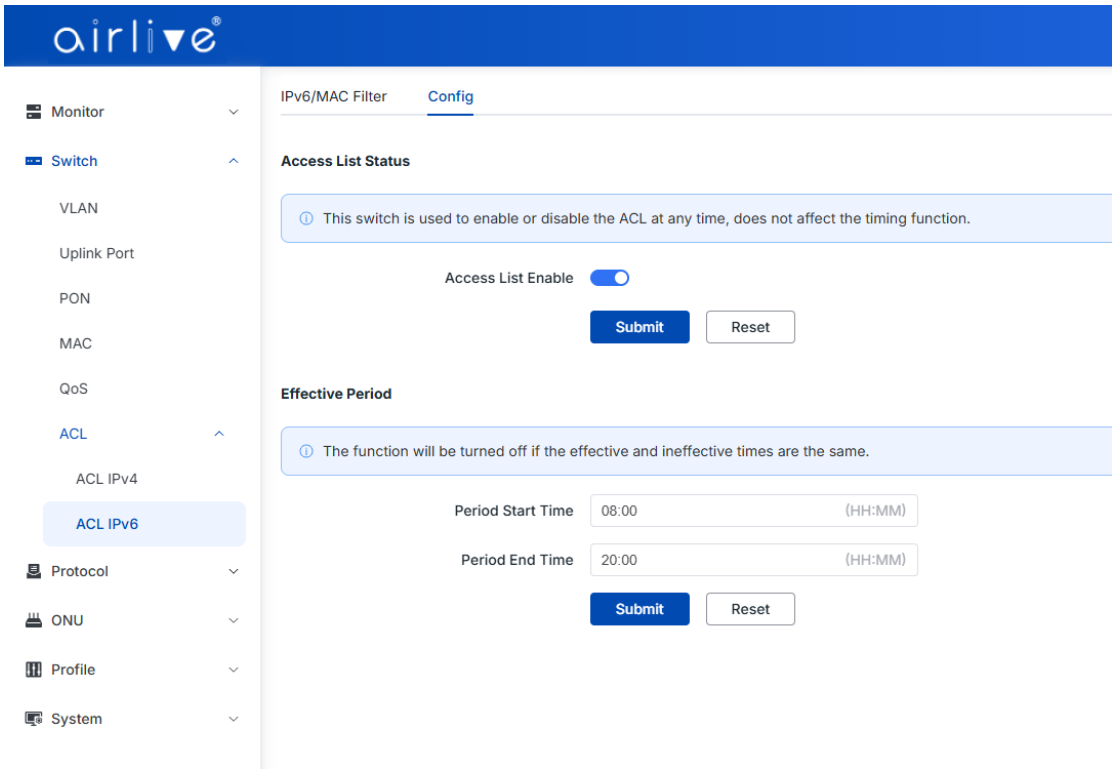


Figure 3.6-4: ACL IPv6 Config

3.7 WAN

This function is used to set the OLT working mode to layer 3, which can be used as a router, with GE3 as the WAN side, PON, GE1, and GE2 as the LAN side. The OLT can perform DHCP, PPPOE, and static IP upstream for internet access.
Caution: Enabling the WAN routing mode will re-purpose GE1 and GE2 from uplink

ports to LAN-side ports. Please ensure this change does not disrupt existing network topology before proceeding.

3.7.1 WAN

Switch → WAN → WAN

This page is used to configure WAN and display WAN business status.

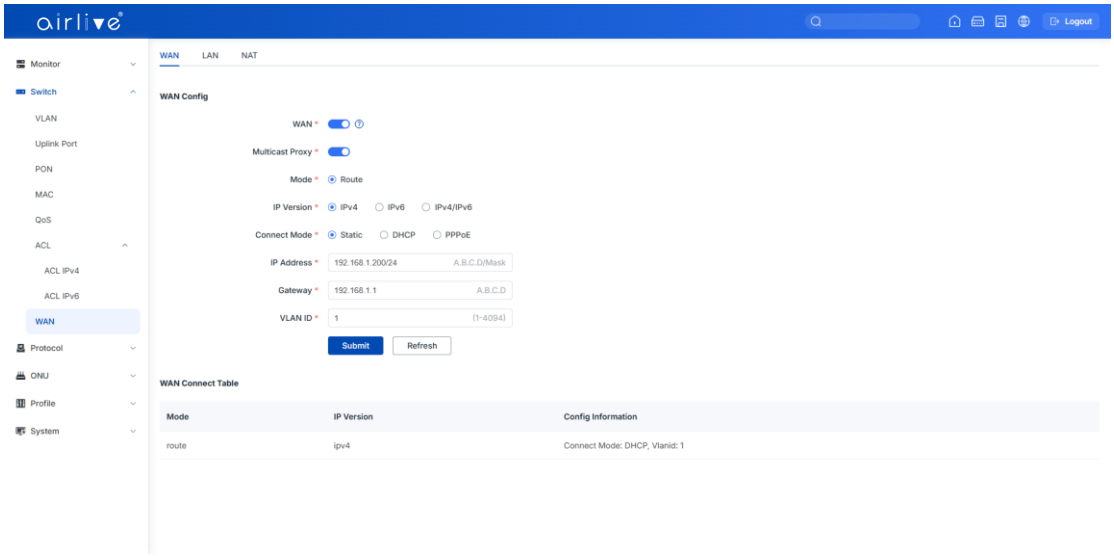


Figure 3.7-1: WAN Status

3.7.2 LAN

Switch → WAN → LAN

This page is configured with LAN side IP address and DHCP server.

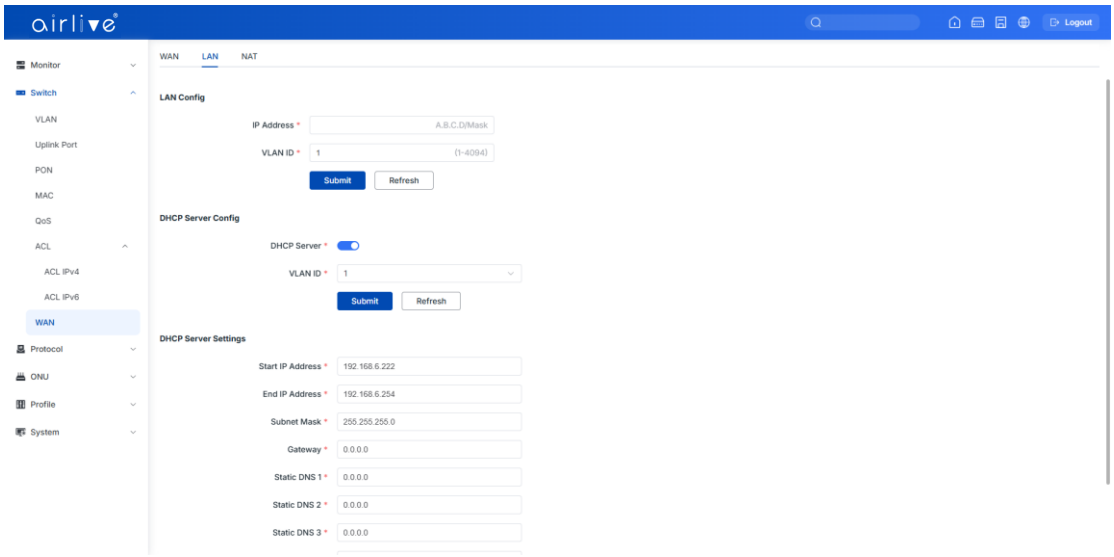


Figure 3.7-2: LAN

3.7.3 NAT

Switch → WAN → NAT

This page is used to configure the routing NAT mode for DMZ hosts.

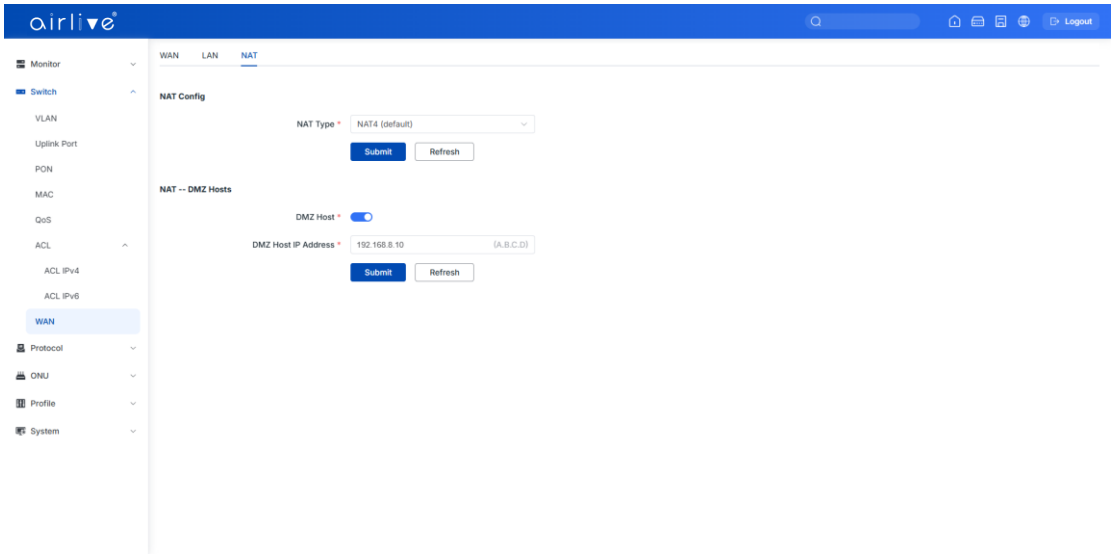


Figure 3.7-3: NAT Config

Chapter 4 Protocol

4.1 Loopback

Network loops can cause severe packet loss, high latency, device lag and even system outages, directly disrupting services such as office operations, video services and server access. Loop detection can quickly eliminate loops and restore network connectivity.

4.1.1 Information

Protocol → Loopback → Information
This page displays the information of the port that has been detected by the OLT.

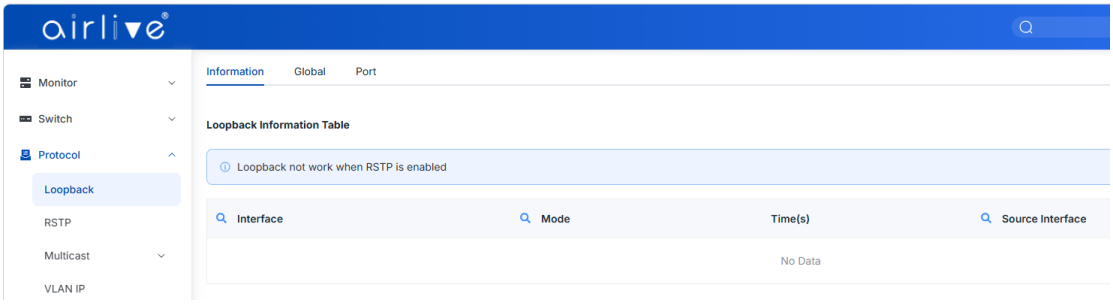


Figure 4.1-1: Loopback Information

4.1.2 Global

Protocol → Loopback →Global
This page is used to enable or disable loopback detect, set the loopback range, mode, and aging time, loopback packet sending mode and packet sending interval.

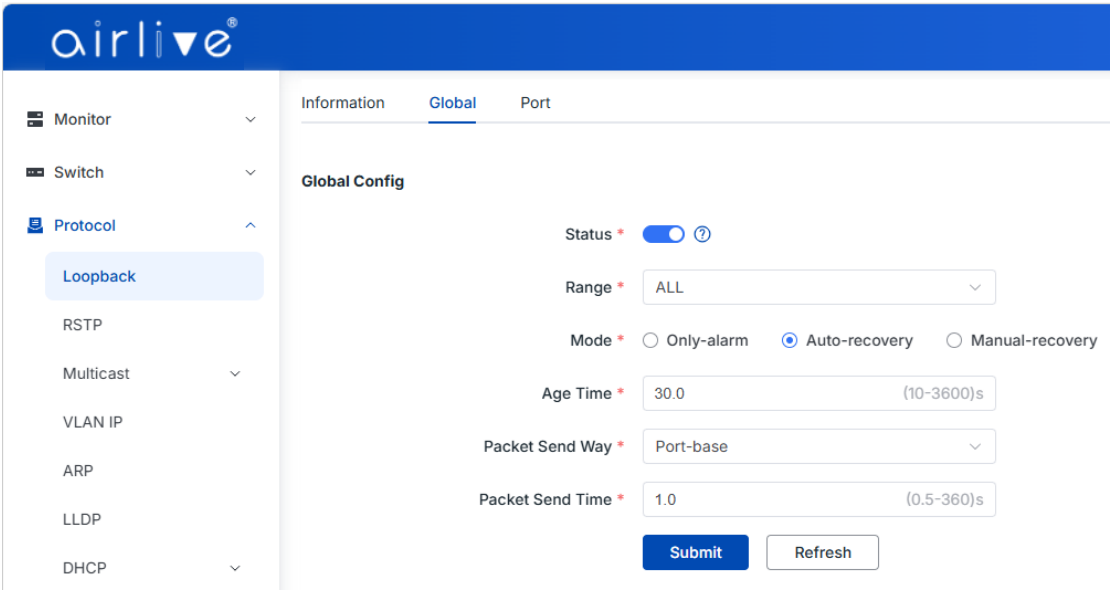


Figure 4.1-2: Loopback Global

4.1.3 Port

Protocol → 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.

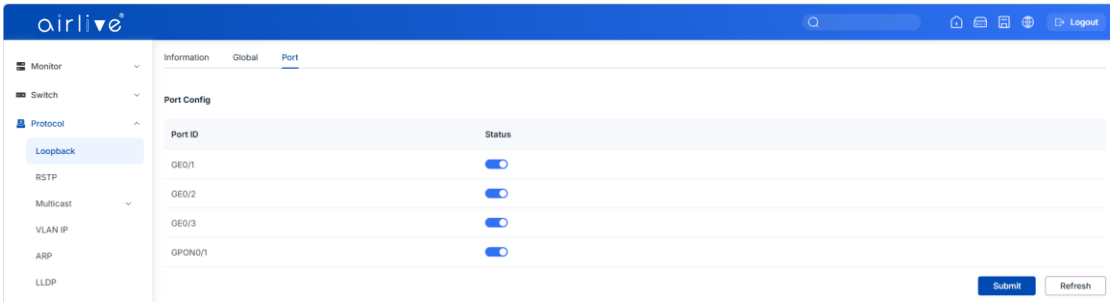


Figure 4.1-3: Loopback Port

4.2 RSTP

The spanning tree protocol is a second layer protocol that eliminates network loops by selectively blocking redundant network links. It also has the feature of link backup.

The Fast Spanning Tree Protocol (RSTP) is defined by the IEEE 802.1w standard, which has been improved on the basis of STP to achieve fast convergence of network topology. Its "speed" is reflected in the fact that when a port is selected as the root port and designated port, the delay for it to enter forwarding state will be greatly reduced, thereby shortening the time required for the network to ultimately reach topological stability.

4.2.1 Information

Protocol → RSTP→ Information

The RSTP information mainly displays the spanning tree protocol parameters of the root bridge device.

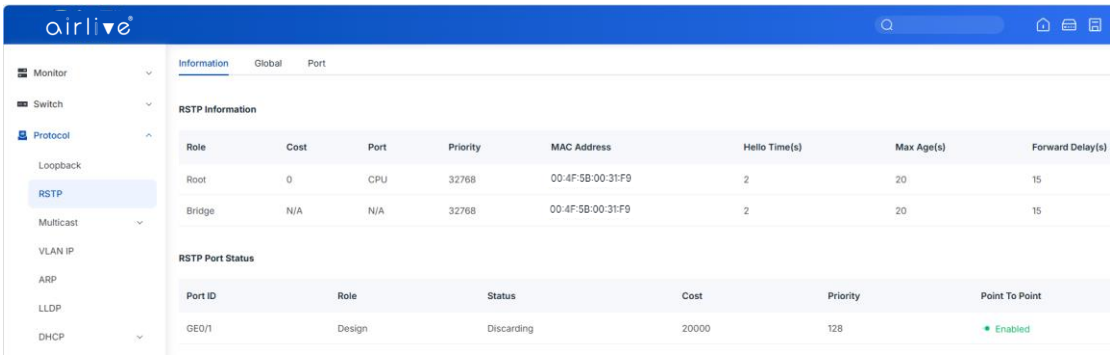


Figure 4.2-1: RSTP Information

4.2.2 Global

Protocol → RSTP → Global

This page is used to set the parameters of the device's spanning tree protocol, including spanning tree protocol switch, priority, hello time, maximum aging time, and forwarding delay.

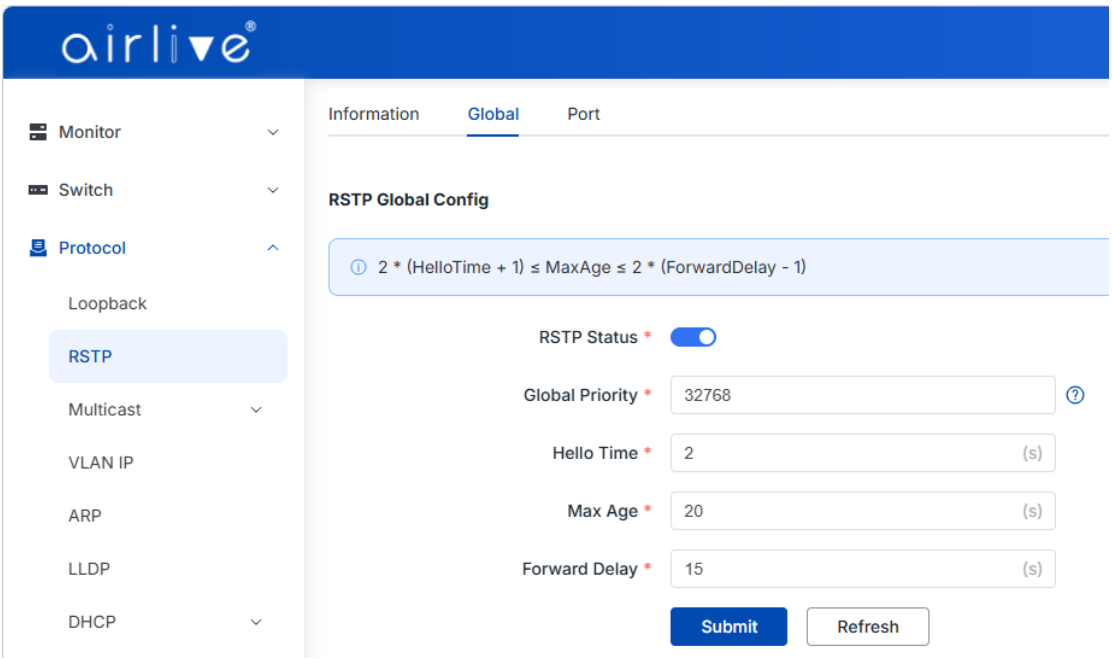


Figure 4.2-2: RSTP Global

4.2.3 Port

Protocol → RSTP→ Port

This page is used to set port fast spanning tree protocol parameters, including spanning tree protocol switches, priority, cost, edge ports, and point-to-point.

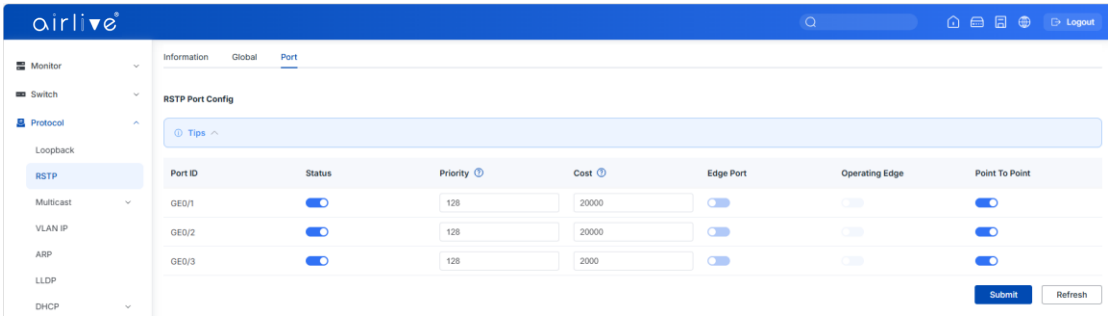


Figure 4.2-3: RSTP Port

4.3 Multicast

4.3.1 IGMP

4.3.1.1 Group Member

Protocol → Multicast → IGMP → Group Member

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

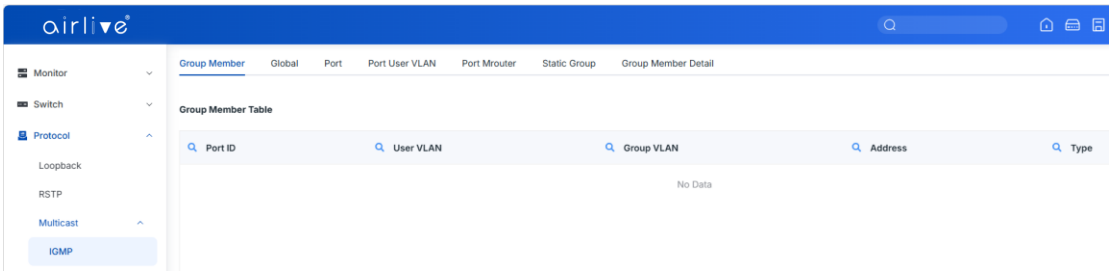


Figure 4.3-1: Group Member

4.3.1.2 Global

Protocol → Multicast → IGMP → Global

IGMP basic configuration mainly contains parameters of query packet and member timeout. 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.

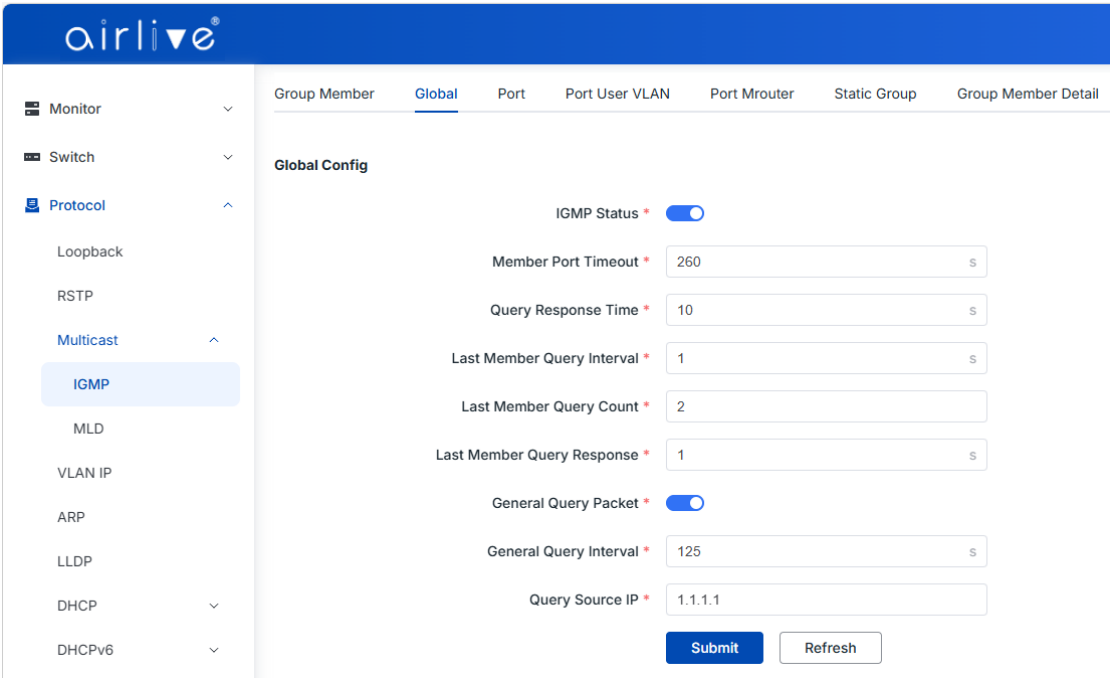


Figure 4.3-2: IGMP Global

4.3.1.3 Port

Protocol → Multicast → IGMP → Port

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

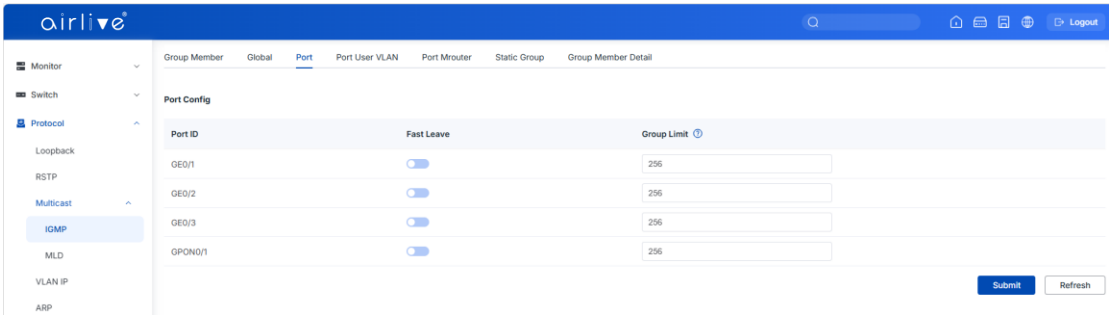


Figure 4.3-3: IGMP Port

4.3.1.4 Port User VLAN

Protocol → Multicast → 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.

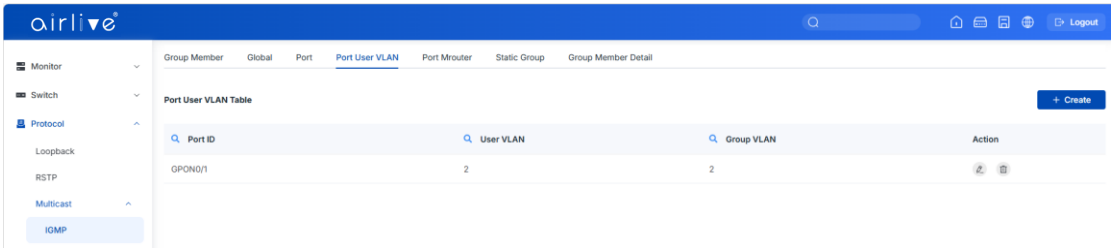


Figure 4.3-4: IGMP Port User VLAN

4.3.1.5 Port Mrouter

Protocol → Multicast → IGMP → Port Mrouter

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

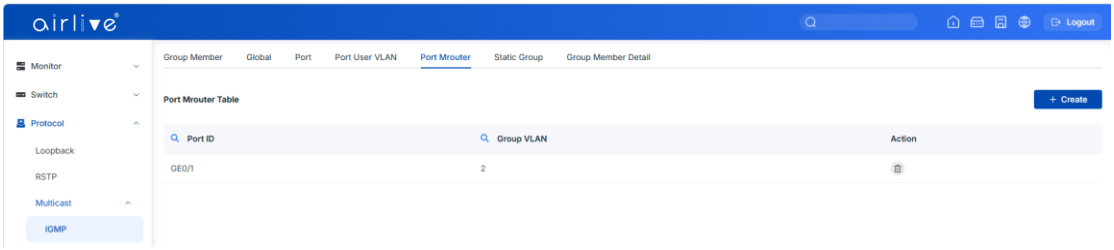


Figure 4.3-5: IGMP Port Mrouter

4.3.1.6 Static Group

Protocol → Multicast → IGMP → Static Group

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

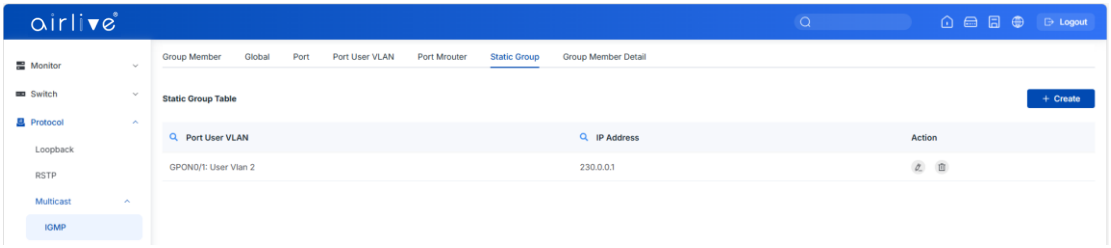


Figure 4.3-6: IGMP Static Group

4.3.1.7 Group Member Detail

Protocol → Multicast → IGMP → Group Member Detail

This page allows you to view more detailed information about the group members, specifically showing the group VLAN ID, multicast group address and client MAC address corresponding to the ONU under which the PON port is located.

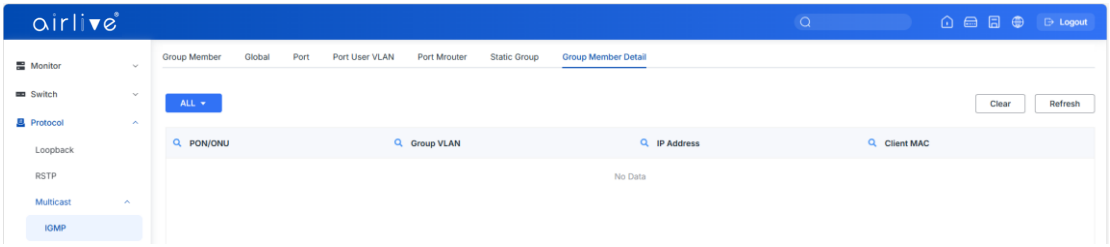


Figure 4.3-7: IGMP Group Member Detail

4.3.2 MLD

4.3.2.1 Group Member

Protocol → Multicast → MLD → Group Member
When a MLD group is generated, it will be displayed in this table.

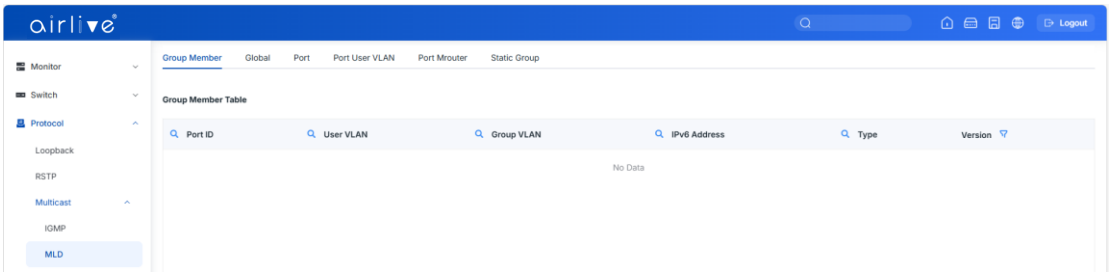


Figure 4.3-8: Group Member

4.3.2.2 Global

Protocol → Multicast → MLD → Global
The basic configuration of MLD mainly includes query packet parameters and member timeout parameters. When MLD mode is enabled, OLT operates in MLD listening mode. MLD monitoring is the process of monitoring Internet group management protocol (MLD) network traffic. This feature allows network switches to "listen" to MLD conversations between hosts and routers. By monitoring these conversations, the switch maintains a mapping of which devices require which IP MLD streams. MLD can enter line filtering from ports that do not require them, thereby controlling which ports receive specific MLD traffic. When MLD status is disabled, OLT operates in transparent mode.

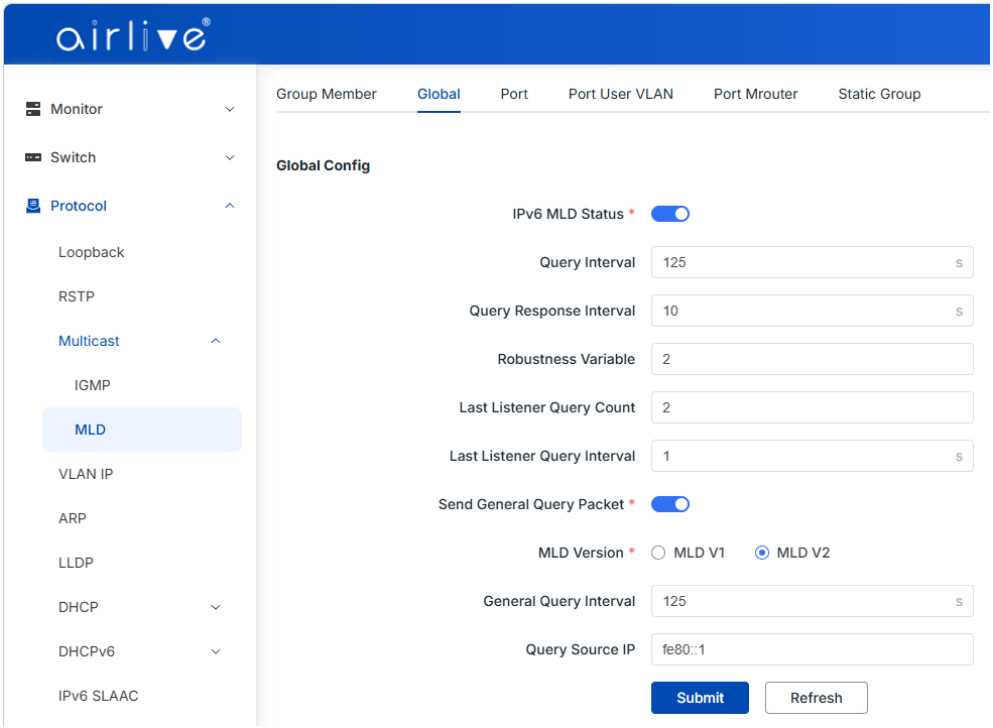


Figure 4.3-9: Global

4.3.2.3 Port

Protocol → Multicast → MLD → Port
This configuration is used to set the group limit, filtering, and fast leave mode for MLD ports.

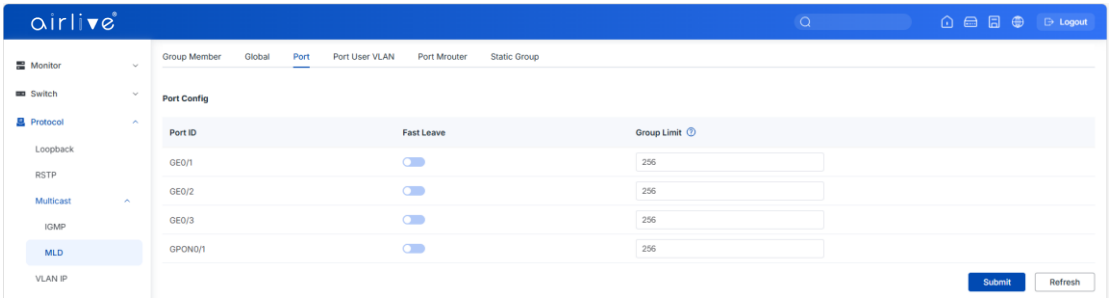


Figure 4.3-10: Port

4.3.2.4 Port User VLAN

Protocol → Multicast → MLD → Port User VLAN
This configuration is used to configure MLD VLAN for OLT. Generally, PON ports should be configured, with the same user VLAN and group VLAN. If they are different, the MLD data VLAN will be converted and forwarded.

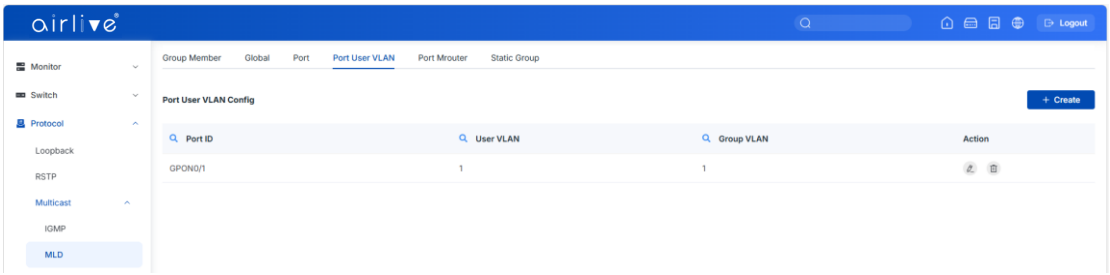


Figure 4.3-11: Port User VLAN

4.3.2.5 Port Mrouter

Protocol → Multicast → MLD → Port Mrouter

The MLD router port is used to transmit MLD signal messages. Usually, the line port on the OLT should be set as a MLD router port.

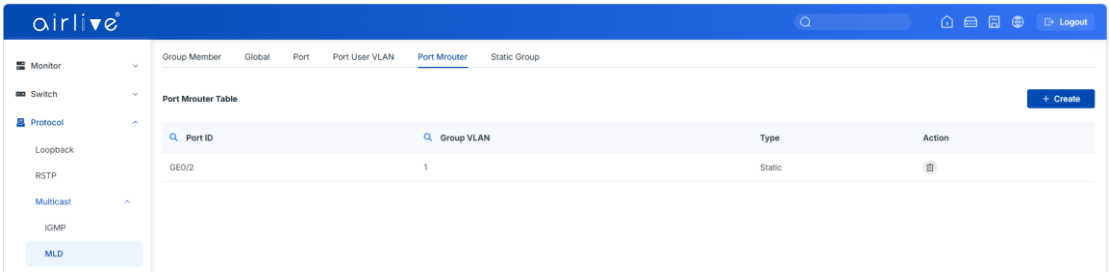


Figure 4.3-12: Port Mrouter

4.3.2.6 Static Group

Protocol → Multicast → MLD → Static Group

This configuration is used to bind MLD IPv6 addresses and VLAN ID.

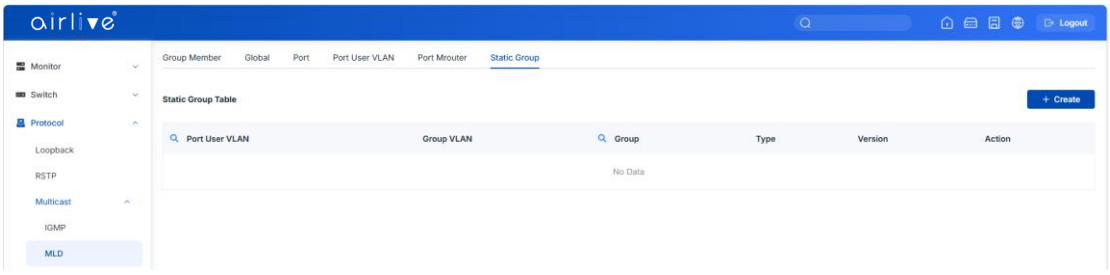


Figure 4.3-13: Static Group

4.4 VLAN IP

4.4.1 VLAN IP

Protocol → VLAN 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.By default, the IP address of VLAN 1 is 192.168.8.200.

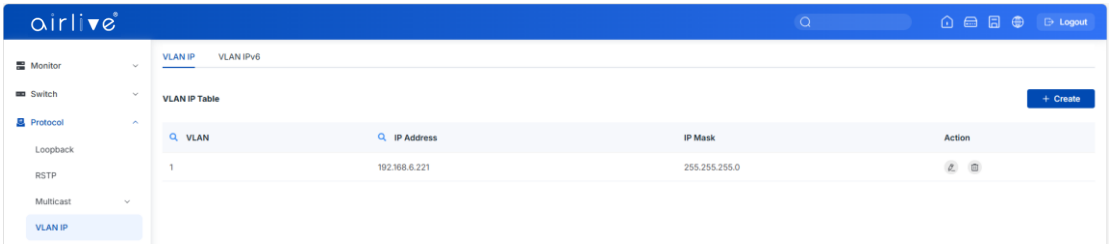


Figure 4.4-1: VLAN IP

4.4.2 VLAN IPv6

Protocol → VLAN IP → VLAN IPv6

Configure IPv6 addresses for the created VLAN.

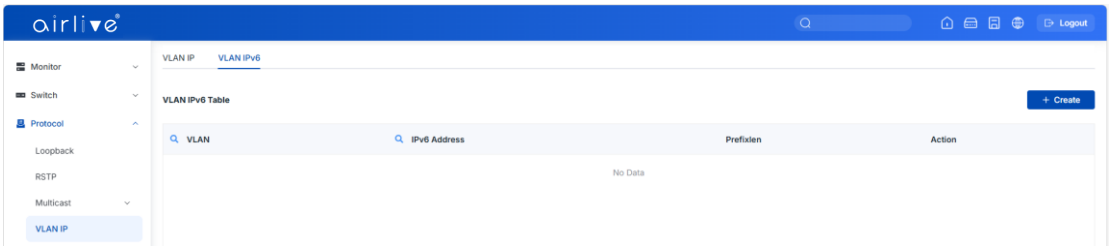


Figure 4.4-2: VLAN IPv6

4.5 ARP Table

Mainly displays OLT ARP table and ARP restriction function.

4.5.1 ARP Table

Protocol → ARP → ARP Table

This page displays the OLT ARP table and allows manual addition of MAC.

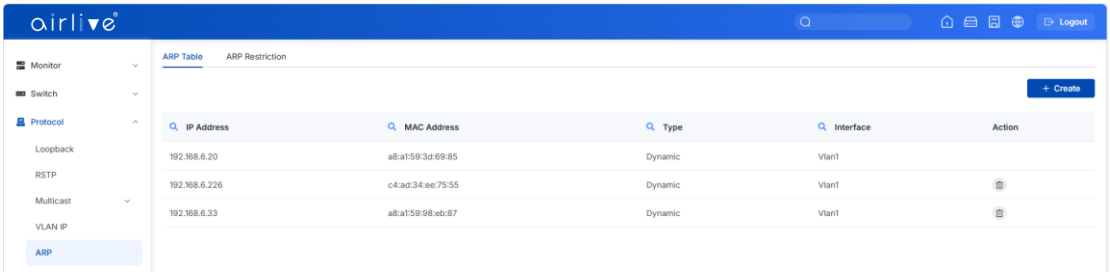


Figure 4.5-1: ARP Table

4.5.2 ARP Restriction

Protocol → ARP → ARP Restriction

This page mainly configures the ARP learning rate and ARP restriction rules.

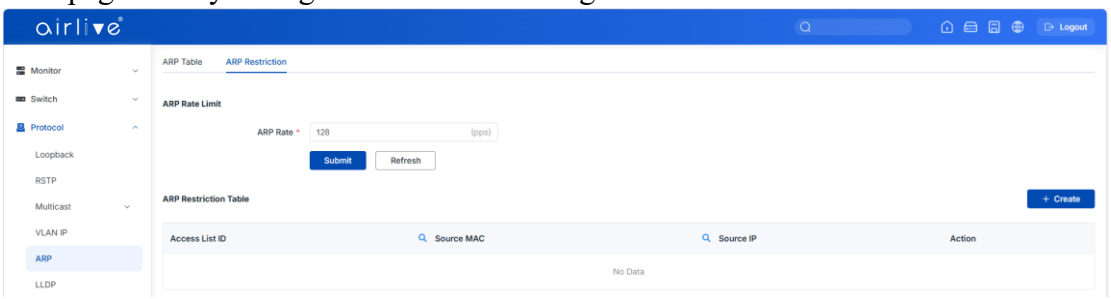


Figure 4.5-2: ARP Restriction

4.6 LLDP

LLDP (Link Layer Discovery Protocol) is a link layer protocol, mainly used for neighbor discovery and information exchange between network devices.

4.6.1 Information

Protocol → LLDP→LLDP Information

This page displays LLDP neighbor information , as well as the ID and description of the port of the neighboring device and other basic information.

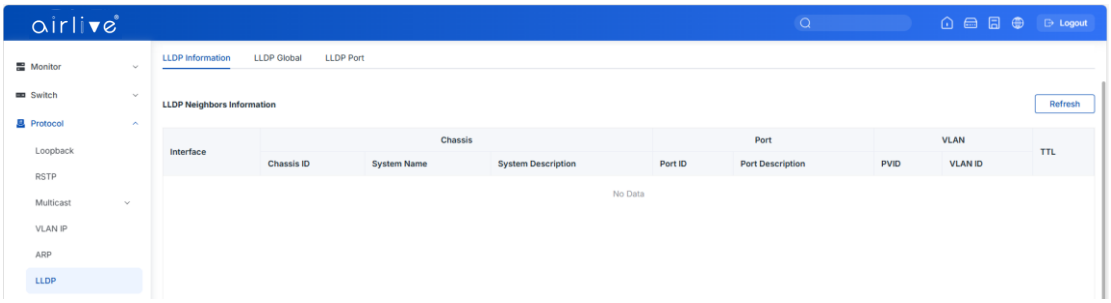


Figure 4.6-1: LLDP Information

4.6.2 Global

Protocol → LLDP→LLDP Global

This page is used to enable and disable the LLDP protocol and can set the message sending cycle and the multiple of the message holding time.

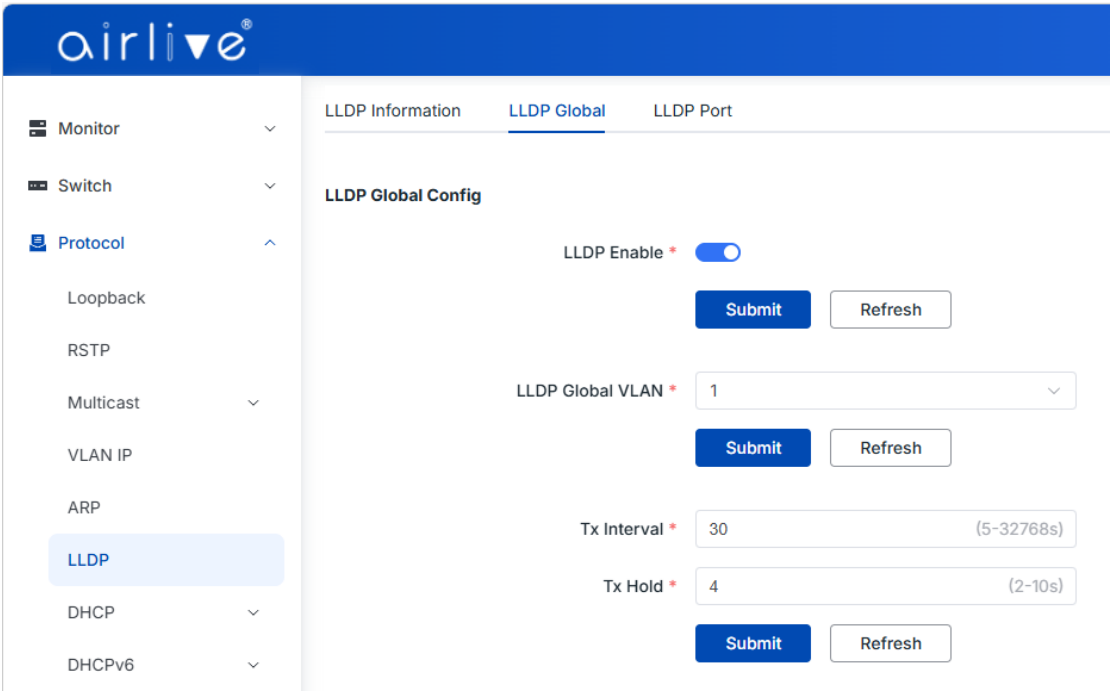


Figure 4.6-2: LLDP Global

4.6.3 Port

Protocol → LLDP→ LLDP Port

This page is used to configure the LLDP protocol enable status of each port and control whether the port participates in LLDP neighbor discovery and information exchange.

