User Guide for Web Management

GPON OLT

TES7001&TES7002

www.tendacn.com

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Preface

Thank you for choosing Tenda! Before you start managing this product through your browser, read this user guide and save it for future reference.

Application model

This guide applies to GPON OLT. The "OLT" and “OLT device” mentioned in this guide refer to GPON OLT. All screenshots herein, unless other specified, are taken from TES7002.

The functions may differ with product models. The actual product prevails.

Audience

This guide is intended for installation and commissioning engineer, field maintenance engineer, system maintenance engineer, data configuration engineer and application developer.

Conventions

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with products of different models and versions. The actual web UI of the product prevails.

The product figures and screenshots in this guide are for examples only. They may be different from the actual products you purchased, but do not affect the normal use.

If the function or parameter is displayed in gray on the product web interface, the product model is not supported or cannot be modified.

The typographical elements that may be found in this document are defined as follows.

Item	Presentation	Example
Cascading menus	>	OLT Configuration > Uplink Port Configuration
Parameter and value	Bold	Click **Apply**
Variable	Italic	Format: *XX*:*XX*:*XX*:*XX*:*XX*:*XX*
UI control	Bold	Click **Copy** in the **PoE Global Configuration** module

The symbols that may be found in this document are defined as follows.

Symbol	Meaning
NOTE	This format is used to highlight information of importance or special interest. Ignoring this type of note may result in ineffective configurations, loss of data or damage to device.
TIP	This format is used to supplement or explain relevant operations.

For more documents

If you want to get more documents about the device, visit www.tendacn.com and search for the corresponding product model.

Technical support

Contact us if you need more help. We will be glad to assist you as soon as possible.

Email address: support@tenda.cn

Website: www.tendacn.com

Revision history

Tenda is constantly searching for ways to improve its products and documentation. The following table indicates any changes that might have been made since this guide was first published.

Version	Date	Description
V1.0	2024-06-30	Original publication.

Contents

1 Login and logout

1.1 Login

For initial use or having restored to factory settings of the OLT, you can refer to the quick start guide of the corresponding OLT model (download it from www.tendacn.com).

If the OLT has been configured, refer to the following.

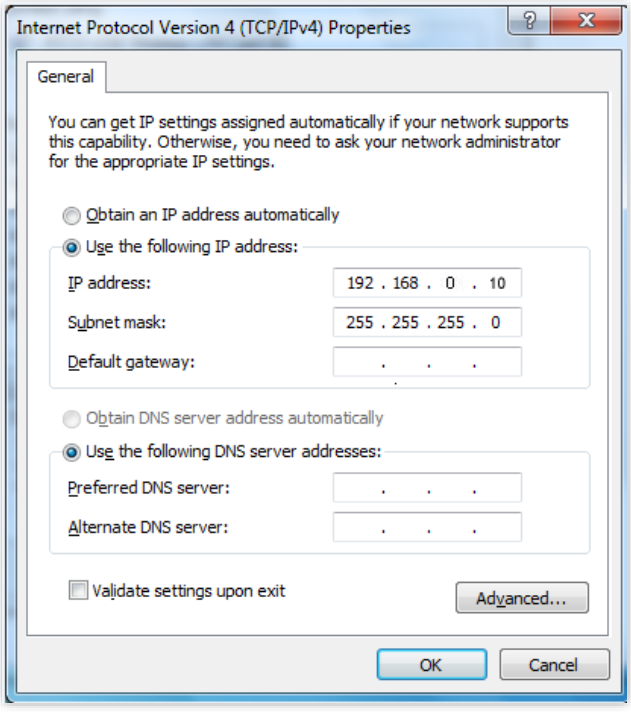
You can log in to the web UI of the OLT with the static inband management and DHCP inband management modes.

Static inband management login

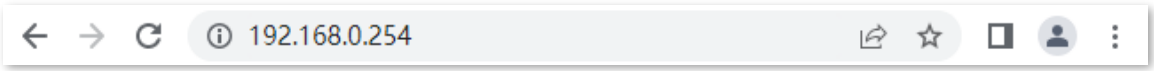
Step 1 Connect the management computer to any uplink port of the OLT.

Step 2 Set the computer IP address to the same network segment as the OLT inband management IP address (192.168.0.254 by default).

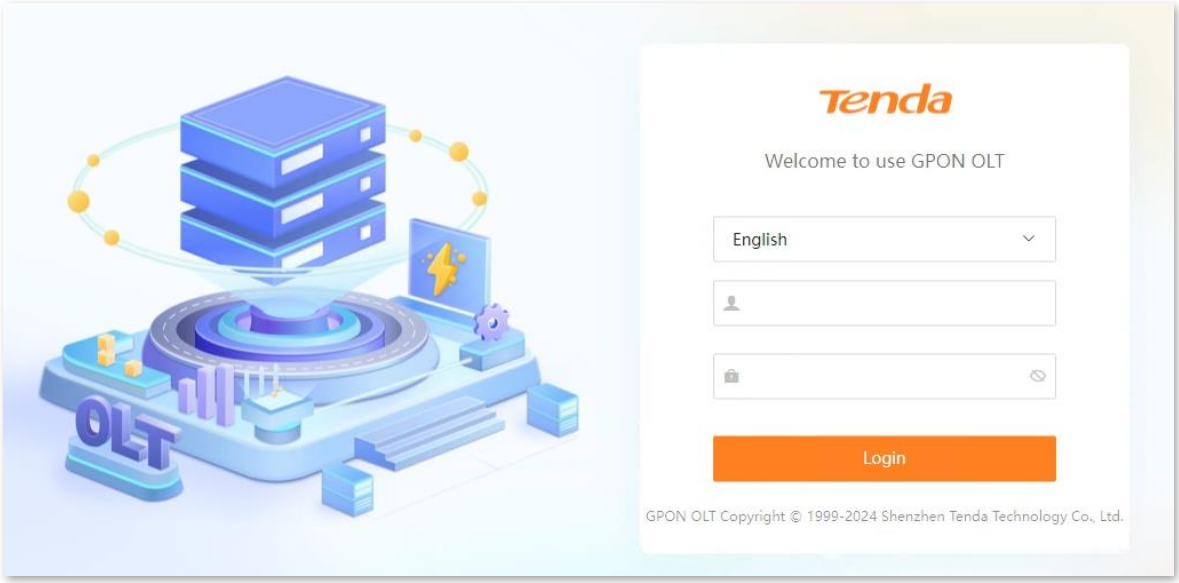
For example, if the OLT inband management IP address is 192.168.0.254, the IP address of the computer can be set to 192.168.0.*X* (*X* is 2 to 253, except 254, which is unused), and the subnet mask is **255.255.255.0**.



Step 3 Start a browser (Chrome 85/Firefox 91/Safari 4/360 browser 10/EDGE and above versions supported) on your computer, and enter the OLT inband management IP address in the web browser to log in to the web UI of the OLT.



Step 4 Select the language as required (**English** by default), enter the username and password (both are **admin** by default), and click **Login**.



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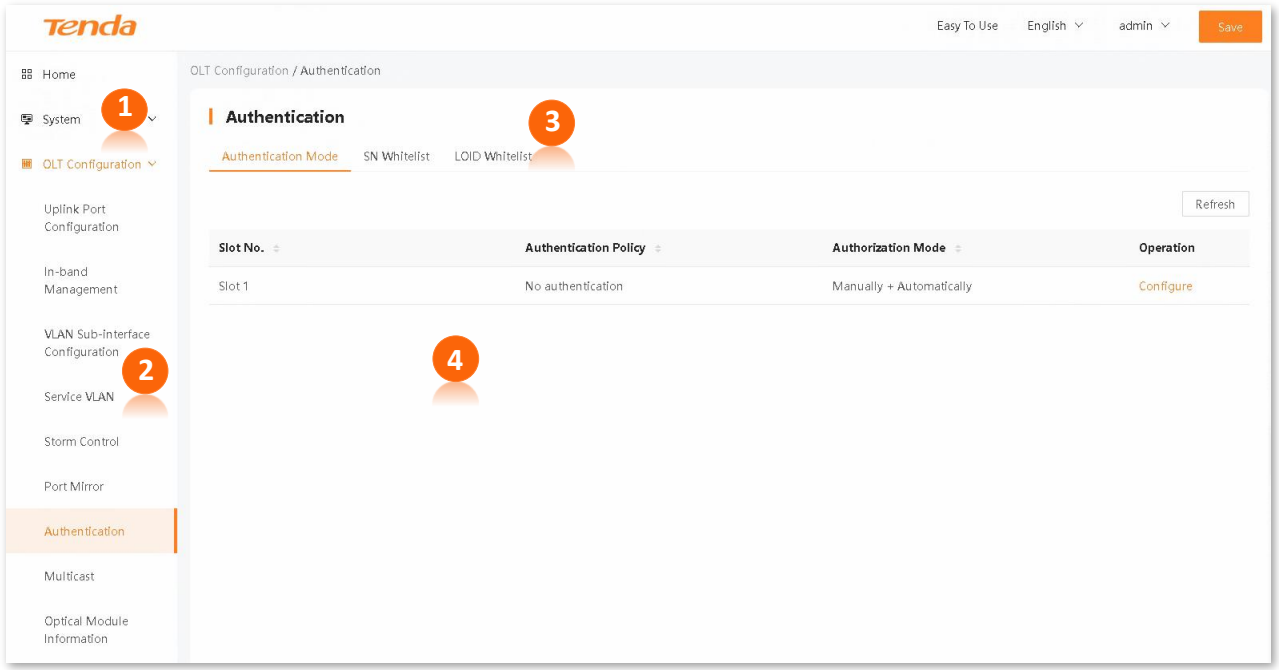
1.2 Logout

After you log in to the OLT's web UI page, the system will automatically log you out if there is no operation within the Web Login Timeout. Alternatively, you can navigate to **admin** > **Logout** in the upper right corner to exit the web UI page.

2 Web UI introduction

2.1 Web layout

The web UI page can be divided into four parts: level-1 navigation bar, level-2 navigation bar, tab page area and the configuration area. See the following figure.



TIP

Functions or parameters displayed in gray on the web UI are not supported yet or cannot be modified under the current configuration.

NO.	Name	Description
1	Level-1 navigation bar	The navigation bars and tab pages display the function menu of the web UI of the OLT. Users can select functions as required and the configuration appears in the configuration area.
2	Level-2 navigation bar	
3	Tab page area	
4	Configuration area	This area enables you to view and modify the configuration.

2.2 Common buttons

The following table describes the common buttons available on the web UI of the OLT.

Common buttons	Description
Easy To Use	Used to configure the Easy to Use function.
English	Used to switch the page language.
admin	Used to exit the web UI page and go back to the login page.
Save	Used to save all configurations of the OLT to the configuration file.
Apply	Used to save the current page configuration and make the configuration take effect. When the configuration is not saved to the configuration file, the configuration will be lost if the device is powered off.
Refresh	Used to refresh the current page content.
Cancel	Used to cancel the unsaved configuration of the current page and revert to the configuration before modification.

3 View OLT information

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models. The actual product prevails.

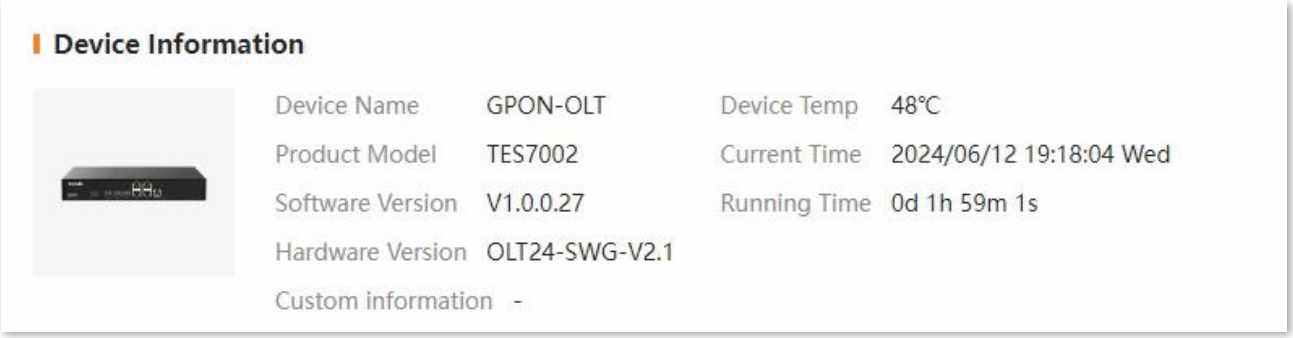
3.1 View OLT basic information

There are two modes to view OLT basic information.

- Using Mode 1, you can view the device name, product model, software and hardware version, device temperature, current time, running time and custom information.
- Using Mode 2, in addition to the OLT information in Mode 1, you can also view the figure of the OLT front panel, connection status of the PON port and in-band IP address.

3.1.1 Mode 1

Log in to the web UI of the OLT, and navigate to **Home**. In the **Device Information** module, you can view the basic information of the OLT. The following figure is for reference only.



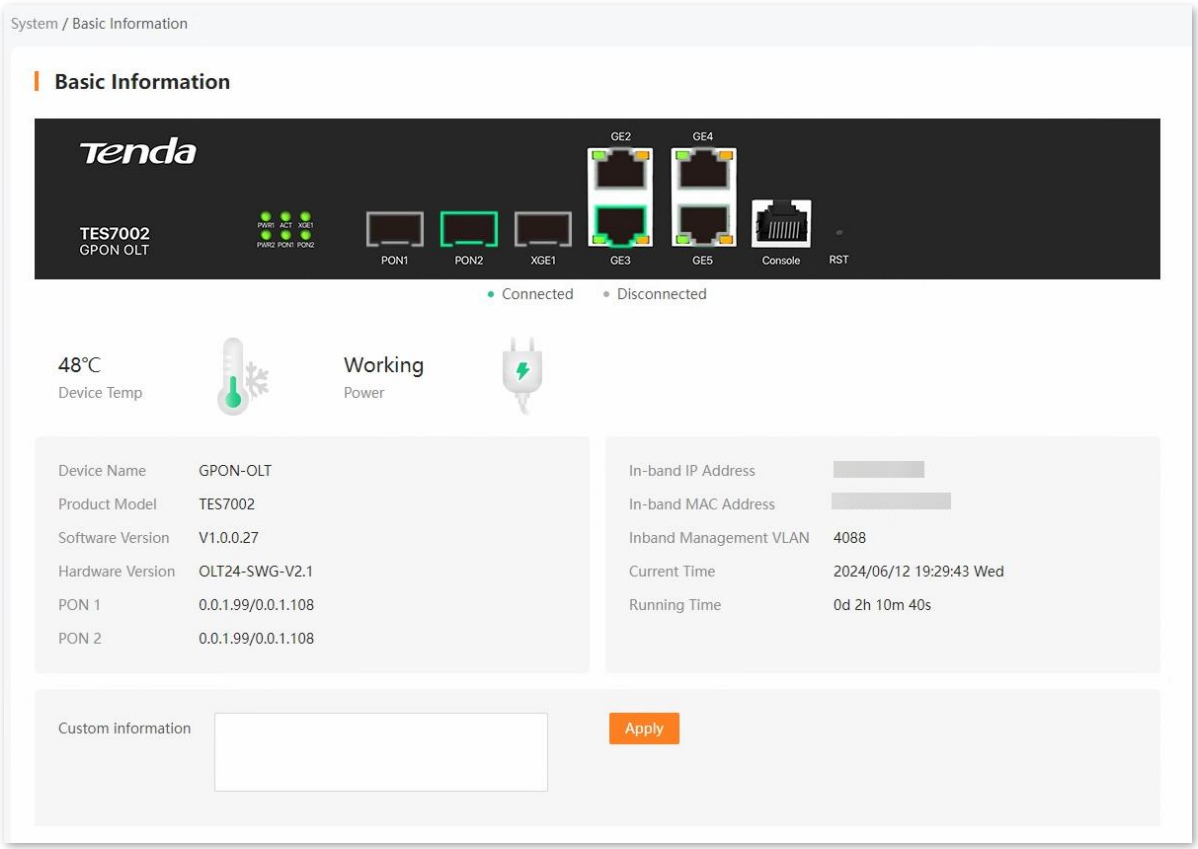
Parameter description

Parameter	Description
Device Name	Specifies the device name of the OLT.
Product Model	Specifies the model of the OLT.

Parameter	Description
Software Version	Specifies the software version of the OLT.
Hardware Version	Specifies the hardware version of the OLT.
Device Temp	Specifies the current temperature of the OLT.
Current Time	Specifies the current system time of the OLT.
Running Time	Specifies the time during which the OLT is operating since the last startup.
Custom Information	Specifies the custom information of OLT, which is usually used for location information annotation. You can customize it on the Basic Information page.

3.1.2 Mode 2

Log in to the web UI of the OLT, and navigate to **System** > **Basic Information**. On this page, you can view the figure of the OLT front panel, connection status of the PON port, working status of the power supply, OLT basic information and time. The following figure is for reference only.



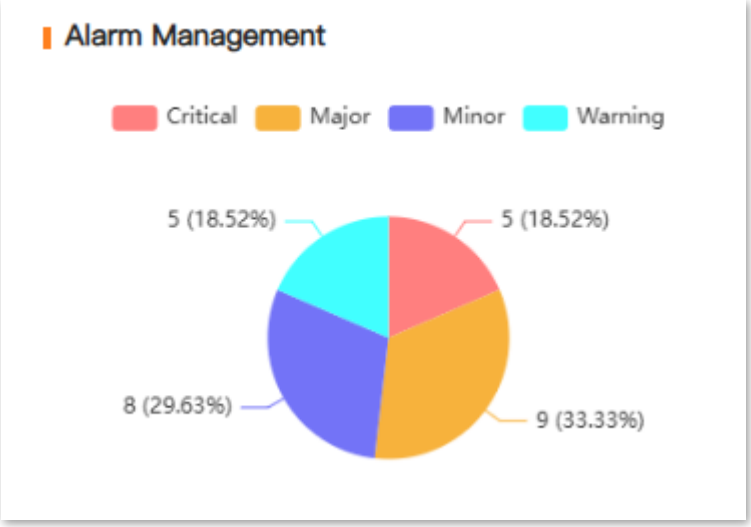
Parameter description

Parameter/Item	Description
	Specifies the connection status of the PON port of the OLT.  : The PON port is connected to an ONT or the uplink PON port is connected properly.  : The PON port is not connected to an ONT, the connected ONT is offline, or the uplink PON port is disconnected.
PON1/2	Specifies the PON chip version.
Power	Specifies the running status of the OLT power.
In-band IP Address	Specifies the OLT in-band management IP address.
In-band MAC Address	Specifies the OLT in-band management MAC address.
In-band Management VLAN	Specifies the OLT in-band management VLAN ID.

Refer to Mode 1 for other parameter descriptions.

3.2 View OLT alarm information

Log in to the web UI of the OLT, and navigate to **Home**. In the **Alarm Management** module, you can view the number and percentage of alarm information of the OLT. To view the specific content of the alarm, you can click the corresponding color in the alarm chart. The system will redirect to the Current Alarm page and display the corresponding alarm information. The following figure is for reference only.

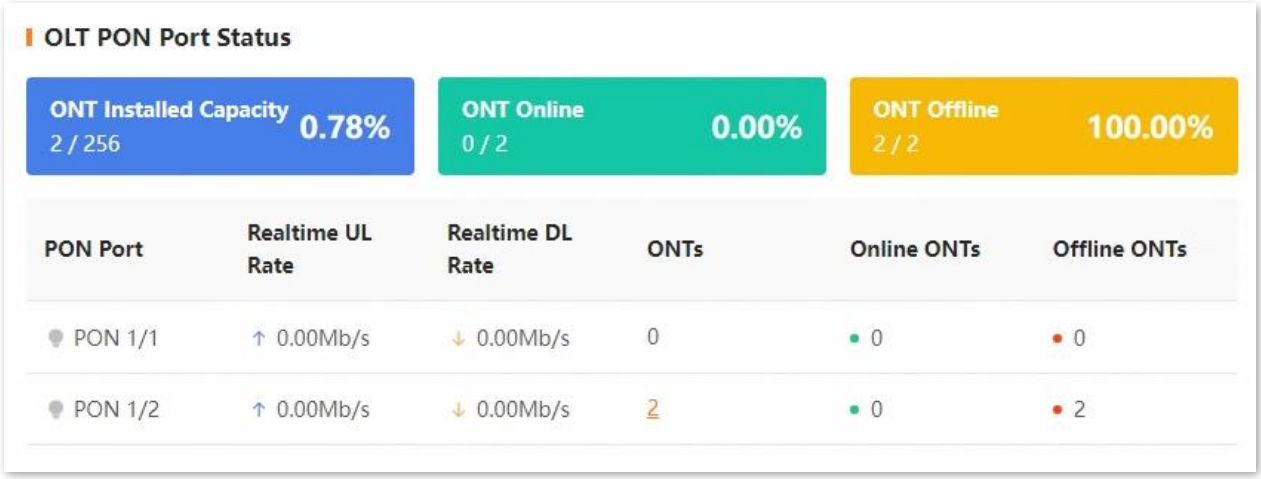


Parameter description

Parameter		Description
Alarm Management	Critical	Specifies the critical alarm marked red of the OLT.
	Major	Specifies the major alarm marked yellow of the OLT.
	Minor	Specifies the minor alarm marked purple of the OLT.
	Warning	Specifies the warning alarm marked blue of the OLT.
Alarm Chart	Chart Parameter	Specifies the number and percentage corresponding to various types of alarms of the OLT. You can click the corresponding color in the alarm chart. The system will redirect to the Current Alarm page and display the corresponding alarm information.

3.3 View OLT PON port status

Log in to the web UI of the OLT, and navigate to **Home**. In the **OLT PON Port Status** module, you can view the ONT installed capacity, ONT online rate and ONT offline rate. You also can view the each PON port status, including realtime uplink and downlink rate, the total number of ONTs, number of online and offline ONTs. The following figure is for reference only.



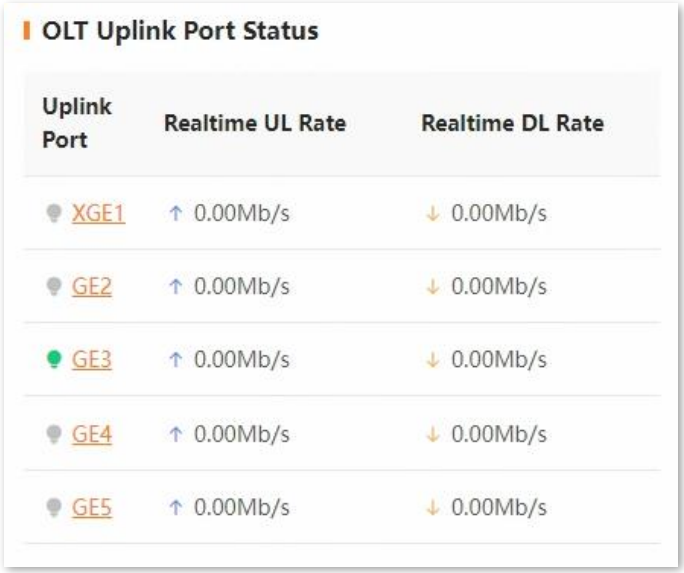
Parameter description

Parameter	Description
PON Port	Specifies the PON port number and connection status of the OLT. : Green means that at least the OLT PON port is properly connected to an ONT. : Gray means the ONTs are all offline or the OLT PON port is disconnected to the ONTs.
Realtime UL Rate	Specifies the uplink real-time rates of the OLT PON port.
Realtime DL Rate	Specifies the downlink real-time rates of the OLT PON port.
ONTs	Specifies the number of registered ONTs connected to the OLT PON port, including offline and online ONTs. You can click any non-zero ONTs to redirect to the Authorized List page.
Online ONTs	Specifies the number of online ONTs connected to the OLT PON port.
Offline ONTs	Specifies the number of offline ONTs connected to the OLT PON port.

