



User Manual

TOLT-8422 Layer 3 GPON OLT - 8 GPON ports

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Table of content

1	Safety Instructions	6
2	Introduction.....	8
2.1	Product description.....	8
2.2	Detailed features.....	8
2.3	Installation	8
2.4	Front panel.....	8
2.5	Rear panel	9
2.6	Interfaces	9
2.7	Supported functions	9
2.7.1	MANAGEMENT	9
2.7.2	LAYER 2 SWITCH	9
2.7.3	MULTICAST	10
2.7.4	DHCP	10
2.7.5	LAYER 3 ROUTE	10
2.7.6	IPV6	10
2.7.7	GPON FUNCTION	10
2.7.8	Various	10
2.8	Login to the OLT	11
2.9	Device Information	11
3	OLT configuration	12
3.1	VLAN	12
3.1.1	Create VLAN	12
3.1.2	VLAN Port	13
3.1.3	QinQ/Translation	13
3.1.4	P2P	14
3.2	Uplink Port	14
3.2.1	Information	14
3.2.2	Configuration	15
3.3	PON	16
3.3.1	Information	16
3.3.2	Traffic Statistics	16
3.3.3	Configuration	17
3.3.4	Range	17
3.3.5	Protection Switch Group	18
3.4	MAC	18
3.4.1	MAC Table	18
3.4.2	PON MAC Table	19
3.4.3	Configuration	20
3.4.4	MAC Flapping Information	20
3.4.5	MAC Flapping Configuration	21
3.4.6	MAC Flapping Port Configuration	21
3.5	LACP	21
3.5.1	Static LACP	21
3.5.2	Dynamic LACP	22
3.6	QoS.....	23
3.7	ACL	23
3.7.1	IP Filter	23
3.7.2	MAC Filter	24
3.7.3	IP/MAC Filter	25
3.7.4	Effect Filter	25
3.8	IPv6 ACL	26
3.8.1	IPv6 Filter	26
3.8.2	IPv6/MAC Filter	26

3.8.3	IPv6 Effect Filter	27
3.9	IGMP	27
3.9.1	Group Member	27
3.9.2	Global	28
3.9.3	Port	29
3.9.4	Port User VLAN	29
3.9.5	Port Mrouter	30
3.9.6	Mvlan	30
3.9.7	Static Group	30
3.10	IPv6 MLD	31
3.10.1	Group Member	31
3.10.2	Global	32
3.10.3	Port User VLAN	32
3.10.4	Port	33
3.10.5	Port Mrouter	34
3.11	STP	34
3.11.1	RSTP Information	35
3.11.2	Global	36
3.11.3	Port	37
3.11.4	MSTP Information	38
3.11.5	MSTP Global	39
3.11.6	Port	40
3.12	Loopback	41
3.12.1	Information	41
3.12.2	Global	42
3.12.3	Port	43
3.13	DHCP	44
3.13.1	DHCP Server	44
3.13.2	DHCP Relay	46
3.13.3	DHCP Snooping	47
3.14	DHCPv6	51
3.14.1	DHCPv6 Server	51
3.14.2	DHCPv6 Relay	53
3.15	IPv6 SLAAC	53
3.15.1	IPv6 SLAAC	53
3.15.2	IPv6 SLAAC Prefix	54
3.15.3	RDNSS	55
3.16	Route	55
3.16.1	IP	55
3.16.2	Static Route	57
3.16.3	RIP	57
3.16.4	OSPF	60
3.16.5	Key Chain	64
3.16.6	Route Table	65
3.17	IPv6 Route	65
3.17.1	IPv6	65
3.17.2	IPv6 Static Route	66
3.17.3	IPv6 Route Table	67
3.18	ARP Security	67
3.18.1	Dynamic ARP Inspection	67
3.19	Traffic policy	68
3.20	PPPoE Intermediate Agent	69
3.20.1	IPv6	70
3.21	ARP	71
3.21.1	ARP Table	71
3.21.2	ARP Restriction	72
3.22	LLDP	72

3.22.1	LLDP Information	73
3.22.2	LLDP Global	74
3.22.3	LLDP Global	74
4	ONU Configuration	75
4.1	ONU AuthList	75
4.1.1	ONU List	75
4.1.2	ONU Status	84
4.1.3	ONU Optical Info	84
4.1.4	ONU Manual Add	84
4.1.5	ONU Allowlist	85
4.1.6	ONU Statistics	85
4.2	AutoFind	85
4.3	AutoLearn	86
4.3.1	ONU AutoLearn	86
4.3.2	ONU AutoBind	87
4.3.3	ONU AutoDelete	87
4.4	ONU Upgrade	87
4.4.1	UpLoad Image	87
4.4.2	Manual Upgrade	88
4.4.3	Upgrade Status	88
4.4.4	Auto Upgrade	89
4.4.5	Auto Upgrade Status	90
4.5	Rogue ONU	90
4.6	ONU Common Service	91
5	Profile configuration	92
5.1	ONU Profile	92
5.1.1	Information	92
5.1.2	Add profile	93
5.2	DBA Profile	94
5.2.1	DBA profiles	94
5.2.2	Add profile	95
5.3	Traffic Profile	96
5.3.1	Traffic profiles	96
5.3.2	Add profile	96
5.4	Line Profile	97
5.4.1	Line profile	97
5.4.2	Add profile	98
5.5	Service Profile	101
5.5.1	Service profile	101
5.5.2	5.5.2 Add profile	102
5.6	Alarm Profile	104
5.6.1	Profile Info	104
5.6.2	Add Profile	105
5.7	Pri Profile	105
5.7.1	Pri Profile	106
5.7.2	Add Profile	106
5.8	Bind Profile	107
5.9	IGMP Profile	107
5.9.1	IGMP Profile	107
5.9.2	Add Profile	108
5.10	Format Profile	109
5.10.1	Format Profile	109
5.10.2	Add Profile	109
6	System configuration	111
6.1	System Log	111
6.1.1	System Log	111

6.1.2	Alarm	112
6.1.3	Threshold Alarm	113
6.1.4	Syslog Server	113
6.1.5	Syslog Server IPv6	114
6.2	Device Management.....	114
6.2.1	Firmware Upgrade	114
6.2.2	Device Reboot	115
6.2.3	Config File	115
6.3	User Management	116
6.4	SNMP	116
6.4.1	SNMP V1/V2	116
6.4.2	SNMP V3	117
6.4.3	Remote Server	117
6.5	AUX IP	118
6.5.1	AUX IP	118
6.5.2	AUX IPv6	119
6.6	DNS	119
6.6.1	IPv4 DNS	119
6.6.2	IPv6 DNS	120
6.7	System Time.....	120
6.7.1	RTC	120
6.7.2	NTP	121
6.8	FAN.....	121
6.9	Mirror.....	122
6.10	Login Management	122
6.10.1	Login Access List	122
6.10.2	Service Port	123
6.10.3	Login Timeout	124
6.11	Net Work Security	124
6.12	SSH	125
6.12.1	SSH State	125
6.12.2	SSH Enable	125
6.13	Diagnose	126
6.13.1	Ping Diagnose	126
6.13.2	Tracert Diagnose	127
6.14	Tacacs+	127
6.15	Radius.....	128
6.16	Power	128
7	Technical Specifications	129
8	EU Declaration of Conformity	130
9	Conditions of warranty.....	130

1 Safety Instructions



Read these instructions carefully before connecting the unit

ATTENTION

- Failure to comply with the specified precautionary measures may cause serious injury to persons or damage to property.
- The assembly, installation, additional electrical wiring, servicing and commissioning may only be performed by suitably qualified persons, technicians or installers in compliance with safety regulations.
- Damage due to improper installation and commissioning, defective connectors on cables or any other incorrect handling will void the warranty.

CAUTION

- The safety requirements are according to the standards EN 62368-1 resp. EN 60728-11 and must be observed, especially concerning equipotential bonding and earthing.
- Observe the relevant country-specific standards, regulations and guidelines on the installation and operation of antenna systems.
- Before starting installation or service work disconnect the receiving system from mains.
- Installation or service work should NEVER be undertaken during electrical / thunderstorms.
- Avoid short circuits!
- To ensure electromagnetic compatibility, make sure all connections are tight and that the covers are screwed on securely.
- Take action to prevent static discharge when working on the device!
- Due to the risk of fires caused by lightning strikes, we recommend that all mechanical parts (e.g. distributor, equipotential bonding rail, etc.) be mounted on a non-combustible base. Wood panelling, wooden beams, plastic covered panels and plastic panels are all examples of combustible bases.



To prevent fire, short circuit or shock hazard:

- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water.
- Do not expose it to dripping or splashing.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.



To avoid any risk of overheating:

- Install the unit in a well aired location and keep a minimum distance of 5 cm around the apparatus for sufficient ventilation.
- Do not place any items such as newspapers, tablecloths, curtains, on the unit that might cover the ventilation holes.
- Do not place any naked flame sources, such as lit candles, on the apparatus.
- Do not install the product in a dusty place.
- Use the apparatus only in moderate climates (not in tropical climates).
- Respect the minimum and maximum temperature specifications.

**To avoid any risk of electrical shocks:**

- Connect apparatus only to a power socket with a protective earth connection.
- The mains plug shall remain readily operable.
- Pull out power plug to make the different connections of cables.
- To avoid electrical shock, do not open the housing of the product.

**Warning (if SFP module is instered)**

CLASS 1 LASER PRODUCT

To avoid exposure to laser radiation from optical fibre or active optical devices like transmitters or receivers which pose a hazard to your health, you should:

- Never look into an exposed end of an optical fibre or mirror surfaces that could reflect light from an open optical fibre.
- Never look into an optical fibre connected with the radiation source with optical instruments (magnifying glass, microscope, etc...).
- Use an approved fibre optic cable to maintain conformity with applicable laser safety requirements.

Concerning fibre optic cables:

- Wearing protective goggles is recommended.
- You should handle fibre optic cables with extreme caution, particularly when unbundling or terminating a cable. The internal glass core of a fibre optic cable is brittle when the shielding and buffer material is removed. It will easily disintegrate into small pieces which may cause injury to the human body.
- Remove all filings immediately using tweezers, place them in a tightly sealed dustbin and dispose in accordance with local regulations.

**Maintenance**

Only use a dry soft cloth to clean the cabinet.



Do not use solvent.



For repairing and servicing, refer to qualified personnel.

**Dispose according to your local authority's recycling processes**

Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

2 Introduction

2.1 Product description

The TOLT-8422 is a 19" rack mount GPON OLT with 8 PON ports that provides flexible and fast FTTx access, suiting scenarios such as sparsely populated or remote areas, industrial parks, commercial buildings and other MDU settings including hospitality.

2.2 Detailed features

- Compact design, meets various application scenarios:
 - o Supports deployment in diverse scenarios including low density areas, remote/sparsely populated areas and industrial parks
 - o Supports FTTM and sharing site/rack with wireless base stations
- Small size and lightweight, easier to transport and install:
 - o Supports multiple installation modes, e.g, limited room space, basement and small rack or cabinet
- Carrier-class security protection, supports dynamic routing protocol RIP&OSPF, ensures the safe operation of the network:
 - o Supports uplink redundancy protection including LACP STP, RSTP and MSTP
 - o Supports RIP & OSPF protocol
 - o Supports link protection
- Lower TCO:
 - o Dramatically saves on investment fees in trunk fibres, pipe engineering and facilities.
 - o Effectively reduce CapEx and OpEx

2.3 Installation

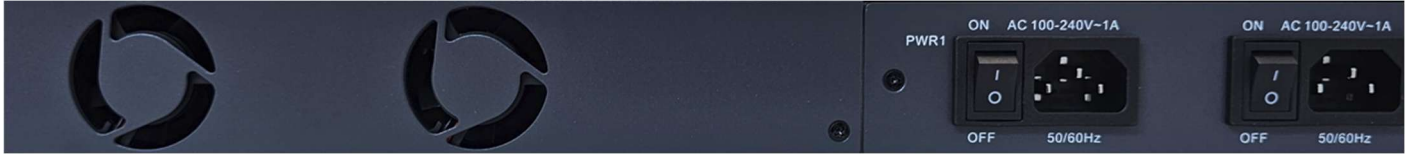
Preparation before installation:

- **Observe instructions given at chapter 1**
- Install the unit in a well aired location and keep a minimum distance of 5 cm around the TOLT for sufficient ventilation. Please don't block the cooling holes of the device
- Connect the OLT only to a power socket with a protective earth connection
- Please make sure the power supply button on the rear panel is turned to OFF before the power supply cable is connected
- Please ensure the interface of the fibre is clean before connecting the fibre (if SFP module is inserted)
- If needed clean the fibre connector with the correct tool (if SFP module is inserted)

2.4 Front panel



2.5 Rear panel



2.6 Interfaces

Products		4 ports GPON OLT	8 ports GPON OLT
Chassis	Racks	1U 19-inch standard box	1U 19-inch standard box
1G/10G Uplink Port	QTY	4	8
	Copper	2*10/100/1000M auto-negotiation	4*10/100/1000M auto-negotiation
	SFP (Independent)	2*SFP+ (SFP+ is compatible with 10GE)	2*SFP and 2*SFP+ (SFP+ is compatible with 10GE)
GPON Port	QTY	4	8
	Physical Interface	SFP Slots	SFP Slots
Management Ports		1*10/100BASE-T out-band port (AUX), 1*CONSOLE port	
Management Mode		SNMP, WEB, Telnet and CLI	

2.7 Supported functions

2.7.1 MANAGEMENT

- SNMP, Telnet, CLI, WEB, SSH v2
- Fan Group Control
- Port status monitoring and configuration management
- Online ONT configuration and management
- User management
- Alarm management

2.7.2 LAYER 2 SWITCH

- 32K Mac address
- Supports 4096 VLANs
- Supports port VLAN
- Supports VLAN tag/Un-tag, VLAN transparent transmission
- Supports VLAN translation and QinQ
- Supports storm control based on port
- Supports port isolation
- Supports port rate limitation
- Supports 802.1D and 802.1W
- Supports static LACP, Dynamic LACP
- QoS based on port, VID, TOS and MAC address
- Access control list
- IEEE802.x flow control
- Port stability statistic and monitoring

2.7.3 MULTICAST

- IGMP snooping
- 2048 IP Multicast Groups

2.7.4 DHCP

- DHCP server, DHCP relay, DHCP snooping
- DHCP option82

2.7.5 LAYER 3 ROUTE

- ARP proxy
- 4096 hardware Host Routes, 512 hardware Subnet Routes
- Supports Radius, TACACS+
- Supports IP source guard
- Supports static route, dynamic route RIP v1/v2, RIPv6 and OSPF v2/v3

2.7.6 IPV6

- Supports NDP
- Supports IPv6 Ping, IPv6 Telnet, IPv6 routing
- Supports ACL based on source IPv6 address, destination IPv6 address, L4 port, protocol type, etc...
- Supports MLD v1/v2 snooping (Multicast Listener Discovery snooping)

2.7.7 GPON FUNCTION

- T-CONT DBA
- Gempport traffic
- Is compliant with ITU-T984.x standard
- Up to 20KM transmission distance
- Supports data encryption, multicast, port VLAN separation, RSTP, etc...
- Supports ONT auto-discovery/link detection/remote upgrade of software
- Supports VLAN division and user separation to avoid broadcast storm
- Supports power-off alarm function, for easy link problem detection
- Supports broadcasting storm resistance function
- Supports port isolation between different ports
- Supports ACL and SNMP to configure data packet filter
- Specialised design for system breakdown prevention to maintain a stable system
- Supports RSTP

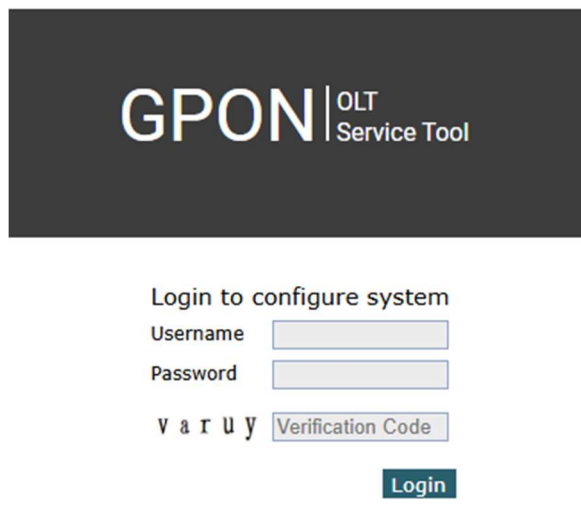
2.7.8 Various

- Power consumption: 45W
- Working temperature: -20°C ~+60°C
- Storage temperature: -40~+70°C
- Relative humidity: 5~95% (non-condensing)
- Dimension (L*W*H): 442mm * 229mm * 43.6mm
- Weight:
 - Net weight of single power: 4.05kg
 - Gross weight of single power: 5.65kg

2.8 Login to the OLT

Follow the steps to login:

- The device default IP address is **192.168.8.200**
- Open a web browser and enter the full URL <https://192.168.8.200/> in the address bar (entering only the IP address without [https://](https://192.168.8.200/) may not work)
- Entry of the username and password will be prompted. Enter the default login Username and Password as per the Product label



The login interface for the GPON OLT Service Tool. It features a dark header with the text "GPON OLT Service Tool". Below the header, the text "Login to configure system" is displayed. There are three input fields: "Username", "Password", and "Verification Code". The "Verification Code" field is preceded by the text "v a r u y". A "Login" button is located at the bottom right of the form.

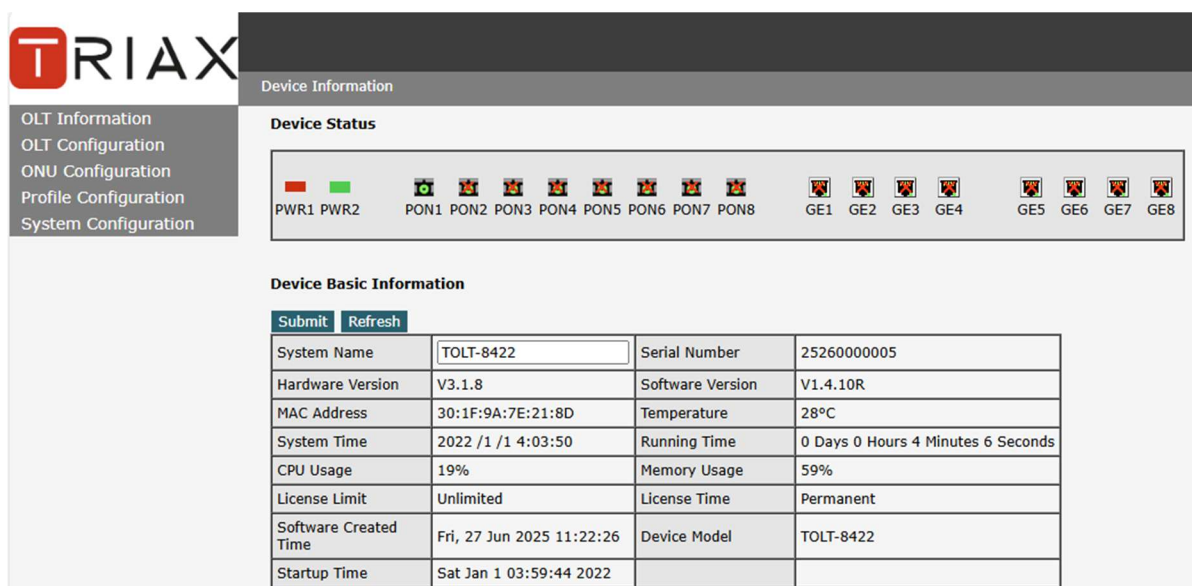
Figure 2.7: Login

2.9 Device Information

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

OLT Information→Device Information

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



The Device Information interface. It features a sidebar with navigation links: "OLT Information", "OLT Configuration", "ONU Configuration", "Profile Configuration", and "System Configuration". The main content area is titled "Device Information" and contains a "Device Status" section with icons for PWR1, PWR2, PON1 through PON8, and GE1 through GE8. Below this is the "Device Basic Information" section, which includes a table with various system parameters.

Device Basic Information			
	Submit	Refresh	
System Name	TOLT-8422	Serial Number	25260000005
Hardware Version	V3.1.8	Software Version	V1.4.10R
MAC Address	30:1F:9A:7E:21:8D	Temperature	28°C
System Time	2022 / 1 / 1 4:03:50	Running Time	0 Days 0 Hours 4 Minutes 6 Seconds
CPU Usage	19%	Memory Usage	59%
License Limit	Unlimited	License Time	Permanent
Software Created Time	Fri, 27 Jun 2025 11:22:26	Device Model	TOLT-8422
Startup Time	Sat Jan 1 03:59:44 2022		

Figure 2.8: Device Information

3 OLT configuration

This section is about the basic service of OLT configuration.

3.1 VLAN

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

- Support Port-based VLAN and IEEE802.1Q VLAN.
- Support full 4K VLAN group, VID range 1~4095.

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

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

3.1.1 Create VLAN

OLT Configuration→VLAN

In this user interface, you can create new VLAN.



The screenshot shows the TRIAX OLT Configuration interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN (selected), Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, BGP, ONU Configuration, Profile Configuration, and System Configuration. The main area is titled 'New VLAN' and contains two input fields: 'VLAN ID' with the value '300' and a range '(1-4094)', and 'Description' with the value 'vlan300'. Below these fields is an 'Add' button. Underneath is a 'VLAN Table' with the following data:

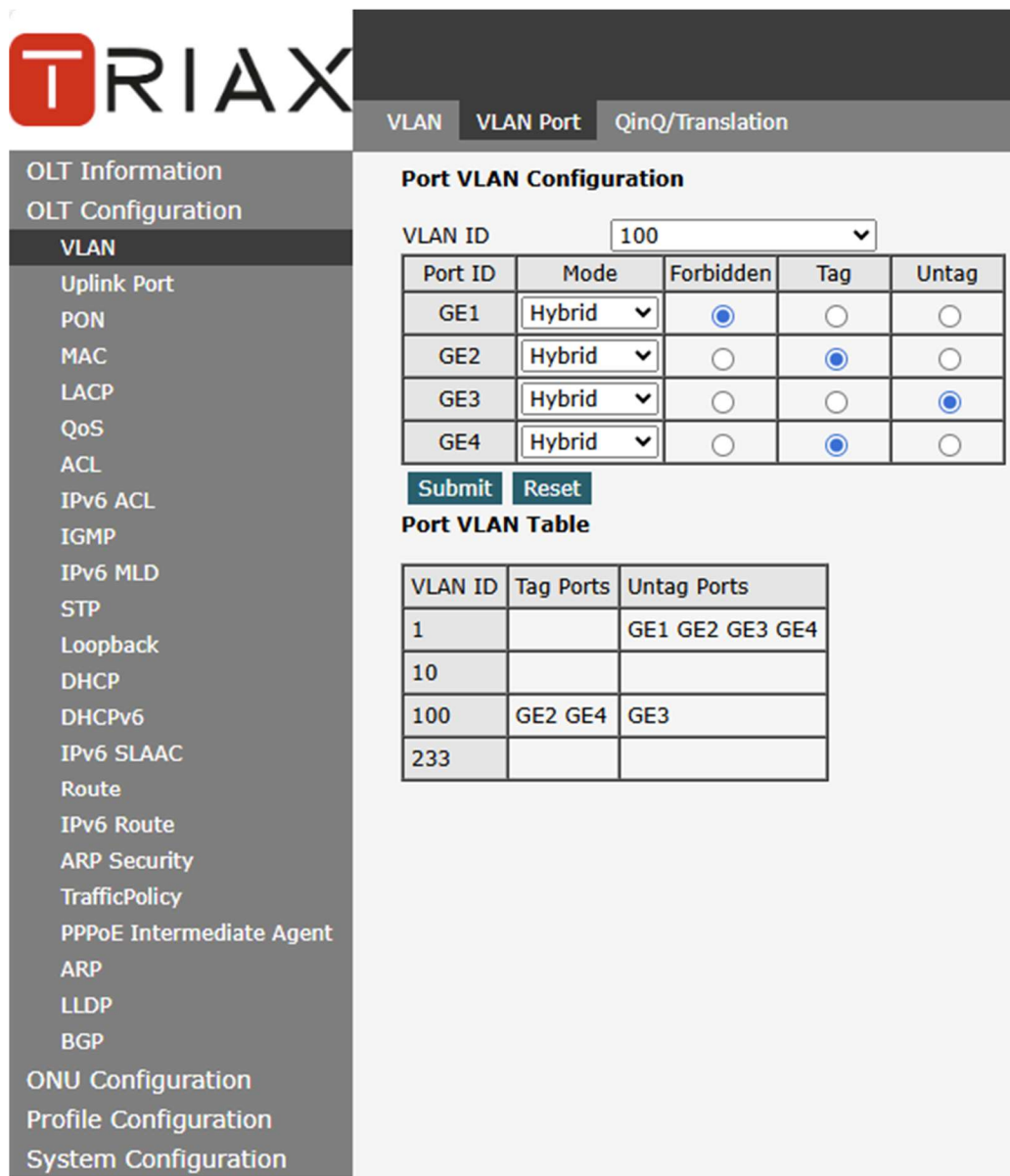
VLAN ID	Description	Edit	Delete
1	default		
10	IPTV		
100	ISP		
233	vlan233		

Figure 3.1-1: Create New VLAN

3.1.2 VLAN Port

OLT Configuration → VLAN → VALN Port

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



Port VLAN Configuration

VLAN ID: 100

Port ID	Mode	Forbidden	Tag	Untag
GE1	Hybrid	☒	☐	☐
GE2	Hybrid	☐	☒	☐
GE3	Hybrid	☐	☐	☒
GE4	Hybrid	☐	☒	☐

Submit **Reset**

Port VLAN Table

VLAN ID	Tag Ports	Untag Ports
1		GE1 GE2 GE3 GE4
10		
100	GE2 GE4	GE3
233		

Figure 3.1-2: Add VLAN Port

3.1.3 QinQ/Translation

OLT Configuration → VLAN → QinQ/Translation

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

QinQ Configuration

Port ID: GE1
Mode: VLAN Translation
Customer VLAN: 1
Service VLAN: 1
Add

VLAN QinQ Mapping Table

Port ID	Mode	Customer VLAN	Service VLAN	Delete
GE1	VLAN Translation	100	100	

Figure 3.1-3: QinQ/Translation Configuration

3.1.4 P2P

OLT Configuration→PON→Configuration

The use of P2P enables ONU to communicate with each other under PON ports.

PON Configuration

Submit Refresh

Port ID	Description	Admin Status	Isolate	ONU P2P	Storm(0 64-1000000fps)			Rate(0 64-1000000kbps)	
					Broadcast	Multicast	Unicast	Ingress	Egress
PON1		☒	☐	☐	512	0	512	0	0
PON2		☒	☐	☐	512	0	512	0	0
PON3		☒	☐	☐	512	0	512	0	0
PON4		☒	☐	☐	512	0	512	0	0

Figure 3.1-5: P2P Configuration

3.2 Uplink Port

GE ports traffic statistics and basic configuration setting.

3.2.1 Information

OLT Configuration→Uplink Port→Information

This user interface displays traffic statistics of uplink ports.

Port ID	Link Status	Speed	Rx Bytes	Rx Packets				Tx Bytes	Tx Packets				Collisions	Errors
				Packets	Unicast	Broadcast	Multicast		Packets	Unicast	Broadcast	Multicast		
GE1	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE2	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE3	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE4	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE5	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE6	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE7	Down	-	0	0	0	0	0	0	0	0	0	0	0	0
GE8	Down	-	0	0	0	0	0	0	0	0	0	0	0	0

Figure 3.2-1: GE Traffic Statistics

3.2.2 Configuration

OLT Configuration → Uplink Port → Information

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

Port ID	Description	Admin Status	Speed	Flow Control	Isolate	PVID	Storm(0/64-1000000fps)			Rate(0/64-1000000kbps)		MAC Limit(0-16384)
							Broadcast	Multicast	Unicast	Ingress	Egress	
GE1		☒	10G Full	☐	☐	1	512	0	512	0	0	0
GE2		☒	10G Full	☐	☐	1	512	0	512	0	0	0
GE3		☒	Auto	☐	☐	1	512	0	512	0	0	0
GE4		☒	Auto	☐	☐	1	512	0	512	0	0	0

Figure 3.2-2: Uplink Ports Configuration

Illustrations of each parameter:

Parameters	Illustration
Port ID	GE port has two types, fibre SFP (GE1 to GE8) and copper (GE9 to GE16).
Description	Descriptions or remarks of port.
Admin Status	Active or inactive status of port. It is Enabled by default.
Speed	Configuring Port Rate.
Flow Control	Enable or disable flow control function of uplink port to control congestion. Disabled by default.
Isolate	Port isolation with each other.
PVID	Default VLAN ID of the port.
Broadcast	Broadcast storm inhibition.
Multicast	Multicast storm inhibition.
Unknown Unicast	Unknown unicast storm inhibition.
Ingress Rate	Port ingress rate.
Egress Rate	Port egress rate.
MAC limit	Number of MAC address can be learnt in the port.

3.3 PON

3.3.1 Information

OLT Configuration→PON→Information

This user interface is used to displays parameters of PON port, such as PON module port current temperature, Voltage, current, transmit power.

Port ID	Temperature(°C)	Voltage(V)	Bias Current(mA)	Transmit Power(dBm)	Vendor Name	Wavelength(nm)	Vendor SN
PON1	50.992	3.266	24.810	9.808	OEM	1490	0542505013857
PON2	51.402	3.273	23.030	9.226	OEM	1490	0542505013858
PON3	52.500	3.247	29.794	9.689	OEM	1490	0542505013859
PON4	51.402	3.270	27.302	9.409	OEM	1490	0542505013860
PON5	50.992	3.261	28.726	9.518	OEM	1490	0542505013862
PON6	50.992	3.270	28.548	9.405	OEM	1490	0542505013861
PON7	49.074	3.275	29.438	9.927	OEM	1490	0542505013863
PON8	47.840	3.259	28.370	10.349	OEM	1490	0542505013864

Figure 3.3-1: PON Information

3.3.2 Traffic Statistics

OLT Configuration→PON→Traffic Statistics

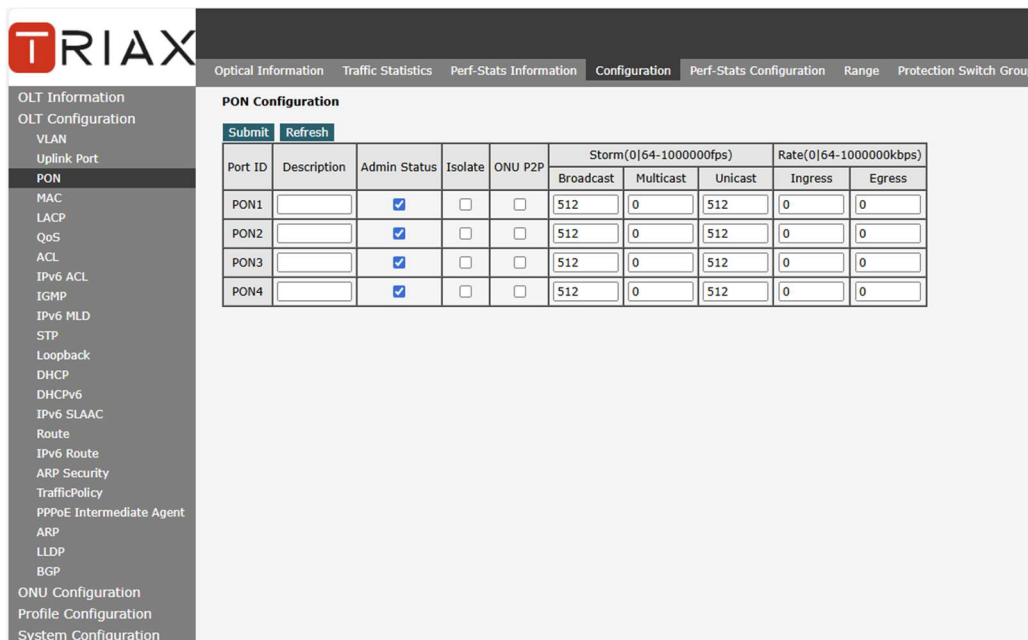
Interface	Rx Packets			Tx Packets			Collisions	Errors
	Packets	Broadcast	Multicast	Packets	Broadcast	Multicast		
PON1	0	0	0	7	0	7	0	0
PON2	0	0	0	7	0	7	0	0
PON3	0	0	0	7	0	7	0	0
PON4	0	0	0	7	0	7	0	0

Figure 3.3-2: Traffic Statistics

3.3.3 Configuration

OLT Configuration→PON→Configuration

This user interface is used to configure port status.



PON Configuration

Submit Refresh

Port ID	Description	Admin Status	Isolate	ONU P2P	Storm(0 64-1000000fps)			Rate(0 64-1000000kbps)	
					Broadcast	Multicast	Unicast	Ingress	Egress
PON1		☒	☐	☐	512	0	512	0	0
PON2		☒	☐	☐	512	0	512	0	0
PON3		☒	☐	☐	512	0	512	0	0
PON4		☒	☐	☐	512	0	512	0	0

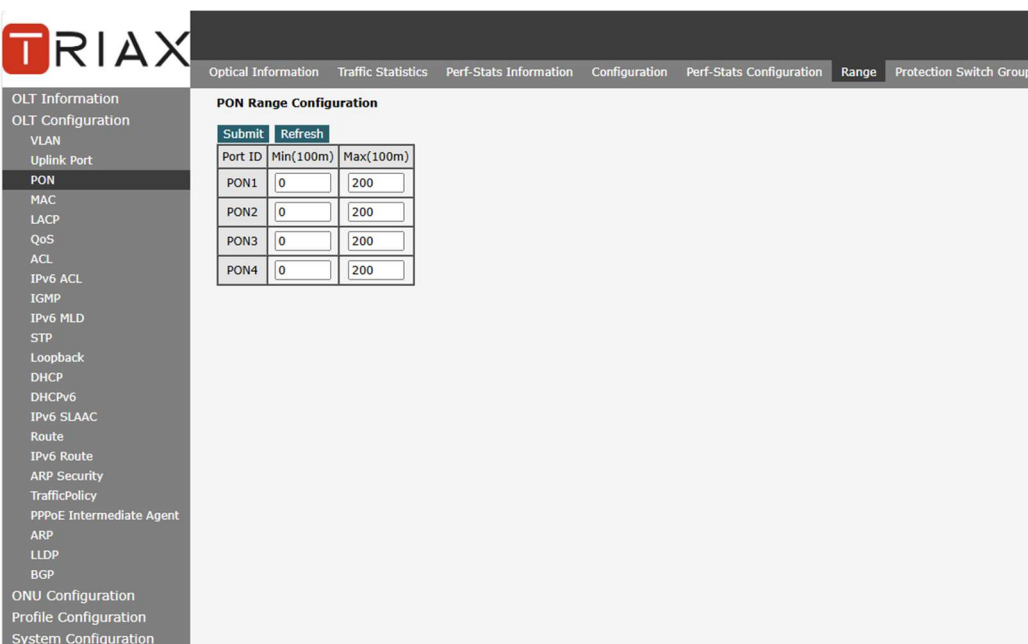
Figure 3.3-3: PON configuration

3.3.4 Range

OLT Configuration→PON→Range

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

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



PON Range Configuration

Submit Refresh

Port ID	Min(100m)	Max(100m)
PON1	0	200
PON2	0	200
PON3	0	200
PON4	0	200

Figure 3.3-4: PON Range Configuration

3.3.5 Protection Switch Group

OLT Configuration→PON→Protection Switch Group

This user interface is used to configure PSG parameters base on Type B. You can configure a Work PON and a Standby PON and connect them to a 2: N optical splitter. When the ONU is registered on the work PON, the registration information and PON configuration is synchronized to the Standby Pon. If the Work PON link is faulty, the ONU automatically registers with another PON.

The screenshot displays the TRIAX web interface for configuring a Protection Switch Group (PSG). The sidebar on the left lists various configuration options, with 'PON' selected. The main content area is titled 'Protection Switch Group' and includes the following sections:

- Group Configuration:**
 - Protection Group Name:
 - Work Pon:
 - Standby Pon:
 - Buttons:
- Manual Control:**
 - Group Name:
 - Active Pon:
 - Change Active Pon: ☐
 - Lock Mode: ☐
 - Revertive: ☐ Revertive Time: (60-3600s)
 - Button:
- Protection Group Table:**

Index	Group Name	Work Pon	Standby Pon	Active Pon	Lock Mode	Revertive Mode	Revertive Time	Delete
Refresh								

Figure 3.3-5: PON Protection Switch Group Configuration

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

OLT Configuration→MAC→MAC Table

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

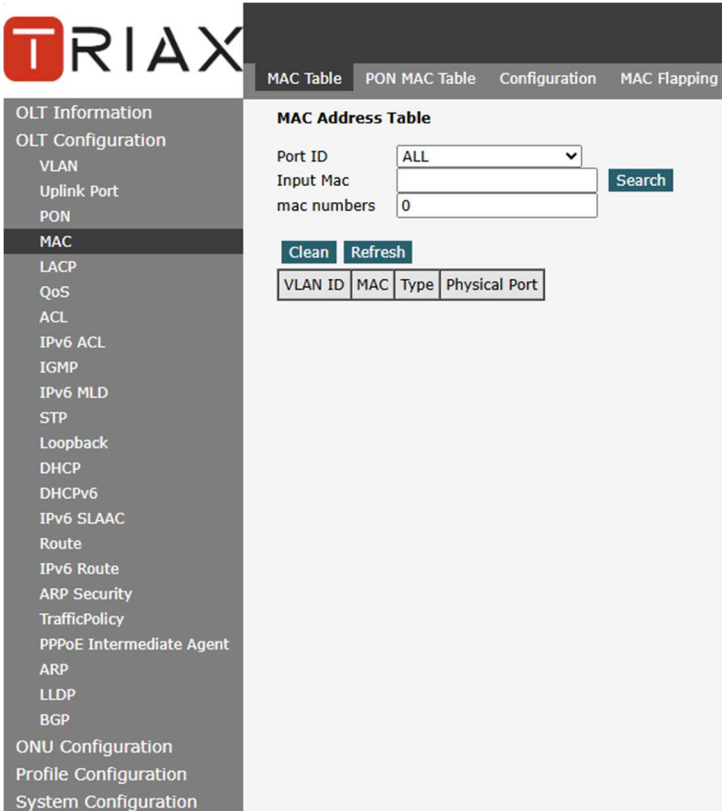


Figure 3.4-1: MAC Address Table

3.4.2 PON MAC Table

OLT Configuration→MAC→PON MAC Table

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

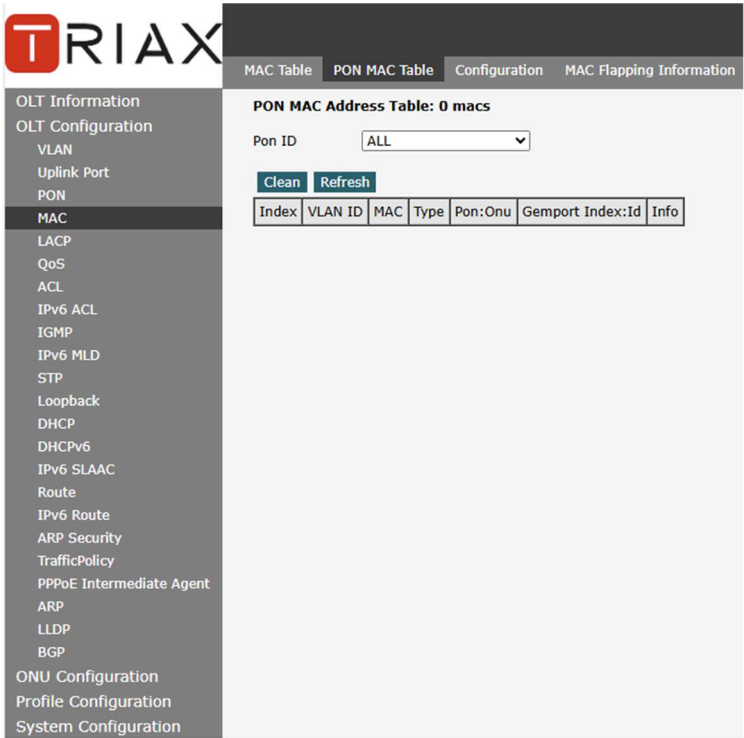


Figure 3.4-2: PON MAC Table

3.4.3 Configuration

OLT Configuration → MAC → Configuration

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

The screenshot shows the TRIAX OLT Configuration interface. The left sidebar contains a menu with categories: OLT Information, OLT Configuration (VLAN, Uplink Port, PON), MAC (LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, BGP), ONU Configuration, Profile Configuration, and System Configuration. The 'MAC' category is selected. The main content area has tabs: MAC Table, PON MAC Table, Configuration (active), MAC Flapping Information, and MAC Flapping. Under the 'Configuration' tab, there are two sections: 'MAC Aging Configuration' and 'Add MAC Address'. 'MAC Aging Configuration' includes 'Automated Aging' (set to 'Enable') and 'Aging Time' (set to '300' with a range of '(10-1000000s)' and a 'Submit' button). 'Add MAC Address' includes 'VLAN ID' (set to '1'), 'MAC Address' (empty field with format '(HH:HH:HH:HH:HH:HH)'), 'Type' (radio buttons for 'Static' (selected) and 'Dynamic'), and 'Port ID' (set to 'GE1'). There are 'Add' and 'Delete' buttons at the bottom of the 'Add MAC Address' section.

Figure 3.4-3: MAC Configuration

3.4.4 MAC Flapping Information

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

The screenshot shows the TRIAX OLT Configuration interface with the 'MAC Flapping Information' tab selected. The left sidebar is the same as in Figure 3.4-3. The main content area has tabs: MAC Table, PON MAC Table, Configuration, MAC Flapping Information (active), and MAC Flapping Configuration. Under the 'MAC Flapping Information' tab, there is a 'Status' field set to 'Disable' and a 'Refresh' button.

Figure 3.4-4: MAC Flapping Information

3.4.5 MAC Flapping Configuration

You can enable MAC Flapping Configuration in this interface.

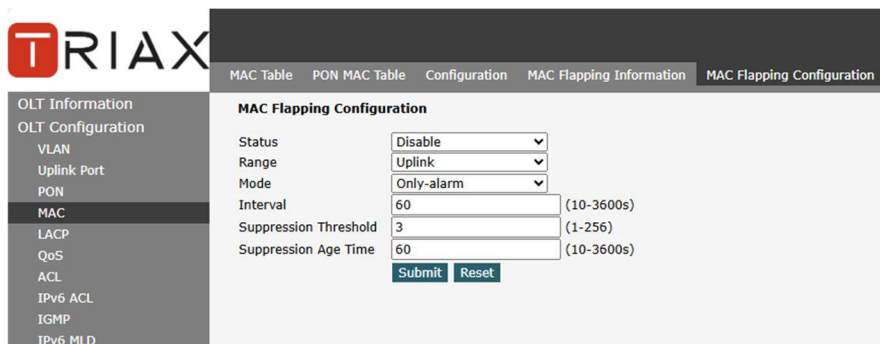
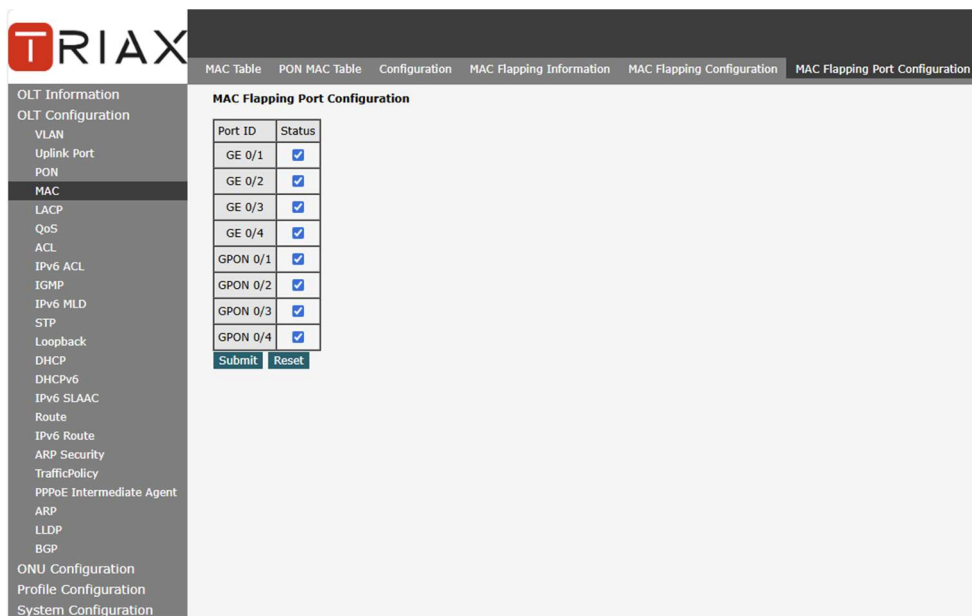


Figure 3.4-5: MAC Flapping Configuration

3.4.6 MAC Flapping Port Configuration

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



Port ID	Status
GE 0/1	☒
GE 0/2	☒
GE 0/3	☒
GE 0/4	☒
GPON 0/1	☒
GPON 0/2	☒
GPON 0/3	☒
GPON 0/4	☒

Figure 3.4-6: MAC Flapping Port Configuration

3.5 LACP

3.5.1 Static LACP

OLT Configuration→LACP→Static LACP

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

Static LACP

Channel Group Configuration

Channel Group ID:

Load Balance:

GE1 GE2 GE3 GE4

Select GE Port: ☐ ☐ ☐ ☐

Channel Group Table

Group ID	Load Balance	Ports	Delete
----------	--------------	-------	--------

Figure 3.5-1: Create Static LACP

3.5.2 Dynamic LACP

OLT Configuration → LACP → Dynamic LACP

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

Dynamic LACP

Dynamic LACP Global Information

System ID:

Channel Group Table

Group ID	Load Balance	Ports
----------	--------------	-------

Channel Group Port Information

Channel Group ID:

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast LACPDUs.
A - Device is in active mode, P - Device is in passive mode.
I - Stand-alone.