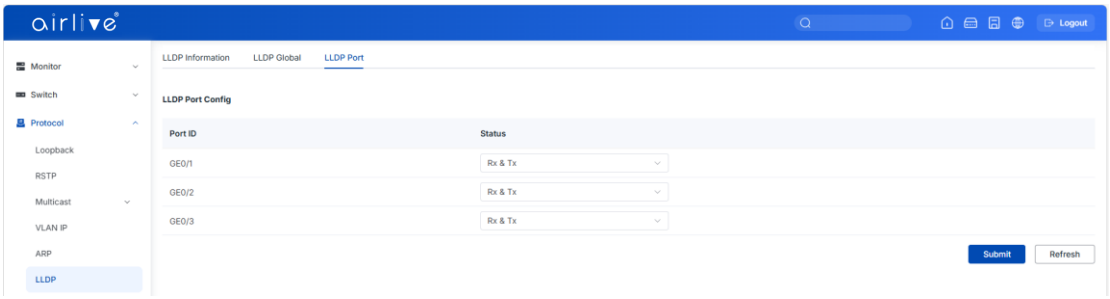


Figure 4.6-3: LLDP Port

4.7 DHCP

OLT can support the following DHCP functions.

- DHCP Server
- DHCP Relay
- DHCP Snooping

4.7.1 DHCP Server

4.7.1.1 Lease

Protocol → DHCP→DHCP Server → Lease
This table displays the MAC addresses, host names and IP addresses, and Lease terms assigned to them.

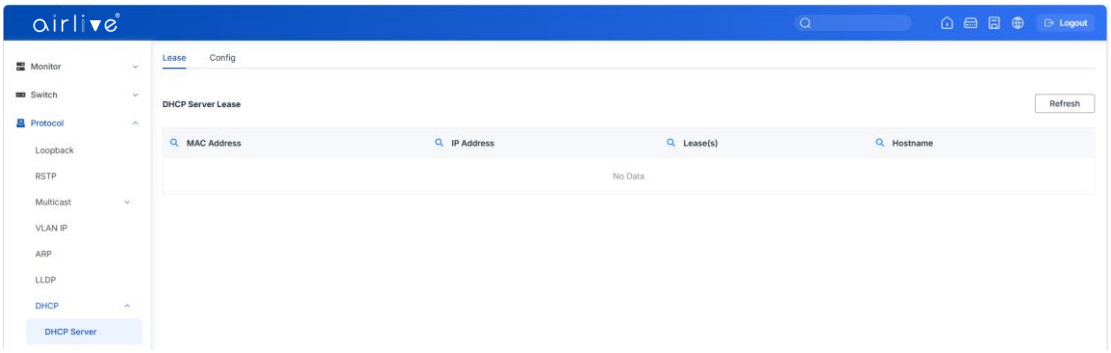


Figure 4.7-1: Lease

4.7.1.2 Config

Protocol → DHCP→DHCP Server → Config
Sometimes devices require dynamic IP addresses, but there are no special DHCP servers in the network. These configurations can solve this problem. The OLT can act as a DHCP server on the network and allocate IP addresses to other devices.
Before enabling the DHCP server, you must configure an IP address for the VLAN.

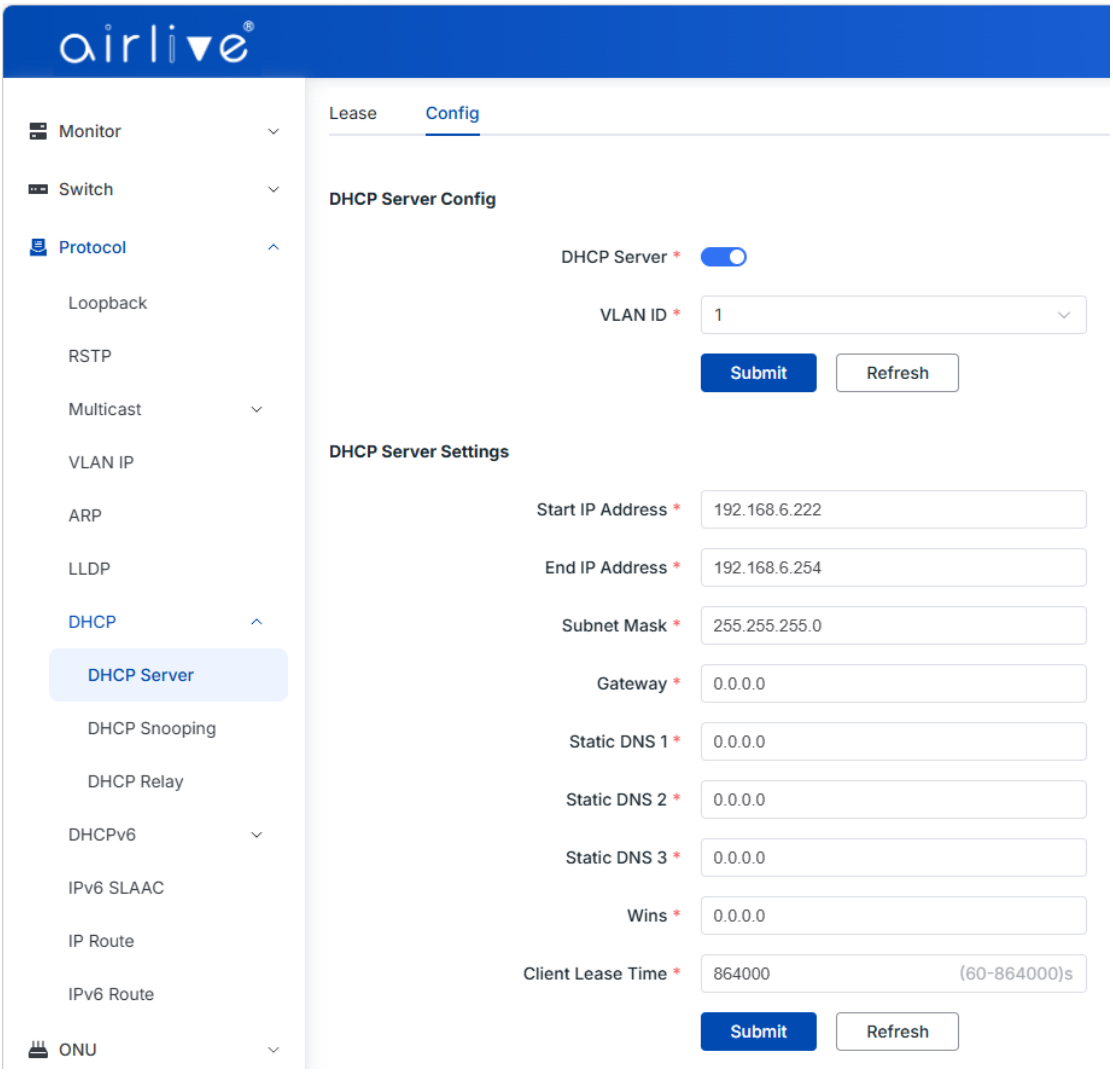


Figure 4.7-2: DHCP Server Config

4.7.2 DHCP Snooping

DHCP Snooping is a security feature of DHCP that ensures that clients obtain IP addresses from legitimate servers and record the correspondence between DHCP client IP and MAC.

4.7.2.1 Bind List

Protocol → DHCP→DHCP Snooping → Bind List
This page is used to display the correspondence information between DHCP client IP and MAC detected by DHCP.

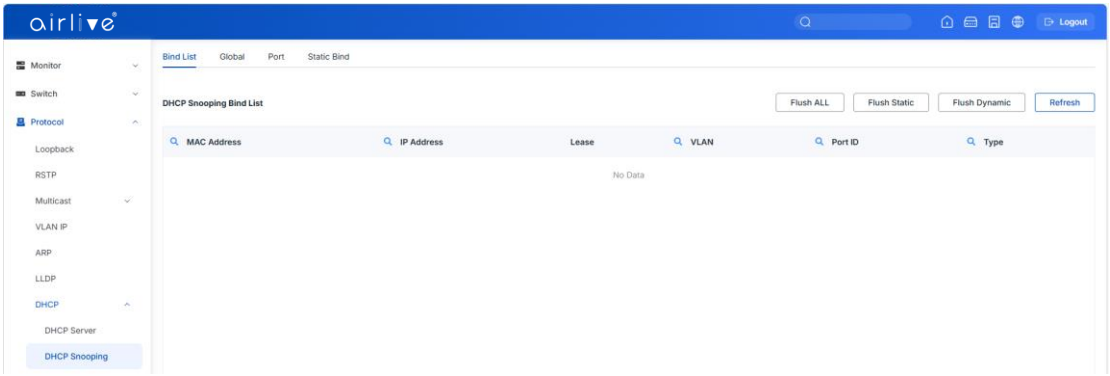


Figure 4.7-3: Bind List

4.7.2.2 Global

Protocol → DHCP→DHCP Snooping → Global

The global configuration of DHCP Snooping mainly includes Option 82 global settings, listening VLAN configuration, and VLAN based Option 82 template (format template) binding.

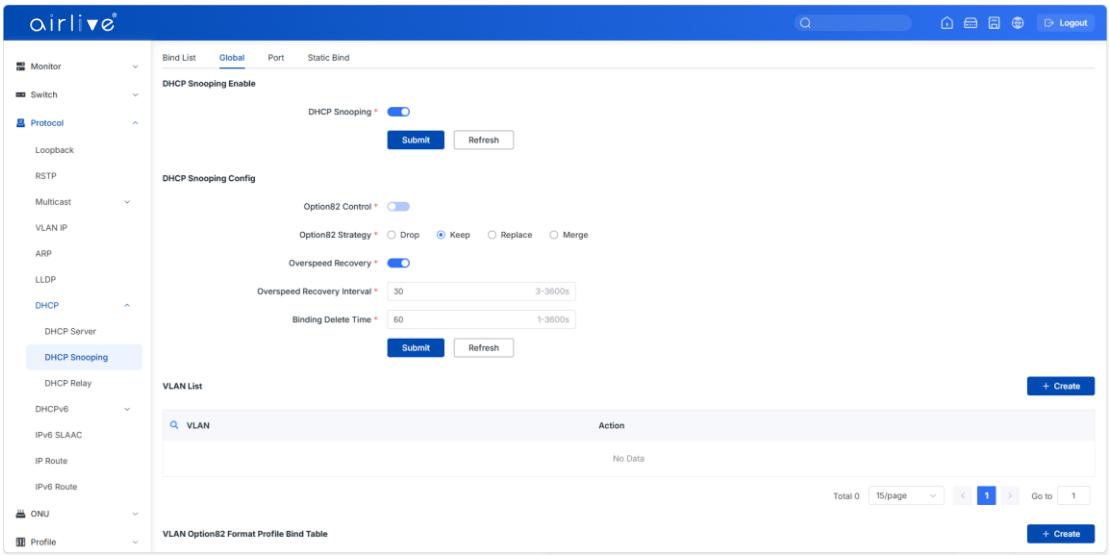


Figure 4.7-4: DHCP Snooping Global

4.7.2.3 Port

Protocol → DHCP→ DHCP Snooping → Port

This interface is used to configure DHCP Snooping parameters for ports that include port types, Option 82 parameters, and rate limits.

All ports default to untrusted ports. Option 82 parameters, 'Option 82 Circuit ID' and 'Option 82 Remote ID', are valid for untrusted ports. 'Restricted speed' refers to the maximum speed at which a port can receive DHCP packets.

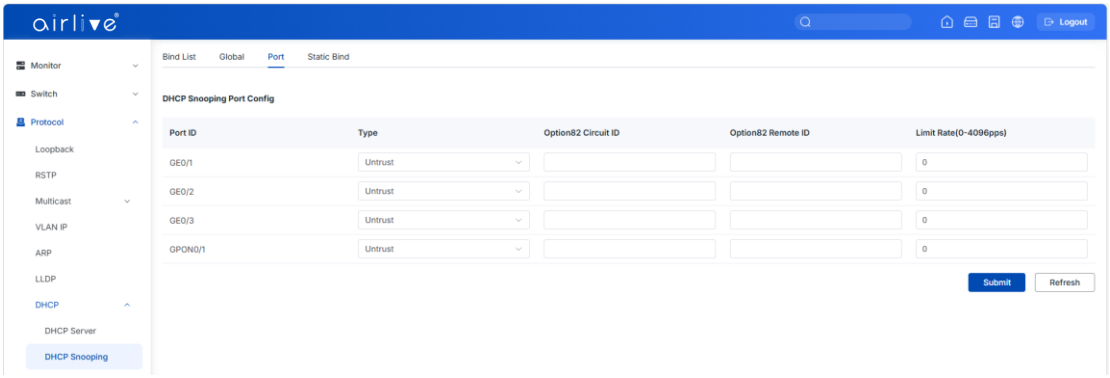


Figure 4.7-5: DHCP Snooping Port

4.7.2.4 Static Bind

Protocol → DHCP→ DHCP Snooping → Static Bind

When a host needs a fixed IP address allocated by a DHCP server from a specific port, DHCP listening for static binding is very useful.

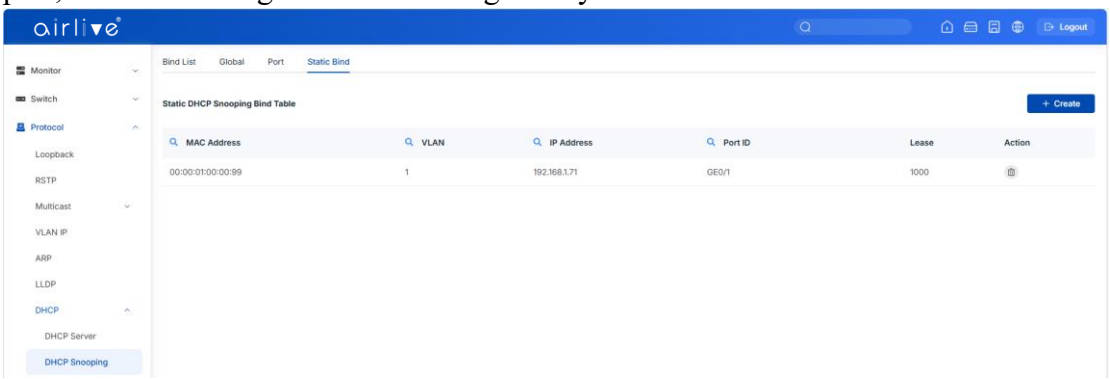


Figure 4.7-6: Static Bind

4.7.3 DHCP Relay

Due to the DHCP process using broadcast to generate request messages, servers and clients usually need to be in the same network segment. DHCP relay can solve the problem that DHCP servers and clients do not exist in the same network.

4.7.3.1 Relay Server

Protocol → DHCP→DHCP Relay → Relay Server

This page is used to configure the IP and working VLAN of DHCP relay servers.

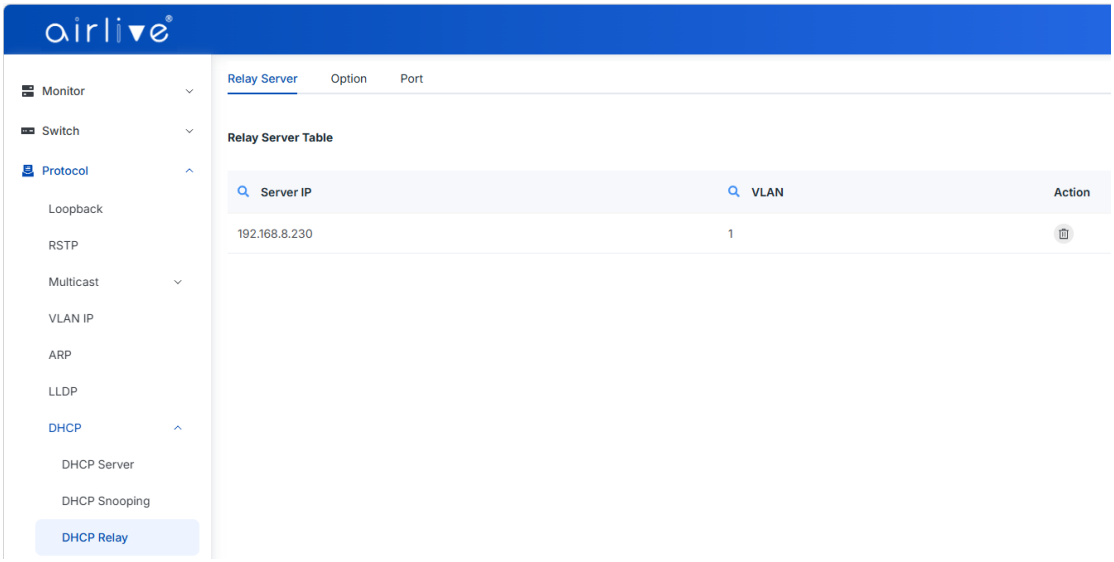


Figure 4.7-7: DHCP Relay Server

4.7.3.2 Option

Protocol → DHCP→DHCP Relay → Option

This page is used to configure the Option 82 function of DHCP relay. After receiving the DHCP request message, the DHCP relay will process the message according to whether it contains Option 82 and the processing strategy and padding mode configured by the user, and forward the processed message to the DHCP server.

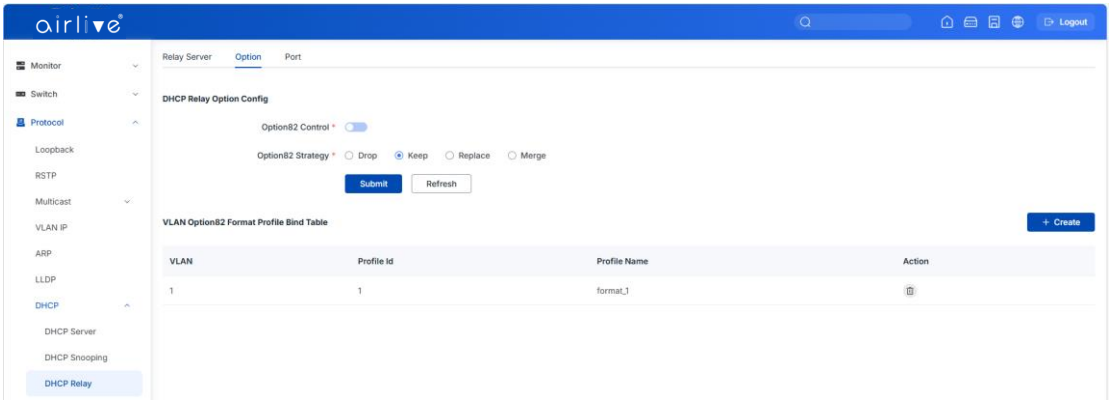


Figure 4.7-8: DHCP Relay Option

4.7.3.3 Port

Protocol → DHCP→ DHCP Relay → Port

This page is used to configure the Option 82 line ID and remote ID of the port.

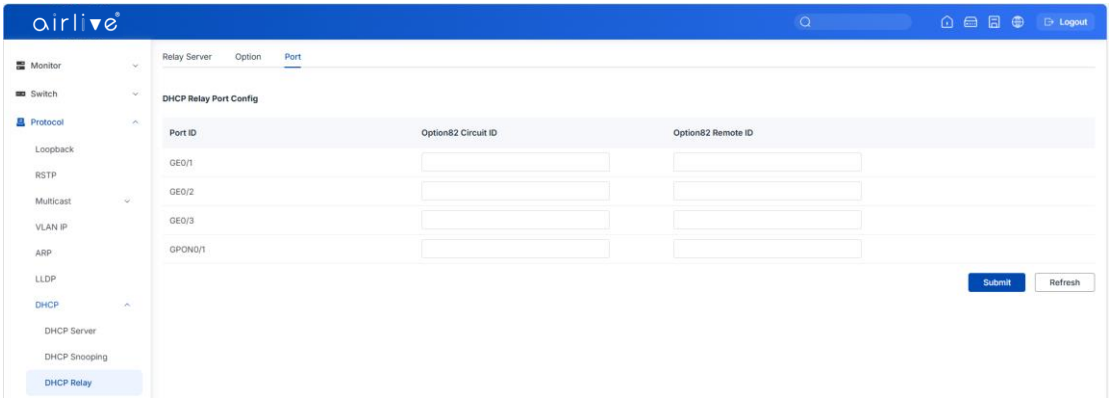


Figure 4.7-9: DHCP Relay Port

4.8 DHCPv6

DHCPv6 is a network protocol used to configure IPv6 addresses, IPv6 prefixes, DNS, domains, and other network parameters for hosts running on IPv6 networks.

4.8.1 DHCPv6 Server

4.8.1.1 Bind List

Protocol→ DHCPv6→DHCPv6 Server → Bind List
The DHCPv6 binding information displays the IPv6 address assigned to the host.

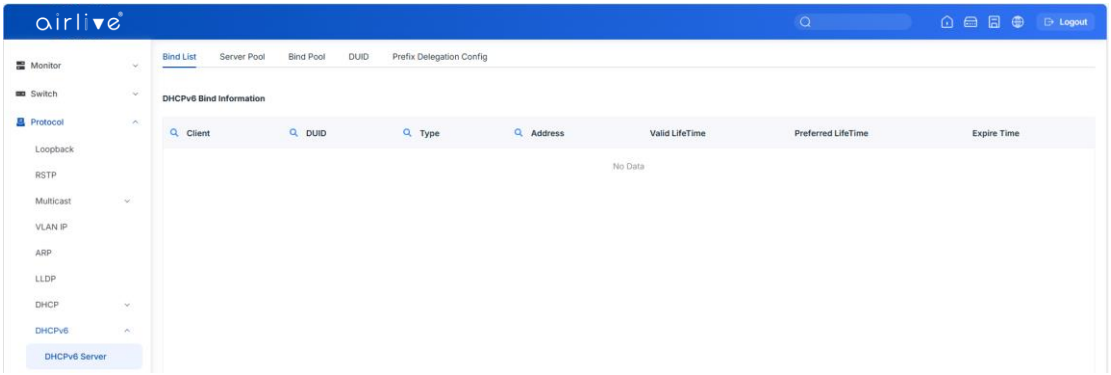


Figure 4.8-1: DHCPv6 Bind List

4.8.1.2 Server Pool

Protocol → DHCPv6→DHCPv6 Server → Server Pool
DHCPv6 address pool specifies the range of IPv6 addresses. Here, you can also provide the effective time, preferred time, DNS, and domain for DHCPv6 clients.

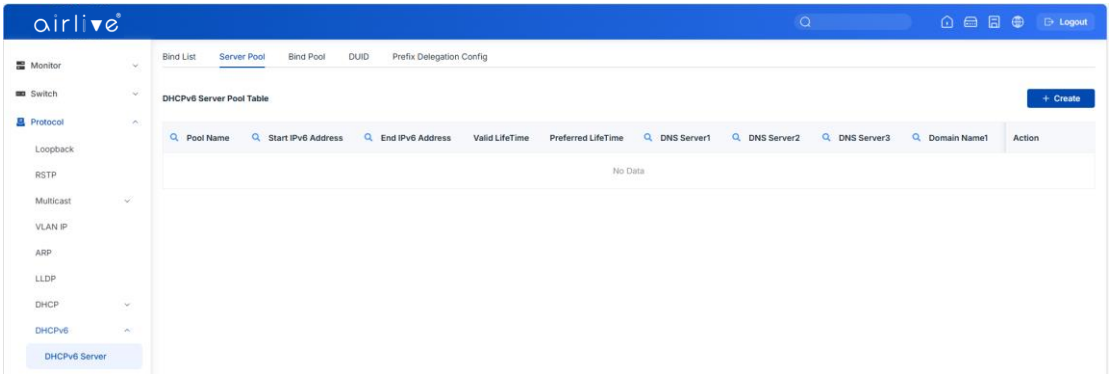


Figure 4.8-2: Server Pool

4.8.1.3 Bind Pool

Protocol → DHCPv6→ DHCPv6 Server → Bind Pool

Select VLAN, fill in the DHCPv6 pool name, enable the DHCPv6 service, and then add the VLAN to the table. Before enabling the DHCPv6 service, it is necessary to complete the configuration of VLAN IPv6 address and server address pool information.

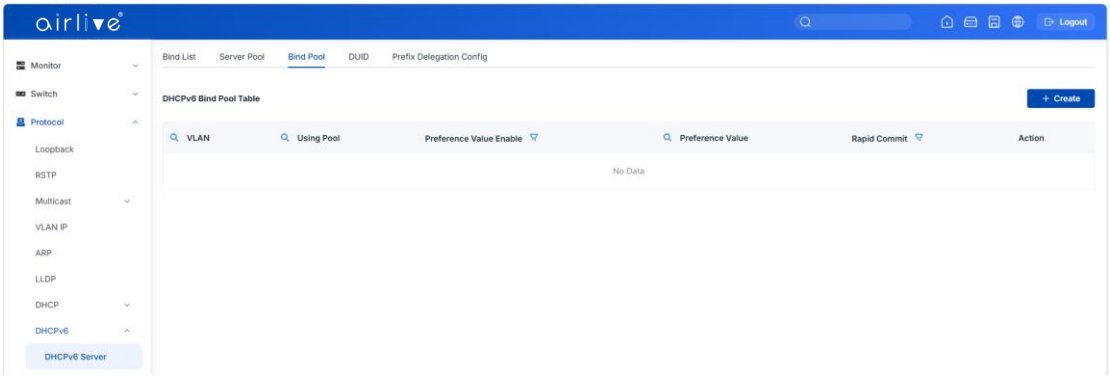


Figure 4.8-3: DHCPv6 Bind Pool

4.8.1.4 DUID

Protocol→DHCPv6→DHCPv6 Server→DUID

This page is used to configure the DHCPv6 DUID (DHCP Unique Identifier) parameters, which can set the DUID type and view the generated DUID information of the device.

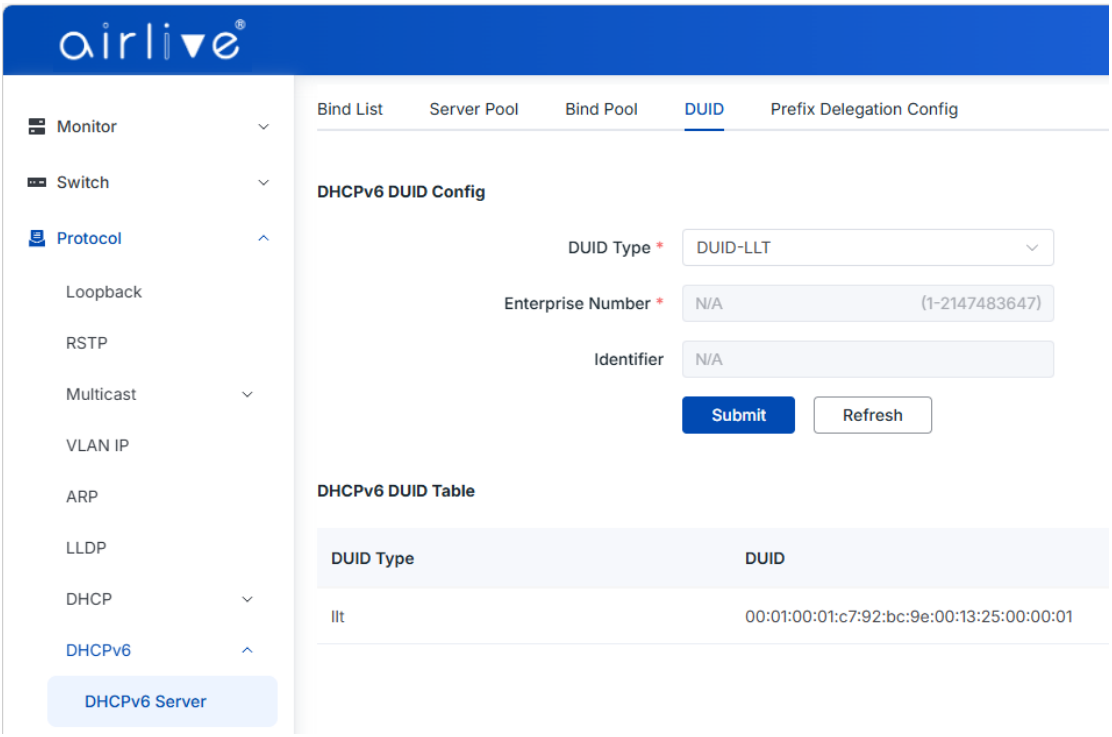


Figure 4.8-4: DUID

4.8.1.5 Prefix Delegation Config

Protocol→DHCPv6→DHCPv6 Server→Prefix Delegation Config

This page supports configuring DHCPv6 prefix proxy, which can configure the prefix information, address prefix validity time, and preferred time allocated by the DHCPv6 service.

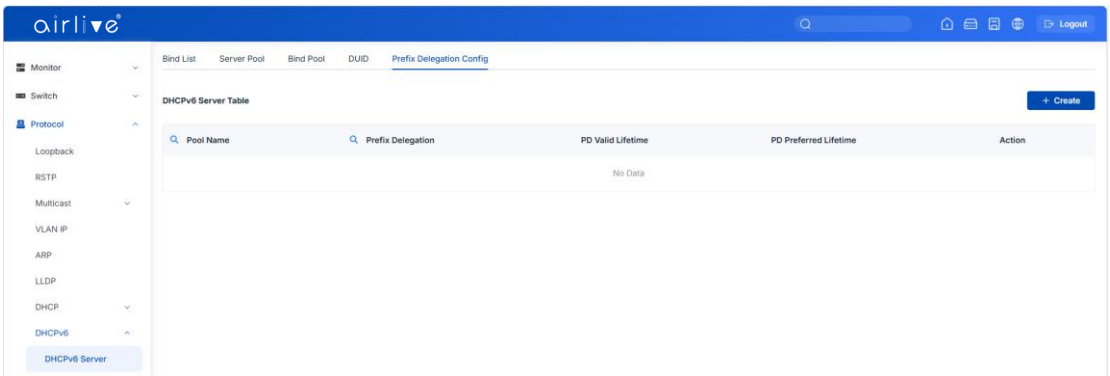


Figure 4.8-5: Prefix Delegation Config

4.8.2 DHCPv6 Relay

4.8.2.1 Relay Server

Protocol → DHCPv6→DHCPv6 Relay → Relay Server

This page configures the DHCPv6 relay to forward client requests to a specified server, enabling dynamic IPv6 address/prefix assignment.

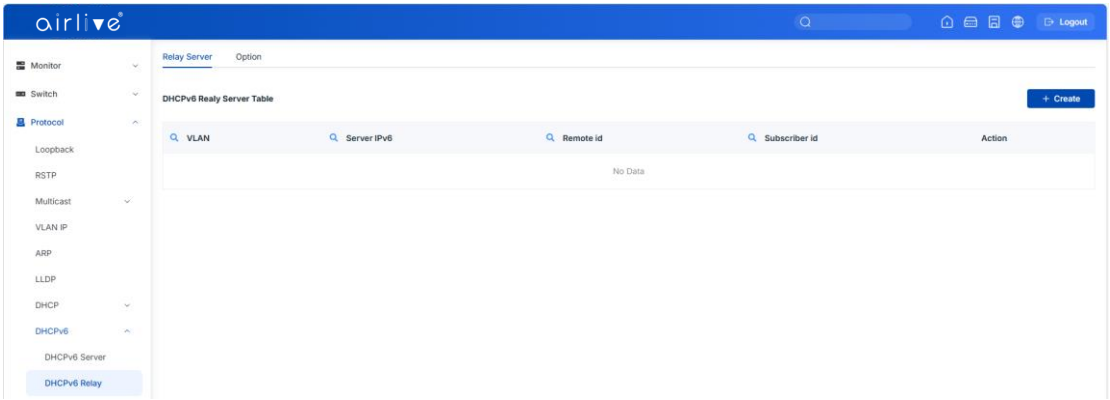


Figure 4.8-6: DHCPv6 Relay Server

4.8.2.2 Option

Protocol → DHCPv6→DHCPv6 Relay → Option

This page supports enable or disable Option 37 and Option 38 functions.

Option 37 (Remote ID) is used to identify the line information for requested access, while Option 38 (Subscriber ID) is used to identify subscriber information. Together, they enable DHCPv6 servers to implement address allocation strategies based on user lines.

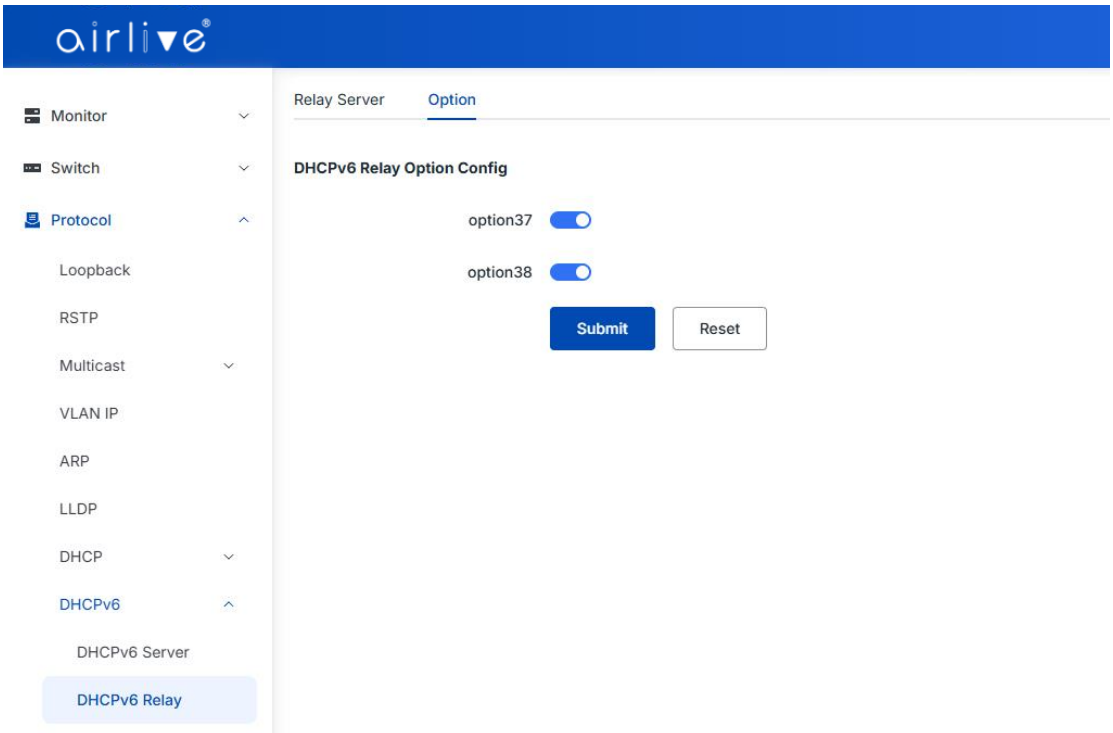


Figure 4.8-7: DHCPv6 Relay Option

4.9 IPv6 SLAAC

IPv6 networks use the ICMPv6 routing discovery protocol. When an IPv6 host connects to the network for the first time, it automatically configures based on the information obtained from route discovery/prefix discovery. Route discovery/prefix discovery refers to the ability of a host to discover local routers and obtain configuration parameters such as neighbor information and current network prefix from RA packets when connected to an IPv6 network.

4.9.1 IPv6 SLAAC

Protocol → IPv6 SLAAC→ IPv6 SLAAC

When an IPv6 host uses stateless address configuration (stateless address auto configuration), the OLT will send it an RA packet. This page is used to configure the parameters of RA message.

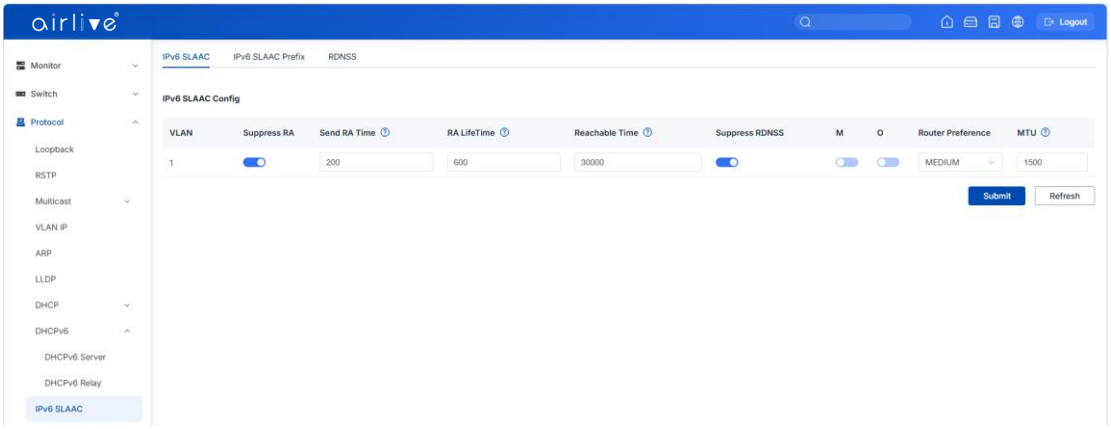


Figure 4.9-1: IPv6 SLAAC

4.9.2 IPv6 SLAAC Prefix

Protocol → IPv6 SLAAC → IPv6 SLAAC Prefix

When IPv6 hosts use stateless address auto configuration, OLT can provide IPv6 prefix. The host will generate an IPv6 address with a prefix.

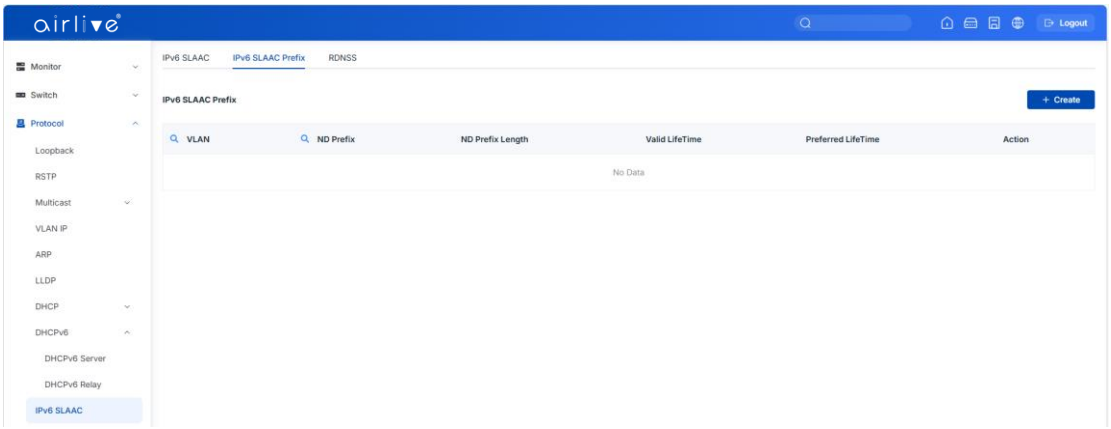


Figure 4.9-2: IPv6 SLAAC Prefix

4.9.3 RDNSS

Protocol → IPv6 SLAAC→ RDNSS

Recursive DNS Server (RDNSS) is a DNS server in the IPv6 network protocol. This interface supports configuring RA messages to carry recursive DNS server information.

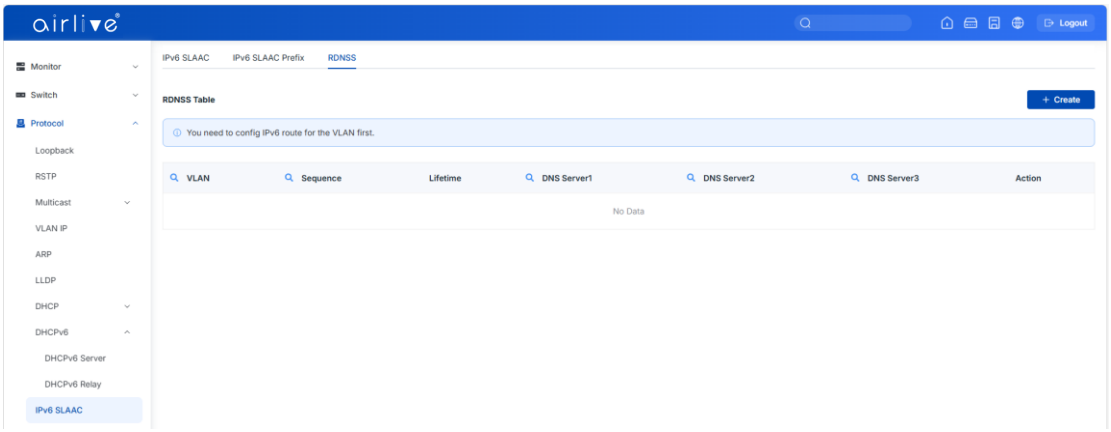


Figure 4.9-3: RDNSS

4.10 IP Route

4.10.1 Static Route

Protocol → IP Route → Static Route

Static routing is a form of routing where routers use manually configured routing items. In many cases, static routing is manually configured by network administrators. Unlike dynamic routing, static routing is fixed and will not change even if the network environment is changed or reconfigured.

After configuring the VLAN IP address, adding static routing can enable communication between networks on different network segments.

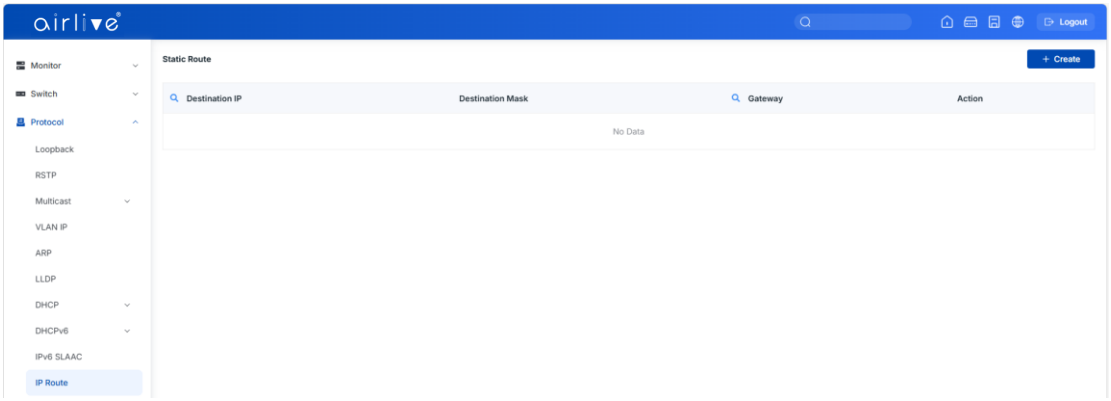


Figure 4.10-1: Static Route

4.11 IPv6 Route

4.11.1 IPv6 Static Route

Protocol → IPv6 Route → IPv6 Static Route Table

This page is used to manually add IPv6 static routing. Even if the network topology has changed, static routing will not alter the configuration.

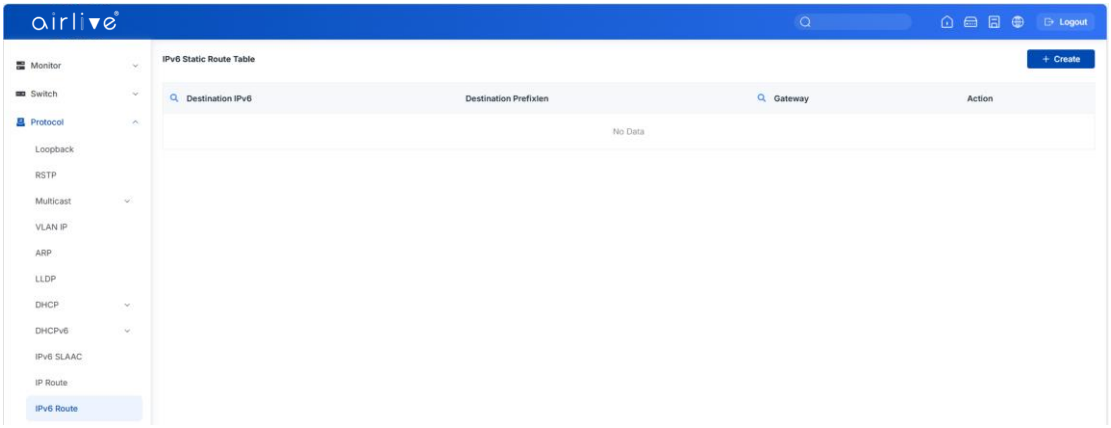


Figure 4.11-1: IPv6 Static Route

Chapter 5 ONU

This chapter is about the ONU management by OLT.

5.1 ONU List

5.1.1 ONU List

5.1.1.1 ONU List

ONU → ONU List → ONU List → ONU List
All registered ONUs will be displayed in this interface. You can check ONU using profile, Registration mode and do some operations on every ONU.