Parameter	Description
ONT Installed Capacity	Specifies the registered ONTs ratio of the OLT (Total number of registered ONTs/Total number of the ONT capacity). - Total number of registered ONTs: The total number of registered ONTs connected to the OLT, which means the total number of registered ONTs connected to all PON ports of the OLT. - Total number of the ONT capacity: The maximum number of ONTs that can be connected to the OLT. Currently, at most 128 ONTs can be connected to the TES7001. At most 256 ONTs can be connected to the TES7002. And each PON port can connect to 128 ONTs.
ONT Online	Specifies the online ONTs ratio of the OLT (Total number of online ONTs/Total number of registered ONTs). - Total number of online ONTs: The total number of online ONTs connected to the OLT, which means the total number of online ONTs connected to all PON ports of the OLT. - Total number of registered ONTs: The total number of registered ONTs connected to the OLT, which means the total number of registered ONTs connected to all PON ports of the OLT.
ONT Offline	Specifies the offline ONTs ratio of the OLT (Total number of offline ONTs/Total number of registered ONTs). - Total number of offline ONTs: The total number of offline ONTs connected to the OLT, which means the total number of offline ONTs connected to all PON ports of the OLT. - Total number of registered ONTs: The total number of registered ONTs connected to the OLT, which means the total number of registered ONTs connected to all PON ports of the OLT.

3.4 View OLT uplink port status

Log in to the web UI of the OLT, and navigate to **Home**. In the **OLT Uplink Port Status** module, you can view the uplink port status and real-time uplink and downlink rate of the port. The following figure is for reference only.



Parameter description

Parameter	Description
Uplink Port	Specifies the OLT uplink port connection status. You can click any uplink port number to redirect to the Uplink Port Configuration page. : The uplink port of the OLT is connected properly. : The uplink port of the OLT is disconnected.
Realtime UL Rate	Specifies the uplink real-time rate of the OLT uplink port.
Realtime DL Rate	Specifies the downlink real-time rate of the OLT uplink port.

4 OLT configuration

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models. The actual product prevails.

4.1 Configure uplink port loopback detection

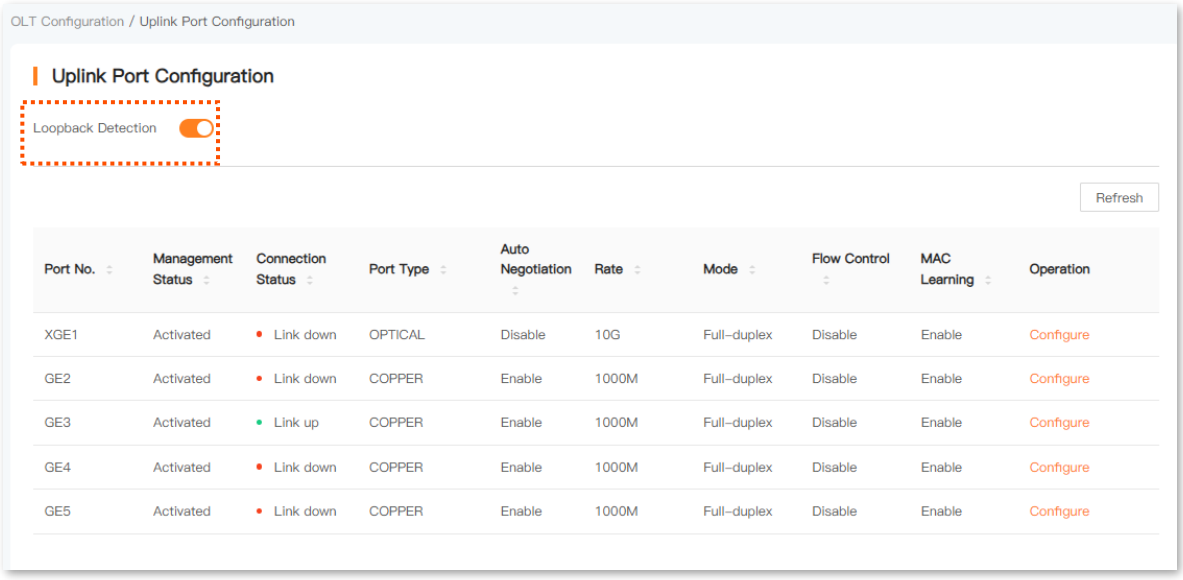
With the uplink port loopback detection function enabled, when the system detects a loop on the OLT uplink port, it will automatically clear the loop fault to ensure normal service operation.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Uplink Port Configuration**.

Step 3 Enable the **Loopback Detection** function. The following figure is for reference only.



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Parameter description

Parameter	Description
Loopback Detection	Specifies whether to enable the loopback detection function. It is enabled by default. It is recommended that this function be enabled for a long time. - Enable: When the system detects a loop on the OLT uplink port, it will automatically clear the loop fault to ensure normal service operation. - Disable: When the system detects a loop on the OLT uplink port, it will not automatically clear the loop fault, which may lead to the risk of failure in user services.

4.2 Configure uplink port

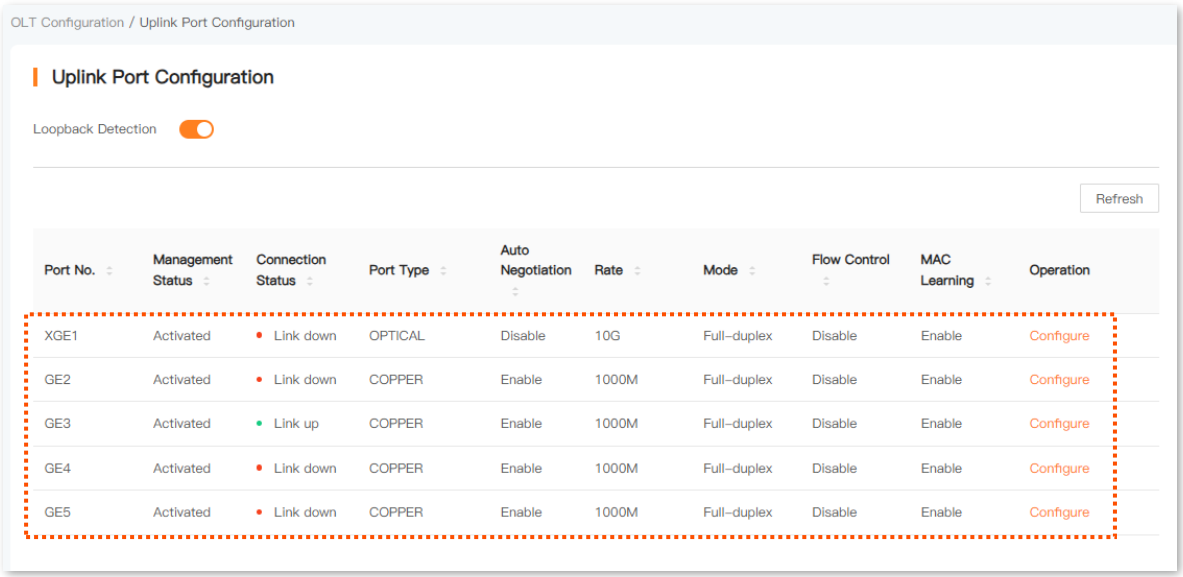
On this page, you can configure the related parameters of the uplink port, including the port type, auto negotiation, rate, duplex mode and flow control.

Configuration procedure

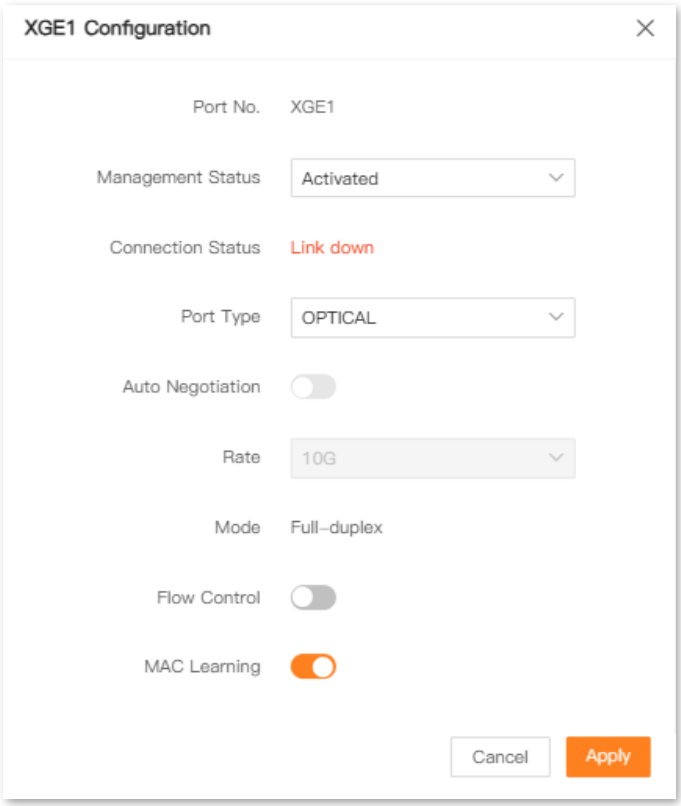
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Uplink Port Configuration**.

Step 3 Select the corresponding uplink port, and click **Configure**. The following figure is for reference only.



Step 4 Configure the relevant parameters as required, and click **Apply**. The following figure is for reference only.



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Parameter description

Parameter	Description
Port No.	Specifies the port number of the OLT uplink port.
Management Status	Specifies the management status of the OLT uplink port, including **Activated** and **Deactivated**. It is **Activated** by default.
Connection Status	Specifies the connection status of the OLT uplink port. - **Link up**: The uplink port of the OLT is connected properly. - **Link down**: The uplink port of the OLT is disconnected.
Port Type	Specifies the port type of the OLT uplink port. **XGE1** port can be configured as **OPTICAL** and **FIBER. GE2** – **GE5** ports can be configured as **COPPER**.

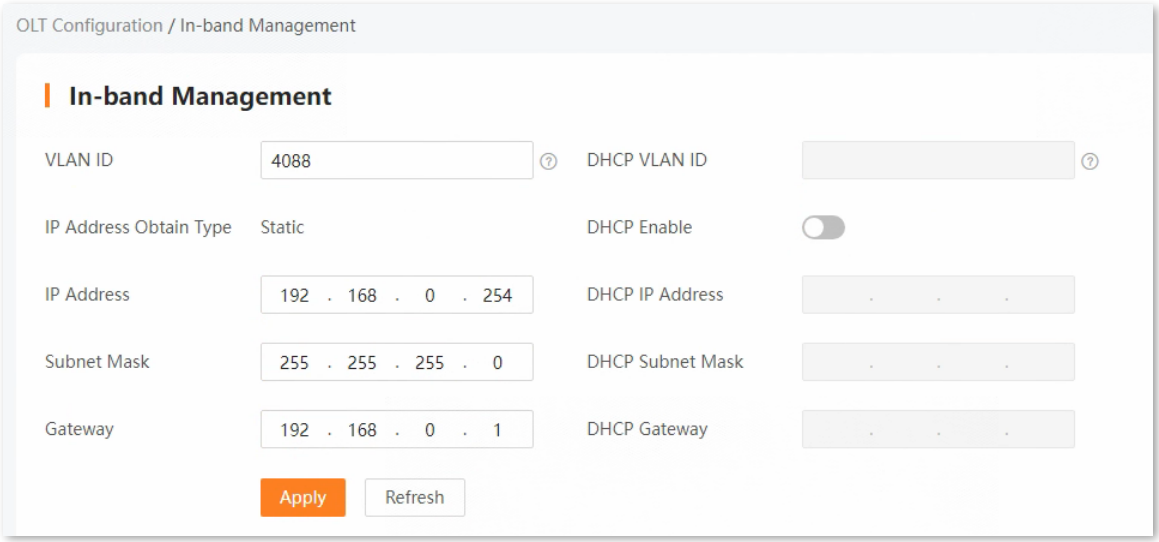
Parameter	Description
Auto Negotiation	Specifies whether to enable the auto negotiation function of the OLT uplink port. When **Auto Negotiation** is enabled, the uplink port will negotiate with the port of the peer device to reach the maximum transmission rate. TIP – This parameter is not available when the **Port Type** is **OPTICAL**. – This parameter is enabled by default and can be edited when the **Port Type** is **FIBER** or **COPPER**.
Rate	Specifies the rate of the OLT uplink port, which is automatically delivered according to the port type.
Mode	Specifies the duplex mode of the OLT uplink port. It is **Full-duplex** by default.
Flow Control	Specifies whether to enable the flow control function of the OLT uplink port for congestion control. It is disabled by default.
MAC Learning	Specifies whether to enable the MAC learning function of the OLT uplink port. It is enabled by default.

4.3 Configure in-band management

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **In-band Management**.

Step 3 Set the relevant parameters of the in-band management as required, and click **Apply**. The following figure is for reference only.



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Parameter description

Parameter	Description
VLAN ID	Specifies the VLAN ID of the OLT static in-band management. The default value is **4088**. The value range is 1 to 4094. TIP – The static in-band management VLAN and the DHCP in-band management VLAN must be different. – Manually added VLAN sub-interfaces support in-band management of the OLT.
IP Address Obtain Type	Specifies the type to obtain the IP address of the OLT in-band management. **Static** means manually configure the **IP Address**, **Subnet Mask** and **Gateway** of the OLT in-band management.

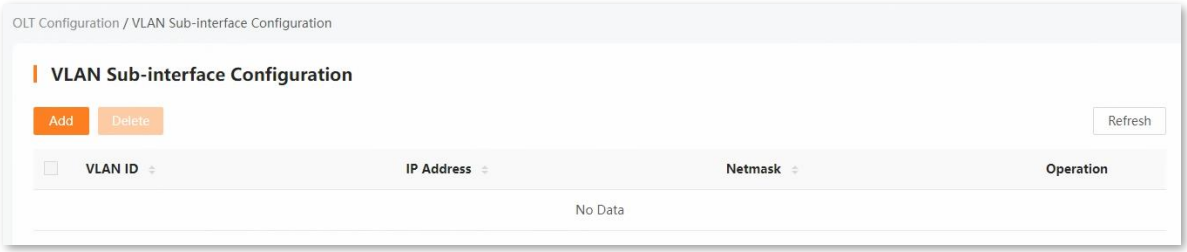
Parameter	Description
IP Address	Specifies the static in-band management IP address of the OLT. Devices connected to the OLT in-band management port (uplink port) can use this IP address to log in to the web UI of the OLT. It is **192.168.0.254** by default.
Subnet Mask	Specifies the static in-band management subnet mask of the OLT. It is **255.255.255.0** by default.
Gateway	Specifies the static in-band management gateway address of the OLT. It is **192.168.0.1** by default.
DHCP VLAN ID	Specifies the VLAN ID of the OLT DHCP in-band management. It is left blank by default. The value range is 1 to 4094. TIP The DHCP in-band management VLAN and the static in-band management VLAN must be different, and the **DHCP VLAN ID** can be configured only when **DHCP Enable** is enabled.
DHCP Enable	Specifies whether to enable the DHCP enable function. It is disabled by default. TIP When **DHCP Enable** is enabled, the OLT can obtain the in-band management IP address from the DHCP server.
DHCP IP Address	Specifies the DHCP in-band management IP address of the OLT. This parameter is automatically assigned by the DHCP server and cannot be modified.
DHCP Subnet Mask	Specifies the DHCP in-band management subnet mask of the OLT. This parameter is automatically assigned by the DHCP server and cannot be modified.
DHCP Gateway	Specifies the DHCP in-band management gateway address of the OLT. This parameter is automatically assigned by the DHCP server and cannot be modified.

4.4 Configure VLAN sub-interface

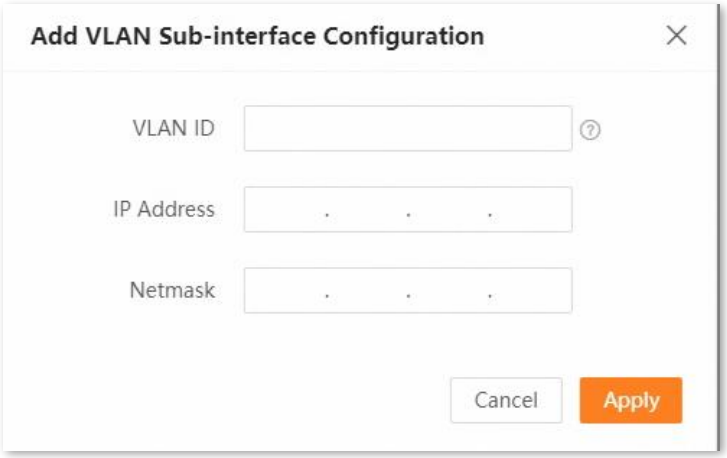
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **VLAN Sub-interface Configuration**.

Step 3 Click **Add**.



Step 4 Configure the relevant parameters of the VLAN sub-interface, and click **Apply**.



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Parameter description

Parameter	Description
VLAN ID	Specifies the VLAN ID of the OLT VLAN sub-interface.
IP Address	Specifies the IP address of the OLT VLAN sub-interface.
Netmask	Specifies the subnet mask of the OLT VLAN sub-interface.

Parameter	Description
Operation	Used to edit or delete the VLAN sub-interface policy. Configure : Used to modify the VLAN sub-interface policy. Delete : Used to delete the VLAN sub-interface policy. TIP Static and DHCP in-band management VLAN sub-interfaces of the OLT cannot be modified and deleted.

4.5 Configure service VLAN

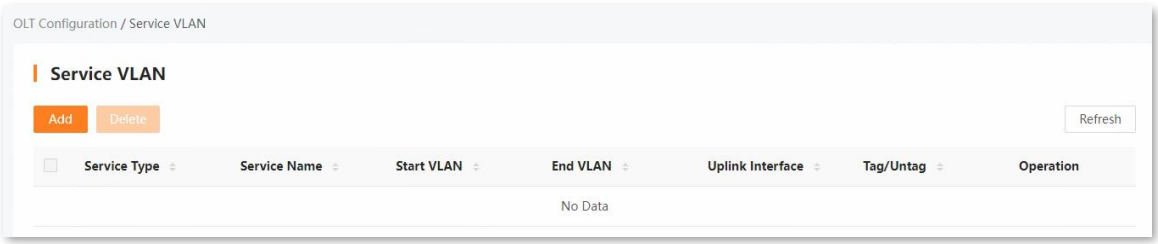
On this page, you can configure the OLT service VLAN for managing and restricting the uplink port service. The service VLAN is left blank by default.

Configuration procedure

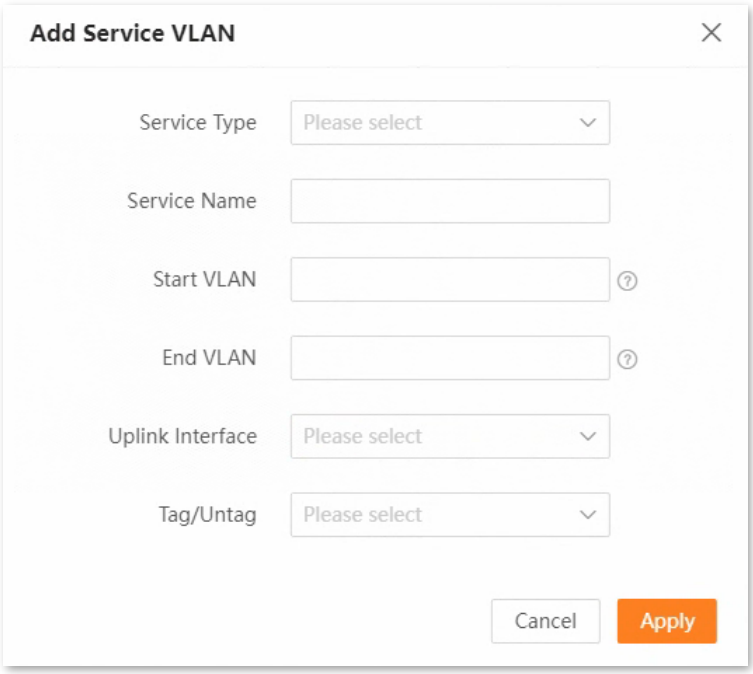
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Service VLAN.**

Step 3 Click **Add**. The following figure is for reference only.



Step 4 Configure the relevant parameters of the service VLAN, and click **Apply**.



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Parameter description

Parameter	Description
Service Type	Specifies the service type of the OLT. - **data**: Data Service - **IPTV**: IPTV Service
Service Name	Specifies the name of the service. Only letters, digits and underscores are allowed. TIP Service type and service name cannot exceed 30 bytes.
Start VLAN	Specifies the start VLAN ID of the OLT. The value range is 1 to 4094.
End VLAN	Specifies the end VLAN ID of the OLT. The value range is 1 to 4094.
Uplink Interface	Specifies the OLT uplink port number.
Tag/Untag	Specifies the VLAN mode. - **tag:** Uplink and downlink data packets are not processed and they are uploaded using the original mode. - **untag**: The tags of uplink data packets will be removed automatically when they pass the port and then uploaded in the **untag** mode. Downlink data packets are processed in the reversed way. TIP Only one service VLAN can be set to the **untag** mode in the same uplink port, and the start and end VLAN IDs must be consistent.
Operation	Used to edit or delete the OLT service VLAN. Edit : Used to modify the OLT service VLAN. Delete : Used to delete the OLT service VLAN.

4.6 Configure storm control

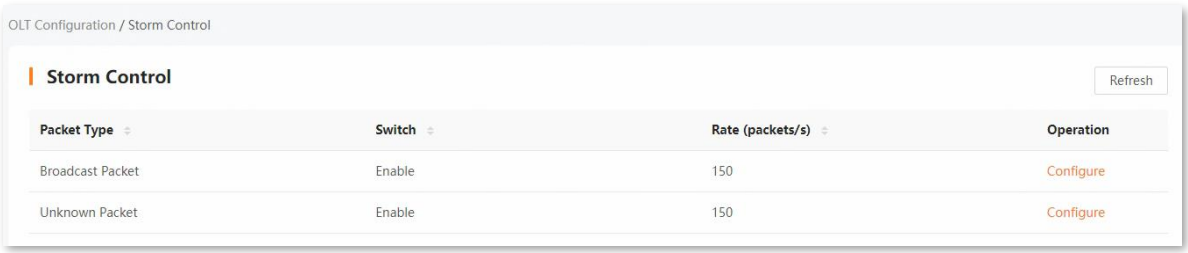
Storm control can suppress the rate of broadcast packets and unknown packets that enter the OLT.

Configuration procedure

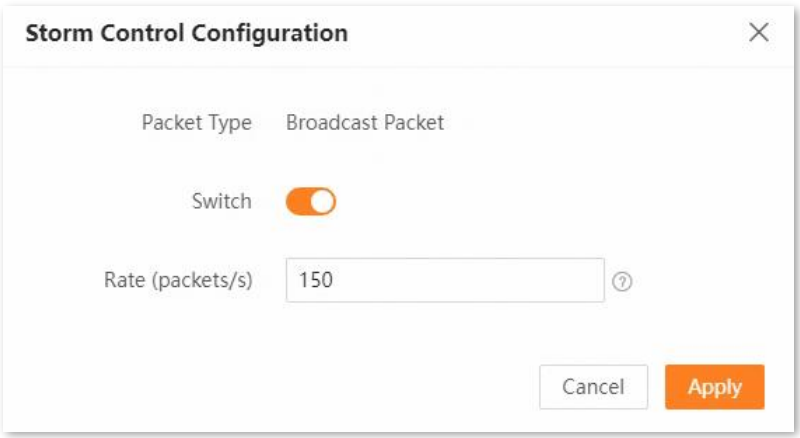
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Storm Control.**

Step 3 Select a packet type to configure the storm control, and click **Configure**. The following figure is for reference only.



Step 4 Enable **Switch**, set the maximum number of packets that can be received per second, and click **Apply**. The following figure is for reference only.



---End

Parameter description

Parameter	Description
Packet Type	Specifies the type of packets to configure the storm control.

Parameter	Description
Switch	Specifies whether to enable the storm control function. It is enabled by default.
Rate (packets/s)	Used to set the maximum number of broadcast/unknown packets that the OLT can receive per second. The default value is 150 packets/s. Its value range is 1 to 262142 packets/s. Within one second, if the OLT receives broadcast/unknown packets that exceed this threshold, it is considered to encounter the attack. At this time, the OLT will randomly drop some of the broadcast/unknown packets to ensure that the packet reception rate is within this threshold, achieving to effectively suppress network storms. TIP This parameter is available only when the storm control function is enabled.