Actor						Partner					
Port ID	Port Flags	Port Priority	Oper Key	Port Number	Port State	System ID	Port Flags	Port Priority	Oper Key	Port Number	Port State

Link Aggregation Information

Port ID	System Priority	Port Priority	Key	Aport	Syn	Col	Dis
---------	-----------------	---------------	-----	-------	-----	-----	-----

Figure 3.5-2: Dynamic LACP Information

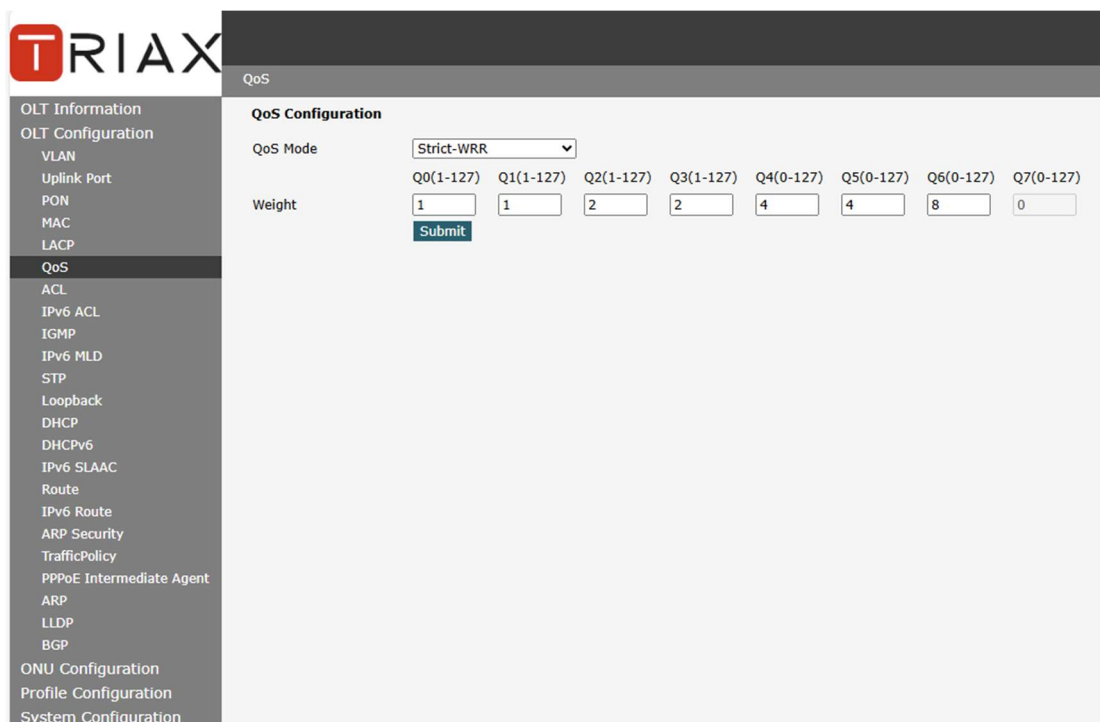
3.6 QoS

OLT Configuration → QoS

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

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

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



QoS Mode	Q0(1-127)	Q1(1-127)	Q2(1-127)	Q3(1-127)	Q4(0-127)	Q5(0-127)	Q6(0-127)	Q7(0-127)
Strict-WRR	1	1	2	2	4	4	8	0

Figure 3.6-1: QOS Configuration

3.7 ACL

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

3.7.1 IP Filter

OLT Configuration → ACL → IP Filter

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

Access List IP Configuration

Access List ID: (1000-1999)

Filter Action: ☒ Deny ☐ Permit

☐ Source IP: Mask: (0-65535)

☐ Source Port: (0-65535)

☐ Destination IP: Mask: (0-65535)

☐ Destination Port: (0-65535)

☐ Protocol: (0-255)

☐ DSCP: (0-63)

Access Lists Configured

List ID	Source IP	Source Port	Destination IP	Destination Port	Protocol	DSCP	Filter Action	Delete
---------	-----------	-------------	----------------	------------------	----------	------	---------------	--------

Figure 3.7-1: IP Filter

3.7.2 MAC Filter

OLT Configuration→ACL→MAC Filter

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

Access List MAC Configuration

Access List ID: (2000-2999)

Filter Action: ☒ Deny ☐ Permit

☐ Source MAC: Mask: (HH:HH:HH:HH:HH:HH)

☐ Destination MAC: Mask: (HH:HH:HH:HH:HH:HH)

☐ VLAN ID: (0-7)

☐ VLAN Cos: (0-7)

☐ Ethernet Type: (HHHH)

Access Lists Configured

List ID	Source MAC	Destination MAC	VLAN ID	VLAN Cos	Ethernet Type	Filter Action	Delete
---------	------------	-----------------	---------	----------	---------------	---------------	--------

Figure 3.7-2: MAC Filter

3.7.3 IP/MAC Filter

OLT Configuration→ACL→IP/MAC Filter

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

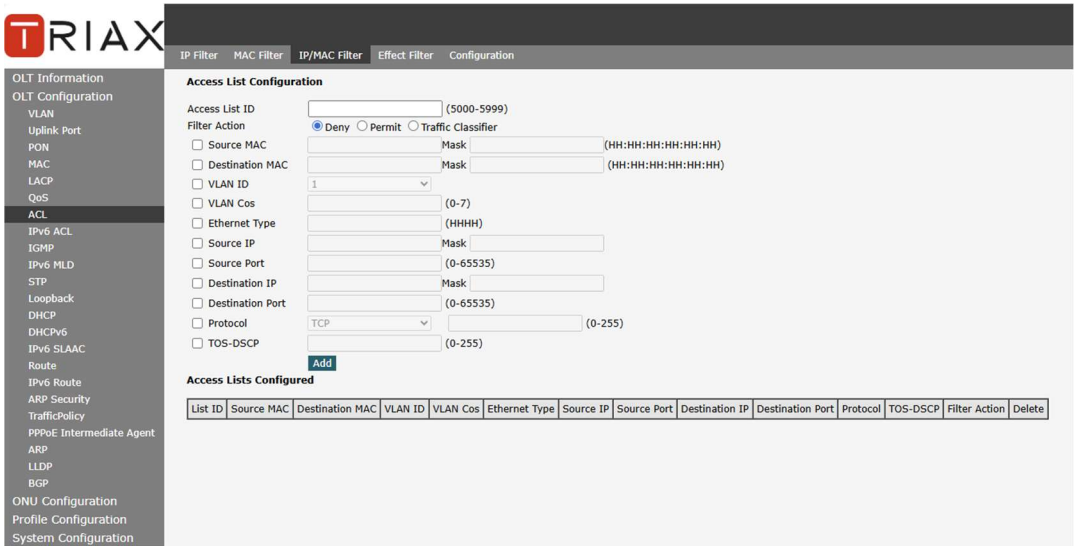


Figure 3.7-3: IP/MAC Filter

3.7.4 Effect Filter

OLT Configuration→ACL→Effect Filter

Bind the access list to the ports then it can take effect. Each access list can be bound several ports.

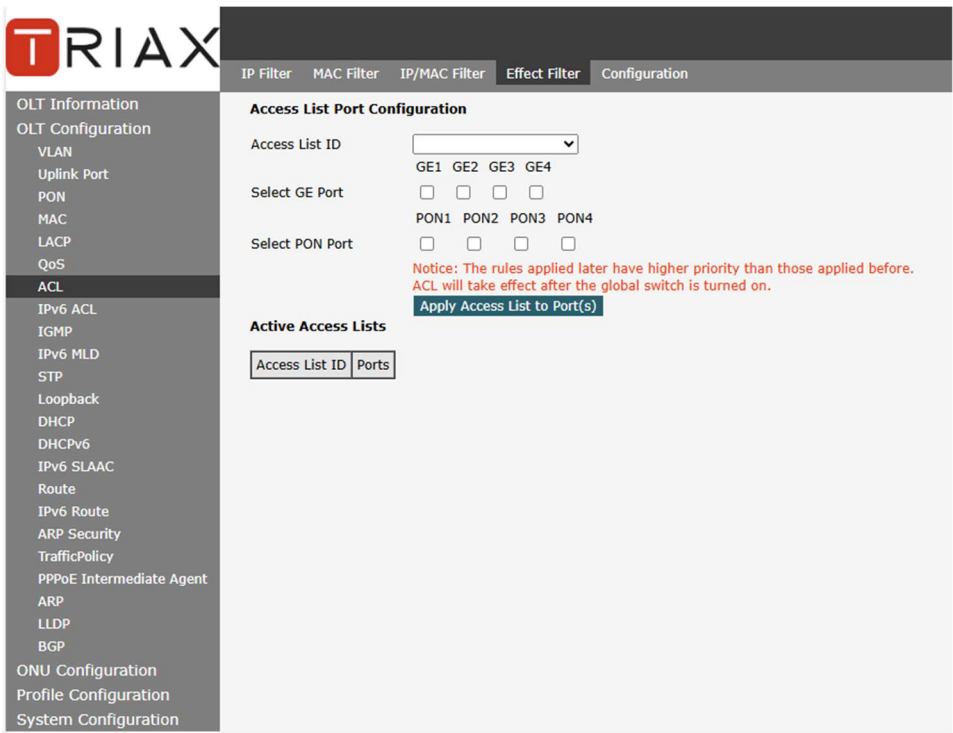


Figure 3.7-4: Bind Security Filter

3.8 IPv6 ACL

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

3.8.1 IPv6 Filter

OLT Configuration→IPv6 ACL→ IPv6 Filter

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

Figure 3.8-1: IPv6 Filter

3.8.2 IPv6/MAC Filter

OLT Configuration→IPv6 ACL→IPv6/MAC Filter

This filter mixes IPv6 address, MAC address and other parameters, including source IPv6 address and destination IPv6 address, source MAC address and destination MAC address, VLAN, Ethernet type, protocol, TCP/UDP port, and so on.

Figure 3.8-2: IPv6/MAC Filter

3.8.3 IPv6 Effect Filter

OLT Configuration → IPv6 ACL → IPv6 Effect Filter

Bind access list to ports so that the ACL rules can take effect. Each access list can be bound to several ports.

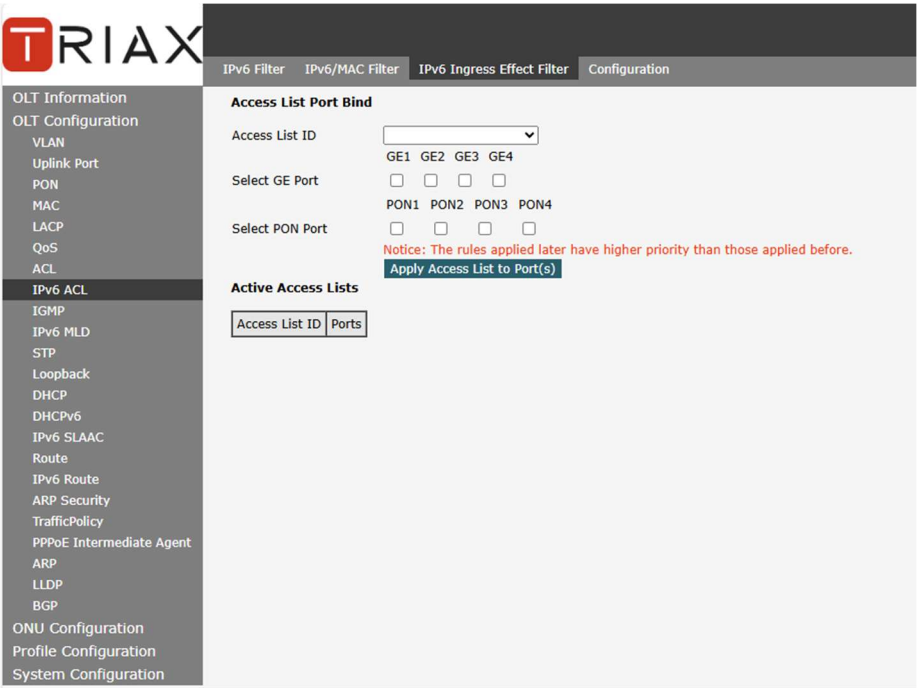


Figure 3.8-3: Bind IPv6 Security Filter

3.9 IGMP

3.9.1 Group Member

OLT Configuration → IGMP → Group Member

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

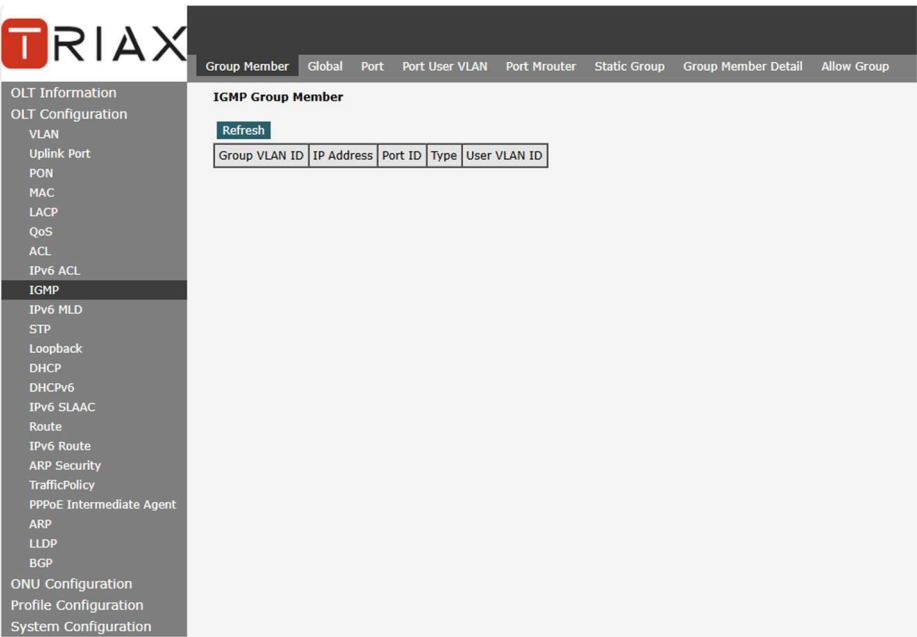


Figure 3.9-1: Group Member

3.9.2 Global

OLT Configuration → IGMP → Global

IGMP basic configuration mainly contains parameters of query packet. When IGMP status is enabled, OLT works at IGMP snooping mode. IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to "listen in" on the IGMP conversation between hosts and routers. By listening to these conversations, the switch maintains a map of which devices need which IP multicast streams. Multicasts may be filtered from the ports which do not need them and thus controls which ports receive specific multicast traffic. When IGMP status is disabled, OLT works at transparent mode.

The screenshot displays the TRIAX OLT configuration interface. On the left, a sidebar lists various configuration categories, with 'IGMP' highlighted. The main content area is titled 'IGMP Configuration' and contains the following settings:

- IGMP Status:** A dropdown menu set to 'Disable'.
- Member Port Timeout:** A text input field with the value '260' and a range '(10-3600s)'.
- Query Response Time:** A text input field with the value '10' and a range '(1-25s)'.
- Last Member Query Interval:** A text input field with the value '1' and a range '(1-255s)'.
- Last Member Query Count:** A text input field with the value '2' and a range '(1-255)'.
- Last Member Query Response:** A text input field with the value '1' and a range '(1-255s)'.
- General Query Packet:** Radio buttons for 'Disable' (selected) and 'Enable'.
- General Query Interval:** A text input field with the value '125' and a range '(10-255s)'.
- Query Source IP:** A text input field with the value '1.1.1.1'.

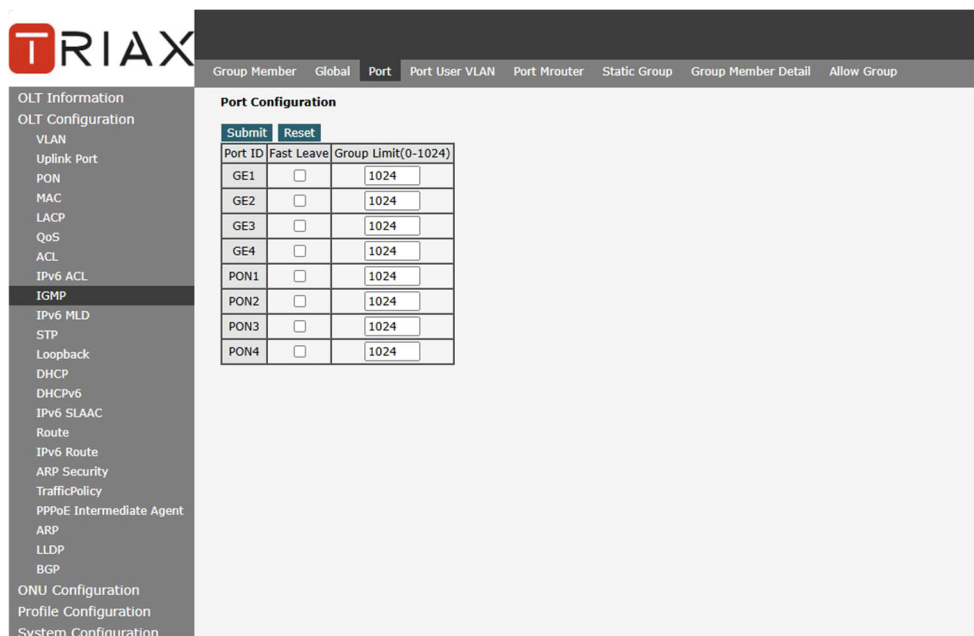
At the bottom of the configuration area, there are two buttons: 'Submit' and 'Reset'.

Figure 3.9-2: IGMP Global

3.9.3 Port

OLT Configuration → IGMP → Port

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



The screenshot shows the TRIAX OLT configuration interface. The left sidebar contains a menu with categories: OLT Information, OLT Configuration, and ONU Configuration. Under OLT Configuration, the 'IGMP' option is selected. The main panel displays the 'Port Configuration' tab, which includes a 'Submit' and 'Reset' button and a table for configuring ports.

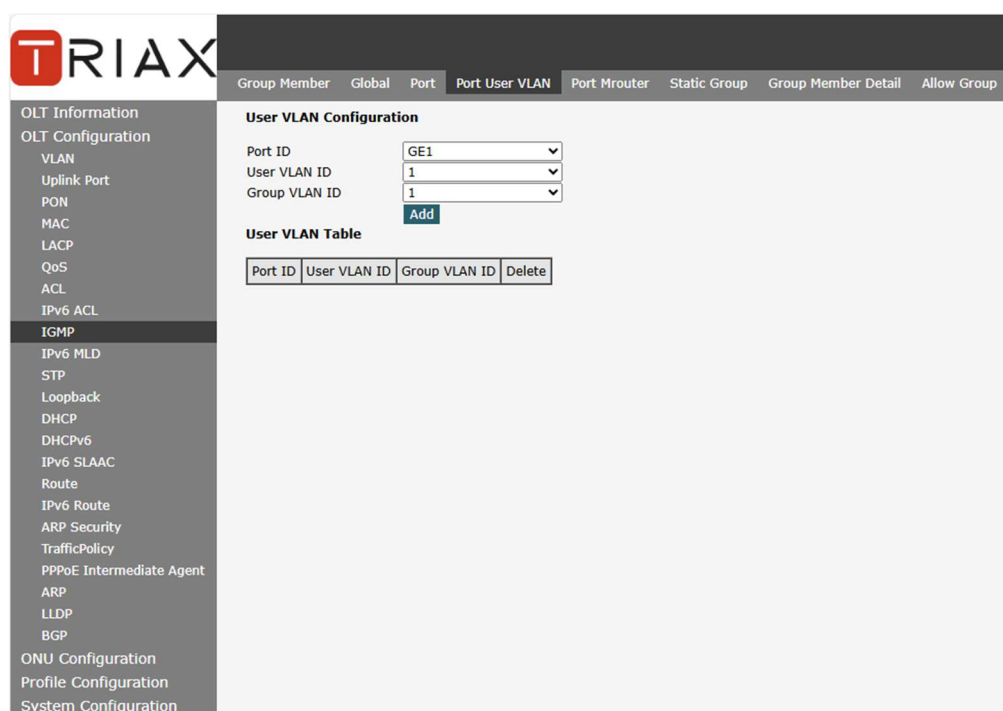
Port ID	Fast Leave	Group Limit(0-1024)
GE1	☐	1024
GE2	☐	1024
GE3	☐	1024
GE4	☐	1024
PON1	☐	1024
PON2	☐	1024
PON3	☐	1024
PON4	☐	1024

Figure 3.9-3: IGMP Port

3.9.4 Port User VLAN

OLT Configuration → IGMP → Port User VLAN

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



The screenshot shows the TRIAX OLT configuration interface. The left sidebar is the same as in Figure 3.9-3, with 'IGMP' selected. The main panel displays the 'Port User VLAN' tab, which includes a 'User VLAN Configuration' section and a 'User VLAN Table'.

User VLAN Configuration

Port ID:

User VLAN ID:

Group VLAN ID:

User VLAN Table

Port ID	User VLAN ID	Group VLAN ID	Delete
---------	--------------	---------------	--------

Figure 3.9-4: IGMP Port User VLAN

3.9.5 Port Mrouter

OLT Configuration → IGMP → Port Mrouter

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

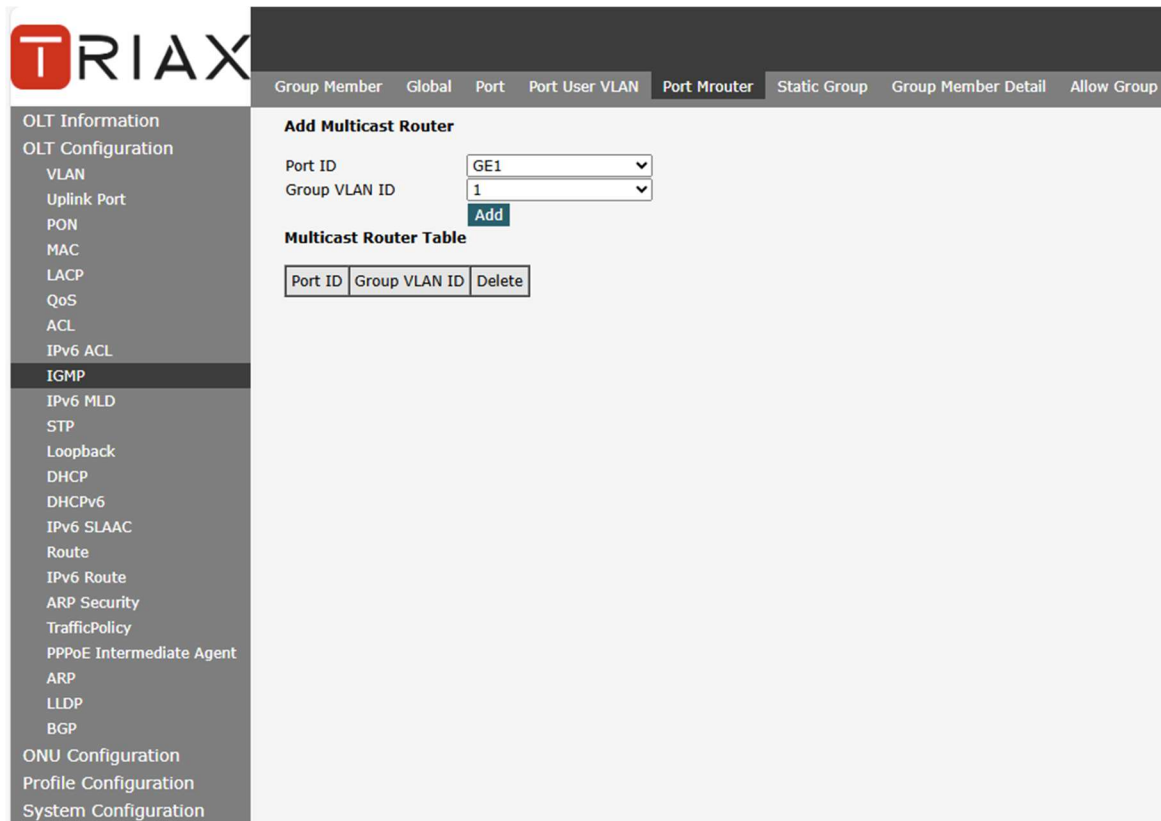


Figure 3.9-5: IGMP Port Mroute

3.9.6 Mvlan

OLT Configuration → IGMP → Mvlan

This configuration is used to configure multicast VLAN and its mode. No Mvlan configuration is required for this OLTs.

IGMP mode	Unknown multicast	Igmp packet
Snooping	drop	trap -to -cpu
Disable(transparent)	forward	forward

3.9.7 Static Group

OLT Configuration → IGMP → Static Group

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

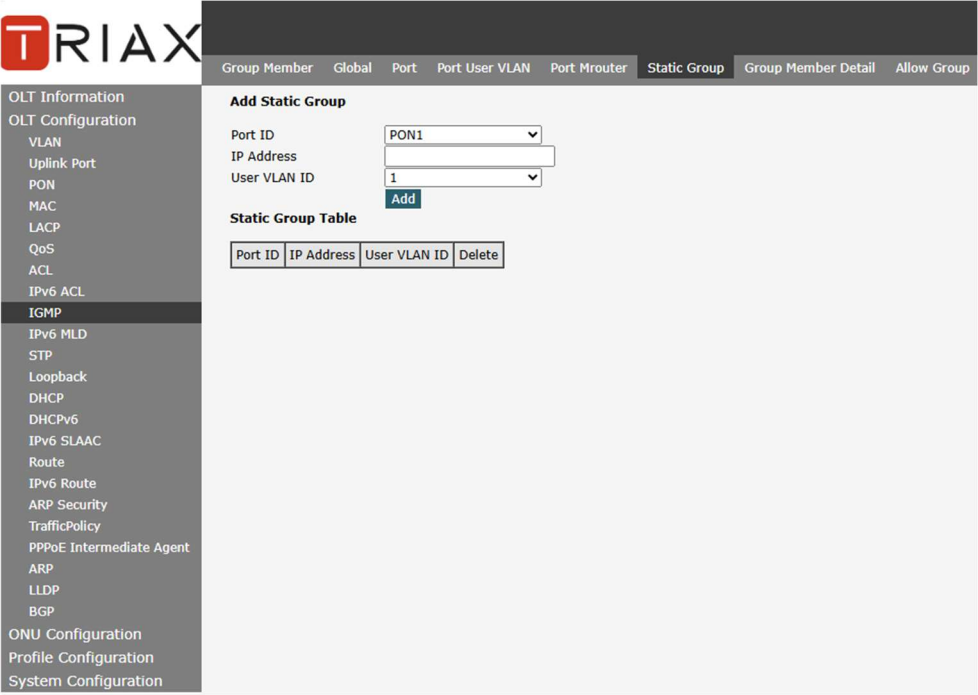


Figure 3.9-7: IGMP Static Group

3.10 IPv6 MLD

3.10.1 Group Member

OLT Configuration → IPv6 MLD → Group Member

This page displays IPv6 multicast group member ports.

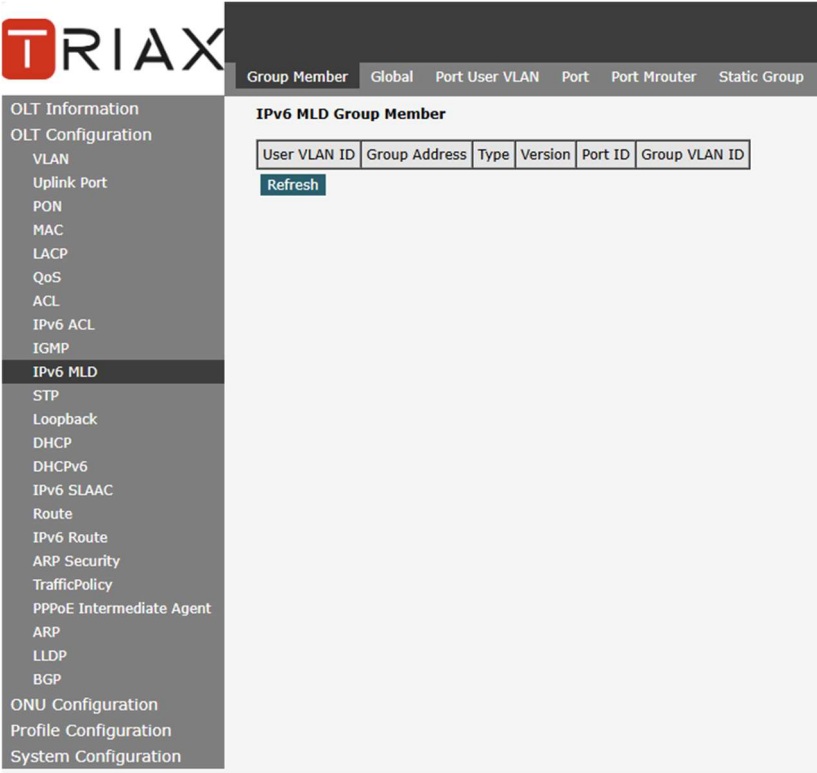


Figure 3.10-1: IPv6 MLD Group Member

3.10.2 Global

OLT Configuration → IPv6 MLD → Global

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

The screenshot shows the TRIAX OLT Configuration interface. The left sidebar lists various configuration categories, with 'IPv6 MLD' selected. The main panel is titled 'IPv6 MLD Configuration' and contains the following settings:

- MLD Status:** A dropdown menu set to 'Disable'.
- Query interval:** A text input field with the value '125' and a range '(1-255s)'.
- Query response interval:** A text input field with the value '10' and a range '(1-64s)'.
- Robustness variable:** A text input field with the value '2' and a range '(1-3)'.
- Last listener query count:** A text input field with the value '2' and a range '(1-7)'.
- Last listener query interval:** A text input field with the value '1' and a range '(1-255s)'.
- Send general query packet:** Radio buttons for 'Disable' (selected) and 'Enable'.
- MLD Version:** A dropdown menu set to 'MLDv2'.
- General Query Interval:** A text input field with the value '125' and a range '(10-3600s)'.
- Query Source IP:** A text input field with the value 'fe80::1'.

At the bottom of the configuration panel are 'Submit' and 'Reset' buttons.

Figure 3.10-2: IPv6 MLD Global

3.10.3 Port User VLAN

OLT Configuration → IPv6 MLD → Port User VLAN

This page is used to configure IGMP VLAN for OLT.

The screenshot shows the TRIAX OLT Configuration interface. The left sidebar lists various configuration categories, with 'IPv6 MLD' selected. The main panel is titled 'User VLAN Configuration' and contains the following settings:

- Port ID:** A dropdown menu set to 'GE1'.
- User VLAN ID:** A text input field with the value '1'.
- Group VLAN ID:** A text input field with the value '1'.

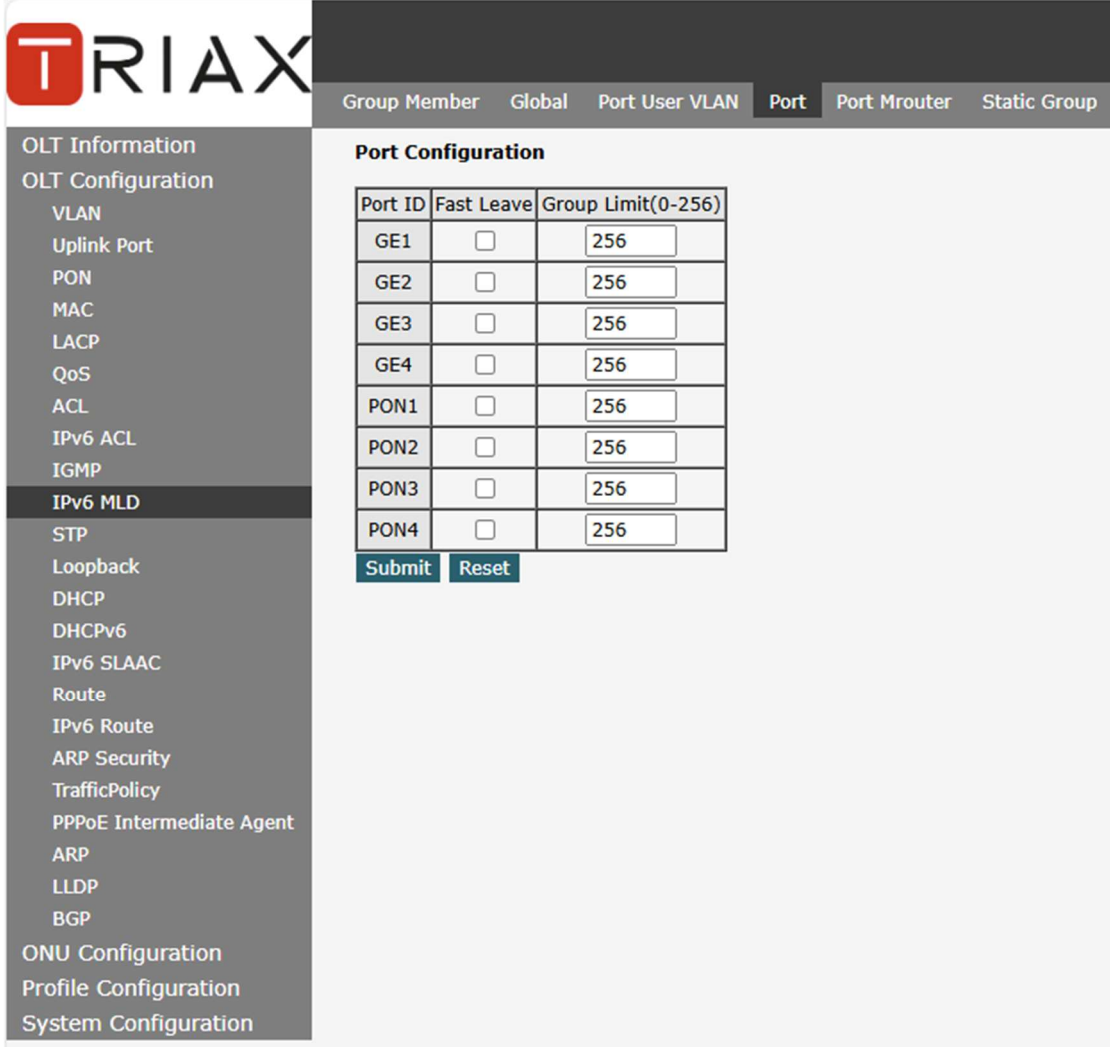
Below these fields is an 'Add' button. Under the heading 'User VLAN Table', there is a table with the following columns: 'Port ID', 'User VLAN ID', 'Group VLAN ID', and 'Delete'. Below the table is a 'Refresh' button.

Figure 3.10-3: IPv6 Port User VLAN

3.10.4 Port

OLT Configuration → IPv6 MLD → Port

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



The screenshot shows the TRIAX OLT configuration interface. The left sidebar contains a menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, **IPv6 MLD**, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, BGP, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled "Port Configuration" and features a table with three columns: Port ID, Fast Leave, and Group Limit(0-256). The table lists eight ports: GE1, GE2, GE3, GE4, PON1, PON2, PON3, and PON4. Each port has a checkbox for Fast Leave and a text input field for Group Limit, all of which are currently set to 256. Below the table are "Submit" and "Reset" buttons. At the top of the main content area, there are tabs for "Group Member", "Global", "Port User VLAN", "Port", "Port Mrouter", and "Static Group", with "Port" being the active tab.

Port ID	Fast Leave	Group Limit(0-256)
GE1	☐	256
GE2	☐	256
GE3	☐	256
GE4	☐	256
PON1	☐	256
PON2	☐	256
PON3	☐	256
PON4	☐	256

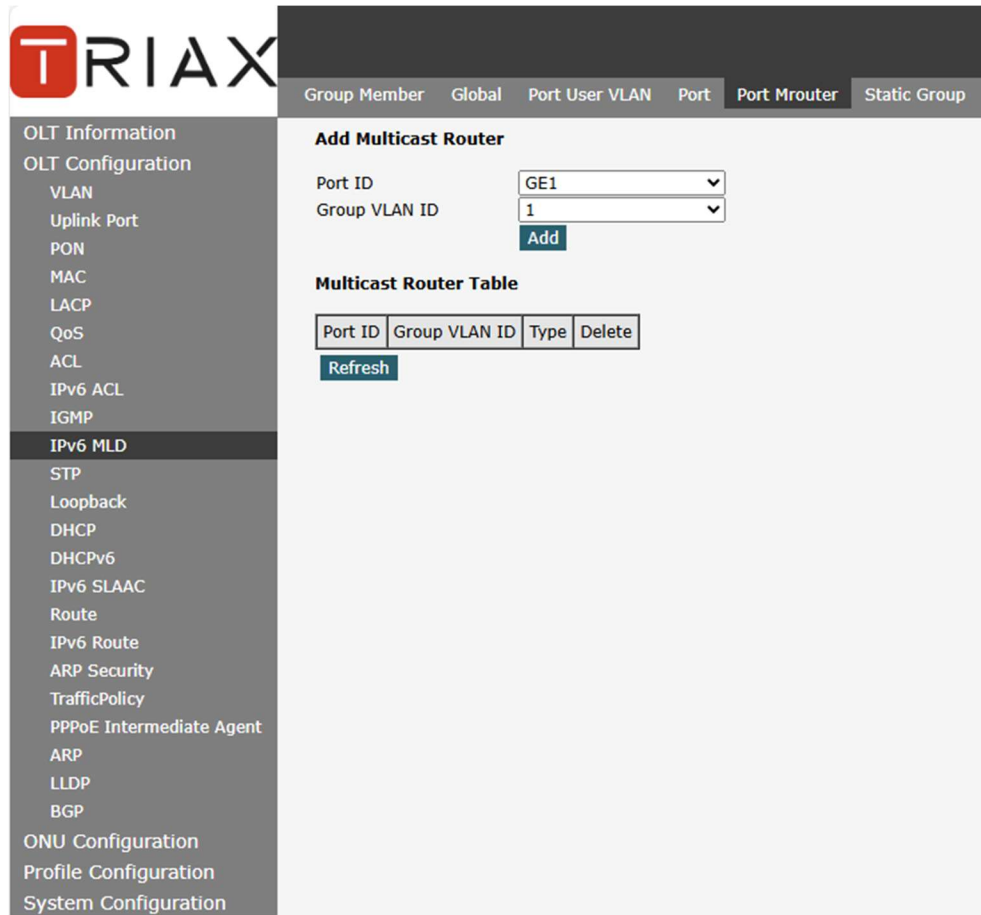
Submit Reset

Figure 3.10-4: IPv6 MLD Port

3.10.5 Port Mrouter

OLT Configuration → IPv6 MLD → Port Mrouter

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



The screenshot shows the TRIAX OLT configuration interface. The left sidebar contains a menu with categories: OLT Information, OLT Configuration, and ONU Configuration. Under OLT Configuration, the 'IPv6 MLD' option is selected. The main area has tabs for Group Member, Global, Port User VLAN, Port, Port Mrouter, and Static Group. The 'Port Mrouter' tab is active, displaying the 'Add Multicast Router' section with dropdowns for Port ID (GE1) and Group VLAN ID (1), and an 'Add' button. Below this is the 'Multicast Router Table' with a table header (Port ID, Group VLAN ID, Type, Delete) and a 'Refresh' button.

Port ID	Group VLAN ID	Type	Delete
Refresh			

Figure 3.10-5: IPv6 MLD Port Mrouter

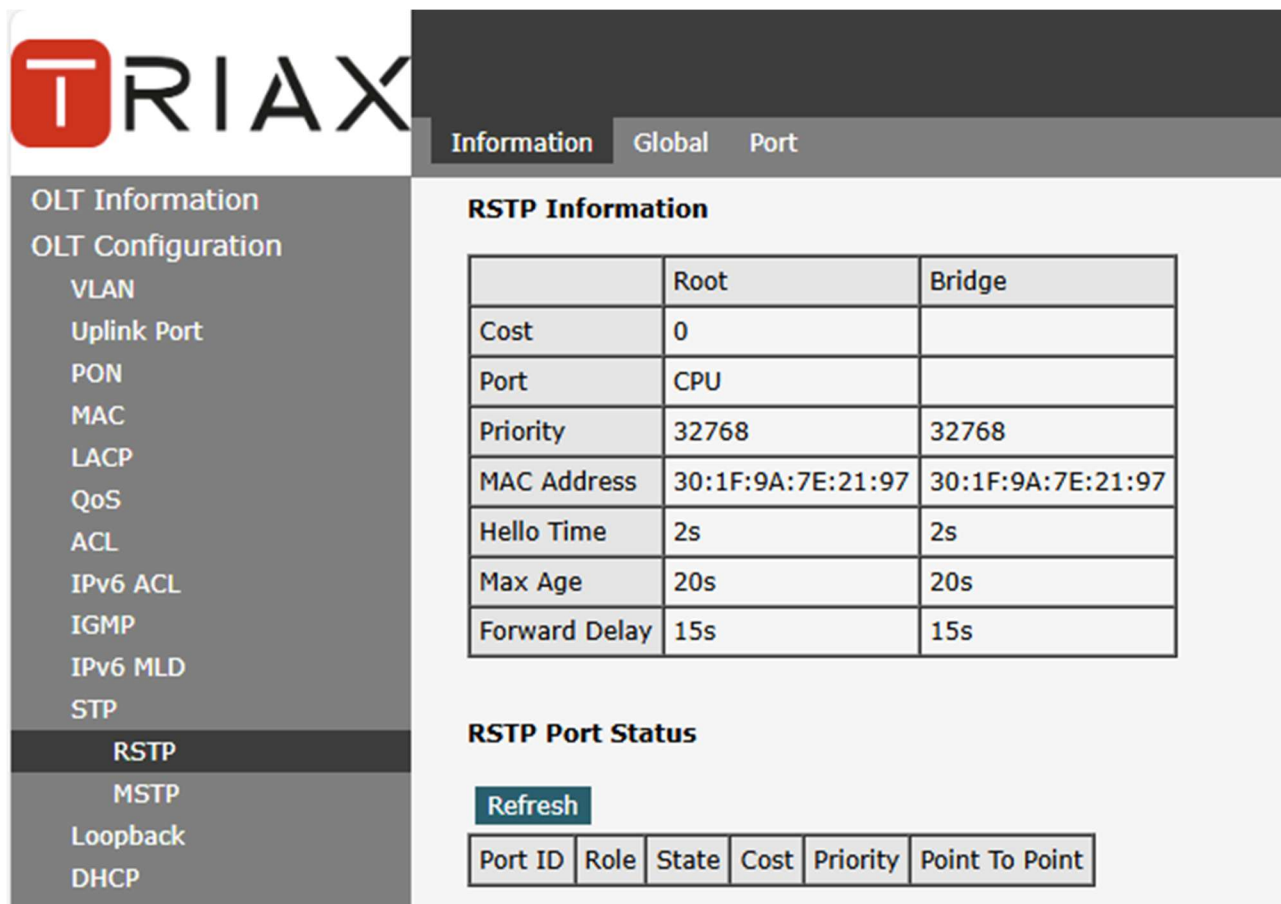
3.11 STP

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

3.11.1 RSTP Information

OLT Configuration → STP → RSTP → Information

Global information mainly displays RSTP parameters of root bridge device.



The screenshot shows the TRIAX OLT web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, **RSTP** (highlighted), MSTP, Loopback, and DHCP. The main content area has three tabs: Information, Global, and Port. The 'Information' tab is selected, displaying the 'RSTP Information' section. This section contains a table with RSTP parameters for the root bridge. Below the table is a 'Refresh' button and a table for 'RSTP Port Status' with columns: Port ID, Role, State, Cost, Priority, and Point To Point.