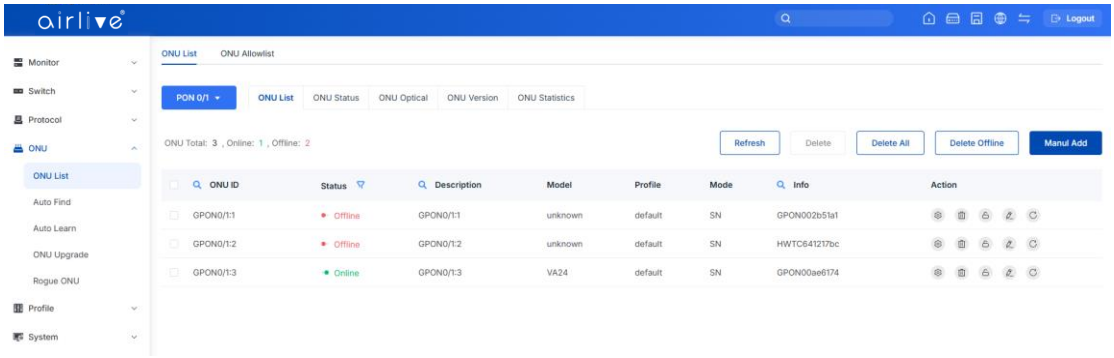


Figure 5.1-1: ONU List

5.1.1.1.1 Configuration

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

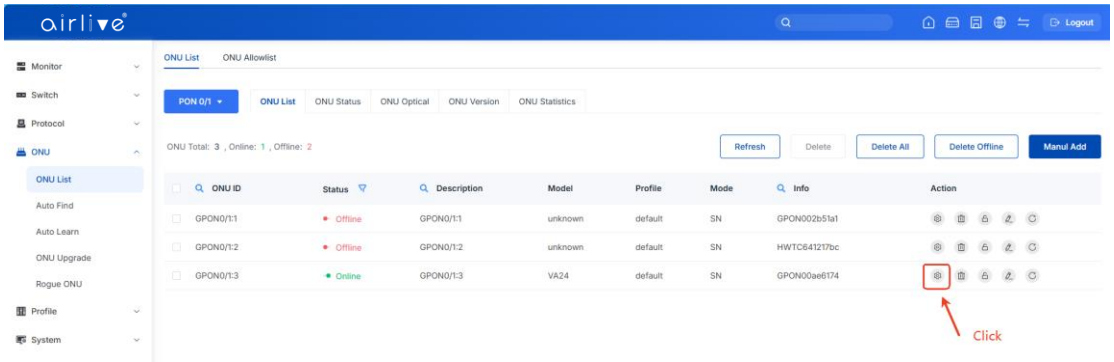


Figure 5.1-2: Configure ONU

5.1.1.1.1.1 Overview

ONU → ONU List → ONU List → ONU List → Configuration → Overview

This ONU Overview page presents the network topology, real-time optical metrics, and key device details of the connected ONU.

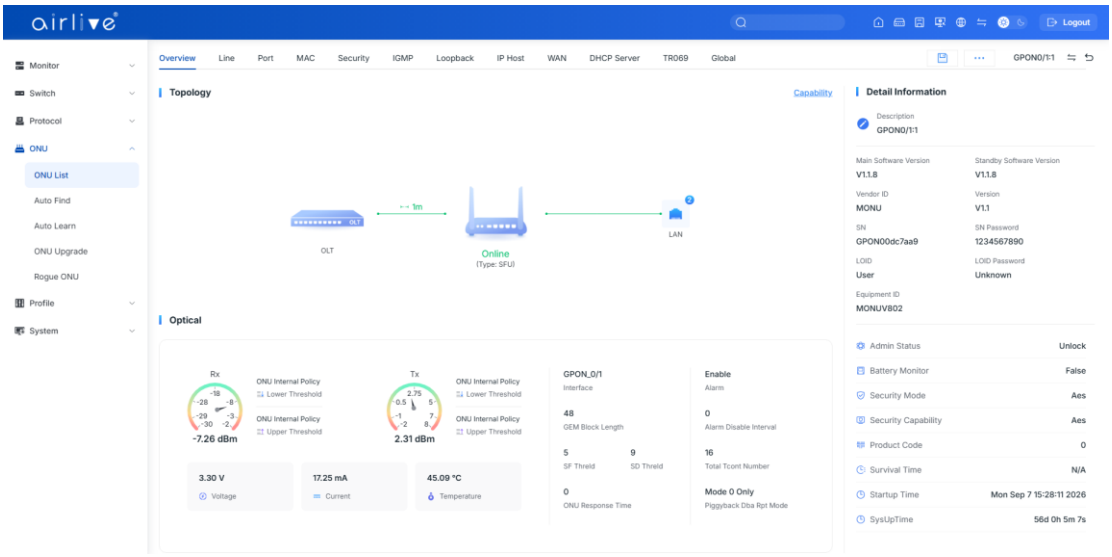


Figure 5.1-3: Overview

5.1.1.1.1.2 Line

5.1.1.1.1.2.1 Tcont

ONU → ONU List → ONU List → ONU List → Configuration → Line → Tcont

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

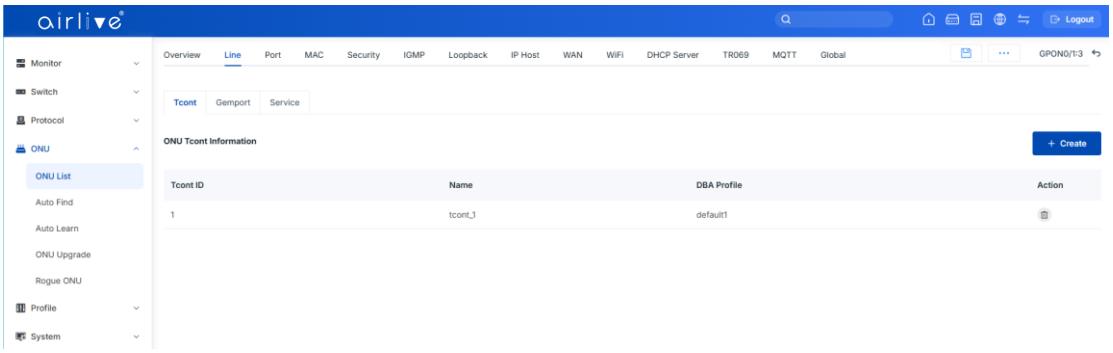


Figure 5.1-4: Create Tcont

5.1.1.1.1.2.2 Gemport

ONU → ONU List → ONU List → ONU List → Configuration→ Line → Gemport

Create Gemport ID and bind Tcont ID.

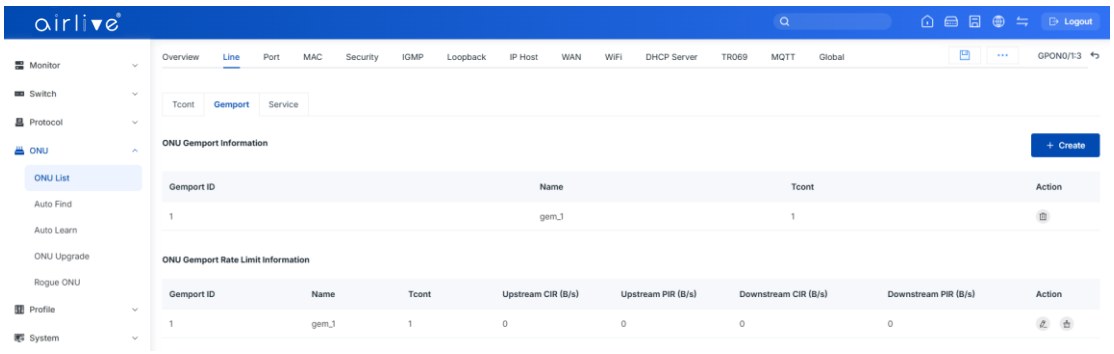


Figure 5.1-5: Create gemport

5.1.1.1.1.2.3 Service

ONU → ONU List → ONU List → ONU List → Configuration → Line → Service

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

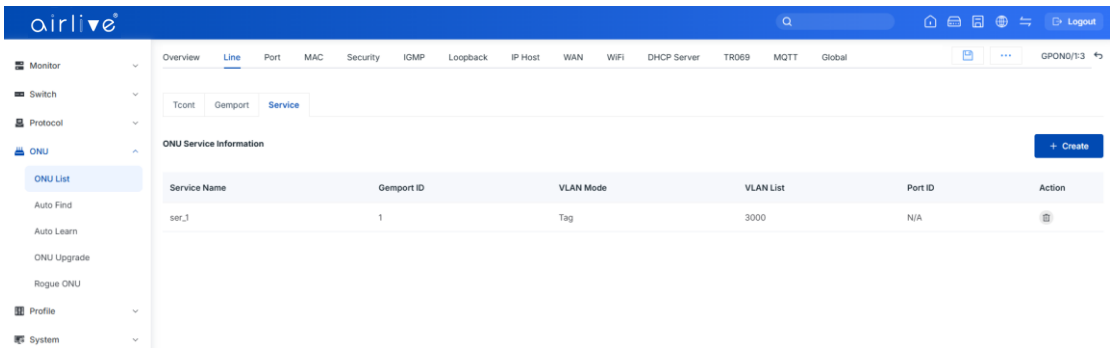


Figure 5.1-6: Create service

5.1.1.1.1.3 Port

5.1.1.1.1.3.1 Port Basic

ONU → ONU List → ONU List → ONU List → Configuration → Port → Port Basic

Set the basic configuration and speed limit of the ONU LAN port.

Please note that you can select the LAN port to configure on the ONU Port.

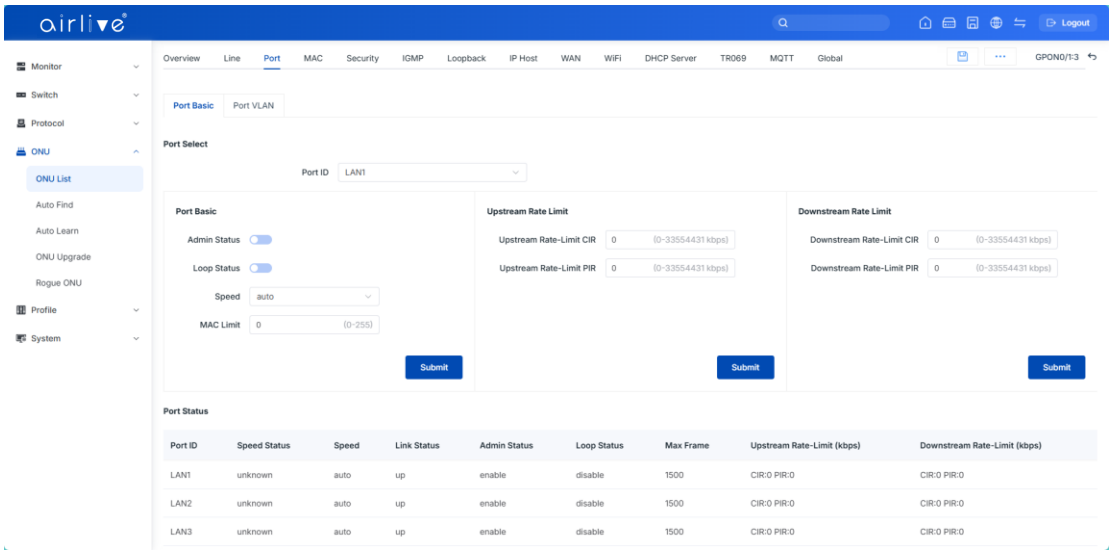


Figure 5.1-7: ONU Port Basic

5.1.1.1.1.3.2 PortVlan

ONU → ONU List → ONU List → ONU List → Configuration → Port → PortVlan

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

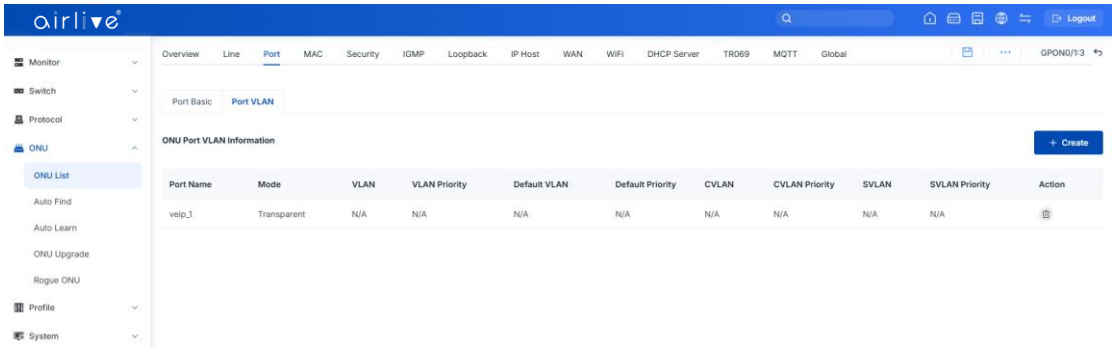


Figure 5.1-8: Configure port VLAN mode

5.1.1.1.1.3.3 Bind Mode

ONU → ONU List → ONU List → ONU List → Configuration → Port → 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.

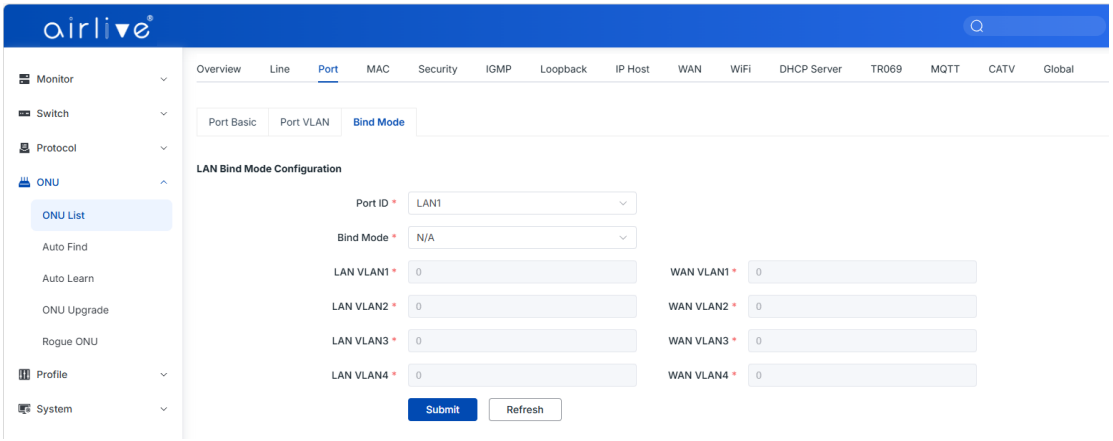


Figure 5.1-9: LAN Bind Mode Configuration

5.1.1.1.1.4 MAC

5.1.1.1.1.4.1 MAC

ONU → ONU List → ONU List → ONU List → Configuration → MAC → MAC

Configure the MAC counts limit based on ONU or Gemport, and 0 means there is no limit.

This interface can also display the learned MAC addresses of each LAN port of the ONU.

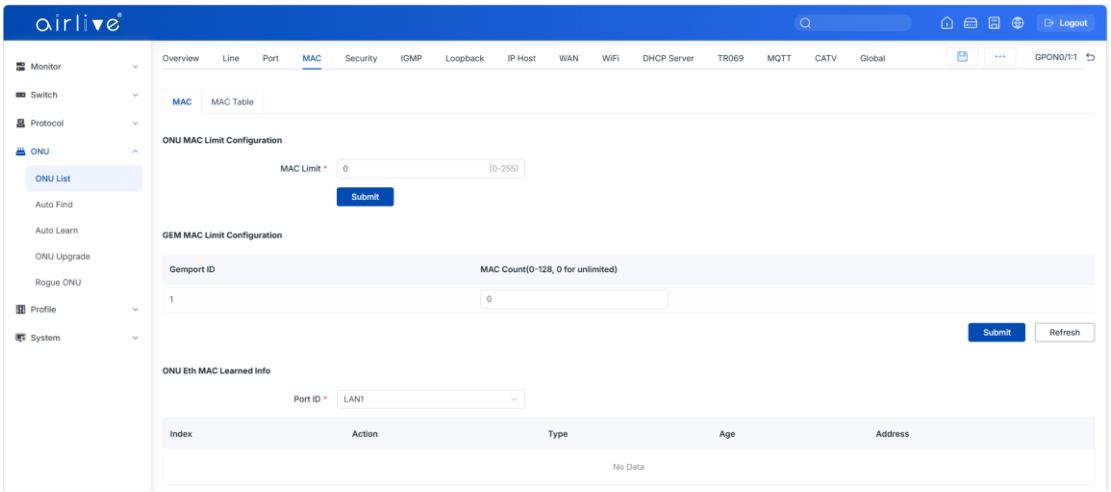


Figure 5.1-10: MAC Limit

5.1.1.1.1.4.2 MAC Table

ONU → ONU List → ONU List → ONU List → Configuration → MAC → MAC Table

This page configures ONU MAC address limits (PON/LAN) and aging time, and displays the learned MAC address table.

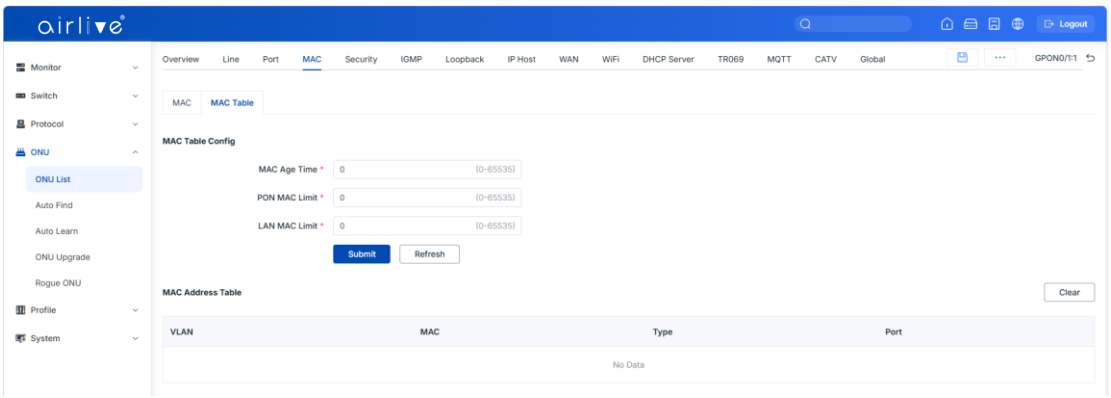


Figure 5.1-11: MAC Table

5.1.1.1.1.5 Security

ONU → ONU List → ONU List → ONU List → Configuration → Security

ONU Security is configured by private OMCI between OLT and ONU.

It allows you to modify ONU passwords, firewall level, and device access rules.

Please note that if you need to enable the device's access protocol, you need to first modify the firewall level to low or disabled.

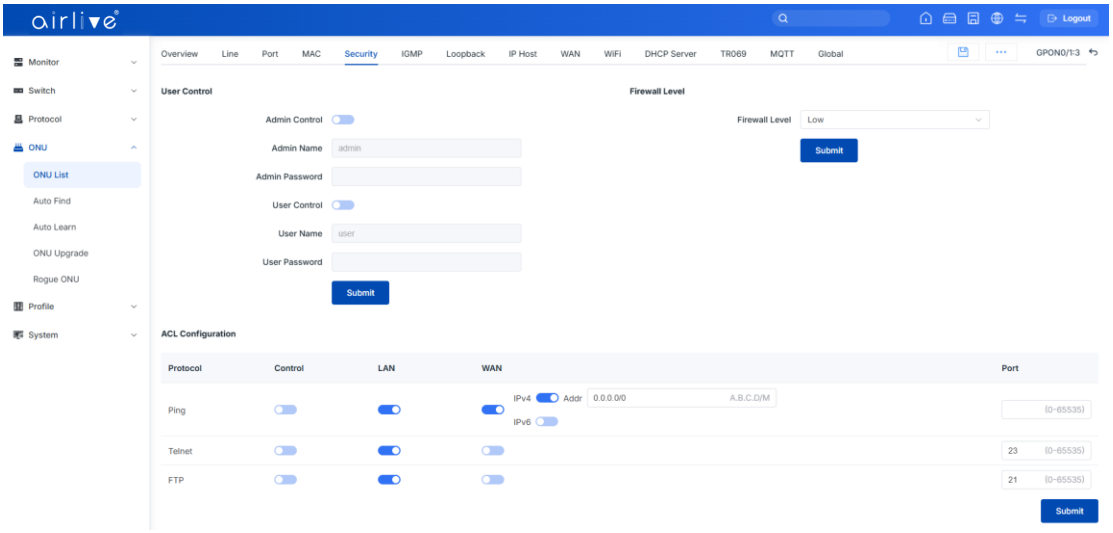


Figure 5.1-12: Security Configuration

5.1.1.1.1.6 IGMP

5.1.1.1.1.6.1 IGMP

ONU → ONU List → ONU List → ONU List → Configuration → IGMP → IGMP

This tab allows you to configure ONU private IGMP-related parameters, supports configuration of IGMP group limit, bandwidth limit, and IGMP profile binding.

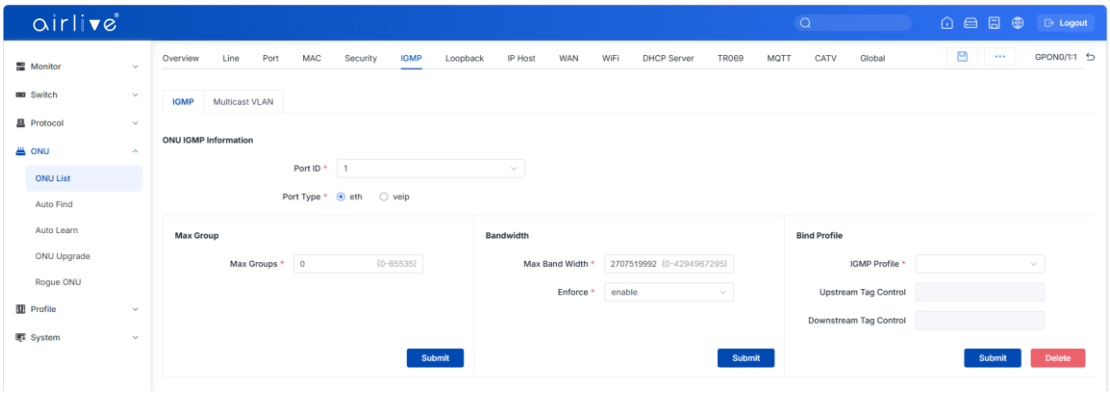


Figure 5.1-13: IGMP

5.1.1.1.1.6.2 Multicast VLAN

ONU → ONU List → ONU List → ONU List → Configuration → IGMP → Multicast VLAN

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

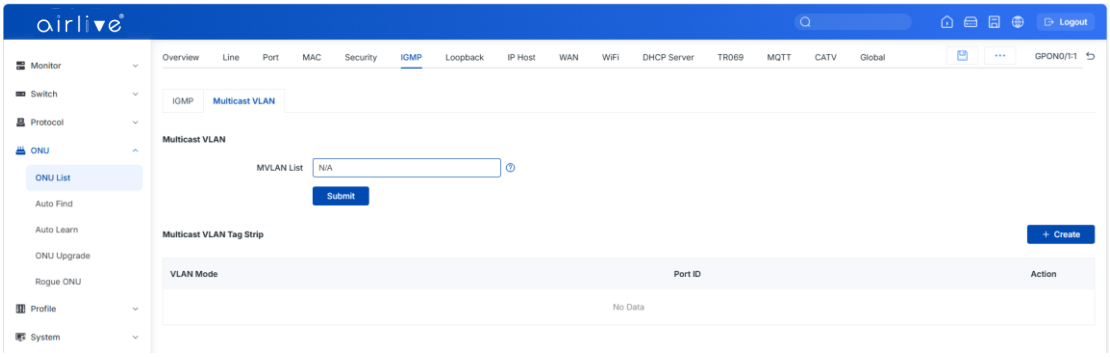


Figure 5.1-14: Configure multicast VLAN

5.1.1.1.1.7 Loopback

ONU → ONU List → ONU List → ONU List → Configuration → Loopback

ONU Loopback Detection is configured by private OMCI between OLT and ONU. It supports configuring the loop detection status and parameters of the ONU.

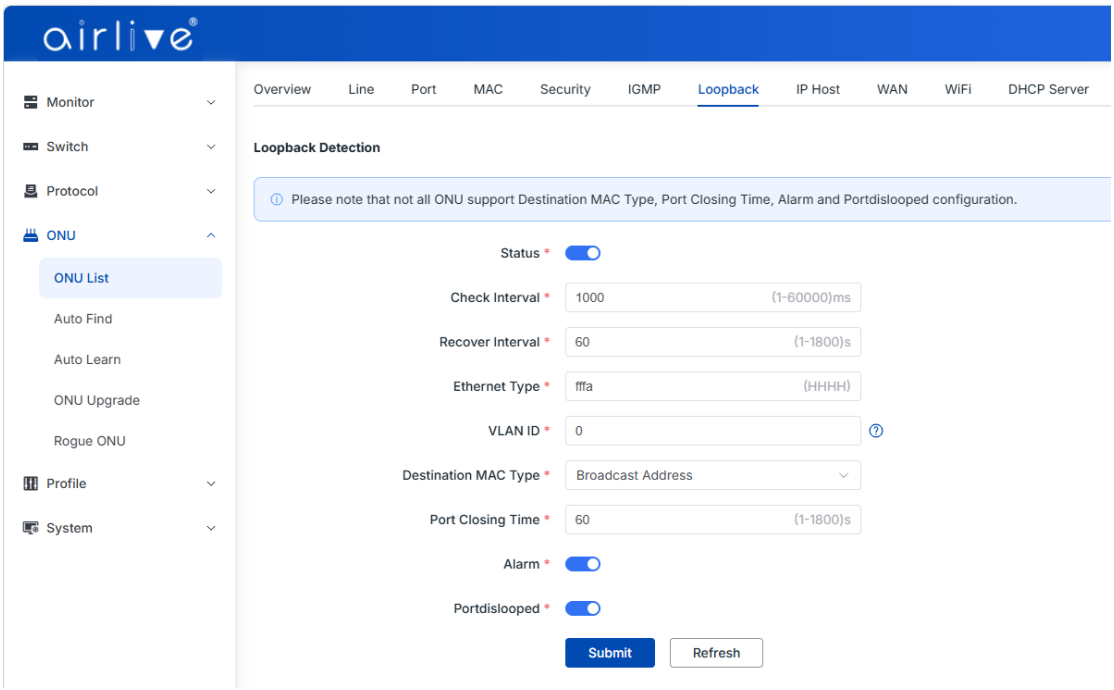


Figure 5.1-15: Loopback Configuration

5.1.1.1.1.8 Ip Host

ONU → ONU List → ONU List → ONU List → Configuration → Ip Host

Create IP host for ONU wan connection. It is used for ONU management.

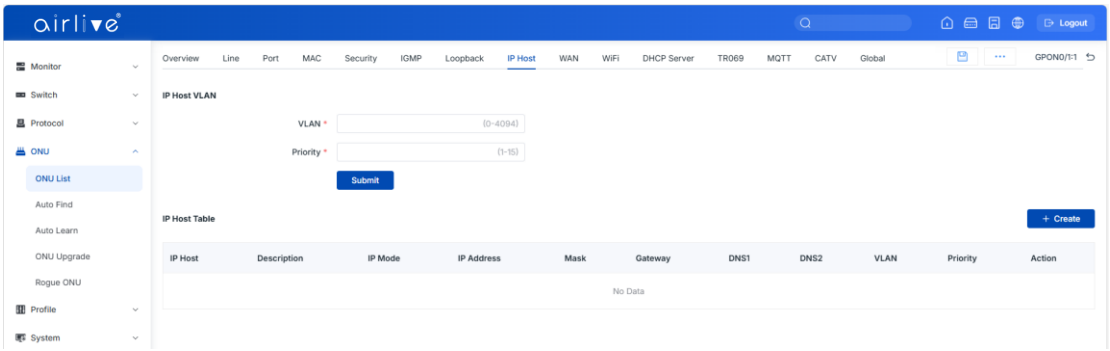


Figure 5.1-16: Configure IP host

5.1.1.1.1.9 WAN

ONU → ONU List → ONU List → ONU List → Configuration → 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.

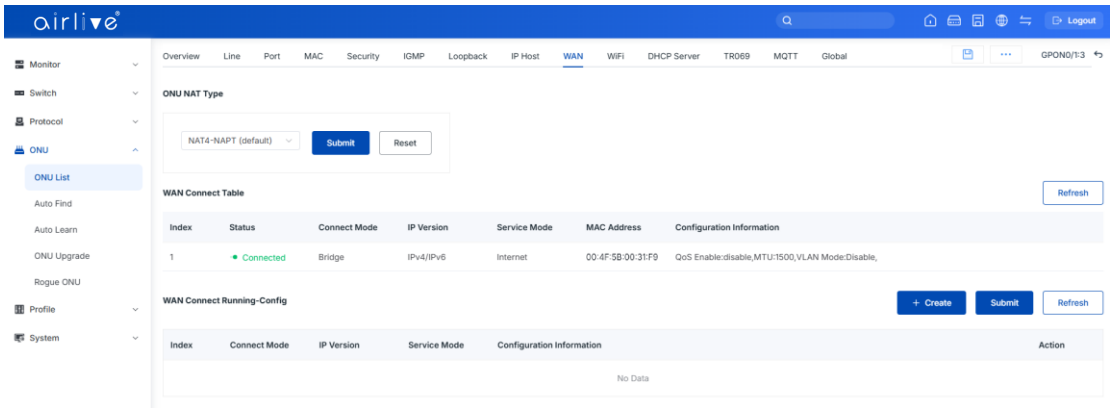


Figure 5.1-17: Configure WAN

5.1.1.1.1.10 WIFI

ONU → ONU List → ONU List → ONU List → Configuration → 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.

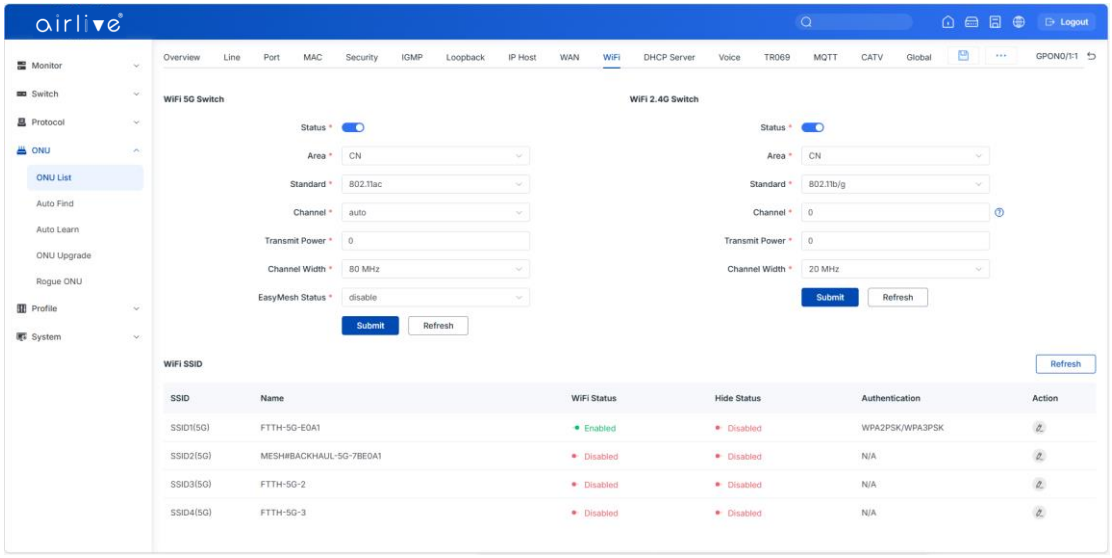


Figure 5.1-18: WIFI Configuration

5.1.1.1.1.11 DHCP Server

ONU → ONU List → ONU List → ONU List → Configuration → 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.

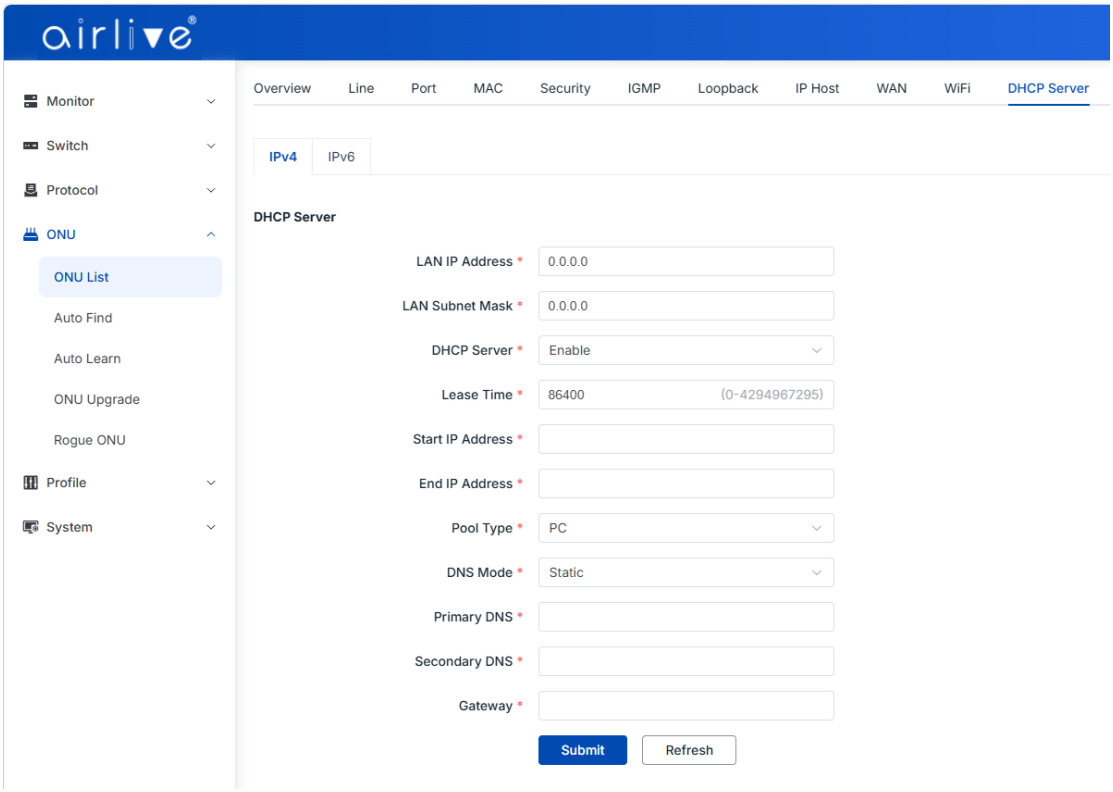


Figure 5.1-19: ONU DHCP IPv4 Server

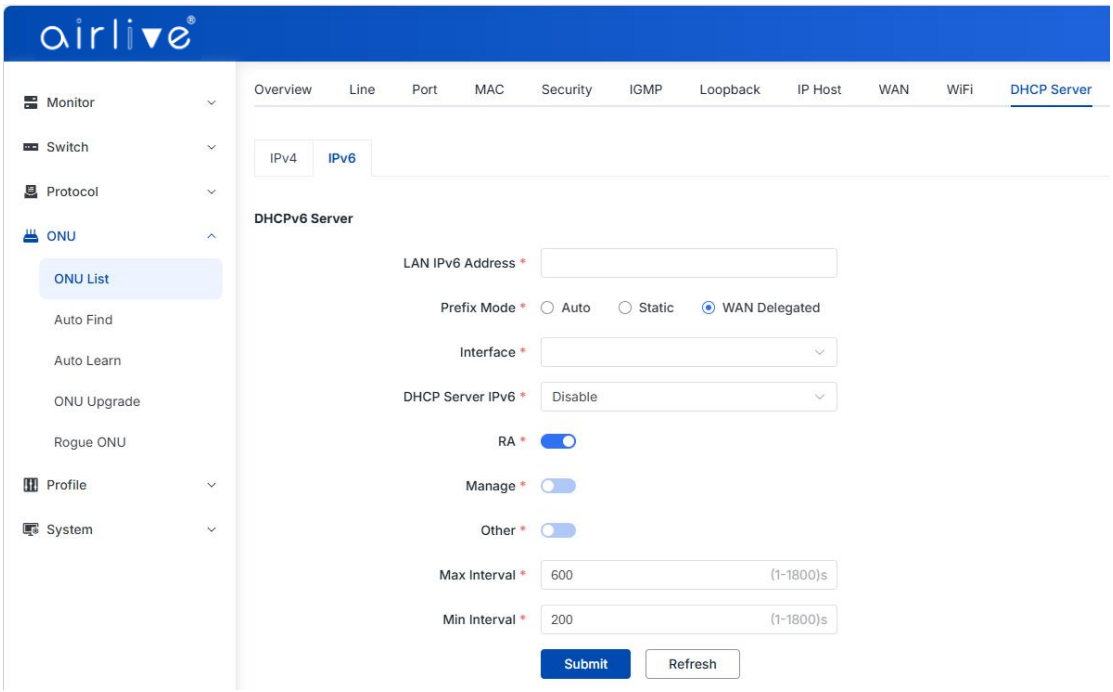


Figure 5.1-20: ONU DHCP IPv6 Server

5.1.1.1.1.12 Voice

5.1.1.1.1.12.1 VoIP

ONU → ONU List → ONU List → ONU List → Configuration → Voice →

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.

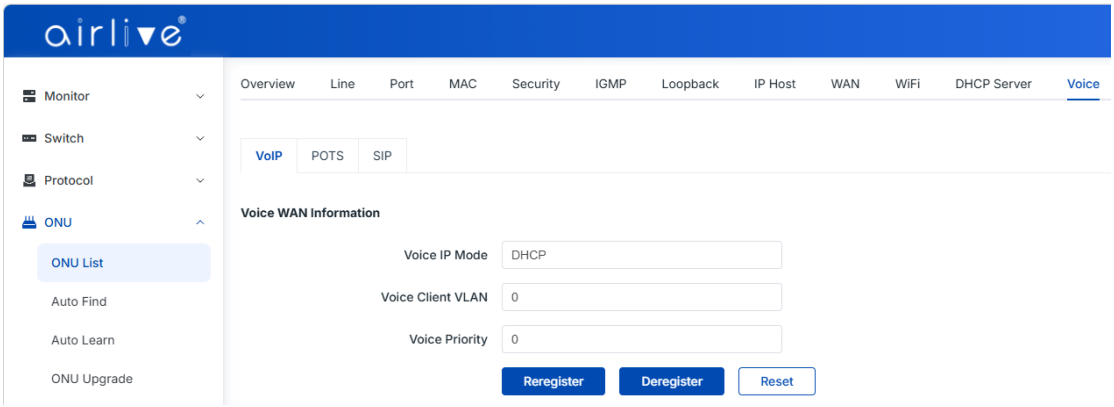


Figure 5.1-21: Voice Wan Information

5.1.1.1.1.12.2 POTS

ONU → ONU List → ONU List → ONU List → Configuration → Voice → POTS

ONU VoIP POTS account, password and other VOIP parameters of POTS can be configured on this page; the length of User account and User password and User name can't be more than 32 characters.

When the connected ONU supports VOIP, the option "POTS" can be shown on this page.

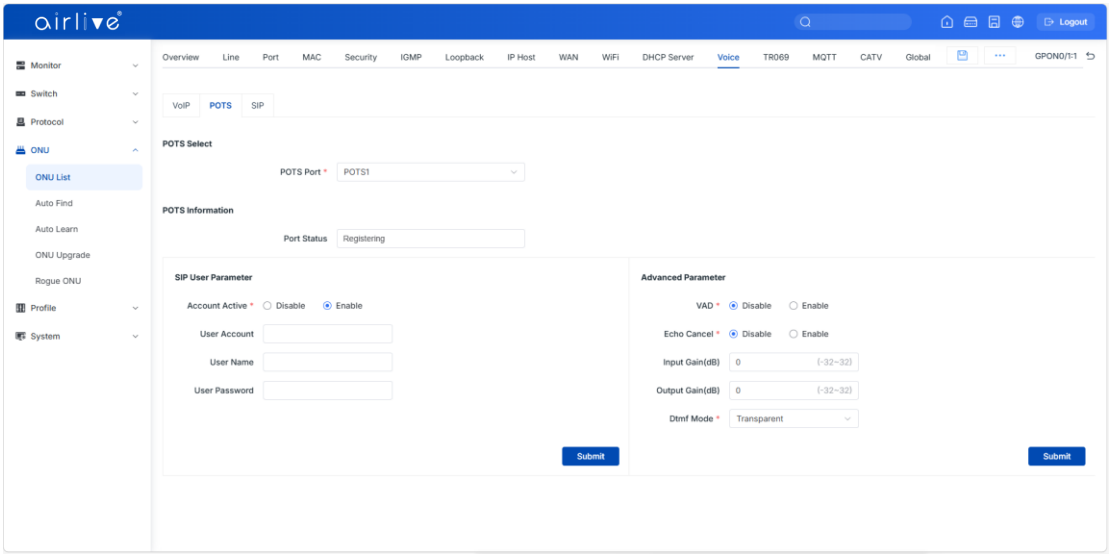


Figure 5.1-22: POTS Configuration

5.1.1.1.1.12.3 SIP

ONU → ONU List → ONU List → ONU List → Configuration → Voice → 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.

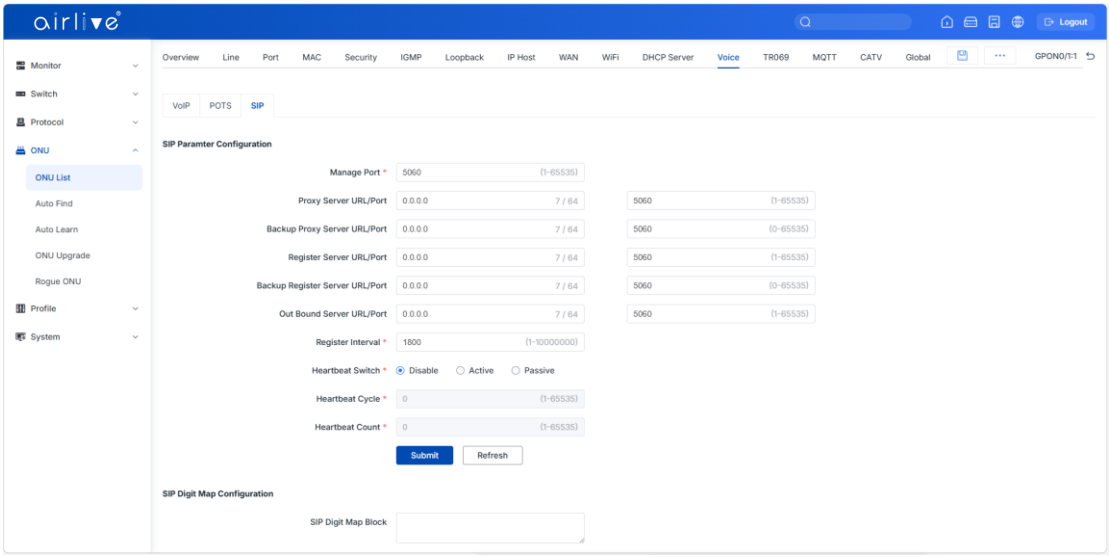


Figure 5.1-23: SIP Parameter

5.1.1.1.1.13 TR069

ONU → ONU List → ONU List → ONU List → Configuration → TR069

ONU TR069 is configured by private OMCI between OLT and ONU.

It supports configuring TR069 management parameters and STUN server configurations.

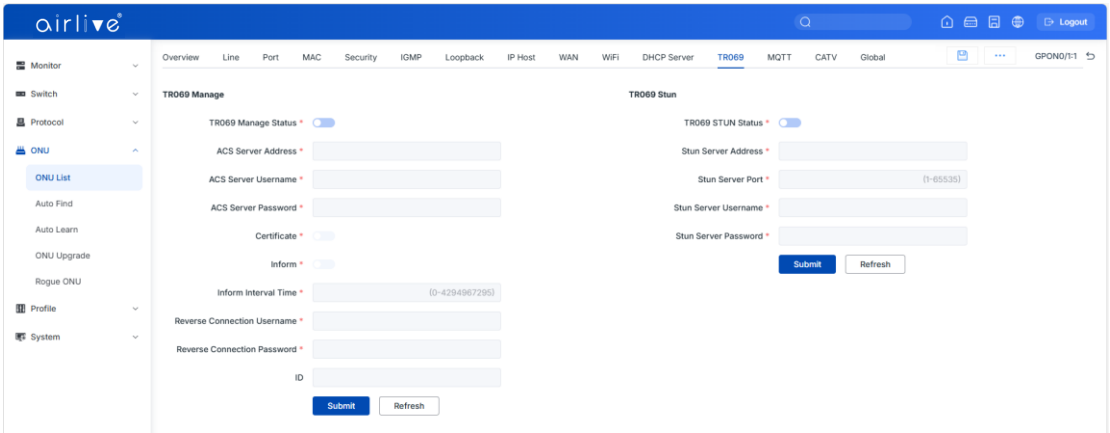


Figure 5.1-24: TR069 Configuration

5.1.1.1.1.14 MQTT

ONU → ONU List → ONU List → ONU List → Configuration → MQTT

MQTT page support configure ONU's MQTT configuration.

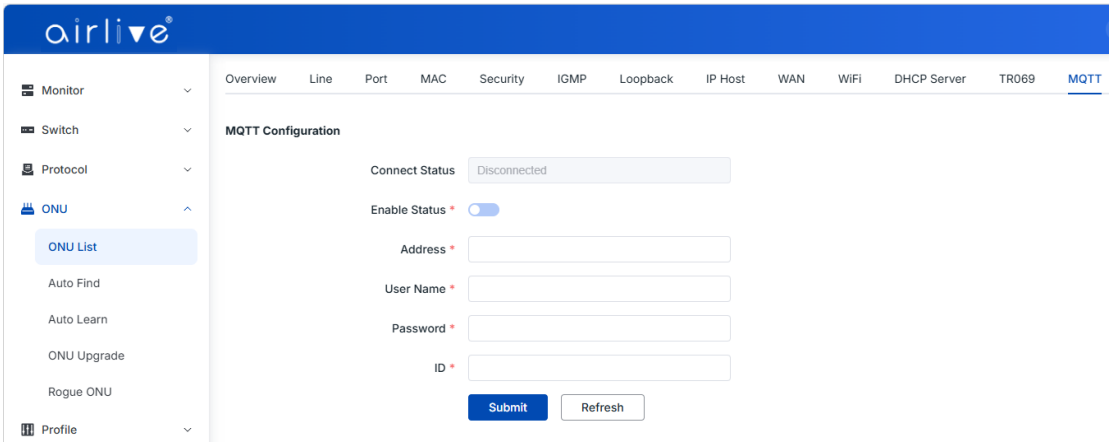


Figure 5.1-25: MQTT Configuration

5.1.1.1.1.15 CATV

ONU → ONU List → ONU List → ONU List → Configuration → CATV

This page configures ONU CATV service by setting admin state and power enable status.