4.7 Configure port mirror

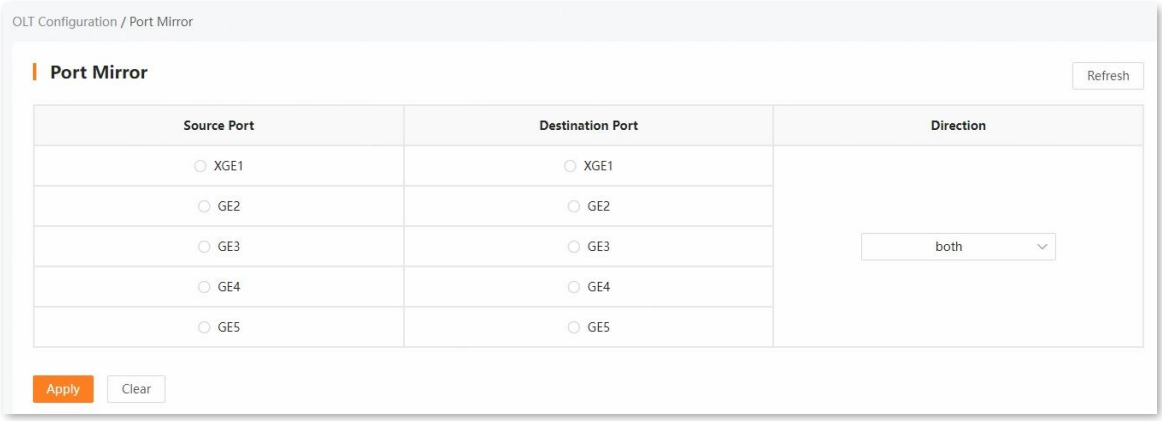
On this page, you can copy the data from one uplink port (mirroring source port) of the OLT to a specified uplink port (mirroring destination port) with the port mirroring function. Generally, the mirroring destination port is connected to a data monitoring device, achieving to perform real-time flow monitoring, performance analysis and fault diagnosis.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Port Mirror.**

Step 3 Select **Source Port**, **Destination Port** and **Direction** to be mirrored, and click **Apply**. The following figure is for reference only.



---End

Parameter description

Parameter	Description
Source Port	Specifies the port to be mirrored. TIP Only one source port can be selected. The source port and destination port must be different.

Parameter	Description
Destination Port	Specifies the mirroring destination port. Packets of the mirroring source port will be copied to the destination port. TIP Only one destination port can be selected. The source port and destination port must be different.
Direction	Specifies the type of mirroring packets. - **ingress**: Used to copy packets received on the mirroring source port to the mirroring destination port. - **egress**: Used to copy packets sent from the mirroring source port to the mirroring destination port. - **both**: Used to copy both incoming and outgoing packets from the mirroring source port to the mirroring destination port.

4.8 Authentication

4.8.1 Configure authentication mode

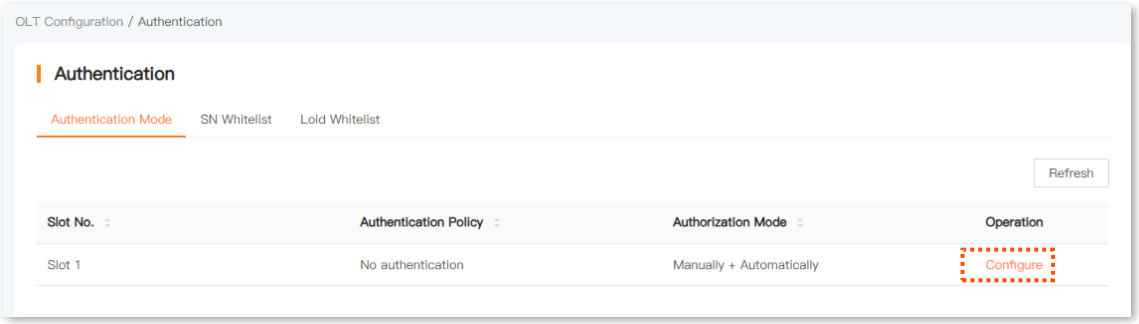
On this page, you can set the authentication policy and authorization mode of the ONT.

Configuration procedure

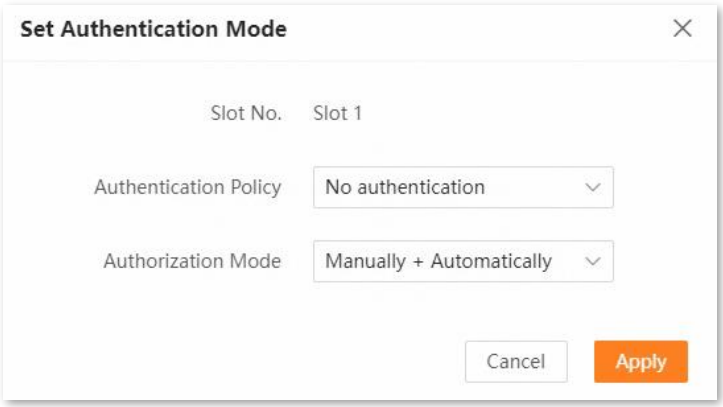
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Authentication**.

Step 3 Click **Configure**.



Step 4 Set **Authentication Policy** and **Authorization Mode**, and click **Apply**. The following figure is for reference only.



---End

Parameter description

Parameter	Description
Slot No.	Specifies the slot number of the OLT. It is **Slot 1** by default and cannot be modified.
Authentication Policy	Specifies the authentication policy of the ONT, including **No authentication**, **SN authentication**, **Loid authentication** and **Hybrid authentication**. It is **No authentication** by default.
Authorization Mode	Specifies the authorization mode of the ONT, including **Manually**, **Automatically** and **Manually + Automatically**. It is **Manually + Automatically** by default.

4.8.2 Configure SN whitelist

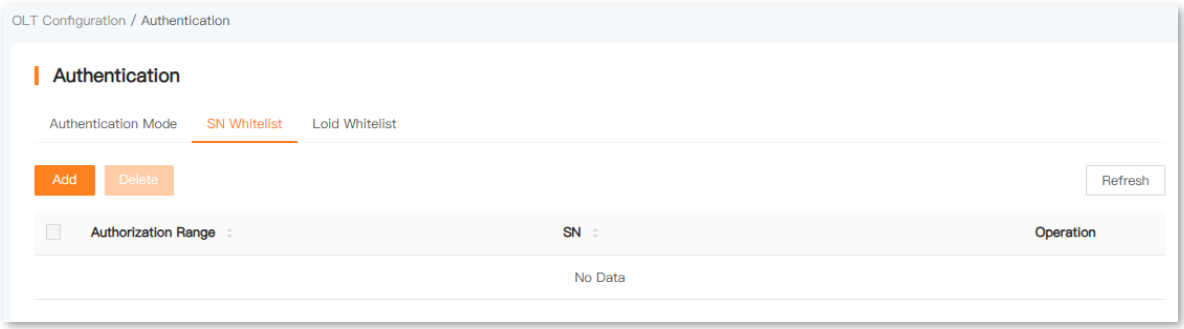
When Authentication Policy is set to **SN authentication** or **Hybrid authentication**, the SN of the ONT must be configured in the SN whitelist to enable the corresponding ONT to register properly.

Configuration procedure

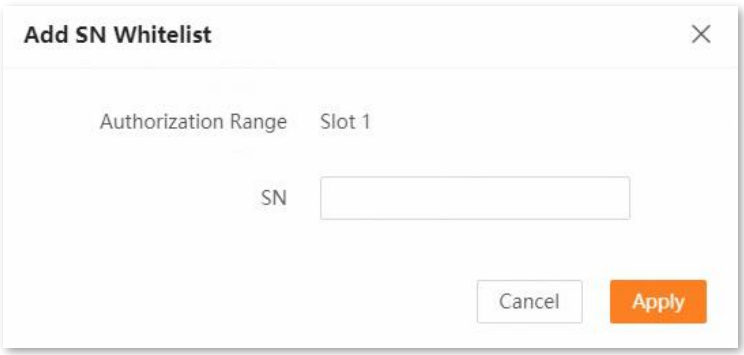
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Authentication** > **SN Whitelist**.

Step 3 Click **Add**. The following figure is for reference only.



Step 4 Set **SN** of the ONT to be added to the whitelist, and click **Apply**.



---End

Parameter description

Parameter	Description
Authorization Range	Specifies the slot number of the OLT. It is **Slot 1** by default and cannot be modified.
SN	Specifies the SN of the ONT. You can view the device's SN on the device label or the web UI page. TIP The correct SN contains 12 characters and letters are case-insensitive.
Operation	Used to edit or delete the SN whitelist. Configure : Used to modify the SN whitelist. Delete : Used to delete the SN whitelist.

4.8.3 Configure Loid whitelist

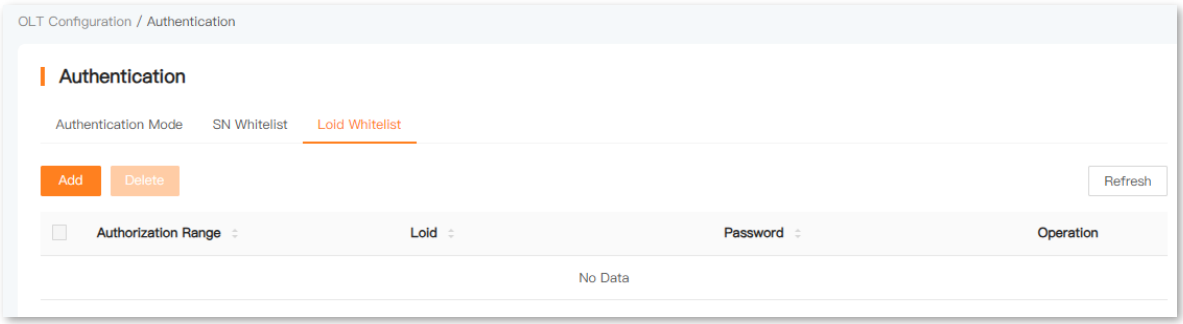
When **Authentication Policy** is set to **Loid authentication** or **Hybrid authentication**, the correct Loid and password must be configured in the Loid whitelist to enable the corresponding ONT to register properly.

Configuration procedure

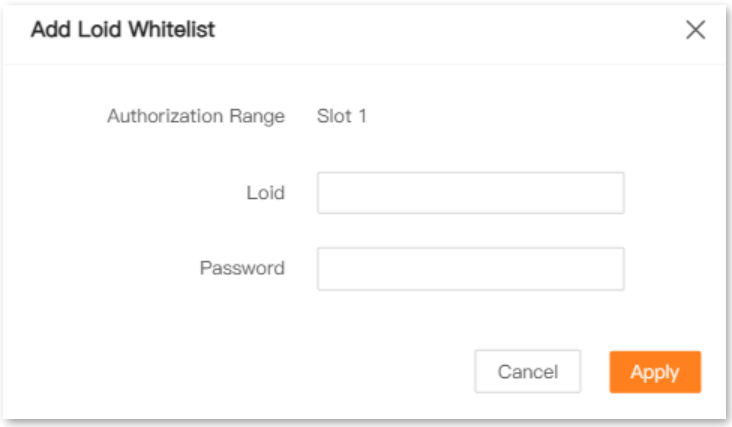
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Authentication** > **Loid Whitelist**.

Step 3 Click **Add**.



Step 4 Set **Loid** and **Password** of the ONT to be added to the whitelist, and click **Apply**.



---End

Parameter description

Parameter	Description
Authentication Range	Specifies the slot number of the OLT. It is **Slot 1** by default and cannot be modified.
Loid	Contains 1 to 24 letters and digits.
Password	Contains 0 to 12 letters and digits. It is optional and can be left blank.
Operation	Used to edit or delete the Loid whitelist. Configure : Used to modify the Loid whitelist. Delete : Used to delete the Loid whitelist.

4.9 Multicast

4.9.1 Configure global property

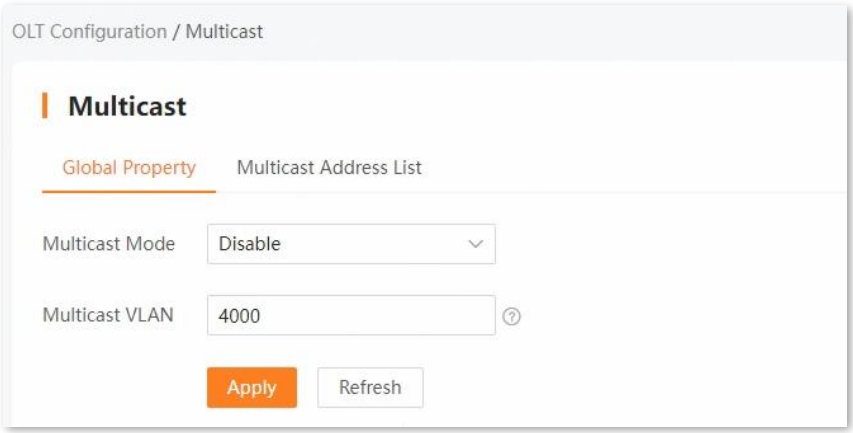
On this page, you can set the global multicast property of the OLT, including the multicast mode and multicast VLAN.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Multicast** > **Global Property**.

Step 3 Set **Multicast Mode** and **Multicast VLAN**, and click **Apply**.



---End

TIP

- The parameters of the OLT global multicast property only take effect on the main control board, and the PON port disk uses the transparent transmission for multicast data by default.
- The ONT multicast mode is **IGMP Snooping** by default.

Parameter description

Parameter	Description
Multicast Mode	Specifies the multicast mode of the OLT. It is disabled by default. – **Snooping Mode**: The multicast snooping device (OLT device) listens to multicast packets between routers and host, maintains a multicast address table, establishes the relationship between multicast groups and ports, and passively listens to and forwards IGMP packets. This mode features relatively the lowest impact on the system load, but will greatly increase the protocol processing load of the uplink device. – **Disable**: The main control board is disabled from broadcasting multicast packets.
Multicast VLAN	Specifies the default VLAN ID of the multicast service. The VLAN ID must be within the VLAN ID range of the IPTV service type configured in **Service VLAN**. The multicast VLAN ID is used to identify video multicast streams. You can configure one or more VLANs dedicated to multicast services to isolate services. A multicast program belongs to only one multicast VLAN, and a multicast VLAN can include a multicast program or a multicast program group.

4.9.2 View the multicast address list

On this page, you can view the multicast forwarding address list of the OLT, including uplink multicast join requests received by the PON port.

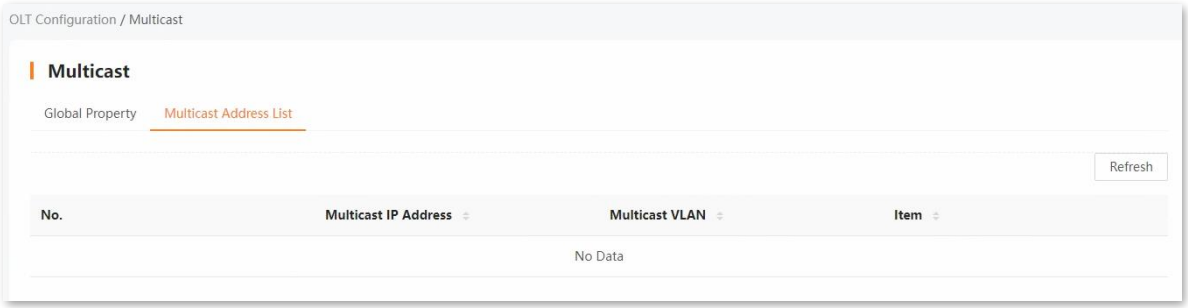
Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **Multicast** > **Multicast Address List**.

Step 3 View the multicast forwarding address list of the OLT.

You can click **Refresh** to view the real-time multicast address forwarding list. The following figure is for reference only.

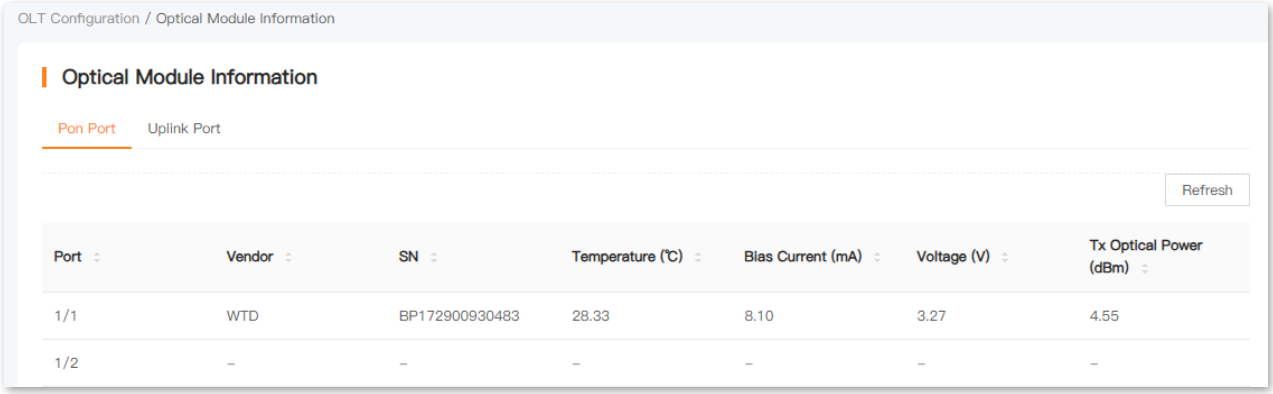


---End

4.10 OLT optical module information

4.10.1 View OLT PON port information

Log in to the web UI of the OLT, and navigate to **OLT Configuration** > **Optical Module Information** > **Pon Port**. You can view the information of optical modules of OLT connected to the PON port. The following figure is for reference only.

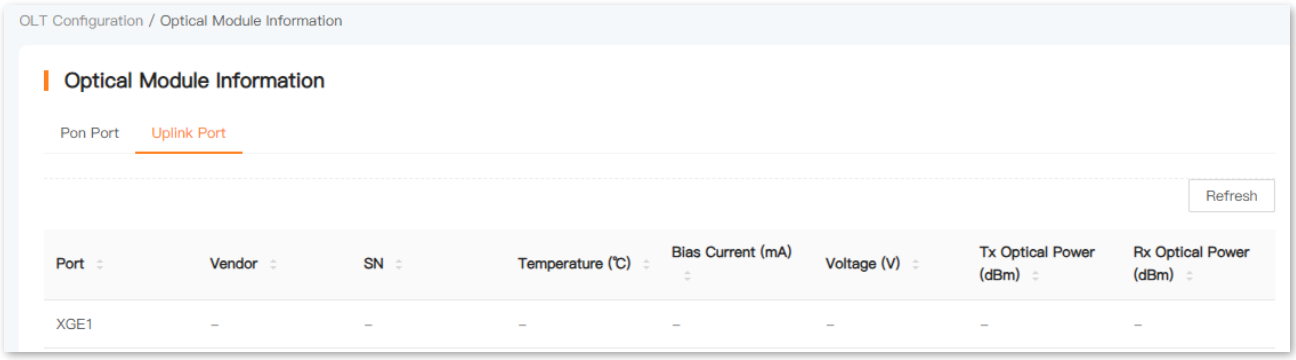


Parameter description

Parameter	Description
Port	Specifies the PON port number of the OLT.
Vender	Specifies the manufacturer of optical modules of the PON port.
SN	Specifies the serial number of optical modules of the PON port.
Temperature (°C)	Specifies the current temperature of optical modules of the PON port.
Bias Current (mA)	Specifies the current bias current value of optical modules of the PON port.
Voltage (V)	Specifies the current voltage value of optical modules of the PON port.
Tx Optical Power (dBm)	Specifies the current TX (transmit) optical power of optical modules of the PON port.

4.10.2 View OLT uplink port information

Log in to the web UI of the OLT, and navigate to **OLT Configuration** > **Optical Module Information** > **Uplink Port**. You can view the information of optical modules of OLT connected to the uplink port. The following figure is for reference only.



Parameter description

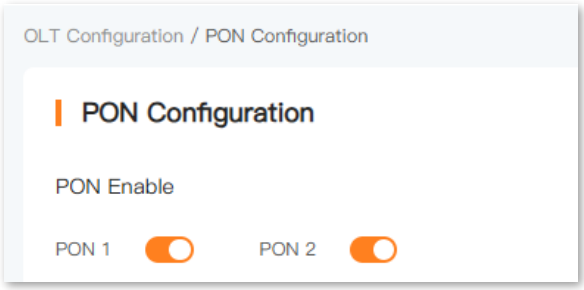
Parameter	Description
Port	Specifies the uplink port number of the OLT. It is **XGE1** by default.
Vender	Specifies the manufacturer of optical modules of the uplink port.
SN	Specifies the serial number of optical modules of the uplink port.
Temperature (°C)	Specifies the current temperature of optical modules of the uplink port.
Bias Current (mA)	Specifies the current bias current value of optical modules of the uplink port.
Voltage (V)	Specifies the current voltage value of optical modules of the uplink port.
Tx Optical Power (dBm)	Specifies the current TX (transmit) optical power of optical modules of the uplink port.
Rx Optical Power (dBm)	Specifies the current RX (receive) optical power of optical modules of the uplink port.

4.11 PON configuration

4.11.1 Configure PON shutdown

Log in to the web UI of the OLT, and navigate to **OLT Configuration** > **PON Configuration**.

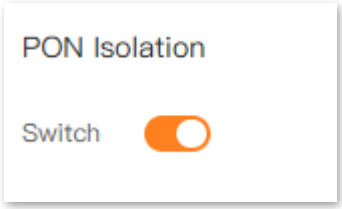
In **PON Enable** module, you can disable the corresponding PON port to disable registration of the PON port, or to kick off the ONU devices connected to the PON port. The PON Enable function is enabled by default.



4.11.2 Configure PON isolation

Log in to the web UI of the OLT, and navigate to **OLT Configuration** > **PON Configuration**.

In **PON Isolation** module, you can enable the PON Isolation function to disable ONU communication under the PON port. The PON Isolation function is enabled by default.



4.11.3 Configure long optical detection

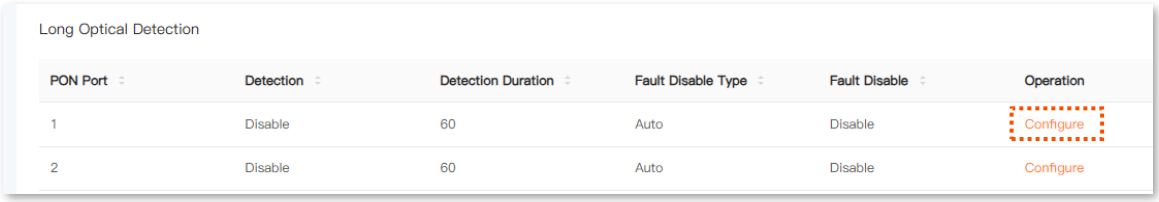
If the ONU cannot register properly due to long optical, you can enable the Long Optical Detection function for troubleshooting.

Configuration procedure

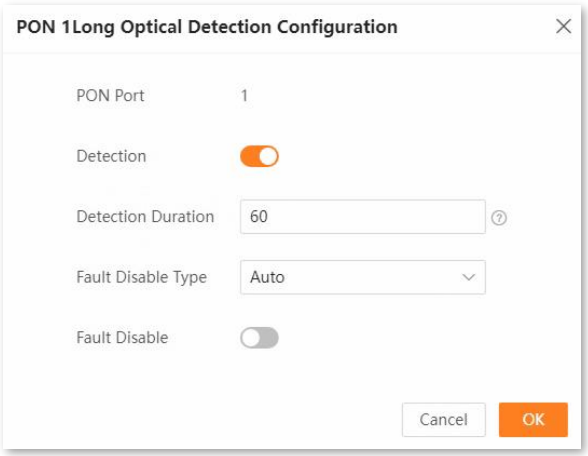
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **OLT Configuration** > **PON Configuration**.

Step 3 Select the port to be configured, and click **Configure**. The following figure is for reference only.



Step 4 Enable **Detection**, set **Detection Duration**, **Fault Disable Type** and **Fault Disable** as required, and click **OK**.



---End

Parameter description

Parameter	Description
PON Port	Specifies the PON port number of the OLT.
Detection	Specifies whether to enable the Long Optical Detection function.
Detection Duration	Specifies the detection duration. The value range is 5 to 3600.

Parameter	Description
Fault Disable Type	Specifies the fault disable type including **Auto** and **Manual**. - **Auto**: The ONU's laser will be automatically disabled when it is detected that the long optical in the ONU. - **Manual**: The ONU's laser needs to be manually disabled when it is detected that the long optical is in the ONU. TIP The function will take effect only when the Fault Disable function is enabled.
Fault Disable	Specifies whether to enable the Fault Disable function.