	Root	Bridge
Cost	0	
Port	CPU	
Priority	32768	32768
MAC Address	30:1F:9A:7E:21:97	30:1F:9A:7E:21:97
Hello Time	2s	2s
Max Age	20s	20s
Forward Delay	15s	15s

RSTP Port Status

[Refresh](#)

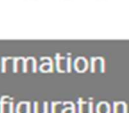
Port ID	Role	State	Cost	Priority	Point To Point
---------	------	-------	------	----------	----------------

Figure 3.11-1: RSTP Information

3.11.2 Global

OLT Configuration→STP→RSTP →Global

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



Information

Global

Port

OLT Information

OLT Configuration

VLAN

Uplink Port

PON

MAC

LACP

QoS

ACL

IPv6 ACL

IGMP

IPv6 MLD

STP

RSTP

MSTP

Loopback

DHCP

DHCPv6

IPv6 SLAAC

Route

IPv6 Route

ARP Security

TrafficPolicy

PPPoE Intermediate Agent

RSTP Configuration

RSTP Status

Global Priority

Hello Time

Max Age

Forward Delay

Packet Send Way

Enable

32768

2

20

15

Port-base

(0-61440)

(1-10s)

(6-40s)

(4-30s)

Notice: $2 * (\text{HelloTime} + 1) \leq \text{MaxAge} \leq 2 * (\text{ForwardDelay} - 1)$

Submit

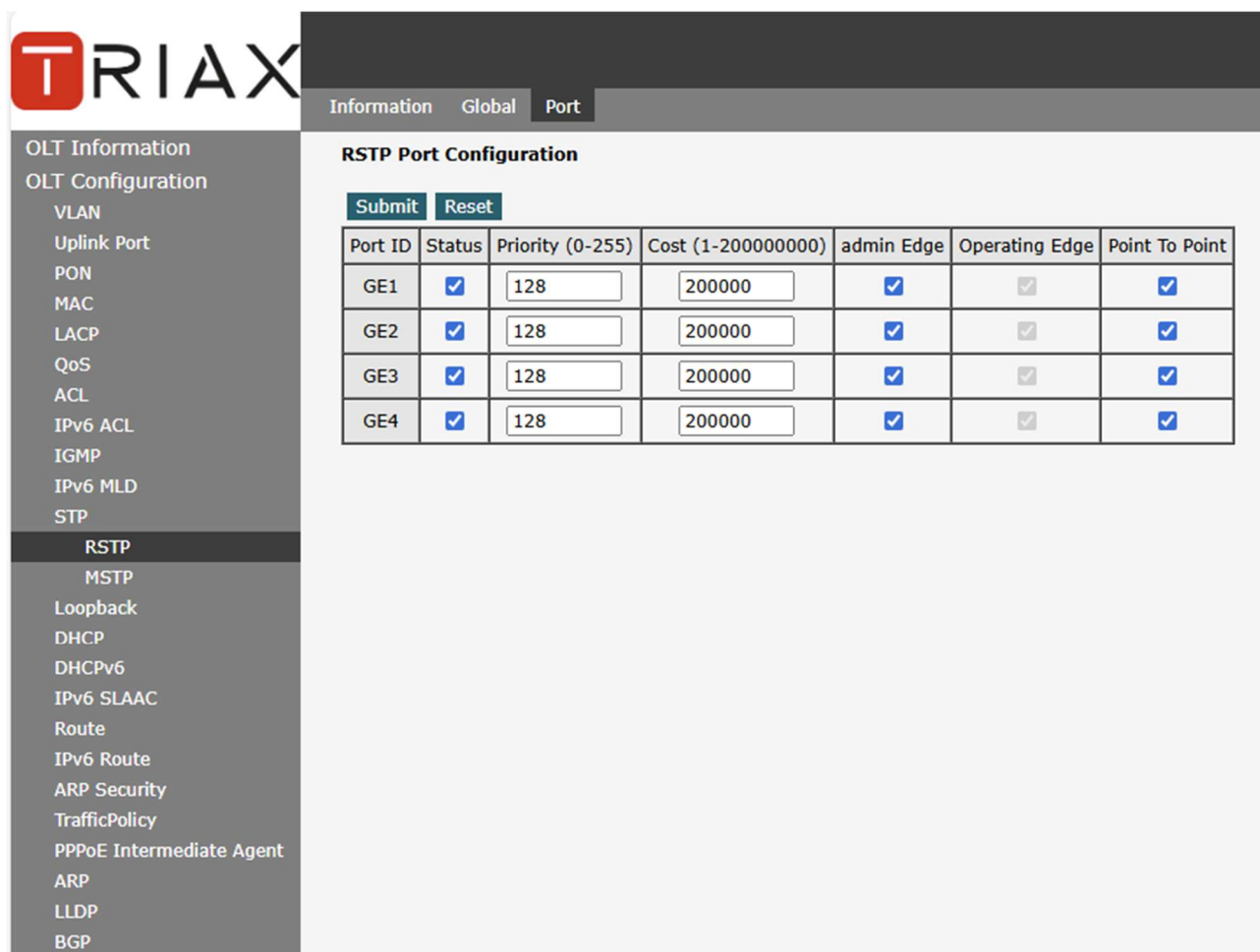
Reset

Figure 3.11-2: RSTP Global Setup

3.11.3 Port

OLT Configuration → STP → RSTP → Port

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



TRIAX

Information Global **Port**

RSTP Port Configuration

Submit Reset

Port ID	Status	Priority (0-255)	Cost (1-200000000)	admin Edge	Operating Edge	Point To Point
GE1	☒	128	200000	☒	☒	☒
GE2	☒	128	200000	☒	☒	☒
GE3	☒	128	200000	☒	☒	☒
GE4	☒	128	200000	☒	☒	☒

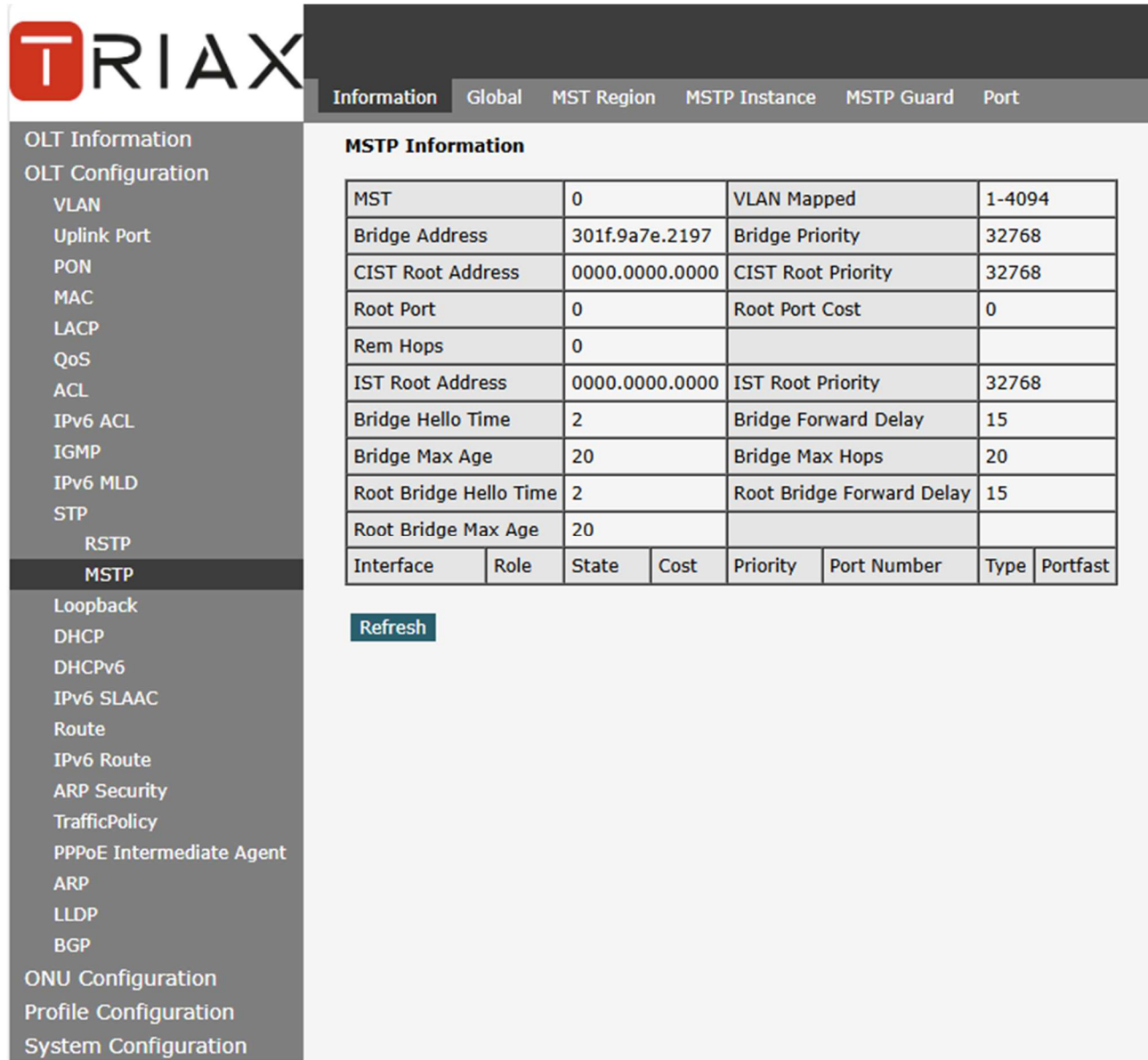
OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IPv6 ACL
IGMP
IPv6 MLD
STP
RSTP
MSTP
Loopback
DHCP
DHCPv6
IPv6 SLAAC
Route
IPv6 Route
ARP Security
TrafficPolicy
PPPoE Intermediate Agent
ARP
LLDP
BGP

Figure 3.11-3: RSTP Port Settings

3.11.4 MSTP Information

OLT Configuration→STP→MSTP→Information

Global information mainly displays MSTP parameters of root bridge device.



The screenshot displays the TRIAX OLT web interface. On the left is a navigation menu with categories like OLT Information, OLT Configuration, and various protocols. The 'MSTP' option is selected. The main content area shows the 'MSTP Information' configuration page. At the top, there are tabs for 'Information', 'Global', 'MST Region', 'MSTP Instance', 'MSTP Guard', and 'Port'. The 'Information' tab is active, displaying a table of MSTP parameters. Below the table is a 'Refresh' button.

MSTP Information							
MST	0		VLAN Mapped		1-4094		
Bridge Address	301f.9a7e.2197		Bridge Priority		32768		
CIST Root Address	0000.0000.0000		CIST Root Priority		32768		
Root Port	0		Root Port Cost		0		
Rem Hops	0						
IST Root Address	0000.0000.0000		IST Root Priority		32768		
Bridge Hello Time	2		Bridge Forward Delay		15		
Bridge Max Age	20		Bridge Max Hops		20		
Root Bridge Hello Time	2		Root Bridge Forward Delay		15		
Root Bridge Max Age	20						
Interface	Role	State	Cost	Priority	Port Number	Type	Portfast

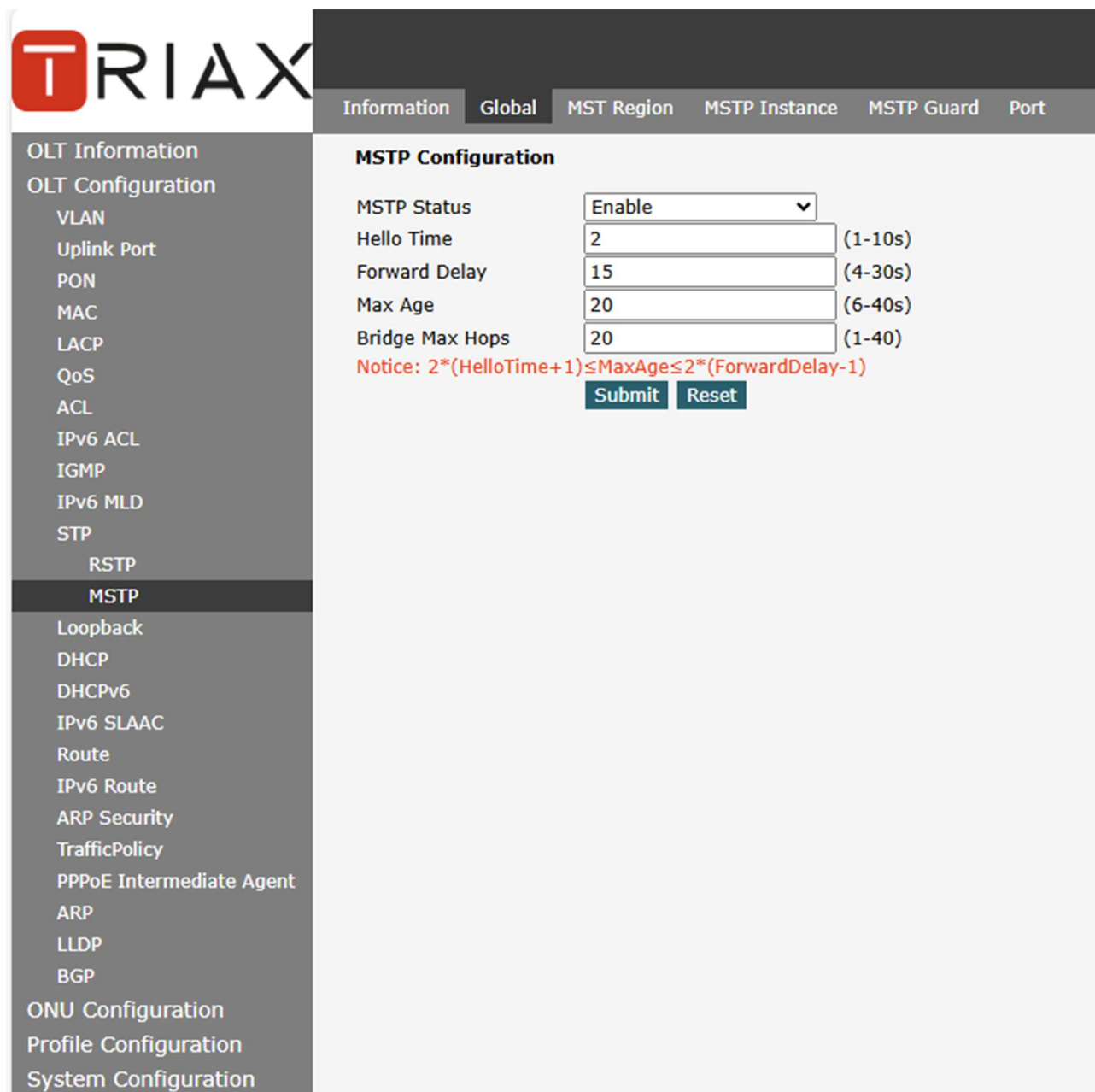
[Refresh](#)

Figure 3.11-4: MSTP Information

3.11.5 MSTP Global

OLT Configuration → STP → MSTP → Global

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



The screenshot displays the TRIAX OLT configuration web interface. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, RSTP, **MSTP**, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, BGP, ONU Configuration, Profile Configuration, and System Configuration. The 'MSTP' item is highlighted.

The main content area is titled 'MSTP Configuration' and includes a tabbed interface with the following tabs: Information, **Global**, MST Region, MSTP Instance, MSTP Guard, and Port. The 'Global' tab is active, showing the following configuration fields:

- MSTP Status:
- Hello Time: (1-10s)
- Forward Delay: (4-30s)
- Max Age: (6-40s)
- Bridge Max Hops: (1-40)

Below the fields, a notice is displayed: $2 * (\text{HelloTime} + 1) \leq \text{MaxAge} \leq 2 * (\text{ForwardDelay} - 1)$. At the bottom of the configuration area are two buttons: **Submit** and **Reset**.

Figure 3.11-5: MSTP Global Setup

3.11.6 Port

OLT Configuration→STP→MSTP →Port

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

The screenshot displays the TRIAX OLT Configuration web interface. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, RSTP, MSTP (highlighted), Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, BGP, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'MSTP Port Configuration' and features a breadcrumb trail: Information > Global > MST Region > MSTP Instance > MSTP Guard > Port. Below the breadcrumb, there is a dropdown menu for 'Instance' set to '0'. A table lists four ports (GE1, GE2, GE3, GE4) with columns for Status, Priority (0-240), Cost (1-200000000), Portfast, Point To Point, BPDU Filter, BPDU Guard, and Guard. All ports have their Status checked, Priority set to 128, Cost set to 20000, and Guard set to NONE. Below the table are 'Submit' and 'Reset' buttons.

Port ID	Status	Priority (0-240)	Cost (1-200000000)	Portfast	Point To Point	BPDU Filter	BPDU Guard	Guard
GE1	☒	128	20000	☐	☐	☐	☐	NONE
GE2	☒	128	20000	☐	☐	☐	☐	NONE
GE3	☒	128	20000	☐	☐	☐	☐	NONE
GE4	☒	128	20000	☐	☐	☐	☐	NONE

Figure 3.11-6: MSTP Port Settings

3.12 Loopback

Loopback can detect loop ports and process loop ports.

3.12.1 Information

OLT Configuration → Loopback → Information

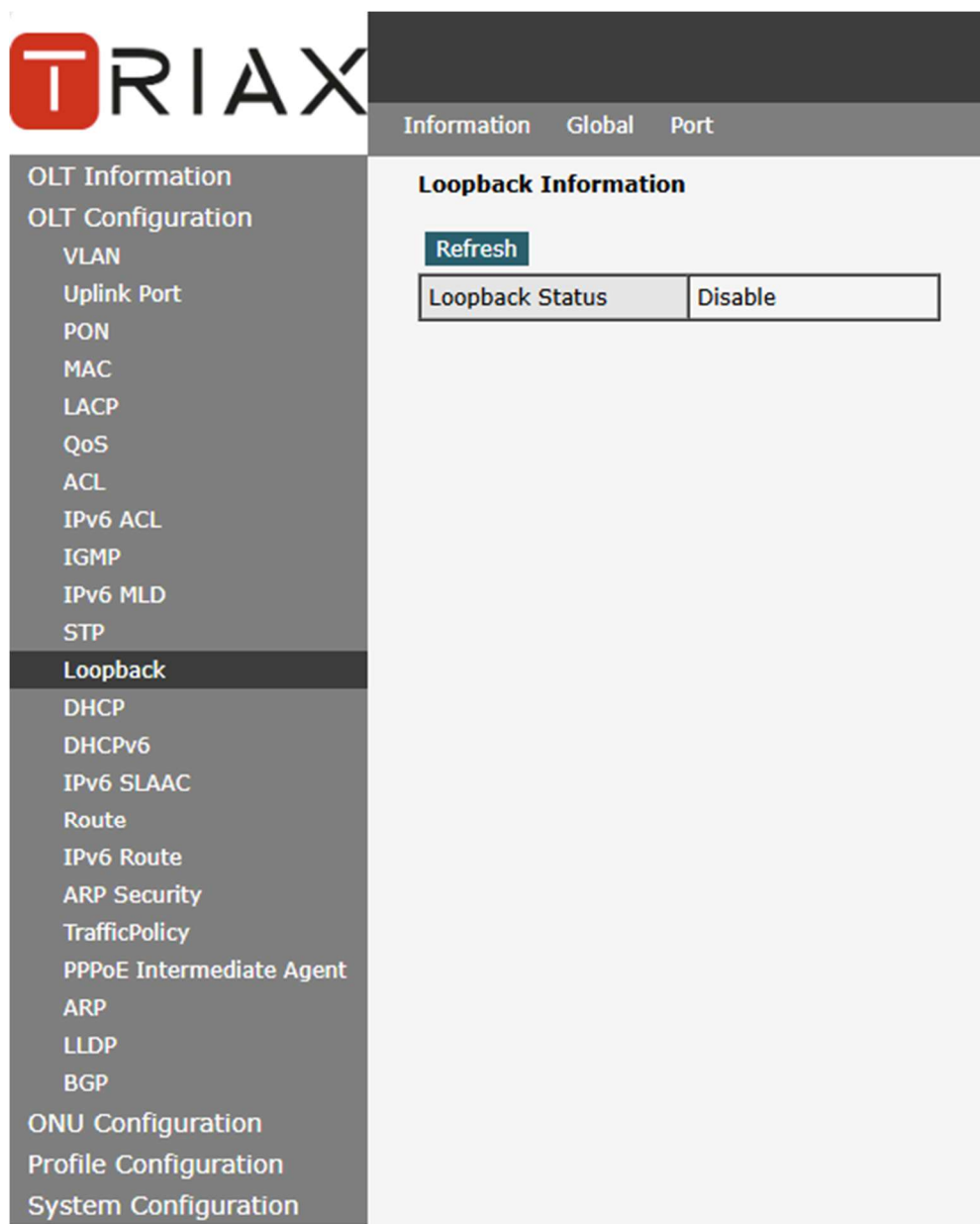


Figure 3.12-1: Loopback Information

3.12.2 Global

OLT Configuration → Loopback → Global

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

The screenshot displays the TRIAX OLT configuration interface. On the left, a sidebar menu lists various configuration categories. The 'Loopback' category is currently selected. The main configuration area is titled 'Loopback Configuration' and includes the following settings:

- Status:** A dropdown menu set to 'Disable'.
- Range:** A dropdown menu set to 'All'.
- Mode:** A dropdown menu set to 'auto-recovery'.
- Age Time:** A text input field containing '60', with a range indicator '(10-3600s)'.
- Packet Send Way:** A dropdown menu set to 'Port-base'.
- Packet Send Time:** A text input field containing '2', with a range indicator '(range 1-720, unit:0.5s)'.

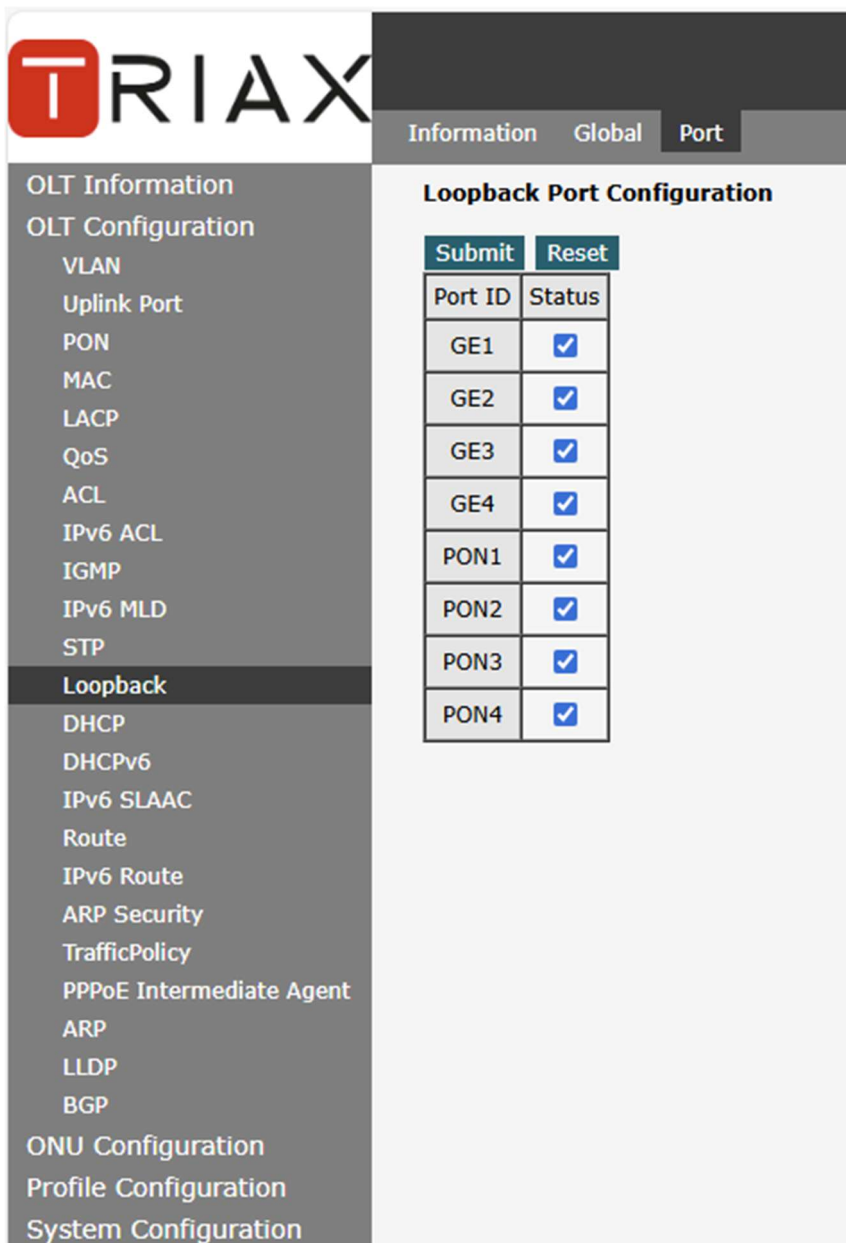
At the bottom of the configuration area, there are two buttons: 'Submit' and 'Reset'.

Figure 3.12-2: Loopback Global

3.12.3 Port

OLT Configuration → Loopback → Port

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



The screenshot displays the TRIAX OLT configuration interface. On the left is a navigation menu with categories: OLT Information, OLT Configuration, Loopback (highlighted), ONU Configuration, Profile Configuration, and System Configuration. Under OLT Configuration, various protocols like VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, and BGP are listed. The main area on the right is titled 'Loopback Port Configuration' and contains two tabs: 'Submit' and 'Reset'. Below these tabs is a table with two columns: 'Port ID' and 'Status'. The table lists eight ports: GE1, GE2, GE3, GE4, PON1, PON2, PON3, and PON4, each with a checked status box.

Port ID	Status
GE1	☒
GE2	☒
GE3	☒
GE4	☒
PON1	☒
PON2	☒
PON3	☒
PON4	☒

Figure 3.12-3: Loopback Port

3.13 DHCP

OLT can support the following DHCP functions.

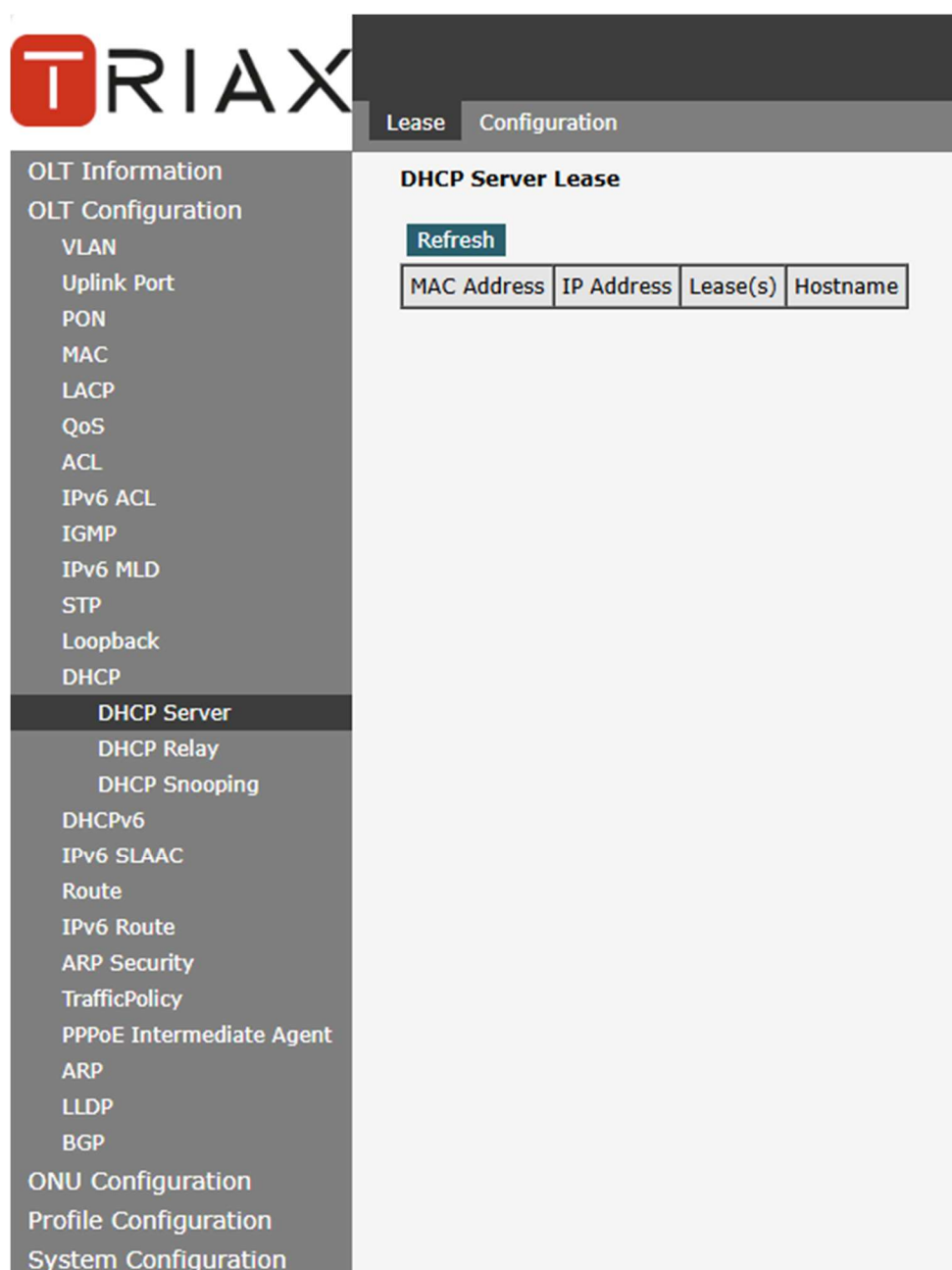
- DHCP Server
- DHCP Relay
- DHCP Snooping

3.13.1 DHCP Server

3.13.1.1 DHCP Lease

OLT Configuration→DHCP→DHCP Server→Lease

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



TRIAX

- OLT Information
- OLT Configuration
 - VLAN
 - Uplink Port
 - PON
 - MAC
 - LACP
 - QoS
 - ACL
 - IPv6 ACL
 - IGMP
 - IPv6 MLD
 - STP
 - Loopback
 - DHCP
- DHCP Server**
- DHCP Relay
- DHCP Snooping
- DHCPv6
- IPv6 SLAAC
- Route
- IPv6 Route
- ARP Security
- TrafficPolicy
- PPPoE Intermediate Agent
- ARP
- LLDP
- BGP
- ONU Configuration
- Profile Configuration
- System Configuration

Lease
Configuration

DHCP Server Lease

Refresh

MAC Address	IP Address	Lease(s)	Hostname
-------------	------------	----------	----------

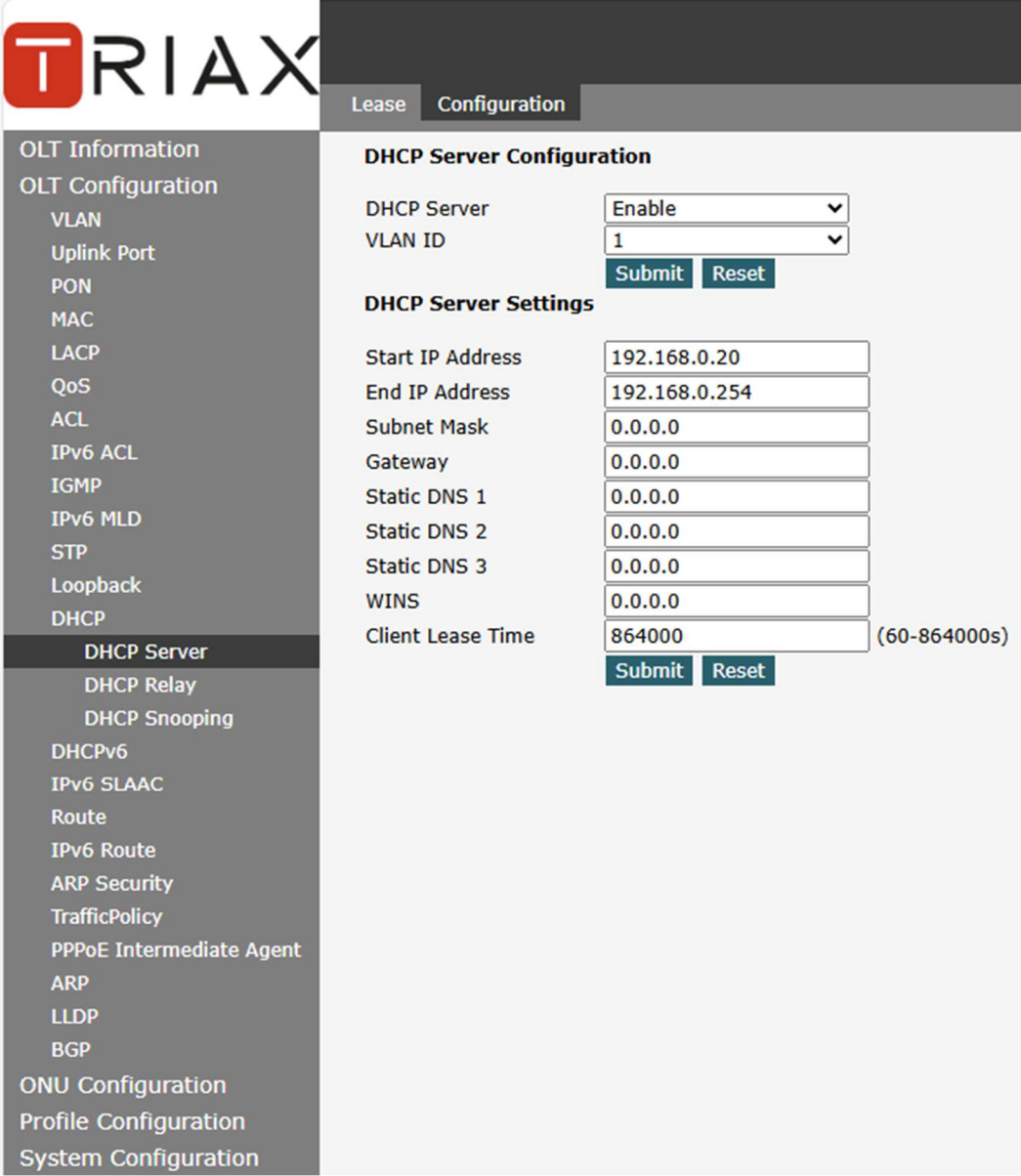
Figure 3.13-1: DHCP Lease

3.13.1.2 DHCP Configuration

OLT Configuration→DHCP→DHCP Server→Configuration

Sometimes the devices need dynamic IP addresses, but there is no special DHCP server in network. These configurations can solve the problem. OLT will be a DHCP server in network and assign IP addresses to other devices.

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



TRIAX

Lease Configuration

DHCP Server Configuration

DHCP Server: Enable

VLAN ID: 1

Submit Reset

DHCP Server Settings

Start IP Address: 192.168.0.20

End IP Address: 192.168.0.254

Subnet Mask: 0.0.0.0

Gateway: 0.0.0.0

Static DNS 1: 0.0.0.0

Static DNS 2: 0.0.0.0

Static DNS 3: 0.0.0.0

WINS: 0.0.0.0

Client Lease Time: 864000 (60-864000s)

Submit Reset

OLT Information

OLT Configuration

VLAN

Uplink Port

PON

MAC

LACP

QoS

ACL

IPv6 ACL

IGMP

IPv6 MLD

STP

Loopback

DHCP

DHCP Server

DHCP Relay

DHCP Snooping

DHCPv6

IPv6 SLAAC

Route

IPv6 Route

ARP Security

TrafficPolicy

PPPoE Intermediate Agent

ARP

LLDP

BGP

ONU Configuration

Profile Configuration

System Configuration

Figure 3.13-2: DHCP Configuration

3.13.2 DHCP Relay

OLT Configuration→DHCP→DHCP Relay

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

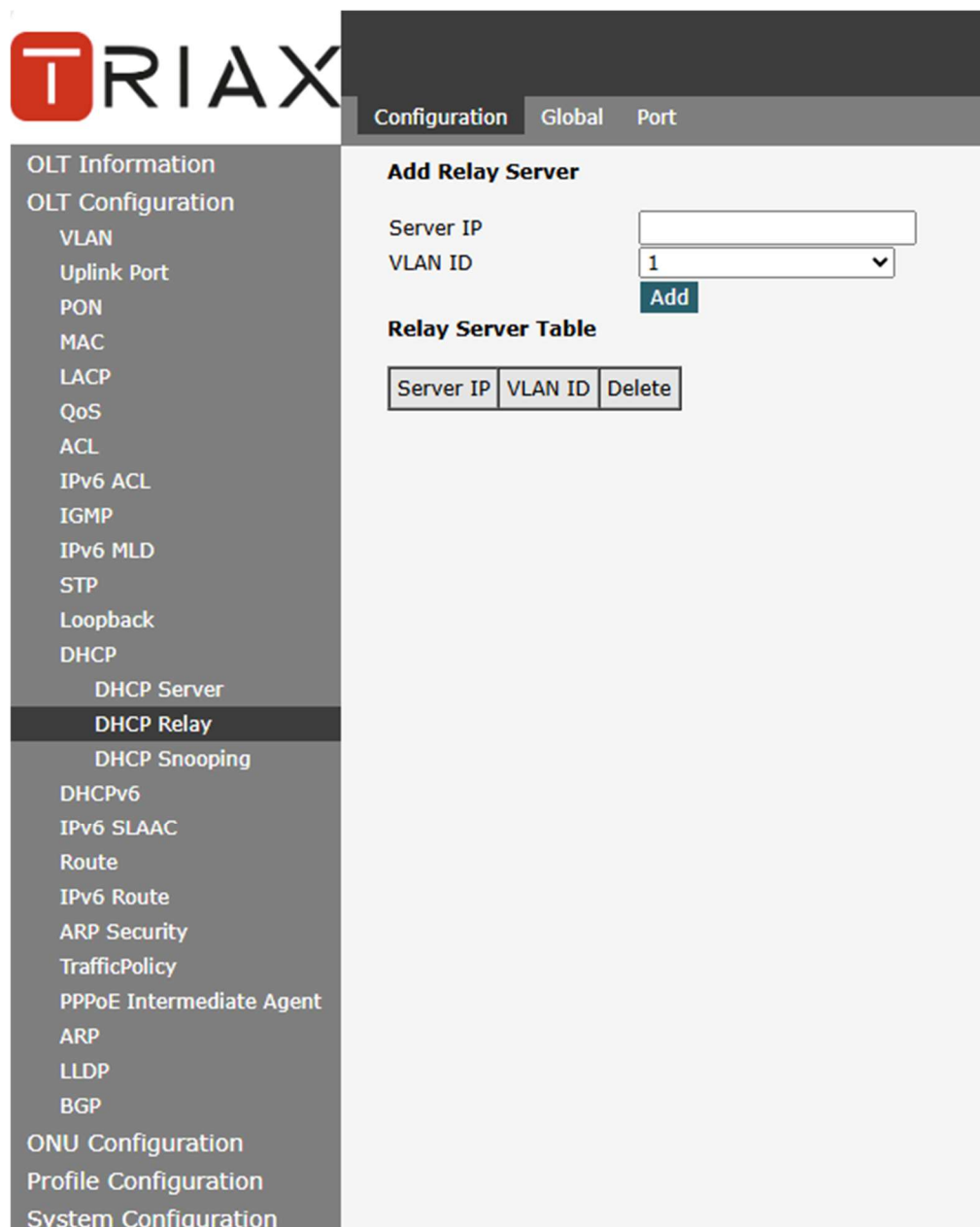


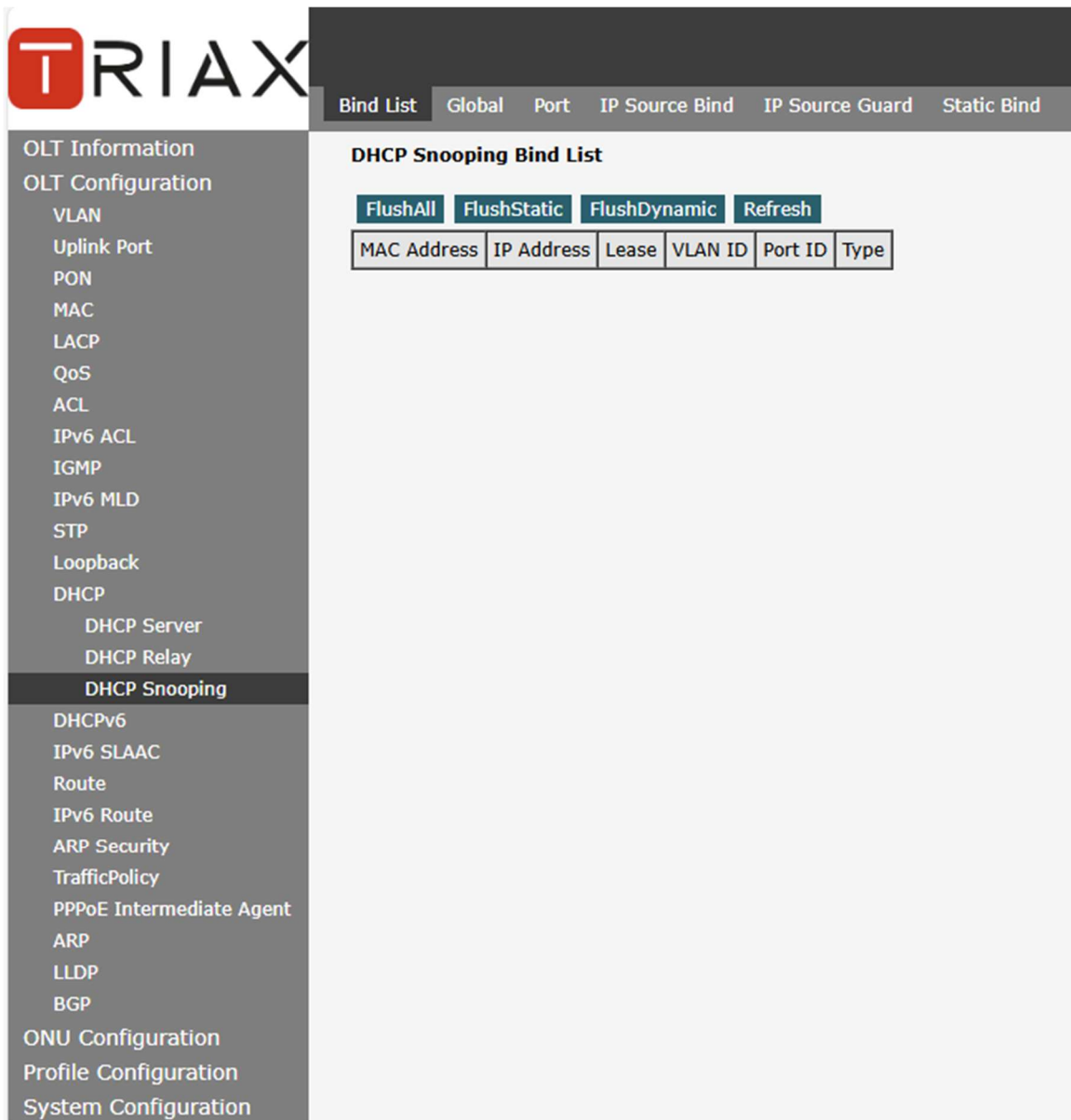
Figure 3.13-3: DHCP Relay Configuration

3.13.3 DHCP Snooping

3.13.3.1 Bind List

OLT Configuration → DHCP → DHCP Snooping → Bind List

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



The screenshot displays the TRIAX OLT web interface. On the left is a navigation menu with categories like OLT Information, OLT Configuration, and various protocols. The 'DHCP Snooping' option is highlighted. The main content area is titled 'DHCP Snooping Bind List' and includes tabs for 'Bind List', 'Global', 'Port', 'IP Source Bind', 'IP Source Guard', and 'Static Bind'. Below the tabs are buttons for 'FlushAll', 'FlushStatic', 'FlushDynamic', and 'Refresh'. A table with the following headers is visible:

MAC Address	IP Address	Lease	VLAN ID	Port ID	Type
-------------	------------	-------	---------	---------	------

Figure 3.13-4: DHCP Snooping Bind List

3.13.3.2 Global

OLT Configuration→DHCP→DHCP Snooping→Global

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

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

TRIAX

Bind List Global Port IP Source Bind IP Source Guard Static Bind

DHCP Snooping Configuration

DHCP Snooping Enable Submit Reset

DHCP Snooping Settings

Option82 Control ☒ Disable ☐ Enable

Option82 Strategy ☐ Drop ☒ Keep ☐ Replace ☐ Merge

Overspeed Recovery ☐ Disable ☒ Enable

Overspeed Recovery Interval (3-3600s)

Binding Delete Time (1-3600s)

Submit Reset

VLAN ID List

List
VLAN ID 1

Add Delete

VLAN option82 Profile(Format Profile) Bind

VLAN	Profile Id	Profile Name
VLAN ID 1	Profile 	

Add Delete

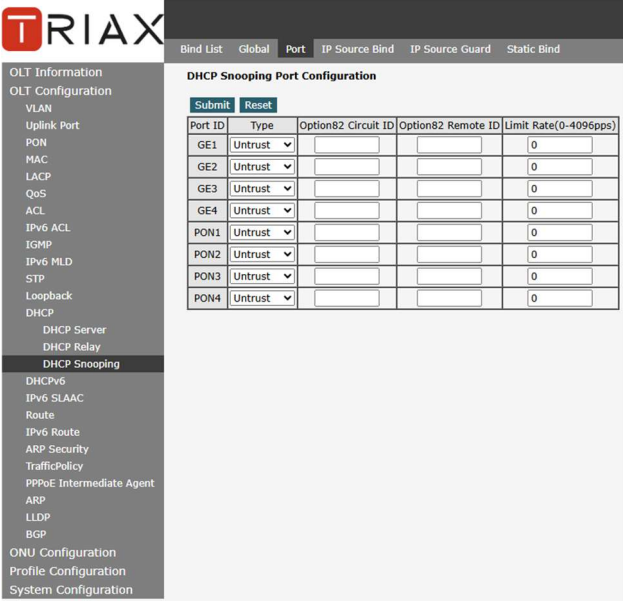
Figure 3.13-5: DHCP Snooping Global

3.13.3.3 Port

OLT Configuration→DHCP→DHCP Snooping→Port

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

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



The screenshot shows the 'DHCP Snooping Port Configuration' page. On the left is a navigation menu with categories like OLT Information, OLT Configuration, and ONU Configuration. The 'DHCP Snooping' section is expanded. The main area has tabs for 'Bind List', 'Global', 'Port', 'IP Source Bind', 'IP Source Guard', and 'Static Bind'. The 'Port' tab is active, showing a table of ports with their configuration details.

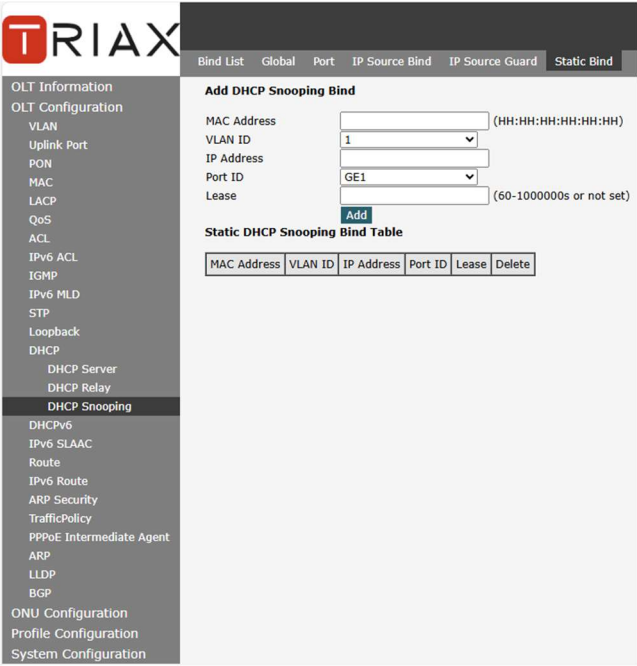
Port ID	Type	Option82 Circuit ID	Option82 Remote ID	Limit Rate(0-4096pps)
GE1	Untrust			0
GE2	Untrust			0
GE3	Untrust			0
GE4	Untrust			0
PON1	Untrust			0
PON2	Untrust			0
PON3	Untrust			0
PON4	Untrust			0

Figure 3.13-6: DHCP Snooping Port Setup

3.13.3.4 Static Bind

OLT Configuration→DHCP→DHCP Snooping→Static Bind

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



The screenshot shows the 'Static Bind' configuration page. It includes a form to 'Add DHCP Snooping Bind' with fields for MAC Address, VLAN ID (set to 1), IP Address, Port ID (set to GE1), and Lease time. Below this is a table titled 'Static DHCP Snooping Bind Table' with columns for MAC Address, VLAN ID, IP Address, Port ID, Lease, and Delete.

MAC Address	VLAN ID	IP Address	Port ID	Lease	Delete
-------------	---------	------------	---------	-------	--------

Figure 3.13-7: DHCP Snooping Static Bind

3.13.3.5 IP Source Guard

Only GPON OLT-B Series supports this feature.

OLT Configuration→DHCP→DHCP Snooping→IP Source Guard

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

The screenshot displays the TRIAX OLT web interface. On the left, a navigation menu lists various configuration options, including 'DHCP Snooping'. The main content area is titled 'IP Source Guard Configuration'. It features three input fields: 'Port ID' (set to 'GE1'), 'Filter Type' (set to 'Disable'), and 'Filter VLAN ID'. Below these fields are 'Submit' and 'Reset' buttons. Underneath is the 'IP Source Guard Table', which is currently empty. The table has columns for 'Interface', 'Filter Type', 'Filter Mode', 'IP Address', 'MAC Address', and 'Filter VLAN ID'.

Figure 3.13-8: DHCP Snooping IP Source Guard

3.13.3.6 IP Source Bind

Only GPON OLT-B Series supports this feature.

OLT Configuration→DHCP→DHCP Snooping→IP Source Bind

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

The screenshot displays the TRIAX OLT web interface. On the left, a navigation menu lists various configuration options, including 'DHCP Snooping'. The main content area is titled 'IP Source Bind Configuration'. It features four input fields: 'VLAN ID', 'Port ID', 'IP Address' (with a 'Mask' field next to it), and 'MAC Address'. Below these fields are 'Submit' and 'Reset' buttons. Underneath is the 'IP Source Bind Table', which is currently empty. The table has columns for 'MAC Address', 'IP Address', 'Type', 'VLAN ID', 'Interface', and 'Delete'.