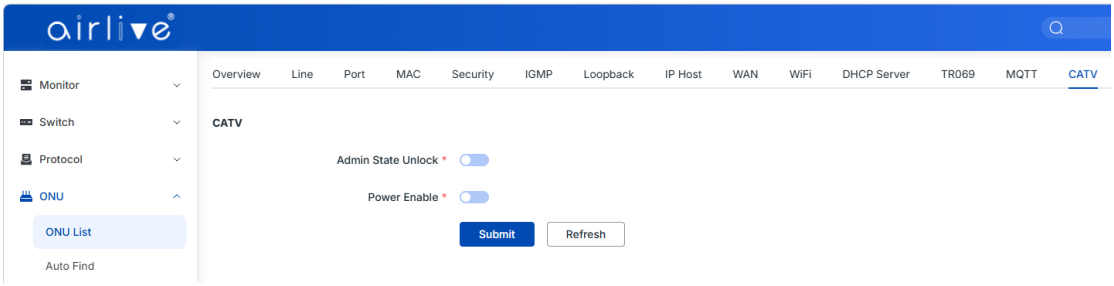


Figure 5.1-26: Catv Configuration

5.1.1.1.1.16 Global

ONU → ONU List → ONU List → ONU List → Configuration → Global

Misc includes other features of ONUs configured by private OMCI, such as CATV control, and so on.

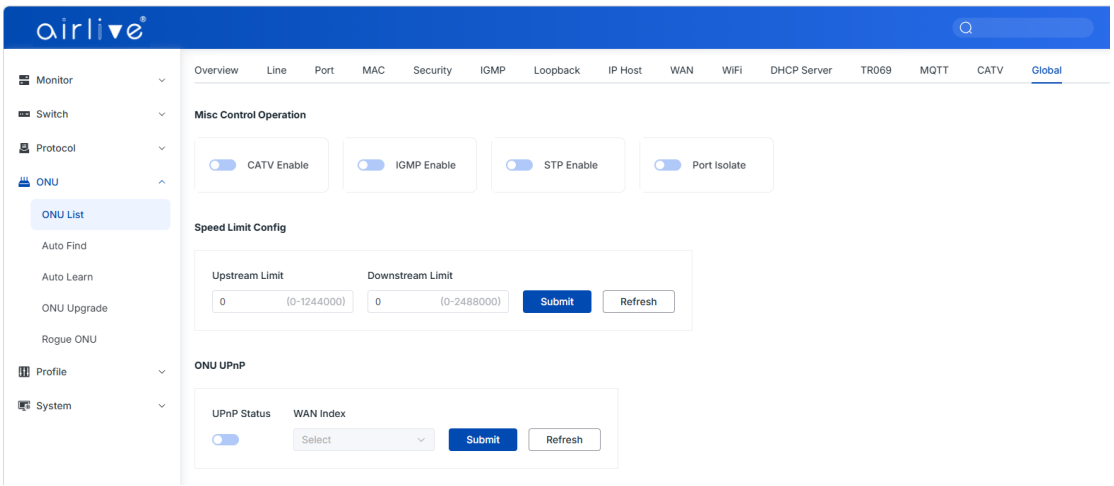


Figure 5.1-27: Global Configuration

5.1.1.1.2 Activate/Deactivate

ONU → ONU List → ONU List → ONU List → Deactivate (Activate)

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

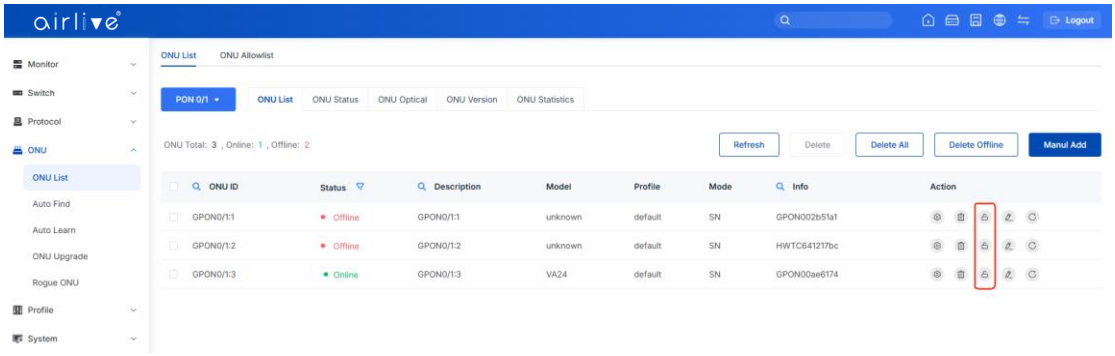


Figure 5.1-28: Deactivate/Activate ONU

5.1.1.1.3 Delete

ONU → ONU List → ONU List → ONU List → Delete

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

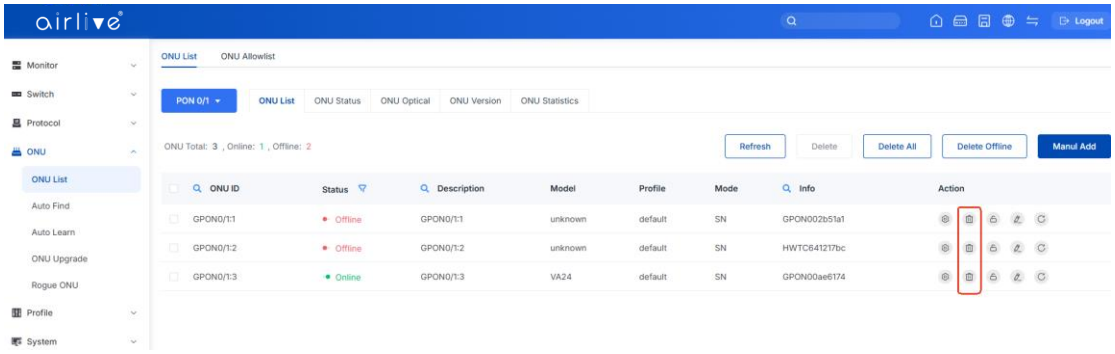
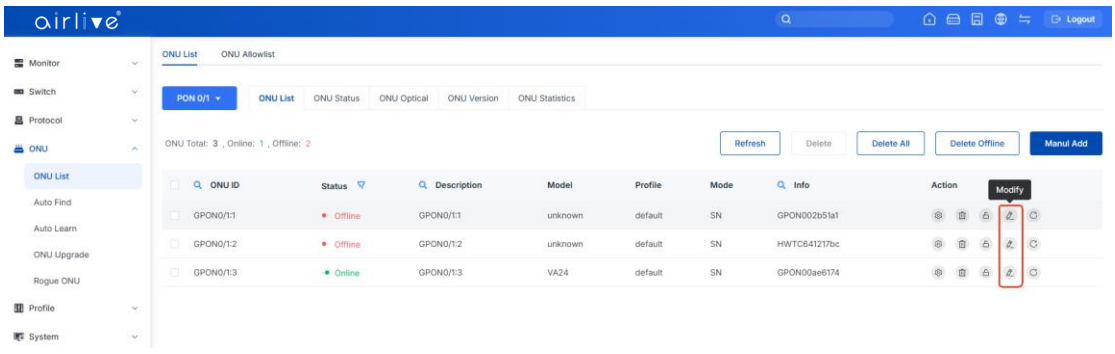


Figure 5.1-29: Delete ONU

5.1.1.1.4 Modify

ONU → ONU List → ONU List → ONU List → Modify

This is used to modify ONU Profile.



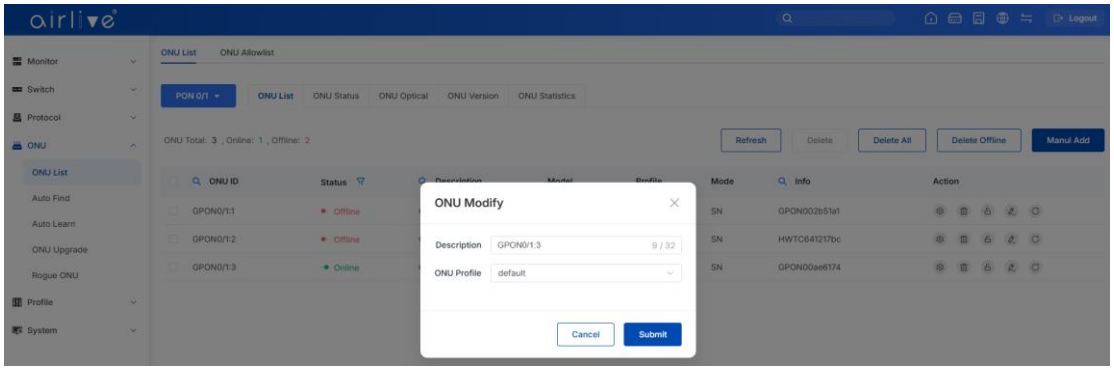


Figure 5.1-30: Modify ONU Profile

5.1.1.1.5 Reboot

ONU → ONU List → ONU List → ONU List → Reboot

Reboot ONU which you selected.

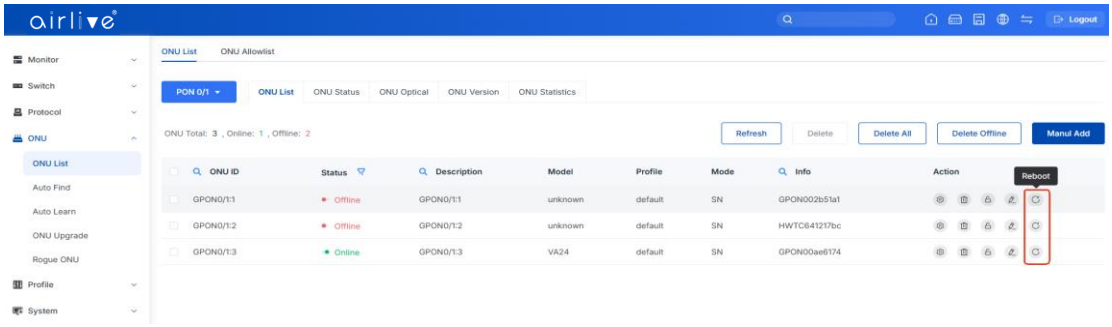


Figure 5.1-31: Reboot ONU

5.1.1.1.6 Manual Add

ONU → ONU List → ONU List → ONU List → Manual Add

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

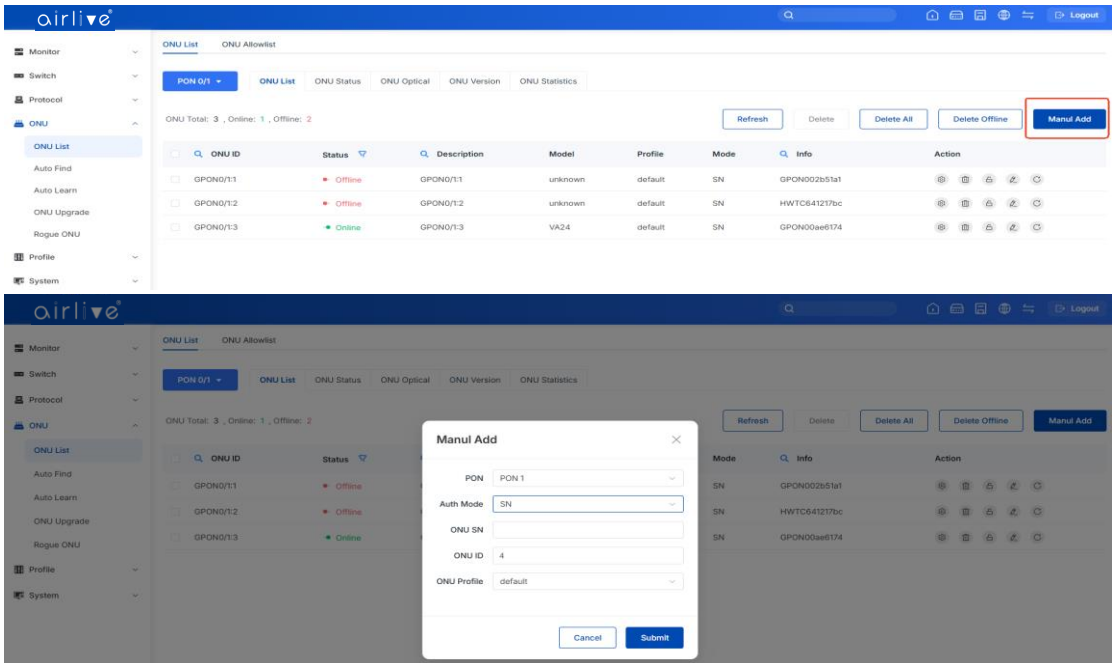


Figure 5.1-32: Add ONU Manually

5.1.1.2 ONU Status

ONU → ONU List → ONU List → 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.

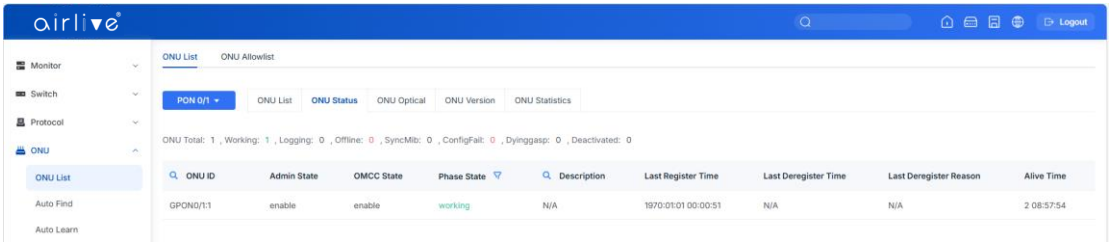


Figure 5.1-33: ONU Status

5.1.1.3 ONU Optical

ONU → ONU List → ONU List → ONU Optical

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.

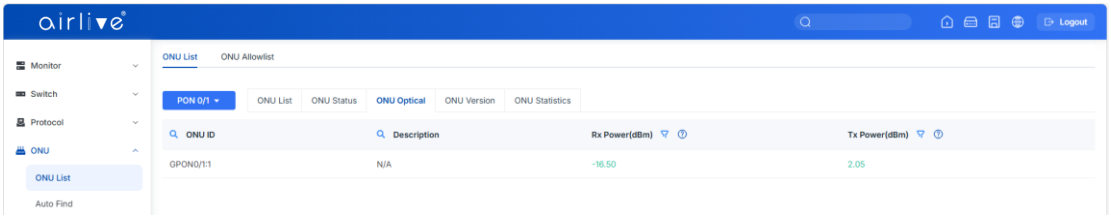


Figure 5.1-34: ONU Optical Info

5.1.1.4 ONU Version

ONU → ONU List → ONU List → ONU Version

This page displays the main and standby software versions of the ONU. You can display the version information of a batch of ONUs in the list.

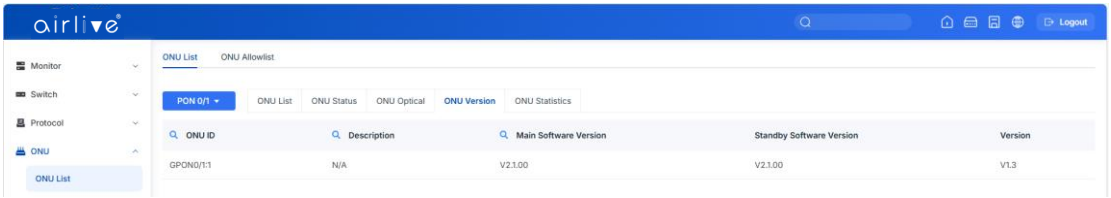


Figure 5.1-35: ONU Version Info

5.1.1.5 ONU Statistics

ONU → ONU List → ONU List → ONU Statistics

This page displays the number of incoming and outgoing packets for batch ONUs.

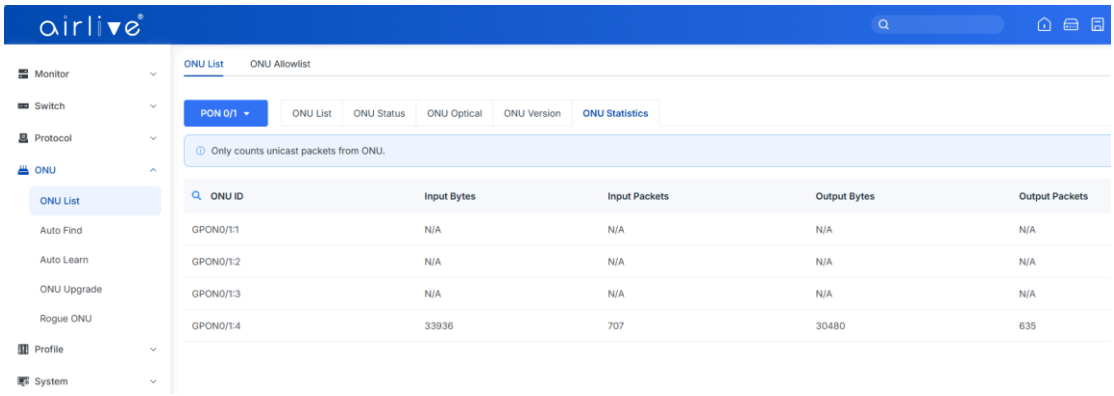


Figure 5.1-36: ONU Statistics Info

5.1.2 ONU Allowlist

ONU → ONU List → ONU Allowlist

You can set up an Allowlist on this page.

Allowlist can restrict ONU registration based on SN. It allows ONUs within one or more segments to register, while other ONUs cannot register and go online.

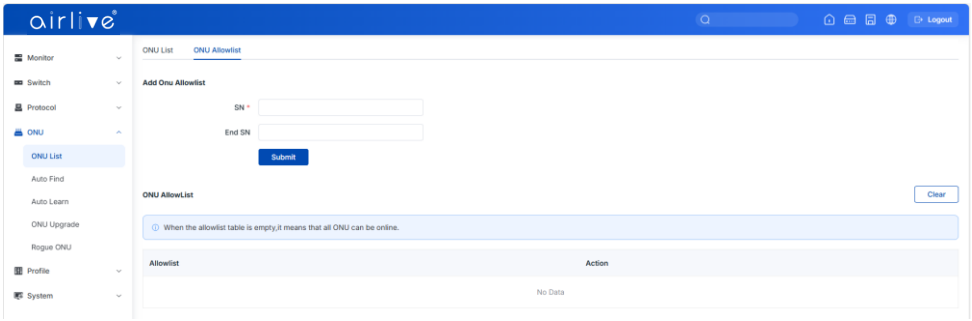


Figure 5.1-37: ONU Allowlist

5.2 Auto Find

This chapter is about the configuration and management of automatic discovery ONUs.

5.2.1 Automatic Discovery

ONU → Auto Find → Automatic Discovery

All ONUs which are authenticated failed or not authenticated will be displayed in this interface. You can check the serial number of ONUs. Then click Modify to Authenticate ONU.

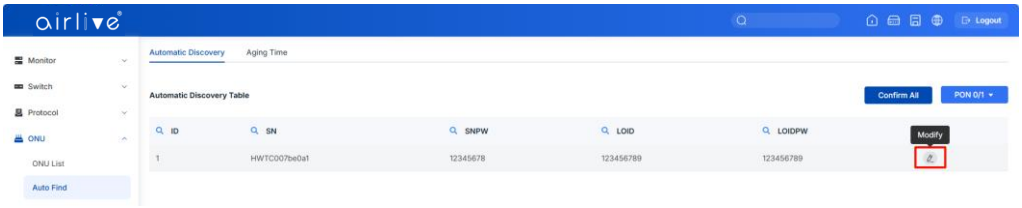


Figure 5.2-1: Automatic Discovery

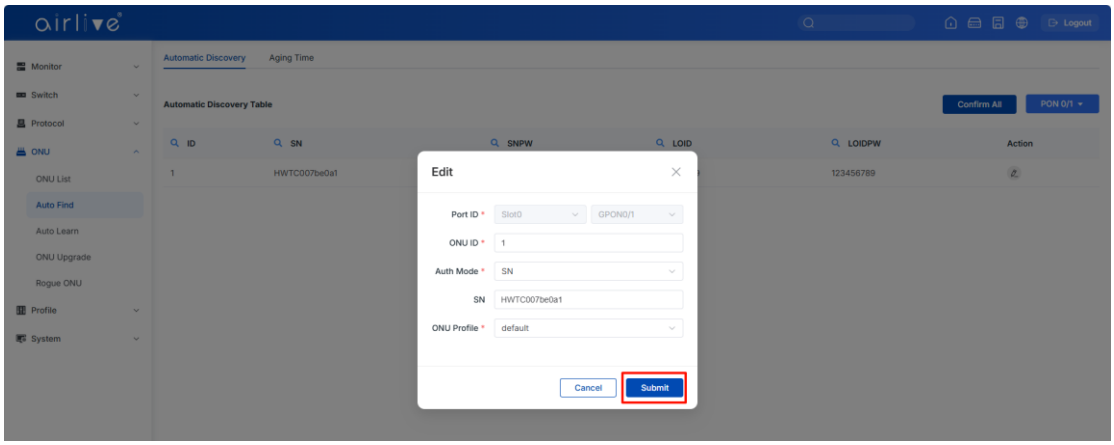


Figure 5.2-2: Add ONU

5.2.2 Aging Time

ONU → Auto Find → Aging Time

It allows you to configure the retention time of automatically discovered ONU information. The default aging time is 5 minutes.

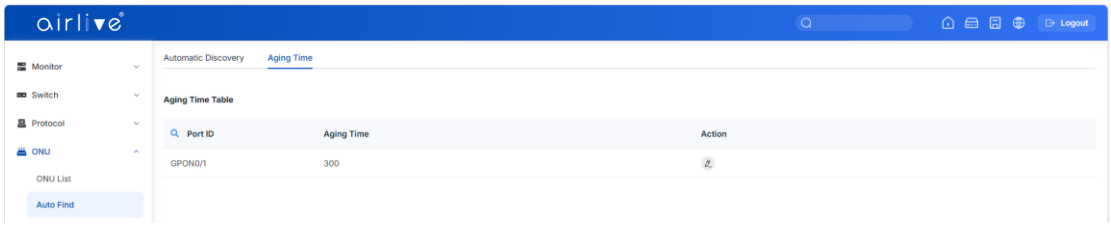


Figure 5.2-3: Aging Time

5.3 Auto Learn

5.3.1 Auto Learn

ONU → Auto Learn → Auto Learn

ONU can automatically authenticate after enabling PON port automatic learning. At the same time, OLT supports automatic binding templates based on PON ports. There are also plug and play enabled switches on this interface.

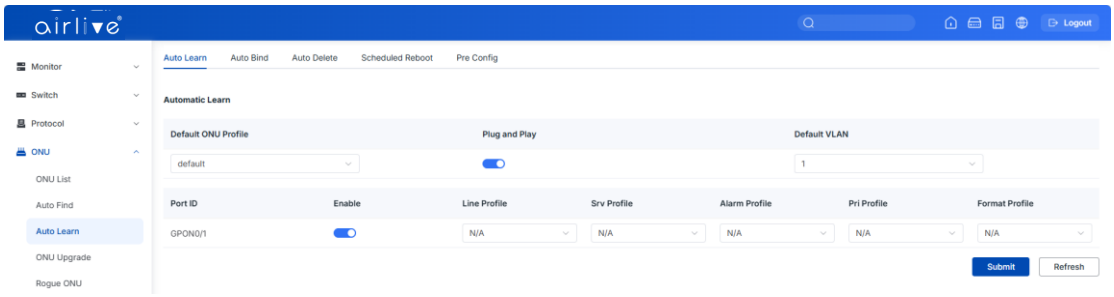


Figure 5.3-1:ONU AutoLearn

5.3.2 Auto Bind

ONU → Auto Learn → Auto Bind
Input the Equipment ID and bind the profile you need.
Note: you must create a profile first.

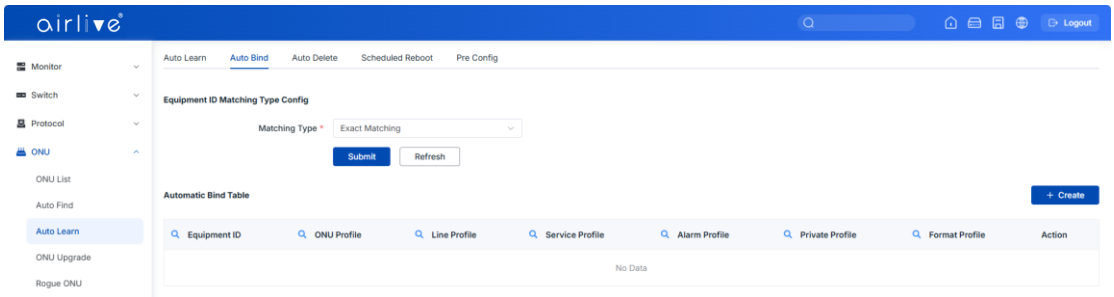


Figure 5.3-2: ONU AutoBind

5.3.3 Auto Delete

ONU → Auto Learn → Auto Delete
It supports periodic checking and deleting offline ONUs and this feature is disabled by default.

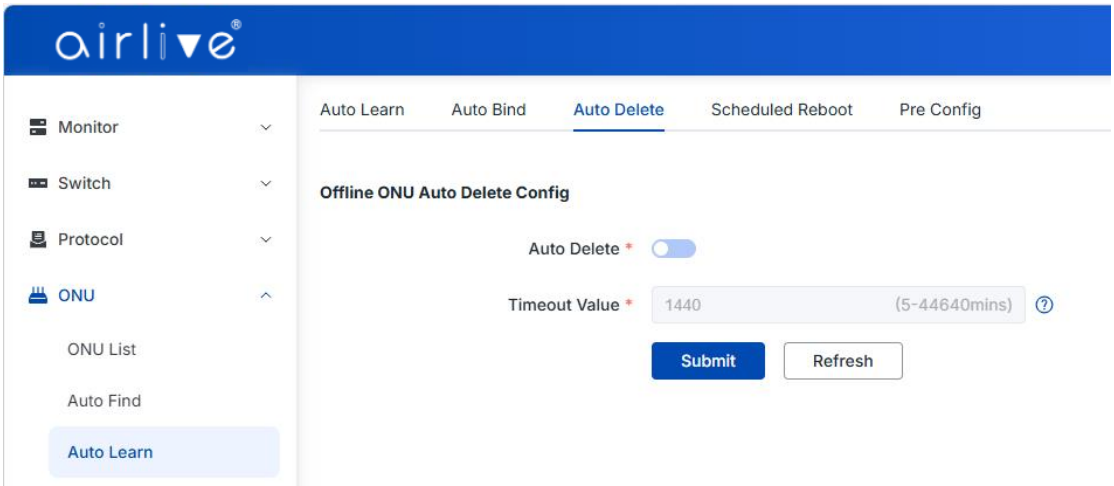


Figure 5.3-3: ONU AutoDelete

5.3.4 Scheduled Reboot

ONU → Auto Learn → Scheduled Reboot
Configure ONU to automatically restart based on time.

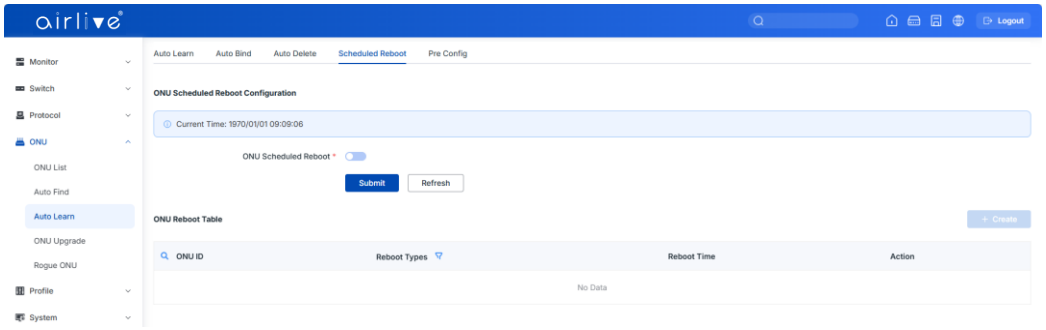


Figure 5.3-4: ONU Scheduled Reboot

5.3.5 Pre Config

ONU → Auto Learn → Pre Config
Manually add a Pre-registration configuration to the ONU list in PON, and when the ONU is registered with that ID, it will automatically bind the configuration settings.

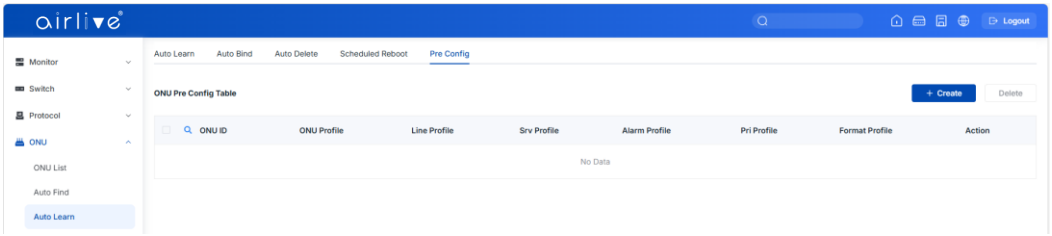


Figure 5.3-5: ONU Pre-Config

5.4 ONU Upgrade

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

5.4.1 UpLoad Image

ONU → ONU Upgrade → Upload Image
Upload the required ONU firmware image. The image will be stored in the OLT's flash memory.

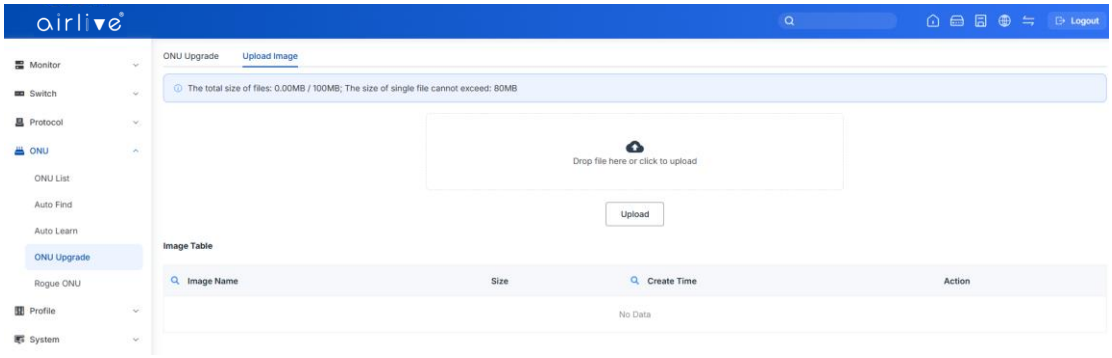


Figure 5.4-1: Upload Image

5.4.2 ONU Upgrade

5.4.2.1 Manual Upgrade

ONU → ONU Upgrade → ONU Upgrade → Create → Manual Upgrade
This is the ONU Upgrade page, which displays the list of ONU firmware upgrade tasks. You can click Create to initiate a new upgrade task, choosing between Manual Upgrade (step-by-step configuration) or Auto Upgrade (automatic batch upgrade).

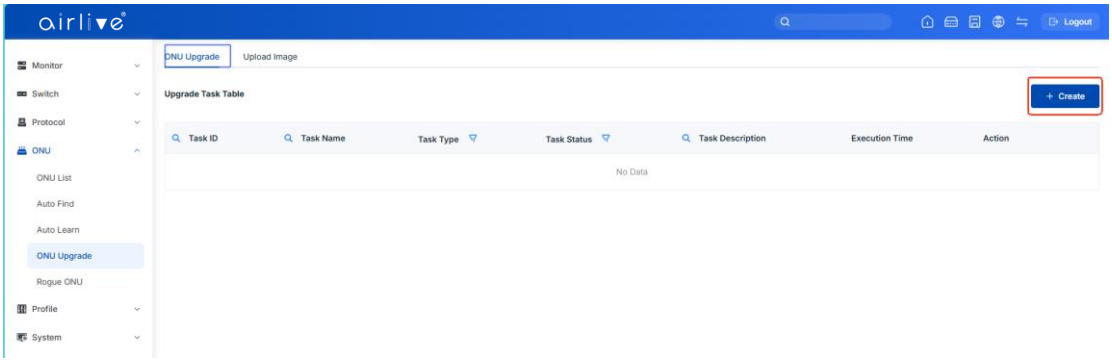


Figure 5.4-2: Create Upgrade Task

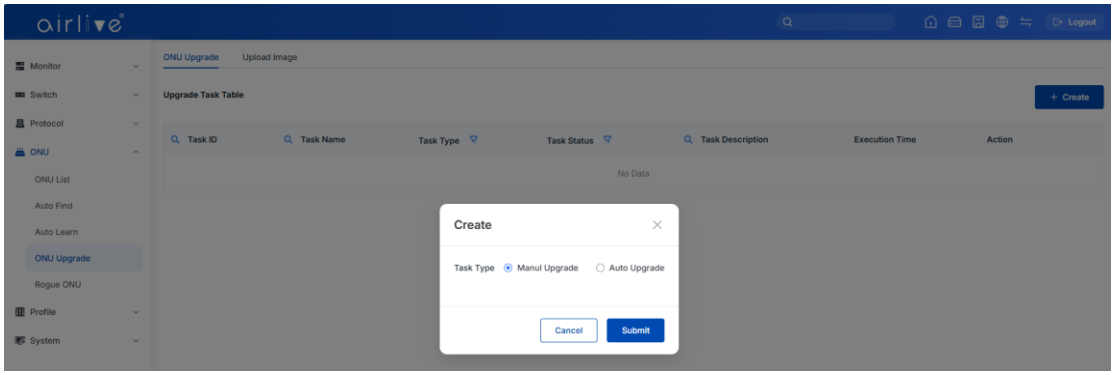


Figure 5.4-3: Select Task Type

You can configure task details (ID, name, description), select upgrade mode, and choose target firmware on Basic Info interface. For most ONU upgrade scenarios, the mixed mode is recommended.

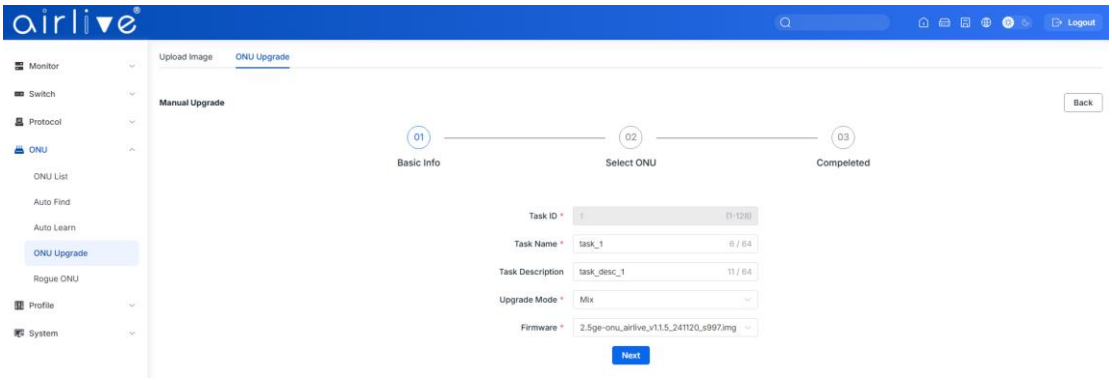


Figure 5.4-4: Manual Upgrade Basic Info

You can upgrade the same ONU model under one PON port each time.

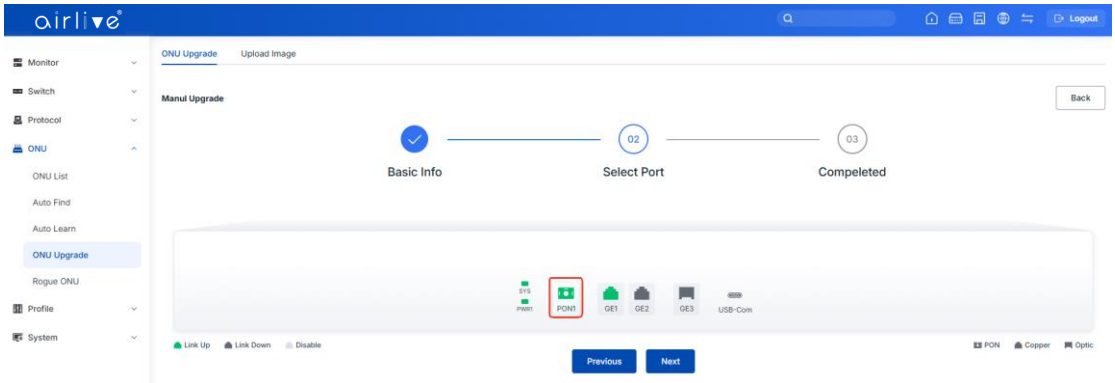


Figure 5.4-5: Select ONU

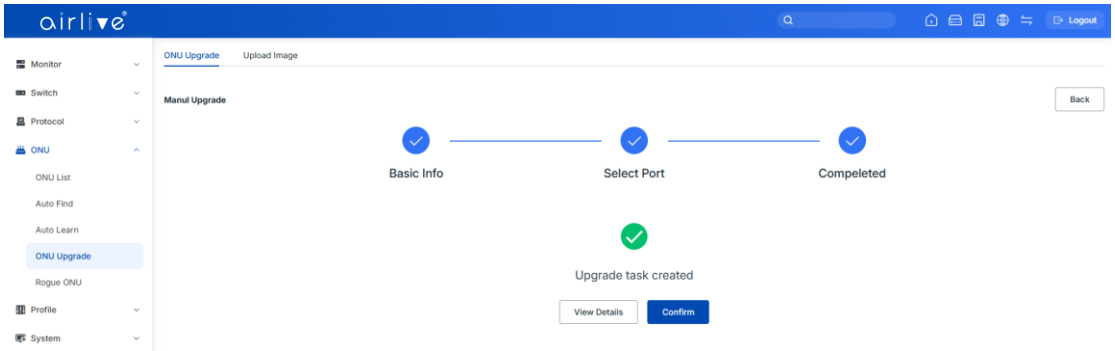


Figure 5.4-6: Upgrade task created

You can click the Detail button to check the ONU upgrade detail.

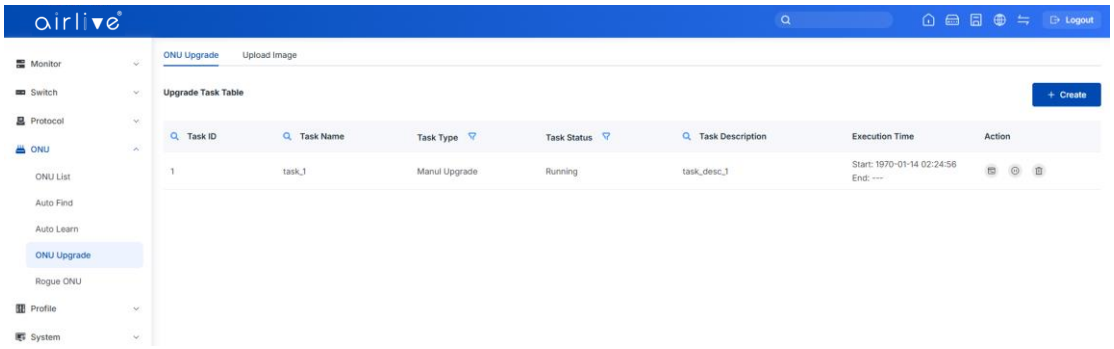


Figure 5.4-7: Check upgrade detail

The upgrading status will be shown on this page.

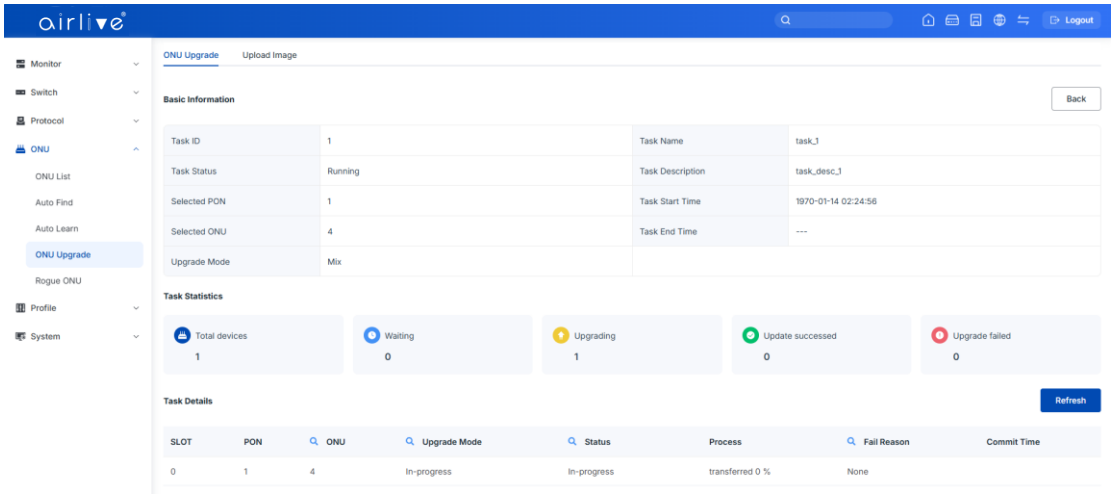


Figure 5.4-8: Upgrade Status

You can click the Stop button to halt an ongoing upgrade task,

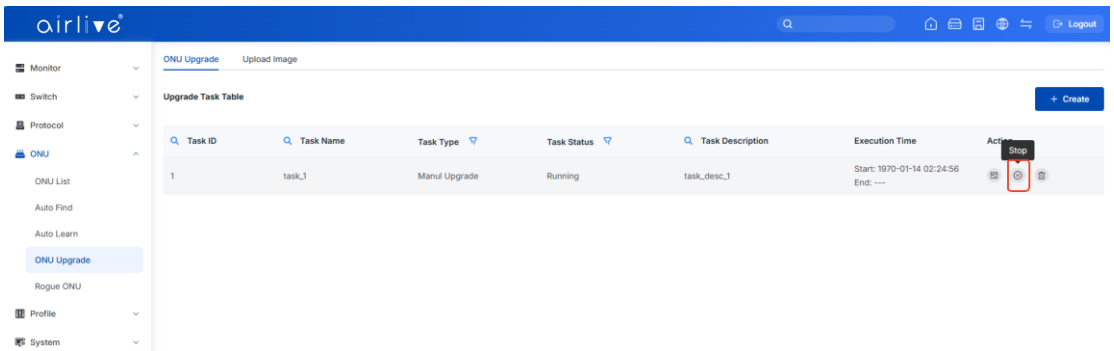


Figure 5.4-9: Stop Upgrade Task

You can click the Delete button to remove an upgrade task.

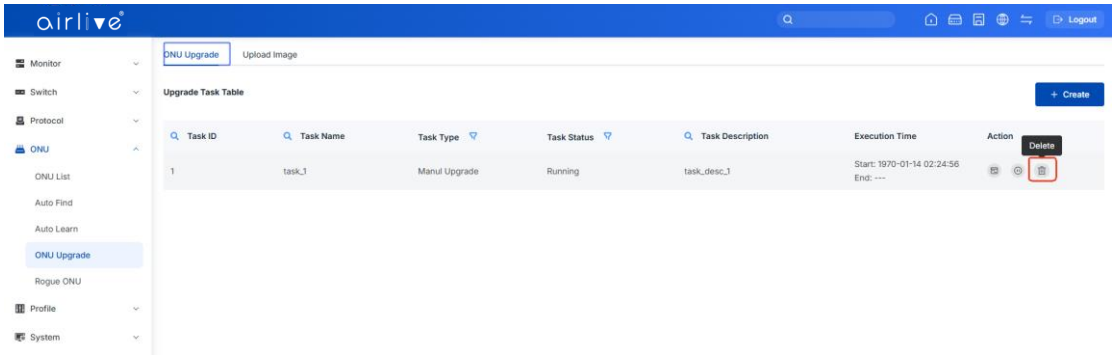


Figure 5.4-10: Delete Upgrade Task

5.4.2.2 Auto Upgrade

ONU → ONU Upgrade → ONU Upgrade → Create → 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 comes online, they will be upgraded automatically.

Each type of ONU has its own equipment ID, which you can check in ONU detail info.

Note: please upload the ONU firmware in advance on the upload image interface.