4.12 MAC address management

4.12.1 View MAC address table

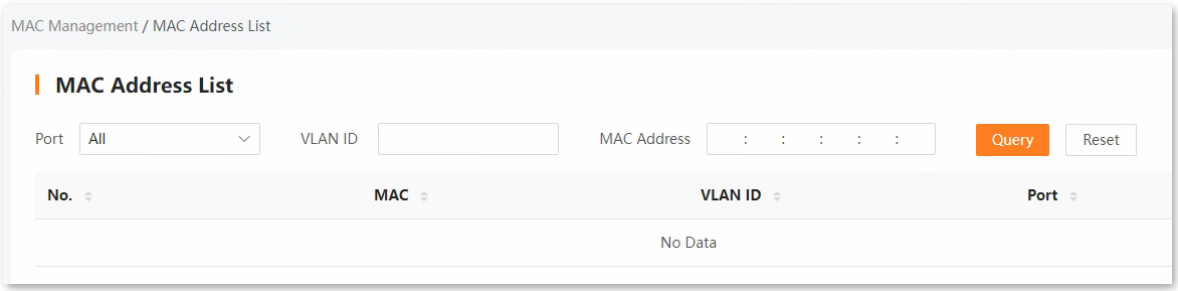
On this page, you can view the MAC addresses learned from the OLT PON port or uplink port and VLAN IDs corresponding to these MAC addresses.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **MAC Management** > **MAC Address List**.

Step 3 Set the query conditions (**Port**, **VLAN ID** or **MAC Address**), and click **Query.**



---End

Query condition description

Query condition	Description
Port	Specifies the OLT port corresponding to the MAC address table to be viewed. **All** is selected by default. - **Pon 1/1** to **Pon 1/2**: The MAC address table of the specified OLT PON port is queried. - **XGE1, GE2** to **GE5**: The MAC address table of the specified OLT uplink port is queried. - **All**: The whole MAC address table of the OLT ports is queried.
VLAN ID	Specifies the VLAN ID used to query the MAC address.

Query condition	Description
MAC Address	Specifies the MAC address to be queried. TIP Fuzzy queries are supported. You can enter the partial or complete MAC address to query.

Parameter description

Parameter	Description
No.	Specifies the list number of the MAC address table.
MAC	Specifies the MAC address learned from the OLT.
VLAN ID	Specifies the VLAN ID of the MAC address.
Port	Specifies the OLT port number corresponding to the MAC address. TIP The OLT port number includes the port number of the uplink port and OLT PON port.

4.12.2 Configure MAC address table aging time

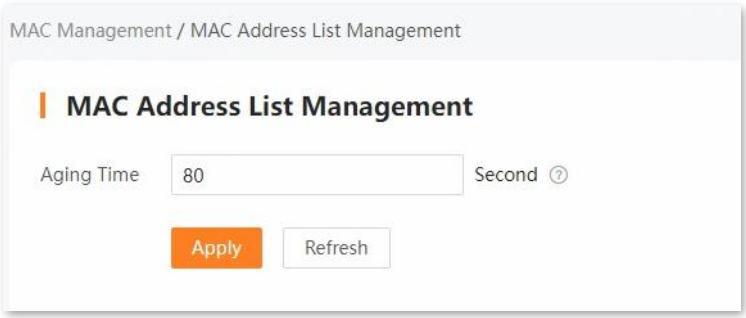
When the OLT has exceeded the aging time since it last received a message with a source address that matches the source MAC address in the table entry, the OLT will automatically remove the MAC address table entry.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **MAC Management** > **MAC Address List Management**.

Step 3 Set **Aging Time** as required (**80** by default. The value range is 0 to 300. 0 means no aging time is configured), and click **Apply**.



---End

5 ONT management

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models. The actual product prevails.

5.1 Authorize ONTs

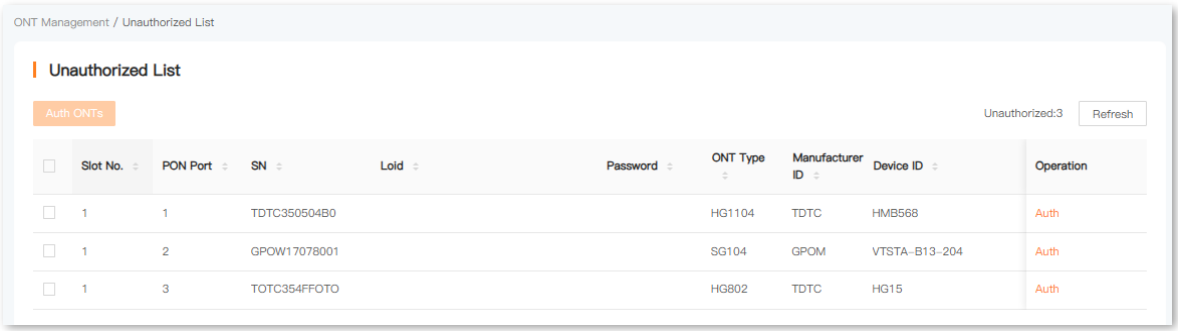
After authorizing the ONT, the ONT can be used normally, which is convenient for users to unify the management of ONTs.

5.1.1 Authorize a single ONT

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Unauthorized List.**

Step 3 Select an ONT to be authorized, and click **Auth**. The following figure is for reference only.



---End

ONT will be removed from the unauthorized list and added to the authorized list after the successful authorization.

Parameter description

Parameter	Description
Slot No.	Specifies the slot number of the OLT.

Parameter	Description
PON Port	Specifies the PON port number of the OLT.
SN	Specifies the serial number of the ONT.
Loid Password	Specify the logical identification and password of the ONT, which belong to the information carried by the ONT.
ONT Type	Specifies the ONT type. The ONT type is divided into two main classes, including Single Family Unit (SFU, beginning with SG) and Home Gateway Unit (HGU, beginning with HG.) The SFU main class is divided into 9 subclasses, including SG101, SG102, SG104, SG501, SG502, SG504, SG104E, SG108E and SG108. The HGU main class is divided into 13 subclasses, including HG101, HG501, HG601, HG602, HG604, HG702, HG704, HG802, HG804, HG904, HG1002, HG1004 and HG1104. - SG101: SFU ONT with one Ethernet port - SG102: SFU ONT with two Ethernet ports - SG104: SFU ONT with four Ethernet ports - SG501: SFU ONT with one Ethernet port and one CATV port - SG502: SFU ONT with two Ethernet ports and one CATV port - SG504: SFU ONT with four Ethernet ports and one CATV port - SG104E: SFU ONT with four Ethernet ports that support PoE power supply - SG108E: SFU ONT with eight Ethernet ports that support PoE power supply - SG108: SFU ONT with eight Ethernet ports - HG101: HGU ONT with one Ethernet port - HG501: HGU ONT with one Ethernet port and one CATV port - HG601: HGU ONT with one Ethernet port and WiFi switch - HG602: HGU ONT with two Ethernet ports and WiFi switch - HG604: HGU ONT with four Ethernet ports and WiFi switch - HG702: HGU ONT with two Ethernet ports, WiFi switch and one CATV port - HG704: HGU ONT with four Ethernet ports, WiFi switch and one CATV port - HG802: HGU ONT with two Ethernet ports, WiFi switch and one POTS port - HG804: HGU ONT with four Ethernet ports, WiFi switch and one POTS port - HG904: HGU ONT with four Ethernet ports, WiFi switch and two POTS ports - HG1002: HGU ONT with two Ethernet ports, WiFi switch, one POTS port and one CATV port - HG1004: HGU ONT with four Ethernet ports, WiFi switch, one POTS port and one CATV port - HG1104: HGU ONT with four Ethernet ports, WiFi switch, two POTS ports and one CATV port

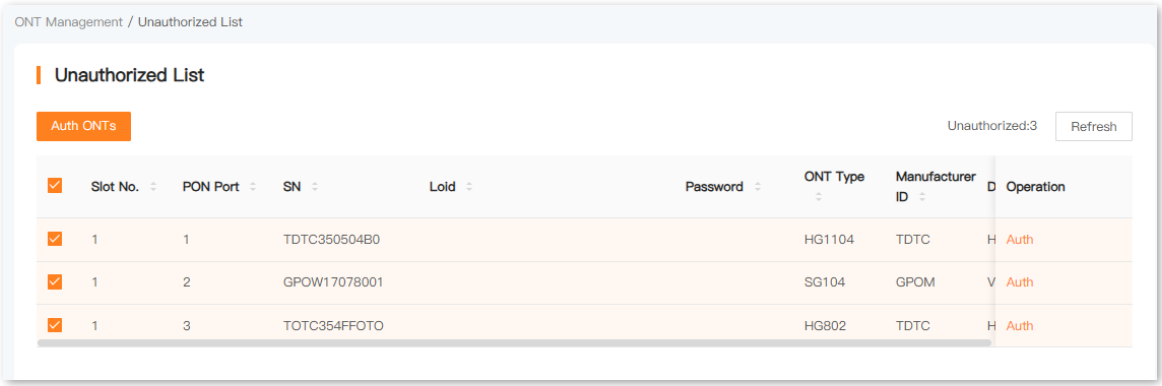
Parameter	Description
Manufacturer ID	Specifies the manufacturer ID of the ONT, such as the manufacturer ID carried by Tenda ONT is TDTC, which belongs to the information carried by the ONT.
Device ID	Specifies the device ID of the ONT, which belongs to the information carried by the ONT.

5.1.2 Authorize multiple ONTs

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Unauthorized List**.

Step 3 Select multiple ONTs to be authorized, and click **Auth ONTs**. The following figure is for reference only.



---End

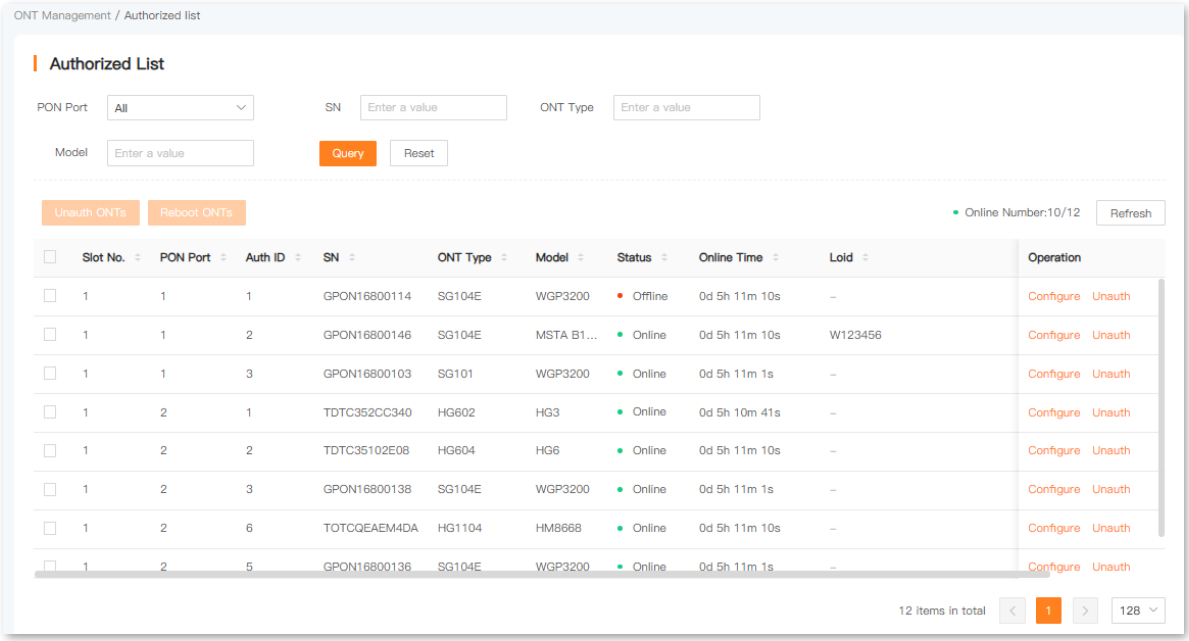
ONT will be removed from the unauthorized list and added to the authorized list after the successful authorization.

5.2 View authorized ONTs

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List**.

Step 3 Set the query conditions (**PON Port**, **SN**, **ONT Type** or **Model**), and click **Query.**



---End

Parameter description

Parameter	Description
Slot No.	Specifies the slot number of the OLT. It is **1** by default
PON Port	Specifies the PON port number of the OLT. It is **All** by default.
Auth ID	Specifies the authorization number of the ONT. The value range is 1 to 128.
SN	Specifies the serial number of the ONT. TIP Fuzzy queries are supported. You can enter the partial or complete serial number to query.

Parameter	Description
Loid	Specify the logical identification and password of the ONT, which belong to the information carried by the ONT.
Password	
ONT Type	Specifies the ONT type. The ONT type is divided into two main classes, including SFU (beginning with SG) and HGU (beginning with HG.) The SFU main class is divided into 9 subclasses, including SG101, SG102, SG104, SG501, SG502, SG504, SG104E, SG108E and SG108. The HGU main class is divided into 13 subclasses, including HG101, HG501, HG601, HG602, HG604, HG702, HG704, HG802, HG804, HG904, HG1002, HG1004 and HG1104. For details, refer to ONT Type. TIP Fuzzy queries are supported. You can enter the partial or complete ONT type to query.
Model	Specifies the ONT model. TIP Fuzzy queries are supported. You can enter the partial or complete ONT model to query.
Status	Specifies the connection status of the ONT. : The ONT is operating normally and is connected to the OLT properly. : ONT is offline.
Online Time	Specifies the time during which the ONT is operating since the last startup.

5.3 Unauthorize ONTs

After the ONT is unauthorized, the ONT will be removed from the authorized list of the OLT.

TIP

After the ONT is unauthorized, if the ONT **Authentication Policy** is **No authentication**, **SN authentication**, **Loid authentication** and **Hybrid authentication** (for SN/Loid/hybrid authentication, the ONT information must be in the correct whitelist):

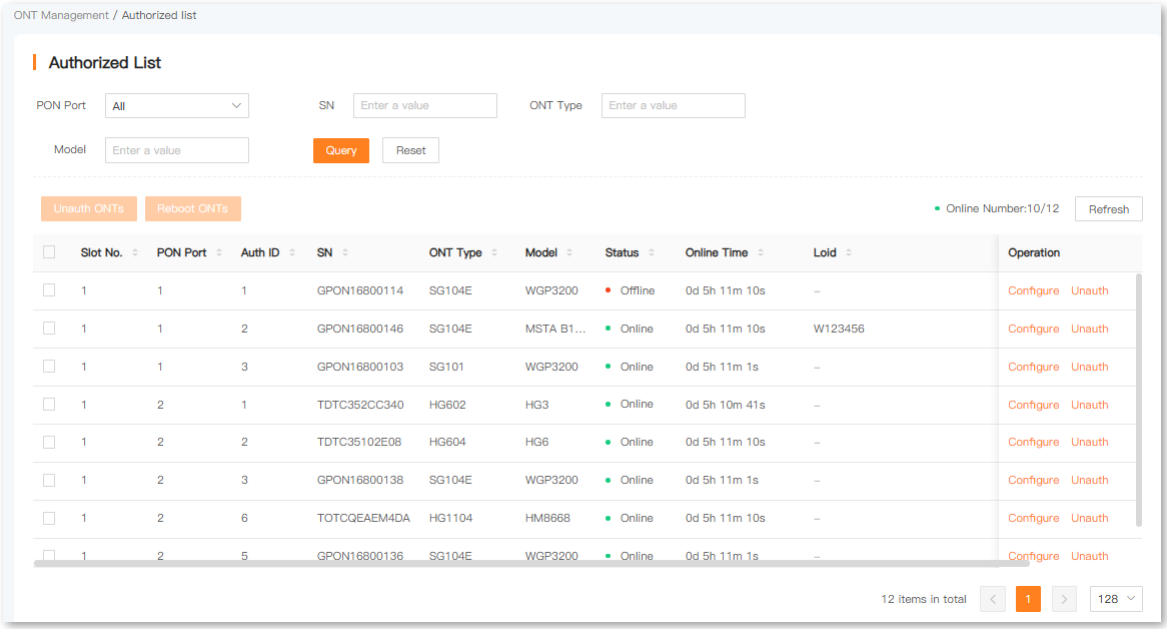
- If the ONT **Authentication Mode** is **Automatically** or **Manually + Automatically**, the ONT (Powered off or rebooted) will re-register successfully and appear in the **Authorized List**.
- If the ONT **Authentication Mode** is **Manually**, the ONT (Powered off or rebooted) will appear in the **Unauthorized List**.

5.3.1 Unauthorize a single ONT

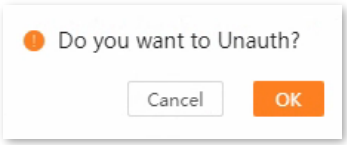
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List.**

Step 3 Select an ONT to be unauthorized, and click **Unauth**. The following figure is for reference only.



Step 4 Confirm the prompt information, and click **OK**.



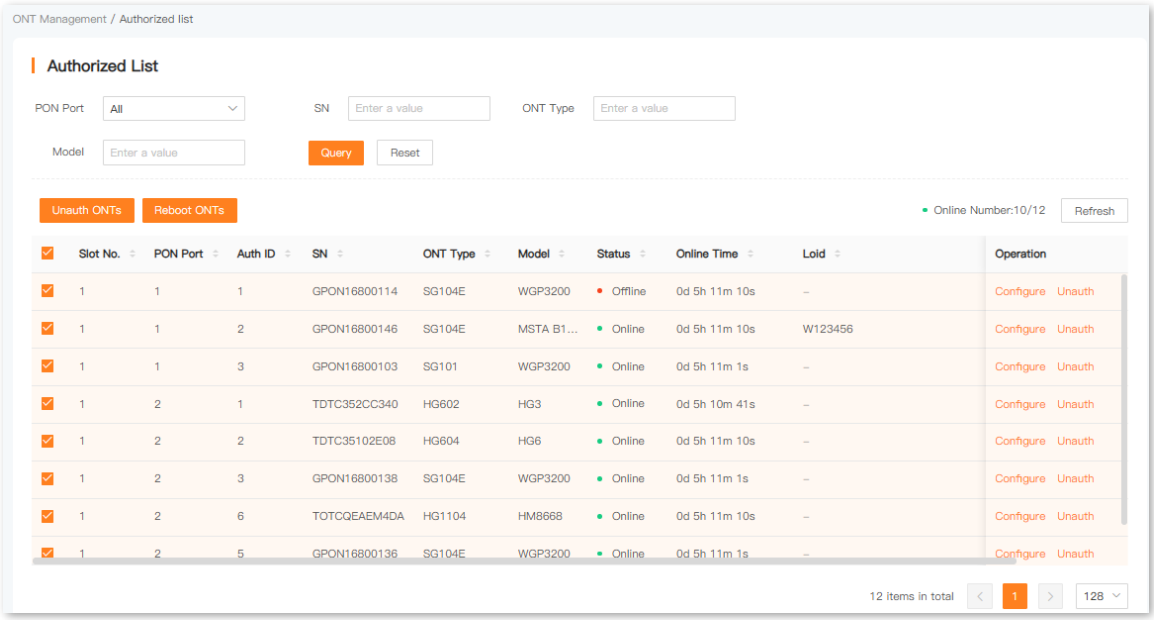
---End

5.3.2 Unauthorize multiple ONTs

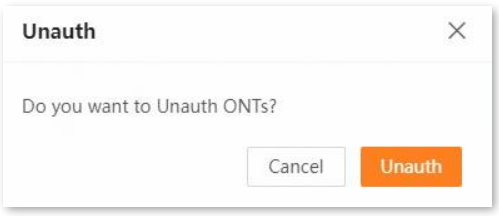
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List**.

Step 3 Select multiple ONTs to be unauthorized, and click **Unauth ONTs**. The following figure is for reference only.



Step 4 Confirm the prompt information, and click **Unauth**.



---End

5.4 Reboot ONTs

On this page, you can soft reboot one or multiple ONTs in batches.

TIP

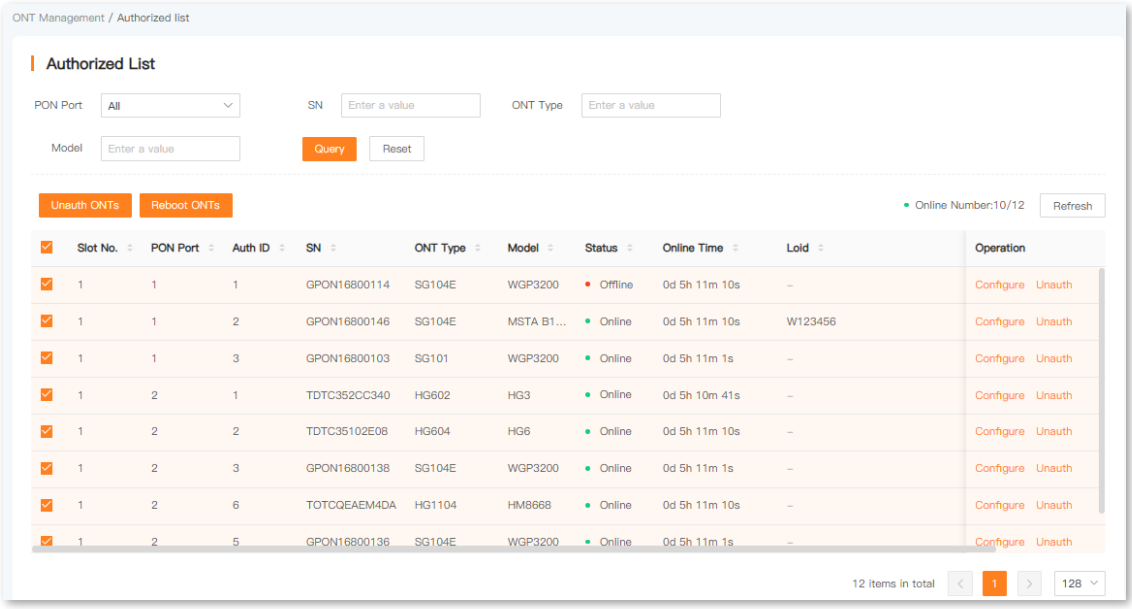
- After the ONT is rebooted, the ONT turns from online to offline, and ONT services are interrupted.
- Automatic registration will be completed and services will recover after the rebooting is completed.

Configuration procedure

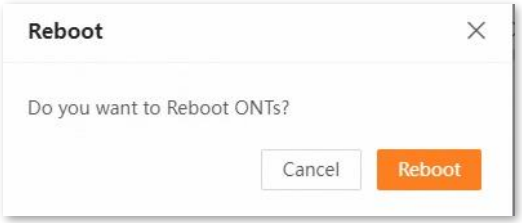
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List**.

Step 3 Select ONTs to be rebooted, and click **Reboot ONTs**. The following figure is for reference only.



Step 4 Confirm the prompt information, and click **Reboot**.



---End

5.5 Configure ONT

5.5.1 Configure SFU ONT

On this page, you can use the SFU ONT to configure the DBA bandwidth template binding for the PON port and user services for the LAN port.