Figure 3.13-9: DHCP Snooping IP Source Bind

3.14 DHCPv6

3.14.1 DHCPv6 Server

DHCPv6 is a network protocol that used to configure IPv6 address, IPv6 prefix, DNS, domain and other network parameters for a host which operating on an IPv6 network.

3.14.1.1 DHCPv6 Bind Information

OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 Bind Information

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

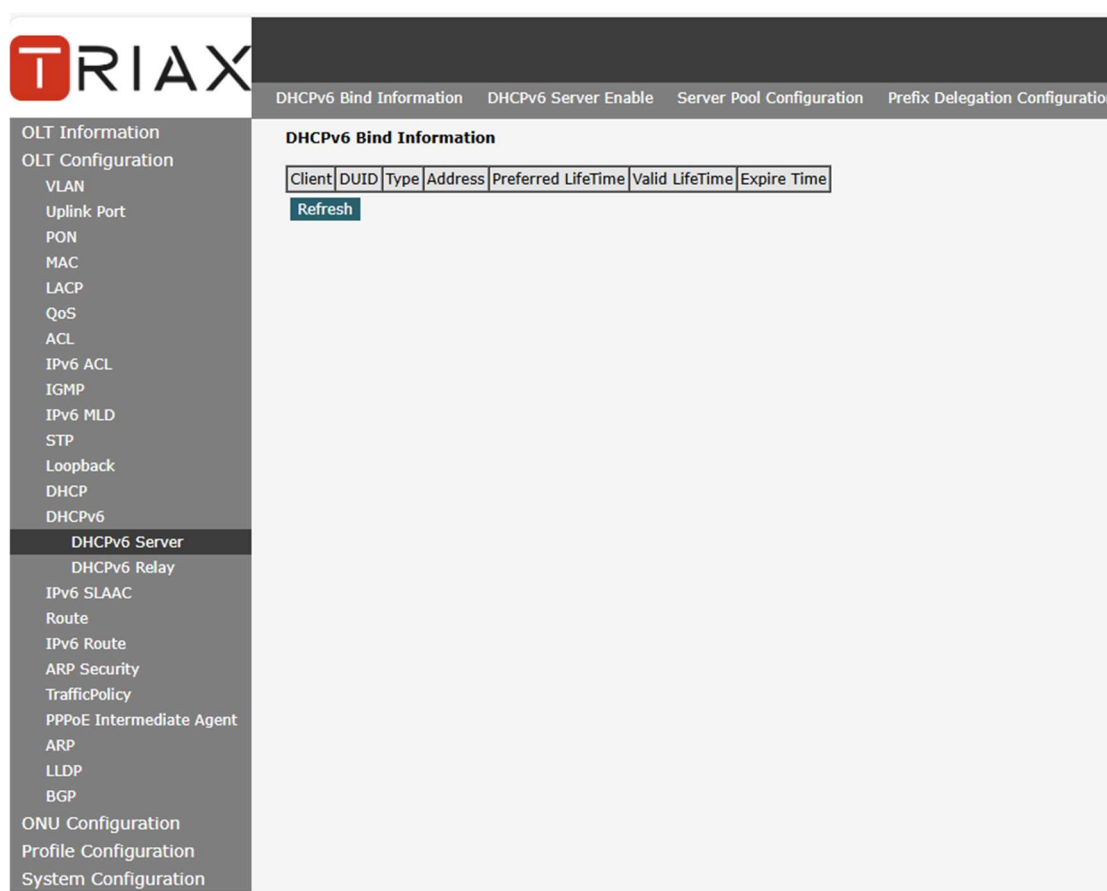


Figure 3.14-1: DHCPv6 Bind Information

3.14.1.2 DHCPv6 Server Enable

OLT Configuration → DHCPv6 → DHCPv6 Server → DHCPv6 Server Enable

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

TRIAX

DHCPv6 Bind Information | DHCPv6 Server Enable | **Server Pool Configuration** | Prefix Delegation Configuration

OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IPv6 ACL
IGMP
IPv6 MLD
STP
Loopback
DHCP
DHCPv6
DHCPv6 Server
DHCPv6 Relay
IPv6 SLAAC
Route
IPv6 Route
ARP Security
TrafficPolicy
PPPoE Intermediate Agent
ARP
LLDP
BGP
ONU Configuration
Profile Configuration
System Configuration

DHCPv6 Server Configuration

VLAN ID: 1
Pool Name:
☐ Preference Value (0-255)
Rapid Commit: ☐ On ☒ Off
Submit **Reset**

DHCPv6 DUID Configuration

DUID Type: Ilt
Enterprise Number: (1-2147483647)
Identifier: (0-32 chars)
Submit **Reset**

DHCPv6 DUID Table
DUID Type: Ilt
DUID: 00:01:00:01:c7:92:bc:8e:6a:98:c3:70:74:03

DHCPv6 Interface Information

VLAN ID	Using Pool	Preference Value	Rapid Commit	Delete

Refresh

Figure 3.14-2: DHCPv6 Server

3.14.1.3 Server Pool Configuration

OLT Configuration → DHCPv6 → DHCPv6 Server → Server Pool Configuration

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

TRIAX

DHCPv6 Bind Information | DHCPv6 Server Enable | **Server Pool Configuration** | Prefix Delegation Configuration

OLT Information
OLT Configuration
VLAN
Uplink Port
PON
MAC
LACP
QoS
ACL
IPv6 ACL
IGMP
IPv6 MLD
STP
Loopback
DHCP
DHCPv6
DHCPv6 Server
DHCPv6 Relay
IPv6 SLAAC
Route
IPv6 Route
ARP Security
TrafficPolicy
PPPoE Intermediate Agent
ARP
LLDP
BGP
ONU Configuration
Profile Configuration
System Configuration

DHCPv6 Server Pool Setting

Pool Name:
Start IPv6 Address:
End IPv6 Address:
Valid Lifetime: 172800 (60-4294967295)s
Preferred Lifetime: 86400 (60-4294967295)s (Valid lifetime must be larger or equal than Preferred lifetime)
DNS Server:
Domain Name:
Submit **Reset**

DHCPv6 Server Pool

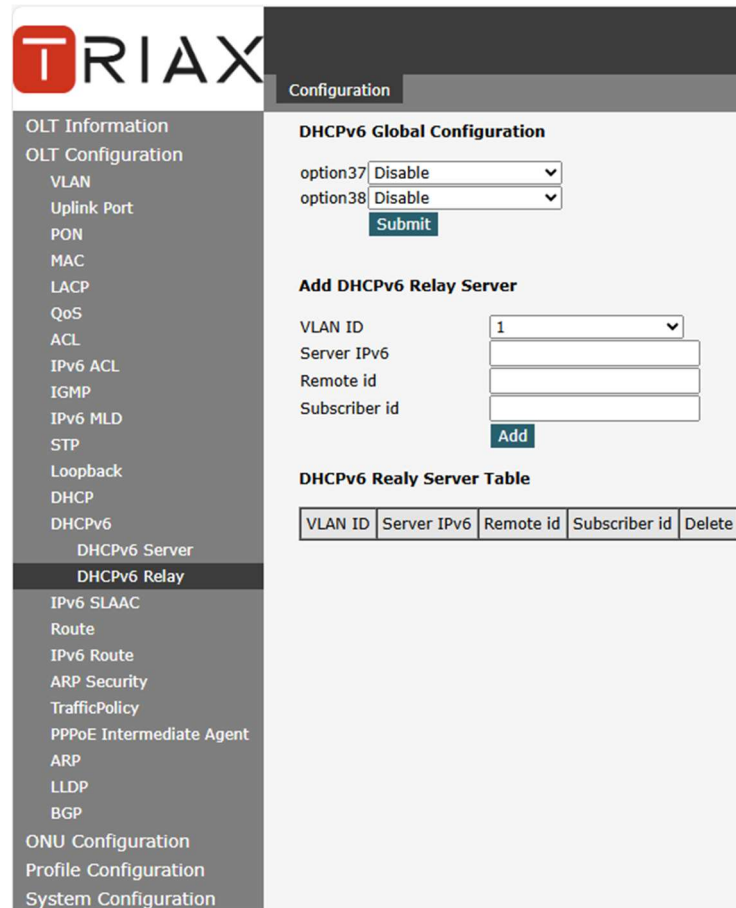
Pool Name	Start IPv6 Address	End IPv6 Address	Valid Lifetime	Preferred Lifetime	DNS Server	Domain Name	Edit	Delete

Figure 3.14-3: DHCPv6 Pool

3.14.2 DHCPv6 Relay

OLT Configuration → DHCPv6 → DHCPv6 Relay → Configuration

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



Configuration

DHCPv6 Global Configuration

option37

option38

Add DHCPv6 Relay Server

VLAN ID

Server IPv6

Remote id

Subscriber id

DHCPv6 Realy Server Table

VLAN ID	Server IPv6	Remote id	Subscriber id	Delete
---------	-------------	-----------	---------------	--------

Figure 3.14-4: DHCPv6 Relay

3.15 IPv6 SLAAC

IPv6 network uses the ICMPv6 route discovery protocol. When an IPv6 host connects to the network for the first time, it automatically configures it according to the information got by route discovery/prefix discovery. Route discovery/prefix discovery is that when a host is connected to IPv6 network, it can discover local router and obtain neighbour information, prefix of current network and other configuration parameters from route advertisement (RA) packets.

3.15.1 IPv6 SLAAC

OLT Configuration → IPv6 SLAAC → IPv6 SLAAC

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

IPv6 SLAAC Configuration

VLAN ID	Suppress RA	Send RA Time (1-1800s)	RA LifeTime (0-9000s)	Reachable Time (0-3600000ms)	Suppress RDNS	M	O	Router Preference	MTU (1280-1500)
Submit									

Figure 3.15-1: IPv6 SLAAC

3.15.2 IPv6 SLAAC Prefix

OLT Configuration → IPv6 SLAAC → IPv6 SLAAC Prefix

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

IPv6 SLAAC Prefix Configuration

VLAN ID:

ND Prefix:

ND Prefix Length:

Valid LifeTime: (0-4294967295)s

Preferred LifeTime: (0-4294967295)s

(Valid lifetime must be larger or equal than Preferred lifetime)

IPv6 SLAAC Prefix

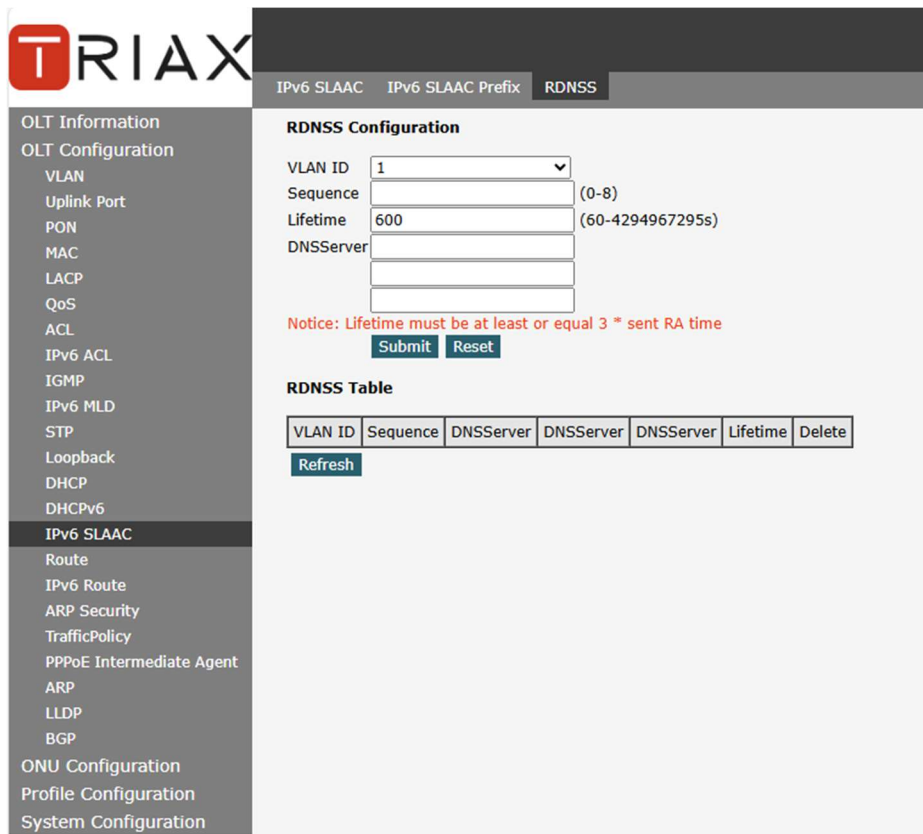
VLAN ID	ND Prefix	Valid LifeTime	Preferred LifeTime	Delete
Refresh				

Figure 3.15-2: IPv6 SLAAC Prefix

3.15.3 RDNSS

OLT Configuration → IPv6 SLAAC → RDNSS

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



The screenshot shows the TRIAX OLT configuration interface. The left sidebar contains a menu with categories: OLT Information, OLT Configuration, IPv6 SLAAC, and ONU Configuration. The 'IPv6 SLAAC' category is selected, and the 'RDNSS' sub-tab is active. The main area displays the 'RDNSS Configuration' form with fields for VLAN ID (1), Sequence (0-8), Lifetime (600), and DNSServer. A notice states: 'Notice: Lifetime must be at least or equal 3 * sent RA time'. Below the form are 'Submit' and 'Reset' buttons. A 'RDNSS Table' is shown with columns: VLAN ID, Sequence, DNSServer, DNSServer, DNSServer, Lifetime, and Delete. A 'Refresh' button is located below the table.

VLAN ID	Sequence	DNSServer	DNSServer	DNSServer	Lifetime	Delete

Figure 3.15-3: RDNSS

3.16 Route

3.16.1 IP

3.16.1.1 VLAN IP

OLT Configuration → Route → IP → VLAN IP

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

TRIAX

VLAN IP

OLT Information

OLT Configuration

- VLAN
- Uplink Port
- PON
- MAC
- LACP
- QoS
- ACL
- IPv6 ACL
- IGMP
- IPv6 MLD
- STP
- Loopback
- DHCP
- DHCPv6
- IPv6 SLAAC
- Route**
- IPv6 Route
- ARP Security
- TrafficPolicy
- PPPoE Intermediate Agent
- ARP
- LLDP
- BGP

ONU Configuration

Profile Configuration

System Configuration

VLAN IP Configuration

VLAN ID:

IP Address:

Subnet Mask:

VLAN IP Table

VLAN ID	IP Address	Subnet Mask	Delete
---------	------------	-------------	--------

Figure 3.16-1: VLAN IP

3.16.1.2 ARP Proxy

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

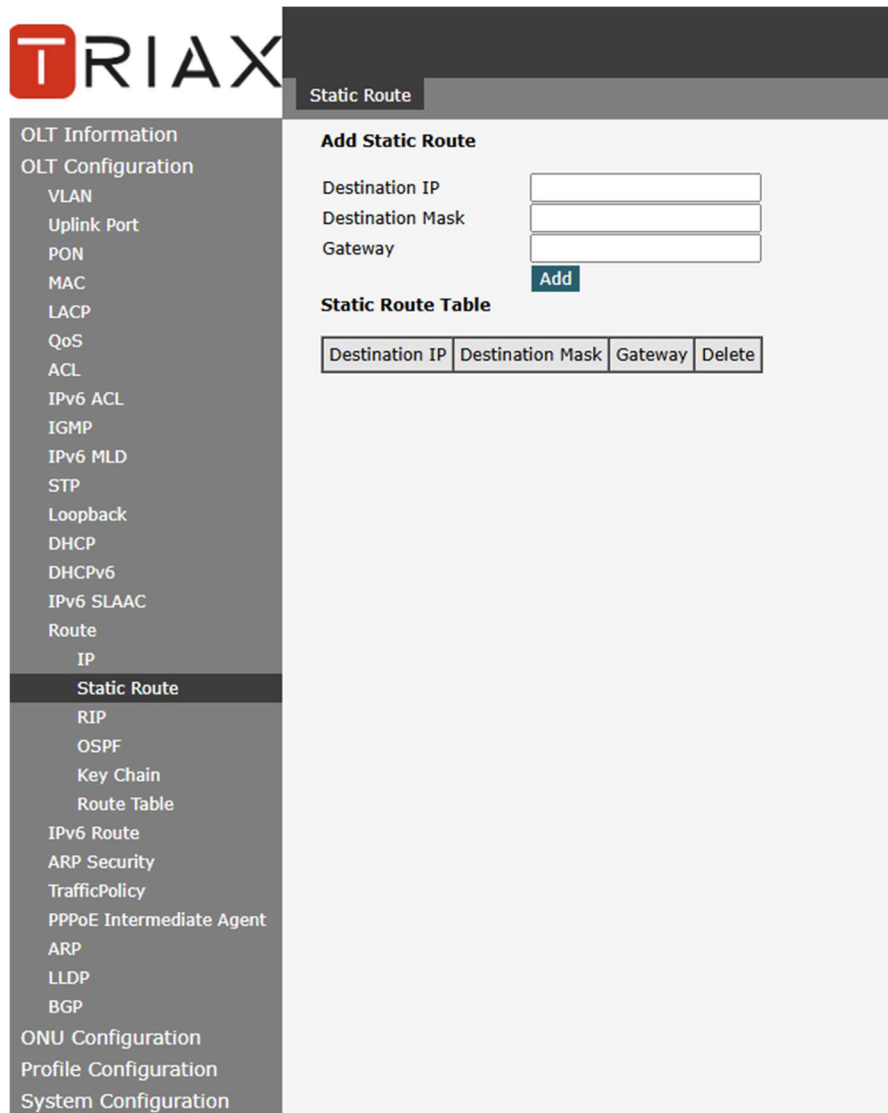
The process which results in the node responding with its own MAC address to an ARP request for a different IP address for proxying purposes is sometimes referred to as 'publishing'. This OLT does not support ARP Proxy.

3.16.2 Static Route

Static route is a form of routing that a router uses a manually configured routing entry. In many cases, static routes are manually configured by a network administrator. Unlike dynamic routing, static routes are fixed and do not change if the network is changed or reconfigured.

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

OLT Configuration → Route → Static Route



Static Route

Add Static Route

Destination IP

Destination Mask

Gateway

Add

Static Route Table

Destination IP	Destination Mask	Gateway	Delete
----------------	------------------	---------	--------

Figure 3.16-3: Static Route

3.16.3 RIP

RIP (Routing Information Protocol) is a simple internal gateway protocol, which is based on the D-V algorithm and uses hop count to represent metric. The hop count is the number of routers that a datagram must pass through. RIP only support maximum 15 hops; hence it is fit for a small network.

3.16.3.1 RIP Information

OLT Configuration → Route → RIP → RIP Information

This page displays RIP information.

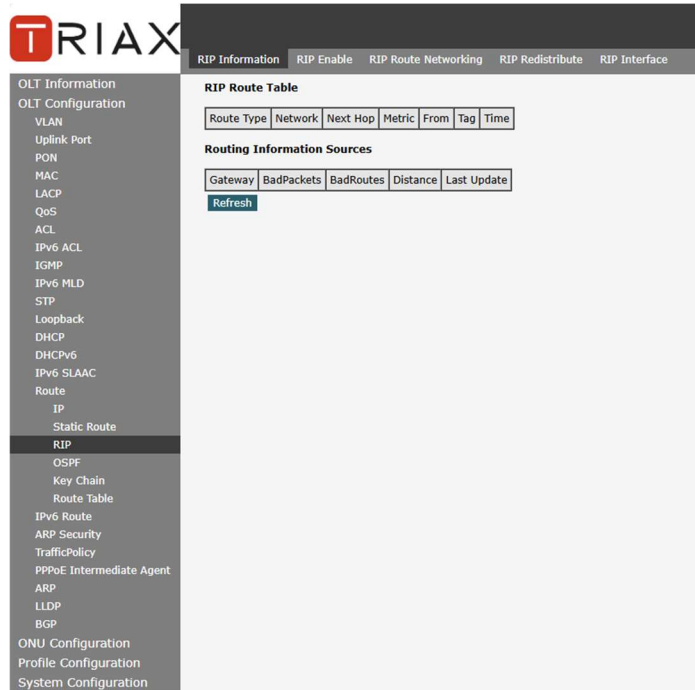


Figure 3.16-4: RIP Information

3.16.3.2 RIP Enable

OLT Configuration → Route → RIP → RIP Enable

Enable RIP protocol and configure RIP parameters.

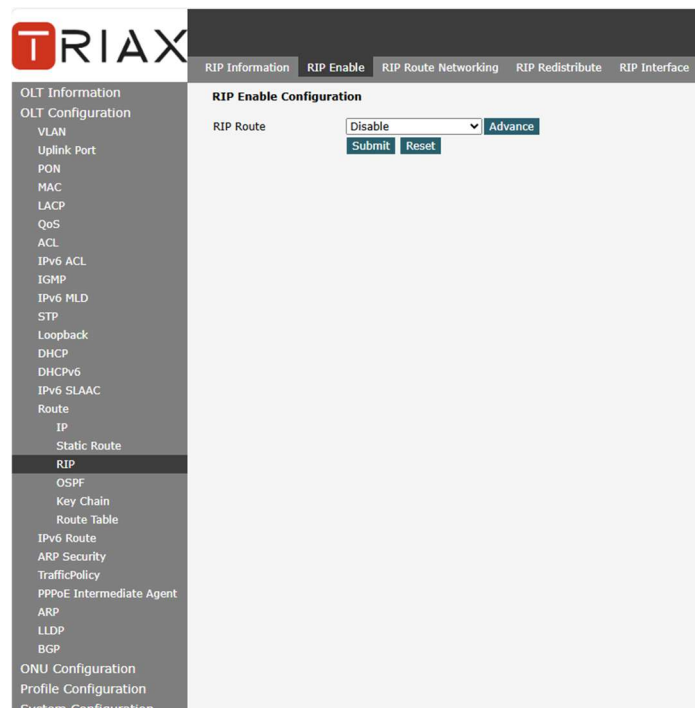


Figure 3.16-5: RIP Enable

3.16.3.3 RIP Route Networking

OLT Configuration → Route → RIP → RIP Route Networking

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

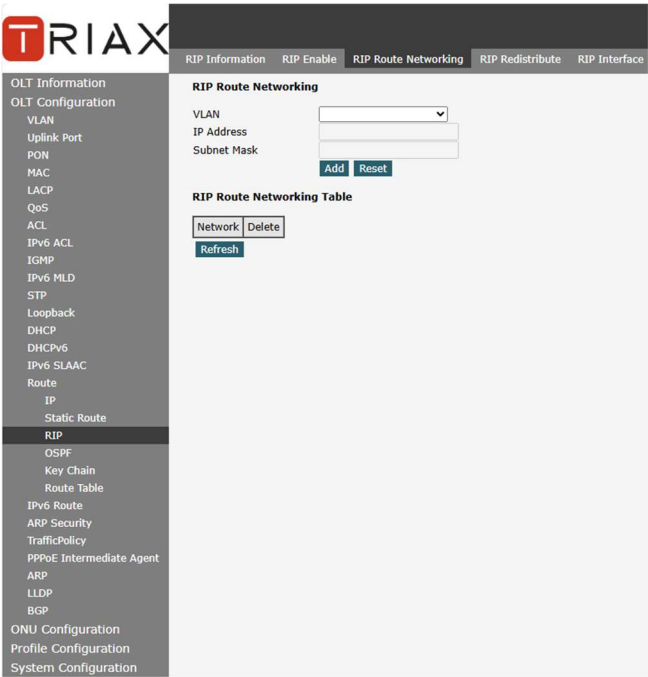


Figure 3.16-6: RIP Route Networking

3.16.3.4 RIP Redistribute

OLT Configuration → Route → RIP → RIP Redistribute.

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

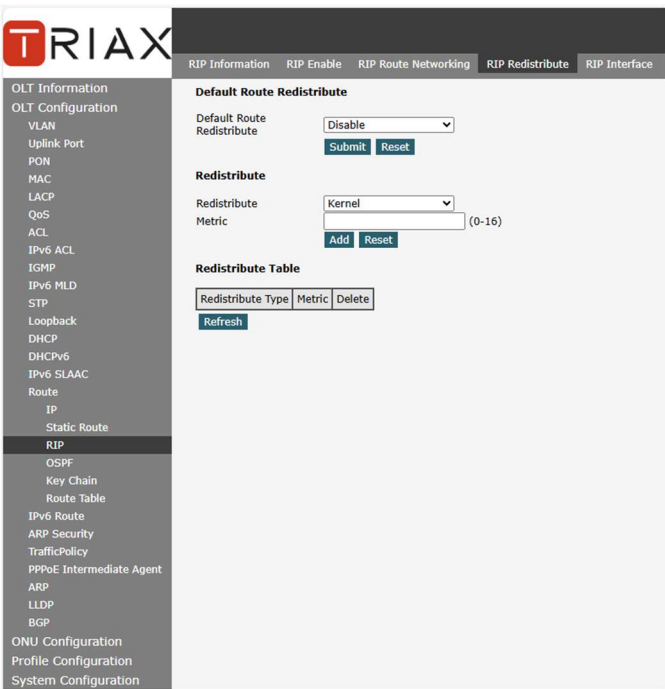


Figure 3.16-7: RIP Redistribute

3.16.3.5 RIP Interface

OLT Configuration → Route → RIP → RIP Interface

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

The screenshot shows the TRIAX OLT configuration interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IP, Static Route, RIP (highlighted), OSPF, Key Chain, Route Table, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, ARP, LLDP, BGP, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'RIP Interface Configuration' and has tabs for RIP Information, RIP Enable, RIP Route Networking, RIP Redistribute, and RIP Interface (selected). The configuration fields include: VLAN (dropdown), IP Address (text input), Subnet Mask (text input), Send Version (dropdown with value 1), Recv Version (dropdown with value 1), and Authentication (dropdown with value Disable). There are 'Submit' and 'Reset' buttons. Below the configuration fields is a 'RIP Interface Table' with columns: Interface, Network, Send Version, Recv Version, and Authentication. A 'Refresh' button is located below the table.

Figure 3.16-8: RIP Interface

3.16.4 OSPF

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

3.16.4.1 OSPF Information

OLT Configuration → Route → OSPF → OSPF Information

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

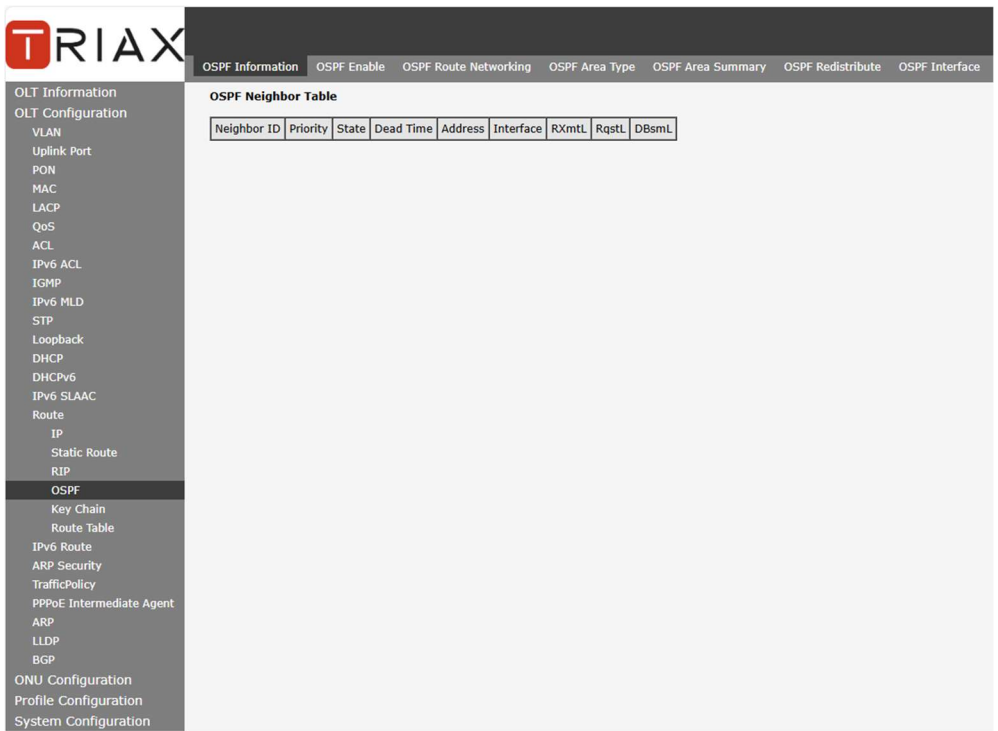


Figure 3.16-9: OSPF Information

3.16.4.2 OSPF Enable

OLT Configuration → Route → OSPF → OSPF Enable

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

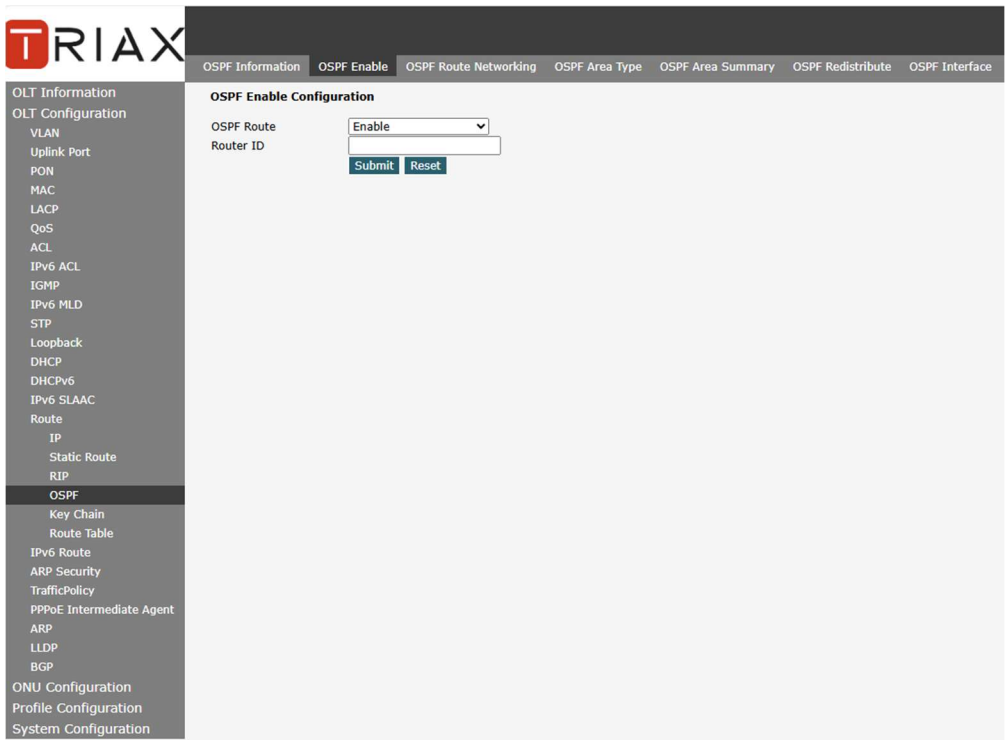


Figure 3.16-10: OSPF Enable

3.16.4.3 OSPF Route Networking

OLT Configuration → Route → OSPF → OSPF Route Networking

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

The screenshot shows the TRIAX OLT configuration interface. The left sidebar contains a tree view of configuration options, with 'OSPF' selected under 'Route'. The main panel is titled 'OSPF Route Networking' and includes tabs for 'OSPF Information', 'OSPF Enable', 'OSPF Route Networking', 'OSPF Area Type', 'OSPF Area Summary', 'OSPF Redistribute', and 'OSPF Interface'. The 'OSPF Route Networking' tab is active, showing configuration fields for 'Area', 'VLAN', 'IP Address', and 'Subnet Mask'. Below these fields are 'Add' and 'Reset' buttons. A table titled 'OSPF Route Networking Table' has columns for 'Area', 'Network', and 'Delete', with a 'Refresh' button below it.

Figure 3.16-11: OSPF Route Networking

3.16.4.4 OSPF Area Type

OLT Configuration → Route → OSPF → OSPF Area Type

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

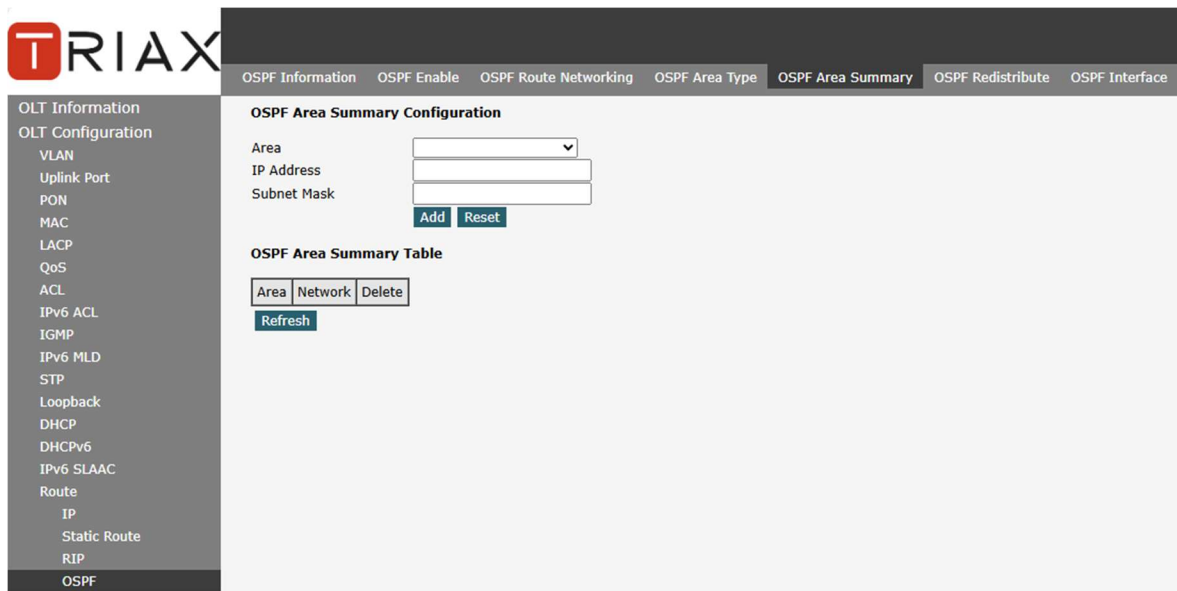
The screenshot shows the TRIAX OLT configuration interface. The left sidebar contains a tree view of configuration options, with 'OSPF' selected under 'Route'. The main panel is titled 'OSPF Area Type Configuration' and includes tabs for 'OSPF Information', 'OSPF Enable', 'OSPF Route Networking', 'OSPF Area Type', 'OSPF Area Summary', 'OSPF Redistribute', and 'OSPF Interface'. The 'OSPF Area Type' tab is active, showing configuration fields for 'Area', 'Area Type', and 'No Summary'. Below these fields are 'Add' and 'Reset' buttons. A table titled 'OSPF Area Type Table' has columns for 'Area', 'Type', 'No Summary', and 'Delete', with a 'Refresh' button below it.

Figure 3.16-12: OSPF Area Type

3.16.4.5 OSPF Area Summary

OLT Configuration → Route → OSPF → OSPF Area Summary

This page is used to configure area IP address summary.



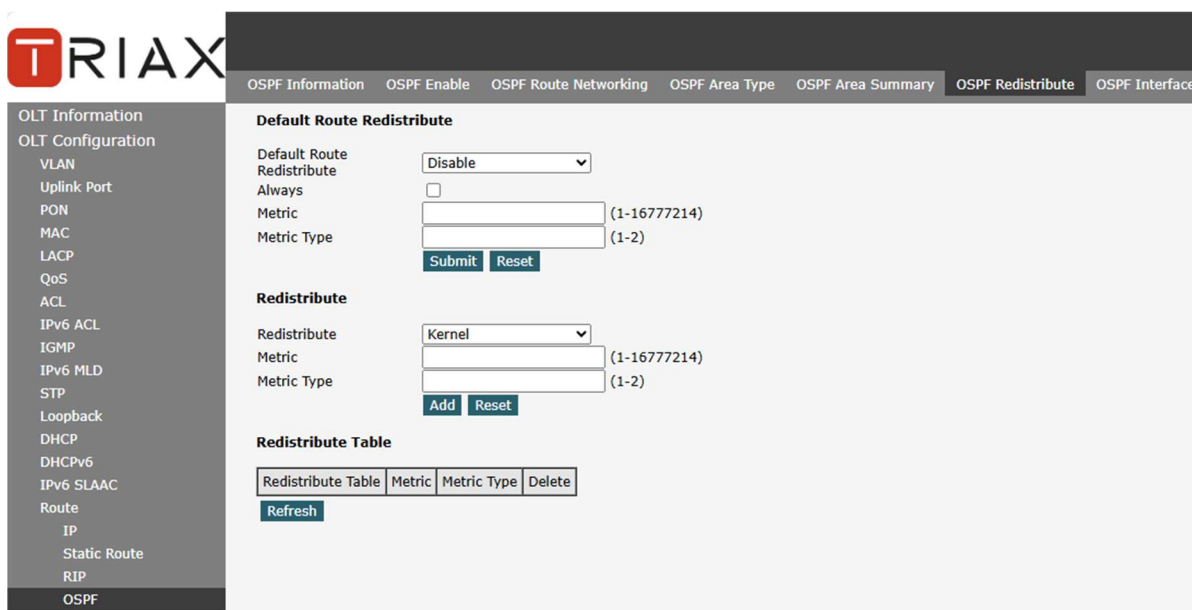
The screenshot shows the TRIAX OLT configuration interface. The left sidebar lists various configuration options, with 'OSPF' selected. The main panel displays the 'OSPF Area Summary Configuration' section. It includes fields for 'Area' (a dropdown menu), 'IP Address', and 'Subnet Mask', along with 'Add' and 'Reset' buttons. Below this is the 'OSPF Area Summary Table' with columns for 'Area', 'Network', and 'Delete', and a 'Refresh' button.

Figure 3.16-13: OSPF Area Summary

3.16.4.6 OSPF Redistribute

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

OLT Configuration → Route → OSPF → OSPF Redistribute



The screenshot shows the TRIAX OLT configuration interface. The left sidebar lists various configuration options, with 'OSPF' selected. The main panel displays the 'OSPF Redistribute' section. It includes a 'Default Route Redistribute' section with a 'Disable' dropdown, an 'Always' checkbox, and fields for 'Metric' and 'Metric Type' (with values (1-16777214) and (1-2) respectively), along with 'Submit' and 'Reset' buttons. Below this is a 'Redistribute' section with a 'Kernel' dropdown, and fields for 'Metric' and 'Metric Type' (with values (1-16777214) and (1-2) respectively), along with 'Add' and 'Reset' buttons. At the bottom is the 'Redistribute Table' with columns for 'Redistribute Table', 'Metric', 'Metric Type', and 'Delete', and a 'Refresh' button.

Figure 3.16-14: OSPF Redistribute

3.16.4.7 OSPF Interface

OLT Configuration → Route → OSPF → OSPF Interface

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

Figure 3.16-15: OSPF Interface

3.16.5 Key Chain

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

OLT Configuration → Route → Key Chain

Figure 3.16-16: Key Chain

3.16.6 Route Table

OLT Configuration → Route → Route Table

This page displays routing items of OLT.

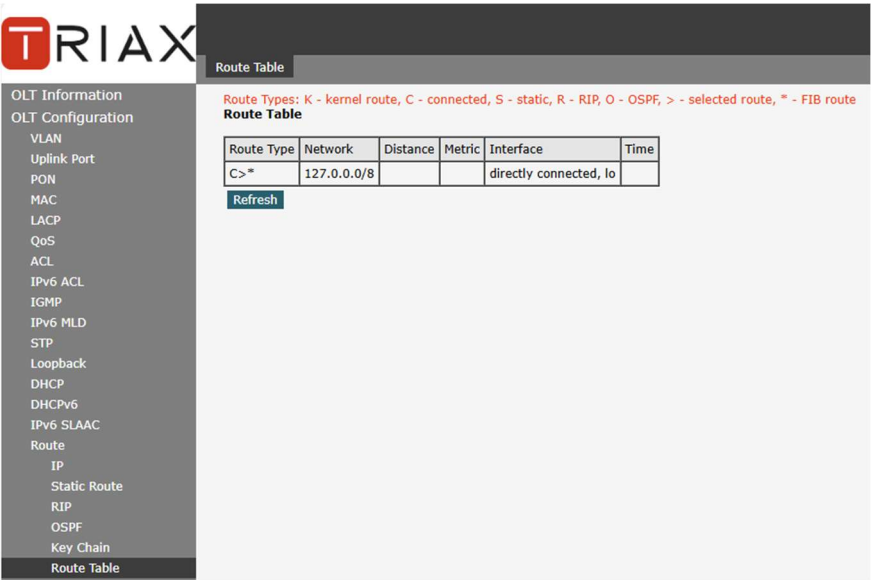


Figure 3.16-17: Route Table

3.17 IPv6 Route

3.17.1 IPv6

OLT Configuration → IPv6 Route → IPv6 → VLAN IPv6

Configure IPv6 address for VLAN that has been created.

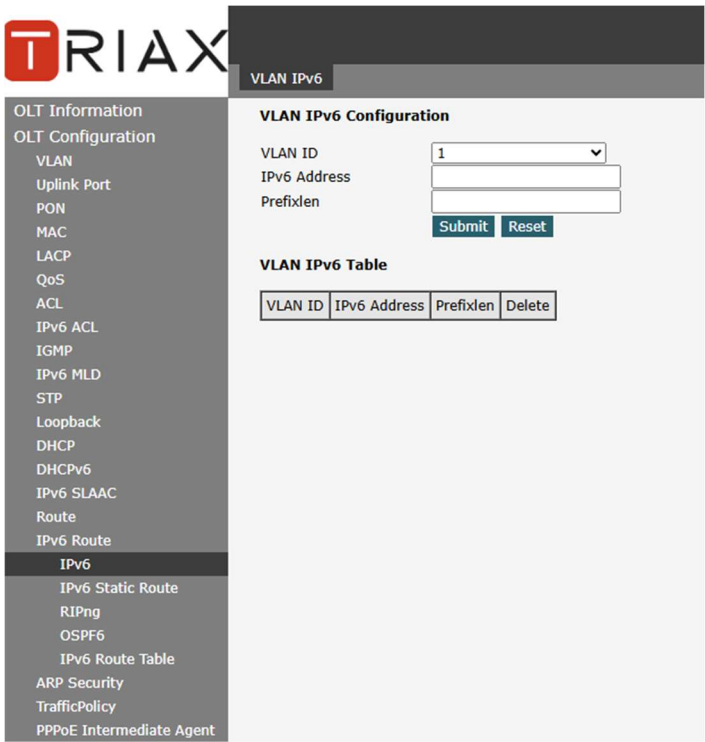


Figure 3.17-1: VLAN IPv6

3.17.2 IPv6 Static Route

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

OLT Configuration → IPv6 Route → IPv6 Static Route

Add IPv6 static route item one by one.

IPv6 Static Route

Add IPv6 Static Route

Destination IPv6

Destination Prefixlen

Gateway

Add

IPv6 Static Route Table

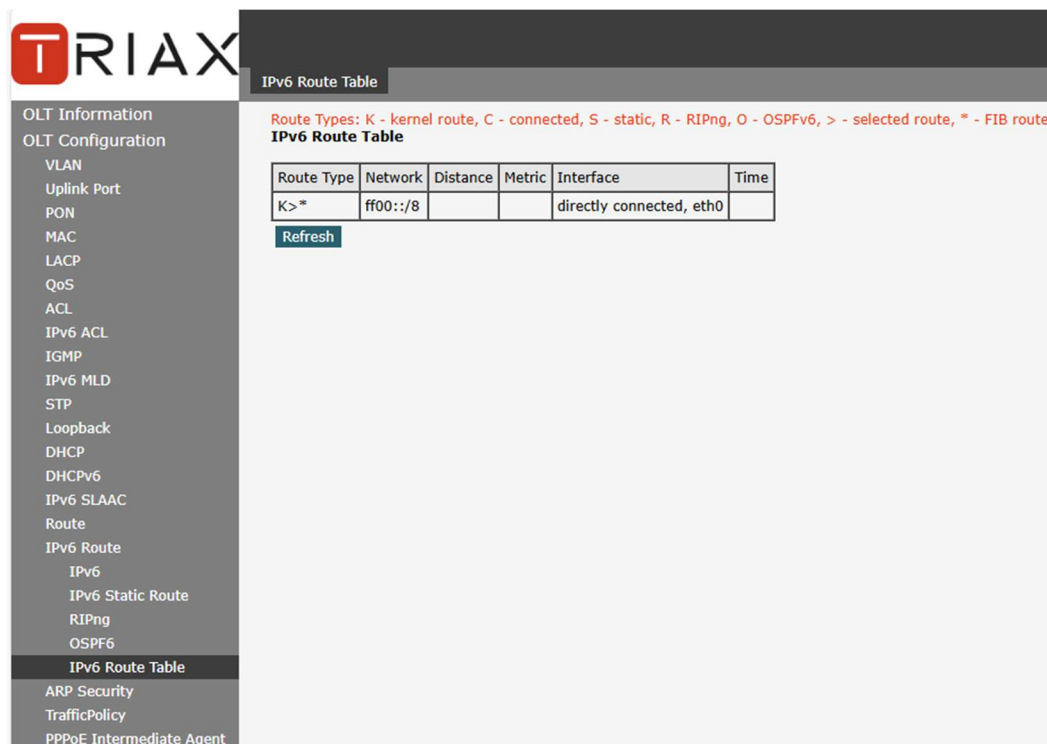
Destination IPv6	Destination Prefixlen	Gateway	Delete
------------------	-----------------------	---------	--------

Figure 3.17-2: IPv6 Static Route

3.17.3 IPv6 Route Table

OLT Configuration → IPv6 Route → IPv6 Route Table

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



The screenshot shows the TRIAX OLT configuration interface. On the left is a sidebar menu with various configuration options. The main area displays the 'IPv6 Route Table' configuration page. At the top of the main area, there is a legend for route types: 'Route Types: K - kernel route, C - connected, S - static, R - RIPng, O - OSPFv6, > - selected route, * - FIB route'. Below the legend is the title 'IPv6 Route Table'. A table lists the routes, and a 'Refresh' button is located below the table.

Route Type	Network	Distance	Metric	Interface	Time
K>*	ff00::/8			directly connected, eth0	

Refresh

Figure 3.17-3: IPv6 Route Table

3.18 ARP Security

3.18.1 Dynamic ARP Inspection

OLT Configuration → ARP Security → Dynamic ARP Inspection (DAI)

Configure IPv6 address for VLAN that has been created.