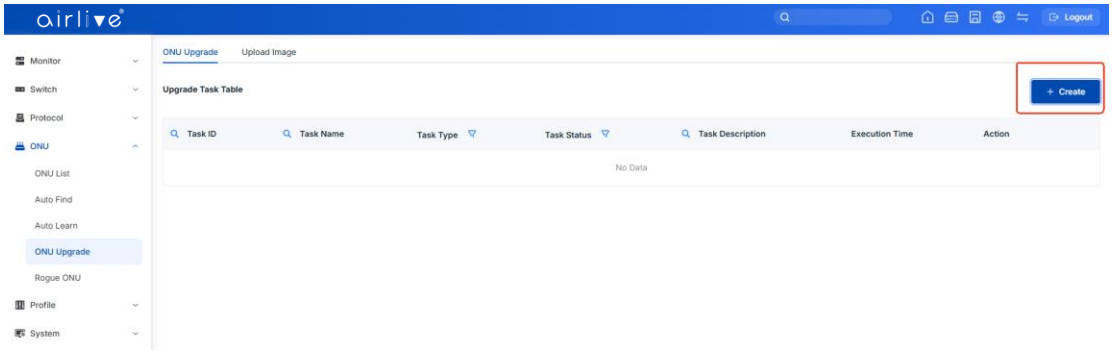


Figure 5.4-11: Create Upgrade Task

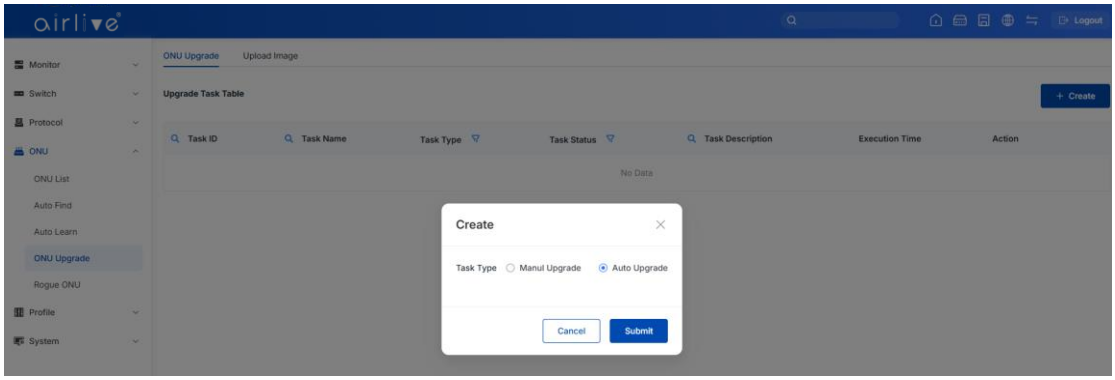


Figure 5.4-12: Select Task Type

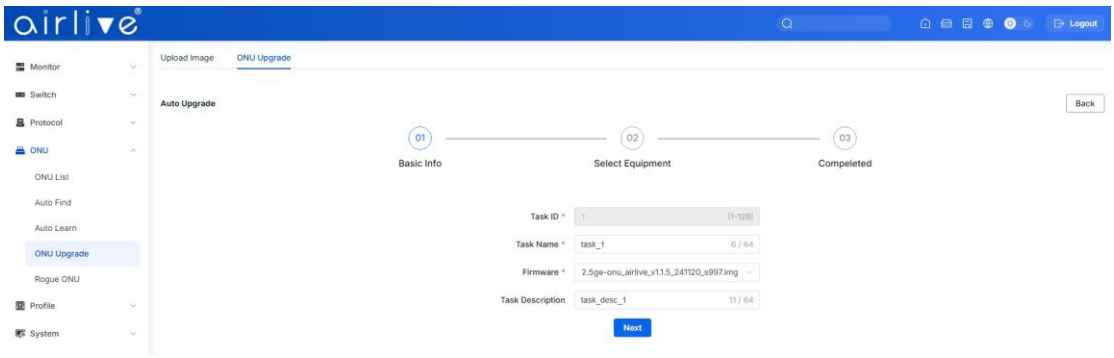


Figure 5.4-13: Auto Upgrade Basic Info

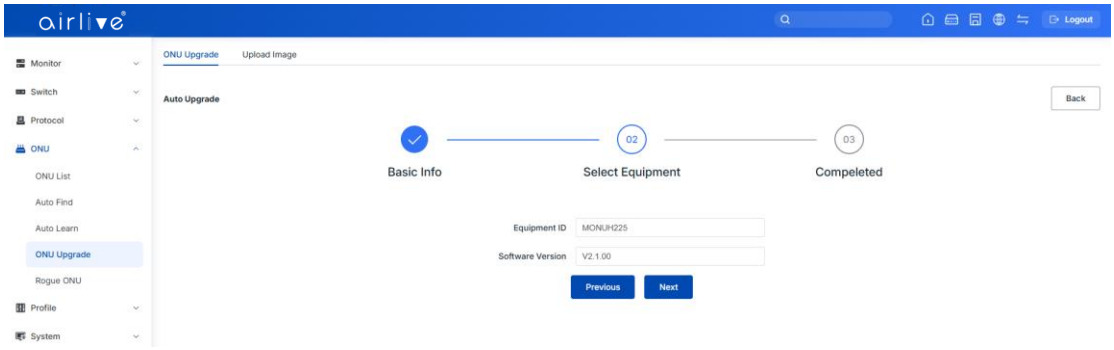


Figure 5.4-14: Select Equipment

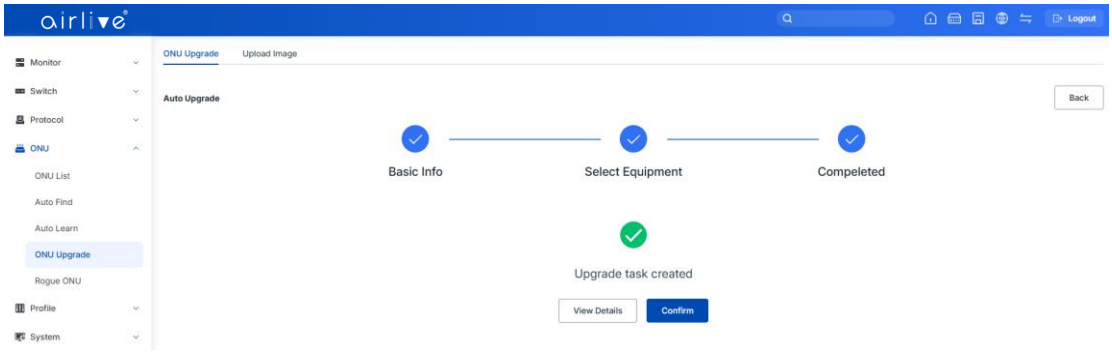


Figure 5.4-15: Upgrade task created

You can click the Detail button to check the ONU upgrade detail.

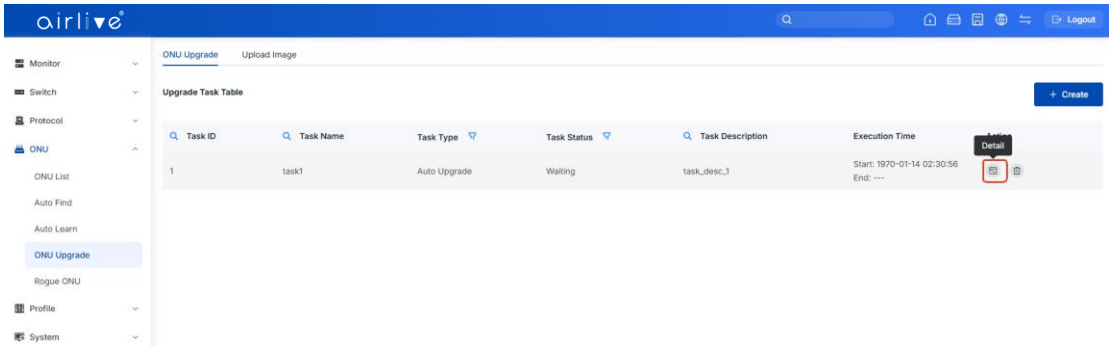


Figure 5.4-16: Check upgrade detail

The upgrading status will be shown on this page.

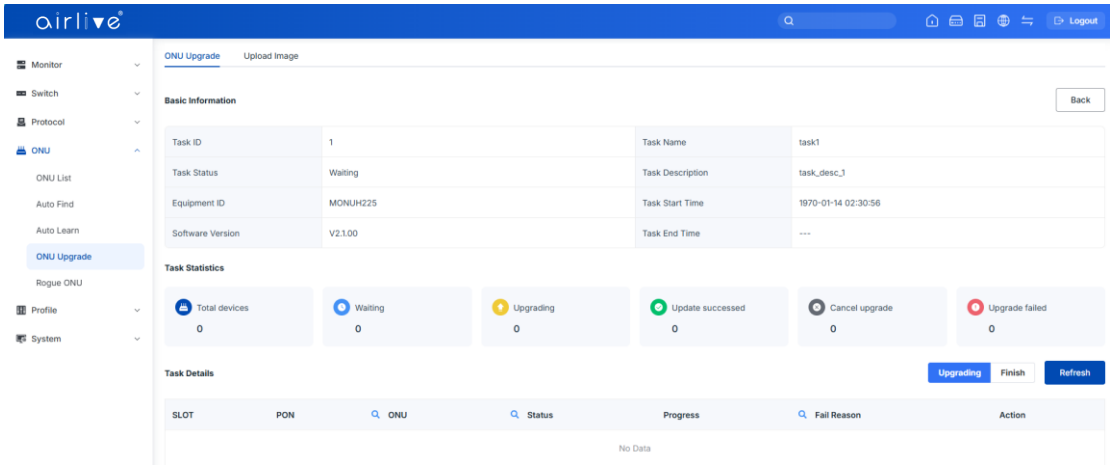


Figure 5.4-17: Upgrade Status

You can click the Delete button to remove an upgrade task.

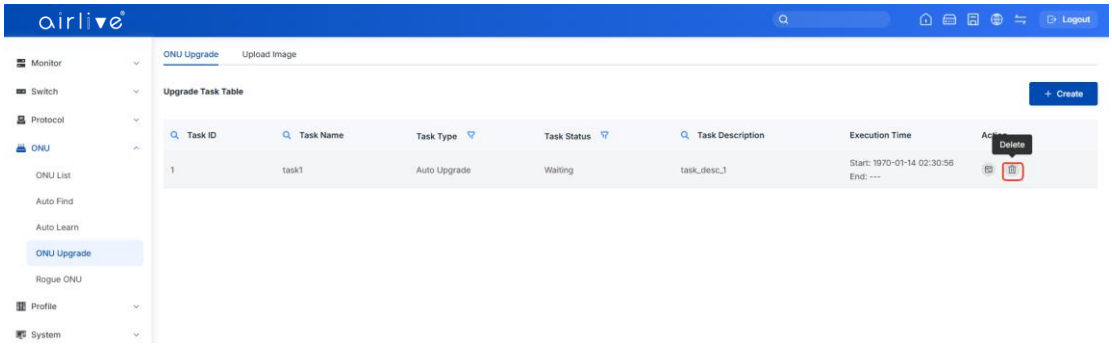


Figure 5.4-18: Delete Upgrade Task

5.5 Rogue ONU

Rogue ONU is the unauthorized or malfunctioning ONU that continues to send optical signals, interfering with the communication of other normal ONUs under the same PON port.

5.5.1 Rogue ONU List

ONU → Rogue ONU → Rogue ONU List
After enabled rogue ONU detection, if there is a rogue ONU trying to register, it will appear in the list.

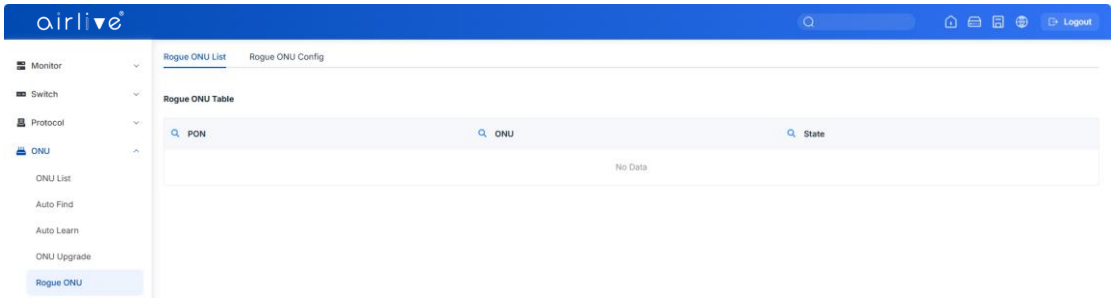


Figure 5.5-1: Rogue ONU List

5.5.2 Rogue ONU Config

ONU → Rogue ONU → Rogue ONU Config

This page is the Rogue ONU Config interface, used to configure rogue ONU detection settings for each PON port. You can enable/disable detection and set auto shutdown mode (Manual/Auto) to protect the PON network from interference.

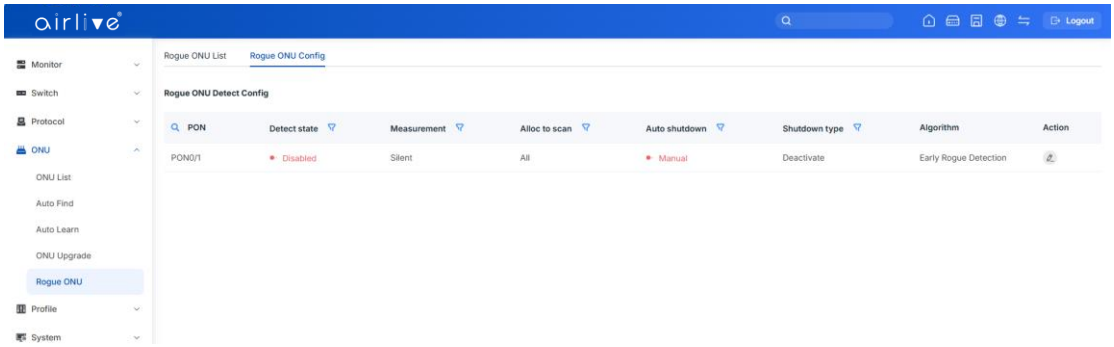


Figure 5.5-2: Rogue ONU Config

Chapter 6 Profile

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

6.1 Profile

This project is used to configure all templates related to the ONU.

6.1.1 ONU

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

6.1.1.1 ONU Profile

Profile → ONU→ ONU Profile
The table displays ONU profile list. You can also do some operations, such as deleting and checking details info.

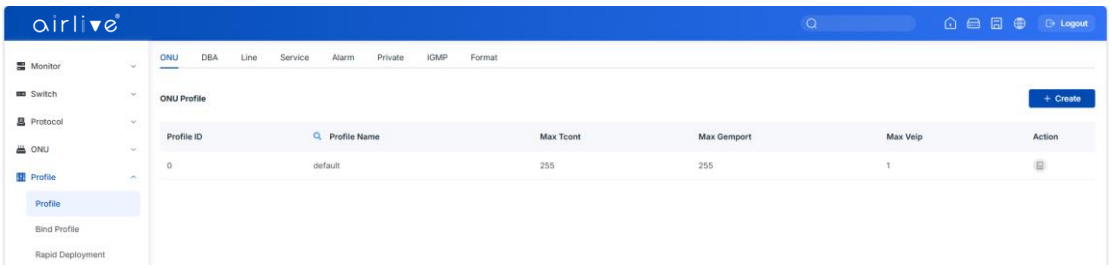


Figure 6.1-1: ONU Profile

6.1.1.2 Create

Profile → ONU → Create
Create a new ONU profile what you need. Generally, ONU has two different types.
SFU type (only using bridge mode):
Usually, only need to set correct eth port and POTS port number of ONU, others can be kept default.

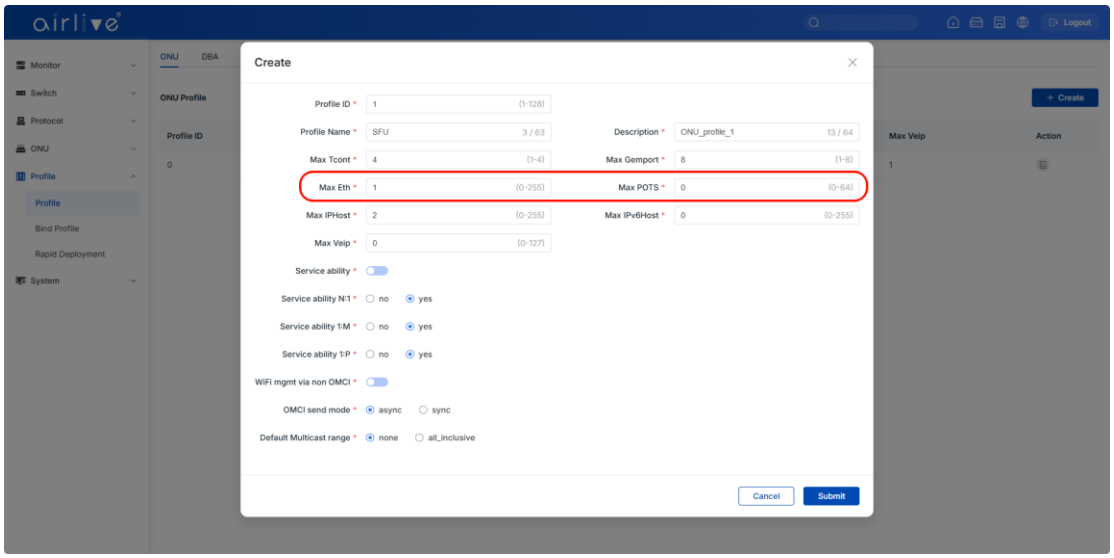


Figure 6.1-2: Add SFU profile

HGU type (with the routing wan connection mode):
For HGU type, need to set correct eth port and POTS port number, and set Veip to be 1, keep others default.

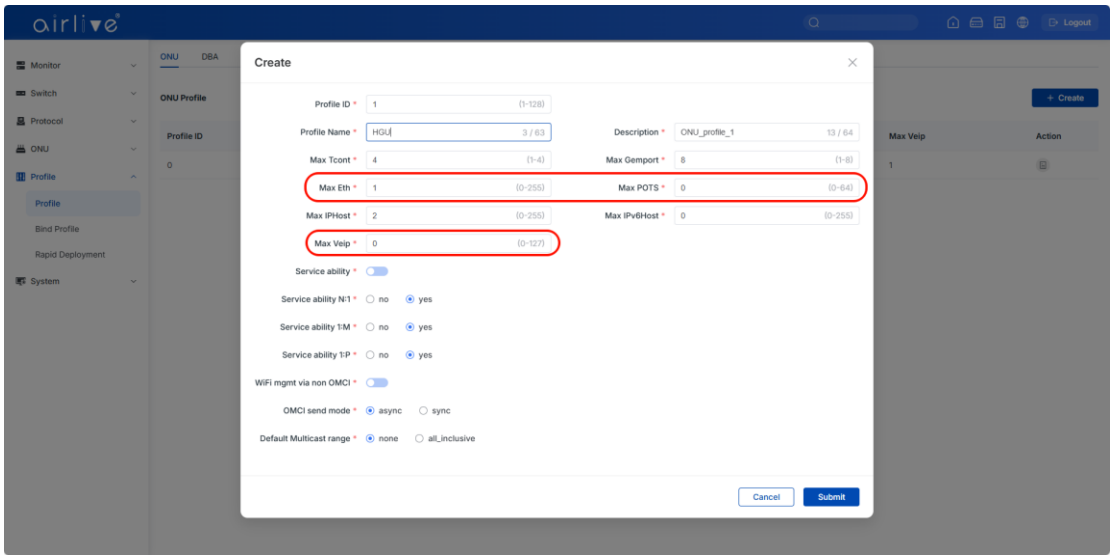


Figure 6.1-3: Add HGU profile

6.1.2 DBA

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.

6.1.2.1 DBA Profiles

Profile → DBA → DBA Profiles

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

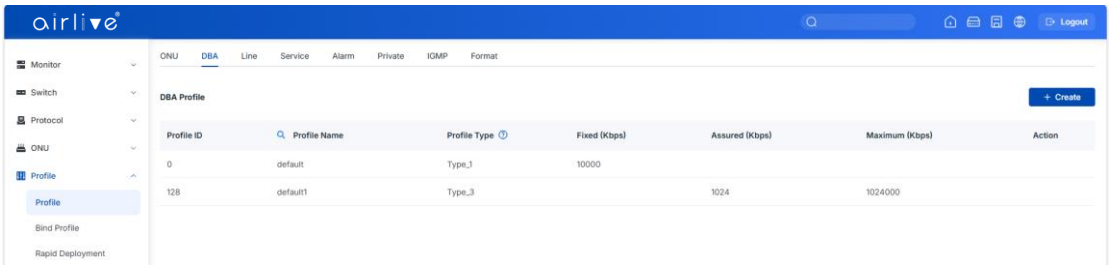


Figure 6.1-4: DBA profile

6.1.2.2 Create

Profile → DBA → Create

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

BW Type	Delay Sensitive	Applicable T-CONT Types				
		Type 1	Type 2	Type 3	Type 4	Type 5
Fixed	Yes	√				√
Assured	No		√	√		√
Maximum	No			√	√	√

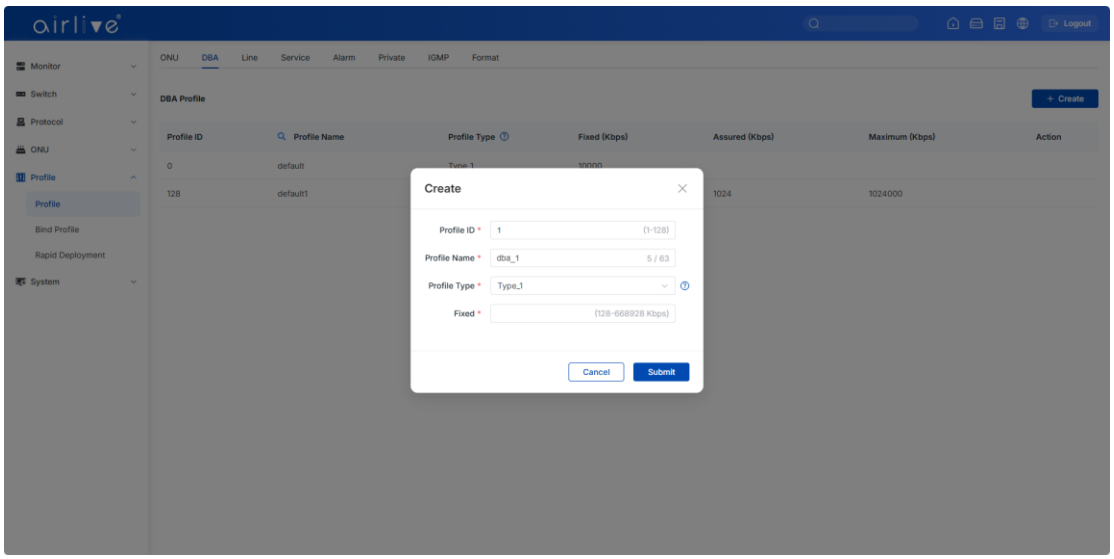


Figure 6.1-5: Add Profile

6.1.3 Line

Line profile is used to configure the all side services of ONU such as T-cont, Gem-port, Service-port, and so on.

6.1.3.1 Line Profile

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

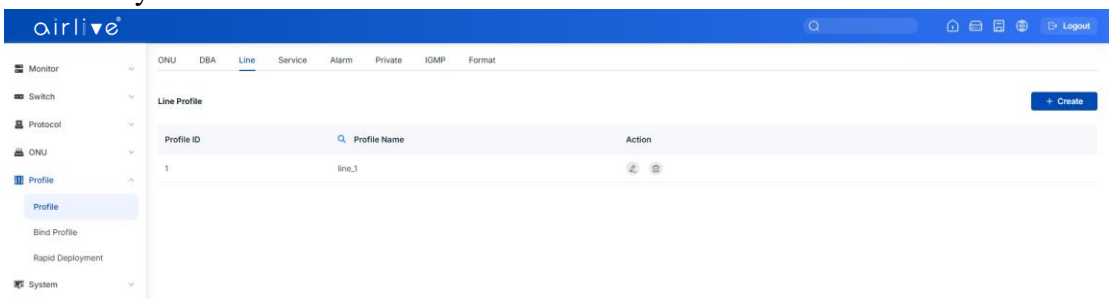


Figure 6.1-6: Line Profile

6.1.3.2 Create

Profile → Line → Create
Create a new Line Profile, set the Profile name.

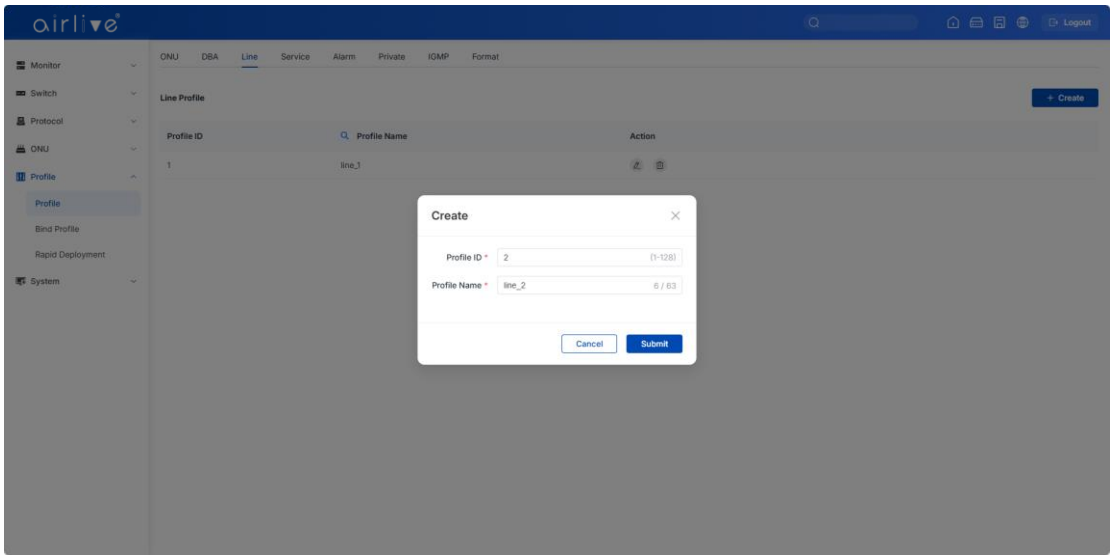


Figure 6.1-7: Add Line Profile

6.1.3.3 Modify

Profile → Line → Line Profile → Modify
In the interface of line profile list, click Modify to edit the profile.

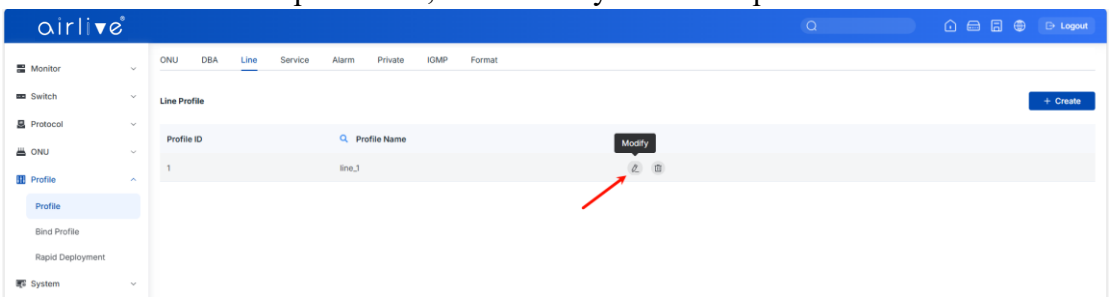


Figure 6.1-8: Modify Line Profile

6.1.3.3.1 Tcont

Profile → Line → Line Profile → Modify → Tcont
Add Tcont ID and bind DBA profile.

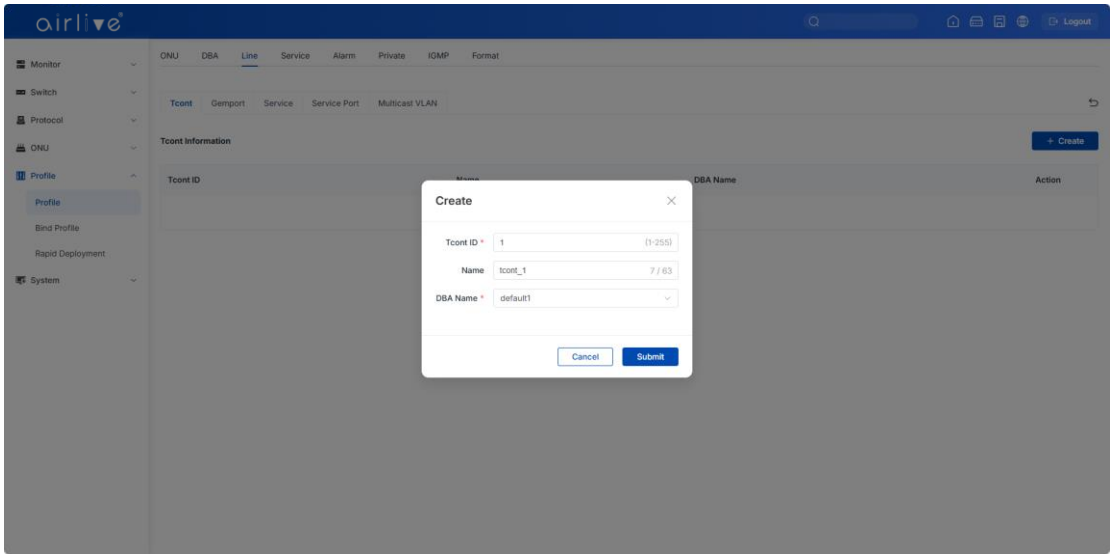


Figure 6.1-9: Add Tcont

6.1.3.3.2 Gemport

Profile → Line → Line Profile → Modify → Gemport
Add Gemport ID and bind Tcont ID.
You can also limit the forwarding speed according to the Gemport ID.

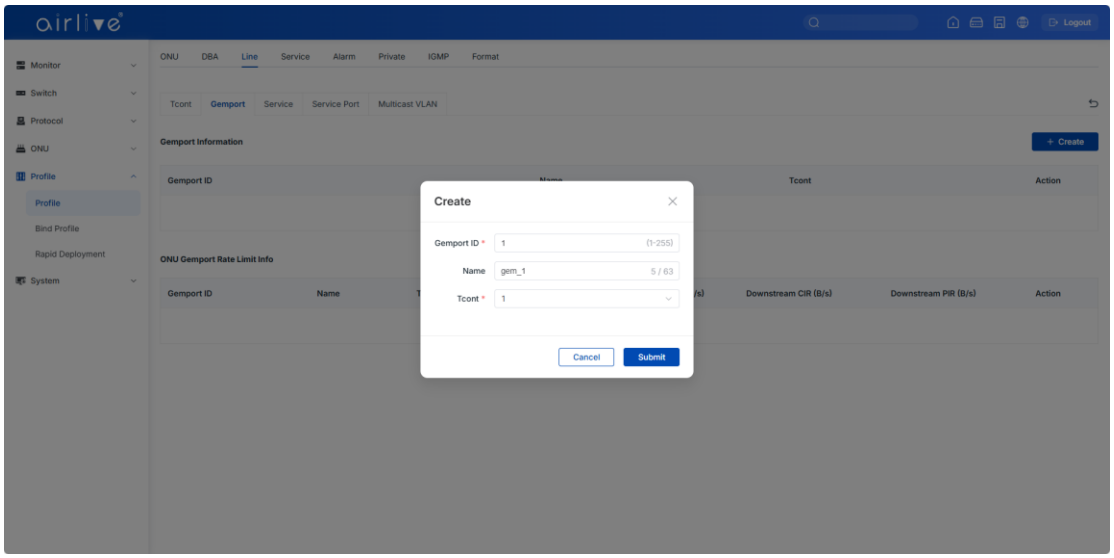


Figure 6.1-10: Add Gemport

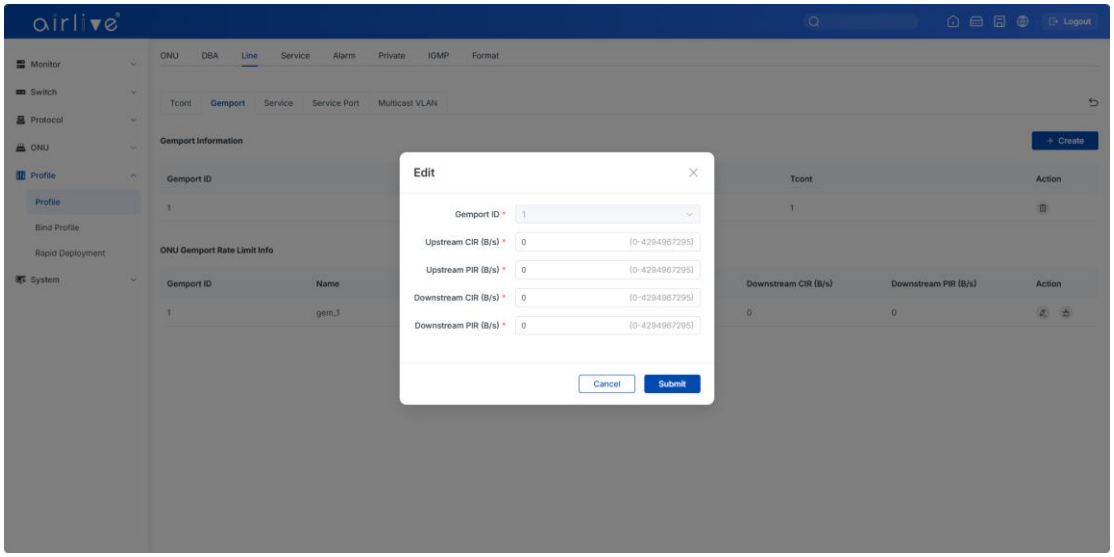


Figure 6.1-11: ONU Gemport Rate Limit Configuration

6.1.3.3.3 Service

Profile → Line → Line Profile → Modify → Service

Add Service, set the VLAN mode and VLAN ID and bind one Gemport ID.

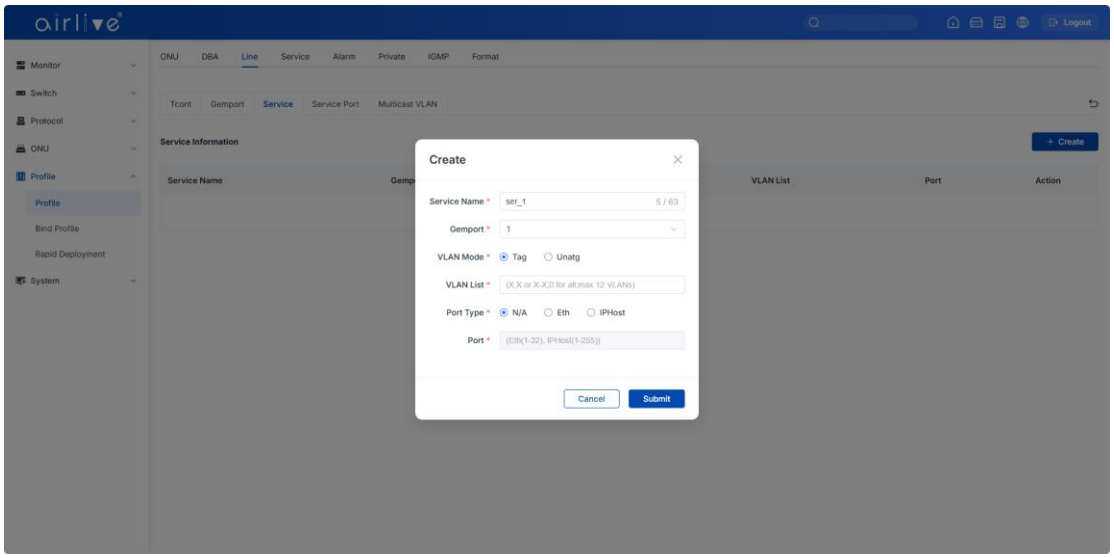


Figure 6.1-12: Add Service

6.1.3.3.4 Service Port

Profile → Line → Line Profile → Modify → Service Port
Create a Service Port, set the user VLAN and translate VLAN and bind one Gemport ID. If VLAN translation is not required, just set translate VLAN the same as User VLAN.

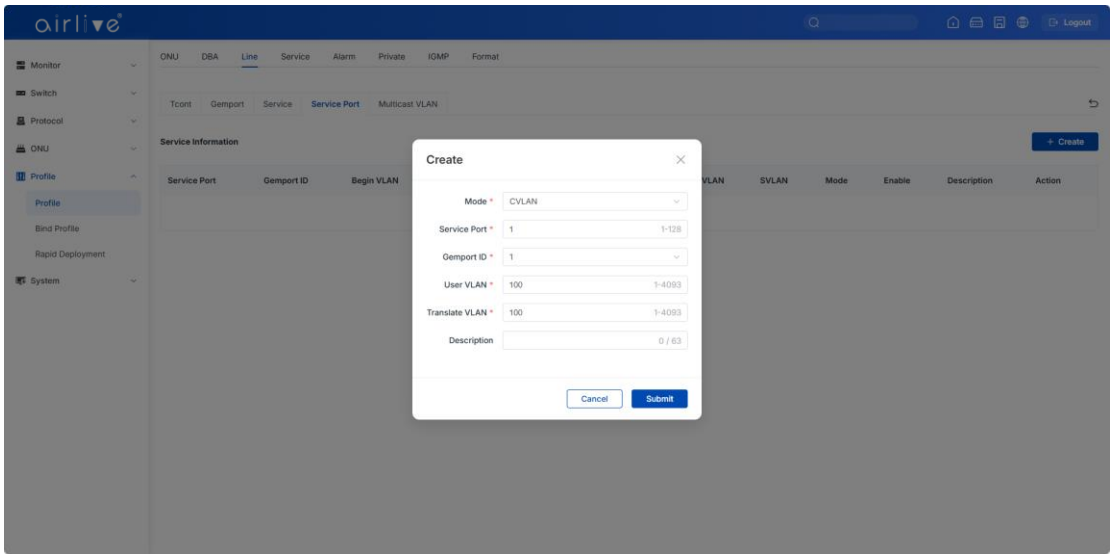


Figure 6.1-13: Add Service Port

6.1.3.3.5 Multicast VLAN

Profile Configuration → Line Profile → Line Profile → Modify → Multicast Van
Set the Multicast VLAN of ONU.

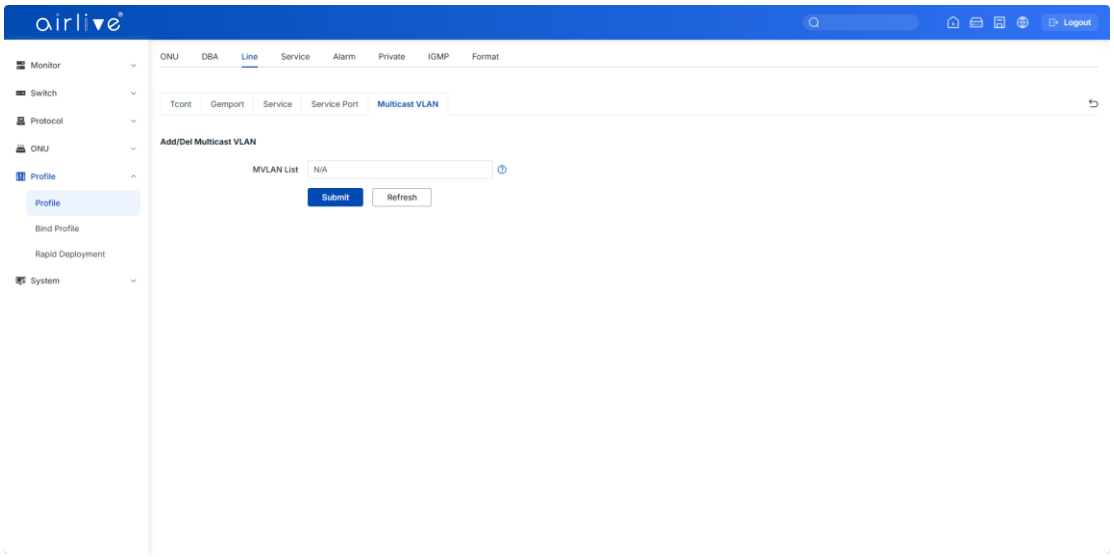


Figure 6.1-14: Configure Multicast VLAN

6.1.4 Service

The Service configuration file is used to configure the UNI side and multicast of the ONU.

6.1.4.1 Service Profile

Profile → Service → Service Profile
The table displays Service Profile list. You can also do some operations, such as delete and modify.

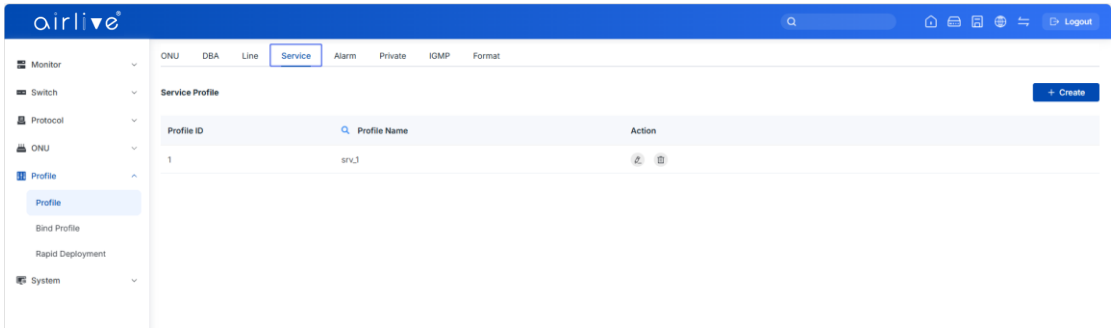


Figure 6.1-15: Service Profile

6.1.4.2 Create

Profile → Service → Create
Add a new Service Profile, set the profile name.

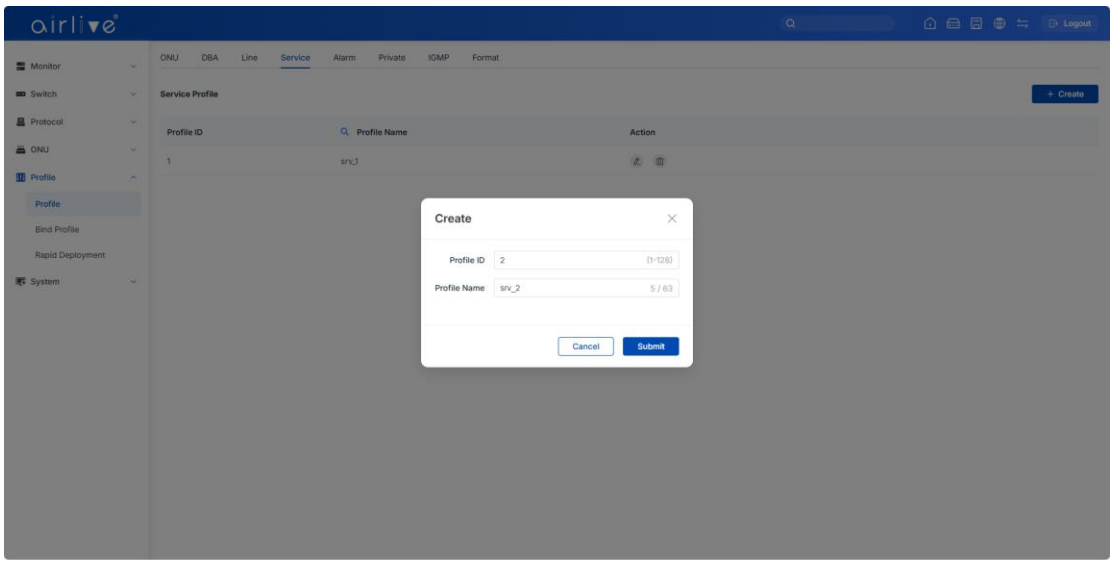


Figure 6.1-16: Add Service profile

6.1.4.3 Modify

Profile → Service→ Service Profile → Modify

In the interface of Service Profile list, click Details&Modify to edit the profile.

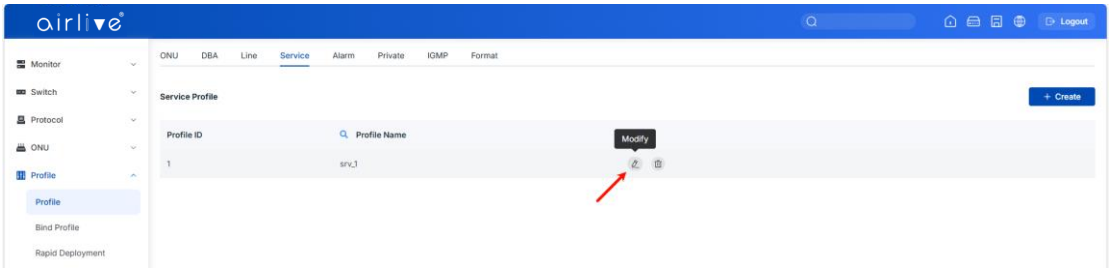


Figure 6.1-17: Modify service profile

6.1.4.3.1 Port VLAN

Profile → Service → Service Profile → Modify → Port VLAN

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

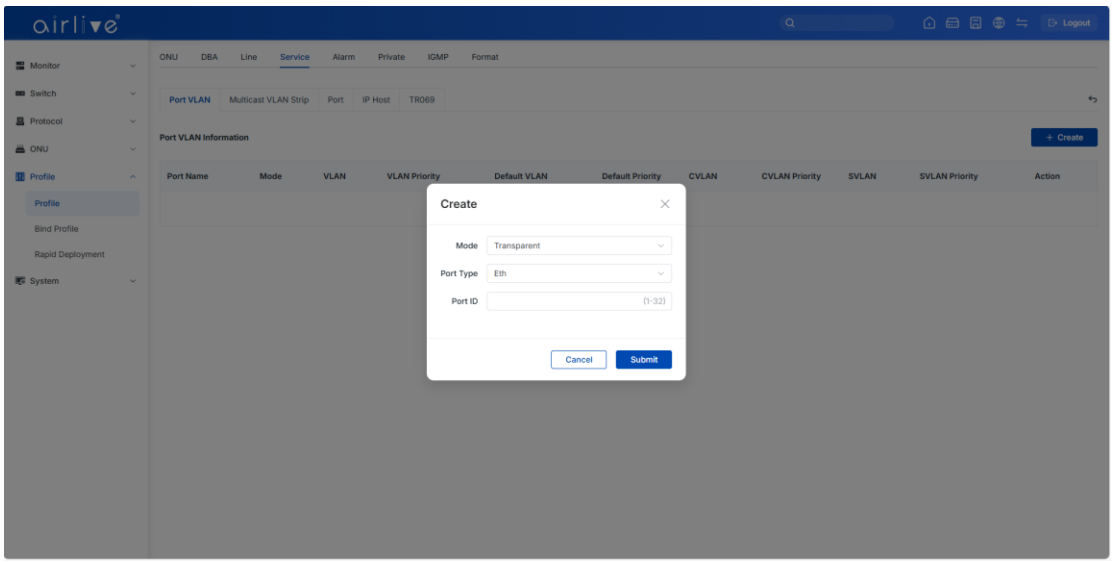


Figure 6.1-18: Port VLAN mode

6.1.4.3.2 Multicast VLAN Strip

Profile Configuration → Service Profile → Service Profile → Modify → Multicast VLAN Strip

Set the Multicast VLAN mode of ONU's port.