TIP

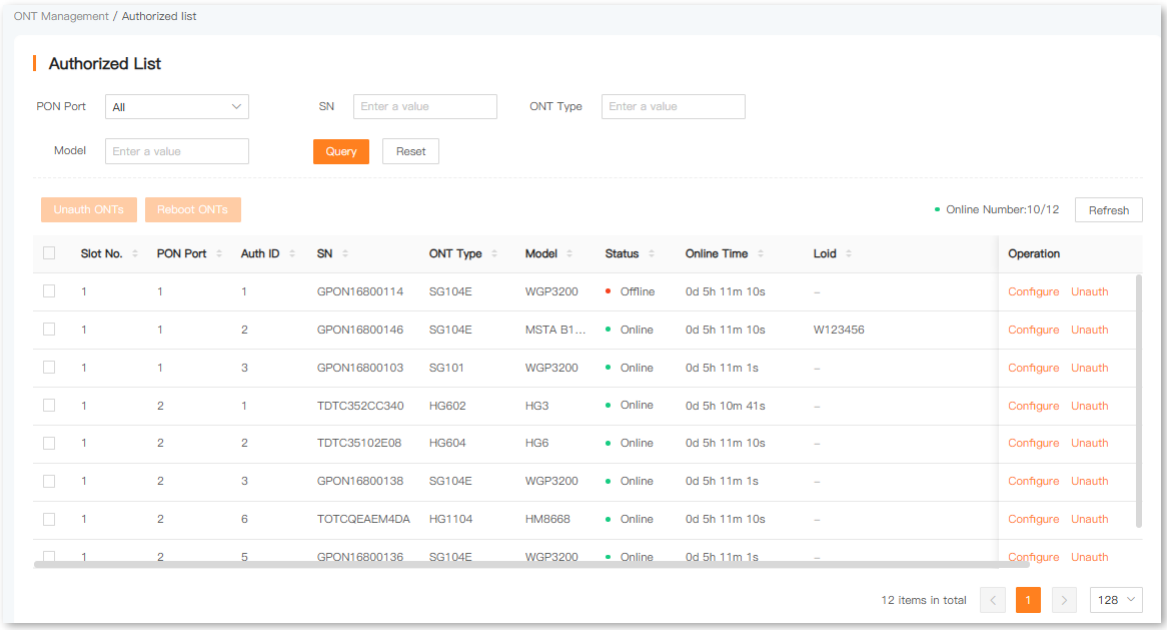
- Before configuring the PON port of the SFU ONT, configure the DBA bandwidth template in advance.
- The LAN port of the SFU ONT applies the SFU service template by default. The user service configuration of the LAN port is consistent with the SFU service template configuration. You can modify the user service configuration of the LAN port as required.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

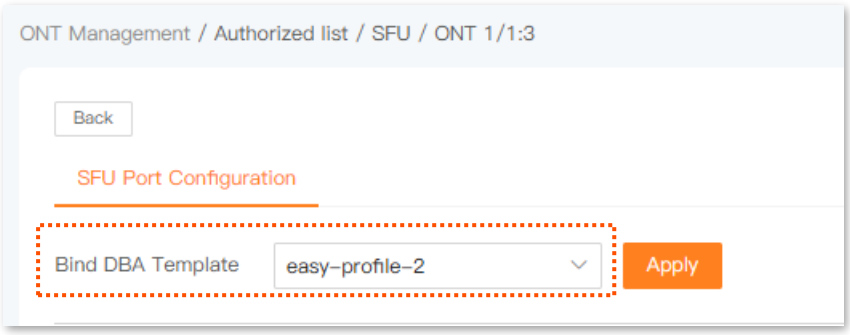
Step 2 Navigate to **ONT Management** > **Authorized List.**

Step 3 Locate the SFU ONT (beginning with SG) to be configured, and click **Configure**. The following figure is for reference only.



Step 4 Bind the DBA bandwidth template to the PON port of the SFU ONT.

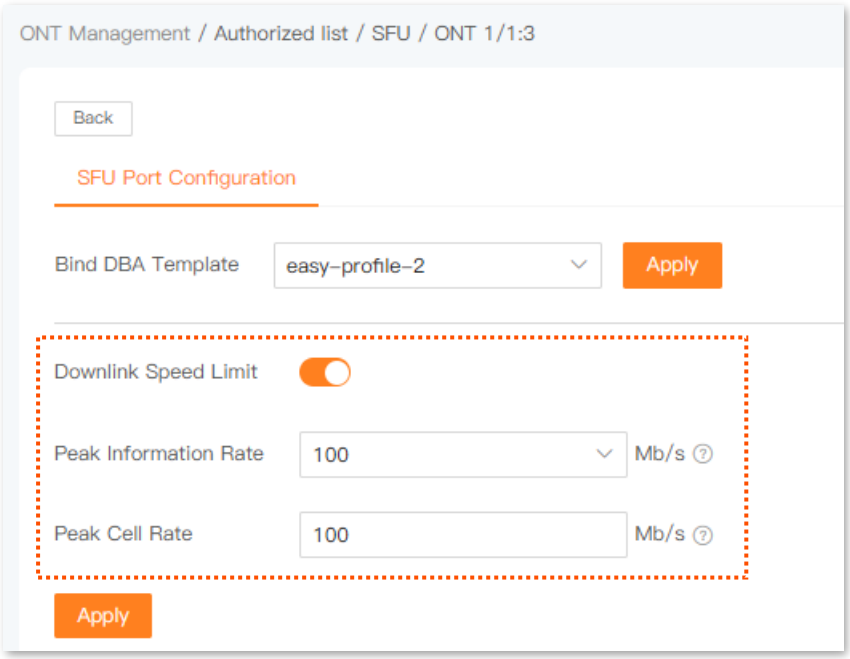
Select a DBA bandwidth template from the **DBA Template** drop-down list box, and click **Apply.**



Step 5 Enable the **Downlink Speed Limit**, enter the speed limit value of the port, and click **Apply**. The following figure is for reference only.

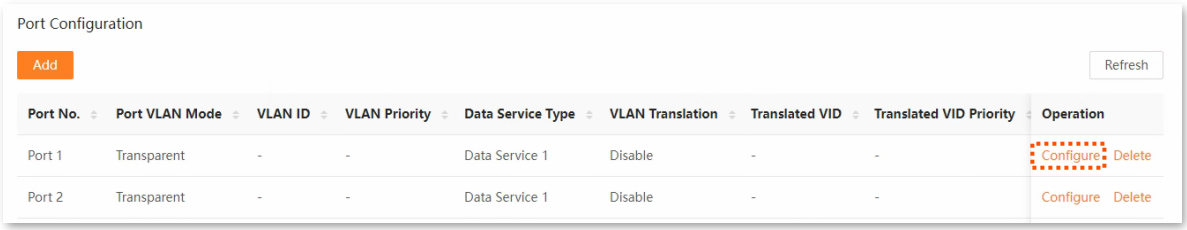
TIP

0 indicates the default preset value, which does not mean no speed limit.

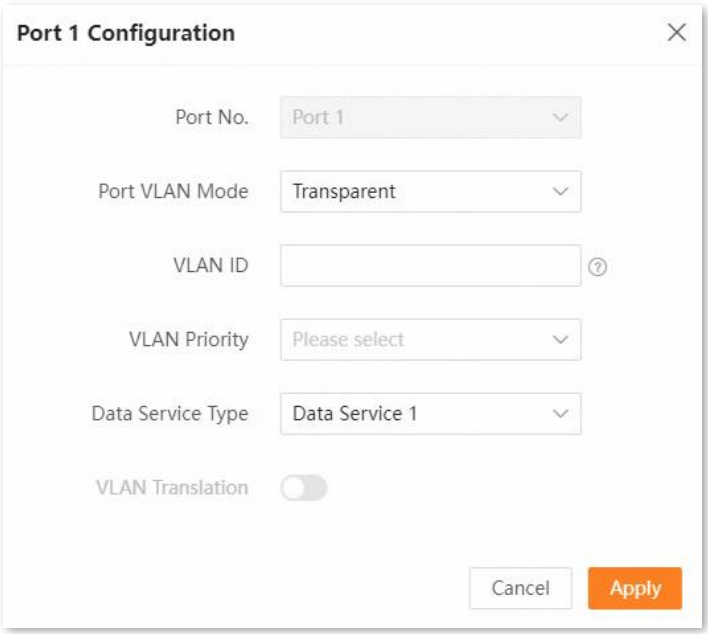


Step 6 Configure user services for the LAN ports of the SFU ONT.

1. In **Port Configuration** module, select the port to be configured, and click **Configure**.



2. Configure the port service parameters, and click **Apply**.



TIP

- To add user services, click **Add** in the **Port Configuration** module, set parameters as required, and click **Apply**. Eight user services can be created for a single port, and 16 user services can be created for the ONT.
- To delete user services, click **Delete** in the line of the service to be deleted in the **Port Configuration** module and then click **OK**.

---End

Parameter description

Parameter	Description
Port No.	Specifies the LAN port number of the SFU ONT.
Port VLAN Mode	Specifies the VLAN mode of the LAN port of the SFU ONT. - **Transparent**: If VLAN ID is left blank, the LAN port of the SFU ONT will transparently transmit all VLANs. If VLAN ID is not left blank and the VLAN translation function is disabled, the LAN port of the SFU ONT will transparently transmit the corresponding VLAN ID. If the VLAN ID is not left blank and the VLAN translation function is enabled, the LAN port of the SFU ONT will convert VLAN ID to translated VID. - **Tag**: The LAN port corresponding to the SFU ONT tags the VLAN ID for the data without VLAN IDs and forwards the downlink data after the VLAN ID is removed.
VLAN ID	Specifies the VLAN ID of the LAN port of the SFU ONT. The value range is 1 to 4094.

Parameter	Description
VLAN Priority	Specifies the VLAN priority of the LAN port of the SFU ONT. The larger the number, the higher the priority. The value range is 0 to 7.
Data Service Type	Specifies the channel for data transmission of the LAN port of the SFU ONT. There are 4 channels including data service 1 to data service 4. It is **Data Service 1** by default. When the corresponding channel is selected, the data passing through the port will be transmitted through that channel.
VLAN Translation	Specifies whether to enable the VLAN translation function of the LAN port of the SFU ONT.
Translated VID	Specifies the translated VLAN ID of the LAN port of the SFU ONT. The value range is 1 to 4094.  This parameter is available only when the **VLAN Translation** is enabled.
Translated VID Priority	Specifies the translated VLAN ID priority of the LAN port of the SFU ONT. The value range is 0 to 7.  This parameter is available only when the **VLAN Translation** is enabled.
Downlink Speed Limit	Specifies whether to enable the downlink speed limit function of the LAN port of the SFU ONT.
Peak Information Rate	Specifies the downlink speed limit threshold and peak cell rate of the LAN port of the SFU ONT. If the downlink data passing through the port exceeds these thresholds, the maximum value of passing data flow will be consistent with the speed limit threshold.  This parameter is available only when the **Downlink Speed Limit** is enabled.
Peak Cell Rate	Specifies the maximum cell rate at which the connected service source sends information.

5.5.2 Configure PoE parameters of PoE ONT

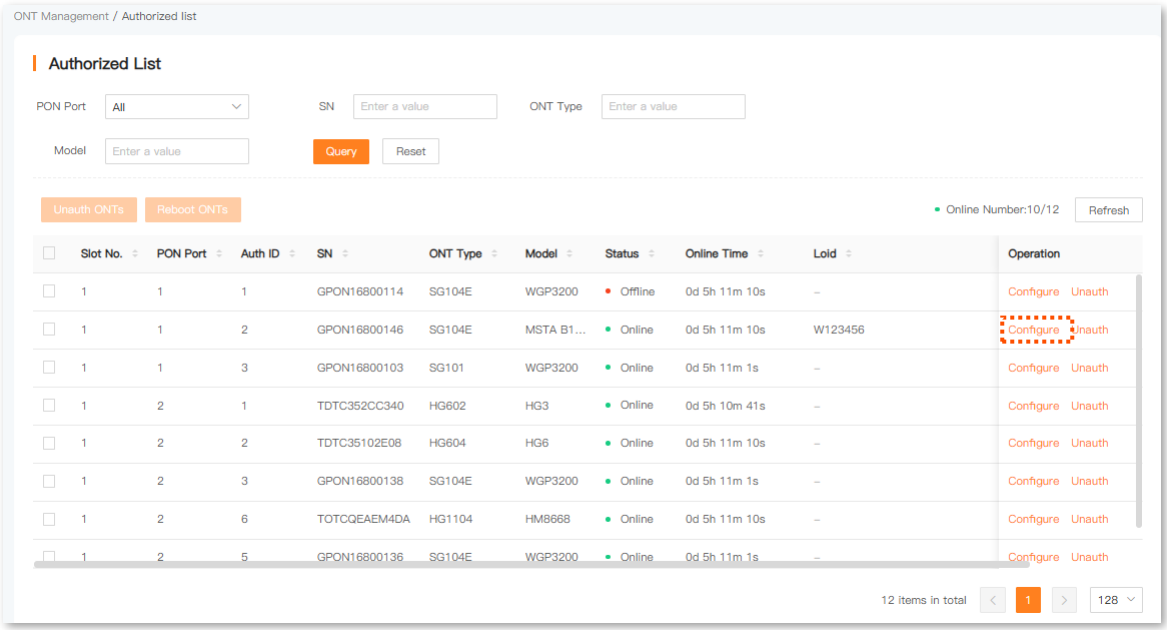
The PoE ONT SG104E is taken as an example here.

Configure PoE global configuration and copy function

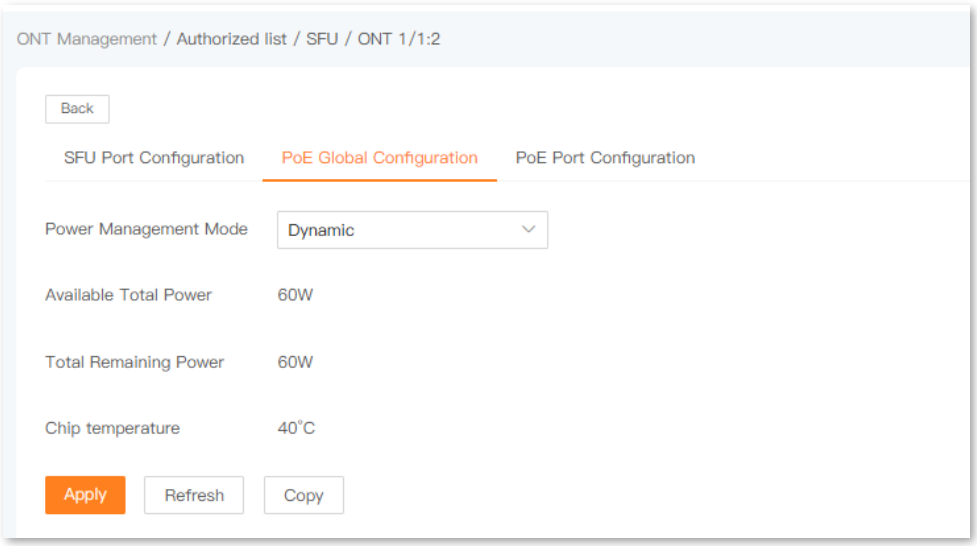
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List.**

Step 3 Locate the SFU PoE ONT (Example: SG104E) to be configured, and click **Configure**. The following figure is for reference only.



Step 4 Click **PoE Global Configuration**, set **Power Management Mode**, and click **Apply**. The following figure is for reference only.

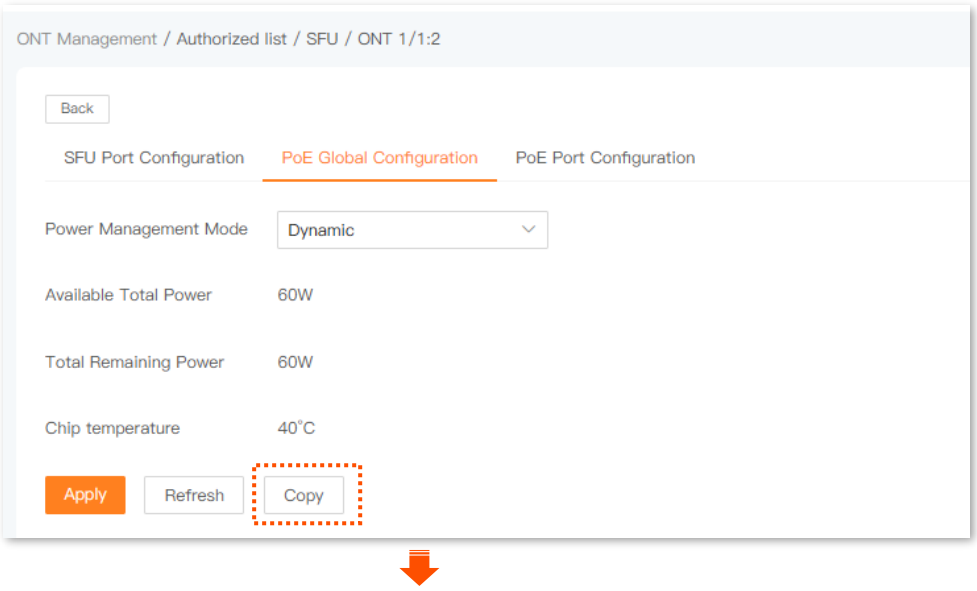


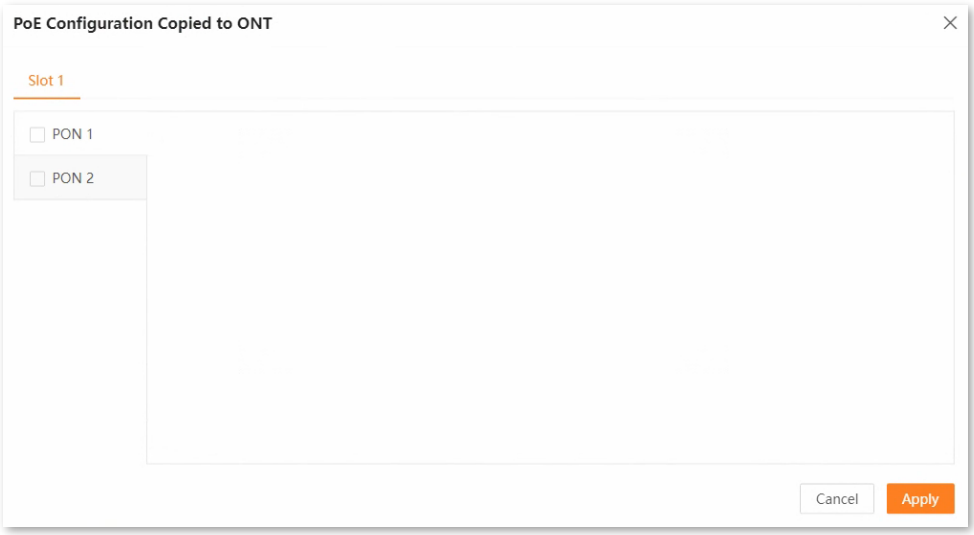
Parameter description

Parameter	Description
Power Management Mode	Specifies the power management mode including **Static** and **Dynamic**. It is **Dynamic** by default. - **Dynamic**: The system automatically adjusts the power supply of the ONT port based on the available total power and the total remaining power of the PoE ONT. - **Static**: Manually adjust the power supply of the ONT port. TIP When the power management mode is **Static**, the sum of the manually allocated power supply parameters of all ports cannot exceed the available total power of the PoE ONT.
Available Total Power	Specifies the available total power of the PoE ONT. This parameter cannot be modified.
Total Remaining Power	Specifies the total remaining power of the PoE ONT. This parameter cannot be modified.
Chip temperature	Specifies the chip temperature of the PoE ONT. This parameter cannot be modified.

Step 5 Copy the PoE configuration of one PoE ONT to other PoE ONTs.

Click **Copy** in the **PoE Global Configuration** module, select the PoE ONT in the **PoE Configuration Copied to ONT** pop-up window, and then click **Apply**.





TIP

The PoE configuration copy function can copy the personalized PoE configuration of one PoE ONT to other PoE ONTs, reducing repeated configurations and improving the efficiency of PoE configuration.

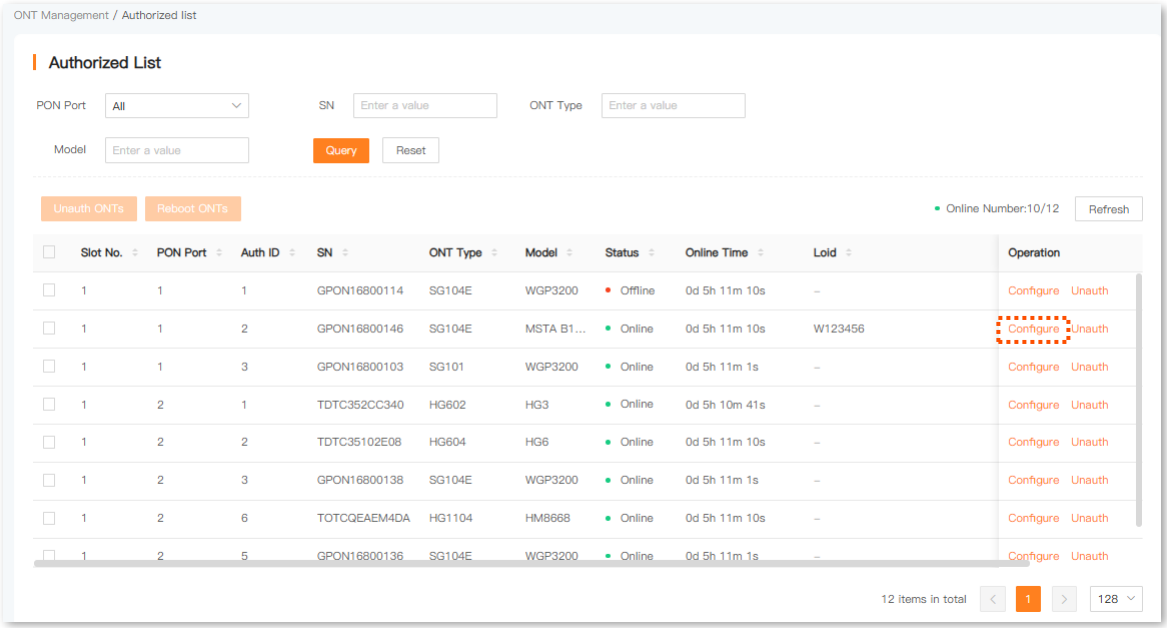
---End

Configure PoE port

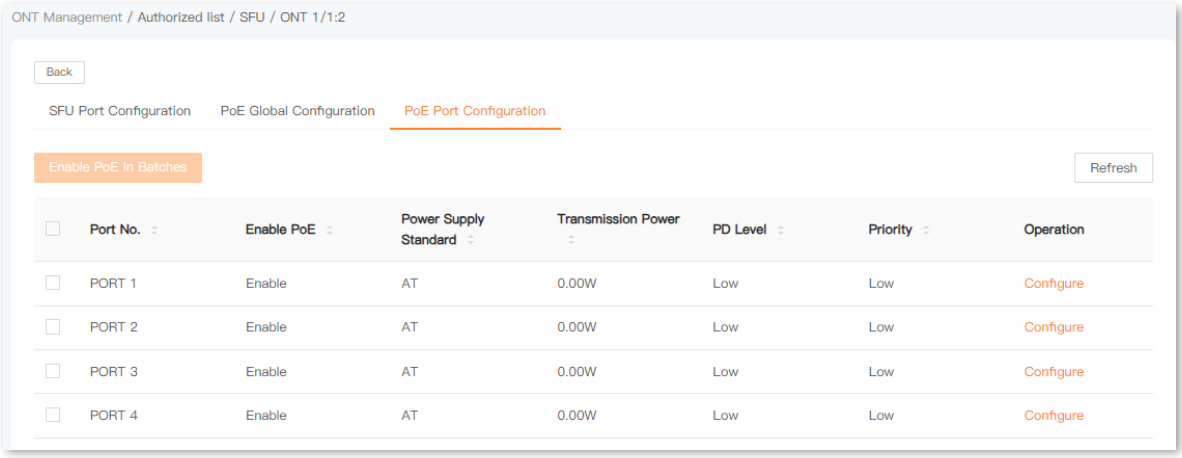
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List.**

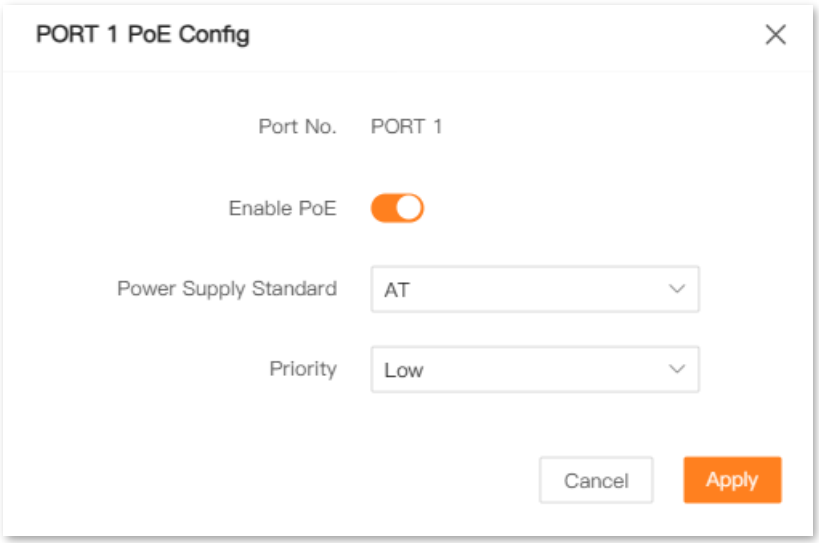
Step 3 Locate the SFU PoE ONT (Example: SG104E) to be configured, and click **Configure**. The following figure is for reference only.