Dynamic ARP Inspection is a security feature that checks ARP packets on the network to prevent ARP spoofing attacks.

- **Trusted Port:** Allows ARP packets without inspection (used for uplink ports or known safe devices).
- **Untrusted Port:** ARP packets are inspected and only allowed if they match the IP–MAC binding table. You can apply DAI per VLAN, so only ARP traffic in those VLANs is monitored.

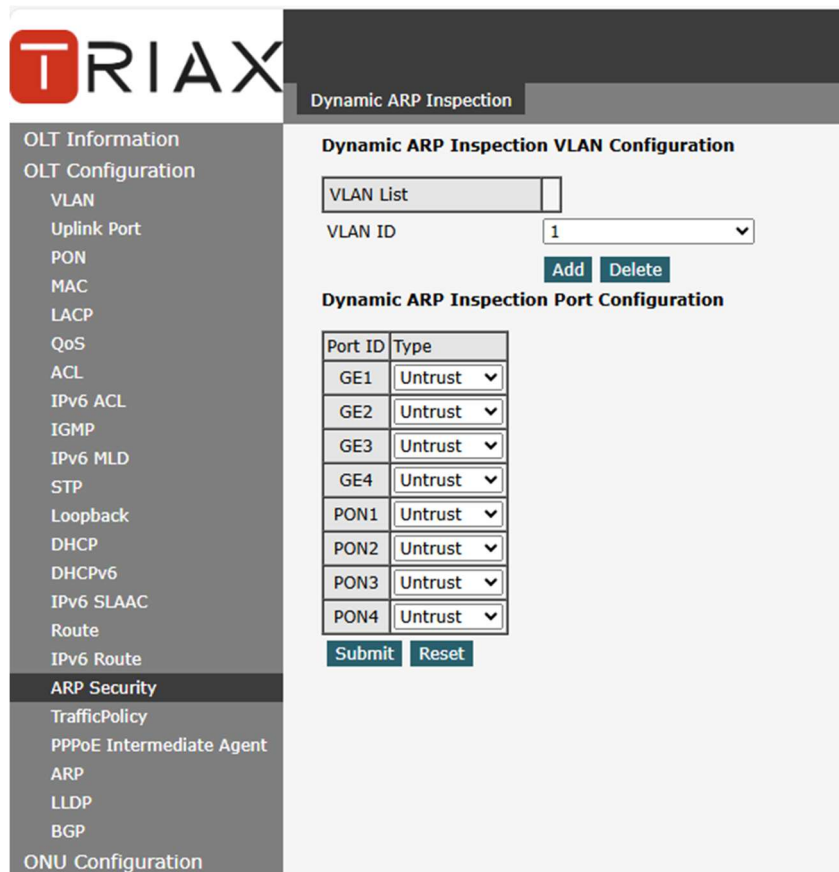


Figure 3.18.1: ARP Security

3.19 Traffic policy

OLT Configuration → Traffic Policy

Traffic Policy is used to identify and control different types of network traffic based on set rules, helping manage bandwidth and priority.

- **Classifier:**
Defines the matching conditions to identify specific traffic.
Examples: match by VLAN ID, IP address, protocol, port number, or DSCP value.
This is like a filter that “marks” the packets you want to control.
- **Behaviour:**
Defines what action to take for traffic that matches a classifier.
Examples: limit bandwidth, change priority, allow/deny, or redirect traffic.
This is like the “rule” applied once the packets are identified.

By combining a **Classifier** with a **Behaviour**, you can shape traffic flow, protect important services, and prevent network congestion.

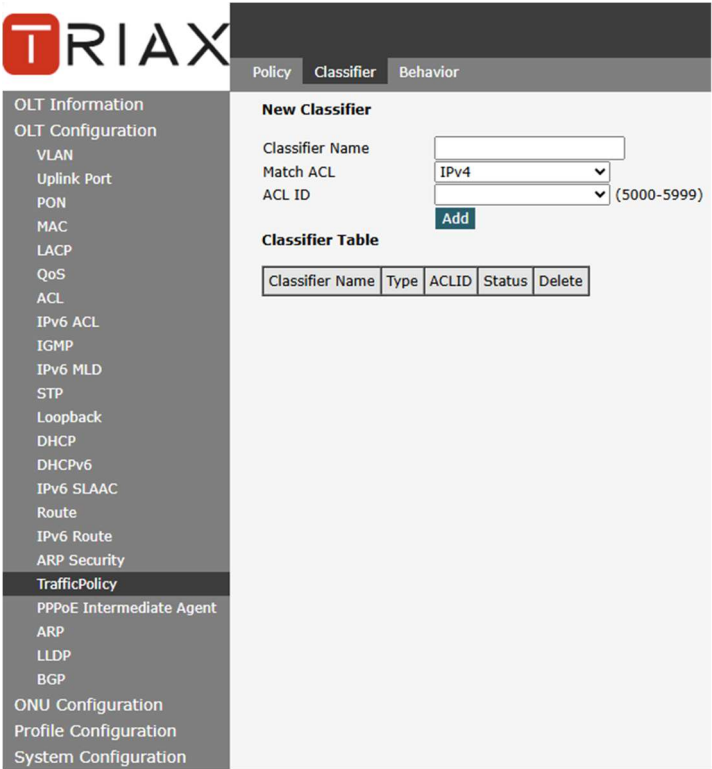


Figure 3.19: Traffic Policy

3.20 PPPoE Intermediate Agent

OLT Configuration → PPPoE Intermediate Agent

The PPPoE Intermediate Agent adds extra information (like VLAN ID or port ID) into PPPoE discovery packets between the ONU and the PPPoE server. This helps the server identify which user is connecting and from where, making user management and authentication easier.

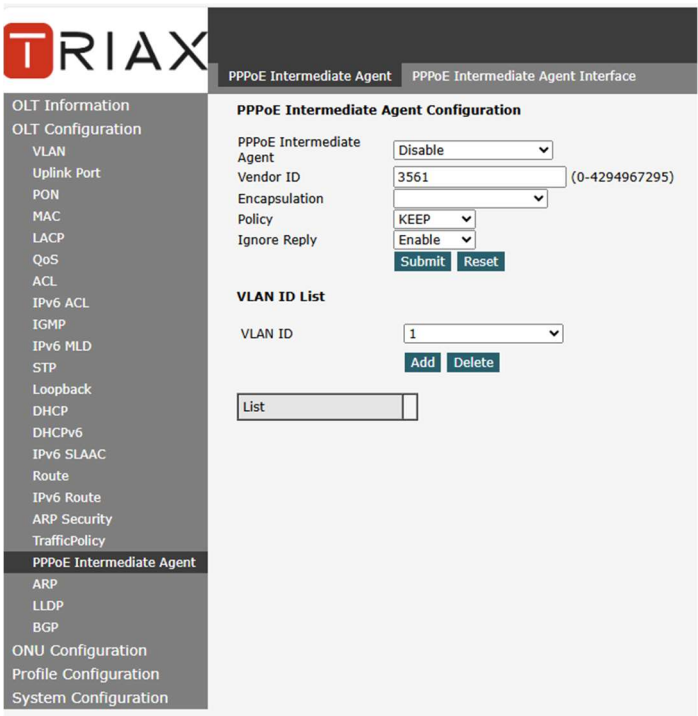


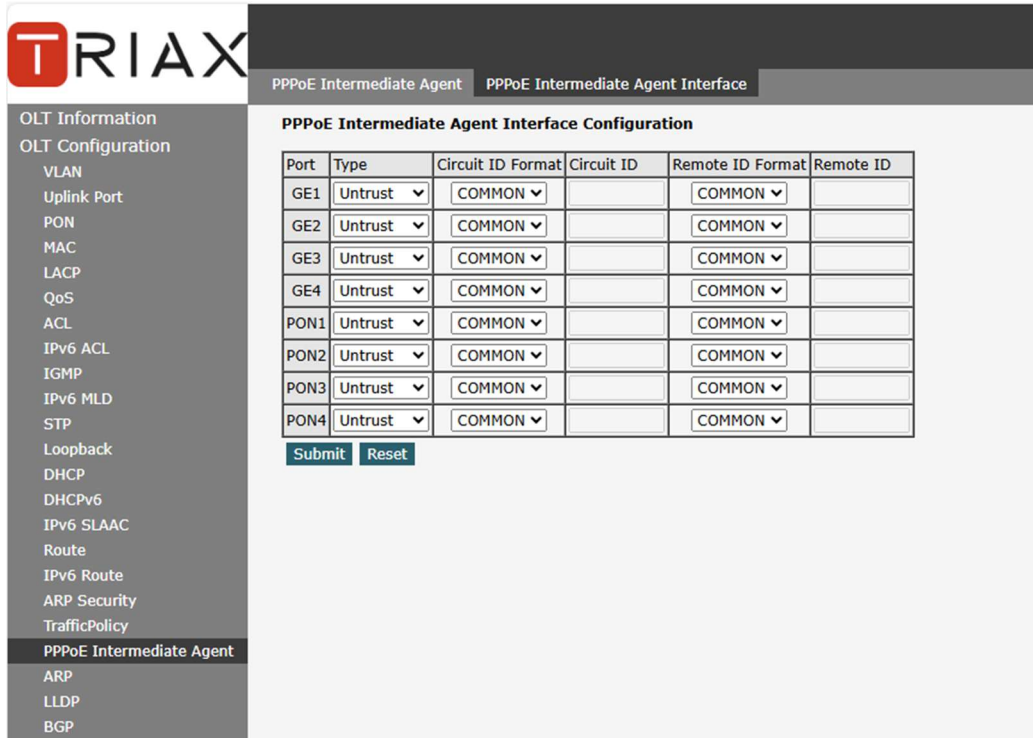
Figure 3.20.1: PPPoE Intermediate Agent

3.20.1 IPv6

OLT Configuration → PPPoE Intermediate Agent → PPPoE Intermediate Agent interface

Let's you select which OLT ports or VLANs will use the PPPoE Intermediate Agent.

This way, only traffic from certain interfaces will carry the extra identification tags.



Port	Type	Circuit ID Format	Circuit ID	Remote ID Format	Remote ID
GE1	Untrust	COMMON		COMMON	
GE2	Untrust	COMMON		COMMON	
GE3	Untrust	COMMON		COMMON	
GE4	Untrust	COMMON		COMMON	
PON1	Untrust	COMMON		COMMON	
PON2	Untrust	COMMON		COMMON	
PON3	Untrust	COMMON		COMMON	
PON4	Untrust	COMMON		COMMON	

Submit Reset

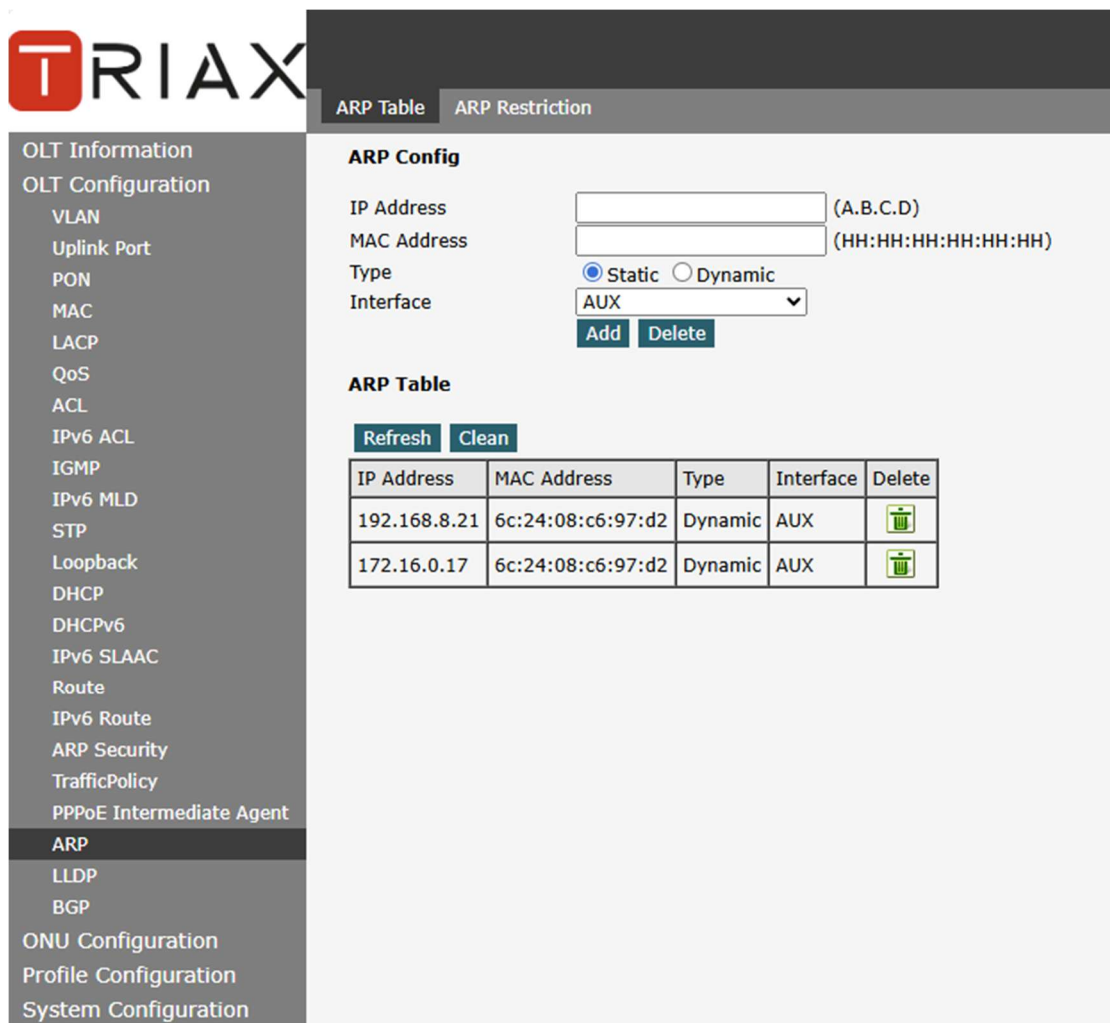
Figure 3.20.2: PPPoE Intermediate Agent interface

3.21 ARP

3.21.1 ARP Table

OLT Configuration → ARP → ARP Table

ARP is used to map an IP address to its corresponding MAC address so devices can communicate within the network. ARP Table: Shows the current IP-to-MAC address mappings learned by the OLT. This is like a phonebook for the network, telling the OLT which MAC address belongs to which IP.



The screenshot shows the TRIAX OLT configuration interface. On the left is a navigation menu with various configuration options. The main area is titled 'ARP Table' and 'ARP Restriction'. It contains an 'ARP Config' section with input fields for IP Address, MAC Address, Type (Static/Dynamic), and Interface, along with 'Add' and 'Delete' buttons. Below this is the 'ARP Table' section, which includes 'Refresh' and 'Clean' buttons and a table of current mappings.

IP Address	MAC Address	Type	Interface	Delete
192.168.8.21	6c:24:08:c6:97:d2	Dynamic	AUX	
172.16.0.17	6c:24:08:c6:97:d2	Dynamic	AUX	

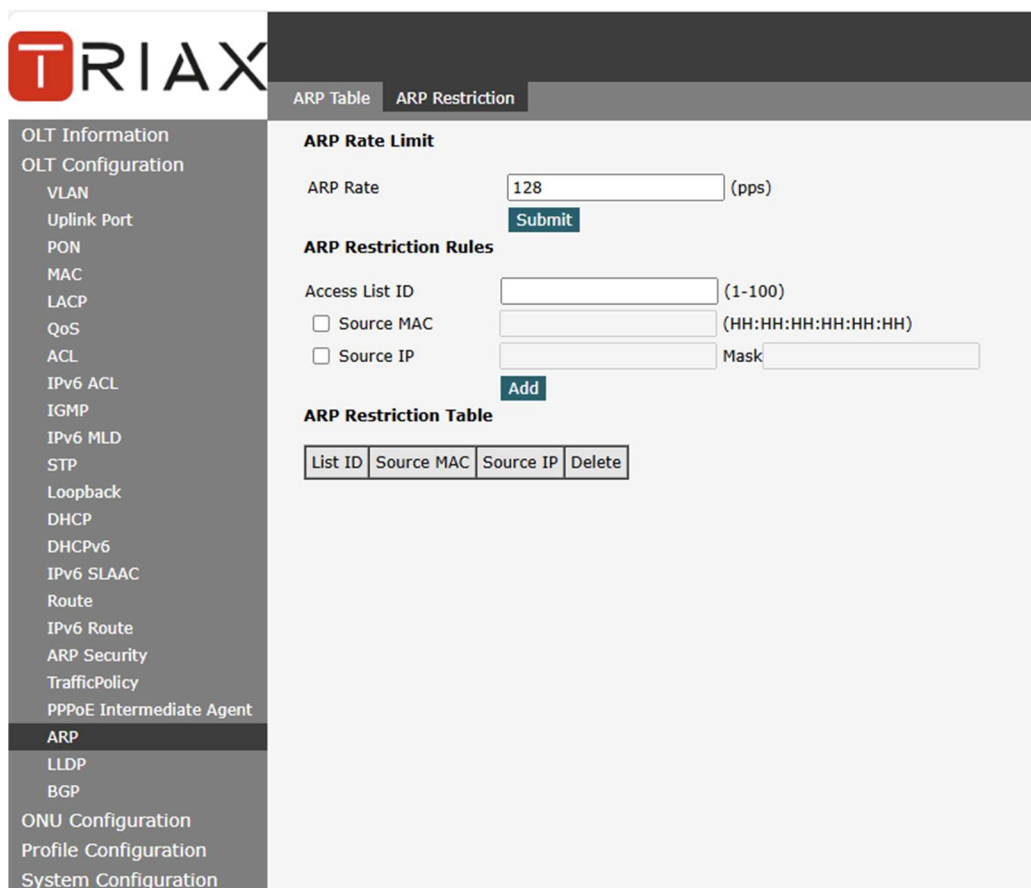
Figure 3.21.1: ARP Table

3.21.2 ARP Restriction

OLT Configuration → ARP → ARP Restriction

Let's you control which IP–MAC pairs are allowed to communicate.

You can set static bindings to prevent unauthorized devices from using a valid IP address (protects against ARP spoofing).



The screenshot shows the TRIAX OLT Configuration interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, LACP, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, Route, IPv6 Route, ARP Security, TrafficPolicy, PPPoE Intermediate Agent, **ARP**, LLDP, BGP, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'ARP Restriction' and contains the following sections:

- ARP Rate Limit**: A form with 'ARP Rate' set to 128 (pps) and a 'Submit' button.
- ARP Restriction Rules**: A form with 'Access List ID' (1-100), two checkboxes for 'Source MAC' and 'Source IP' (both unchecked), and a 'Mask' field. An 'Add' button is at the bottom.
- ARP Restriction Table**: A table with columns 'List ID', 'Source MAC', 'Source IP', and 'Delete'.

Figure 3.21.2: ARP Restriction

3.22 LLDP

OLT Configuration → LLDP

LLDP is a vendor-neutral protocol used by network devices to announce their identity and capabilities to directly connected neighbours. It helps network administrators discover device details, verify connections, and build accurate network topology maps.

3.22.1 LLDP Information

OLT Configuration → LLDP → Information

Shows a list of neighbouring devices detected via LLDP, including their system name, port ID, VLAN information, and supported features (e.g., PoE, capabilities). Useful for confirming correct cabling and connectivity.

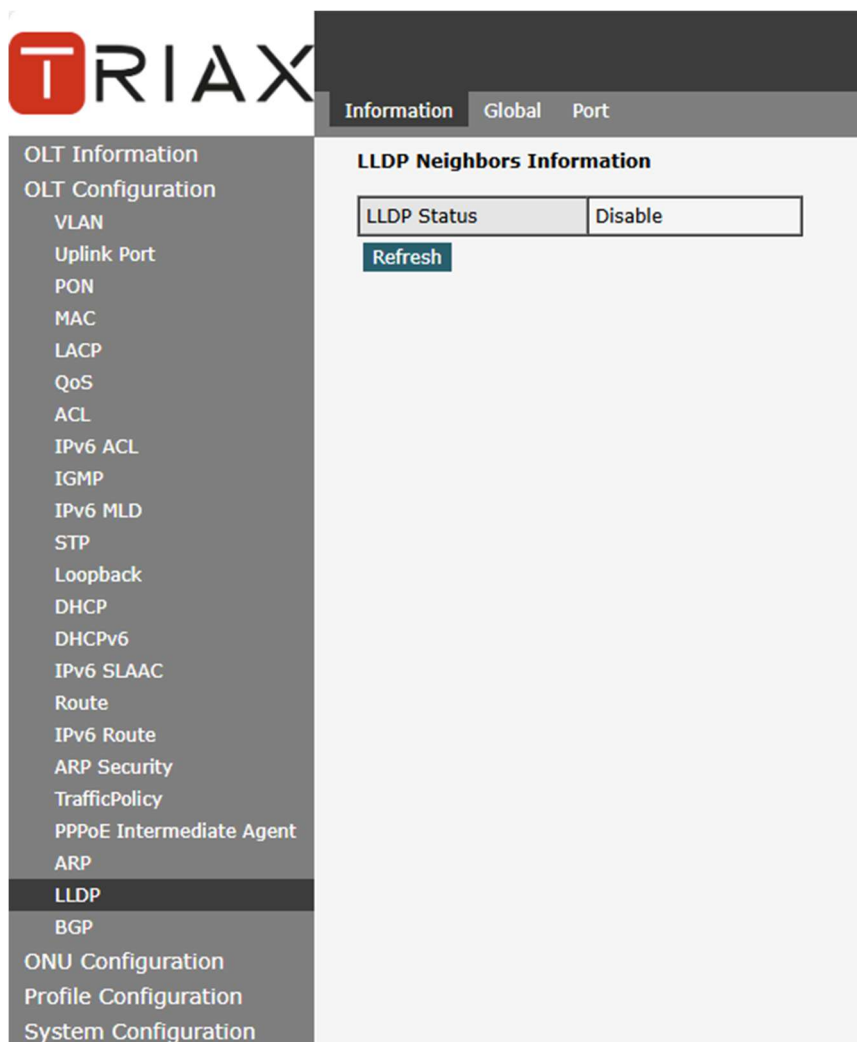


Figure 3.22.1: LLDP Information

3.22.2 LLDP Global

OLT Configuration → LLDP → Global

Enables or disables LLDP across the entire OLT.

Here you can set parameters such as:

- Transmit Interval – how often LLDP packets are sent
- Hold Time – how long neighbour information is kept before it expires
- Re-initialization Delay – wait time before restarting LLDP after a change

Figure 3.22.2: LLDP Information

3.22.3 LLDP Global

OLT Configuration → LLDP → Port

Allows enabling/disabling LLDP on specific OLT ports and choosing what information each port advertises (e.g., port description, VLAN, capabilities).

This is useful for enabling LLDP only where it's needed or limiting information for security.

Port ID	Status
GE1	rx-and-tx ▼
GE2	rx-and-tx ▼
GE3	rx-and-tx ▼
GE4	rx-and-tx ▼

Figure 3.22.3: LLDP Port

4 ONU Configuration

This chapter is about the ONU management by OLT.

4.1 ONU AuthList

4.1.1 ONU List

ONU Configuration→ONU AuthList→ONU List

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

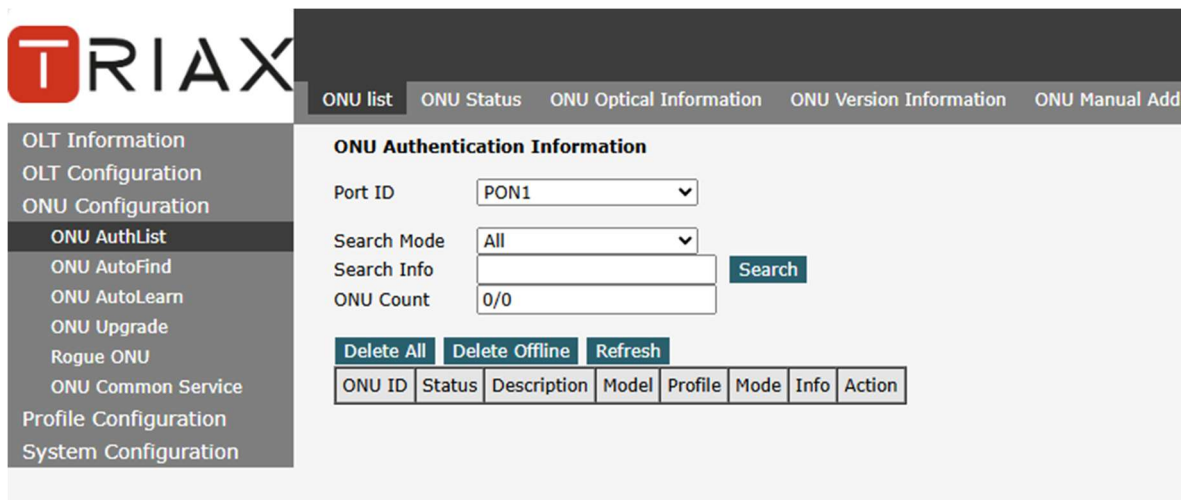


Figure 4.1-1: ONU List

4.1.1.1 Config

ONU Configuration→ONU AuthList→ONU List→Config

Configure ONU parameter information which you selected.

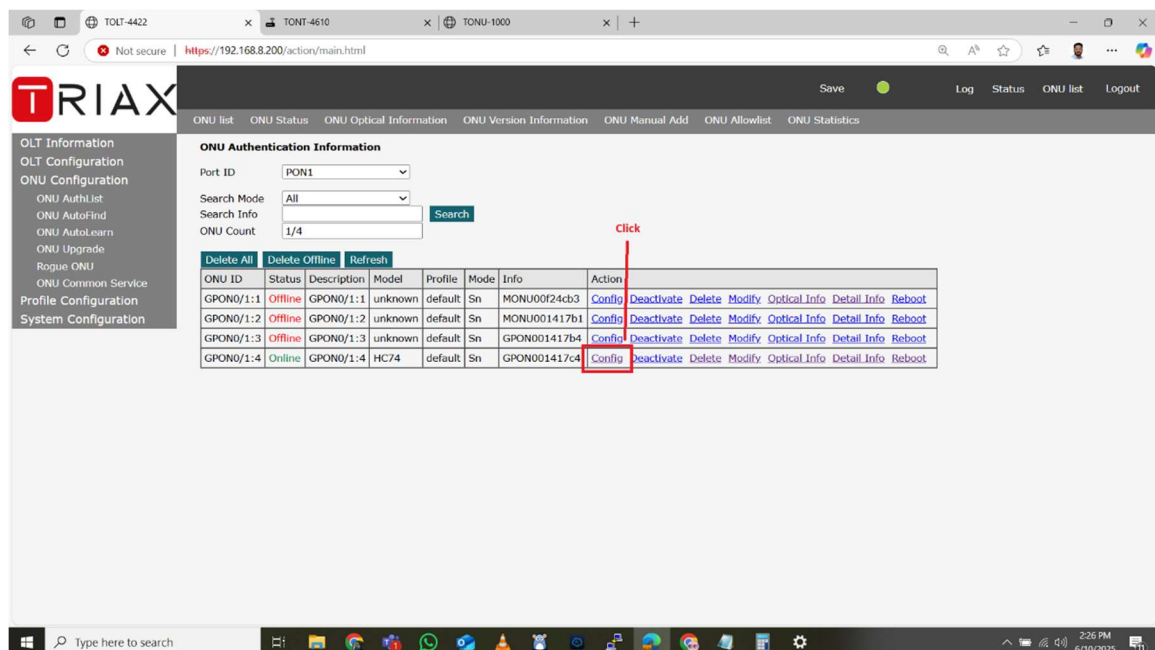


Figure 4.1-2: Configure ONU

4.1.1.1.1 Tcont

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

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

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

Figure 4.1-3: Create Tcont

4.1.1.1.2 Gemport

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

Create gemport ID and bind tcont ID.

Figure 4.1-4: Create gemport

4.1.1.1.3 Service

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

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

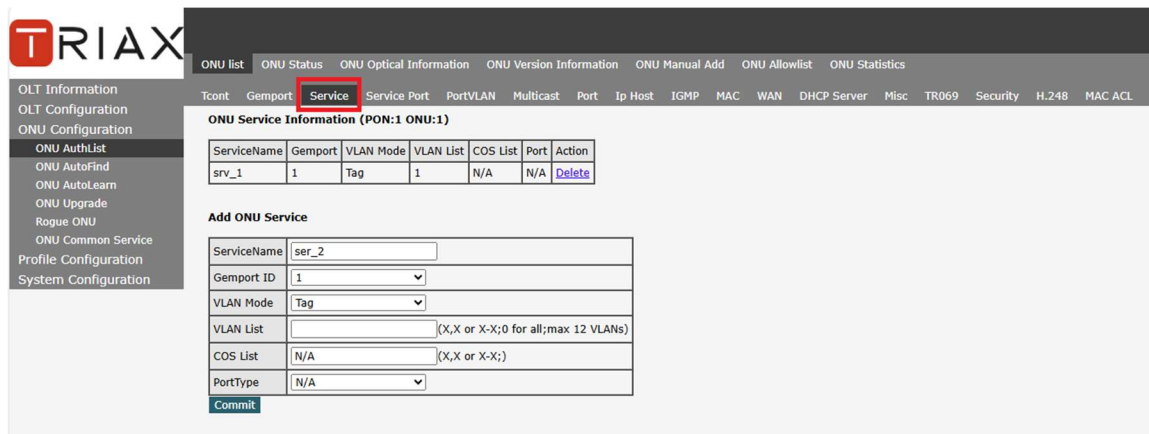


Figure 4.1-5: Create service

4.1.1.1.4 Service Port

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

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

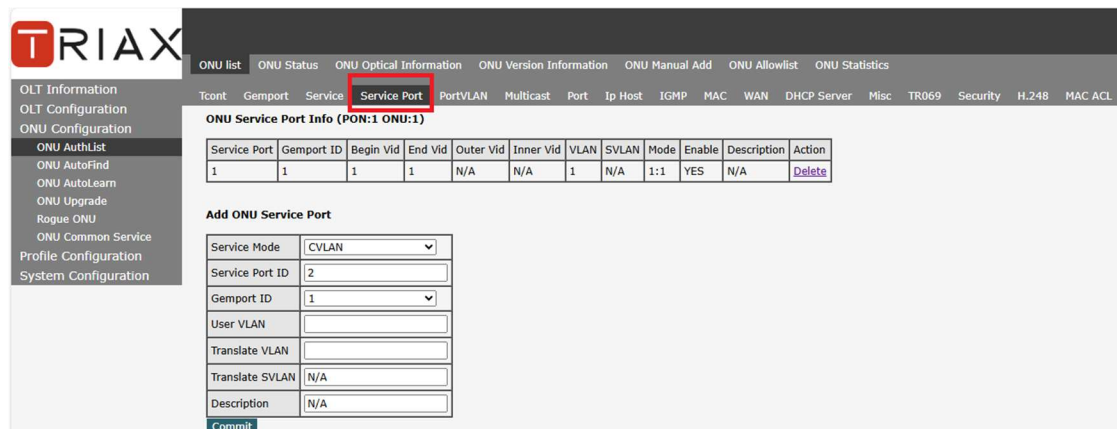


Figure 4.1-6: Create service port

4.1.1.1.5 PortVlan

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

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

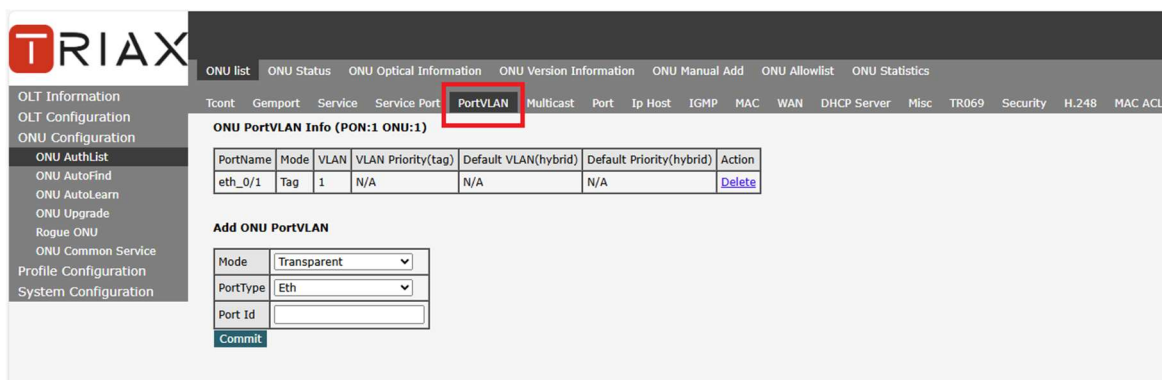


Figure 4.1-7: Configure port VLAN mode

4.1.1.1.6 Multicast

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

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

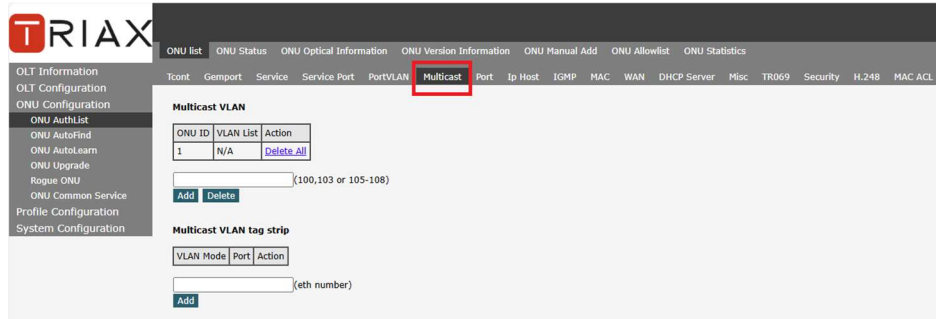


Figure 4.1-8: Configure multicast VLAN

4.1.1.1.7 Port

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

Set attribute of ONU LAN port.

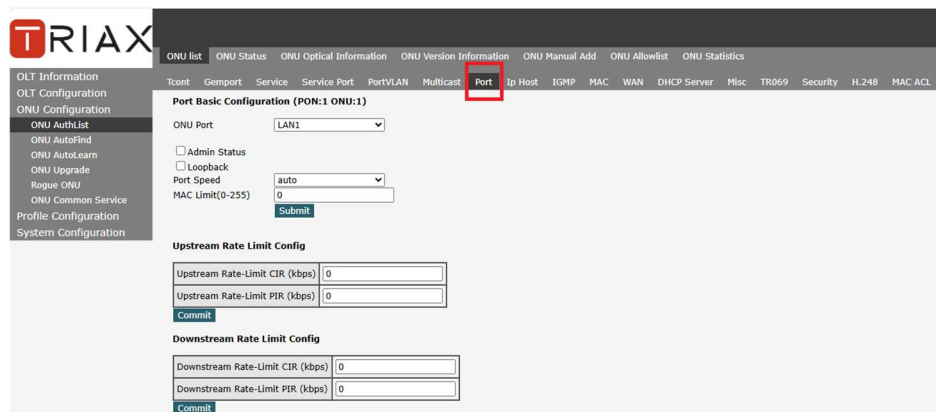


Figure 4.1-9: ONU port attribute

4.1.1.1.8 4.1.1.1.8 Iphost

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

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

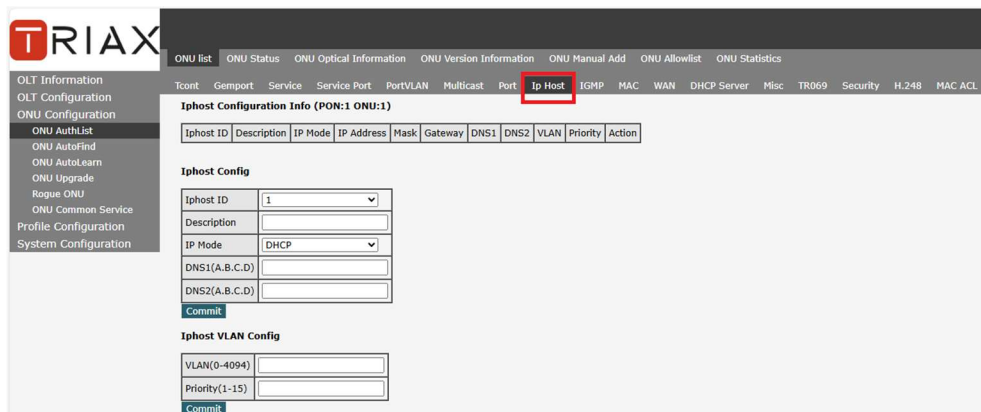


Figure 4.1-10: Configure IPhost

4.1.1.1.9 WAN

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

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

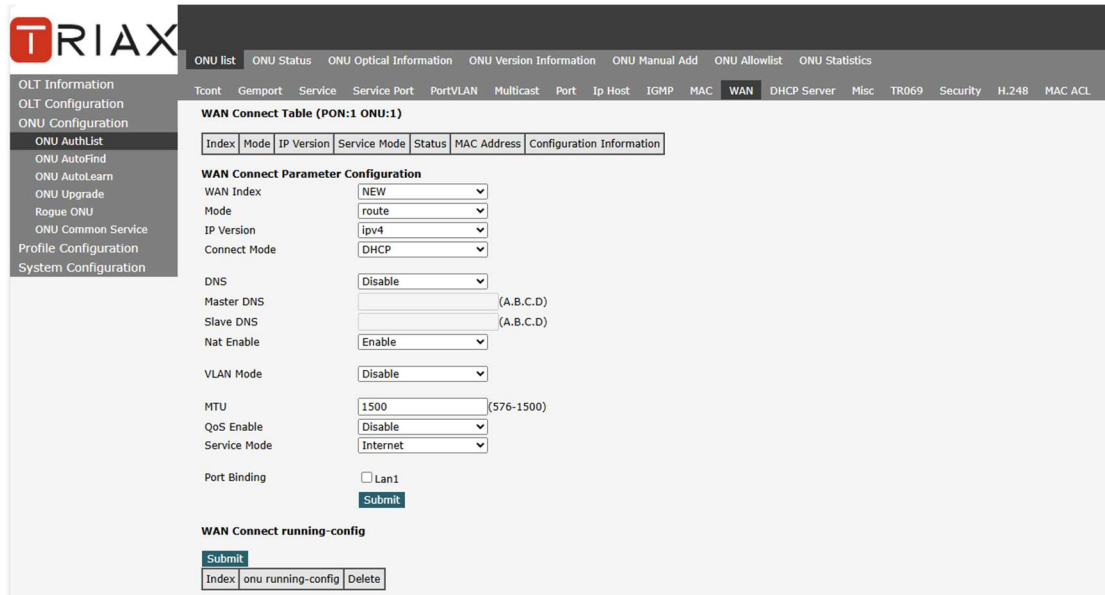


Figure 4.1-11: Configure WAN

4.1.1.1.10 DHCP Server

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

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

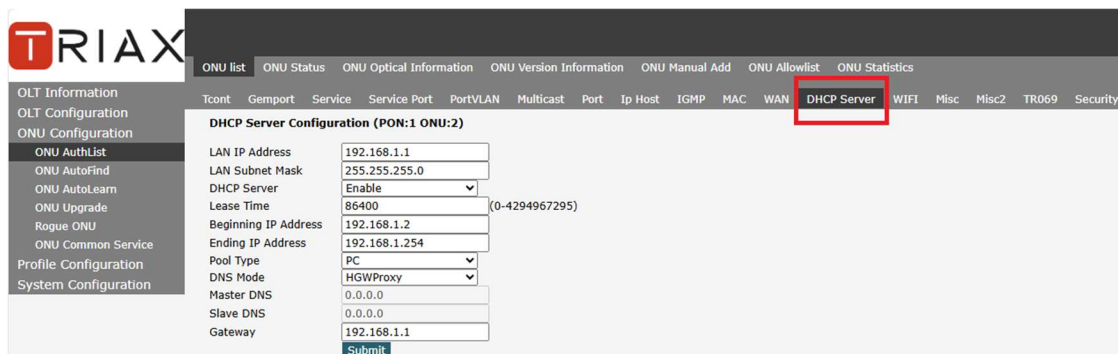


Figure 4.1-12: ONU DHCP Server

4.1.1.1.11 WIFI

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

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

Figure 4.1-14: WIFI Configuration

4.1.1.1.12 Misc

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

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

Figure 4.1-18: Misc Configuration

4.1.1.2 Deactivate

ONU Configuration→ONU AuthList→ONU List→Deactivate (Activate)

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

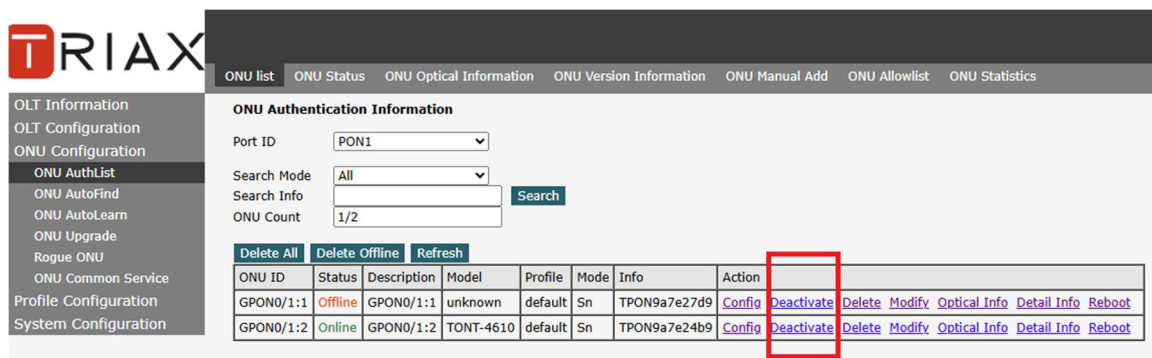


Figure 4.1-19: Deactivate/Activate ONU

4.1.1.3 Delete

ONU Configuration→ONU AuthList→ONU List→Delete

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

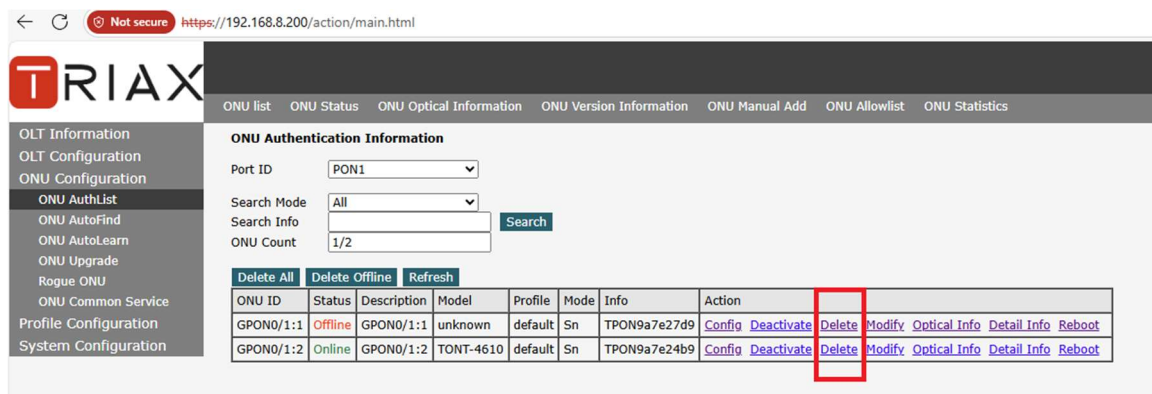


Figure 4.1-20: Delete ONU

4.1.1.4 Modify

ONU Configuration→ONU AuthList→ONU List→Modify

This is used to modify ONU authentication mode.

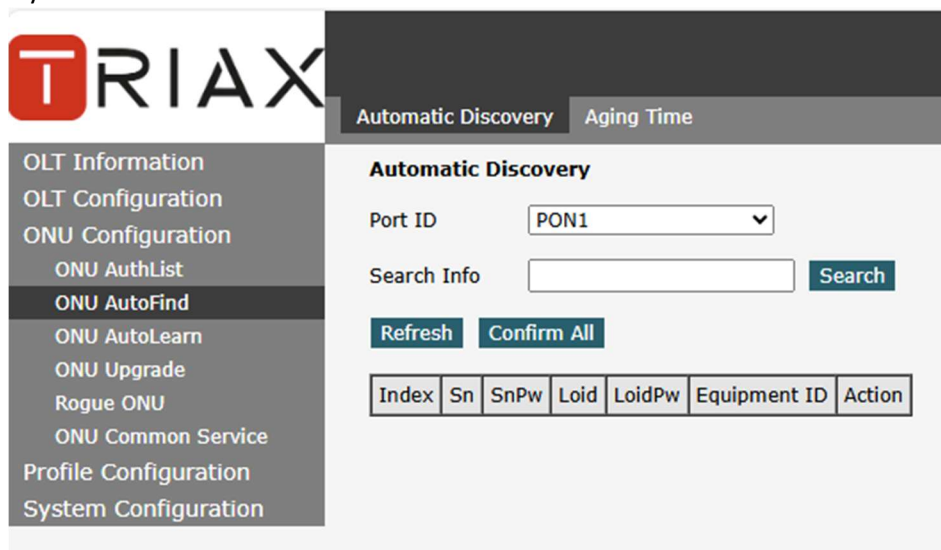


Figure 4.1-21: Modify ONU Authentication mode

4.1.1.5 Optical Info

ONU Configuration→ONU AuthList→ONU List→Optical Info

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

ONU Authentication Information

Port ID:

Search Mode:

Search Info:

ONU Count:

[Delete All](#) [Delete Offline](#) [Refresh](#)

ONU ID	Status	Description	Model	Profile	Mode	Info	Action
GPON0/1:1	Offline	GPON0/1:1	unknown	default	Sn	TPON9a7e27d9	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Online	GPON0/1:2	TONT-4610	default	Sn	TPON9a7e24b9	Config Deactivate Delete Modify Optical Info Detail Info Reboot

Detail Information

[Submit](#) [Back](#)

Description	GPON0/1:2
Main software version	V1.1.00-250626
Standby software version	ECNT-SW-V1.0
Vendor ID:	MONU
Version:	V1.1
SN:	TPON9a7e24b9
Admin Status:	unlock
Battery monito:	false
Security mode:	aes
Product code:	340
Total priority queue num:	159
Total traffic schedule num:	16
Traffic management option:	priority&rate controlled
Operate status:	enable
Equipment ID:	TONT-4610
OMCC Version:	160
Security capability:	aes
Model:	N/A
Survival time:	10 s
TotalGemPortNum:	256
Startup Time:	Sat Jan 1 02:14:13 2022
SysUpTime:	965 s
Region code:	0
Product SN:	N/A
Chip info:	0

Device Capability

TCONT number:	16
GEM port number:	256
Total priority queue number:	159
up priority queue number:	127
down priority queue number:	32
Traffic scheduler number:	16
Traffic management option:	priority&rate controlled
Total UNI number:	6
Ethernet UNI number:	4
40GE number:	0
25GE number:	0
10GE number:	0
5GE number:	0
2.5GE number:	0
GE number:	4
FE number:	0
CES UNI number:	0
POTS UNI number:	0
Video UNI number(num:slot/port):	1:1/1
WIFI UNI number:	8
XDSL UNI number:	0
IP host number:	2
IPv6 host number:	0
VEIP number:	1
Operation Id:	0
CTC spc Version:	CTC 2.0
CUC spc Version:	N/A
ONU Type:	HGU
Tx power supply control:	Not support

Figure 4.1-22: Optical info of ONU

4.1.1.6 Detail Info

ONU Configuration→ONU AuthList→ONU List→Detail Info

Check the Detail Info of ONU which you selected.