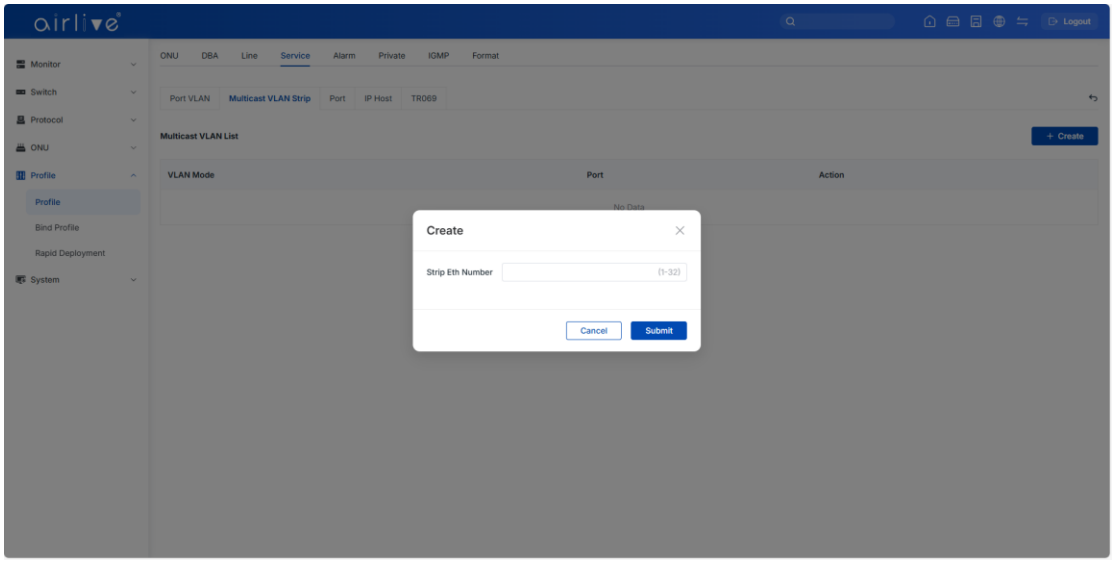


Figure 6.1-19: Port Multicast VLAN Mode

6.1.4.3.3 Port

Profile→ Service → Service Profile → Modify → Port

Set the rate negotiation mode of the ONU LAN interface. You can also choose whether to enable ports or not, and even limit the rates of different LAN ports.

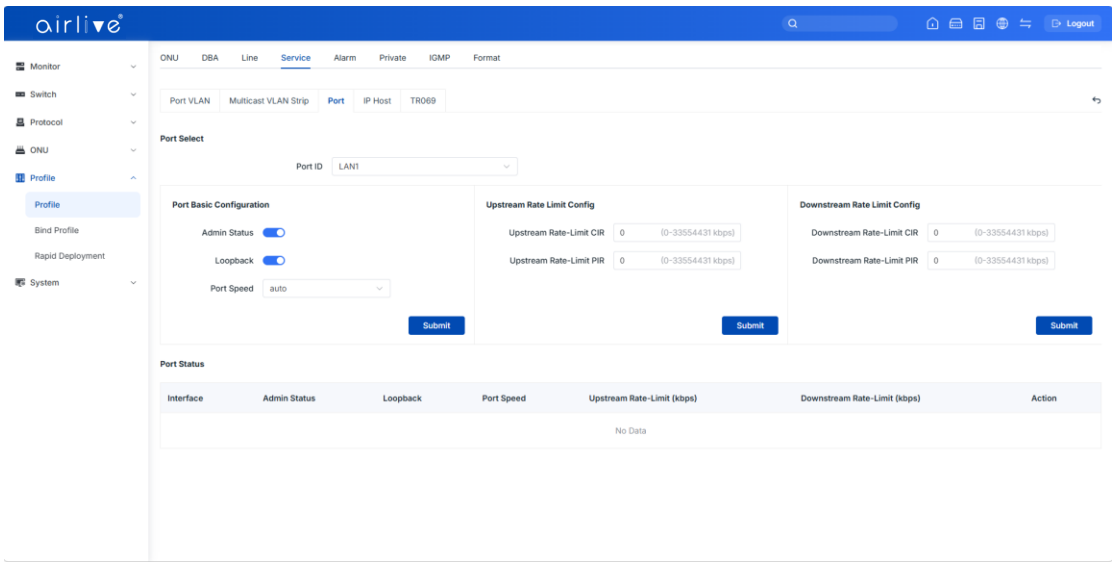


Figure 6.1-20: Port Basic Configuration

6.1.4.3.4 IPhost Config

Profile Configuration → Service Profile → Service Profile → Modify → IPhost Config

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

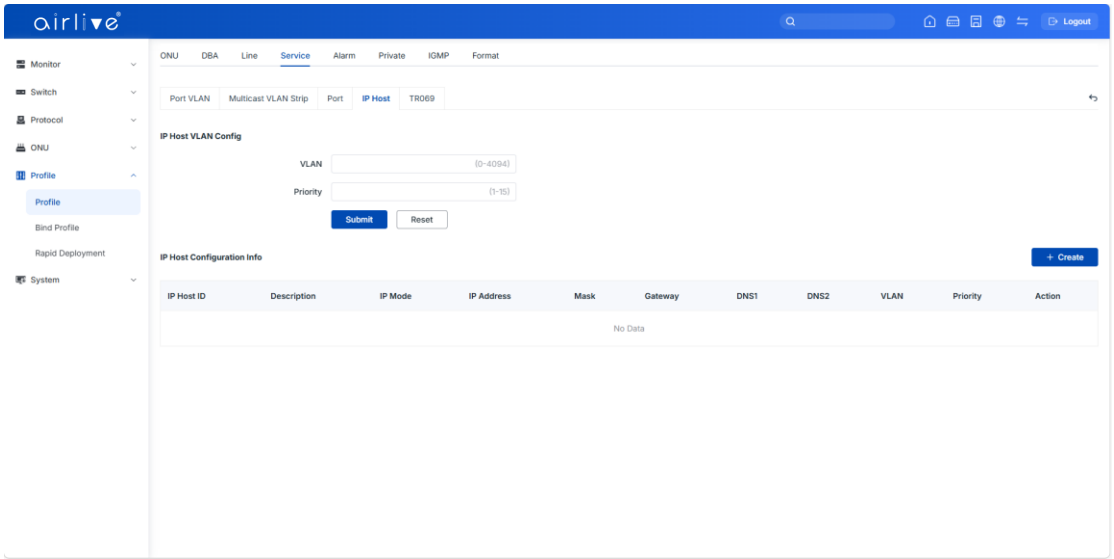


Figure 6.1-21: IPhost Config

6.1.4.3.5 TR069

Profile → Service→ Service Profile → Modify → TR069

Configure the public TR069 management configuration based on the service profile.

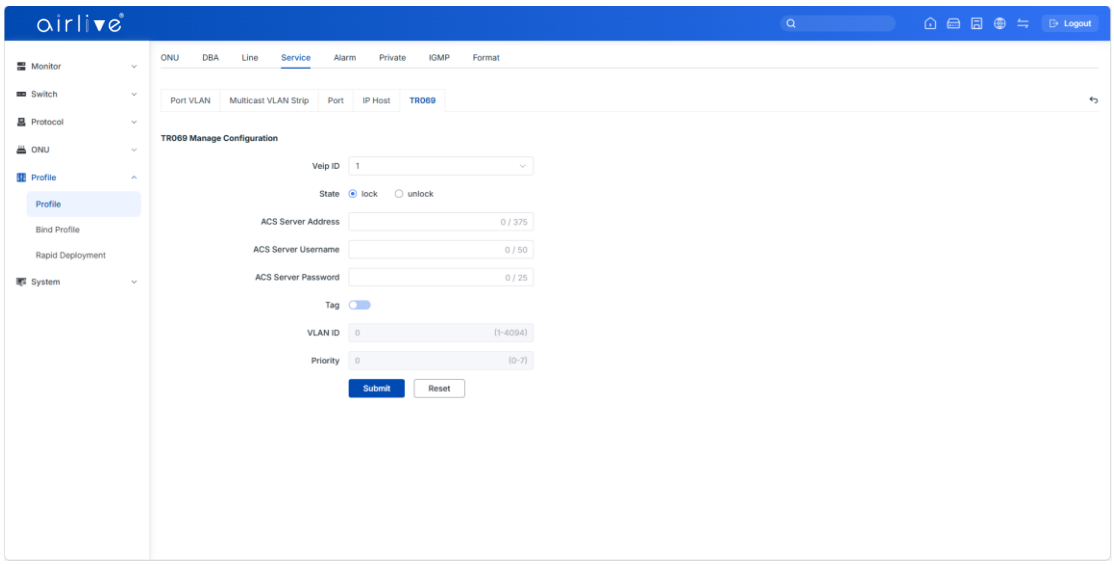


Figure 6.1-22: TR069

6.1.5 Alarm

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

6.1.5.1 Alarm Profile

Profile → Alarm → Alarm Profile
The table displays alarm Profile List.

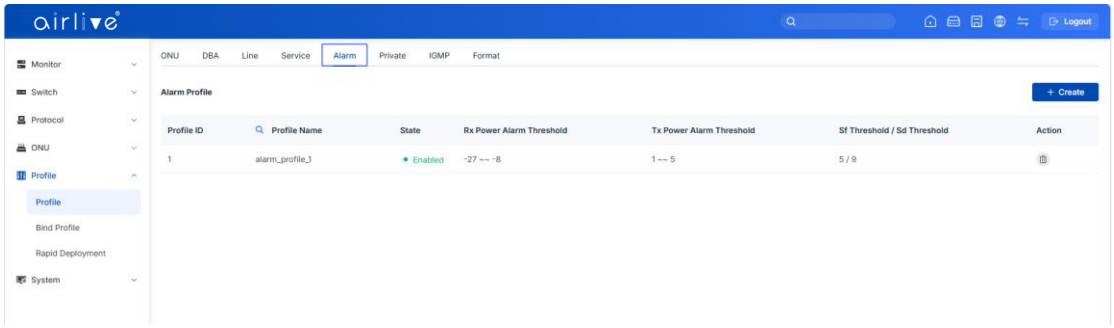


Figure 6.1-23: Alarm Profile List

6.1.5.2 Create

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

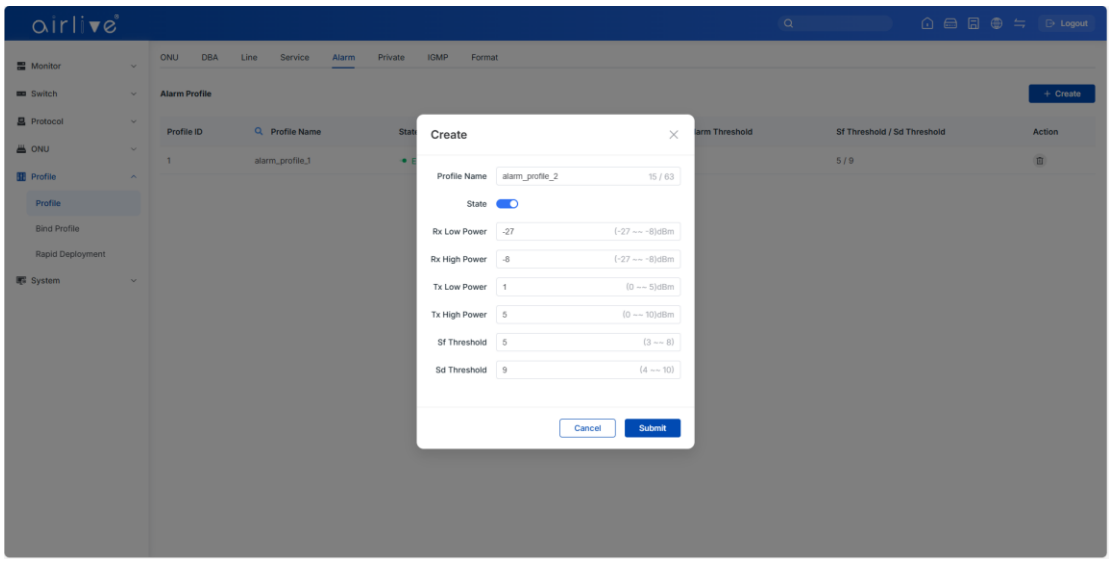


Figure 6.1-24: Add Alarm Profile

6.1.6 Private

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

6.1.6.1 Private Profile

Profile → Private → Private Profile
The table displays Private Profile list. You can also do some operations, such as delete and modify.

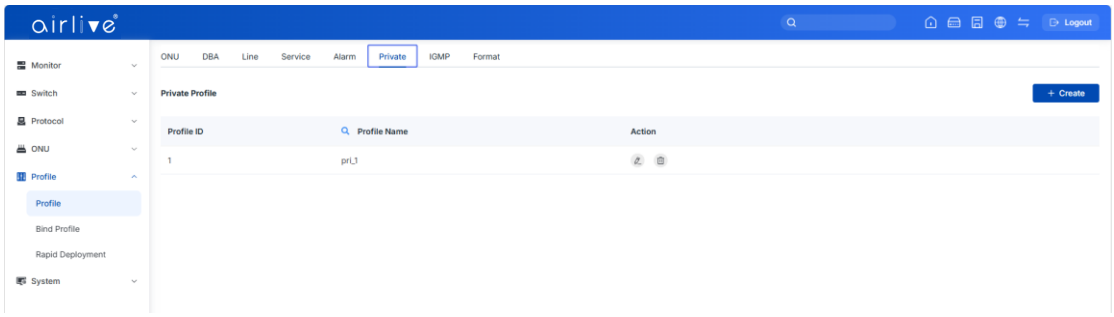


Figure 6.1-25: Private Profile

6.1.6.2 Create

Profile → Private → Create
Add a Private Profile, set the profile name.

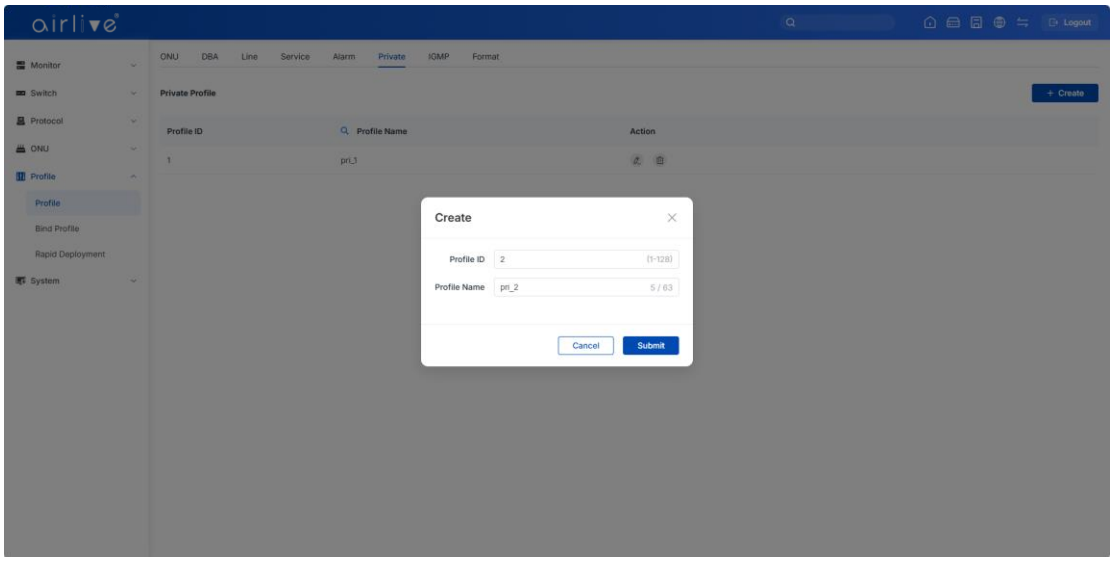


Figure 6.1-26: Add Private Profile

6.1.6.3 Modify

Profile → Private → Private Profile → Modify
In the interface of Private Profile list, click Modify to edit the profile.

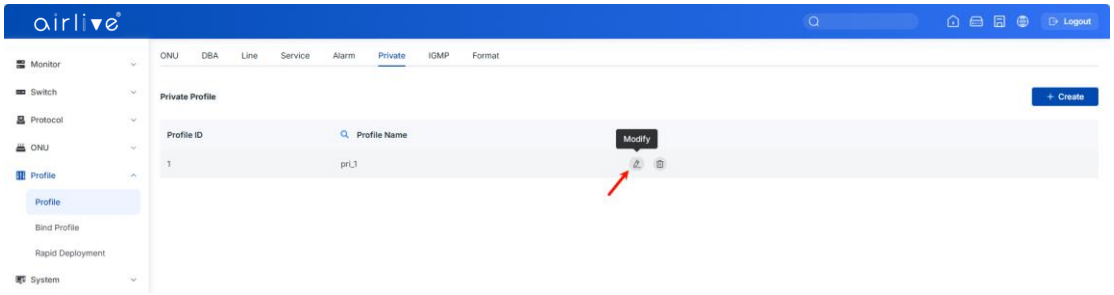


Figure 6.1-27: Modify Private Profile

6.1.6.3.1 Global

Profile → Private → Private Profile → Modify → Global
Global configurations, including CATV switches, speed limits, NAT Type, UPnP Status, and so on.

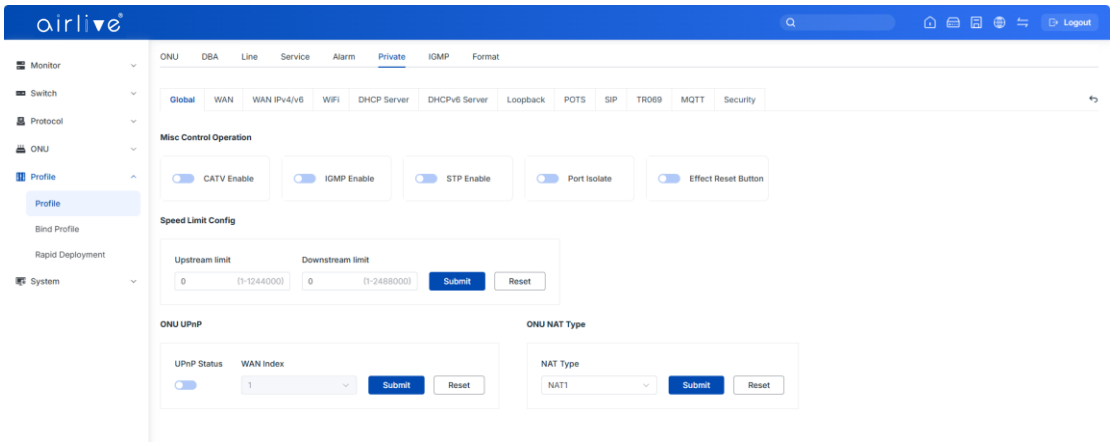


Figure 6.1-28: Misc Configuration

6.1.6.3.2 WAN

Profile → Private → Private Profile → Modify → WAN
Add IPv4 single-stack WAN connection for Private Profile.

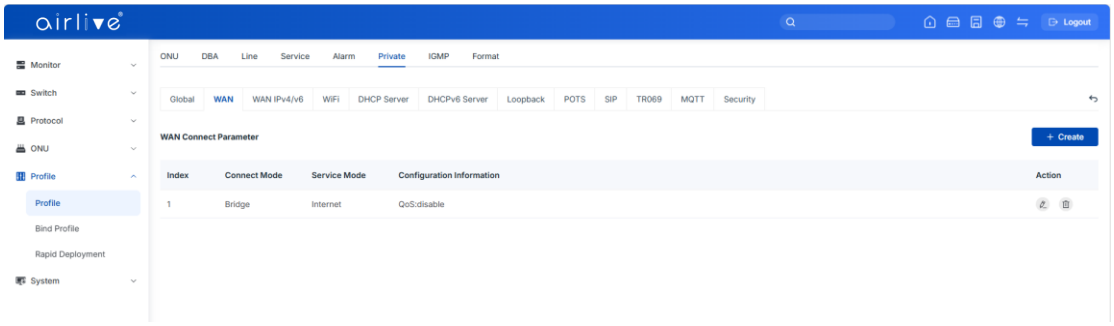


Figure 6.1-29: WAN

6.1.6.3.3 WAN IPv4/v6

Profile → Private → Private Profile → Modify → WAN IPv4/v6
Add IPv4/IPv6 dual-stack WAN connections for Private Profile.

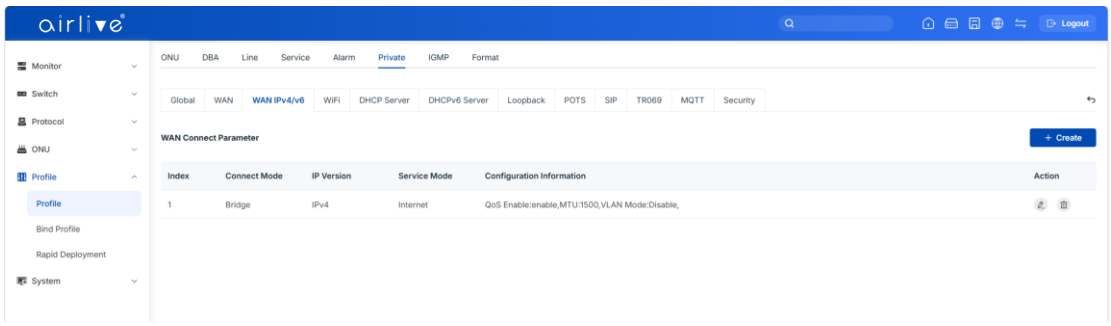


Figure 6.1-30: WAN IPv4/v6

6.1.6.3.4 WIFI

Profile → Private → Private Profile → Modify → WIFI
Configure WIFI parameters for Private Profile.

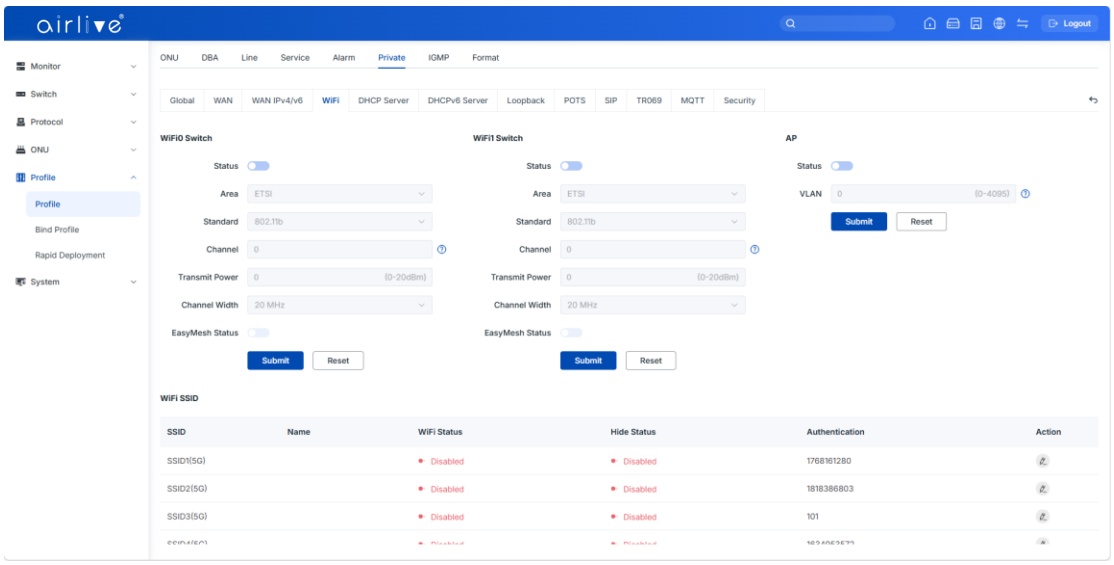


Figure 6.1-31: WIFI

6.1.6.3.5 DHCP Server

Profile → Private → Private Profile → Modify → DHCP Server

Configure IPv4 DHCP server parameters for Private Profile.

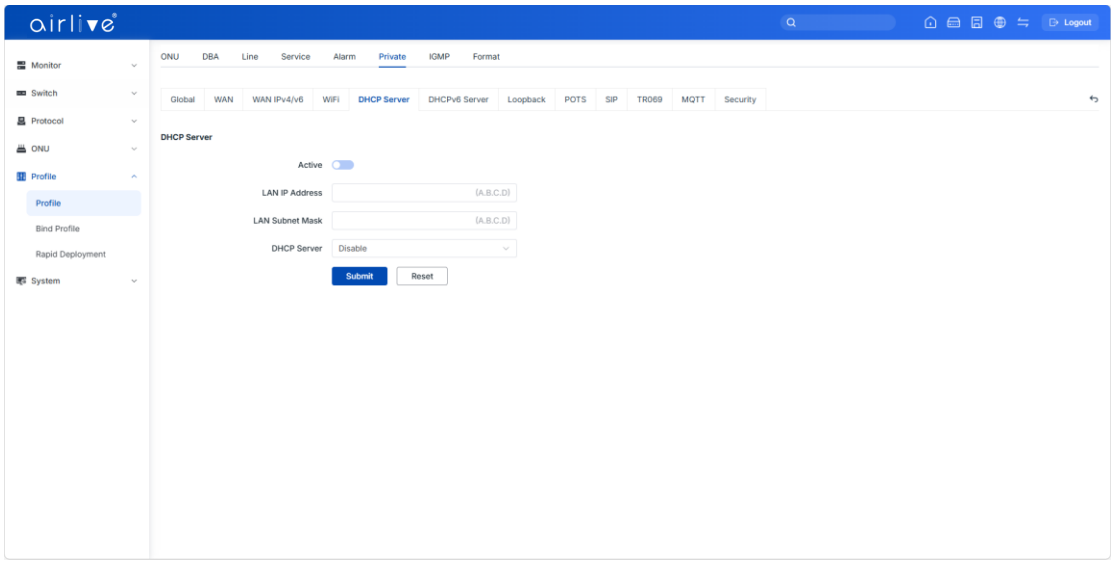


Figure 6.1-32: DHCP Server

6.1.6.3.6 DHCPv6 Server

Profile → Private → Private Profile → Modify → DHCPv6 Server

Configure IPv6 DHCP server parameters for Private Profile.

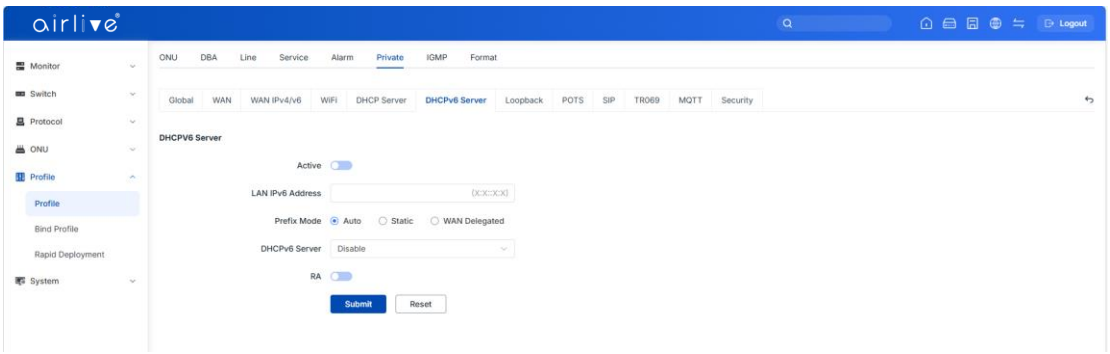


Figure 6.1-33: DHCP Server

6.1.6.3.7 Loopback

Profile → Private → Private Profile → Modify → Loopback

Configure Loopback Detection parameters for Private Profile.

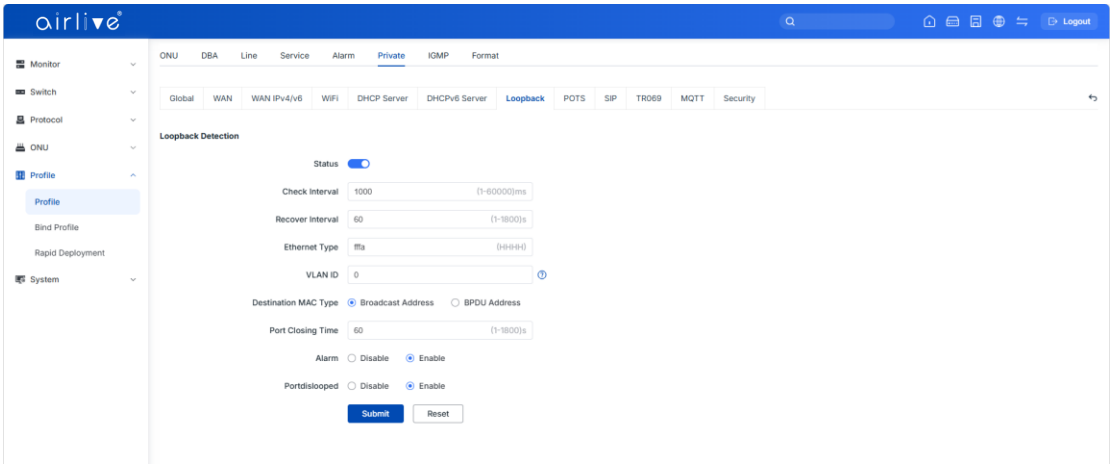


Figure 6.1-34: Loopback

6.1.6.3.8 POTS

Profile → Private → Private Profile → Modify → POTS

Configure POTS parameters for Private Profile.

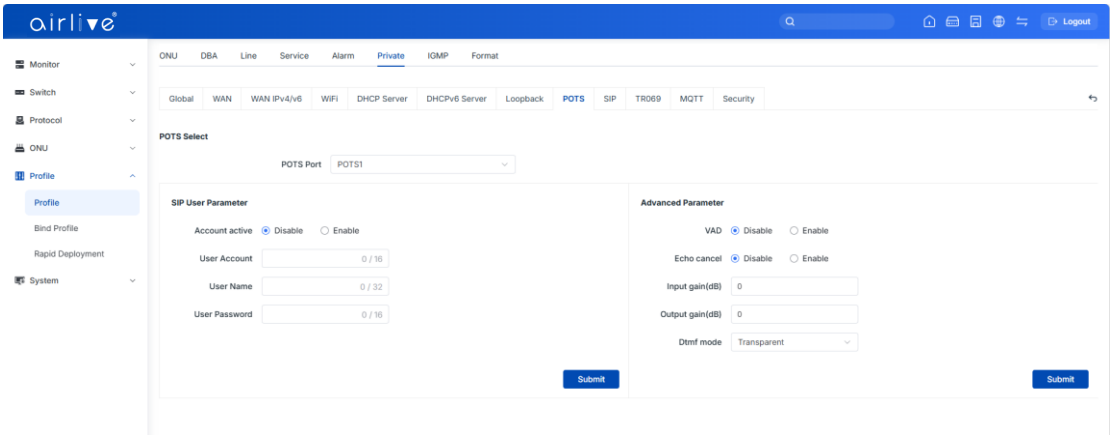


Figure 6.1-35: POTS

6.1.6.3.9 SIP

Profile → Private → Private Profile → Modify → SIP
Configure SIP parameters for Private Profile.

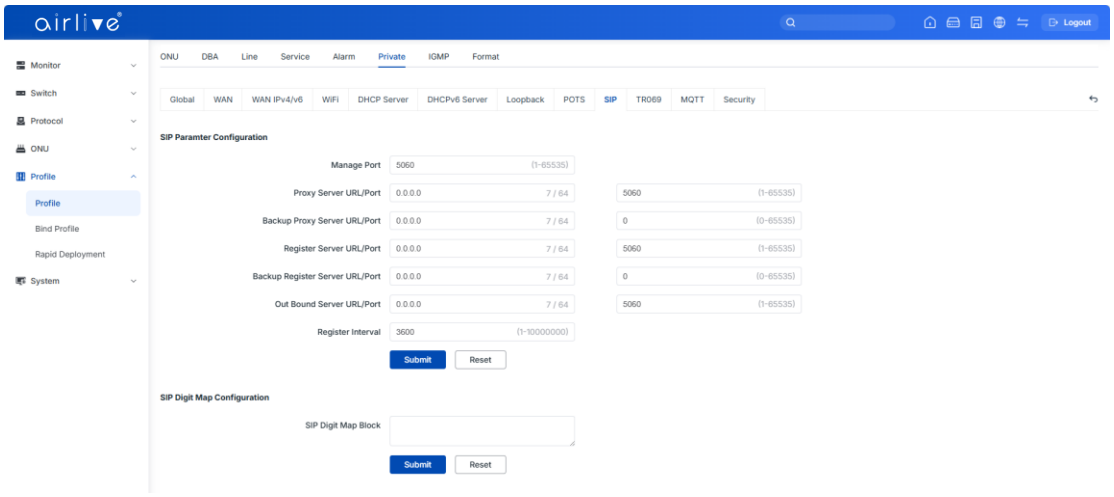


Figure 6.1-36: SIP

6.1.6.3.10 TR069

Profile → Private → Private Profile → Modify → TR069
Configure TR069 parameters for Private Profile.

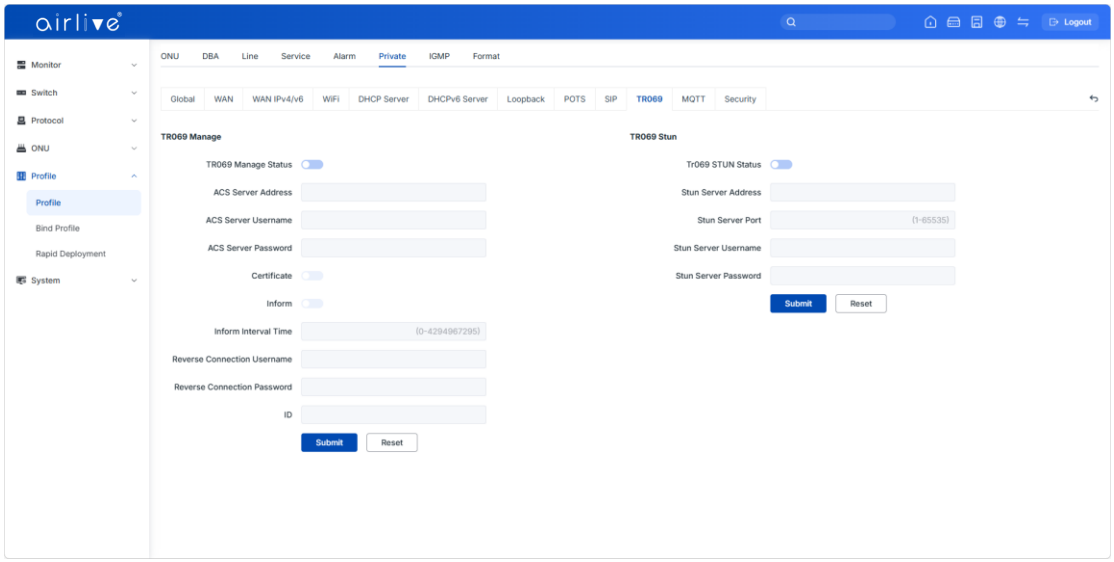


Figure 6.1-37: TR069

6.1.6.3.11 MQTT

Profile → Private → Private Profile → Modify → MQTT
Configure MQTT parameters for Private Profile.

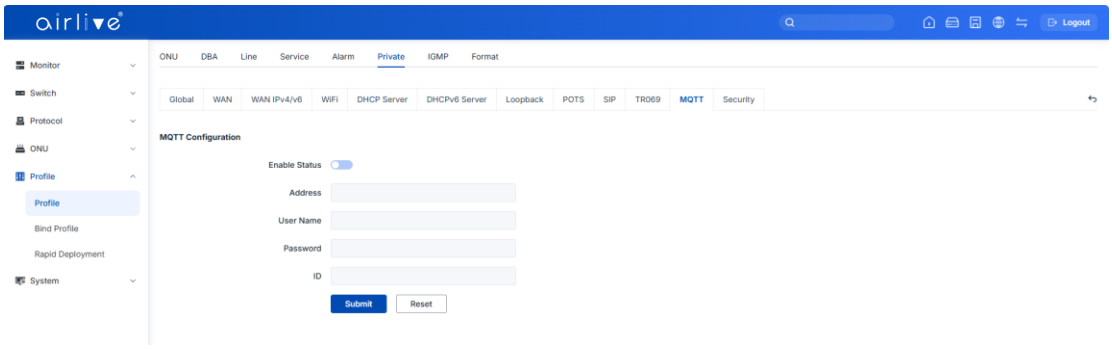


Figure 6.1-38: MQTT

6.1.6.3.12 Security

Profile → Private → Private Profile → Modify → Security

Configure security parameters for Private Profile.

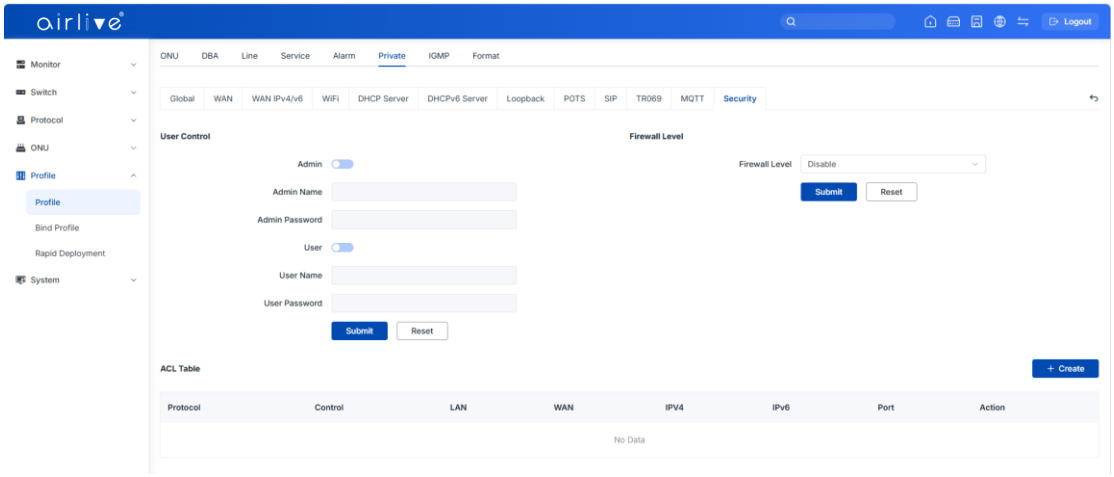


Figure 6.1-39: Security

6.1.7 IGMP Profile

6.1.7.1 IGMP Profile

Profile → IGMP→ IGMP Profile

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

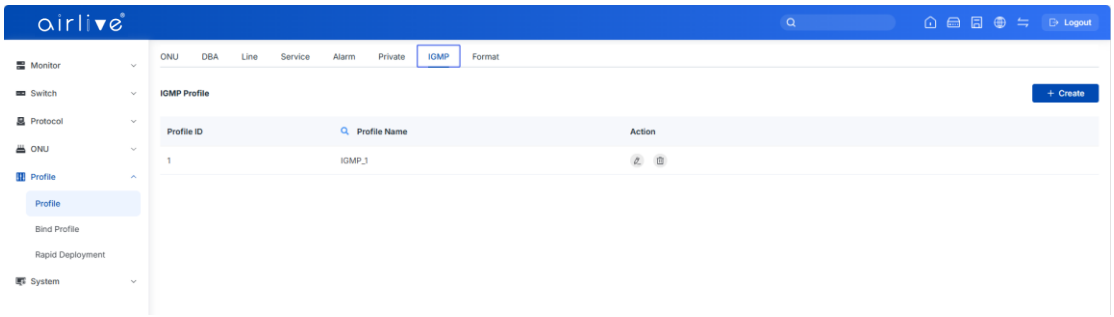


Figure 6.1-40: IGMP Profile list

6.1.7.2 Create

Profile → IGMP→ Add profile

Add new IGMP profile, set the profile name.

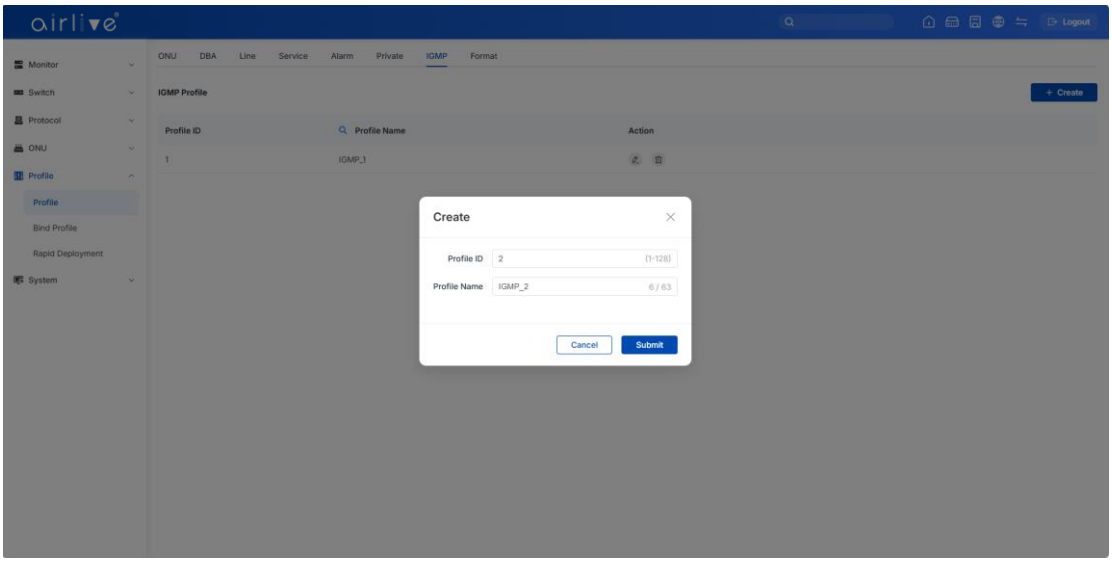


Figure 6.1-41: Add Profile

6.1.7.3 Modify

Profile → IGMP→ IGMP Profile → Modify

In the interface of IGMP profile list, click Modify to edit the profile.

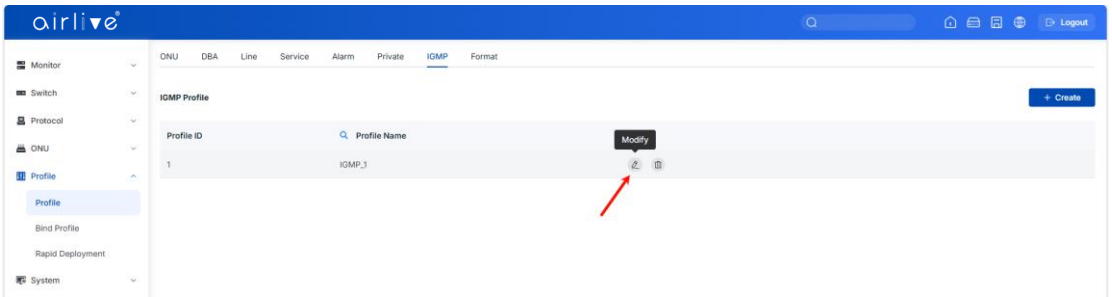


Figure 6.1-42: Modify IGMP profile

Set IGMP/MLD protocol parameters as required.

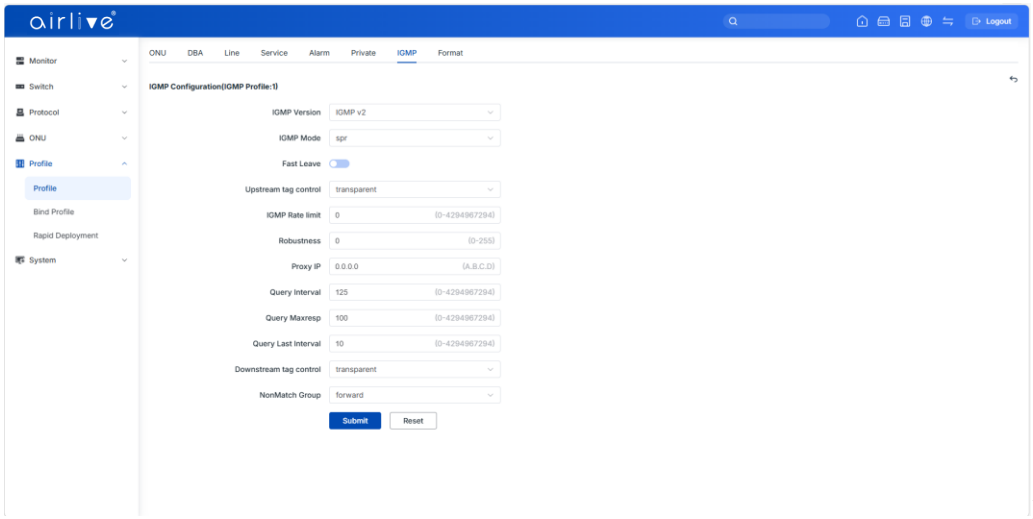


Figure 6.1-43: IGMP Configuration

6.1.8 Format Profile

Format Profile is mainly used to configure the DHCP option format of ONU.

6.1.8.1 Format Profile

Profile→ Format→ Format Profile

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

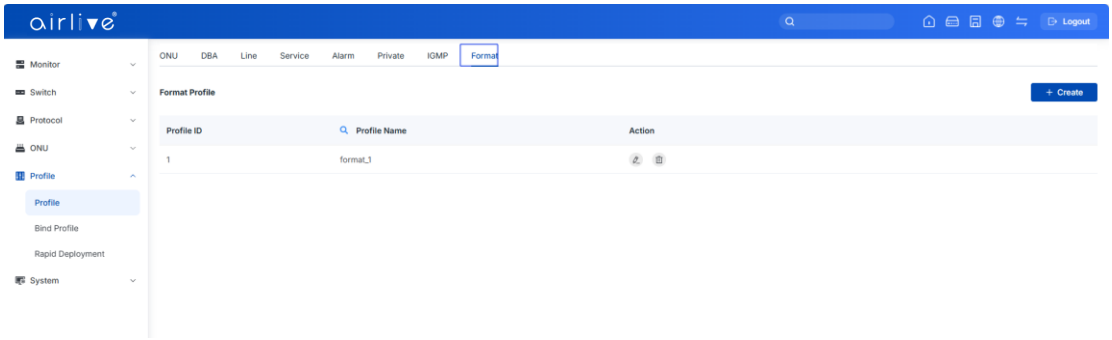


Figure 6.1-44: Format Profile list

6.1.8.2 Create

Profile→ Format→ Create

Add new Format Profile, set the profile name.