Step 4 Click **PoE Port Configuration**, select the port to be configured, and click **Configure**. The following figure is for reference only.



Step 5 Configure parameters of the PoE port, and click **Apply**. The following figure is for reference only.



---End

Parameter description

Parameter	Description
Port No.	Specifies the PoE port number of the PoE ONT.
Enable PoE	Specifies whether to enable PoE function of the port. It is enabled by default.
Power Supply Standard	Specifies the PoE power supply standard of the port. It is **AT** by default. - **AT**: IEEE 802.3at standard - **AF**: IEEE 802.3af standard
Transmission Power	Specifies the port transmission power of the PoE ONT. This parameter cannot be modified.
PD Level	Specifies the port PD level of the PoE ONT. This parameter cannot be modified.
Priority	Specifies the port power supply priority of the PoE ONT. It is **Low** by default. TIP This parameter is available only when the Power Management Mode is **Dynamic**.
Static Power Distribution	Specifies the port static power distribution of the PoE ONT. TIP – When **Power Supply Standard** is set to **AT**, the maximum power that can be allocated to a single port is 30W. – When **Power Supply Standard** is set to **AF**, the maximum power that can be allocated to a single port is 15.4W. – This parameter is available only when the **Power Management Mode** is **Static**.

5.5.3 Configure HGU ONT

On this page, you can use the HGU ONT to configure the DBA bandwidth template binding for the PON port and user services for the VEIP port.

TIP

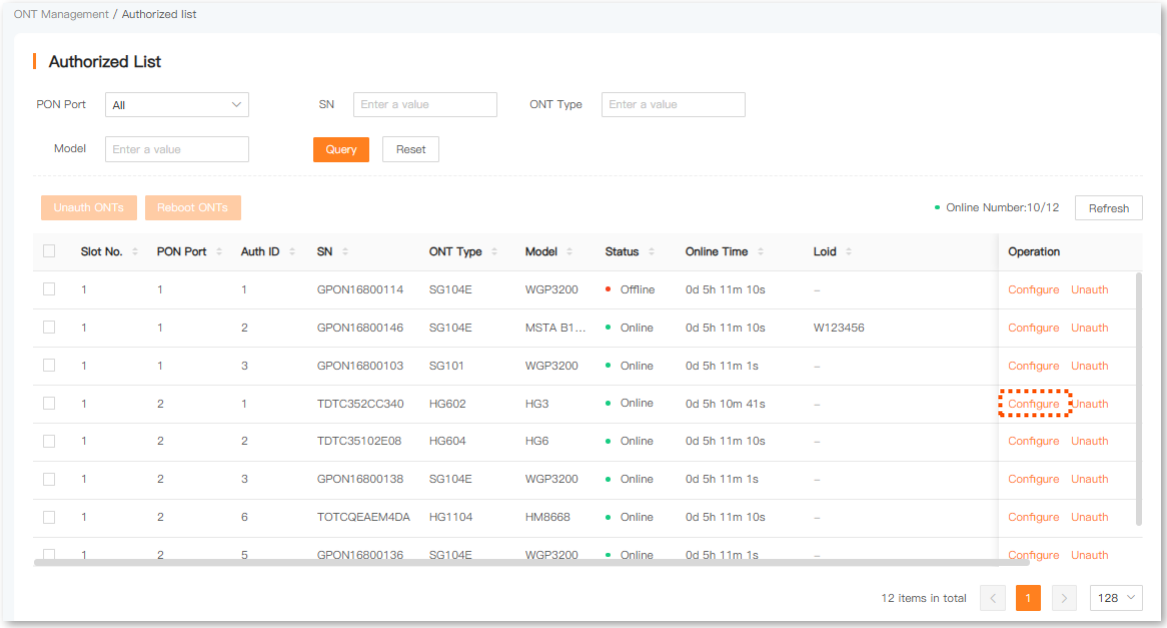
- Before configuring the PON port of the HGU ONT, configure the DBA bandwidth template in advance.
- The VEIP port of the HGU ONT applies the HGU service template by default. The user service configuration of the VEIP port is consistent with the HGU service template configuration. You can modify the user service configuration of the VEIP port as required.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

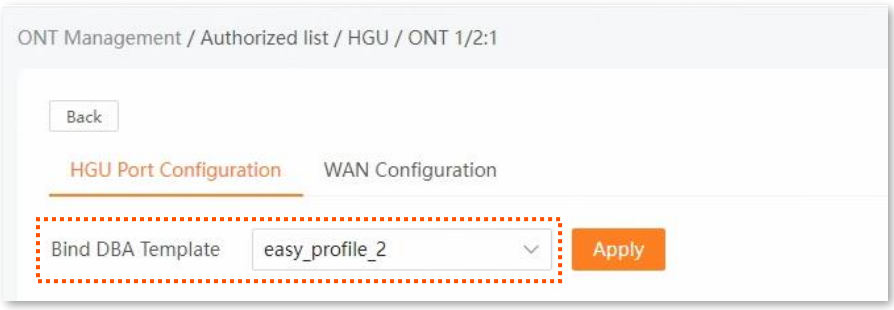
Step 2 Navigate to **ONT Management** > **Authorized List**.

Step 3 Select the HGU ONT (beginning with HG) to be configured, and click **Configure**. The following figure is for reference only.



Step 4 Bind the DBA bandwidth template to the PON port of the HGU ONT.

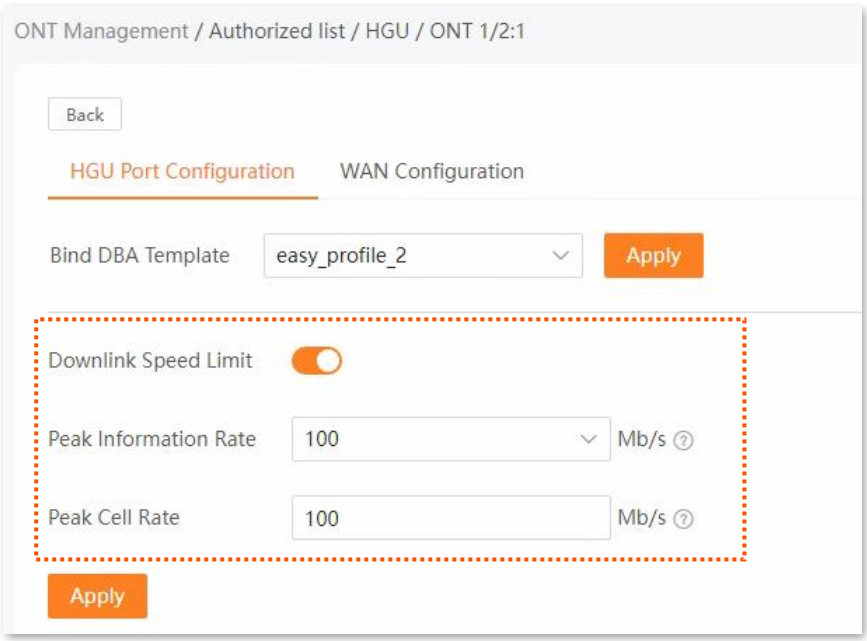
Select a DBA bandwidth template from the **Bind DBA Template** drop-down list box, and click **Apply**. The following figure is for reference only.



Step 5 Enable the **Downlink Speed Limit**, enter the speed limit value of the port, and click **Apply**. The following figure is for reference only.

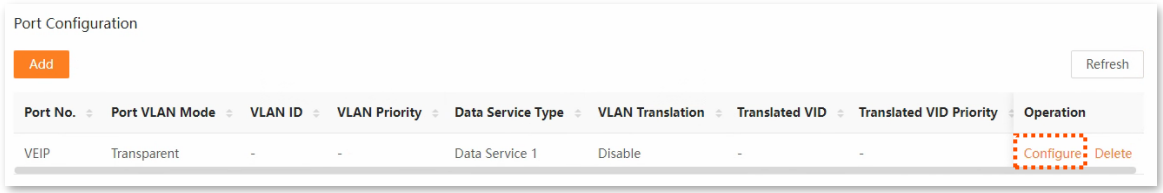
TIP

0 indicates the default preset value, which does not mean no speed limit.

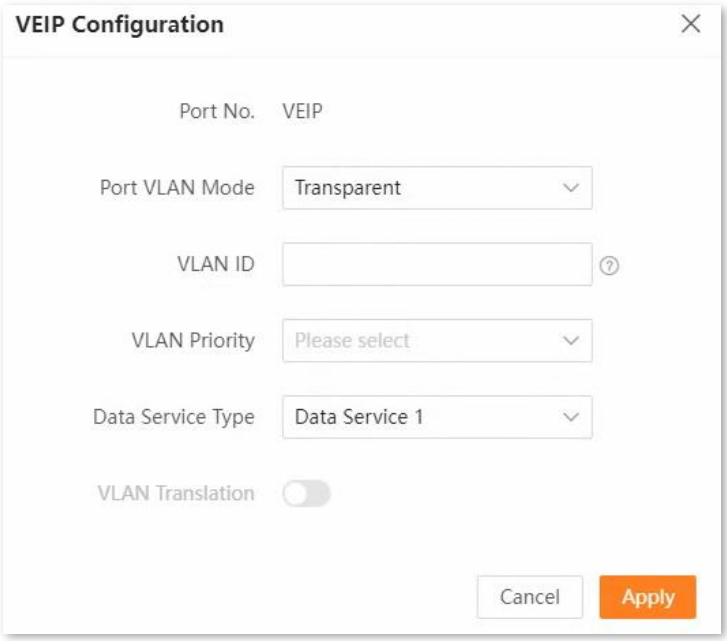


Step 6 Configure user services for the VEIP ports of the HGU ONT.

1. In **Port Configuration** module, select the port to be configured, and click **Configure**.



2. Configure parameters for the VEIP port, and click **Apply**.



TIP

- To add user services, click **Add** in the **Port Configuration** module, set parameters as required, and click **Apply**. Multiple user services can be created for a single port, and 8 user services can be created for the ONT.
- To delete user services, click **Delete** in the line of the service to be deleted in the **Port Configuration** module and then click **OK**.

---End

Parameter description

Parameter	Description
Port No.	Specifies the VEIP port number of the HGU ONT.
Port VLAN Mode	Specifies the VLAN mode of the VEIP port of the HGU ONT. - **Transparent**: If VLAN ID is left blank, the VEIP port of the HGU ONT will transparently transmit all VLANs. If VLAN ID is not left blank and the VLAN translation function is disabled, the VEIP port of the HGU ONT will transparently transmit the corresponding VLAN ID. If the VLAN ID is not left blank and the VLAN translation function is enabled, the VEIP port of the HGU ONT will convert VLAN ID to translated VID. - **Tag**: The VEIP port corresponding to the HGU ONT tags the VLAN ID for the data without VLAN IDs and forwards the downlink data after the VLAN ID is removed.

Parameter	Description
VLAN ID	Specifies the VLAN ID of the VEIP port of the HGU ONT. The value range is 1 to 4094.
VLAN Priority	Specifies the VLAN priority of the VEIP port of the HGU ONT. The value range is 0 to 7.
Data Service Type	Specifies the channel for data transmission of the VEIP port of the HGU ONT. There are 4 channels including data service 1 to data service 4.
VLAN Translation	Specifies whether to enable the VLAN translation function of the VEIP port of the HGU ONT.
Translated VID	Specifies the translated VLAN ID of the VEIP port of the HGU ONT. The value range is 1 to 4094. TIP This parameter is available only when the **VLAN Translation** is enabled.
Translated VID Priority	Specifies the translated VLAN ID priority of the VEIP port of the HGU ONT. The value range is 0 to 7. TIP This parameter is available only when the **VLAN Translation** is enabled.
Downlink Speed Limit	Specifies whether to enable the downlink speed limit function of the VEIP port of the HGU ONT.
Peak Information Rate	Specifies the downlink speed limit threshold of the VEIP port of the HGU ONT. If the downlink data passing through the port exceeds this threshold, the maximum value of passing data flow will be consistent with the rate limit threshold. TIP This parameter is available only when the **Downlink Speed Limit** is enabled.
Peak Cell Rate	Specifies the maximum cell rate at which the connected service source sends information.

5.5.4 Configure WAN connections for HGU ONTs

On this page, you can remotely set WAN connections for PON ports of HGU ONTs.

TIP

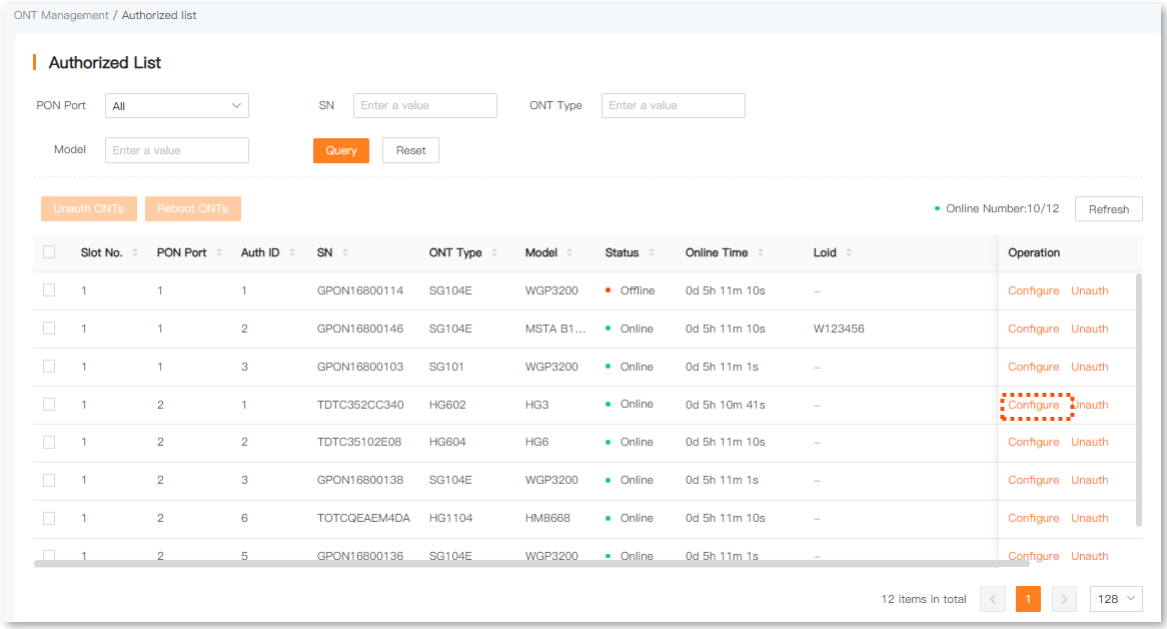
Currently for HGU ONTs, only WAN connections delivered through the OLT can be edited, viewed and deleted. WAN connections configured on the HGU cannot be read.

Configuration procedure

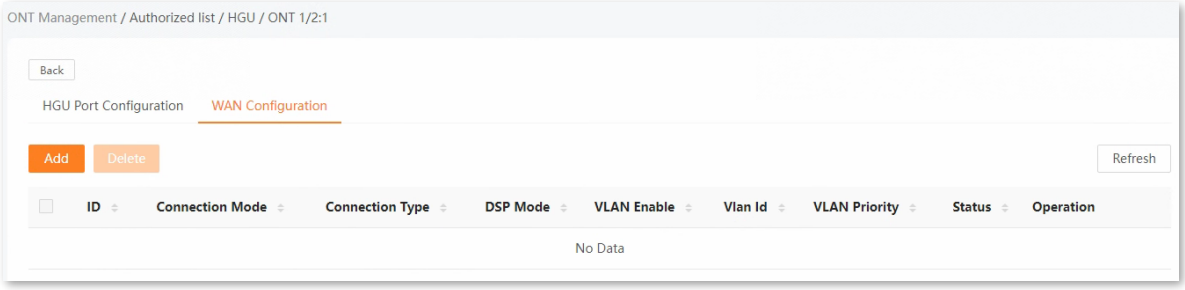
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Authorized List**.

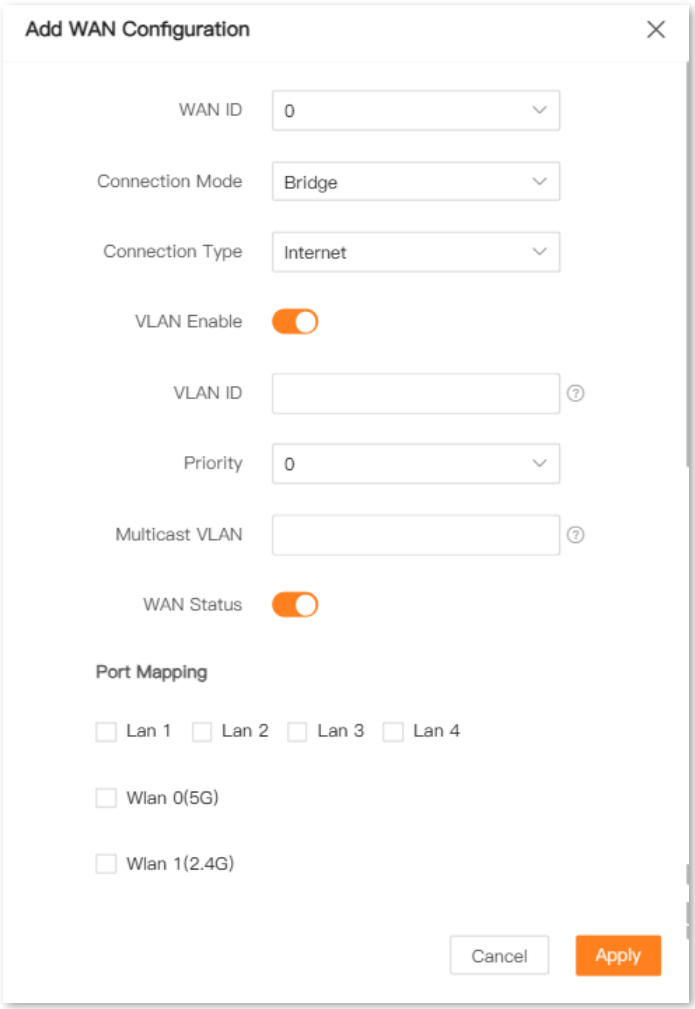
Step 3 Select the HGU ONT (beginning with HG) to be configured, and click **Configure**.



Step 4 Click **WAN Configuration**, and click **Add**.



Step 5 Set WAN parameters, and click **Apply**.



---End

Parameter description

Parameter	Description
WAN ID	Specifies the ID of WAN connections (in the range of 0 to 7). It is provided by the system automatically.
Connection Mode	Specifies the WAN connection mode. **Bridge** is selected by default. - **Bridge**: The default value is connect_type=Internet,vlan_mode = untag. - **Route**: The default value is connect_type=tr069,vlan_mode =untag,wan D_S_P mode = dhcp.
Connection Type	Specifies the WAN connection type, including Tr069, Internet, Voice, Other, Voice_Internet, Tr069_Internet, Tr069_Voice and Tr069_Voice_Internet. When **Connection Mode** is set to **Bridge**, only **Internet** and **Other** are available for this parameter. When **Connection Mode** is set to **Route**, all values are available.

Parameter	Description
VLAN Enable	Specifies whether to enable the VLAN function for WAN connections of the HGU ONT.
VLAN ID	Specifies the VLAN ID for WAN connection of the HGU ONT. Its value range is 1 to 4094. TIP This parameter is available only when the **VLAN Enable** is enabled.
Priority	Specifies the priority of the VLAN ID for WAN connection of the HGU ONT. Its value range is 0 to 7. TIP This parameter is available only when the **VLAN Enable** is enabled.
Multicast VLAN	The value range is 1 to 4094. It is optional.
WAN Status	Specifies whether to enable WAN connection for the HGU ONT. It is enabled by default. The default status is recommended.
DSP Mode	Specifies the DSP mode for WAN connection of the HGU ONT, including **DHCP**, **STATIC** and **PPPoE**. TIP This parameter is available only when **Connection Mode** is set to **Route**.
IP Settings	Provides IP setting parameters for WAN connection of the HGU ONT, including **IP Address**, **Subnet Mask**, **Gateway**, **Primary DNS** and **Secondary DNS**. TIP This parameter is available only when **Connection Mode** is set to **Route** and **DSP Mode** is set to **STATIC**.
PPPoE Settings	Provides PPPoE setting parameters for WAN connections of the HGU ONT, including **PPPoE Username** and **PPPoE Password**, which contain 1 to 24 characters. TIP This parameter is available only when **Connection Mode** is set to **Route** and **DSP Mode** is set to **PPPoE**.

Parameter	Description
MTU	Specifies the MTU value for WAN connection of the HGU ONT. - When **DSP Mode** is set to **DHCP** and **STATIC**, the default MTU value is 1500. Its value range is 576 to 1500. - When **DSP Mode** is set to **PPPoE**, the default MTU value is 1492. Its value range is 576 to 1492. TIP This parameter is available only when **Connection Mode** is set to **Route**.
Port Mapping (Bind Port)	Specifies the port bound for WAN connection of the HGU ONT. No port is selected by default. - LAN port: LAN1 to LAN4 are available. - Wlan: WLAN-2.4G and WLAN-5G are available.

5.6 ONT optical module information

5.6.1 Query optical module information

On this page, you can query the information of optical modules of ONTs connected to the PON port.

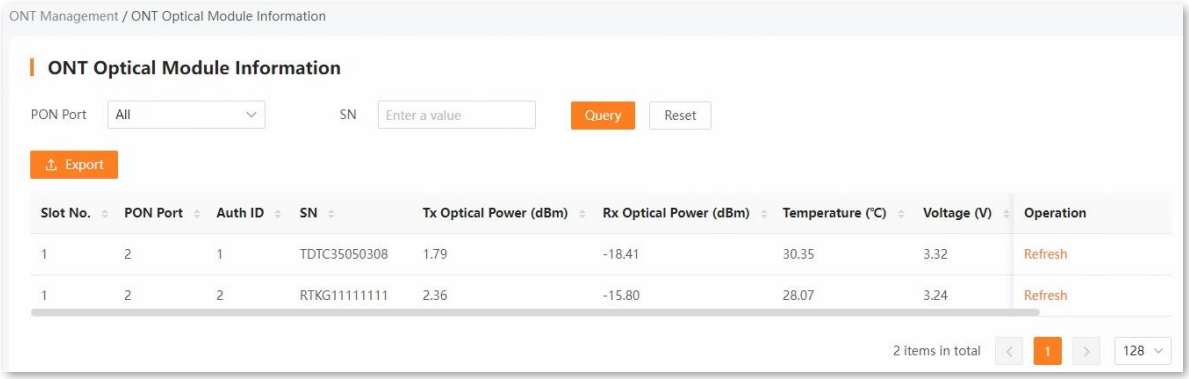
Configuration procedure

Step 1 Log in to the web UI of the OLT.

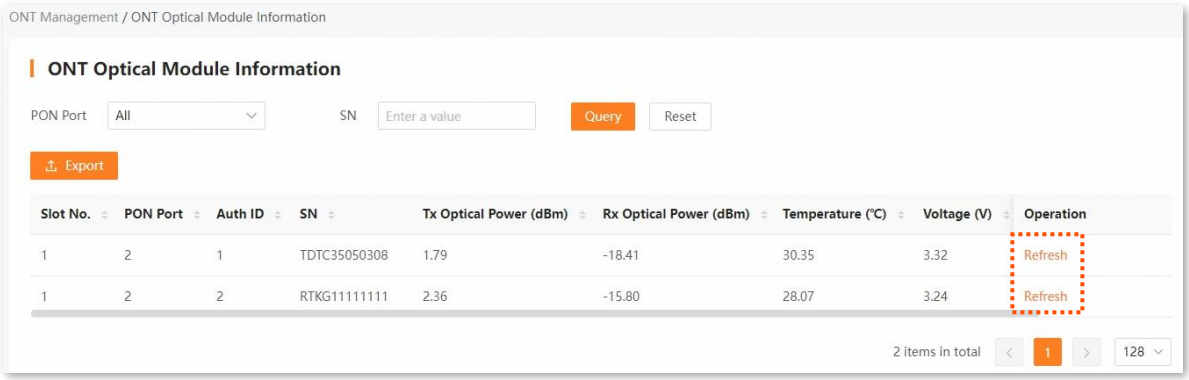
Step 2 Navigate to **ONT Management** > **ONT Optical Module Information.**

Step 3 Enter the PON port number of the OLT or the ONT SN, and click **Query**.