TRIAX

OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
ONU Common Service
Profile Configuration
System Configuration

ONU list | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist | ONU Statistics

ONU Authentication Information

Port ID: PON1
Search Mode: All
Search Info:
ONU Count: 1/2

[Delete All](#) [Delete Offline](#) [Refresh](#)

ONU ID	Status	Description	Model	Profile	Mode	Info	Action
GPON0/1:1	Offline	GPON0/1:1	unknown	default	Sn	TPON9a7e27d9	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Online	GPON0/1:2	TONT-4610	default	Sn	TPON9a7e24b9	Config Deactivate Delete Modify Optical Info Detail Info Reboot

TRIAX

OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
ONU Common Service
Profile Configuration
System Configuration

ONU list | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist | ONU Statistics

Detail Information

[Submit](#) [Back](#)

Description	GPON0/1:1
Main software version	
Standby software version	
Vendor ID:	
Version:	
SN:	
Admin Status:	unlock
Battery monito:	false
Security mode:	N/A
Product code:	0
Total priority queue num:	0
Total traffic schedule num:	0
Traffic management option:	priority controlled
Operate status:	disable
Equipment ID:	
OMCC Version:	0
Security capability:	N/A
Model:	N/A
Survival time:	N/A
TotalGemPortNum:	0
Startup Time:	
SysUpTime:	N/A
Region code:	0
Product SN:	N/A
Chip info:	0

Device Capability

TCONT number:	15
GEM port number:	256
Total priority queue number:	136
up priority queue number:	120
down priority queue number:	16
Traffic scheduler number:	15
Traffic management option:	priority&rate controlled
Total UNI number:	2
Ethernet UNI number:	1
40GE number:	0
25GE number:	0
10GE number:	0
5GE number:	0
2.5GE number:	0
GE number:	1
FE number:	0
CES UNI number:	0
POTS UNI number:	0
Video UNI number(num:slot/port):	0:0/0
WIFI UNI number:	0
XDSL UNI number:	0
IP host number:	2
IPv6 host number:	2
VEIP number:	1
Operation Id:	0
CTC spc Version:	CTC 2.0
CUC spc Version:	N/A
ONU Type:	SFU
Tx power supply control:	Tx only

Figure 4.1-23: Detail info of ONU

4.1.1.7 Reboot

ONU Configuration→ONU AuthList→ONU List→Reboot

Reboot ONU which you selected.

TRIAX

OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
ONU Common Service
Profile Configuration
System Configuration

ONU list | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist | ONU Statistics

ONU Authentication Information

Port ID: PON1
Search Mode: All
Search Info:
ONU Count: 1/2

[Delete All](#) [Delete Offline](#) [Refresh](#)

ONU ID	Status	Description	Model	Profile	Mode	Info	Action
GPON0/1:1	Offline	GPON0/1:1	unknown	default	Sn	TPON9a7e27d9	Config Deactivate Delete Modify Optical Info Detail Info Reboot
GPON0/1:2	Online	GPON0/1:2	TONT-4610	default	Sn	TPON9a7e24b9	Config Deactivate Delete Modify Optical Info Detail Info Reboot

Figure 4.1-24: Reboot ONU

4.1.2 ONU Status

ONU Configuration→ONU AuthList→ONU Status

This page shows the ONU information of the activity. User can check "Last Register Time", "Last Deregister Reason" and "Active Time" of each ONU.

ONU ID	Mode	Info	Admin State	OMCC State	Phase State	Description	Last Register Time	Last Deregister Time	Last Deregister Reason	Alive Time	Deregister Detail
GPON0/1:1	Sn	TPON9a7e27d9	enable	disable	offline	N/A	2022-01-01 2:8:48	2022-01-01 2:13:47	Onu Los	00:04:59	Detail
GPON0/1:2	Sn	TPON9a7e24b9	enable	enable	working	N/A	2022-01-01 2:16:29	N/A	N/A	00:15:57	Detail

Figure 4.1-25: ONU Status

4.1.3 ONU Optical Info

ONU Configuration→ONU AuthList→ONU Optical Info

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

ONU ID	Description	RX Power(ONU)	TX Power(ONU)	RX Power(OLT)
GPON0/1:1	N/A	NULL	NULL	NULL
GPON0/1:2	N/A	3.09	2.48	-2.65

Figure 4.1-26: ONU Optical Info

4.1.4 ONU Manual Add

ONU Configuration→ONU AuthList→ONU Manual Add

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

PON Port	PON1
ONU ID	3
Auth Mode	Sn
ONU Sn	
ONU Profile	default

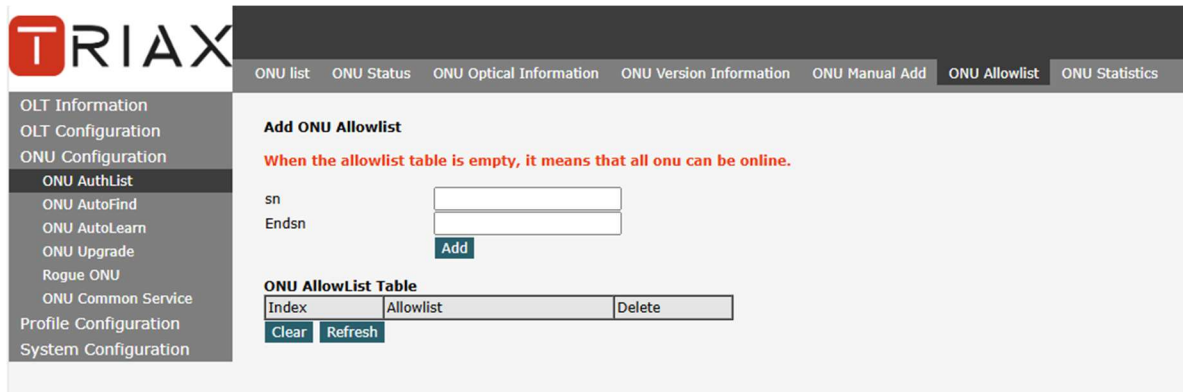
Figure 4.1-27: Add ONU Manually

4.1.5 ONU Allowlist

ONU Configuration→ONU AuthList→ONU Whitelist

You can set up whitelist on this page.

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



TRIAX

ONU list ONU Status ONU Optical Information ONU Version Information ONU Manual Add **ONU Allowlist** ONU Statistics

OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
ONU Common Service
Profile Configuration
System Configuration

Add ONU Allowlist

When the allowlist table is empty, it means that all onu can be online.

sn
Endsn
Add

ONU AllowList Table

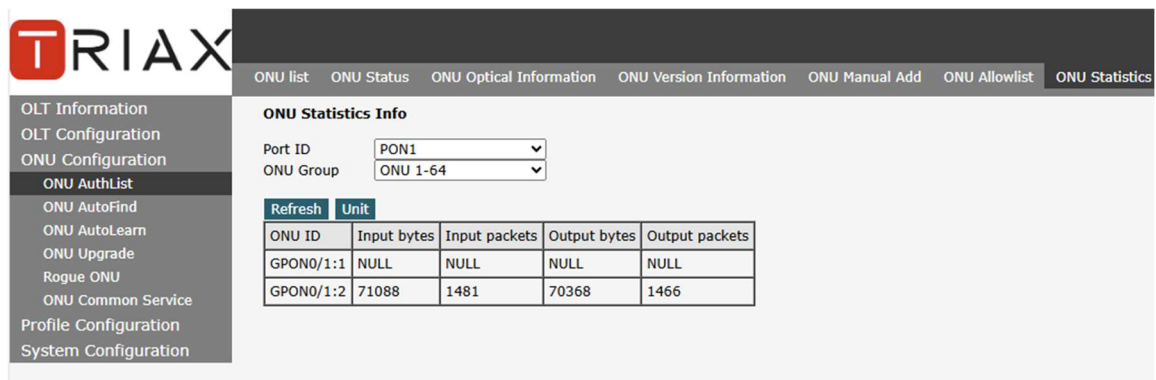
Index	Allowlist	Delete
Clear	Refresh	

Figure 4.1-28: ONU Whitelist

4.1.6 ONU Statistics

ONU Configuration→ONU AuthList→ONU Statistics

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



TRIAX

ONU list ONU Status ONU Optical Information ONU Version Information ONU Manual Add ONU Allowlist **ONU Statistics**

OLT Information
OLT Configuration
ONU Configuration
ONU AuthList
ONU AutoFind
ONU AutoLearn
ONU Upgrade
Rogue ONU
ONU Common Service
Profile Configuration
System Configuration

ONU Statistics Info

Port ID
ONU Group

Refresh **Unit**

ONU ID	Input bytes	Input packets	Output bytes	Output packets
GPON0/1:1	NULL	NULL	NULL	NULL
GPON0/1:2	71088	1481	70368	1466

Figure 4.1-29: ONU Statistics

4.2 AutoFind

ONU Configuration→ONU AutoFind

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

More information will be shown under the ONU Detail menu.

Figure 4.2-1: Automatic Discovery

Figure 4.2-2: Detail info

4.3 AutoLearn

4.3.1 ONU AutoLearn

Configuration→AutoLearn→ONU AutoLearn

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

PON ID	Enable	Line Profile	Srv Profile	Alarm Profile	Pri Profile	Format Profile	Plug and Play
PON1	Enable	N/A	N/A	N/A	N/A	N/A	Enable
PON2	Enable	N/A	N/A	N/A	N/A	N/A	Enable
PON3	Enable	N/A	N/A	N/A	N/A	N/A	Enable
PON4	Enable	N/A	N/A	N/A	N/A	N/A	Enable

Figure 4.3-1: Automatic learn

4.3.2 ONU AutoBind

Configuration→AutoLearn→ONU AutoBind

Input the Equipment ID and bind the profile you need

Note: you must create profile first.

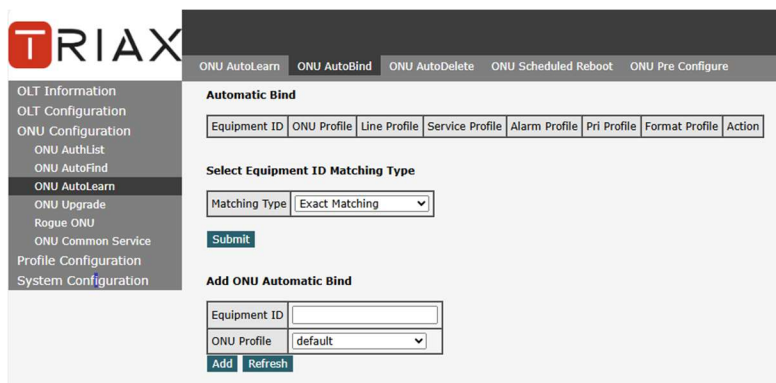


Figure 4.3-2: Bind profile

4.3.3 ONU AutoDelete

Configuration→AutoLearn→ONU AutoDelete

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

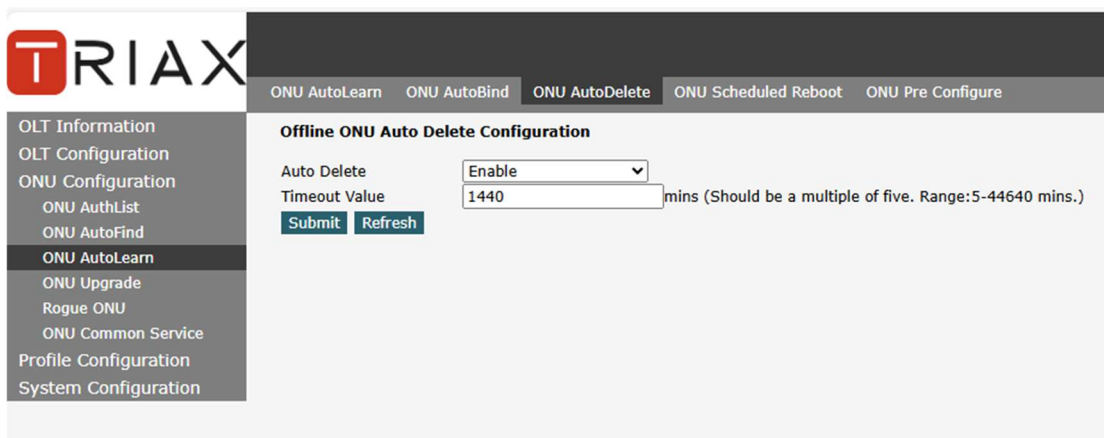


Figure 4.3-3: ONU AutoDelete

4.4 ONU Upgrade

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

4.4.1 Upload Image

Configuration→ONU Upgrade→ONU Image

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

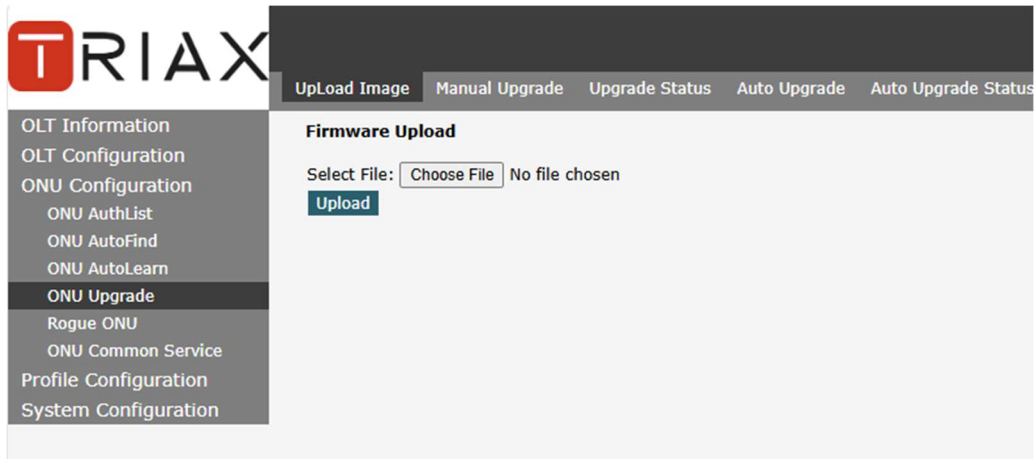


Figure 4.4-1: Upload image

4.4.2 Manual Upgrade

Configuration→ONU Upgrade→Manual Upgrade

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

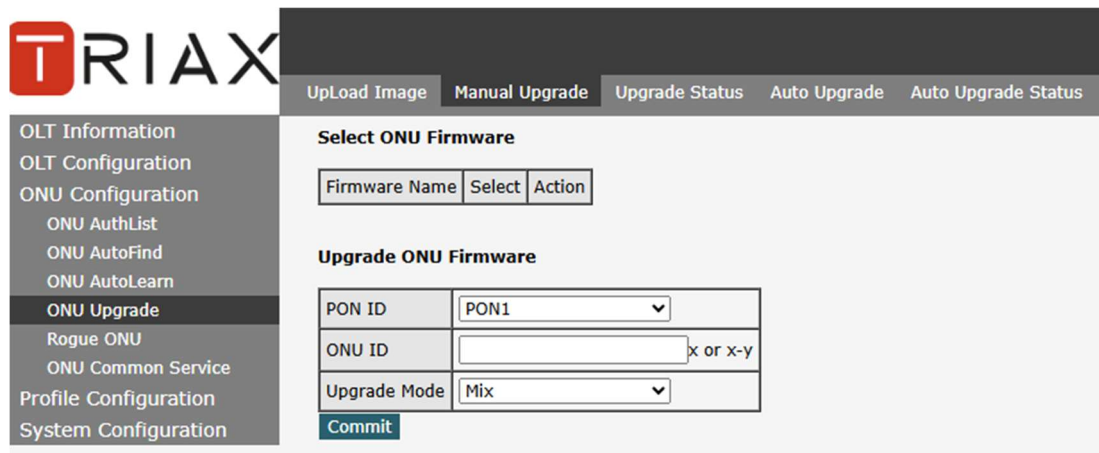


Figure 4.4-2: Manual Upgrade

4.4.3 Upgrade Status

Configuration→ONU Upgrade→Upgrade Status

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

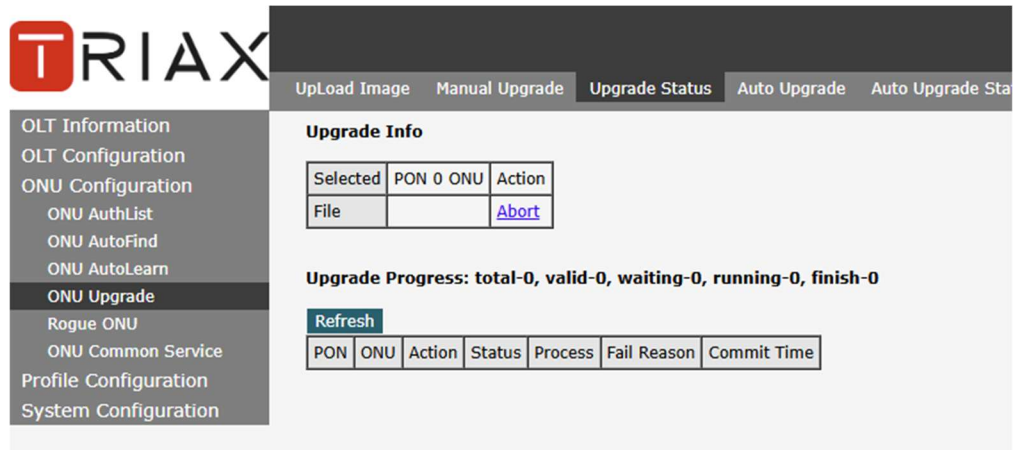


Figure 4.4-3: ONU Upgrade Status

4.4.4 Auto Upgrade

Configuration→ONU Upgrade→Auto Upgrade

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

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

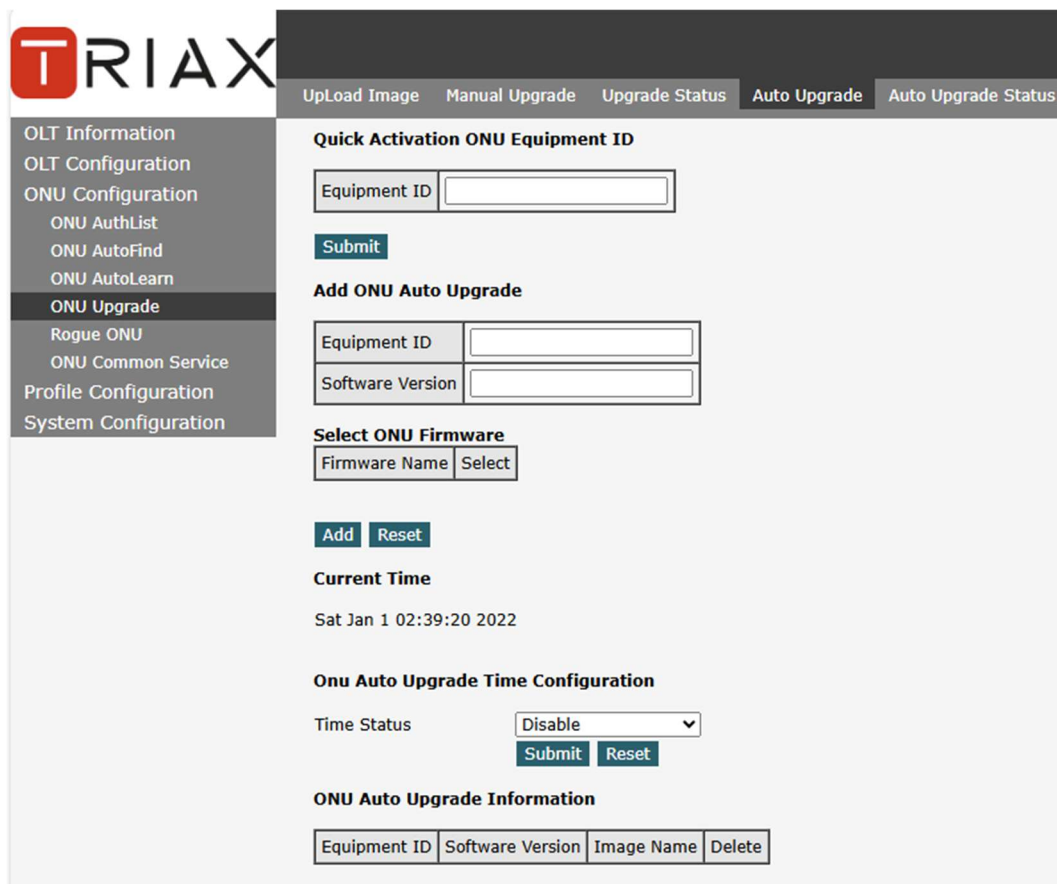


Figure 4.4-4: Auto-Upgrade

4.4.5 Auto Upgrade Status

Configuration→ONU Upgrade→Auto Upgrade Status

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

Figure 4.4-5: Auto Upgrade Status

4.5 Rogue ONU

ONU Configuration→Rogue ONU

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

Figure 4.5-1: Rogue ONU detection

4.6 ONU Common Service

Only GPON OLT-B Series supports this feature.

ONU Configuration→ONU Common Service

You have more flexibility to create TCONT ID and other items for the specified ONU you select.

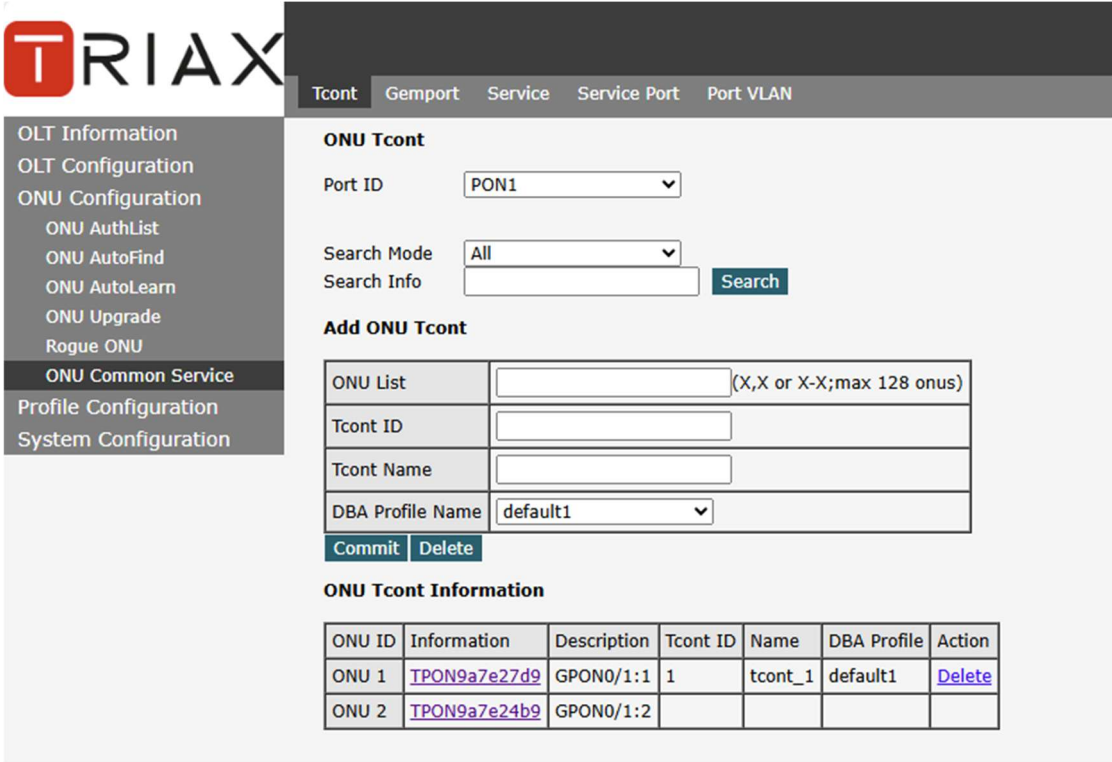


Figure 4.6-1: ONU Common Service

5 Profile configuration

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

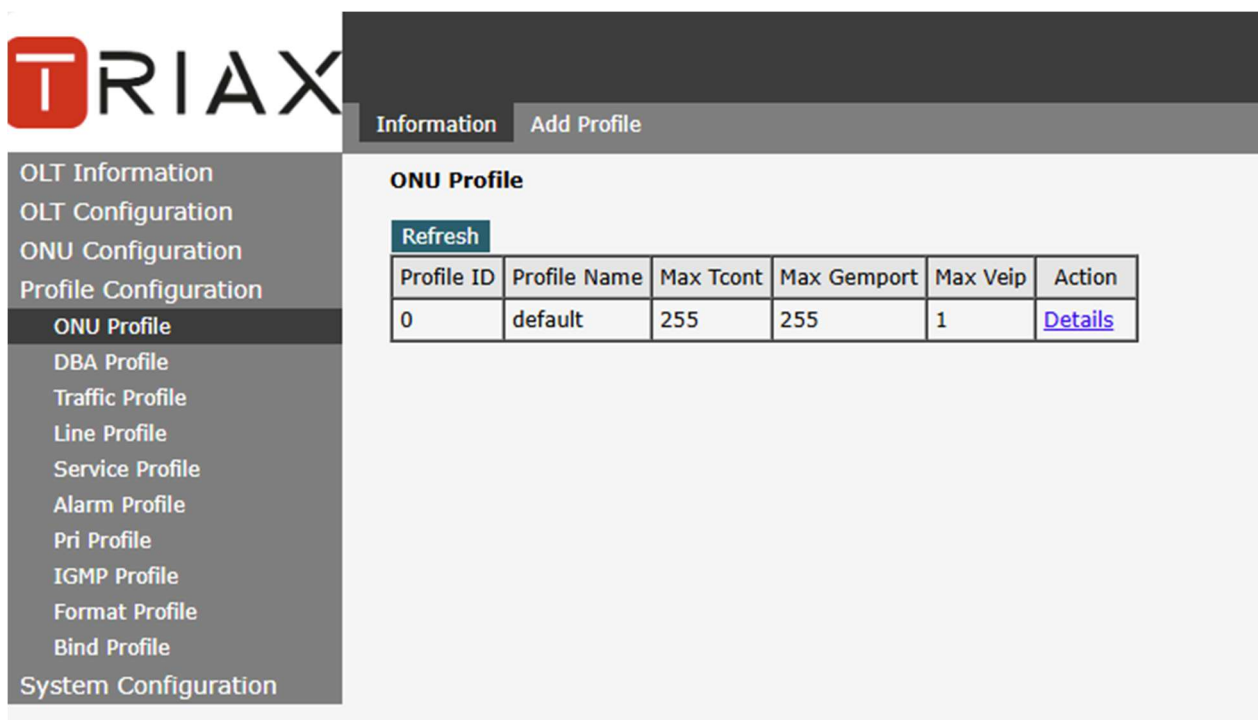
5.1 ONU Profile

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

5.1.1 Information

Profile Configuration → ONU profile → Information

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



The screenshot shows the TRIAX web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, **ONU Profile** (highlighted), DBA Profile, Traffic Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area has a header with 'Information' and 'Add Profile' tabs. Below the header, the title 'ONU Profile' is displayed. There is a 'Refresh' button above a table. The table has the following data:

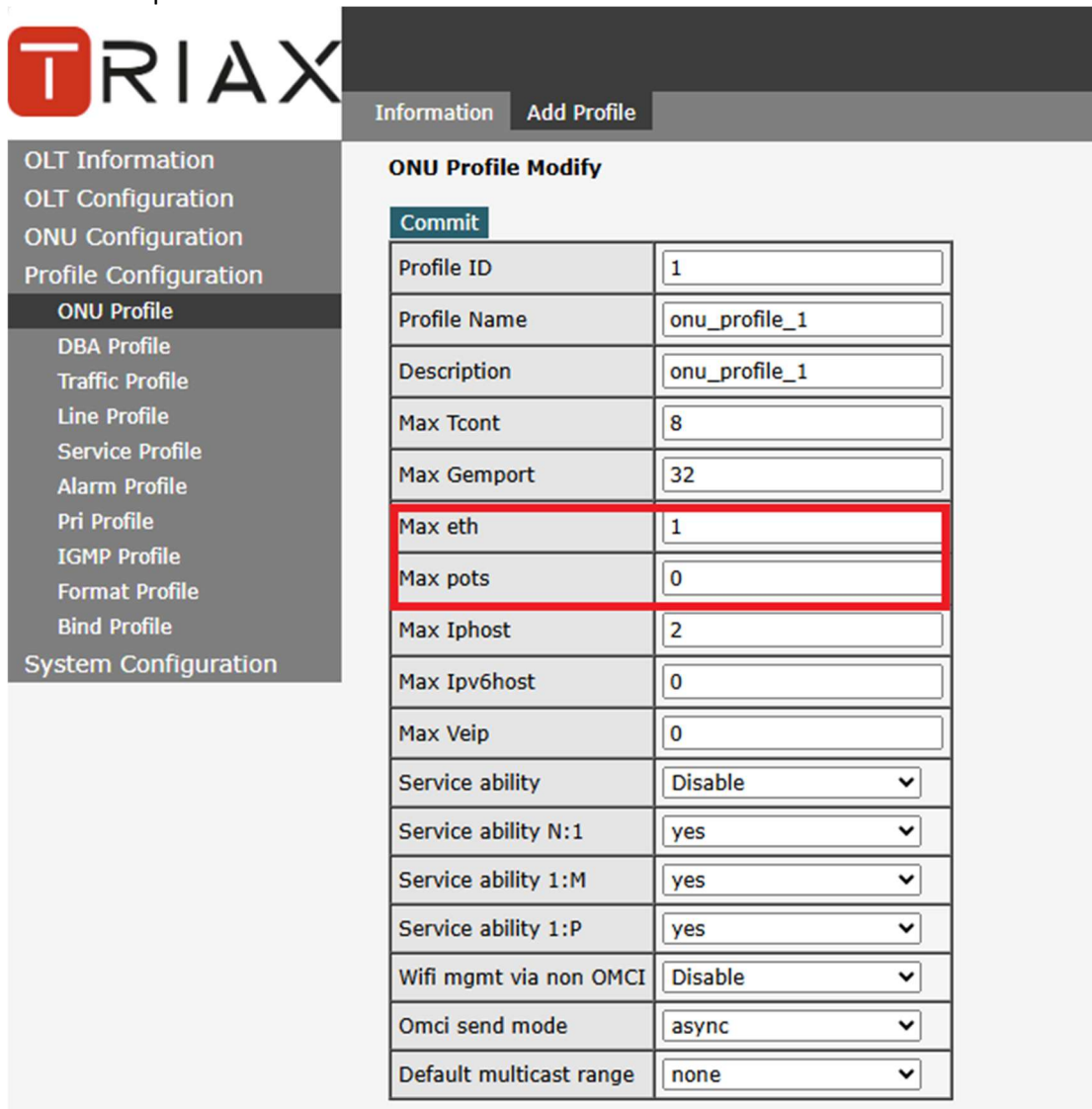
Profile ID	Profile Name	Max Tcont	Max Gempport	Max Veip	Action
0	default	255	255	1	Details

Figure 5.1-1: ONU profile list

5.1.2 Add profile

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

- SFU mode (only using bridge mode): usually, only need to set correct eth port and POTS port number of ONU, others can be kept default.



TRIAX

Information Add Profile

ONU Profile Modify

Commit

Profile ID	1
Profile Name	onu_profile_1
Description	onu_profile_1
Max Tcont	8
Max Gempport	32
Max eth	1
Max pots	0
Max Iphost	2
Max Ipv6host	0
Max Veip	0
Service ability	Disable
Service ability N:1	yes
Service ability 1:M	yes
Service ability 1:P	yes
Wifi mgmt via non OMCI	Disable
Omci send mode	async
Default multicast range	none

Figure 5.1-2: Add SFU profile

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

TRIAX

Information Add Profile

ONU Profile Modify

Commit

Profile ID	1
Profile Name	onu_profile_1
Description	onu_profile_1
Max Tcont	8
Max Gempport	32
Max eth	1
Max pots	0
Max Iphost	2
Max Ipv6host	0
Max Veip	0
Service ability	Disable
Service ability N:1	yes
Service ability 1:M	yes
Service ability 1:P	yes
Wifi mgmt via non OMCI	Disable
Omci send mode	async
Default multicast range	none

Figure 5.1-3: Add HGU profile

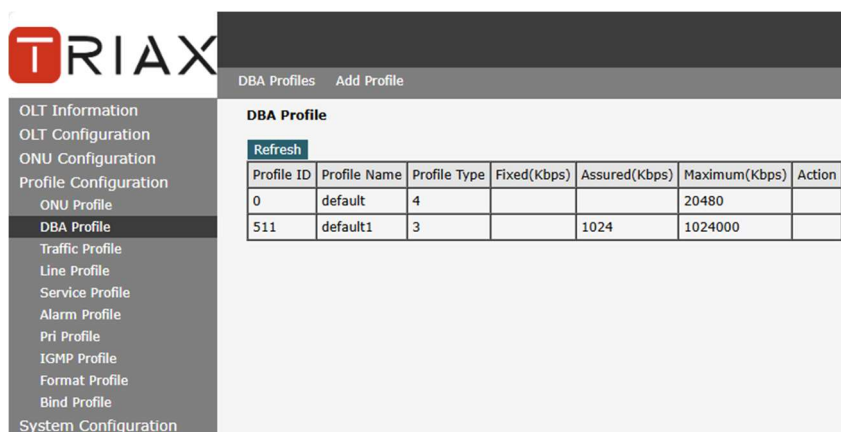
5.2 DBA Profile

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

5.2.1 DBA profiles

Profile Configuration → DBA Profile → DBA Profiles

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



DBA Profile						
Profile ID	Profile Name	Profile Type	Fixed(Kbps)	Assured(Kbps)	Maximum(Kbps)	Action
0	default	4			20480	
511	default1	3		1024	1024000	

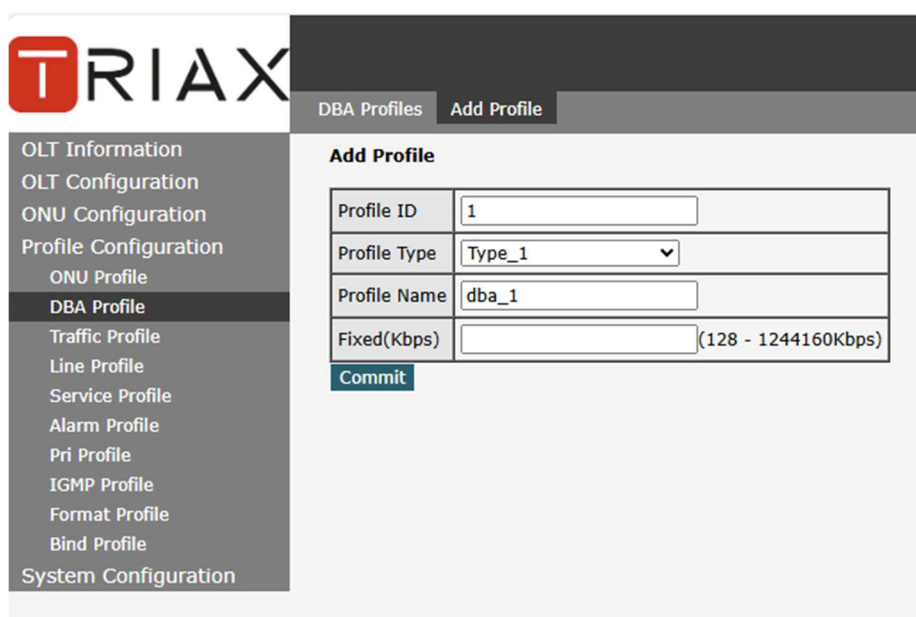
Figure 5.2-1: DBA profile list

5.2.2 Add profile

Profile Configuration → DBA Profile → Add profile

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

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



Add Profile	
Profile ID	1
Profile Type	Type_1
Profile Name	dba_1
Fixed(Kbps)	(128 - 1244160Kbps)
Commit	

Figure 5.2-2: Add a DBA profile

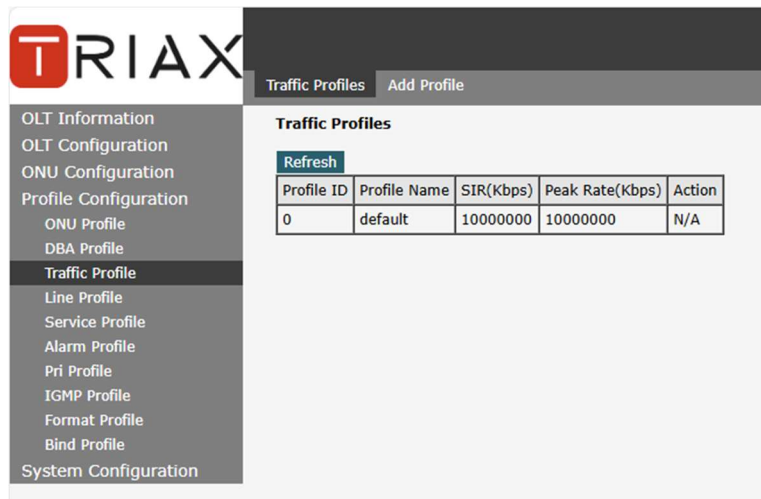
5.3 Traffic Profile

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

5.3.1 Traffic profiles

Profile Configuration → Traffic Profile → Traffic Profiles

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



Profile ID	Profile Name	SIR(Kbps)	Peak Rate(Kbps)	Action
0	default	100000000	100000000	N/A

Figure 5.3-1: Traffic Profile list

5.3.2 Add profile

Profile Configuration → Traffic Profile → Add Profile

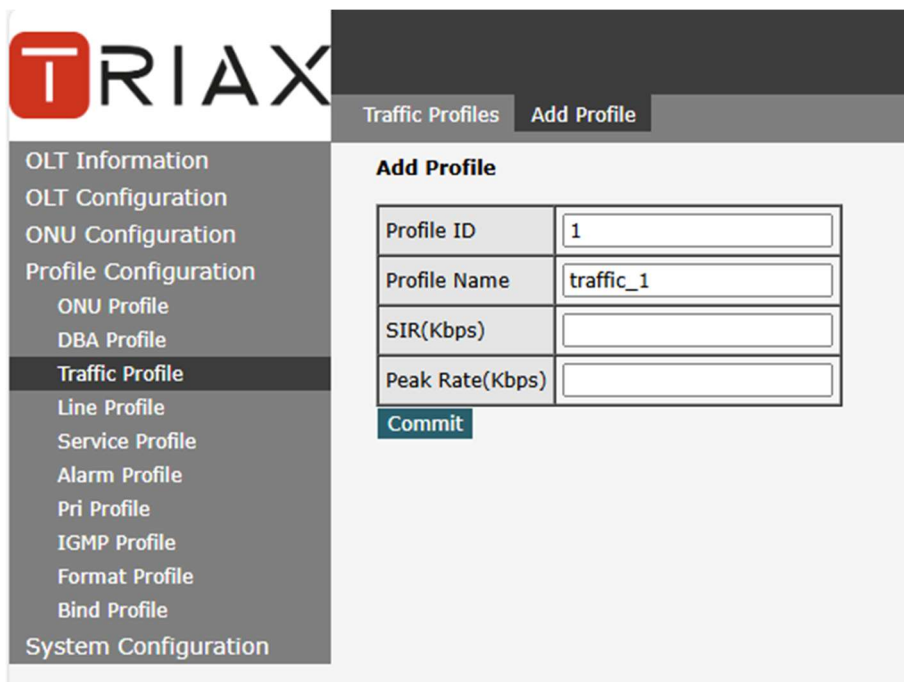
Configure gemport to specify the upstream/downstream bandwidth.

SIR: Committed Information Rate

PIR: Peak Information Rate

CBS: Committed Burst Size

PBS: Peak Burst Size



The screenshot shows the TRIAX web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (expanded), ONU Profile, DBA Profile, Traffic Profile (selected), Line Profile, Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area has two tabs: 'Traffic Profiles' and 'Add Profile'. The 'Add Profile' tab is active, displaying a form titled 'Add Profile' with the following fields:

Profile ID	1
Profile Name	traffic_1
SIR(Kbps)	
Peak Rate(Kbps)	

Below the form is a 'Commit' button.

Figure 5.3-2: Add a traffic Profile

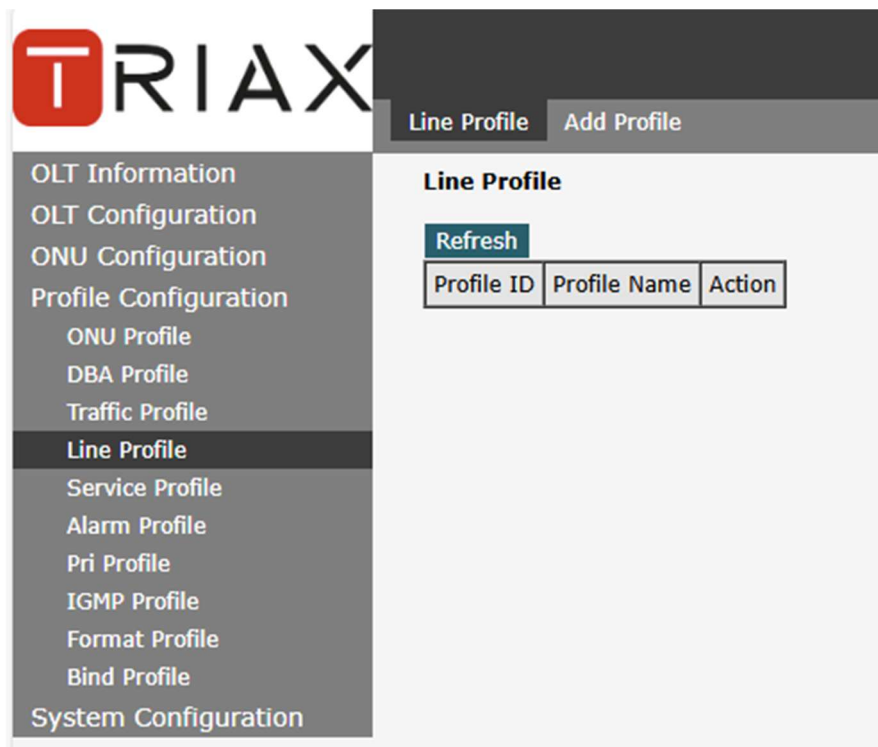
5.4 Line Profile

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

5.4.1 Line profile

Profile Configuration → Line Profile → Line Profile

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



The screenshot shows the TRIAX web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (expanded), ONU Profile, DBA Profile, Traffic Profile, Line Profile (selected), Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area has two tabs: 'Line Profile' and 'Add Profile'. The 'Line Profile' tab is active, displaying a section titled 'Line Profile' with a 'Refresh' button and a table with the following columns:

Profile ID	Profile Name	Action
------------	--------------	--------

Figure 5.4-1: Line Profile list

5.4.2 Add profile

Profile Configuration → Line profile → Add profile

Create a new line profile.

The screenshot shows the TRIAX web interface. On the left is a navigation menu with categories: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, Line Profile (selected), Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. Under 'Profile Configuration', there are sub-items: ONU Profile, DBA Profile, Traffic Profile, and Line Profile. The main content area has two tabs: 'Line Profile' and 'Add Profile'. The 'Add Profile' tab is active, showing a form titled 'Add Profile'. The form has two input fields: 'Profile ID' with the value '1' and 'Profile Name' with the value 'line_1'. Below these fields is a blue 'Add' button. A red arrow points from the text 'CLICK' to the 'Add' button.

Figure 5.4-2: Add Line Profile

Modify the line profile parameters.

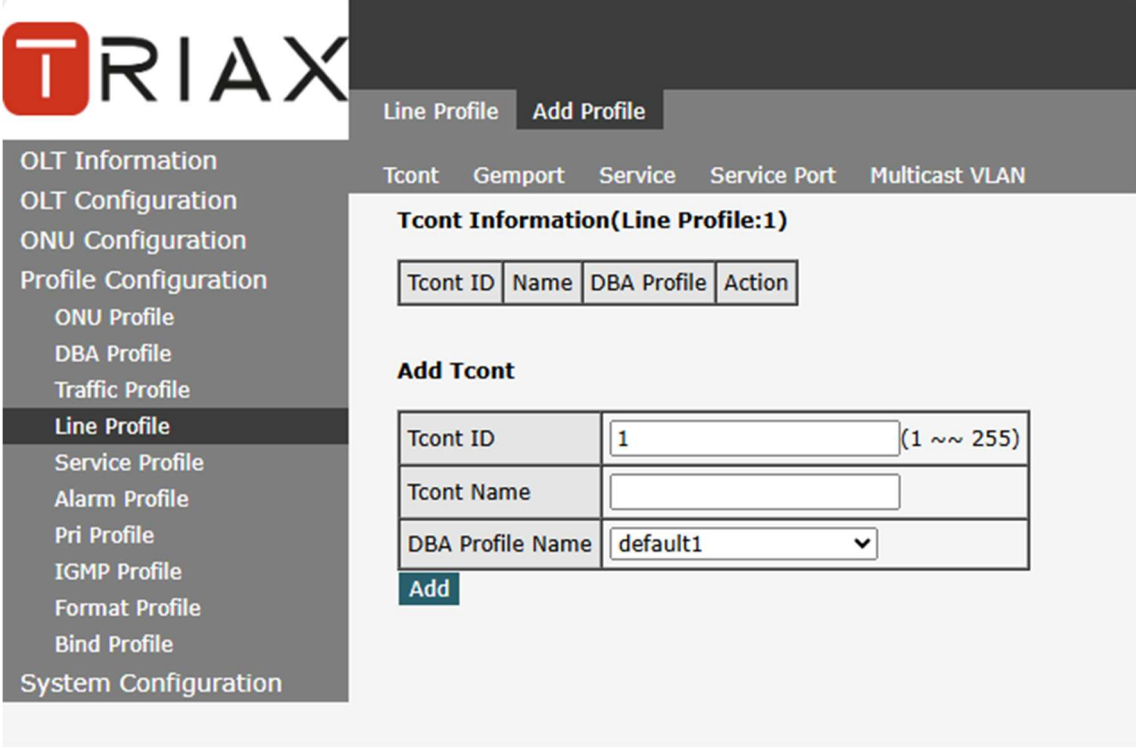
The screenshot shows the TRIAX web interface. On the left is the same navigation menu as in Figure 5.4-2. The main content area has two tabs: 'Line Profile' and 'Add Profile'. The 'Line Profile' tab is active, showing a table titled 'Line Profile'. Above the table is a 'Refresh' button. The table has three columns: 'Profile ID', 'Profile Name', and 'Action'. There is one row with 'Profile ID' 1 and 'Profile Name' 'line_1'. In the 'Action' column, there are two links: 'Details & Modify' and 'Delete'. The 'Details & Modify' link is highlighted with a red rectangle.