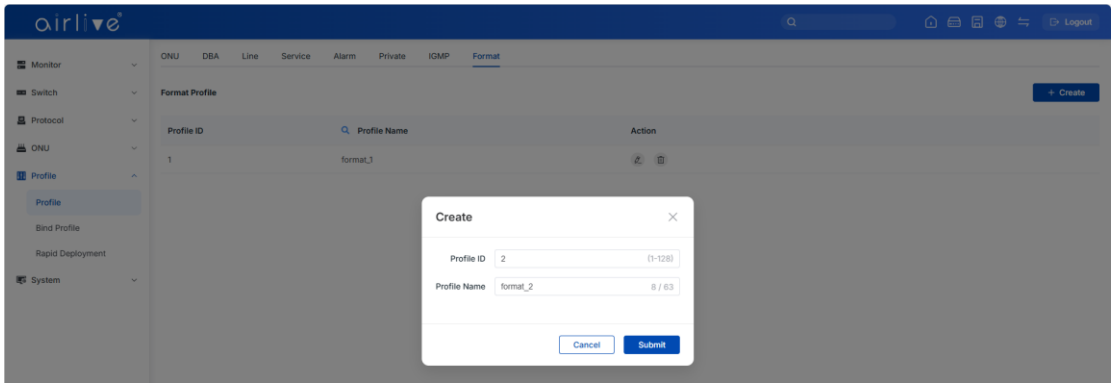


Figure 6.1-45: Add Format Profile

6.1.8.3 Modify

Profile→ Format→ Format Profile → Modify

In the interface of Format Profile list, click Modify to edit the profile.

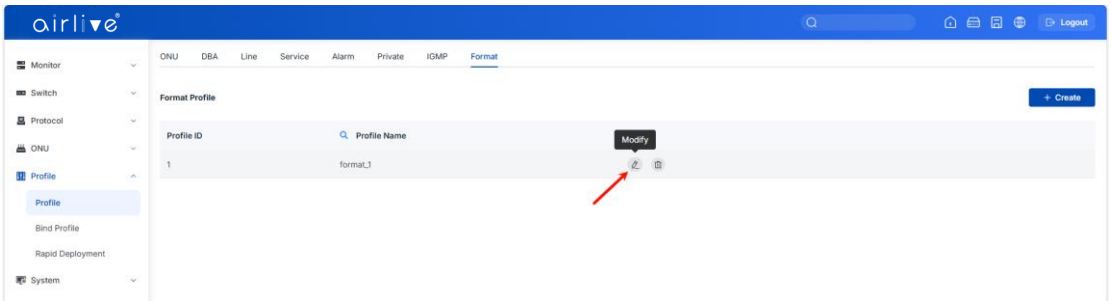


Figure 6.1-46: Modify Format Profile

Set DHCP option parameters as required.

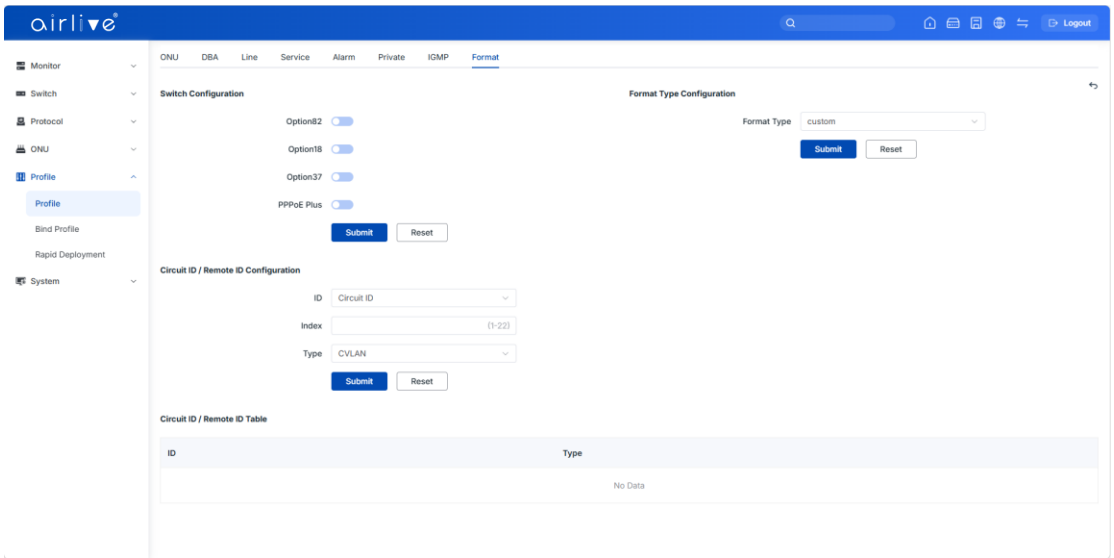


Figure 6.1-47: Format Profile Configuration

6.2 Bind Profile

Profile Configuration → Bind Profile

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

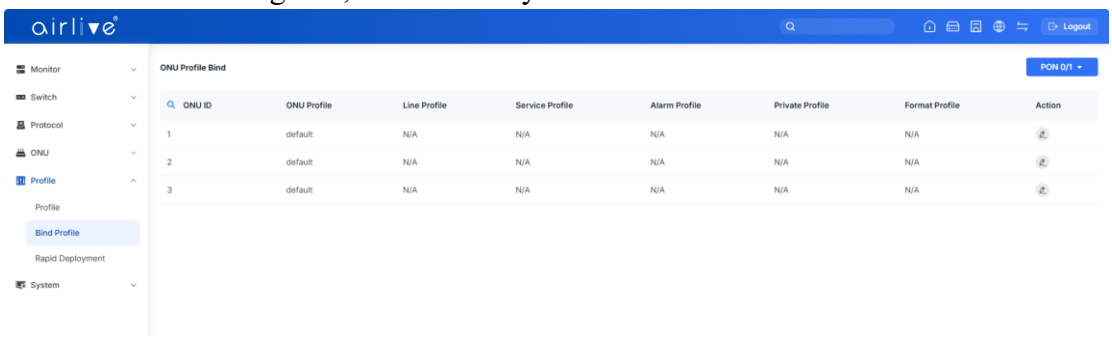


Figure 6.2-1: Bind profile

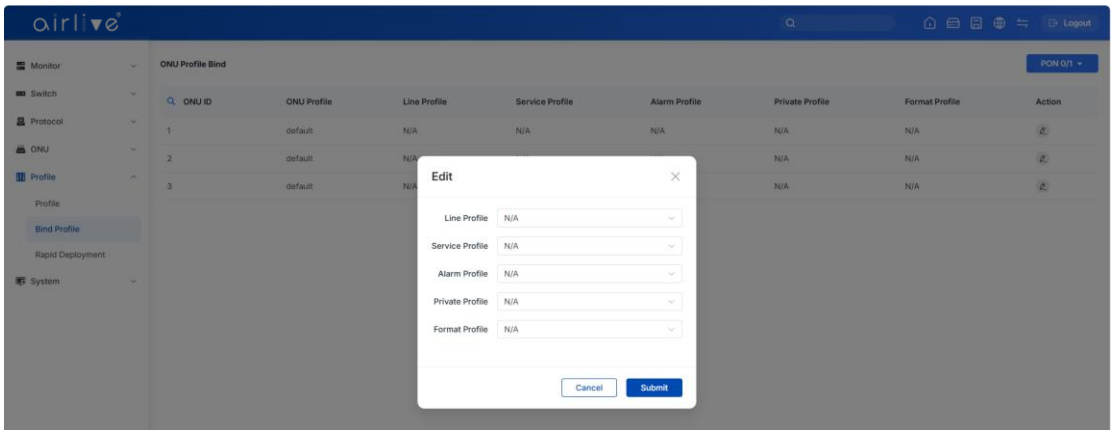


Figure 6.2-2: Modify Profile

6.3 Rapid Deployment

There are three sub-items in the ONU rapid deployment function, namely Pre-set Profile, Application and Deployment Status. After the Pre-set Profile configuration service is completed, select the created Pre-set Profile in Application menu and bind it to the PON port, so that the ONUs under the corresponding PON port can go online and take effect the relevant configuration. And users can check the binding result of taking effect in Deployment Status.

6.3.1 Pre-set Profile

6.3.1.1 Pre-set Profile

Profile → Rapid Deployment → Pre-set Profile → Pre-set Profile

This page displays the current list of Pre-set Profiles. Users can view details or delete the created Pre-set Profiles .

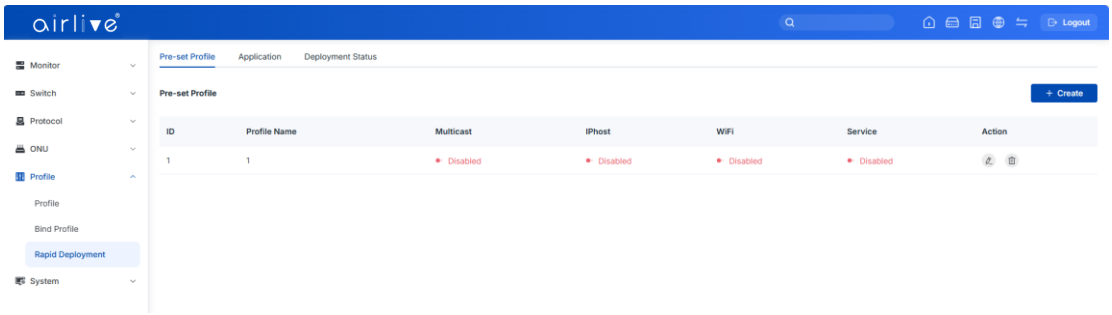


Figure 6.3-1: Pre-set Profile Information

6.3.1.2 Create

Profile → Rapid Deployment → Pre-set Profile → Create

Specify the profile ID and name. Please note that the ID and name must be unique .

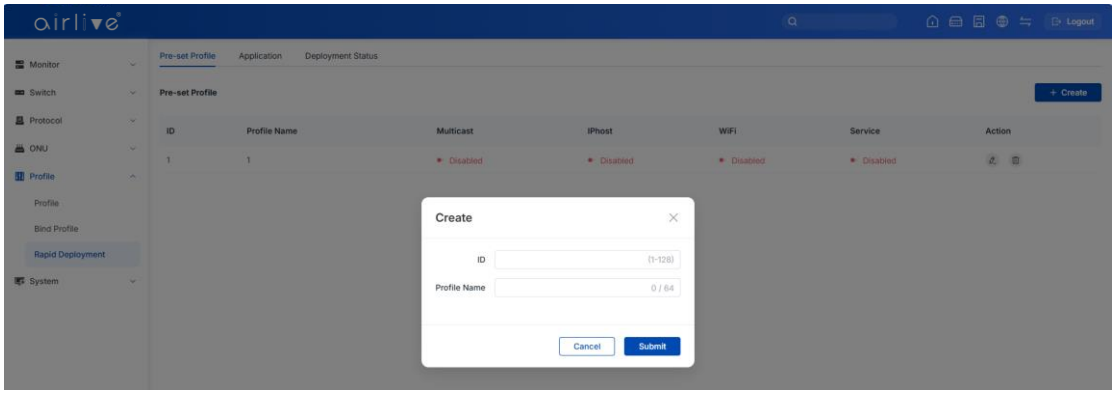


Figure 6.3-2: Create

6.3.1.3 Edit

Profile → Rapid Deployment → Pre-set Profile → Edit

In the interface of Pre-set Profile list, click Edit to edit the profile.

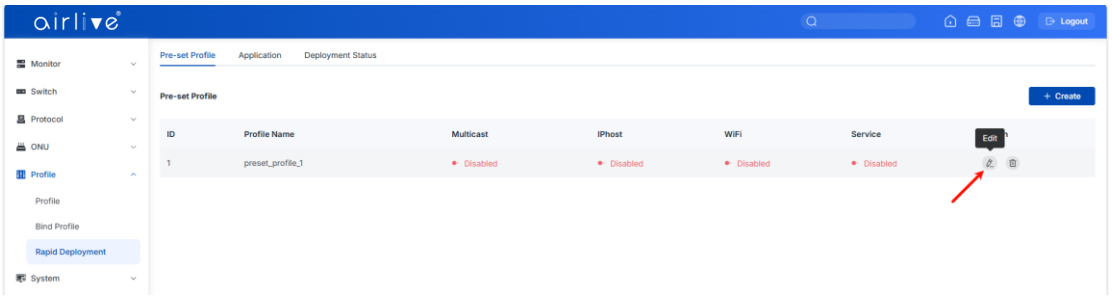


Figure 6.3-3: Edit

6.3.1.3.1 Global

Global Configuration contains the following information:
(1) Display PVID, Tag VLAN, Untag VLAN and other information based on the port;
(2) Modify the PVID and VLAN mode of an existing VLAN on a port;
(3) Add a new VLAN;
(4) Modify the VLAN IP.
Note: VLAN configuration range 1-4094, VLAN 1 is reserved for the system, please refer to 3.1 for relevant constraints.
The content in the global configuration step will take effect on the OLT immediately after configuration, and users can configure it according to the actual requirements.

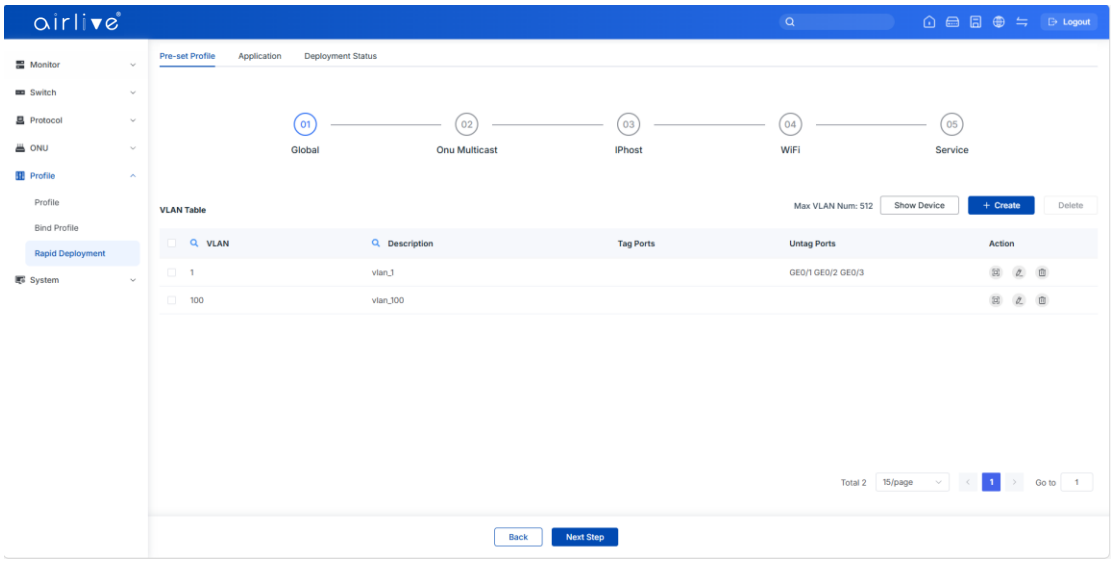


Figure 6.3-4: Global Configuration

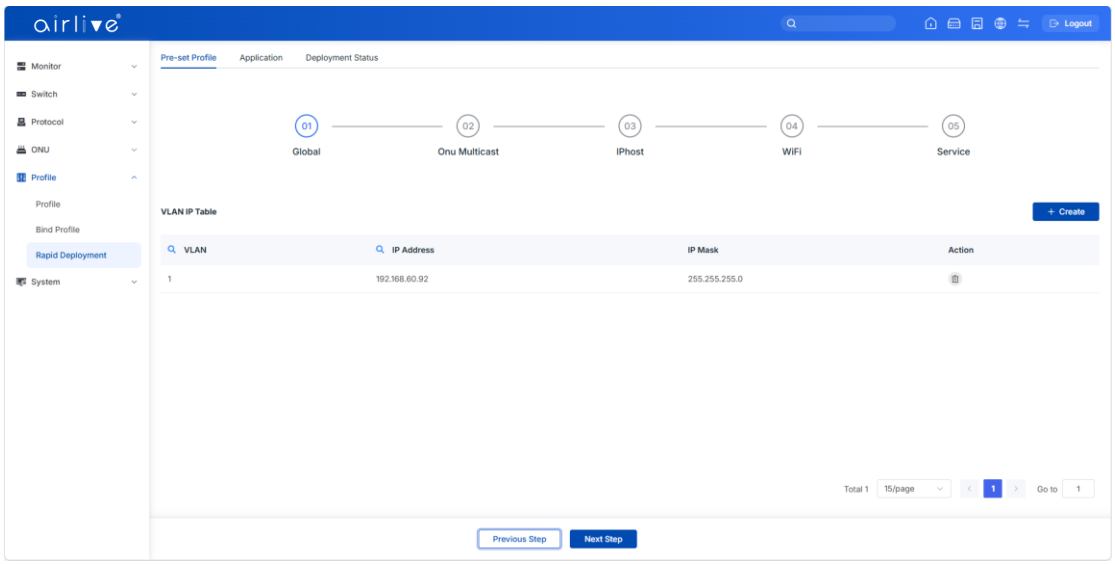


Figure 6.3-5: Global Configuration

6.3.1.3.2 ONU Multicast

By default, this is not configured. It can also be modified and adjusted according to the actual application scenarios. Users can refer to the general configuration of ONU Multicast.

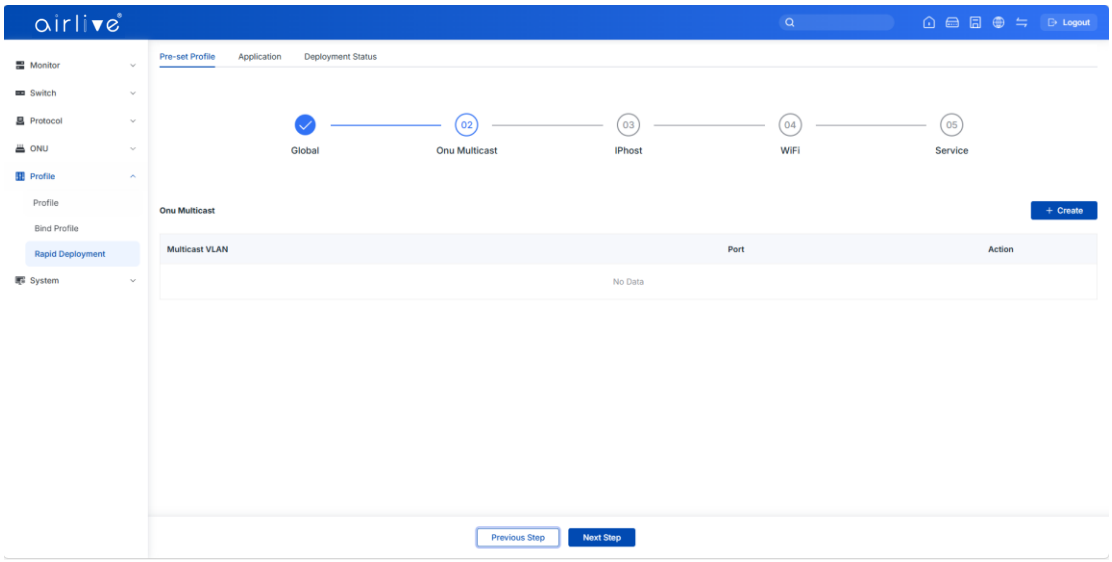


Figure 6.3-6: ONU Multicast Configuration

6.3.1.3.3 IPhost

By default, this is not configured. It can also be modified and adjusted according to the actual application scenarios. Users can refer to the general configuration of ONU IPhost. Currently, only one IPhost is supported.

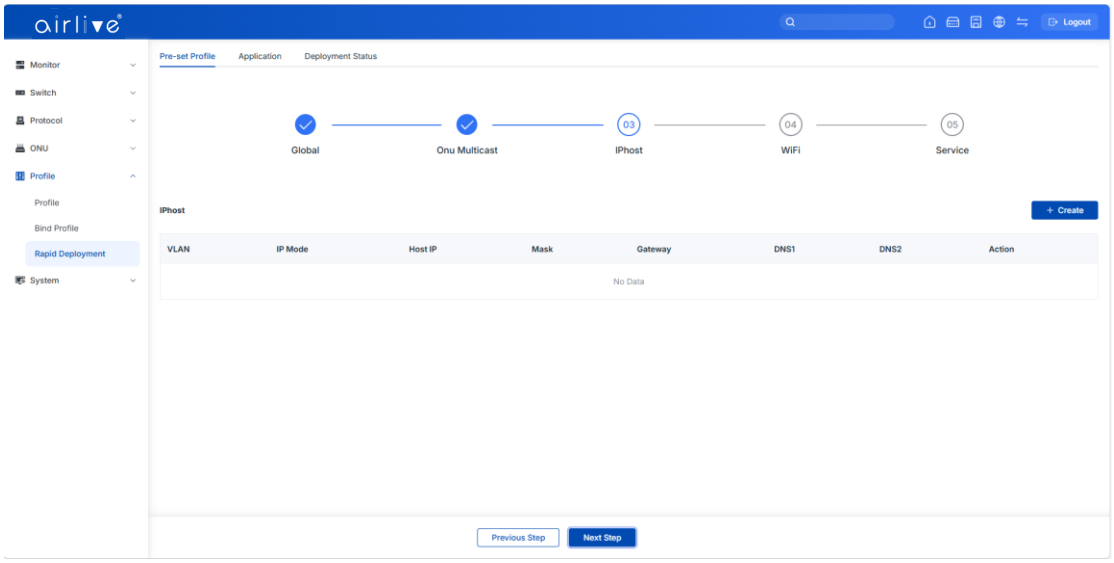


Figure 6.3-7: IPhost Configuration

6.3.1.3.4 WIFI

By default, this is not configured. It can also be modified and adjusted according to the actual application scenarios. Users can refer to the general configuration of ONU WIFI;

Note: You need to configure the SSID name, if you don't configure the password, the auth mode will be open by default.

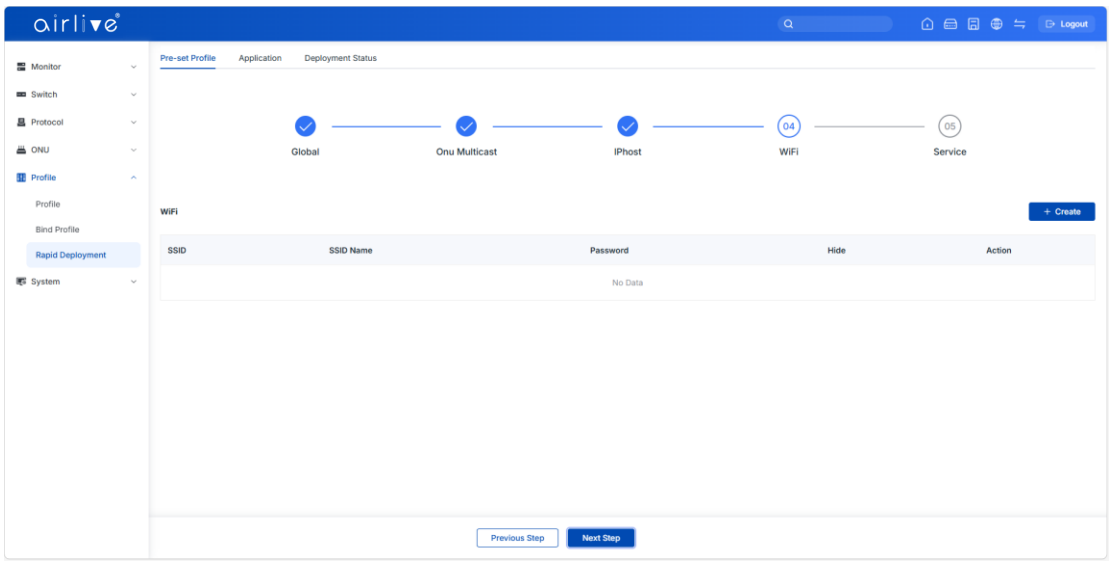


Figure 6.3-8: WIFI Configuration

6.3.1.3.5 Service

(1) You need to configure Service Mode and VLAN ID, Service Mode configures the specific service type, such as Internet, Multicast, Tr069, VoIP and Other. VLAN ID refers to the specific VLAN that the Service takes effect; port binding is configured according to demand;
(2) If Service is configured, the Tcont, Gemport, Service, PortVLAN, WAN and other Services will be configured automatically when ONU goes online. For SFU, PortVLAN will be configured automatically according to the port binding information in the Service configuration and the number of ports in SFU itself;
For HGU portVLAN will be configured with Transparent by default, and if private WAN is supported, WAN service will be configured automatically according to the configuration information;
Currently, at most 5 Services are configured at the same time.

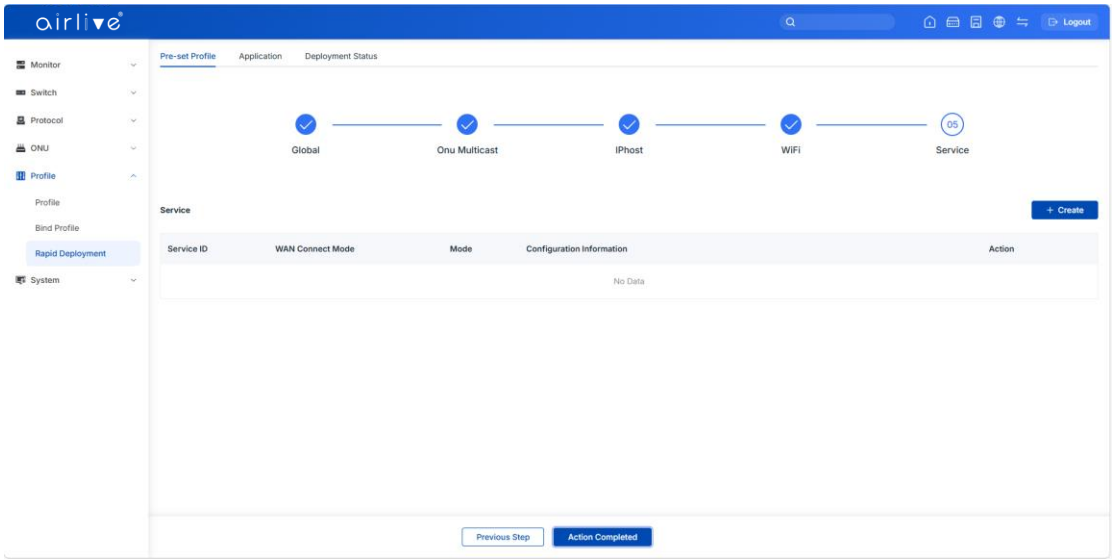


Figure 6.3-9: Service Configuration

6.3.2 Application

The function of Application interface is to configure the Pre-set Profile bind rules. select the corresponding Match rule to validate the ONUs under the PON that satisfy the matching conditions.

6.3.2.1 Information

Profile → Rapid Deployment → Application → Application

This page displays the current list of created Application, which can be Enabled or Disabled and deleted for a specific Application. The Modify function is not supported currently.

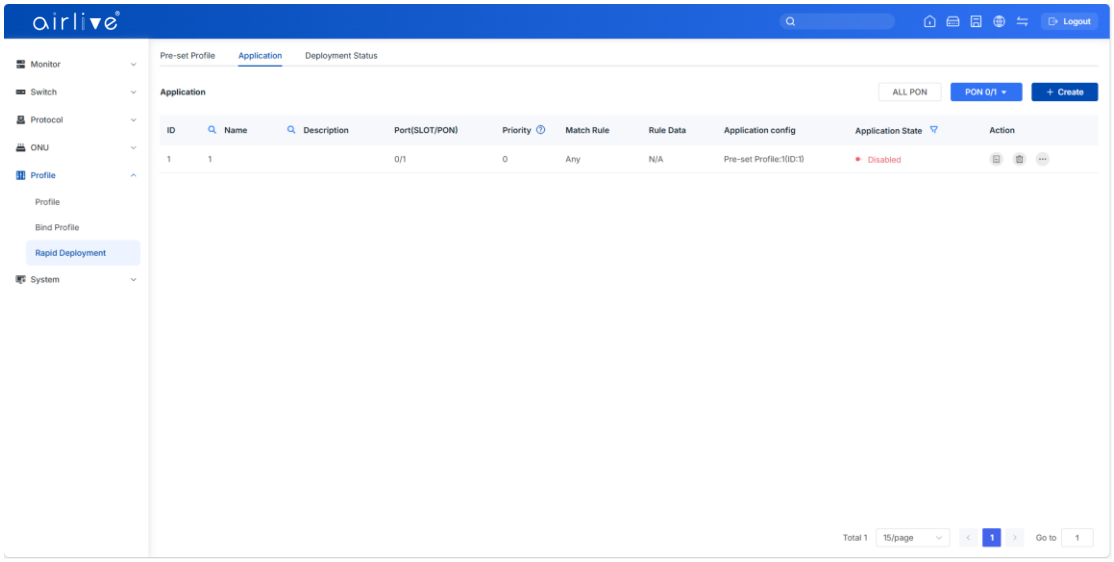


Figure 6.3-10: Application Information

6.3.2.2 Create

Profile → Rapid Deployment → Application → Create

(1). Specify the Application ID and name. These two items must be unique.

(2). Specify the priority of the Application rule to take effect. When more than one Application rule exists under the same PON port, the one with the highest priority (0 is the highest priority) will be matched first. Only one Application of the same priority can exist under the same PON port.

(3)Match Rule includes Any, Fuzzy_Equid, Exact_Equid, ONU_ID, SN, Vendor_ID. Any means any ONU; Fuzzy_Equid means Fuzzy equipment ID of ONU; Exact_Equid means Exact equipment ID of ONU; ONU_ID means ONU id list of ONU, such as 1,3,5-10,12,16, etc.

(4). Select the corresponding Preset-Profile configuration.
(5). Select Enable or Disable the currently created application; if Disable, the Application will not be matched when ONU goes online, but will be skipped directly.

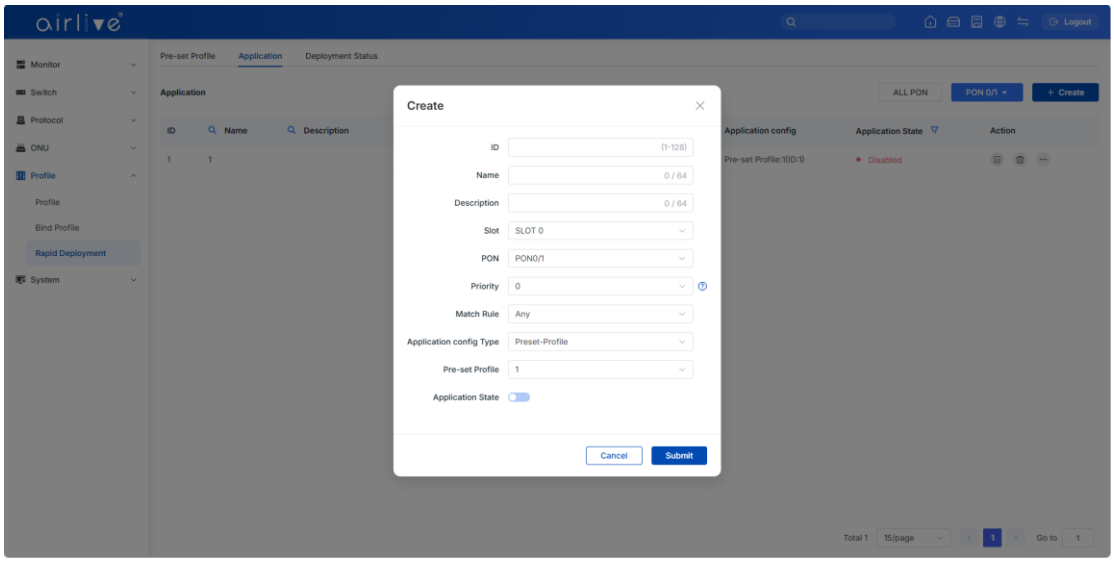


Figure 6.3-11: Add Application

6.3.3 Deployment Status

This page displays the results of the ONU Rapid Deployment configuration taken effect, and also supports users to filter the results as needed.

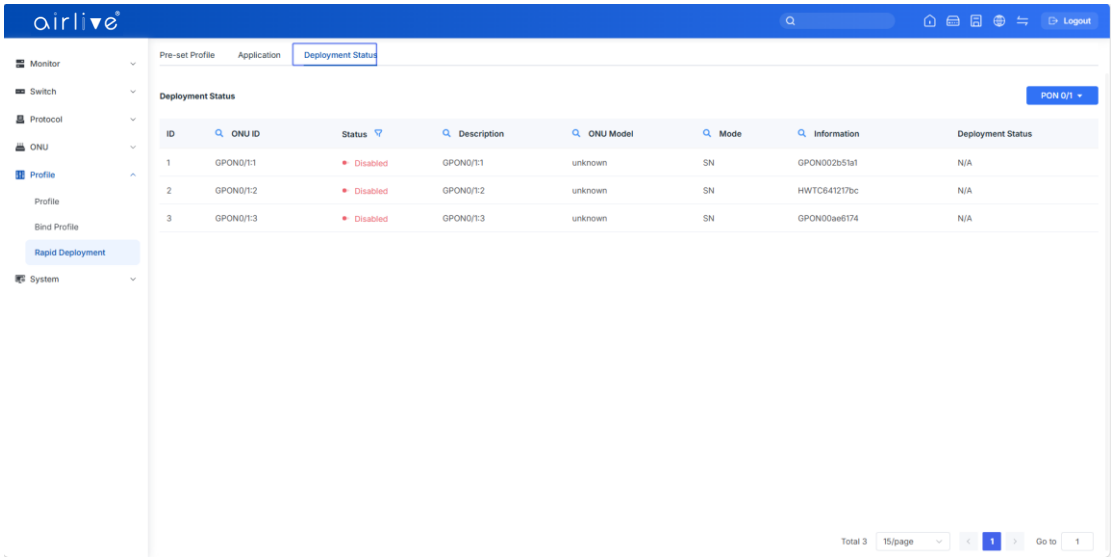


Figure 6.3-12: Deployment Status

Chapter 7 System Configuration

This chapter is about the global management of OLT.

7.1 System Log

7.1.1 System Log

System → System Log
This page displays OLT system alarms and events.

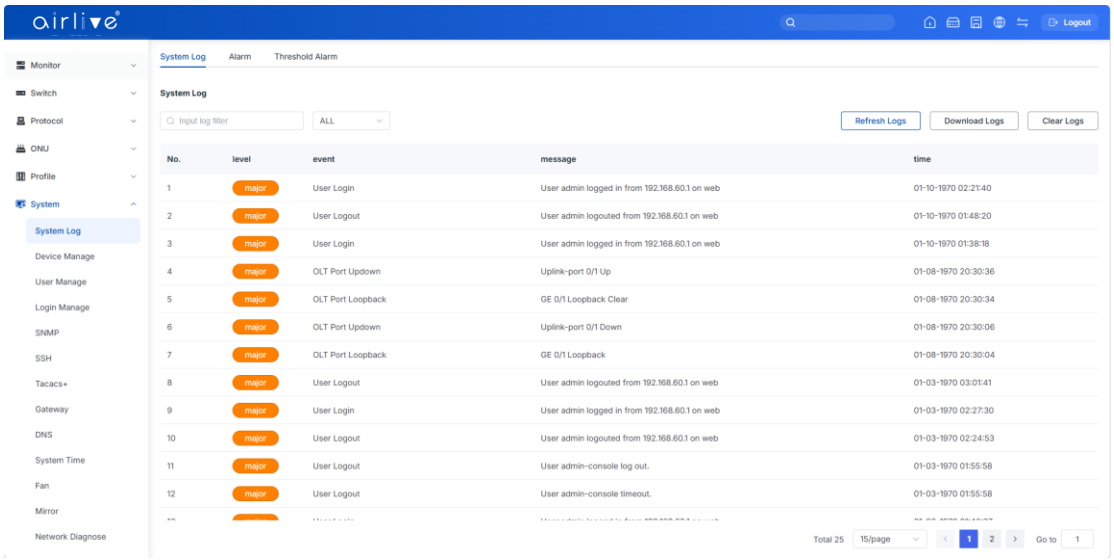


Figure 7.1-1: System Log

7.1.2 Alarm

System → System Log → Alarm
It contains all the Alarms of OLT. User can choose the different Alarms to "**Print**", "**Record**", "**Trap**" and "**Remote**".

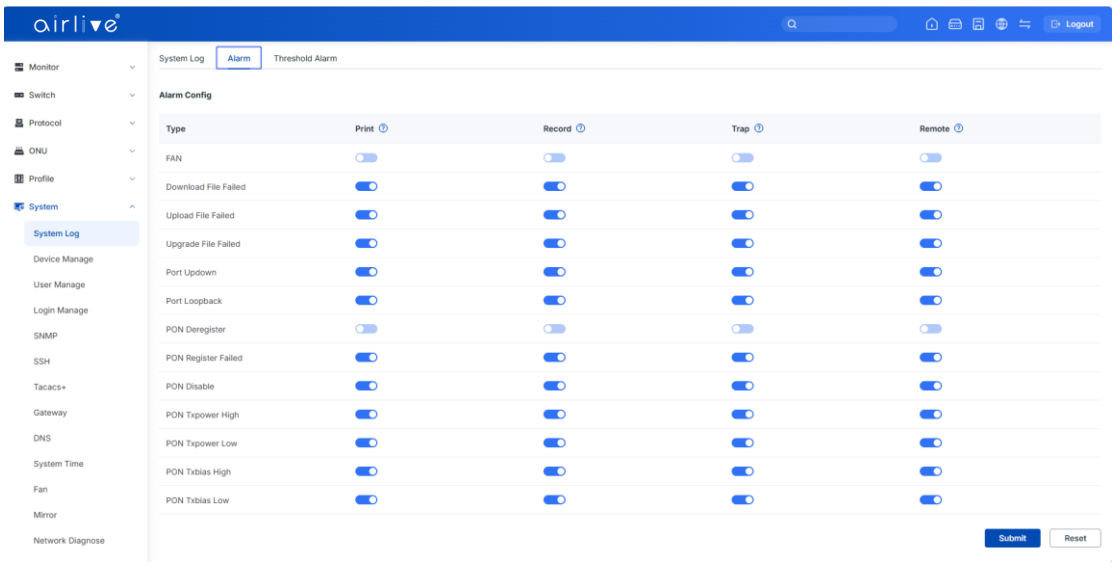


Figure 7.1-2: Alarm

Options	Descriptions
Print	Alarm and event show in console and telnet, but not show in syslog, INCE and remote log server.
Record	Alarm and event show in syslog, but not show in console, telnet, INCE and remote log server.
Trap	Alarm and event show in INCE, 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 INCE.

7.1.3 Threshold Alarm

System → System Log → Threshold Alarm

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

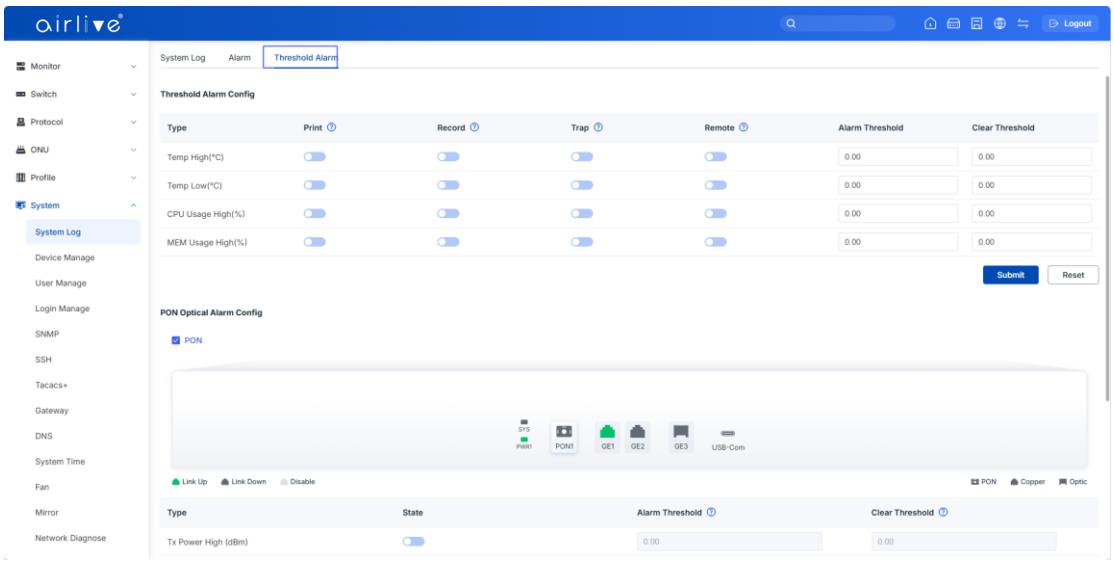


Figure 7.1-3: Threshold Alarm

7.2 Device Manage

7.2.1 Firmware Upgrade

System → Device Manage →Firmware Upgrade

You can upgrade the OLT firmware on this page. OLT will reboot automatically with the new firmware after upgraded when you select the option “Upgrade And Reboot”.

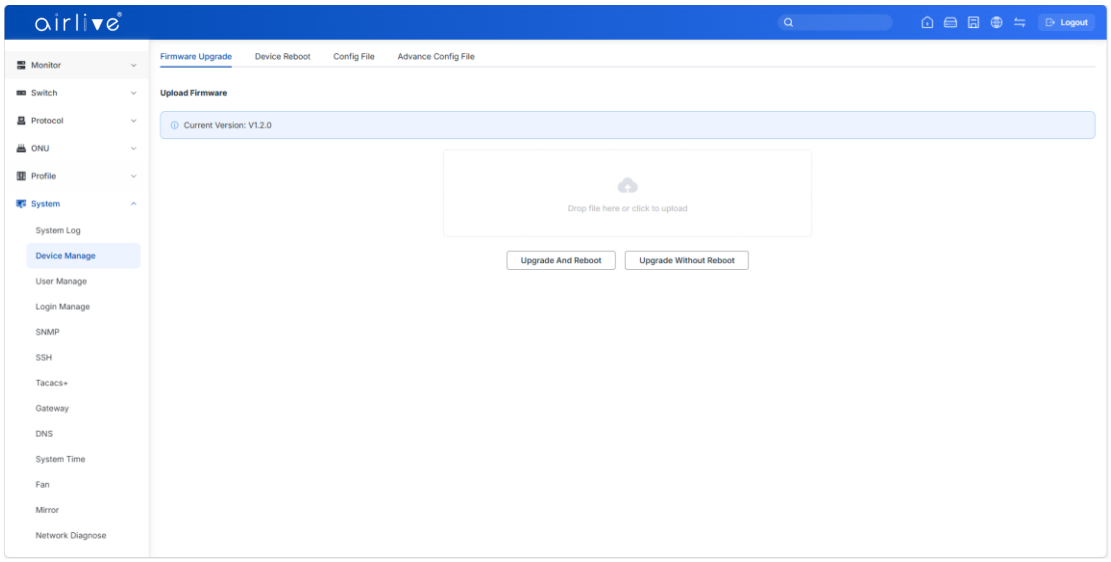


Figure 7.2-1: Firmware Upgrade

7.2.2 Device Reboot

System → Device Management → Device Reboot

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

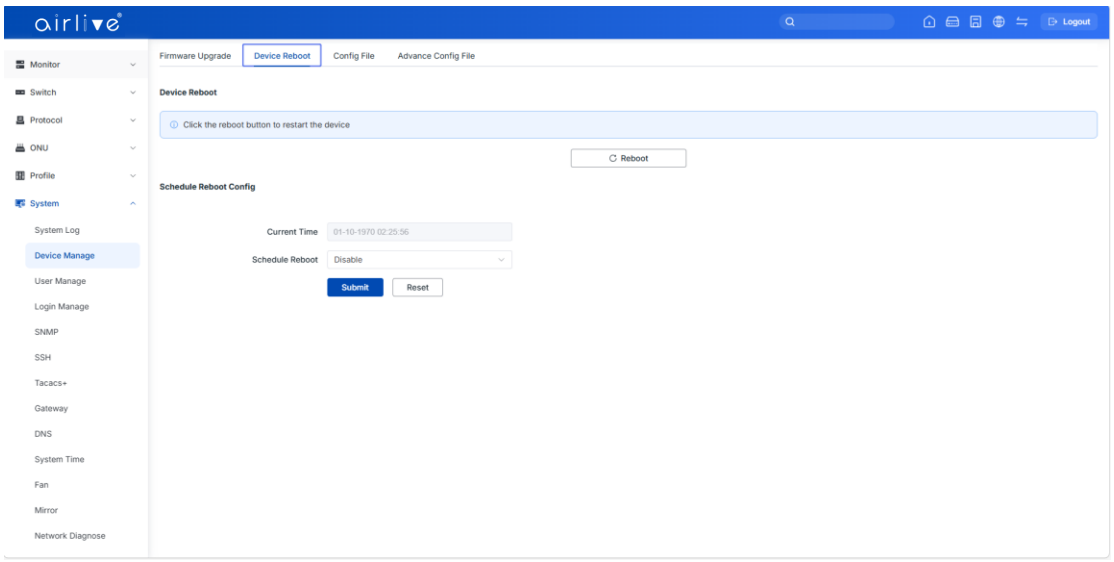


Figure 7.2-2: Device Reboot

7.2.3 Config File

System → Device Management → Config File

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

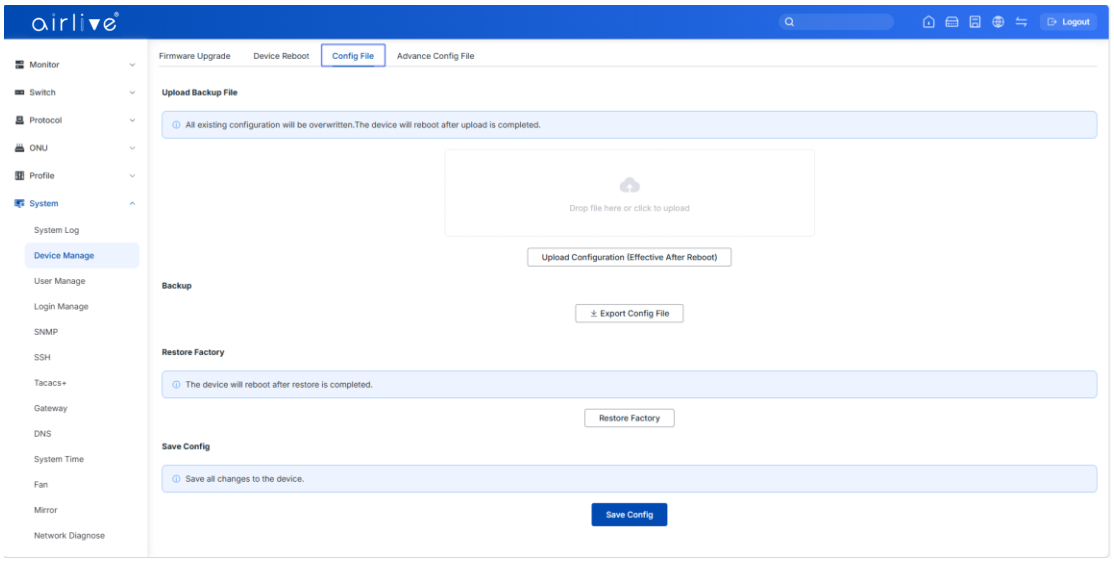


Figure 7.2-3: Config File Configuration

7.2.4 Advance Config File

System → Device Management → Advance Config File

You can automatically backup files on this page.