Step 4 Set the query conditions (**PON Port** of OLT or **SN** of ONT), and click **Query.**



Step 5 Locate the optical module information to be updated, and click **Refresh** to update a single optical module information. The following figure is for reference only.



---End

Parameter description

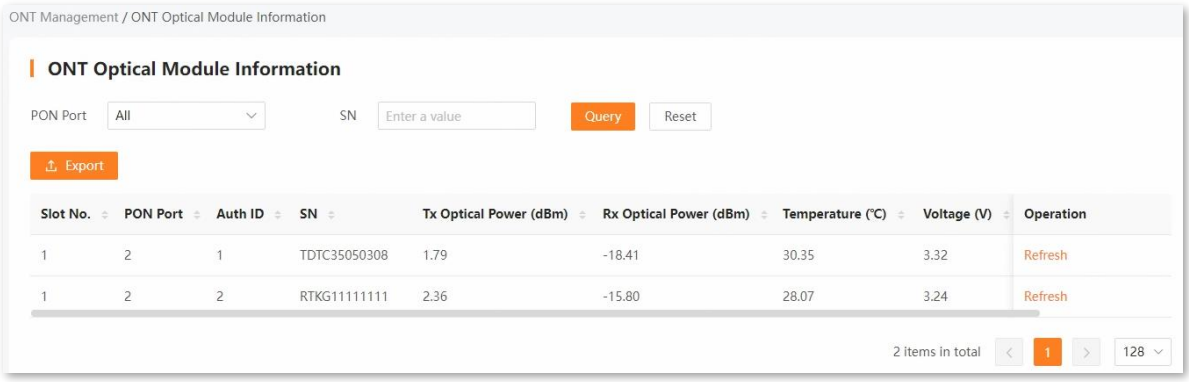
Parameter	Description
Slot No.	Specifies the slot number of the OLT. It is **1** by default.
PON Port	Specifies the PON port number of the OLT. It is **All** by default.
Auth ID	Specifies the authorization number of the ONT. The value range is 1 to 128.
SN	Specifies the serial number of the ONT. TIP Fuzzy queries are supported. You can enter the partial or complete serial number to query.
Tx Optical Power (dBm)	Specifies the current TX (transmit) optical power of the ONT.
Rx Optical Power (dBm)	Specifies the current RX (receive) optical power of the ONT.
Temperature (°C)	Specifies the current temperature of the ONT.
Voltage (V)	Specifies the current voltage value of optical modules of ONTs.
Bias Current (mA)	Specifies the current bias current value of optical modules of ONTs.

5.6.2 Export optical module information

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **ONT Optical Module Information**.

Step 3 Click **Export**.



---End

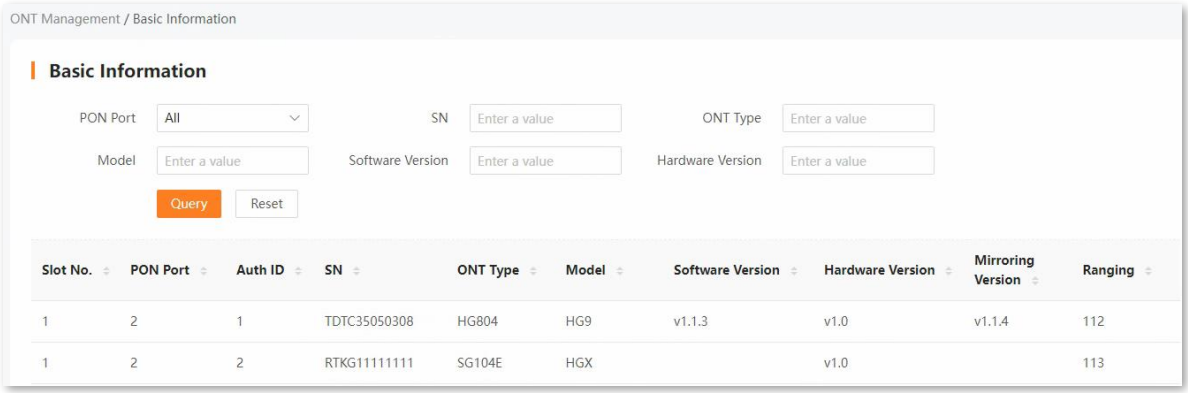
A file suffixed with **.csv** is downloaded to the local computer.

5.7 Query version information and ranging value

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Basic Information.**

Step 3 Set the query conditions (**PON Port**, **SN**, **ONT Type**, **Model**, **Software Version** and **Hardware Version**), and click **Query**. The following figure is for reference only.



---End

Parameter description

Parameter	Description
Slot No.	Specifies the slot number of the OLT.
PON Port	Specifies the PON port number of the OLT.
Auth ID	Specifies the authorization number of the ONT. The value range is 1 to 128.
SN	Specifies the serial number of the ONT. TIP Fuzzy queries are supported. You can enter the partial or complete serial number to query.

Parameter	Description
ONT Type	Specifies the ONT type. The ONT type is divided into two main classes, including SFU (beginning with SG) and HGU (beginning with HG.) The SFU main class is divided into 9 subclasses, including SG101, SG102, SG104, SG501, SG502, SG504, SG104E, SG108E and SG108. The HGU main class is divided into 13 subclasses, including HG101, HG501, HG601, HG602, HG604, HG702, HG704, HG802, HG804, HG904, HG1002, HG1004 and HG1104. For details, refer to ONT Type. TIP Fuzzy queries are supported. You can enter the partial or complete ONT type to query.
Model	Specifies the ONT model. TIP Fuzzy queries are supported. You can enter the partial or complete ONT model to query.
Software Version	Specifies the software version of the ONT.
Hardware Version	Specifies the hardware version of the ONT.
Mirroring Version	Specifies the mirroring version of the ONT.
Ranging	Specifies the ranging value of the ONT.

5.8 Configure ONT type mapping

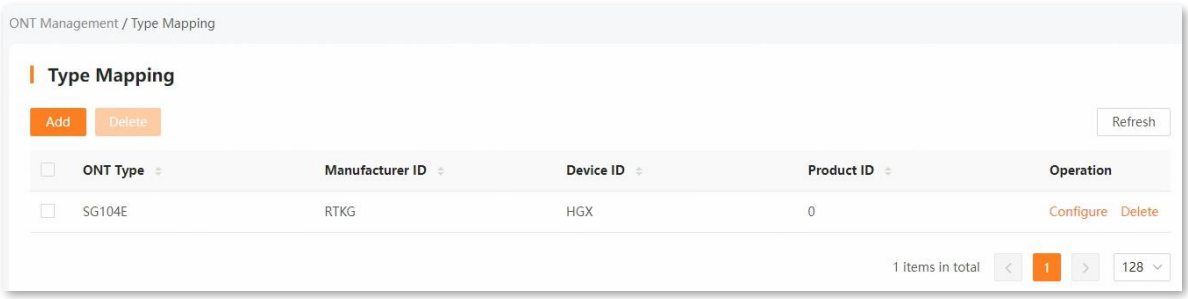
On this page, you can map the ONT type with manufacturer ID, device ID and product ID to improve device compacity with other manufacturers' ONTs.

Configuration procedure

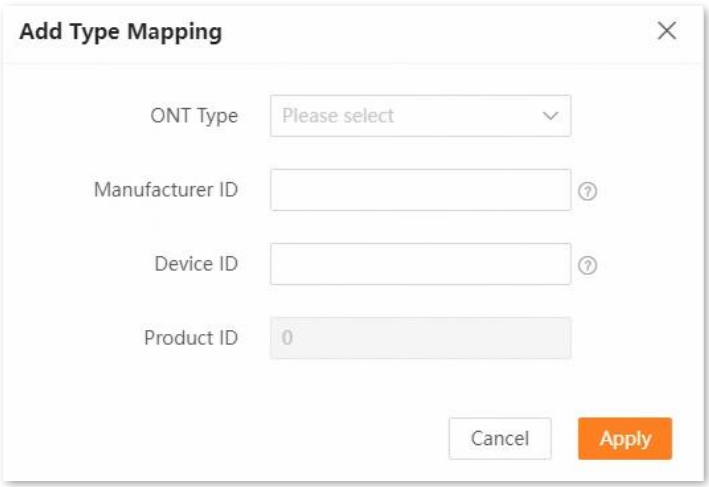
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Type Mapping.**

Step 3 Click **Add**.



Step 4 Set ONT type mapping parameters and click **Apply**.



---End

Parameter description

Parameter	Description
ONT Type	Specifies the ONT type. The ONT type is divided into two main classes, including SFU (beginning with SG) and HGU (beginning with HG.) The SFU main class is divided into 9 subclasses, including SG101, SG102, SG104, SG501, SG502, SG504, SG104E, SG108E and SG108. The HGU main class is divided into 13 subclasses, including HG101, HG501, HG601, HG602, HG604, HG702, HG704, HG802, HG804, HG904, HG1002, HG1004 and HG1104. For details, refer to ONT Type. TIP Fuzzy queries are supported. You can enter the partial or complete ONT type to query.
Manufacturer ID	Specifies the ID of manufacturer, such as the manufacturer ID carried by Tenda ONT is TDTC, which consists of four digits and letters.
Device ID	Specifies the ONT type reported by the ONT, which consists of 1 to 20 characters. Digits, letters and special characters are allowed.
Product ID	It is 0 by default and cannot be modified.
Operation	Used to edit or delete ONT type mapping parameters. Configure : Used to modify ONT type mapping parameters. Delete : Used to delete ONT type mapping parameters.

5.9 Enable ONT automatic transfer

After the ONT automatic transfer function is enabled, if an ONT that has been authorized on the PON port of the OLT is authorized on another PON port again, the OLT automatically unauthorizes the ONT and reauthorizes the ONT on the actually connected PON port. This simplifies the operation procedure for changing the PON ports to connect the ONTs and improves fault tolerance of ONT registration.

TIP

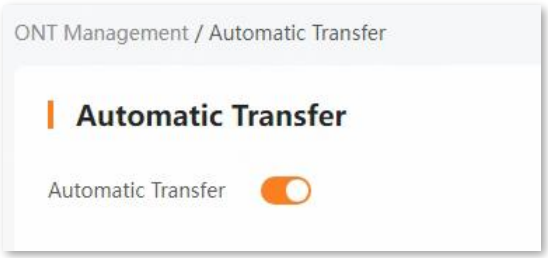
This function is available only when the authorization mode of PON board is automatic authorization or automatic + manual authorization. It will not take effect when Authorization Mode is set to **Manually**.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Automatic Transfer.**

Step 3 Enable the **Automatic Transfer** function.



---End

5.10 Configure ONT auto unauth

With the ONT auto unauth function enabled, after the offline time of the ONT that has been authorized on the device's PON port reaches the default value of 1440 minutes, the device will automatically deauthorize the ONT and release the ONT authorization ID to prevent PON authorization number is occupied by some ONTs that have not been used or offline for a long time, causing the registration of newly connected ONTs to fail. If the deauthorized ONT needs to be resumed, you can re-initiate the registration process normally.

TIP

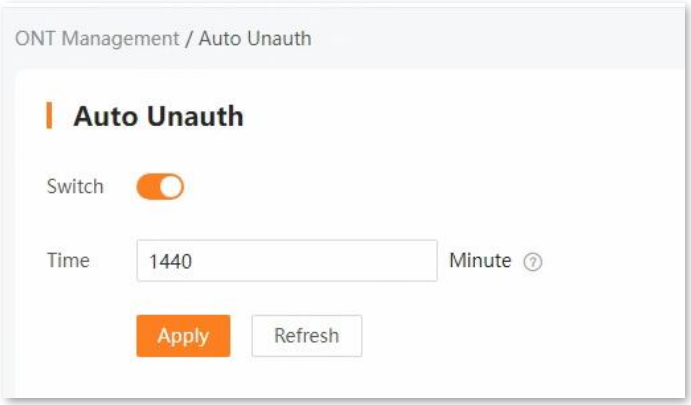
If the ONT configurations connected to the OLT PON port are all user-personalized configurations, it is recommended not to enable this function. Otherwise, the ONT personalized configurations will be lost. After the ONT resumes normal use, only fixed service template configurations can be obtained, resulting in ONT services being unable to be restored normally.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **Auto Unauth**.

Step 3 Enable the **Auto Unauth** function, set the time as required, and click **Apply**.



---End

Parameter description

Parameter	Description
Switch	Specifies whether to enable the auto unauth function.
Time	After the ONT offline time reaches the set value, the ONT will be automatically deauthorized. The value range is 1 to 525600 minutes, and the default value is 1440.

5.11 Enable ONT loopback detection

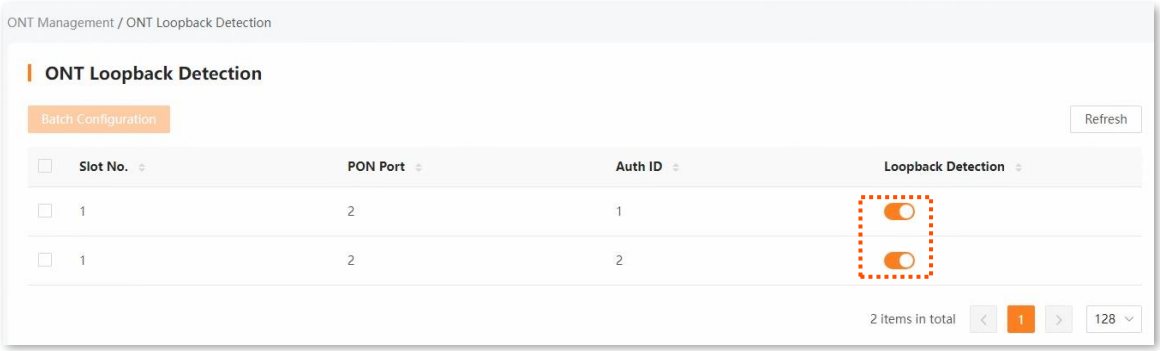
With the ONT loopback detection function enabled, when the system detects a loop on the ONT, it will automatically clear the loop fault to ensure normal service operation.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **ONT Management** > **ONT Loopback Detection**.

Step 3 Enable the **Loopback Detection** function. The following figure is for reference only.



---End

Parameter description

Parameter	Description
Slot No.	Specifies the slot number of the OLT.
PON Port	Specifies the PON port number of the OLT.
Auth ID	Specifies the authorization number of the ONT. The value range is 1 to 128.
Loopback Detection	Specifies whether to enable the loopback detection function. It is enabled by default. It is recommended that this function be enabled for a long time. - Enable: When the system detects a loop on the ONT, it will automatically clear the loop fault to ensure normal service operation. - Disable: When the system detects a loop on the ONT, it will not automatically clear the loop fault, which may lead to the risk of failure in user services.

6 Template configuration

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models. The actual product prevails.

6.1 Configure DBA bandwidth template

The system uses the dynamic bandwidth allocation (DBA) mechanism based on status report (SR) to improve the uplink bandwidth usage and ensure service fairness and quality of service (QoS). The bandwidth is allocated based on the queue status reported by the ONT.

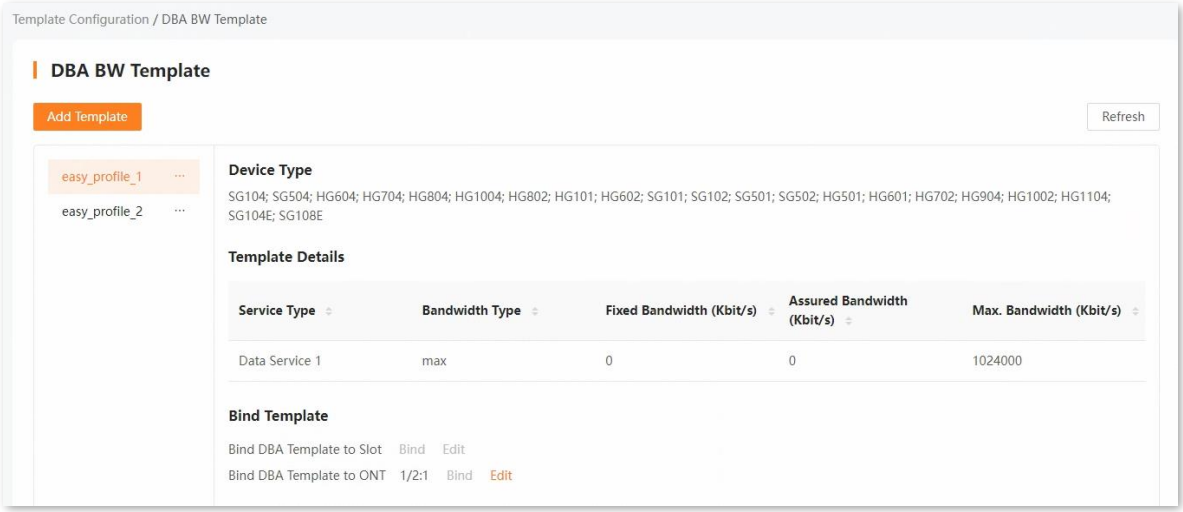
There are two DBA bandwidth templates by default. The template names are **easy_profile_1** and **easy_profile_2**.

6.1.1 Add DBA bandwidth template

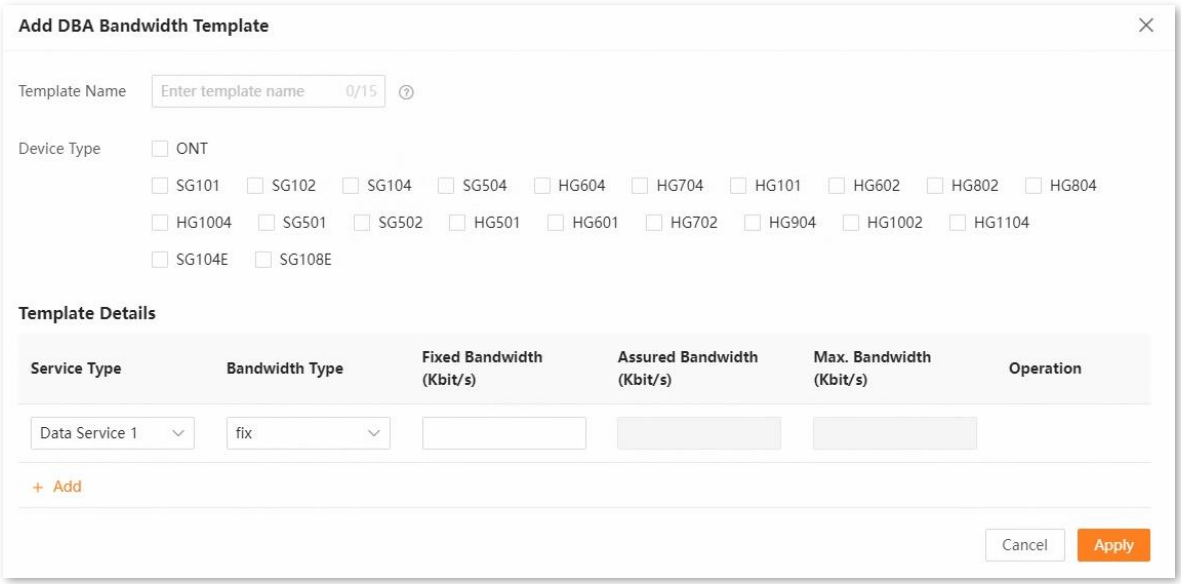
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template.**

Step 3 Click **Add Template**.



Step 4 Set the relevant parameters as required, and click **Apply**.



---End

Parameter description

Parameter		Description
Template Name		Specifies the name of the template. A maximum of 15 bytes consisting of letters, digits and underscores (_) are allowed.
Device Type		Specifies the type of the ONT to which the DBA bandwidth template is applied. After the corresponding ONT type is selected, the DBA bandwidth template will take effect only when it is bound to the ONT of the selected device type.
Template Details	Service Type	Specifies the Data transmission channel to which the DBA bandwidth template is applied**. Data Service 1** to **Data Service 4** are available. By default, **Data Service 1** is selected. After selecting the corresponding channel, the DBA bandwidth template takes effect only for the uplink data in the selected channel. TIP The DBA bandwidth template bound to an ONT should be consistent with the data service in the user service configuration of the ONT port (LAN or VEIP port).

Parameter		Description
	Bandwidth Type	Specifies the bandwidth type allocated by the DBA. – **fix**: Specifies the fixed bandwidth. If **fix** is selected, the fixed bandwidth is the same as the maximum bandwidth. – **assure**: Specifies the assured bandwidth. If **assure** is selected, the assured bandwidth is the same as the maximum bandwidth. – **assure-max**: Specifies the assured bandwidth and the maximum bandwidth. If **assure-max** is selected, the assured bandwidth is lower than the maximum bandwidth. – **max**: Specifies the maximum bandwidth. If **max** is selected, the maximum bandwidth must be specified. – **fix-assure-max**: Specifies the fixed bandwidth, the assured bandwidth and the maximum bandwidth. If **fix-assure-max** is selected, the sum of fixed bandwidth and assured bandwidth is lower than or equal to the maximum bandwidth.
	Fixed Bandwidth (Kbit/s)	Specifies the uplink fixed bandwidth value assigned by the OLT to the ONT PON port. The range is 128 to 1244000 Kbit/s.
	Assured Bandwidth (Kbit/s)	Specifies the uplink assured bandwidth value assigned by the OLT to the ONT PON port. The range is 128 to 1244000 Kbit/s.
	Maxed Bandwidth (Kbit/s)	Specifies the uplink maximum bandwidth value assigned by the OLT to the ONT PON port. The range is 128 to 1244000 Kbit/s.

6.1.2 Modify DBA bandwidth template

TIP

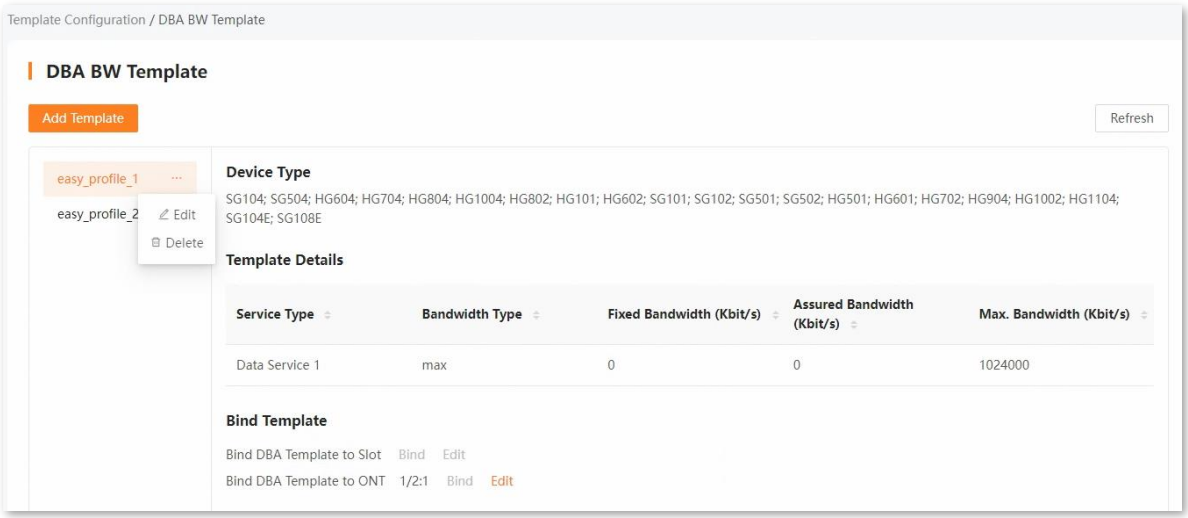
– For the DBA bandwidth templates (**easy_profile_1** and **easy_profile_2**) preset in the system, only the bandwidth value can be modified in **easy_profile_1** and no modification is allowed in **easy_profile_2**.

– If the DBA bandwidth template added manually has been not bound, the ONT type, service type, bandwidth type and bandwidth value are supported to modified. If the DBA bandwidth template has been bound, parameters cannot be modified.