Profile ID	Profile Name	Action
1	line_1	Details & Modify Delete

Figure 5.4-3: Modify Line Profile

5.4.2.1 Tcont

Add tcont ID and bind DBA profile.



Line Profile **Add Profile**

Tcont Gemport Service Service Port Multicast VLAN

Tcont Information(Line Profile:1)

Tcont ID	Name	DBA Profile	Action
1		default1	

Add Tcont

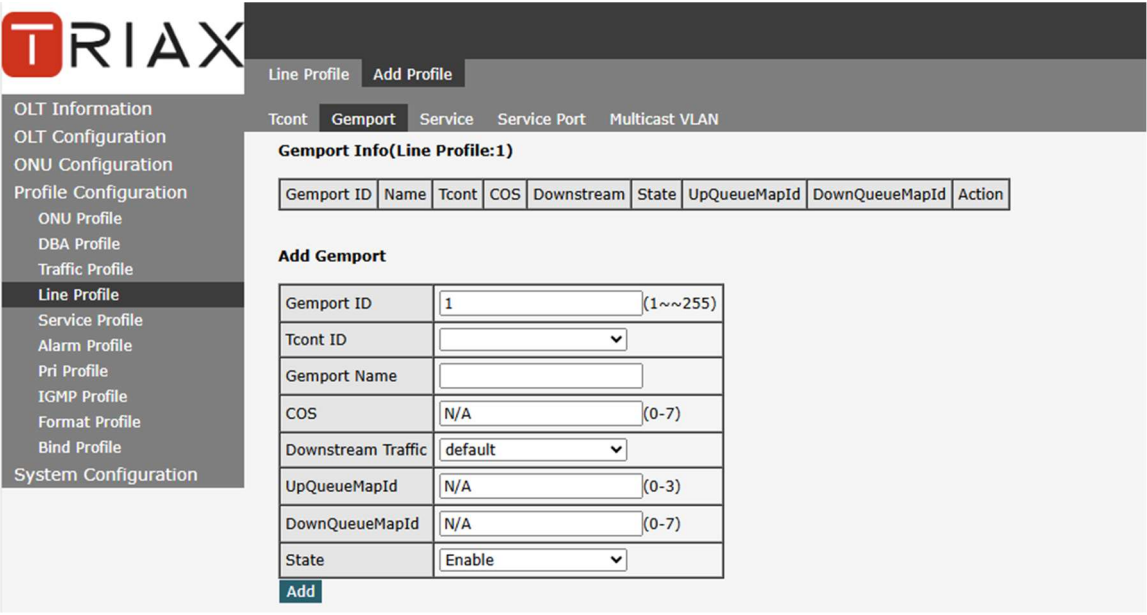
Tcont ID	1 (1 ~ 255)
Tcont Name	
DBA Profile Name	default1

Add

Figure 5.4-4: Add Tcont

5.4.2.2 Gemport

Add gemport ID and bind tcont ID.



Line Profile **Add Profile**

Tcont **Gemport** Service Service Port Multicast VLAN

Gemport Info(Line Profile:1)

Gemport ID	Name	Tcont	COS	Downstream	State	UpQueueMapId	DownQueueMapId	Action
1			N/A	default	Enable	N/A	N/A	

Add Gemport

Gemport ID	1 (1~255)
Tcont ID	
Gemport Name	
COS	N/A (0-7)
Downstream Traffic	default
UpQueueMapId	N/A (0-3)
DownQueueMapId	N/A (0-7)
State	Enable

Add

Figure 5.4-5: Add Gemport

5.4.2.3 Service

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

Figure 5.4-6: Add Service

5.4.2.4 Service Port

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

Figure 5.4-7: Add Service Port

5.4.2.5 Multicast Vlan

Set the Multicast VLAN of ONU.

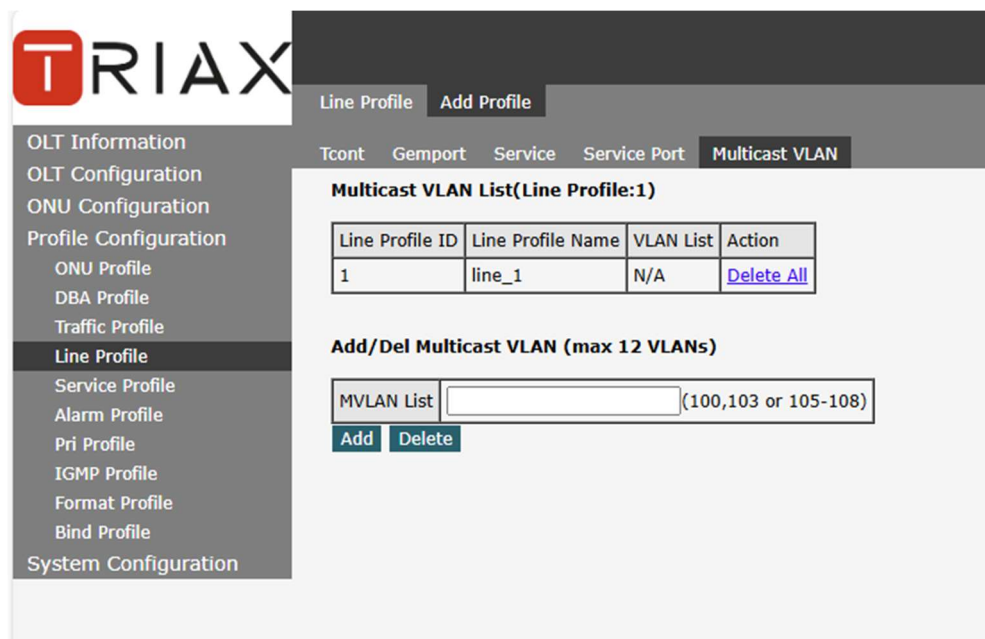


Figure 5.4-8: Configure Multicast VLAN

5.5 Service Profile

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

5.5.1 Service profile

Profile Configuration → Service Profile → Service Profile

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

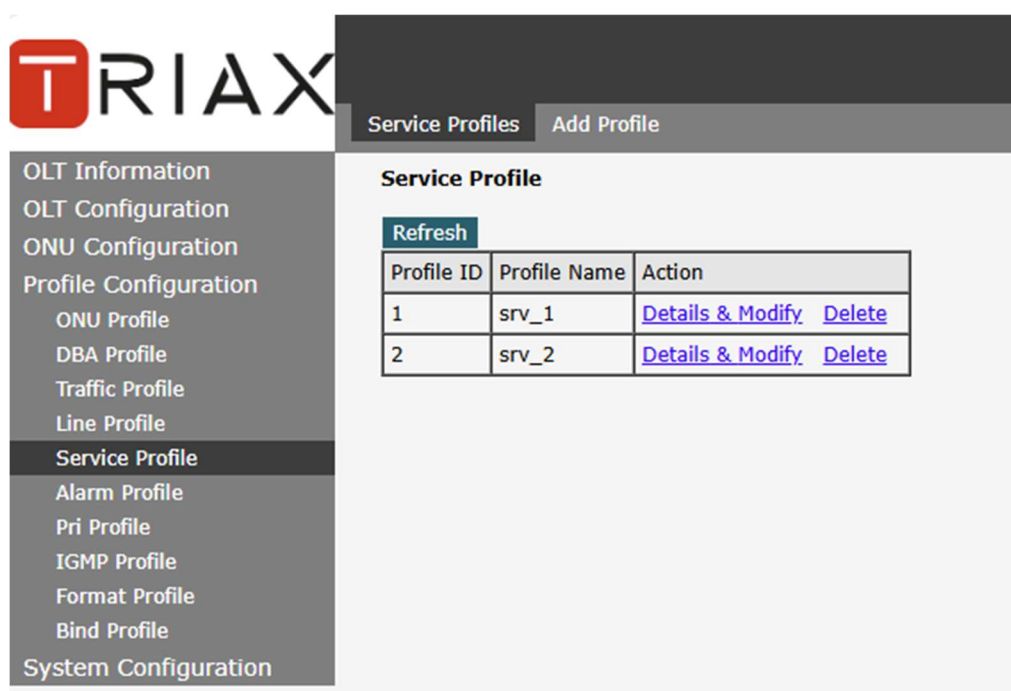


Figure 5.5-1: Service Profile List

5.5.2 5.5.2 Add profile

Profile Configuration → Service Profile → Add Profile

Add a new service profile.

The screenshot shows the TRIAX web interface. On the left is a navigation menu with categories: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (highlighted), and System Configuration. Under Profile Configuration, 'Service Profile' is selected. The main area has tabs for 'Service Profiles' and 'Add Profile'. The 'Add Profile' form contains two input fields: 'Profile ID' with the value '3' and 'Profile Name' with the value 'srv_3'. Below these fields is a blue 'Add' button.

Figure 5.5-2: Add Service profile

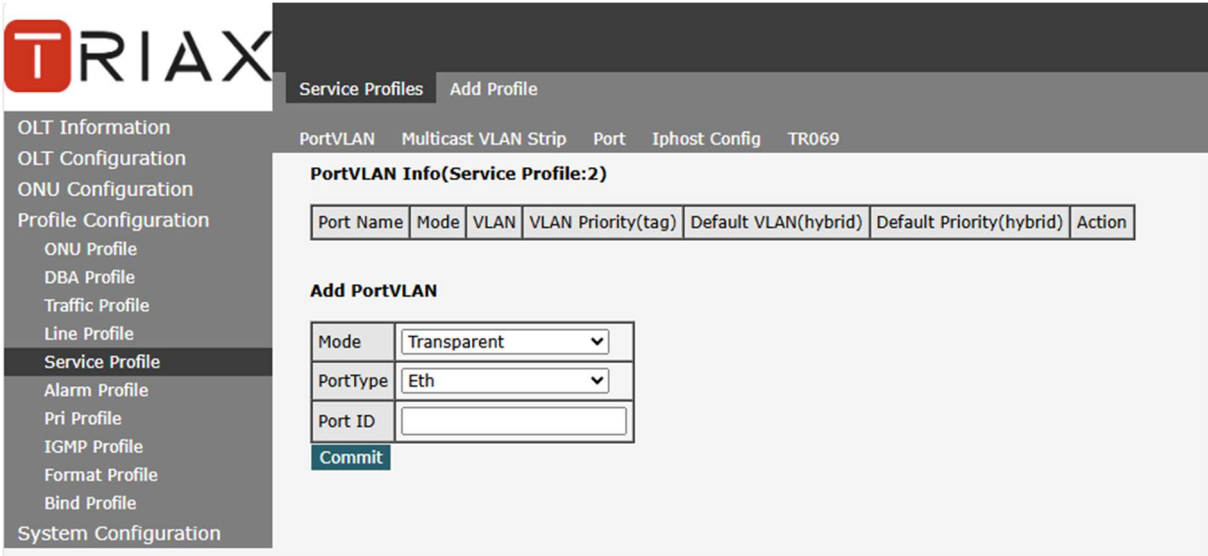
The screenshot shows the TRIAX web interface with the 'Service Profiles' tab selected. It displays a table of existing service profiles. A red box highlights the 'Details & Modify' link for the first profile (ID 1, Name srv_1).

Profile ID	Profile Name	Action
1	srv_1	Details & Modify Delete
2	srv_2	Details & Modify Delete

Figure 5.5-3: Modify Service Profile

5.5.2.1 PortVlan

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



Service Profiles Add Profile

PortVLAN Multicast VLAN Strip Port Iphost Config TR069

PortVLAN Info(Service Profile:2)

Port Name	Mode	VLAN	VLAN Priority(tag)	Default VLAN(hybrid)	Default Priority(hybrid)	Action
-----------	------	------	--------------------	----------------------	--------------------------	--------

Add PortVLAN

Mode:

PortType:

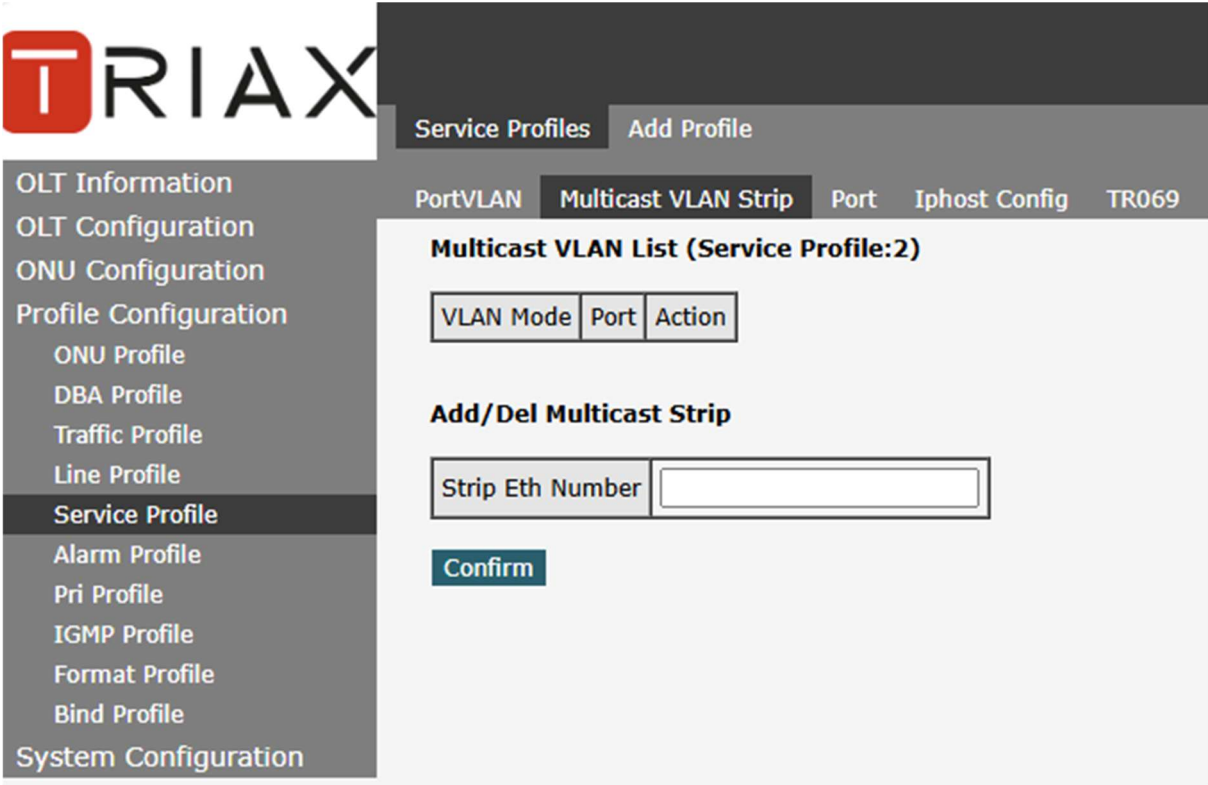
Port ID:

Commit

Figure 5.5-4: Port VLAN mode

5.5.2.2 Multicast Vlan Strip

Set the multicast VLAN mode of ONU's port.



Service Profiles Add Profile

PortVLAN **Multicast VLAN Strip** Port Iphost Config TR069

Multicast VLAN List (Service Profile:2)

VLAN Mode	Port	Action
-----------	------	--------

Add/Del Multicast Strip

Strip Eth Number:

Confirm

Figure 5.5-5: Port Multicast VLAN Mode

5.5.2.3 Iphost Config

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

Service Profiles Add Profile

PortVLAN Multicast VLAN Strip Port **Iphost Config** TR069

Iphost Configuration Info(Service Profile:2)

Iphost ID	Description	IP Mode	IP Address	Mask	Gateway	DNS1	DNS2	VLAN	Priority	Action
-----------	-------------	---------	------------	------	---------	------	------	------	----------	--------

Iphost Config

Iphost ID

Description

IP Mode DHCP

DNS1(A.B.C.D)

DNS2(A.B.C.D)

Commit

Iphost VLAN Config

VLAN(0-4094)

Priority(1-15)

Commit

Figure 5.5-6: Add IPhost

5.6 Alarm Profile

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

5.6.1 Profile Info

Profile Configuration → Alarm Profile → profile info

The table displays alarm profile list.

Profile Information Add Profile

Alarm Profile

Refresh

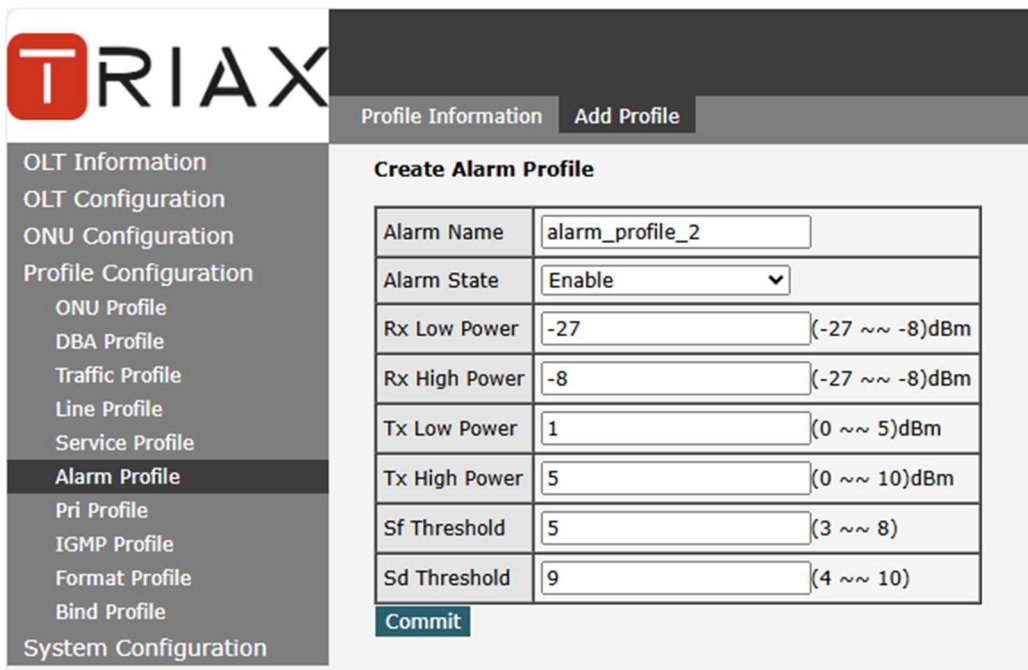
Profile ID	Profile Name	State	Rx Power Alarm Threshold	Tx Power Alarm Threshold	Sf Threshold/Sd Threshold	Action
1	alarm_profile_1	enable	-27 ~ -8	1 ~ 5	5 / 9	Delete

Figure 5.6-1: Alarm Profile List

5.6.2 Add Profile

Profile Configuration → Alarm Profile → Add profile

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



Create Alarm Profile	
Alarm Name	alarm_profile_2
Alarm State	Enable
Rx Low Power	-27 (-27 ~ -8)dBm
Rx High Power	-8 (-27 ~ -8)dBm
Tx Low Power	1 (0 ~ 5)dBm
Tx High Power	5 (0 ~ 10)dBm
Sf Threshold	5 (3 ~ 8)
Sd Threshold	9 (4 ~ 10)
Commit	

Figure 5.6-2: Add Alarm Profile

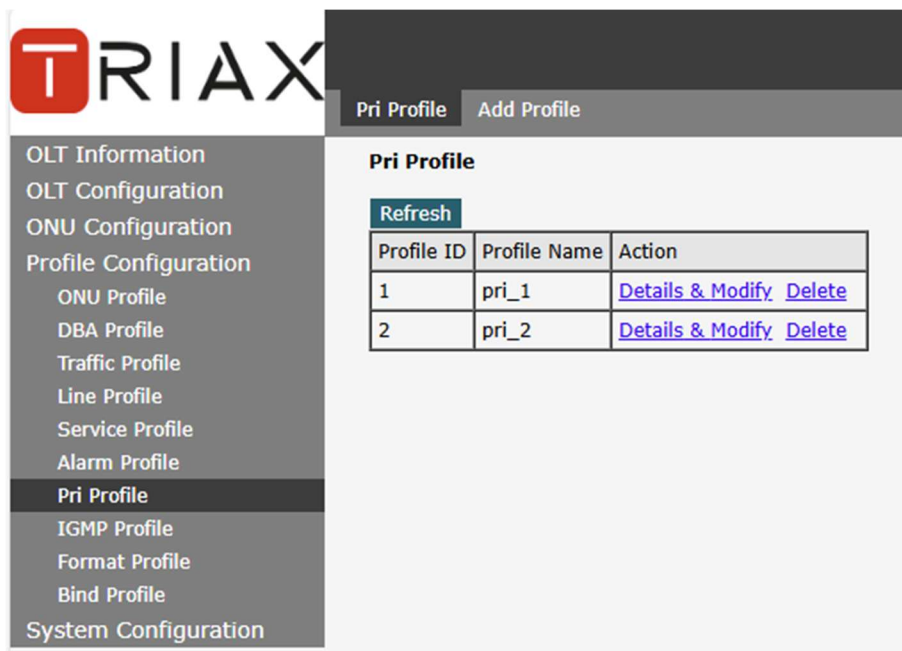
5.7 Pri Profile

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

5.7.1 Pri Profile

Profile Configuration → Pri Profile

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



Pri Profile

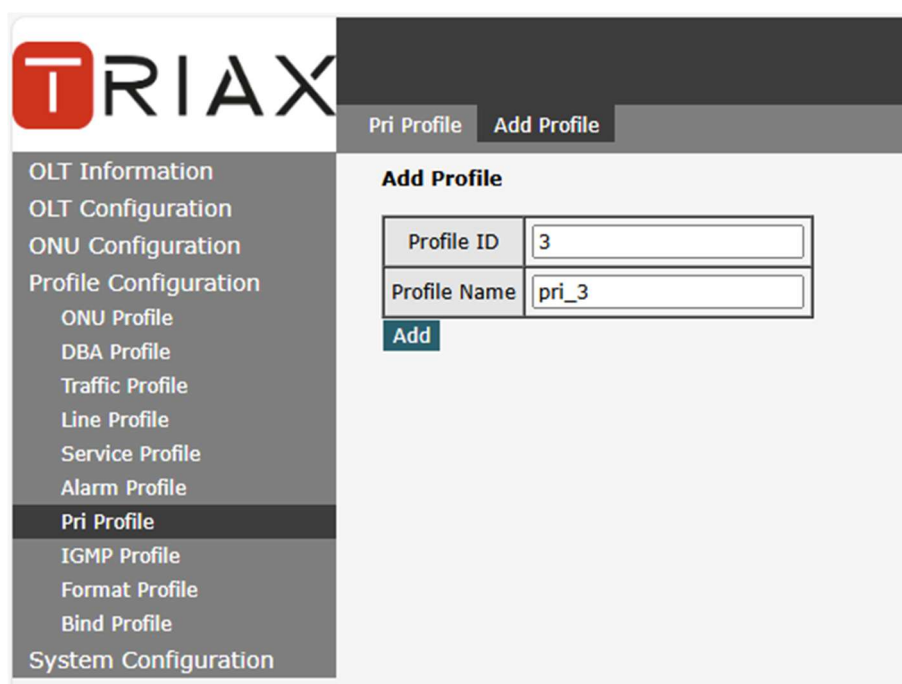
[Refresh](#)

Profile ID	Profile Name	Action
1	pri_1	Details & Modify Delete
2	pri_2	Details & Modify Delete

Figure 5.7-1: Pri Profile

5.7.2 Add Profile

Profile Configuration → Pri Profile → Add profile



Add Profile

Profile ID	3
Profile Name	pri_3

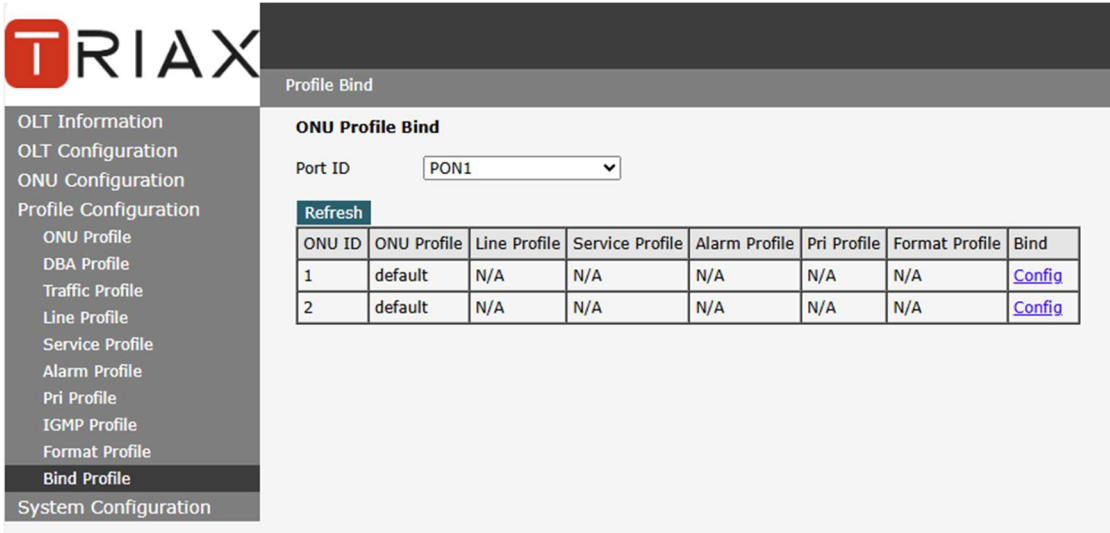
[Add](#)

Figure 5.7-2: Add Private Profile

5.8 Bind Profile

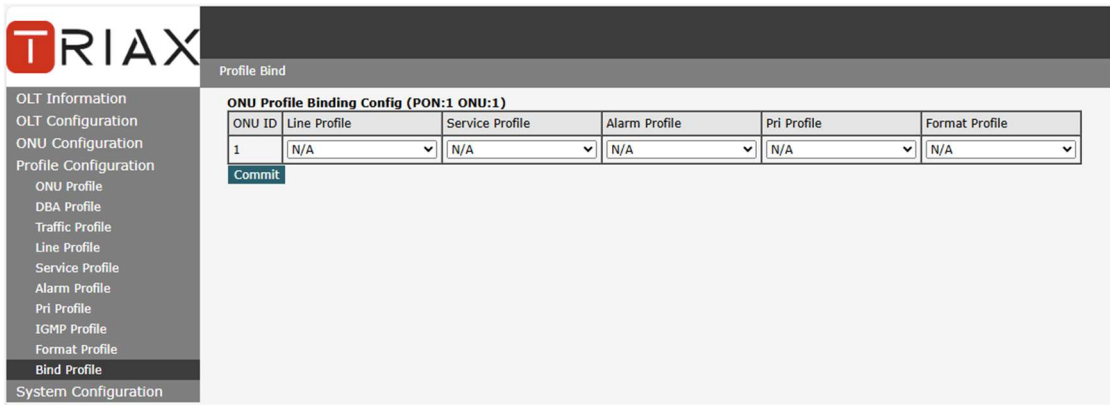
After profile is configured, it is necessary to bind it to ONU.

Profile Configuration → Bind Profile



ONU ID	ONU Profile	Line Profile	Service Profile	Alarm Profile	Pri Profile	Format Profile	Bind
1	default	N/A	N/A	N/A	N/A	N/A	Config
2	default	N/A	N/A	N/A	N/A	N/A	Config

Figure 5.8-1: Bind profile



ONU ID	Line Profile	Service Profile	Alarm Profile	Pri Profile	Format Profile
1	N/A	N/A	N/A	N/A	N/A

Figure 5.8-2: Select Profile

5.9 IGMP Profile

5.9.1 IGMP Profile

Profile Configuration → IGMP Profile → IGMP Profile

An IGMP Profile defines the multicast settings that will be applied to ports or VLANs for IPTV services. It controls how the OLT handles IGMP (Internet Group Management Protocol) messages from subscribers and how multicast streams are delivered.

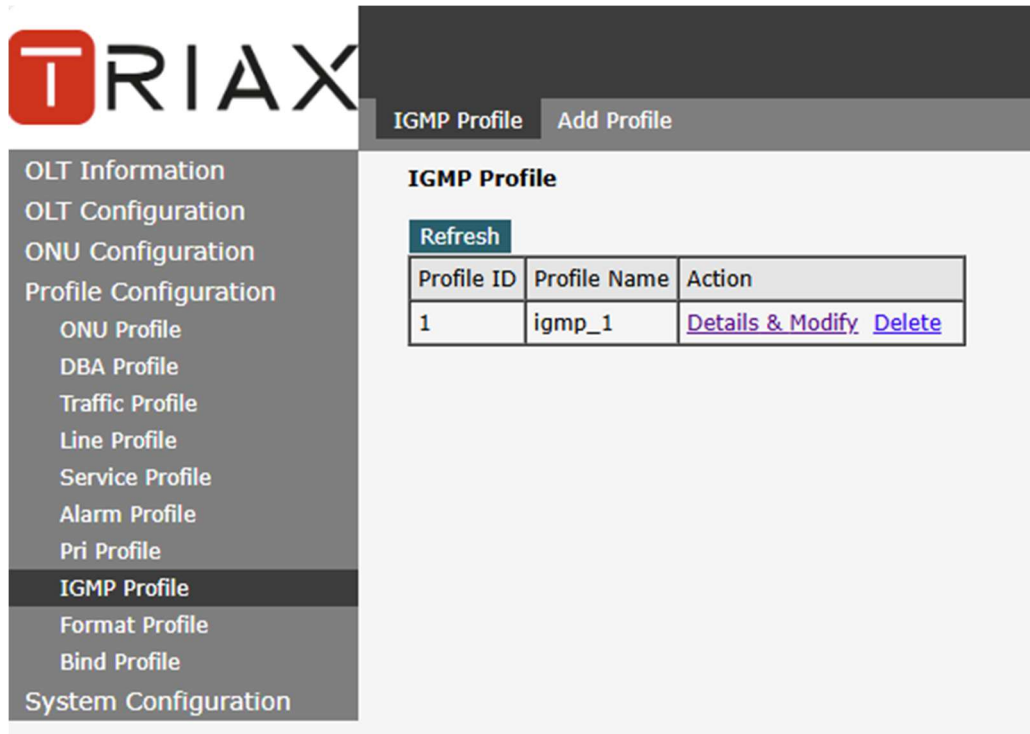


Figure 5.9.1: IGMP Profile

5.9.2 Add Profile

Profile Configuration→IGMP Profile→Add Profile

The IGMP profile sets how multicast IPTV traffic is handled. You can choose the IGMP version, mode (Snooping/Proxy), Fast Leave, upstream/downstream tag handling, rate limits, robustness, proxy IP, query intervals, and how unmatched multicast groups are treated. These settings control stream delivery, channel switching, and network efficiency.

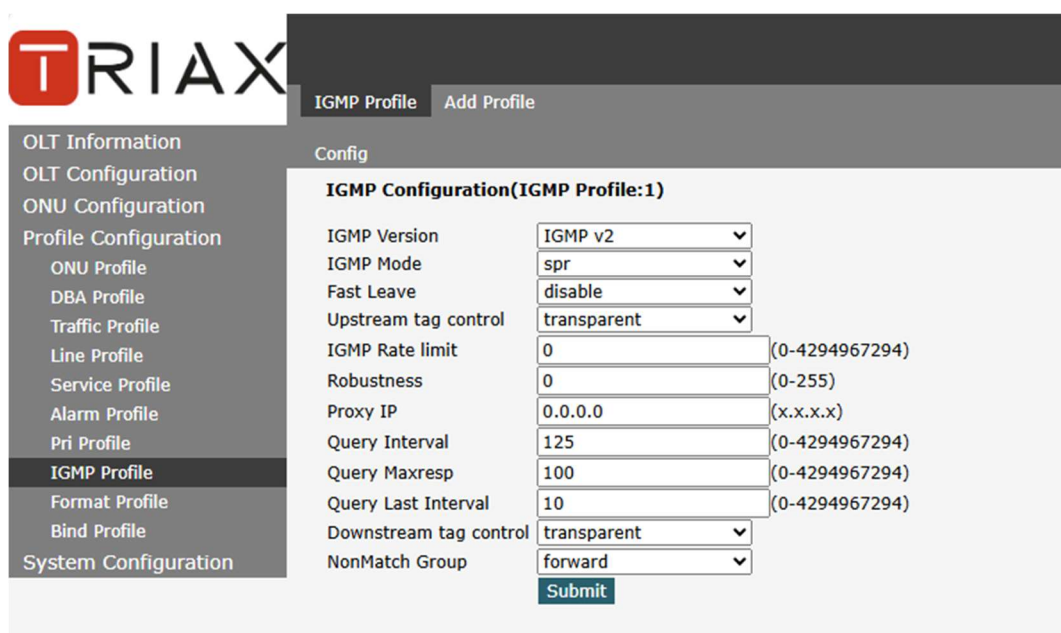


Figure 5.9.2: IGMP Add Profile

5.10 Format Profile

The Format Profile defines how subscriber information is inserted into DHCP, PPPoE, or other packets for identification and management.

5.10.1 Format Profile

Profile Configuration → Format Profile → Format Profile

The Format Profile defines how subscriber information is inserted into DHCP, PPPoE, or other packets for identification and management.

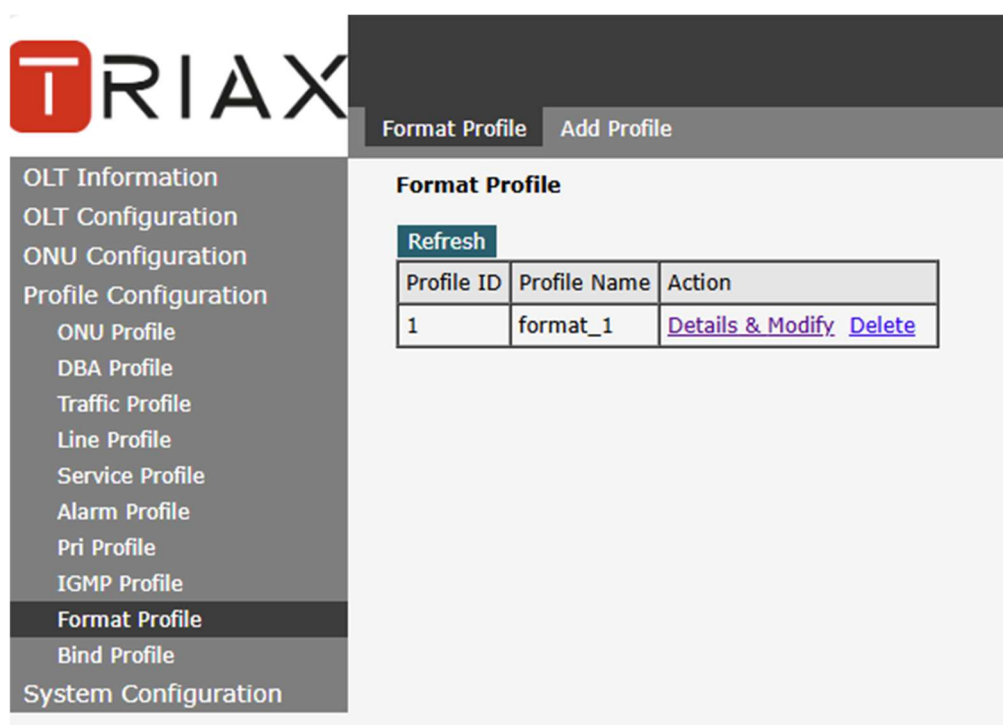


Figure 5.10.1: Format Profile

5.10.2 Add Profile

Profile Configuration → Format Profile → Add Profile

The Format Profile defines how subscriber information is added to packets for identification. You can enable/disable options like Option82, Option18, Option37, or PPPoE Plus, choose a format type (custom), and configure Circuit ID/Remote ID (e.g., CVLAN) to track subscribers accurately.



- OLT Information
- OLT Configuration
- ONU Configuration
- Profile Configuration
 - ONU Profile
 - DBA Profile
 - Traffic Profile
 - Line Profile
 - Service Profile
 - Alarm Profile
 - Pri Profile
 - IGMP Profile
 - Format Profile**
 - Bind Profile
- System Configuration

Format Profile Add Profile

Config

Format Configuration(Format Profile:1)

Switch Configuration

Option82
Option18
Option37
PPPoE Plus

Format Type Configuration

Format Type

Circuit ID / Remote ID Configuration

ID	Circuit ID
Index	
Type	CVLAN

Circuit ID / Remote ID Table

ID	Type
----	------

Figure 5.10.2: Format Add Profile

6 System configuration

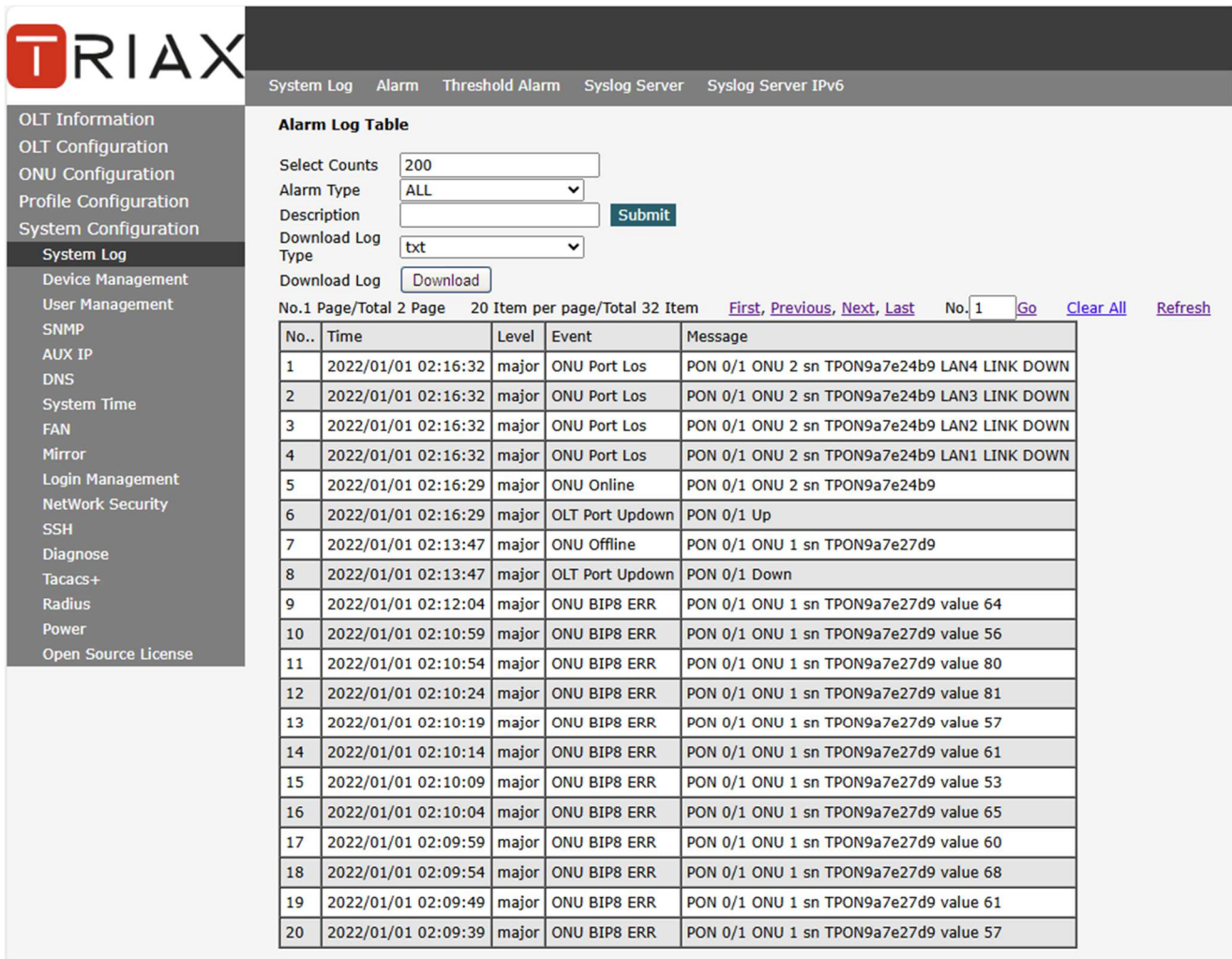
This chapter is about the global management of OLT.

6.1 System Log

6.1.1 System Log

System Configuration→System Log

This page displays OLT system alarms and events.



The screenshot shows the TRIAX web interface for System Log. On the left is a navigation menu with options like OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log (selected), Device Management, User Management, SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management, NetWork Security, SSH, Diagnose, Tacacs+, Radius, Power, and Open Source License. The main content area has tabs for System Log, Alarm, Threshold Alarm, Syslog Server, and Syslog Server IPv6. Below the tabs is the 'Alarm Log Table' section, which includes filters for Select Counts (200), Alarm Type (ALL), Description, and Download Log Type (txt). A 'Submit' button is next to the Description field, and a 'Download' button is below the Download Log Type field. The table shows 20 items per page, with a total of 32 items. The table columns are No., Time, Level, Event, and Message. The messages include various events such as 'ONU Port Los', 'ONU Online', 'OLT Port Updown', 'ONU Offline', and 'ONU BIP8 ERR'.

No..	Time	Level	Event	Message
1	2022/01/01 02:16:32	major	ONU Port Los	PON 0/1 ONU 2 sn TPON9a7e24b9 LAN4 LINK DOWN
2	2022/01/01 02:16:32	major	ONU Port Los	PON 0/1 ONU 2 sn TPON9a7e24b9 LAN3 LINK DOWN
3	2022/01/01 02:16:32	major	ONU Port Los	PON 0/1 ONU 2 sn TPON9a7e24b9 LAN2 LINK DOWN
4	2022/01/01 02:16:32	major	ONU Port Los	PON 0/1 ONU 2 sn TPON9a7e24b9 LAN1 LINK DOWN
5	2022/01/01 02:16:29	major	ONU Online	PON 0/1 ONU 2 sn TPON9a7e24b9
6	2022/01/01 02:16:29	major	OLT Port Updown	PON 0/1 Up
7	2022/01/01 02:13:47	major	ONU Offline	PON 0/1 ONU 1 sn TPON9a7e27d9
8	2022/01/01 02:13:47	major	OLT Port Updown	PON 0/1 Down
9	2022/01/01 02:12:04	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 64
10	2022/01/01 02:10:59	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 56
11	2022/01/01 02:10:54	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 80
12	2022/01/01 02:10:24	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 81
13	2022/01/01 02:10:19	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 57
14	2022/01/01 02:10:14	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 61
15	2022/01/01 02:10:09	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 53
16	2022/01/01 02:10:04	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 65
17	2022/01/01 02:09:59	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 60
18	2022/01/01 02:09:54	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 68
19	2022/01/01 02:09:49	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 61
20	2022/01/01 02:09:39	major	ONU BIP8 ERR	PON 0/1 ONU 1 sn TPON9a7e27d9 value 57

Figure 6.1-1: System Log

6.1.2 Alarm

System Configuration → System Log → Alarm

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

- OLT Information
- OLT Configuration
- ONU Configuration
- Profile Configuration
- System Configuration
- System Log**
- Device Management
- User Management
- SNMP
- AUX IP
- DNS
- System Time
- FAN
- Mirror
- Login Management
- NetWork Security
- SSH
- Diagnose
- Tacacs+
- Radius
- Power
- Open Source License

System Log **Alarm** Threshold Alarm Syslog Server Syslog Server IPv6

Alarm Configuration

Submit Reset

Type	Print	Record	Trap	Remote	Type	Print	Record	Trap	Remote
FAN	☐	☐	☐	☐	Download File Failed	☒	☒	☒	☒
Upload File Failed	☒	☒	☒	☒	Upgrade File Failed	☒	☒	☒	☒
Port Updown	☒	☒	☒	☒	Port Loopback	☒	☒	☒	☒
PON Deregister	☐	☐	☐	☐	PON Register Failed	☒	☒	☒	☒
PON Disable	☒	☒	☒	☒	PON Txpower High	☒	☒	☒	☒
PON Txpower Low	☒	☒	☒	☒	PON Txbias High	☒	☒	☒	☒
PON Txbias Low	☒	☒	☒	☒	PON Vcc High	☒	☒	☒	☒
PON Vcc Low	☒	☒	☒	☒	PON Temp High	☒	☒	☒	☒
PON Temp Low	☒	☒	☒	☒	PON Los	☒	☒	☒	☒
ONU Deregister	☒	☒	☒	☒	ONU Link Lost	☐	☐	☐	☐
ONU Illegal Register	☒	☒	☒	☒	ONU Auth Failed	☒	☒	☒	☒
ONU MAC Conflict	☐	☒	☒	☒	ONU Loid Conflict	☒	☒	☒	☒
ONU Critical Event	☒	☒	☒	☒	ONU Dying Gasp	☒	☒	☒	☒
ONU Link Fault	☒	☒	☒	☒	ONU Link Event	☒	☒	☒	☒
ONU Event Notific	☒	☒	☒	☒	Reset	☒	☒	☒	☒
Config Save	☒	☒	☒	☒	Config Erase	☒	☒	☒	☒
Download File Success	☒	☒	☒	☒	Upload File Success	☒	☒	☒	☒
Upgrade File Success	☒	☒	☒	☒	PON Register	☐	☒	☒	☒
PON Enable	☒	☒	☒	☒	PON Los Recovery	☒	☒	☒	☒
ONU Register	☐	☒	☒	☒	ONU Link Discover	☐	☐	☐	☐
ONU Auth Success	☒	☒	☒	☒	ONU Deauth Success	☐	☒	☒	☒
ONU PON Rxpower High	☐	☐	☐	☐	ONU PON Rxpower low	☐	☐	☐	☐
ONU PON Txpower High	☐	☐	☐	☐	ONU PON Txpower Low	☐	☐	☐	☐
ONU PON Txbias High	☒	☒	☒	☒	ONU PON Txbias Low	☒	☒	☒	☒
ONU PON Vcc High	☒	☒	☒	☒	ONU PON Vcc Low	☒	☒	☒	☒

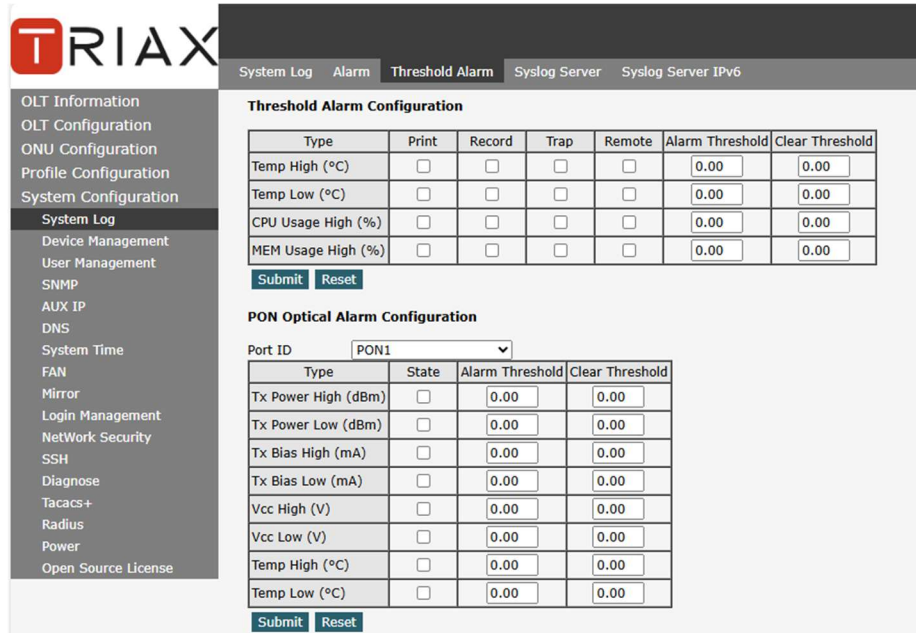
Figure 6.1-2: Alarm

Options	Illustration
Print	Alarm and events are displayed in console and telnet, but not in syslog, EMS and remote log server.
Record	Alarm and event are displayed in syslog, but not in console, telnet, EMS and remote log server.
Trap	Alarm and event are displayed in EMS, but not in console, telnet, syslog and remote log server.
Remote	Alarm and event are displayed in remote log server, but not in console, telnet, syslog and EMS.