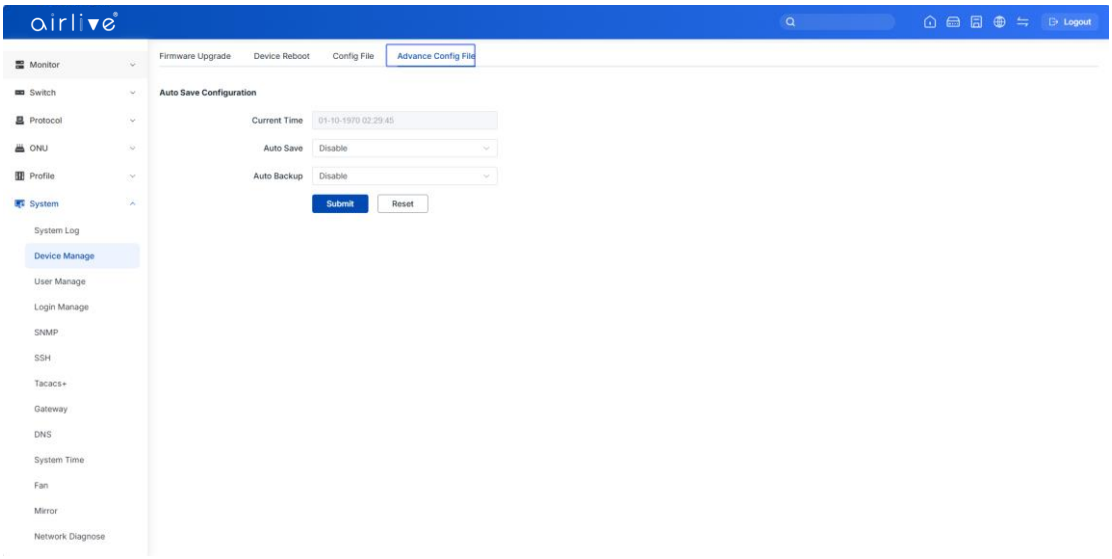


Figure 7.2-4: Advance Config File Configuration

7.3 User Manage

System → 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.

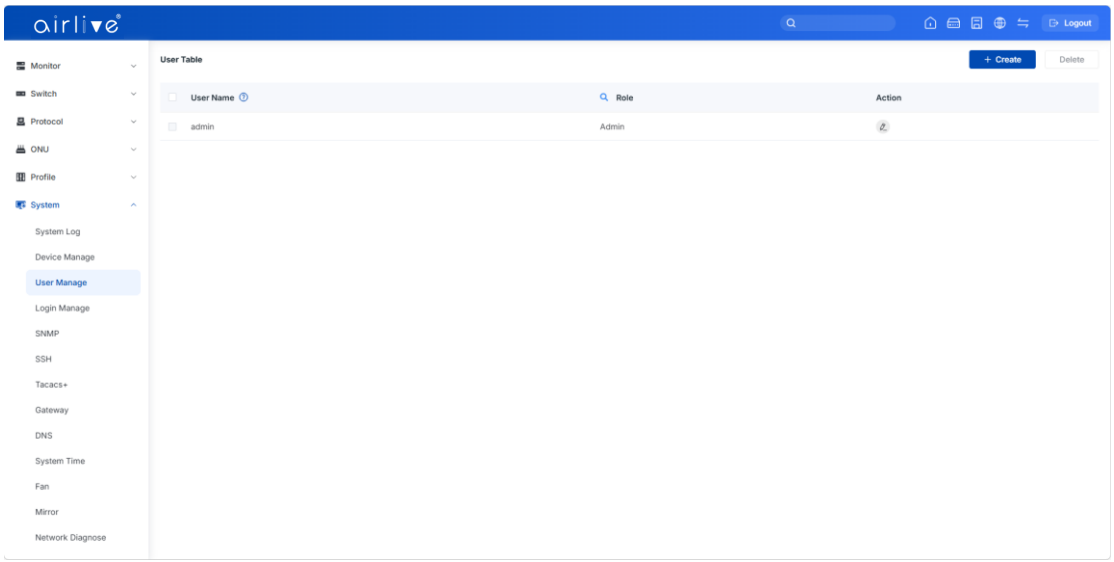


Figure 7.3-1: User Manage

7.4 Login Management

7.4.1 Login Access List

System → Login Manage → Login Access List

This page is used to configure access rights for management. You can configure access rights for Telnet, Web, according to source IP address.

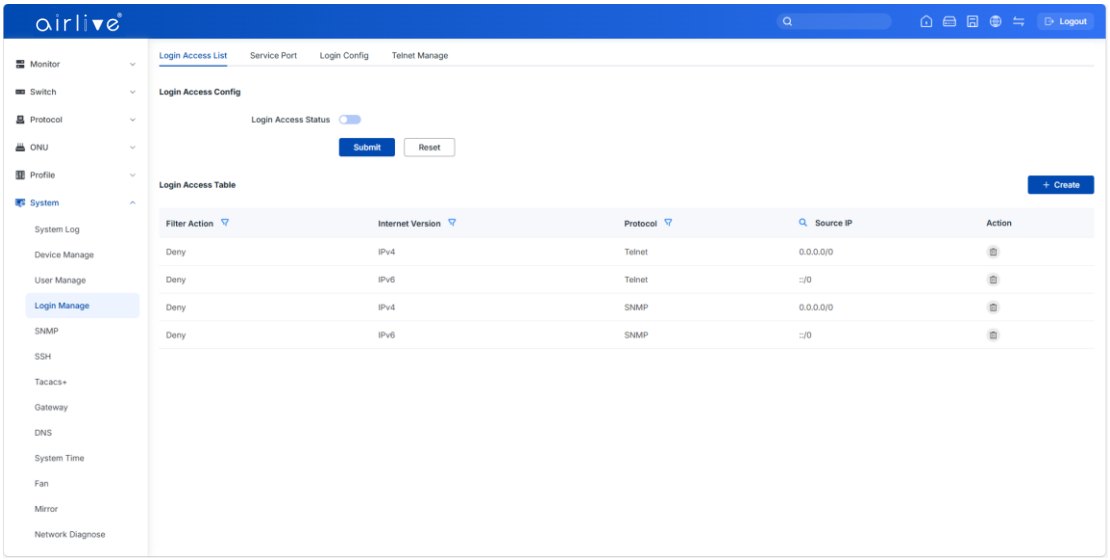


Figure 7.4-1: Login Access List Config

7.4.2 Service Port

System → Login Manage → Service Port

This page is used to set Web,Telnet Port .

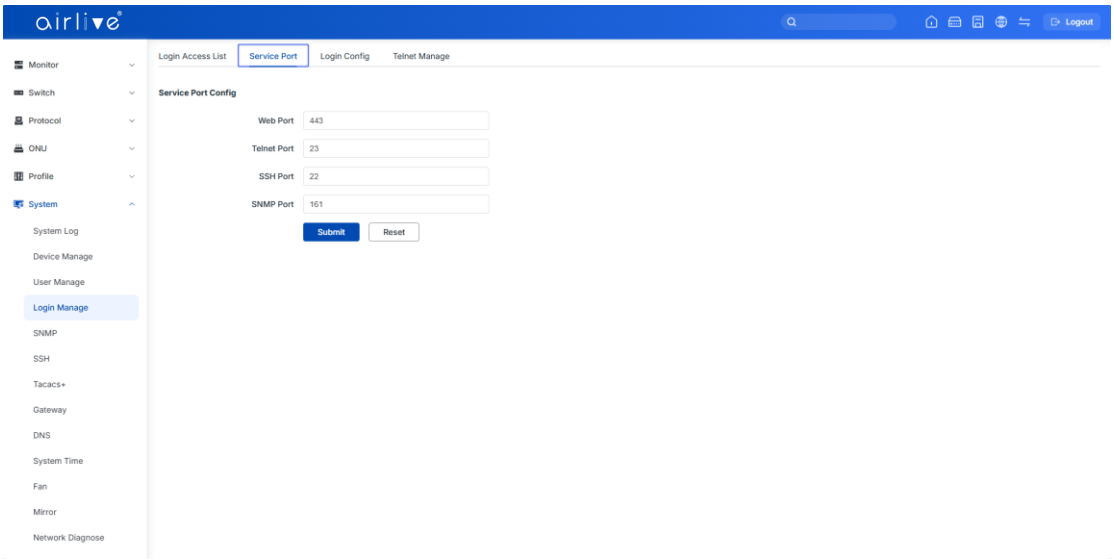


Figure 7.4-2: Service Port Config

7.4.3 Login Config

System Configuration→ Login Manage →Login Config

This page is used to set login timeout and verification code switch .

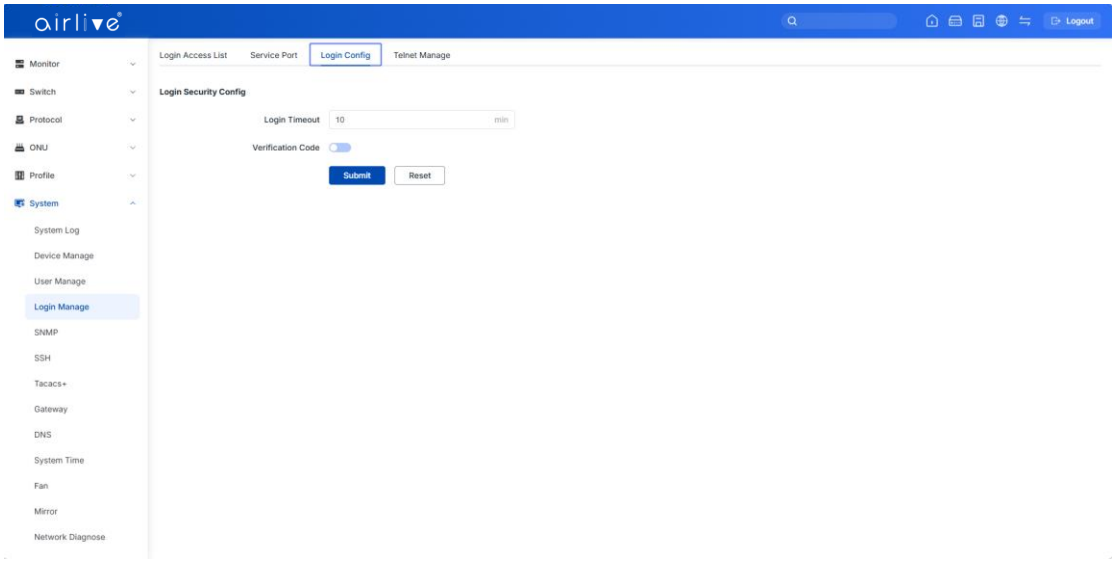


Figure 7.4-3: Login Config

7.4.4 Telnet Manage

System Configuration→ Login Manage→ Telnet Manage

This page displays the current telnet connection information.You can see the host IP address and user name information that are currently accessing the OLT through telnet.

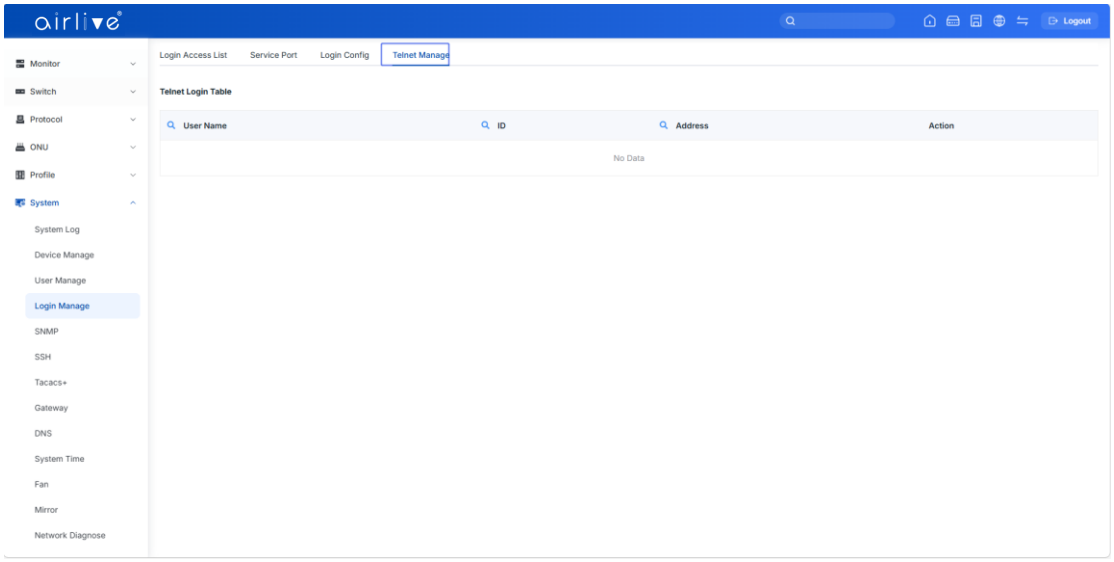


Figure 7.4-4: Telnet Manage

7.5 SNMP

7.5.1 SNMPV1/V2

System → SNMP→ SNMPV1/V2

This page is used to configure SNMP V1/V2 parameters for OLT management.

It is not recommended to modify the default community name in the following image, as it may cause the network management system to be unable to manage and configure it.

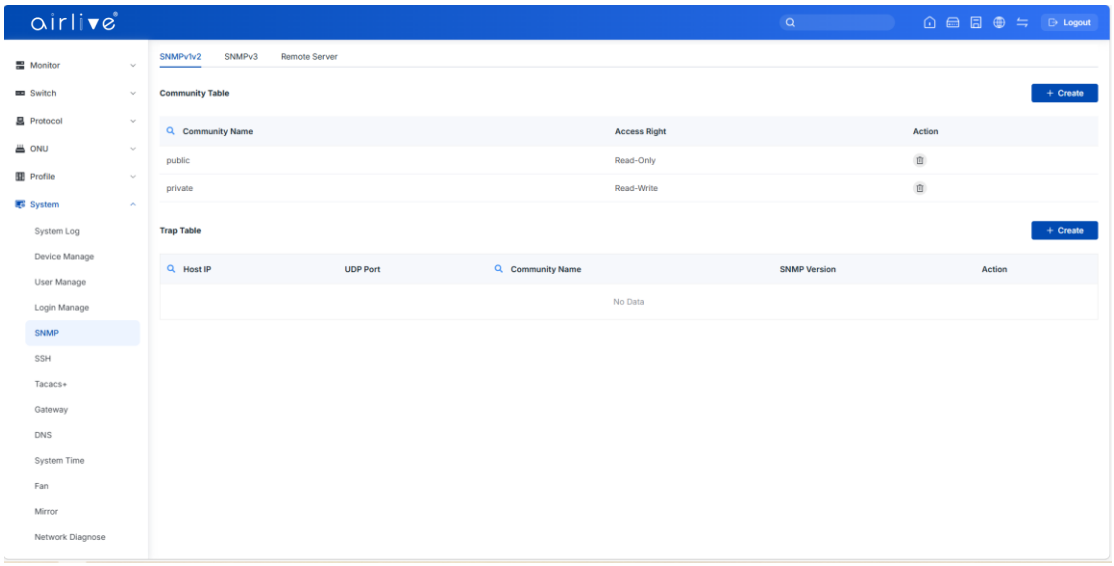


Figure 7.5-1: SNMPV1/V2

7.5.2 SNMPv3

System → SNMP→ SNMPV3

This page is used to configure SNMP V3 parameters for OLT management.

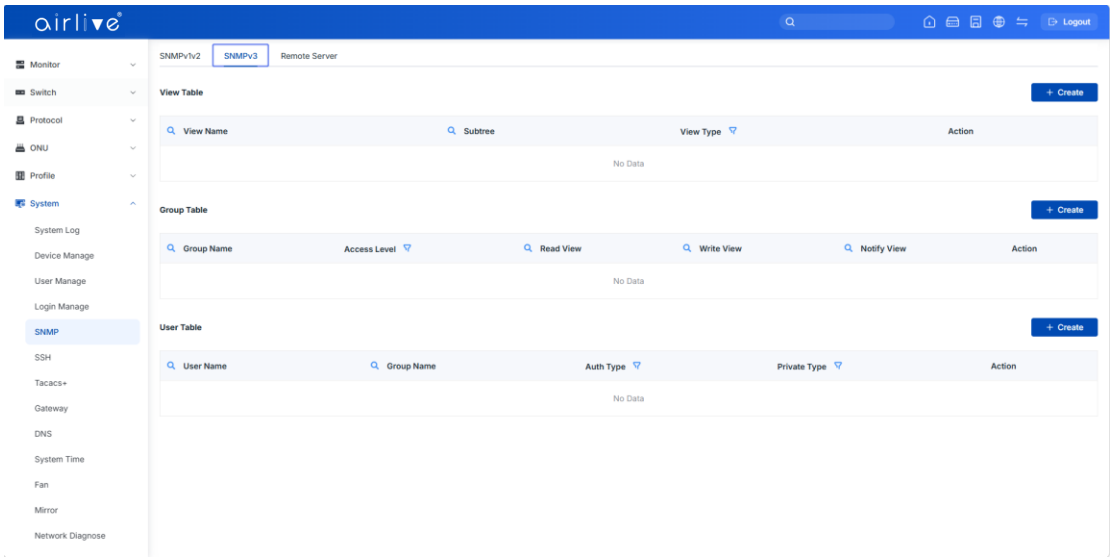


Figure 7.5-2: SNMPv3

7.5.3 Remote Server

System → SNMP→ Remote Server

This page is used to configure AirCore, EMS, OptiCloud server IP.

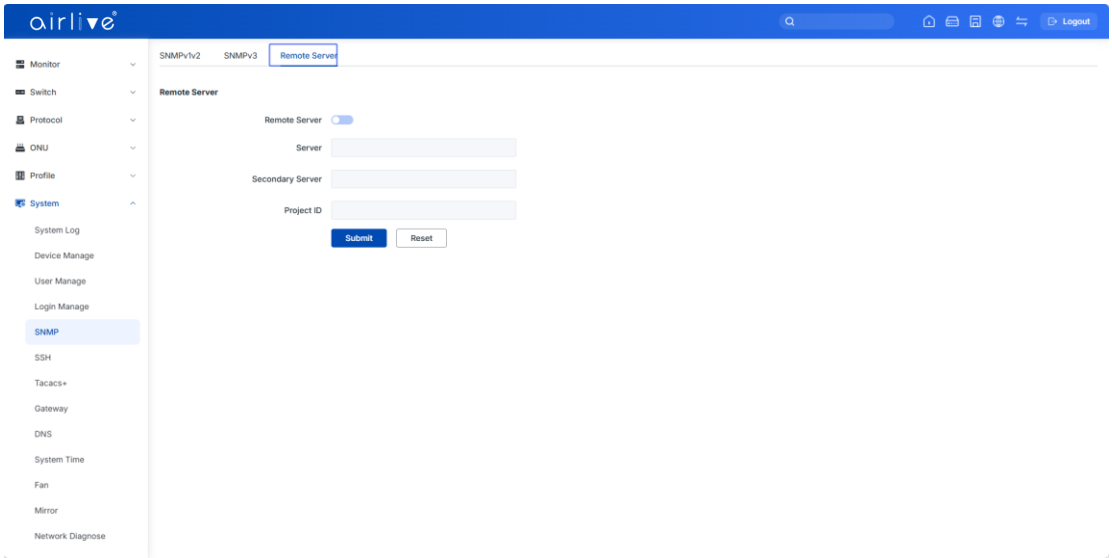


Figure 7.5-3: Remote Server

7.6 SSH

System Configuration→ SSH

This page is used to configure SSH protocol related parameters.

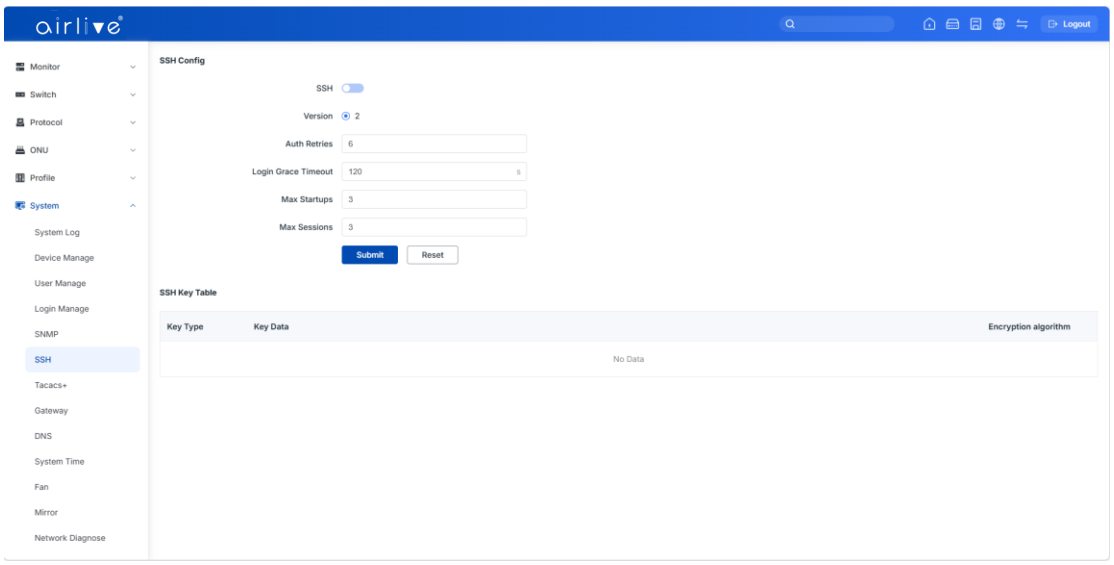


Figure 7.6-1:SSH Enable

7.7 Tacacs+

System Configuration→ 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.

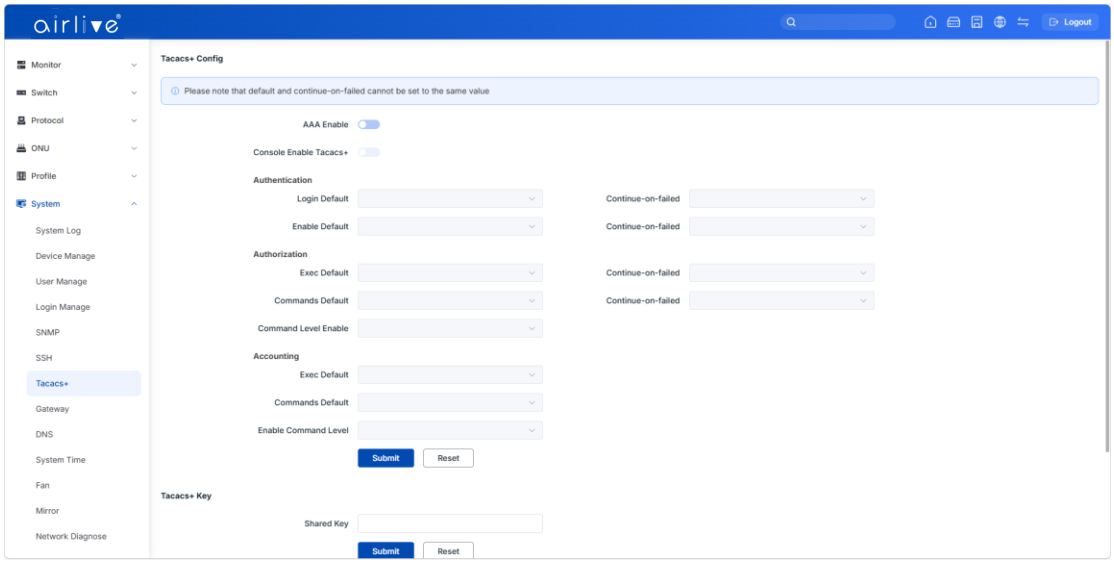


Figure 7.7-1: Tacacs+ Configuration

7.8 Gateway

7.8.1 Gateway

System → Gateway
This page is used to configure the OLT Gateway in case of that the OLT needs to access Internet or any Layer 3 network.

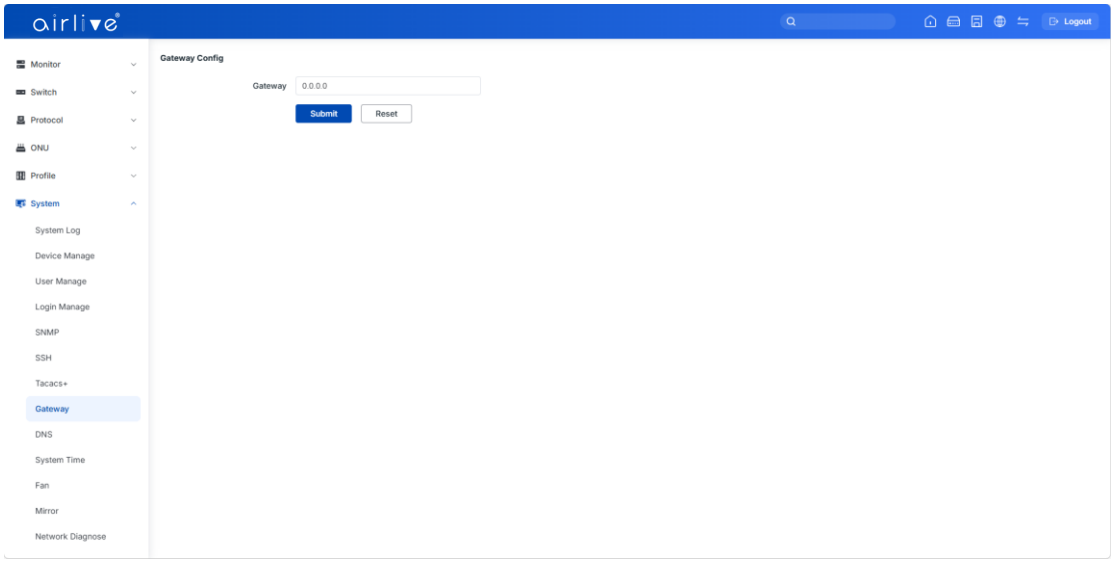


Figure 7.8-1: Gateway

7.9 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.

7.9.1 IPv4 DNS Config

System → DNS → IPv4 DNS Config
This page is used to configure IPv4 DNS.

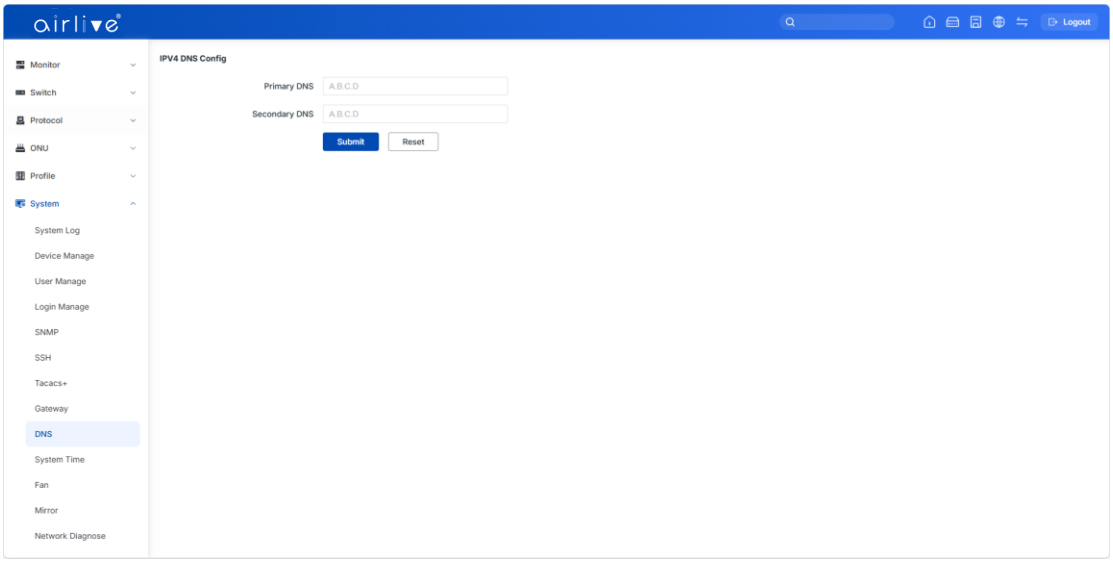


Figure 7.9-1: IPv4 DNS

7.10 System Time

7.10.1 RTC

System → 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.

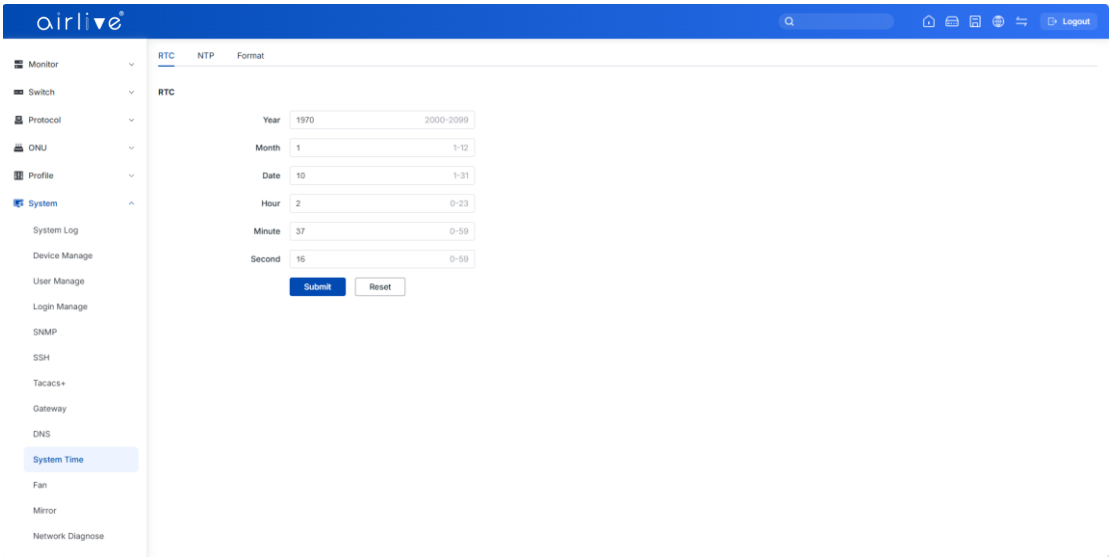


Figure 7.10-1: RTC

7.10.2 NTP

System → System Time → NTP

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

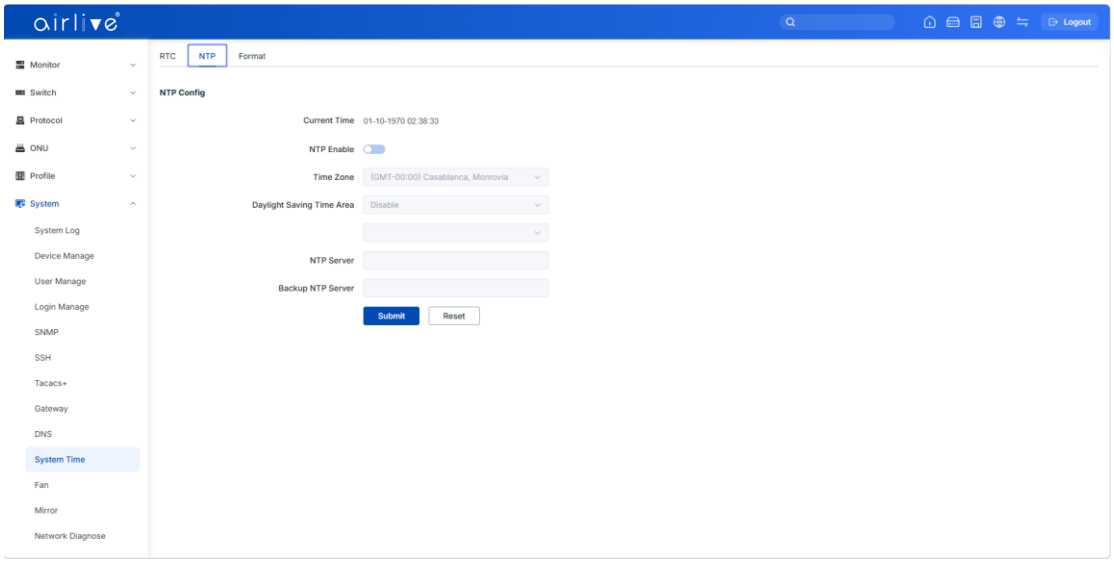


Figure 7.10-2: NTP

7.10.3 Format

System → System Time → Format

This page is used to configure system time format.

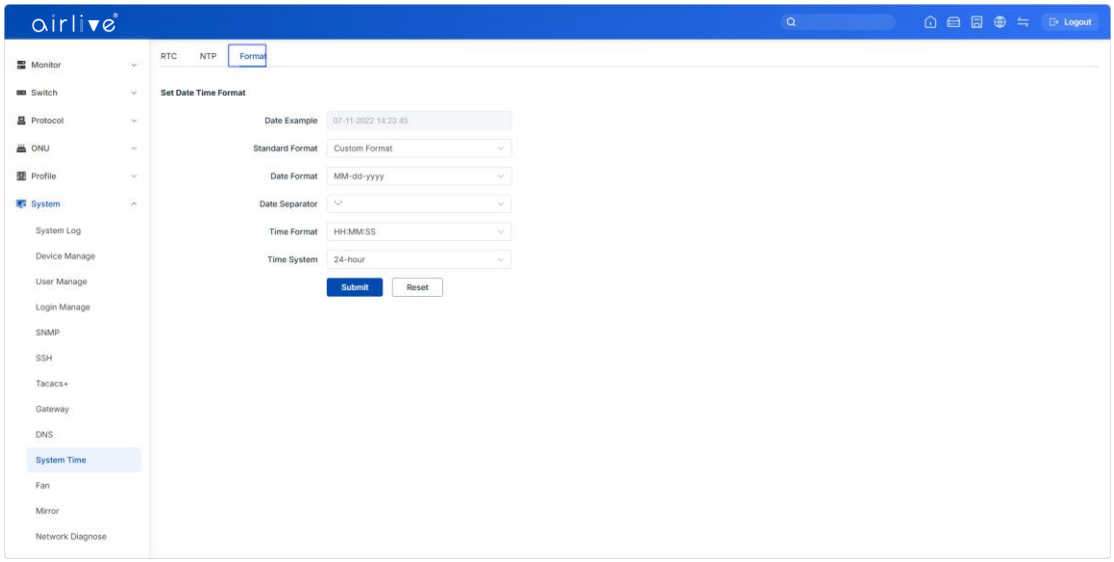


Figure 7.10-3: Format

7.11 Fan

7.11.1 Fan Config

System → Fan → Fan Config

The device fan management configuration enables fan state control and features automatic fan activation for device cooling upon reaching a configured temperature threshold..

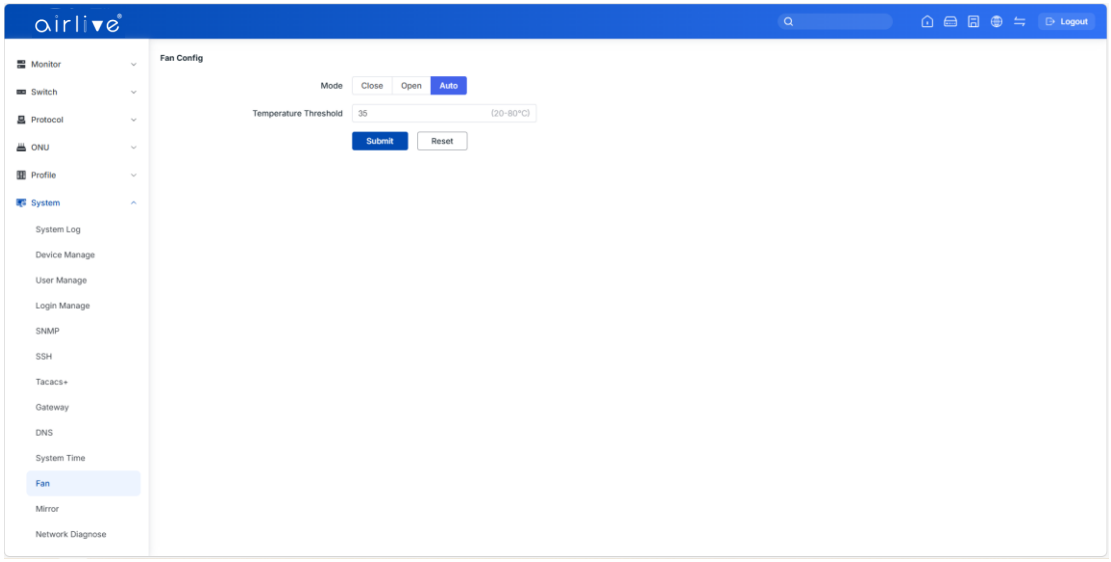


Figure 7.11-1: Fan Config

7.12 Mirror

7.12.1 Mirror Config

System → Mirror → Mirror Config

Port mirror is usually used for troubleshooting. It can forward incoming and outgoing packets from the source port to the destination port.

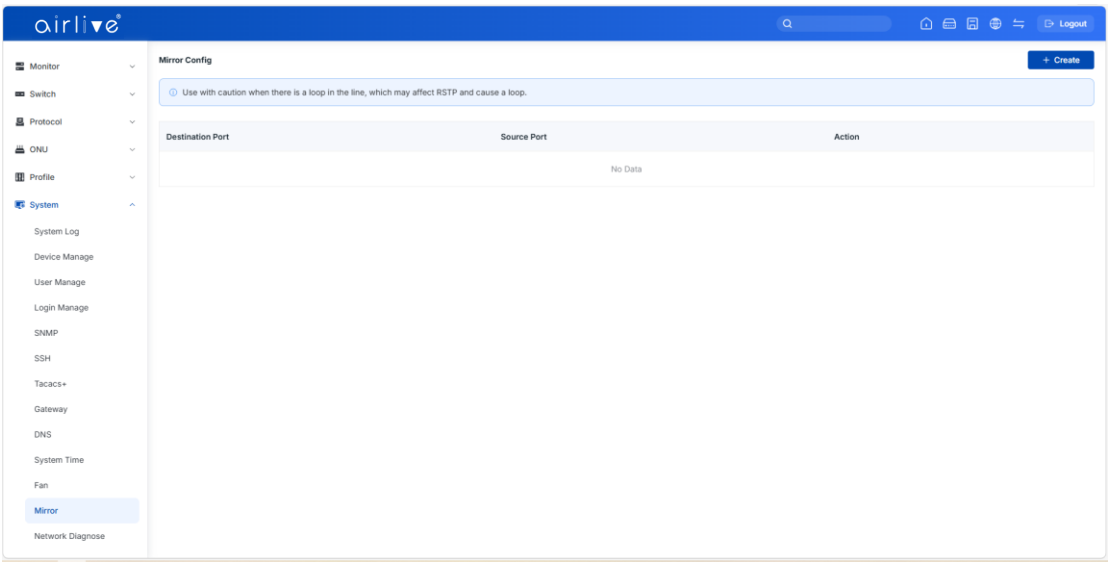


Figure 7.12-1: Mirror Config

7.12.2 Create

System → Mirror → Create

This page is used to create mirror rules. The Destination Port is connected to the packet capture device (e.g., a laptop running Wireshark). The Source Port is the port whose traffic you want to monitor. The Direction field specifies whether to monitor ingress traffic (packets received on the source port), egress traffic (packets transmitted from the source port), or both.

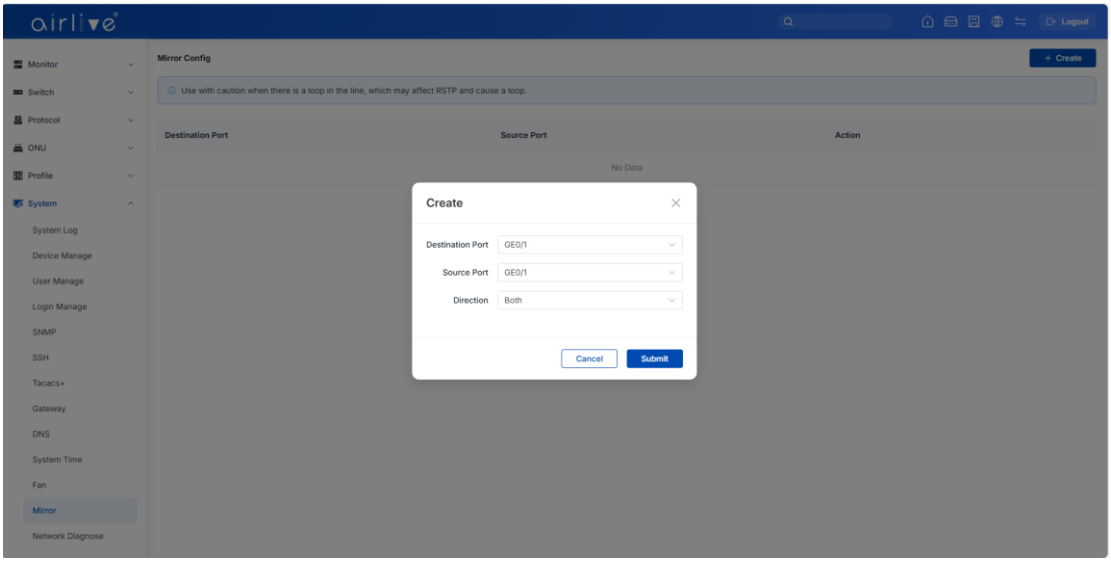


Figure 7.12-2: Create Mirror

7.13 Network Diagnose

7.13.1 PING Diagnose

System → Network Diagnose→ Ping Diagnose
This page supports diagnosing network connections using the PING command.
PING supports IPv4 and IPv6 address.

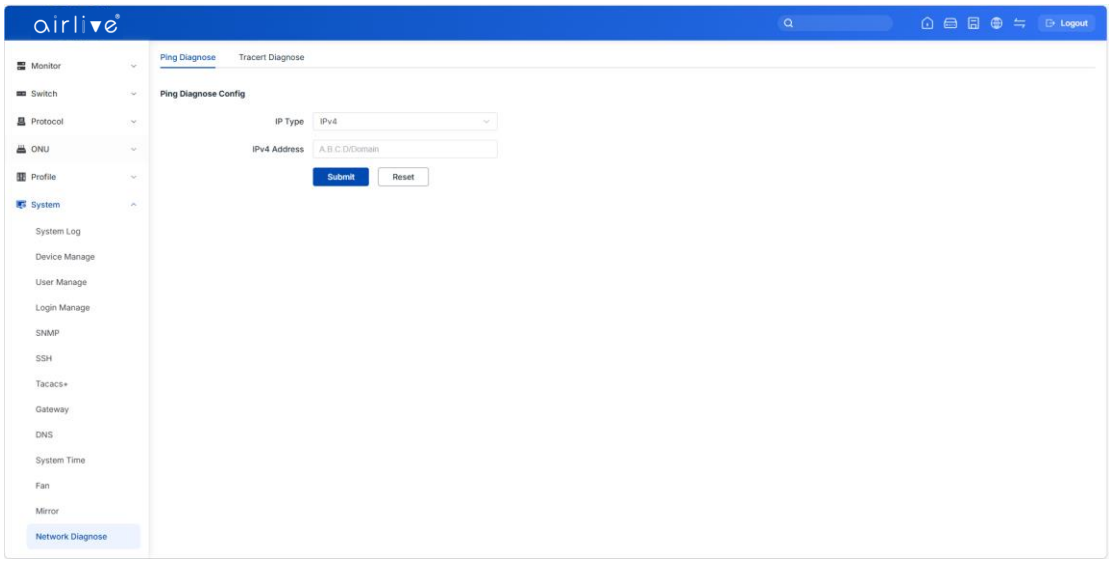


Figure 7.13-1:Ping Diagnose

7.13.2 Tracert Diagnose

System → Network Diagnose→ Tracert Diagnose
This page supports using Tracert commands for route tracing to diagnose network connections.
The routing tracking function supports IPv4 and IPv6 addresses.

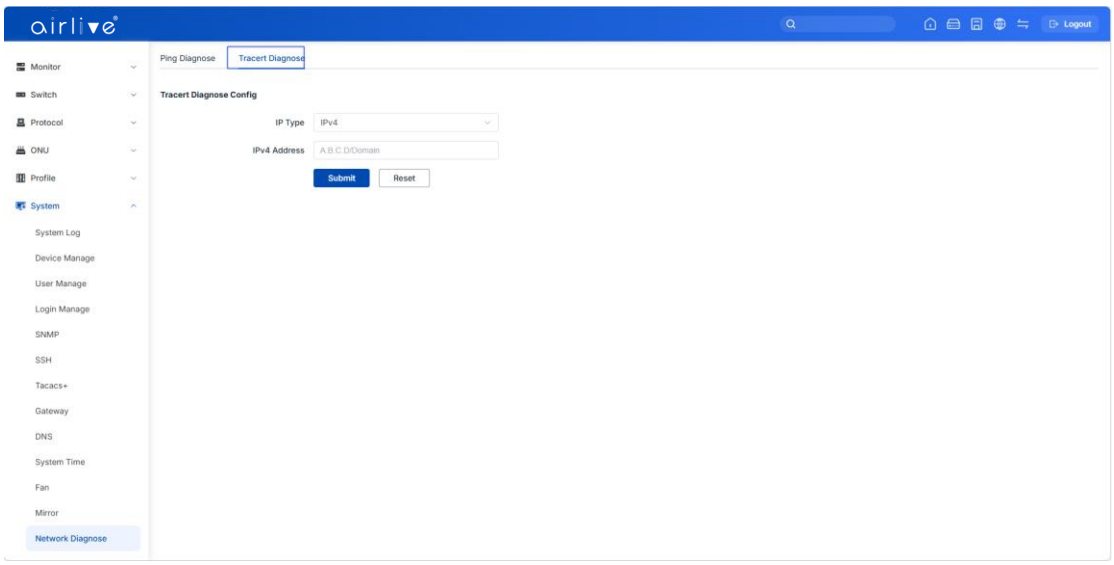


Figure 7.13-2:Tracert Diagnose

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