6.1.3 Threshold Alarm

System Configuration → System Log → Threshold Alarm

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



Type	Print	Record	Trap	Remote	Alarm Threshold	Clear Threshold
Temp High (°C)	☐	☐	☐	☐	0.00	0.00
Temp Low (°C)	☐	☐	☐	☐	0.00	0.00
CPU Usage High (%)	☐	☐	☐	☐	0.00	0.00
MEM Usage High (%)	☐	☐	☐	☐	0.00	0.00

Submit Reset

PON Optical Alarm Configuration

Port ID: PON1

Type	State	Alarm Threshold	Clear Threshold
Tx Power High (dBm)	☐	0.00	0.00
Tx Power Low (dBm)	☐	0.00	0.00
Tx Bias High (mA)	☐	0.00	0.00
Tx Bias Low (mA)	☐	0.00	0.00
Vcc High (V)	☐	0.00	0.00
Vcc Low (V)	☐	0.00	0.00
Temp High (°C)	☐	0.00	0.00
Temp Low (°C)	☐	0.00	0.00

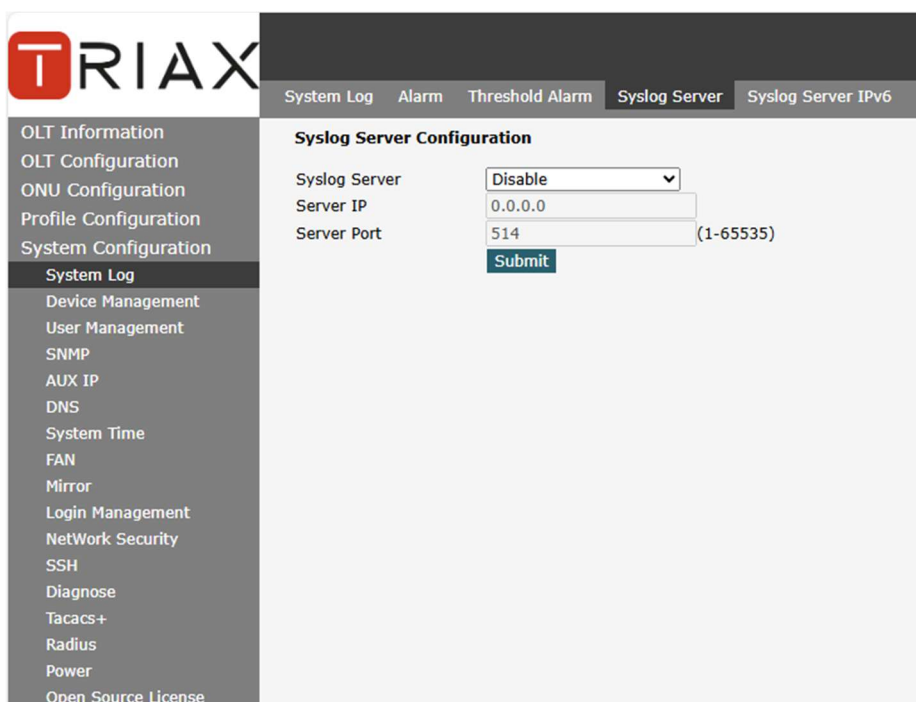
Submit Reset

Figure 6.1-3: Threshold Alarm

6.1.4 Syslog Server

System Configuration → System Log → Syslog Server

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



Syslog Server Configuration

Syslog Server: Disable

Server IP: 0.0.0.0

Server Port: 514 (1-65535)

Submit

Figure 6.1-4: Syslog Server

6.1.5 Syslog Server IPv6

System Configuration→System Log →Syslog Server IPv6

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

The screenshot shows the TRIAX web interface. On the left, a sidebar menu lists various configuration options, with 'System Log' highlighted. The main panel is titled 'Syslog Server IPv6 Configuration'. It includes a dropdown menu for 'Syslog Server IPv6' currently set to 'Disable', an empty text field for 'Server IPv6', and a text field for 'Server Port' set to '514' with a hint '(1-65535)'. A blue 'Submit' button is located below these fields.

Figure 6.1-5: Syslog Server IPv6

6.2 Device Management

6.2.1 Firmware Upgrade

System Configuration→Device Management →Firmware Upgrade

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

The screenshot shows the TRIAX web interface. The left sidebar menu has 'Device Management' selected. The main panel is titled 'Firmware Upgrade'. It shows 'Current Firmware Version: V1.4.10R'. Below this is a 'Reboot After Upgrade' checkbox which is unchecked. There is a 'Select File' section with a 'Choose File' button and the text 'No file chosen'. A blue 'Upgrade' button is positioned below the file selection area.

Figure 6.2-1: Firmware Upgrade

6.2.2 Device Reboot

System Configuration → Device Management → Device Reboot

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

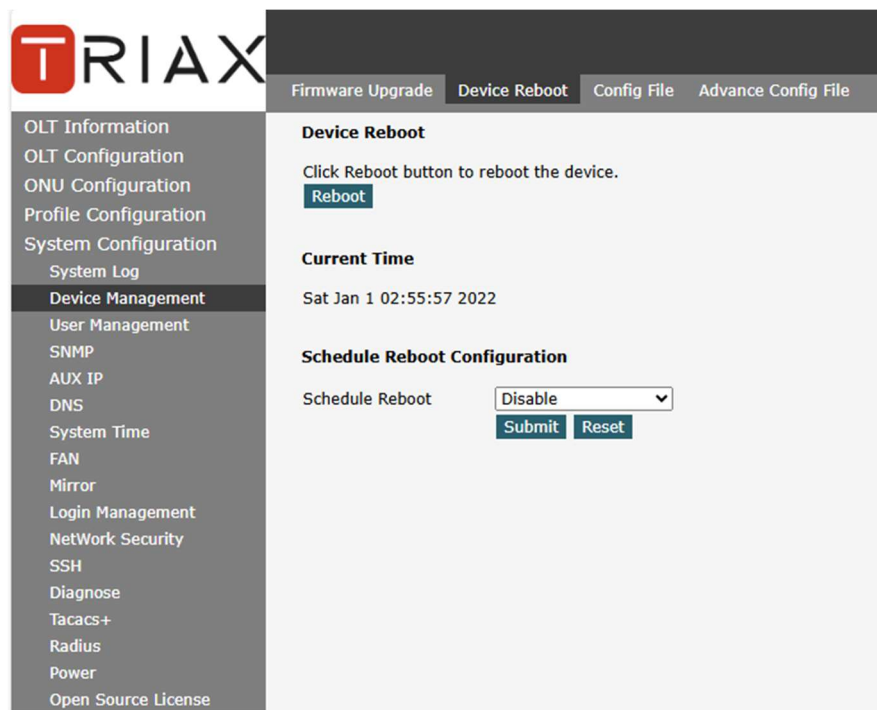


Figure 6.2-2: Device Reboot

6.2.3 Config File

System Configuration → Device Management → Config File

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

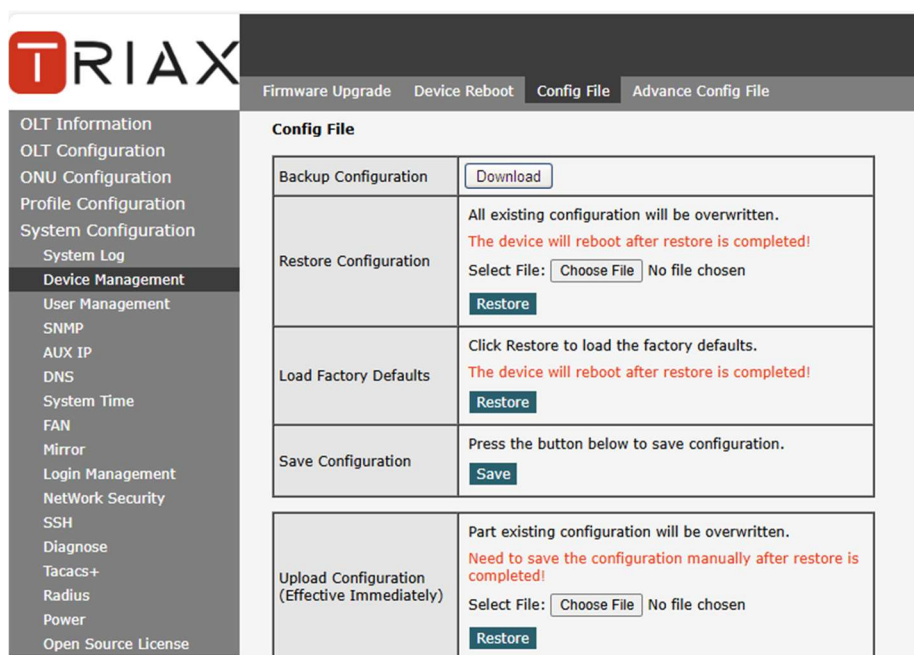


Figure 6.2-3: File Configuration

6.3 User Management

System Configuration → User management

Two types of users 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.

TRIAX

User Manage Role Manage

Add User

User Name

User Password

Confirm Password

User Role

Add Reset

Notice:

- 1.The password must contain at least 10 characters.
- 2.The password must contain at least one digit, one uppercase letter, and one lowercase letter.
- 3.The password can not be any user name.
- 4.The password can not be a weak password.
- 5.The special characters need to be as follows:
(. : - _ / @ ! ~ # \$ % ^ & * () + = ? \ | [{ }] ; ' " < , > `) .

User Table

User Name	User Role	Edit	Delete
admin	Admin		

Figure 6.3-1: User Manage

6.4 SNMP

6.4.1 SNMP V1/V2

System Configuration → SNMP → SNMP V1/V2

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

TRIAX

SNMPV1/V2 SNMPV3 Remote Server

Add Community

Community Name

Access Right

Add

Community Table

Community Name	Access Right	Delete
public	Read-Only	
private	Read-Write	

Add Trap

Host

UDP Port (1-65535)

Community Name

SNMP Version

Add

Trap Table

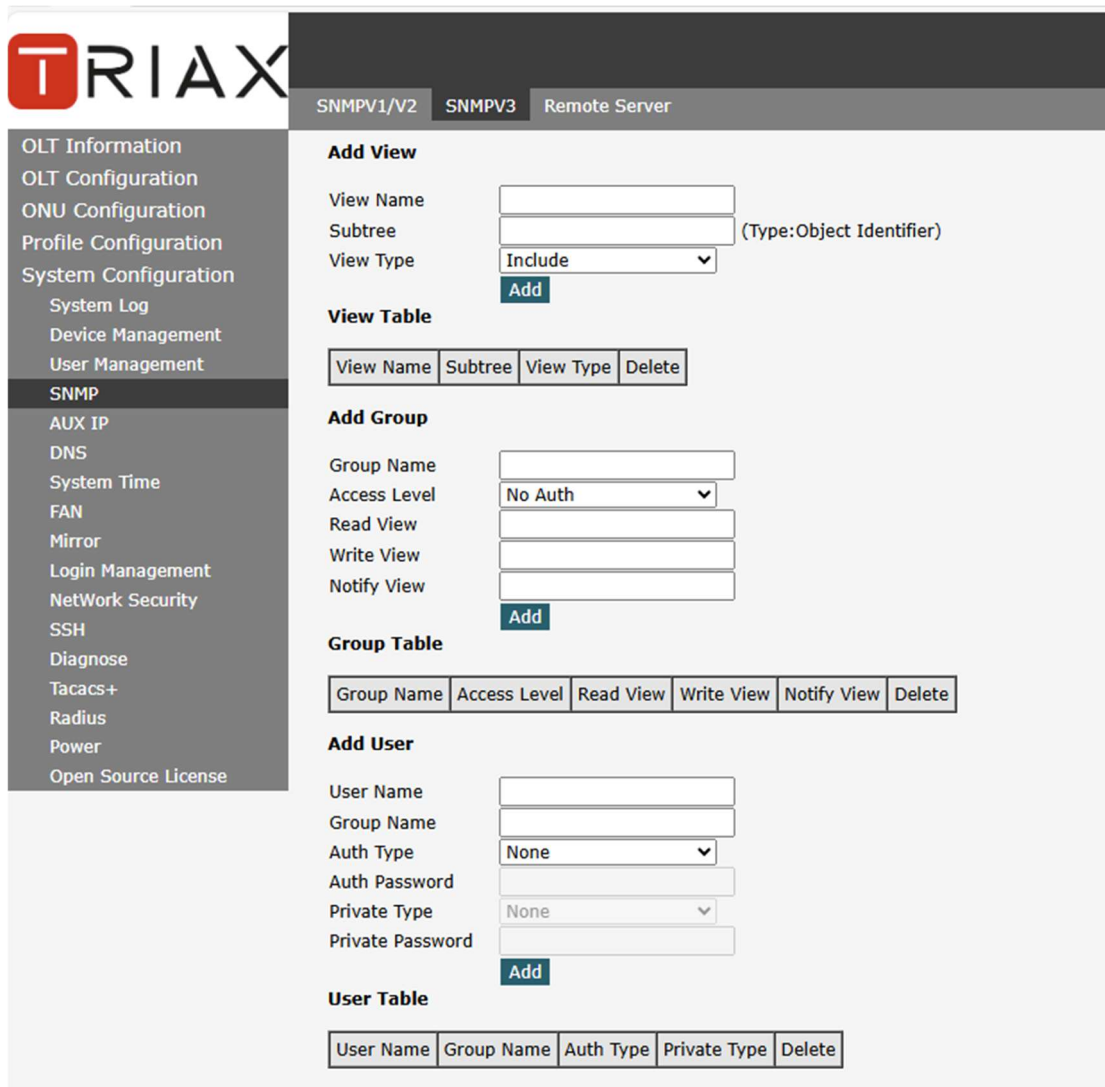
Host	UDP Port	SNMP Version	Community Name	Delete
		1	public	

Figure 6.4-1: SNMP V1/V2

6.4.2 SNMP V3

System Configuration → SNMP → SNMP V3

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



SNMPV1/V2 **SNMPV3** Remote Server

Add View

View Name

Subtree (Type:Object Identifier)

View Type

Add

View Table

View Name	Subtree	View Type	Delete
-----------	---------	-----------	--------

Add Group

Group Name

Access Level

Read View

Write View

Notify View

Add

Group Table

Group Name	Access Level	Read View	Write View	Notify View	Delete
------------	--------------	-----------	------------	-------------	--------

Add User

User Name

Group Name

Auth Type

Auth Password

Private Type

Private Password

Add

User Table

User Name	Group Name	Auth Type	Private Type	Delete
-----------	------------	-----------	--------------	--------

Figure 6.4-2: SNMP V3

6.4.3 Remote Server

System Configuration → SNMP → Remote Server

Configure the IP address of your SNMP network management server.

TRIAX

SNMPV1/V2 **SNMPV3** Remote Server

Add View

View Name:
 Subtree: (Type:Object Identifier)
 View Type:

View Table

View Name	Subtree	View Type	Delete
-----------	---------	-----------	--------

Add Group

Group Name:
 Access Level:
 Read View:
 Write View:
 Notify View:

Group Table

Group Name	Access Level	Read View	Write View	Notify View	Delete
------------	--------------	-----------	------------	-------------	--------

Add User

User Name:
 Group Name:
 Auth Type:
 Auth Password:
 Private Type:
 Private Password:

User Table

User Name	Group Name	Auth Type	Private Type	Delete
-----------	------------	-----------	--------------	--------

Figure 6.4-4: Remote Server

6.5 AUX IP

6.5.1 AUX IP

System Configuration → AUX IP→ AUX IP

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

TRIAX

AUX IP AUX IPv6

AUX IP Configuration

IP Address:
 Subnet Mask:
 Gateway:

Figure 6.5-1: AUX IP

6.5.2 AUX IPv6

System Configuration → AUX IP → AUX IPv6

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

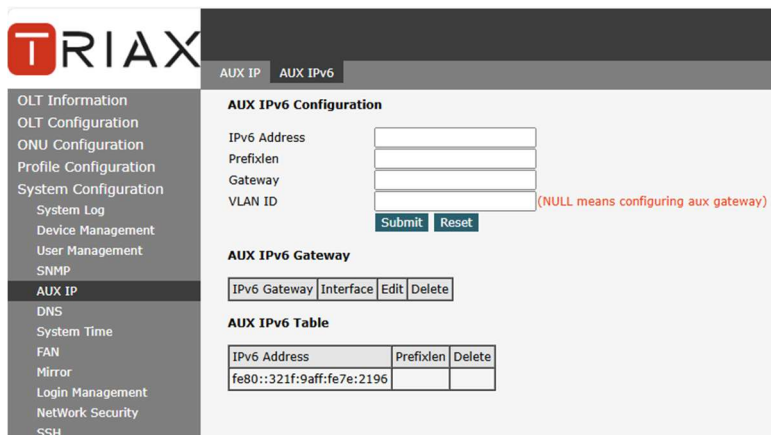


Figure 6.5-2: AUX IPv6

6.6 DNS

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

6.6.1 IPv4 DNS

System Configuration → DNS → IPv4 DNS

This page is used to configure IPv4 DNS.

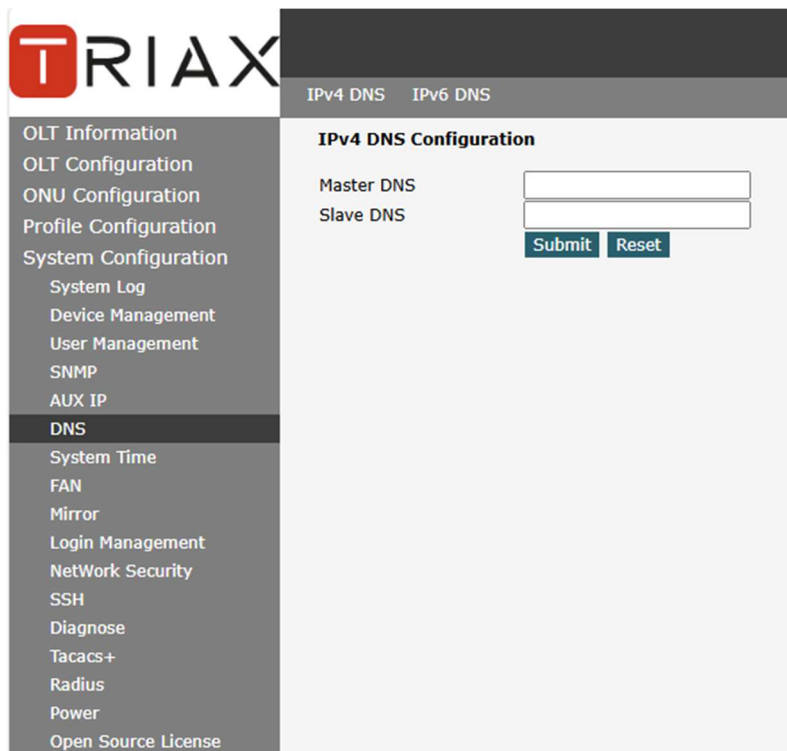


Figure 6.6-1: IPv4 DNS

6.6.2 IPv6 DNS

System Configuration → DNS → IPv6 DNS

This page is used to configure IPv6 DNS.

Figure 6.6-2: IPv6 DNS

6.7 System Time

6.7.1 RTC

System Configuration → System Time → RTC

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

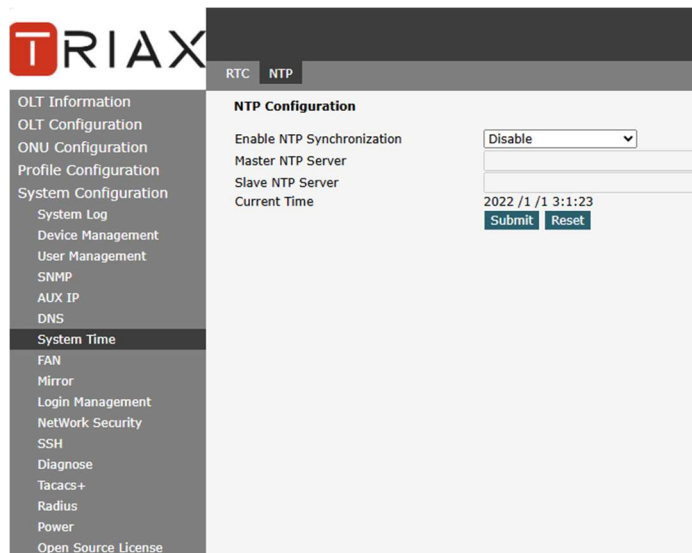
Year	Month	Day	Hour	Minute	Second
2022	1	1	3	0	57

Figure 6.7-1: RTC Setting

6.7.2 NTP

System Configuration → System Time → NTP

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



The screenshot shows the TRIAX web interface for NTP Configuration. The left sidebar contains a menu with options like OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS, System Time (highlighted), FAN, Mirror, Login Management, NetWork Security, SSH, Diagnose, Tacacs+, Radius, Power, and Open Source License. The main content area has tabs for RTC and NTP. Under the NTP tab, the 'NTP Configuration' section includes: 'Enable NTP Synchronization' (set to 'Disable'), 'Master NTP Server' (empty text field), 'Slave NTP Server' (empty text field), and 'Current Time' (displaying '2022 / 1 / 1 3:1:23'). There are 'Submit' and 'Reset' buttons at the bottom.

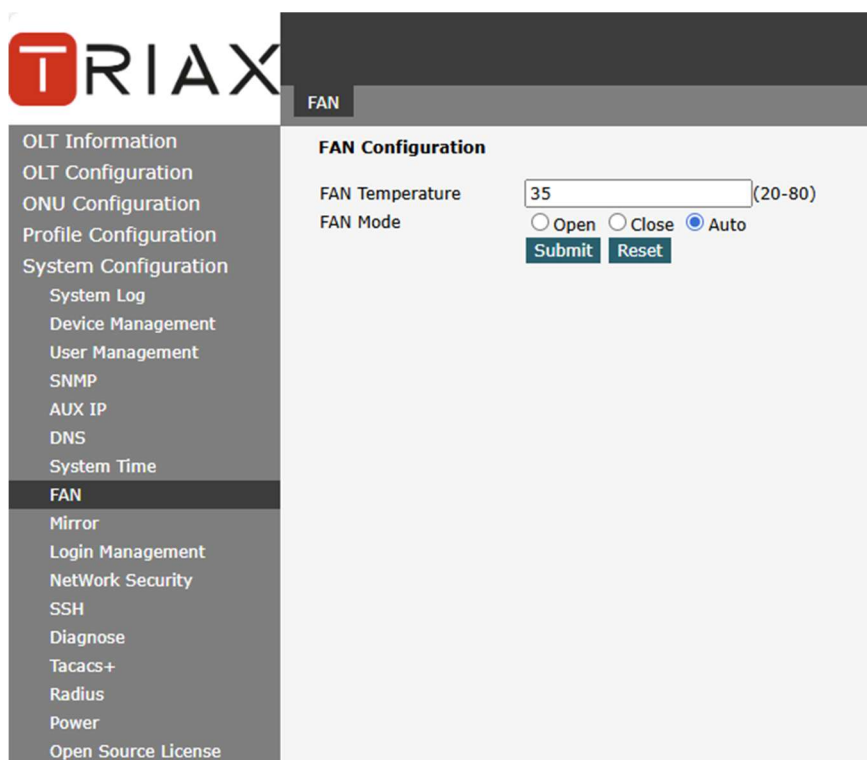
Figure 6.7-2: NTP Configuration

6.8 FAN

System Configuration → FAN

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

This configuration will not be saved after reboot.



The screenshot shows the TRIAX web interface for FAN Configuration. The left sidebar is identical to the previous screenshot, with 'FAN' highlighted in the menu. The main content area has tabs for RTC and FAN. Under the FAN tab, the 'FAN Configuration' section includes: 'FAN Temperature' (set to '35' with a range '(20-80)' in parentheses) and 'FAN Mode' (with radio buttons for 'Open', 'Close', and 'Auto', where 'Auto' is selected). There are 'Submit' and 'Reset' buttons at the bottom.

Figure 6.8-1: FAN Configuration

6.9 Mirror

System Configuration → Mirror

Port mirror is usually used for troubleshooting. Each monitor session can be set with one destination port and up to 8 source ports.

Mirror Configuration

Session ID: 1
Destination Port: GE1

Port ID	Mirrored	Direction
GE1	☐	Both
GE2	☐	Both
GE3	☐	Both
GE4	☐	Both
PON1	☐	Both
PON2	☐	Both
PON3	☐	Both
PON4	☐	Both

Mirror Table

Session ID	Destination Port	Source Port	Type	Delete
------------	------------------	-------------	------	--------

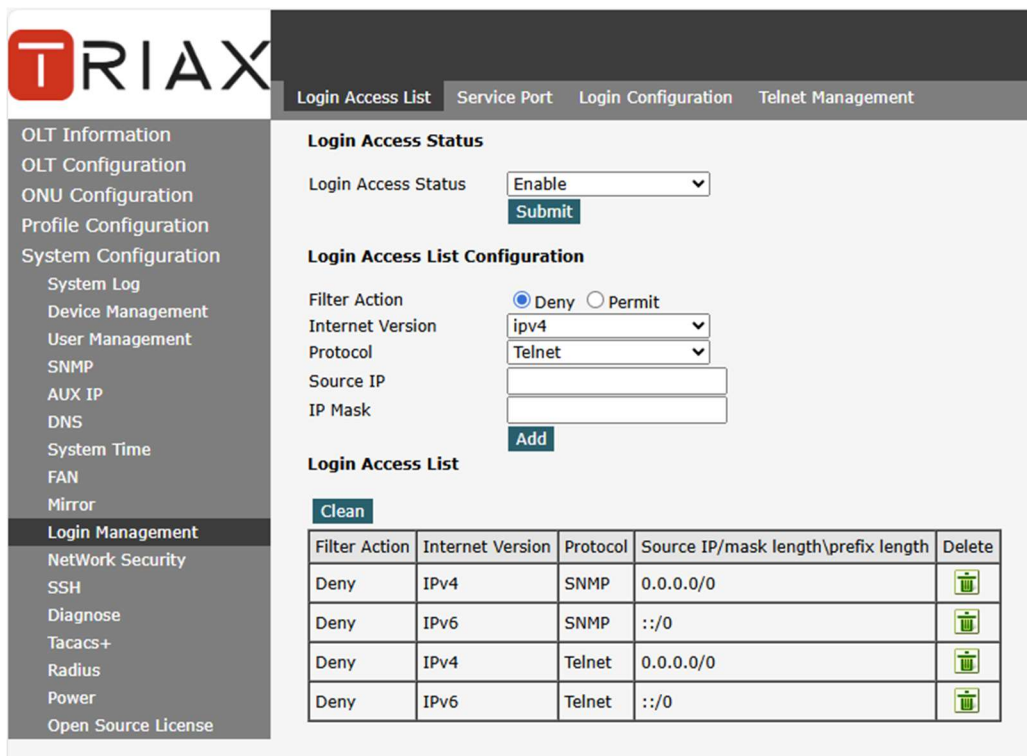
Figure 6.9-1: Mirror Configuration

6.10 Login Management

6.10.1 Login Access List

System Configuration → Login Management → Login Access List

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



Login Access Status

Login Access Status:

Login Access List Configuration

Filter Action: ☒ Deny ☐ Permit

Internet Version:

Protocol:

Source IP:

IP Mask:

Login Access List

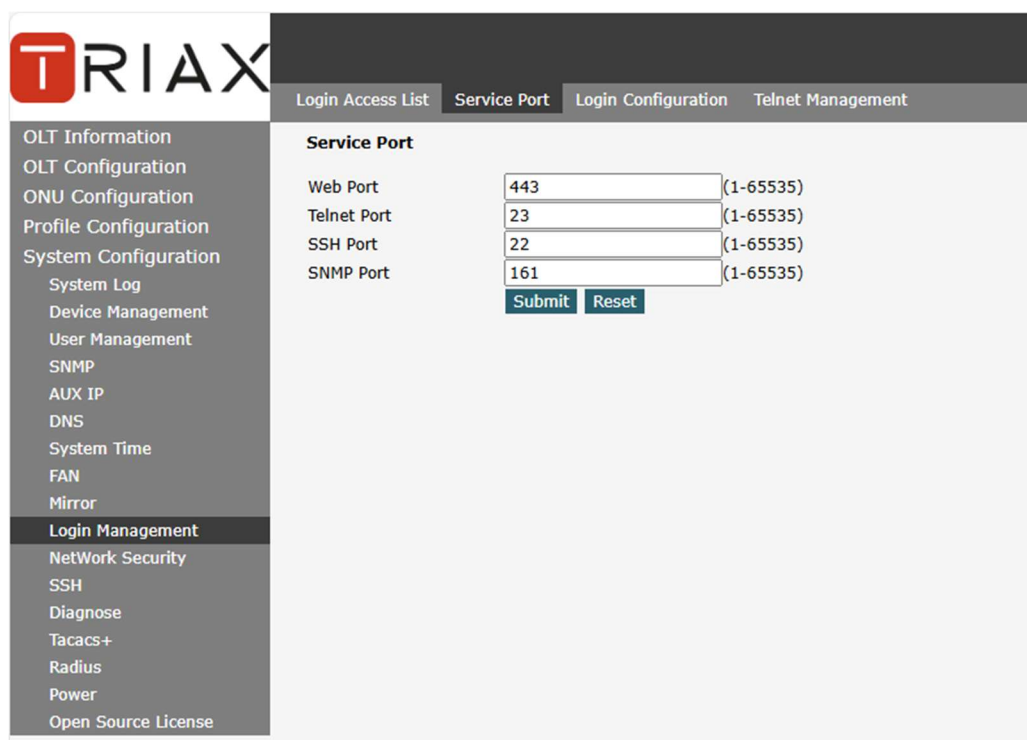
Filter Action	Internet Version	Protocol	Source IP/mask length\prefix length	Delete
Deny	IPv4	SNMP	0.0.0.0/0	Delete
Deny	IPv6	SNMP	::/0	Delete
Deny	IPv4	Telnet	0.0.0.0/0	Delete
Deny	IPv6	Telnet	::/0	Delete

Figure 6.10-1: Login Access List Configuration

6.10.2 Service Port

System Configuration → Login Management → Service Port

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



Service Port

Web Port: (1-65535)

Telnet Port: (1-65535)

SSH Port: (1-65535)

SNMP Port: (1-65535)

Figure 6.10-2: Service Port Configuration

6.10.3 Login Timeout

System Configuration → Login Management → Login Timeout

This page is used to set web timeout.

The screenshot shows the TRIAX web interface. The left sidebar contains a list of configuration options: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management (highlighted), NetWork Security, SSH, Diagnose, Tacacs+, Radius, Power, and Open Source License. The main content area is titled 'Web Configuration' and includes a 'Login Timeout' field set to '10' (with a note '(1-30 minutes)') and a 'Verification Code' dropdown menu set to 'Enable'. There are 'Submit' and 'Reset' buttons at the bottom of the configuration area.

Figure 6.10-3: Login Timeout Configuration

6.11 Net Work Security

System Configuration → Net Work Security

This page is used to set up OLT's network security level.

The screenshot shows the TRIAX web interface. The left sidebar contains a list of configuration options: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, AUX IP, DNS, System Time, FAN, Mirror, Login Management, NetWork Security (highlighted), SSH, Diagnose, Tacacs+, Radius, Power, and Open Source License. The main content area is titled 'Network Security Configuration' and includes a 'Defense level' dropdown menu set to 'Off'. Below this is a 'Detail Configuration' section with various checkboxes and input fields for security settings: IP First Frag, Source IP Equal Dest IP, Source MAC Equal Dest MAC, TCP Flags Syn Frag, TCP Flags CrtI0 Seq0, TCP Flag Fin Urg Psh Seq0, TCP Flags Syn Fin, TCP Source Port Equal Dest Port, UDP Source Port Equal Dest Port, TCP Header Partial Size (set to 20), TCP Header Offset Equals to 1, ICMPv6 Ping Size (set to 512), ICMPv4 Ping Size (set to 512), ICMP Frag Packet, IPv6 Min Frag Size (set to 1280), and Disable Telnet Port: Kernel/Normal. There are 'Submit' and 'Reset' buttons at the bottom of the configuration area.

Figure 6.11-1: Net Work Security Setting

6.12 SSH

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

6.12.1 SSH State

System Configuration → SSH → SSH State

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

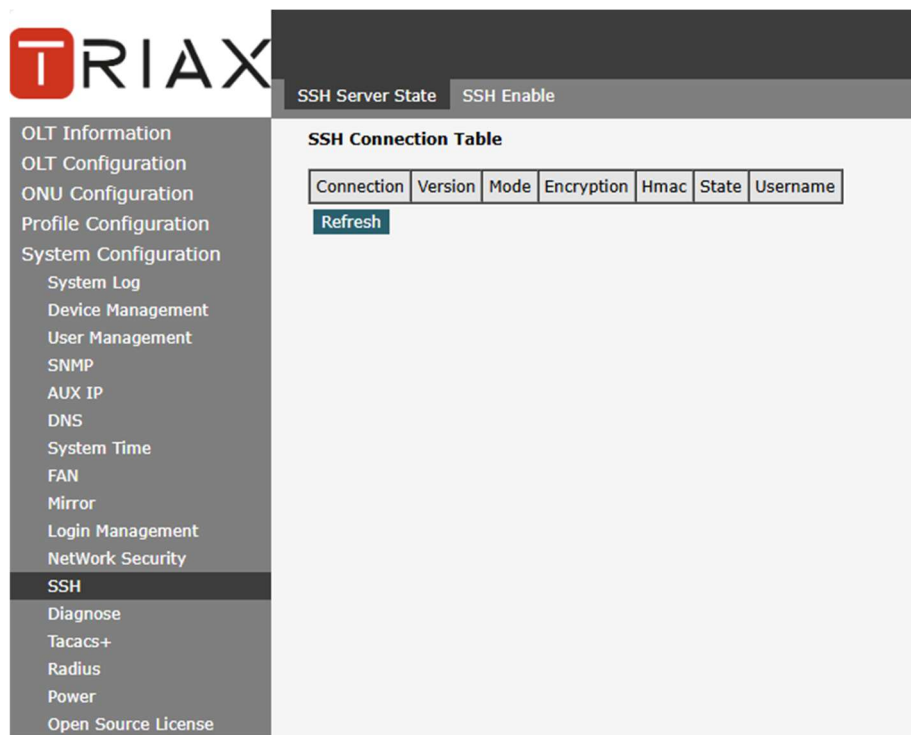


Figure 6.12-1: SSH State

6.12.2 SSH Enable

System Configuration → SSH → SSH Enable

This page is used to configure SSH protocol related parameters.

SSH Server State **SSH Enable**

SSH Enable

SSH Status:

Version:

Auth Retries: (0-6)

Timeout: (1-120)

Max Startups: (1-5)

Max Sessions: (1-12)

Modulus: 2048

SSH Key Table

Key type	Encryption algorithm	Key data
RSA	ssh-rsa	AAAAB3NzaC1yc2EAAAADAQABAAQCuP/RKHqLSw/IHyMeGDO/wt8Uc
ECDSA	ecdsa-sha2-nistp256	AAAAE2VjZHNhLXNoYTItbmlzdHAYNTYAAAAIbmlzdHAYNTYAAABBBM0Gdt
ED25519	ssh-ed25519	AAAAC3NzaC1lZDI1NTE5AAAAIMQqoe64t7IQIy/wtqAzHl9tqdLaqxuWZM

Figure 6.12-2: SSH Global Configuration

6.13 Diagnose

6.13.1 Ping Diagnose

System Configuration → Diagnose → Ping Diagnose

This interface is used to diagnose network connectivity.

PING Diagnose **Tracert Diagnose**

Ping Diagnosis

Destination IP Address Or Host Name:

IP type:

Ping Test Result

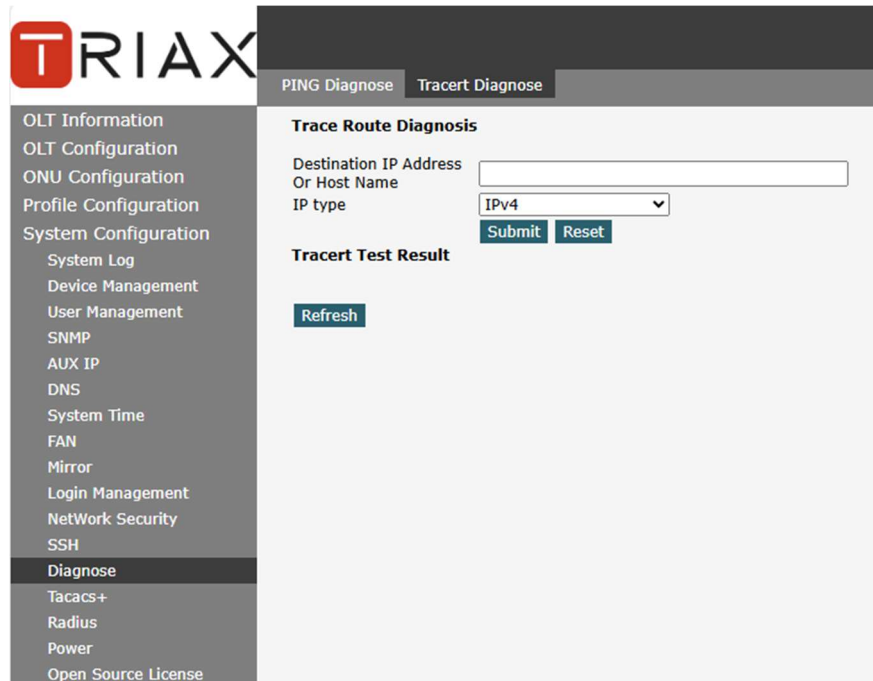
Cannot get host address for host

Figure 6.13-1: Ping Diagnose Configuration

6.13.2 Tracert Diagnose

System Configuration → Diagnose → Tracert Diagnose

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

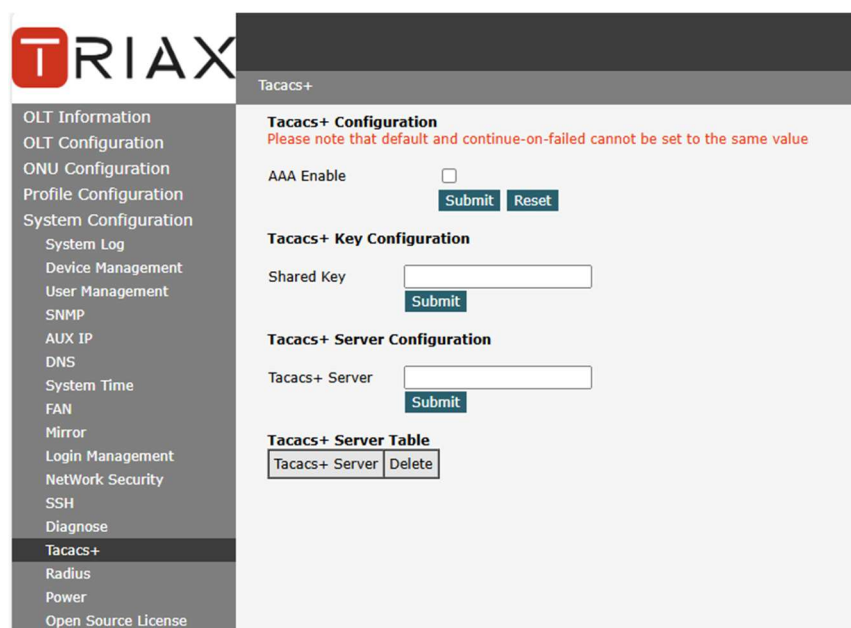


The screenshot shows the TRIAX web interface for Tracert Diagnose Configuration. On the left is a navigation menu with categories like OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, and Diagnose. The 'Diagnose' menu item is selected. The main content area has tabs for 'PING Diagnose' and 'Tracert Diagnose', with 'Tracert Diagnose' being active. Under 'Tracert Diagnose', there is a 'Trace Route Diagnosis' section with input fields for 'Destination IP Address Or Host Name' and 'IP type' (set to IPv4), and 'Submit' and 'Reset' buttons. Below this is a 'Tracert Test Result' section with a 'Refresh' button.

Figure 6.13-2: Tracert Diagnose Configuration

6.14 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.



The screenshot shows the TRIAX web interface for Tacacs+ Configuration. The left navigation menu is the same as in Figure 6.13-2, with 'Tacacs+' selected. The main content area has a 'Tacacs+' tab. Under this tab, there is a 'Tacacs+ Configuration' section with a warning message: 'Please note that default and continue-on-failed cannot be set to the same value'. It includes an 'AAA Enable' checkbox and 'Submit' and 'Reset' buttons. Below this is a 'Tacacs+ Key Configuration' section with a 'Shared Key' input field and a 'Submit' button. Then there is a 'Tacacs+ Server Configuration' section with a 'Tacacs+ Server' input field and a 'Submit' button. At the bottom is a 'Tacacs+ Server Table' section with a table containing two columns: 'Tacacs+ Server' and 'Delete'.

Figure 6.14-1: Tacacs+ Configuration

6.15 Radius

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

Radius Configuration
Please note that default and continue-on-failed cannot be set to the same value

AAA Enable ☐ [Submit](#) [Reset](#)

Radius Server Configuration

Radius Server

Shared Key [Submit](#)

Radius Server Table

Radius Server	Delete

Figure 6.15-1: Radius Configuration

6.16 Power

The Power interface provides monitoring and management of the OLT's power and backup systems. It displays real-time status of the main power supply and rechargeable battery, including charging mode, operational state, and any faults. This allows administrators to ensure continuous device operation and quickly respond to power-related issues.

Battery Charging Management

Mode

Status Not charging

Battery details [Detail](#) [Submit](#)

Power Module State Information

Power ID	Power State
Rechargeable Battery	Not Working
Power Supply	In Working

[Refresh](#)

Figure 6.16-1: Power

7 Technical Specifications

TOLT - 8422			
ART. Number	308501		
	Product Description	Accessories	Power Configuration
	8*GPON	GPON SFP C++++ MODULE X 8	2*AC
	4*RJ45		
	2*SFP		
	2*SFP+		
Chassis	Rack	1U 19 Inch Standard Box	
	QTY	8	
Uplink Port	RJ45(GE)	4	
	SFP(GE)/SFP+(10GE)	2	
	QTY	8	
GPON Port	Physical Interface	SFP Slots	
	Max splitting ratio	1:128	
Management Ports		1*10/100/1000BASE-T out-band port 1*CONSOLE port	
		1*USB2.0	
Backplane Bandwidth (Gbps)		104	
Port Forwarding Rate (Mpps)		68.448	
PON Port Specification	Transmission Distance	20KM	
	GPON port speed	Upstream 1.244Gbps, Downstream 2.488Gbps	
	Wavelength	TX 1490nm, RX 1310nm	
	Connector	SC/UPC	
	Fibre Type	9/125µm SMF	
	Supported PON module level	Class B+, C, C+, C++, C+++, C++++	
Power Supply	AC	Working Voltage Range: 100~240V, Rated Voltage: 110V/220V	
Management Mode		EMS, WEB, SNMP, Telnet, CLI	

8 EU Declaration of Conformity

The product Declaration of Conformity can be downloaded from the product page at www.triax.com

9 Conditions of warranty

TRIAX UK warrants the product as being free from defects in material and workmanship for a period of 24 months starting from the date of production indicated on it. See note below.

If during this period of warranty, the product proves defective, under normal use, due to defective materials or workmanship, TRIAX UK, at its sole option, will repair or replace the product. Return the product to your local dealer for reparation.

THE WARRANTY IS APPLIED ONLY FOR DEFECTS IN MATERIAL AND WORKMANSHIP AND DOES NOT COVER DAMAGE RESULTING FROM:

- Misuse or use of the product outside of its specifications,
- Installation or use in a manner inconsistent with the technical or safety standards in force in the country where the product is used,
- Use of non-suitable accessories (power supply, adapters...),
- Installation in a defective system,
- External cause beyond the control of TRIAX UK such as drop, accidents, lightning, fire, ...

THE WARRANTY IS NOT APPLIED IF

- Production date or serial number on the product is illegible, altered, deleted or removed.
- The product has been opened or repaired by a non-authorized person.

NOTE

Date of production can be found in the product's serial number code. The format is "YYWW123456 (YEAR, WEEK, 123456 product unique number), e.g. 2532000020 = year 2025 week 32, product No.20 of this batch.