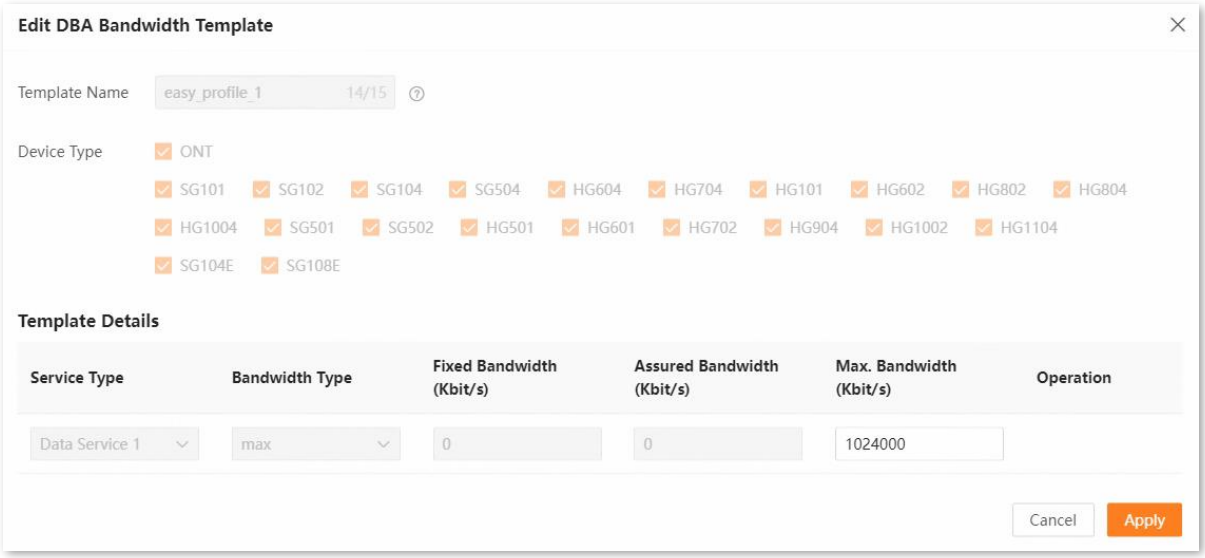
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template**.

Step 3 Select a template, click ··· besides it and select **Edit**. The following figure is for reference only.



Step 4 Modify the relevant parameters as required, and click **Apply**.



---End

6.1.3 Delete DBA bandwidth template

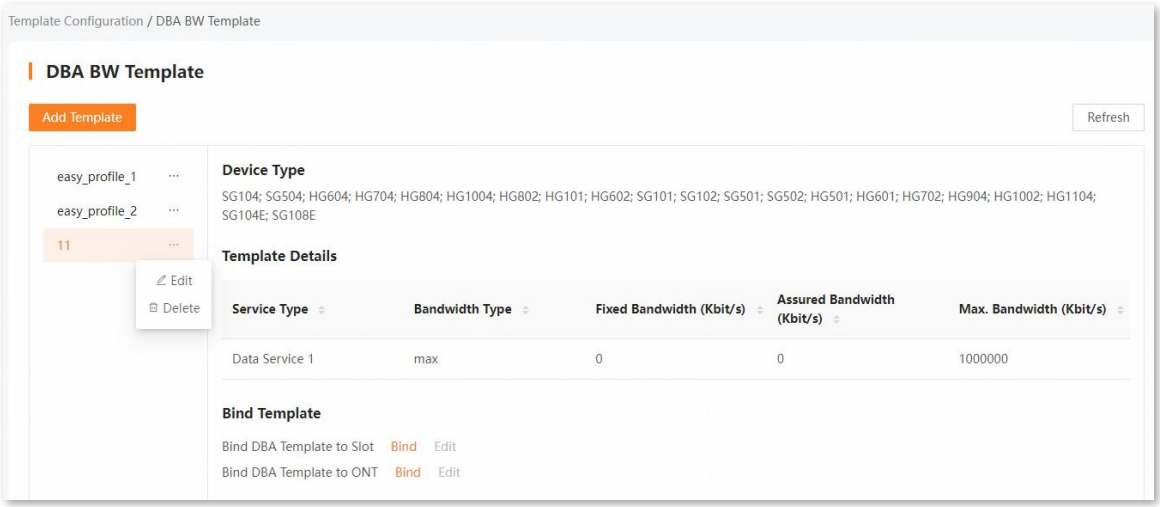
TIP

- The two DBA bandwidth templates (**easy_profile_1** and **easy_profile_2**) of the system cannot be deleted.
- If the DBA bandwidth template added manually has been bound, it cannot be deleted.

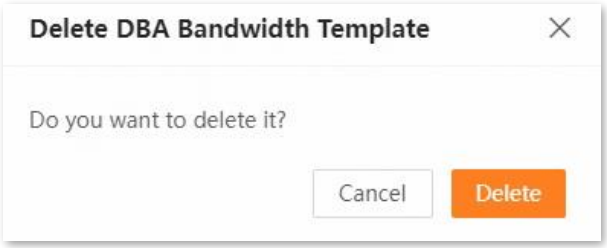
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template**.

Step 3 Select a template, click ··· besides it and select **Delete**. The following figure is for reference only.



Step 4 Confirm the prompt information, and click **Delete**.



---End

6.2 Bind/Unbind DBA bandwidth template

After the OLT slot or the ONT is bound to the DBA bandwidth template, when the ONT is registered, the DBA bandwidth template will be delivered to the ONT with matching type. The PON port of the ONT will handle the uplink bandwidth according to the dynamic allocation mechanism of the uplink bandwidth specified in the template.

6.2.1 Bind DBA bandwidth template

TIP

If the binding slot conflicts with the binding ONT rule, the binding ONT rule takes effect first. For example, if the DBA bandwidth template is bound to all ONTs connected to the PON1 port under the OLT slot 1, but the DBA is not bound to the OLT slot 1, the actual binding situation is that all ONTs connected to the PON1 port under the OLT slot 1 successfully bind the DBA bandwidth template.

Bind DBA bandwidth template to slot

TIP

The two DBA bandwidth templates (**easy_profile_1** and **easy_profile_2**) of the system cannot be bound to the OLT slot.

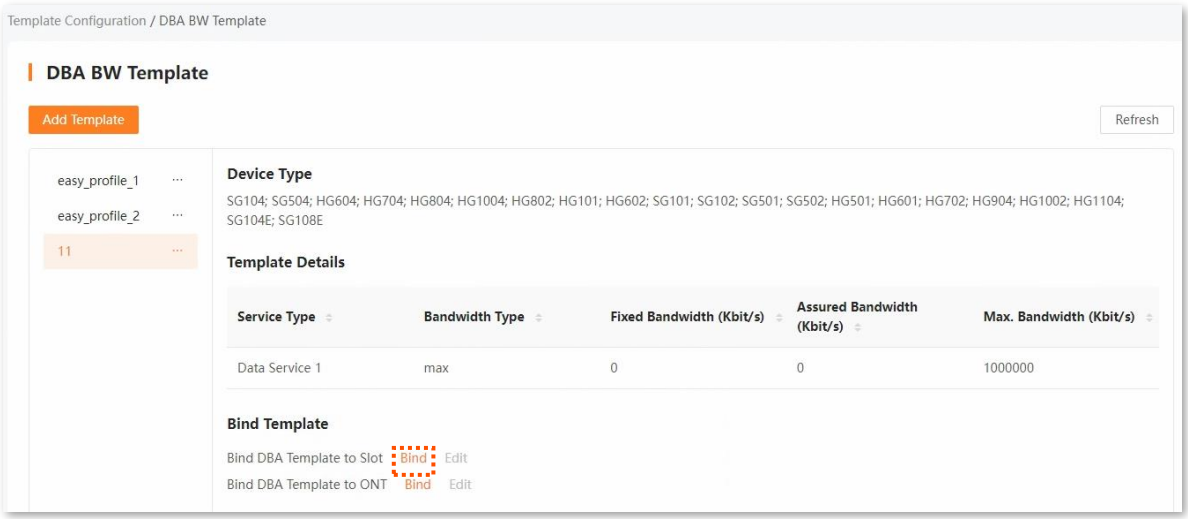
After the DBA bandwidth template is bound to the OLT slot, when the ONT connected to the PON port under the bound OLT slot is registered, the DBA bandwidth template will be delivered to the ONT PON port with matching type.

Configuration procedure

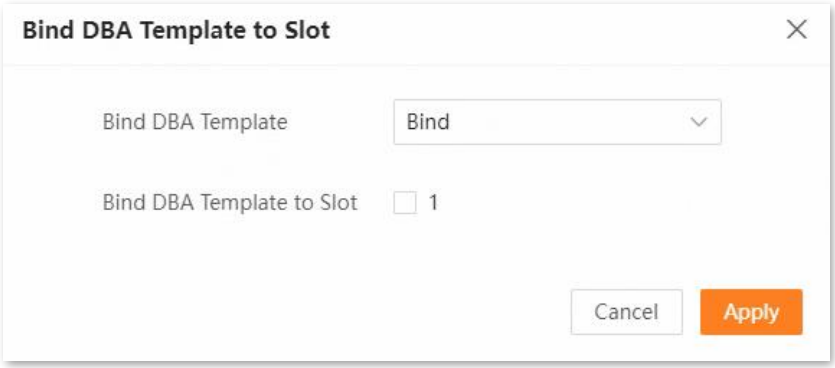
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template**.

Step 3 Select a template to be bound. In **Bind Template** module, click **Bind** after **Bind DBA Template to Slot**.



Step 4 Set **Bind** for **Bind DBA Template**, select the slot to be bound, and click **Apply**.



---End

Bind DBA bandwidth template to ONT

After the DBA bandwidth template is bound to the ONT connected to the OLT PON port, when the ONT is registered, the DBA bandwidth template will be delivered to the ONT PON port with matching type.

TIP

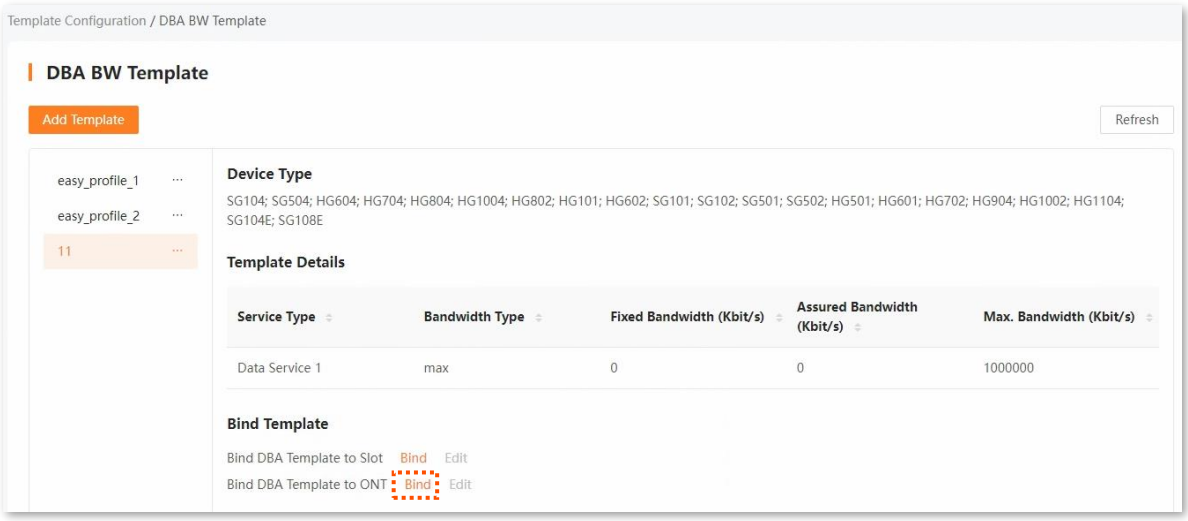
Refer to the following steps to bind DBA bandwidth templates to multiple ONTs by batches, you can also refer to configure ONT to bind DBA bandwidth templates to ONTs one by one.

Configuration procedure

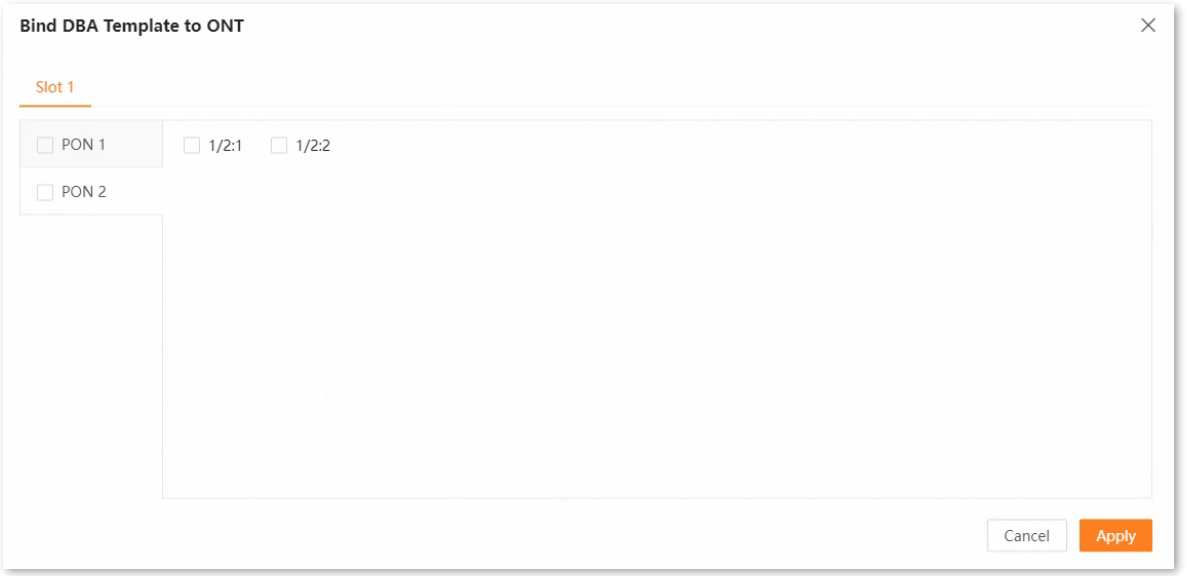
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template**.

Step 3 Select a template to be bound. In **Bind Template** module, click **Bind** after **Bind DBA Template to ONT**.



Step 4 Select the ONTs to be bound, and click **Apply**. The following figure is for reference only.



---End

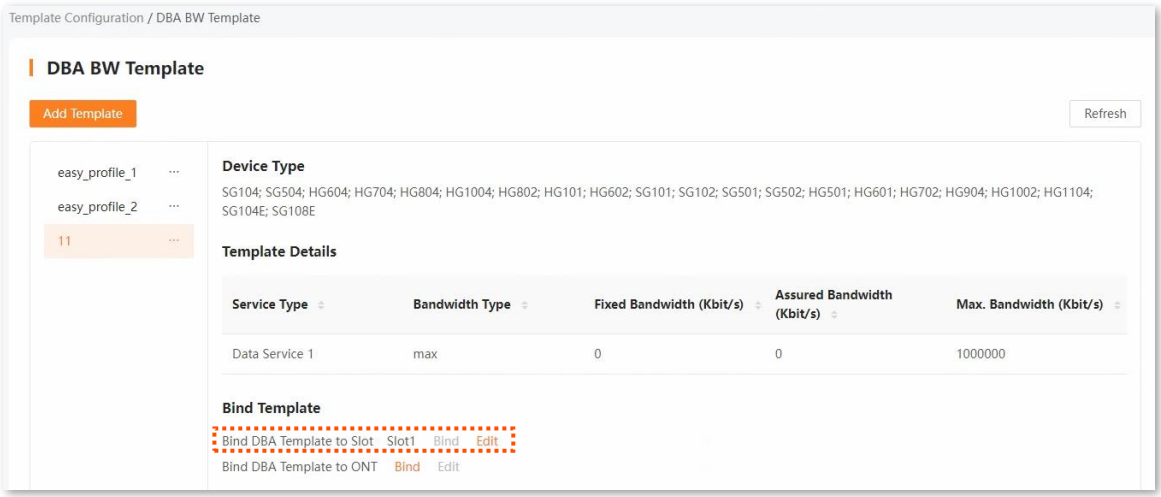
6.2.2 Unbind DBA bandwidth template

Unbind DBA bandwidth template to slot

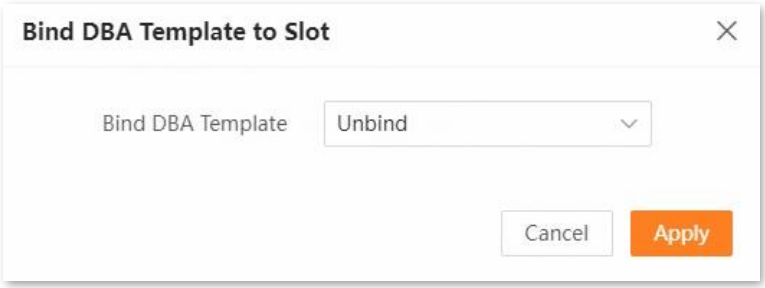
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template**.

Step 3 Select a template to be unbound. In **Bind Template** module, click **Edit** after **Bind DBA Template to Slot**.



Step 4 Unselect the slots to be unbound, or set **Unbind** for **Bind DBA Template** to unbind all slots of the OLT, and click **Apply**. The following shows an example of unbinding all slots of the OLT.



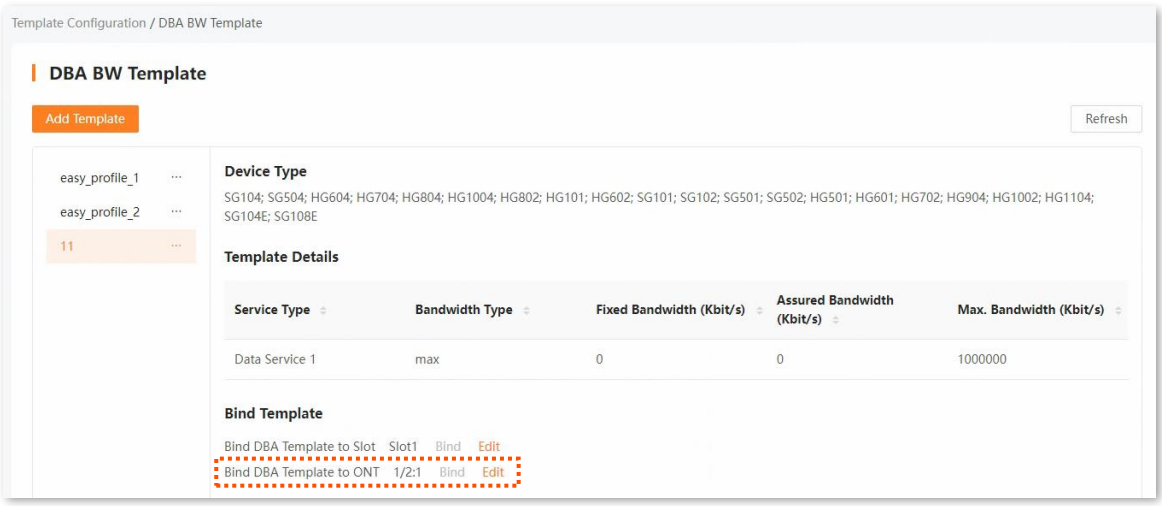
---End

Unbind DBA bandwidth template to ONT

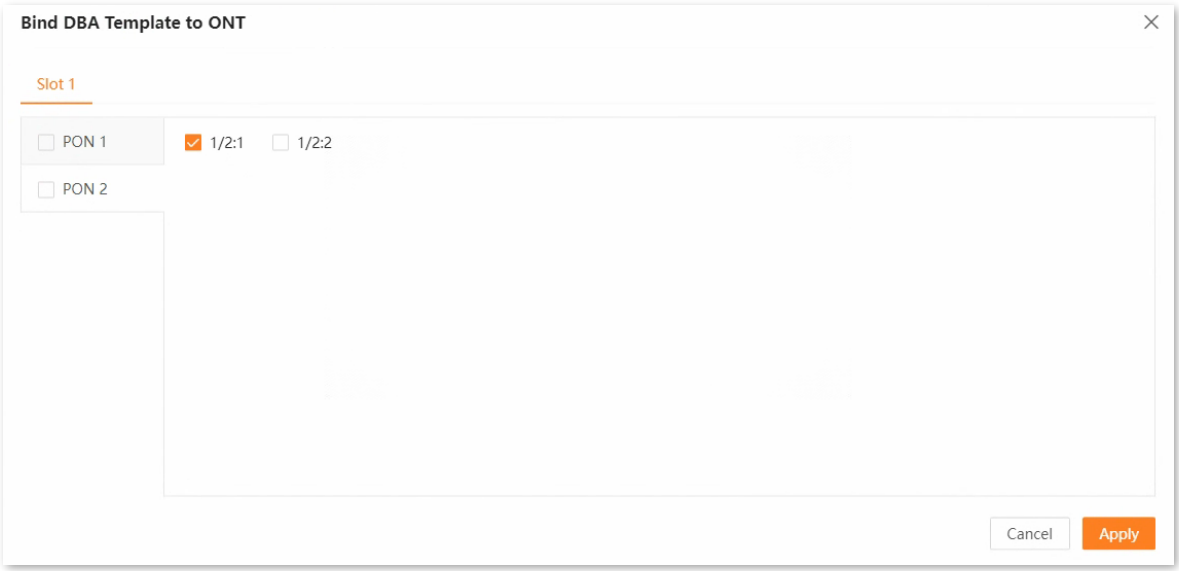
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **DBA BW Template**.

Step 3 Select a template to be unbound. In **Bind Template** module, click **Edit** after **Bind DBA Template to ONT**. The following figure is for reference only.



Step 4 Unselect the ONTs to be unbound, and click **Apply**. The following figure is for reference only.



---End

6.3 Configure HGU service templates

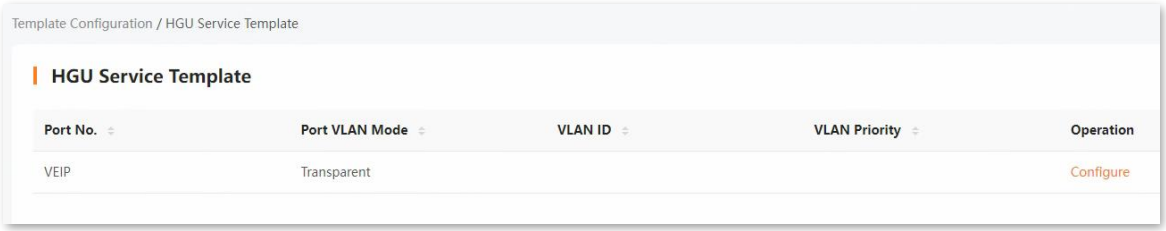
On this page, you can configure the service templates after the HGU ONT is automatically authorized.

Configuration procedure

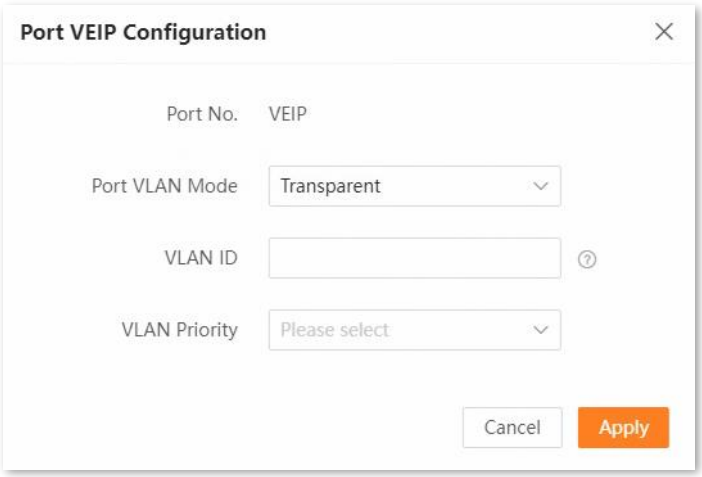
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **HGU Service Template**

Step 3 Click **Configure** in the line of the template to be modified. The following figure is for reference only.



Step 4 Set VEIP port parameters as required and click **Apply**.



---End

Parameter description

Parameter	Description
Port No.	Specifies the VEIP port number of the HGU ONT.
Port VLAN Mode	Specifies the VLAN mode of the VEIP port of the HGU ONT, including Transparent and Tag.

Parameter	Description
VLAN ID	Specifies the VLAN ID of the VEIP port of the HGU ONT. The value range is 1 to 4094.
VLAN Priority	Specifies the VLAN priority of the VEIP port of the HGU ONT. The value range is 0 to 7.

6.4 Configure SFU service templates

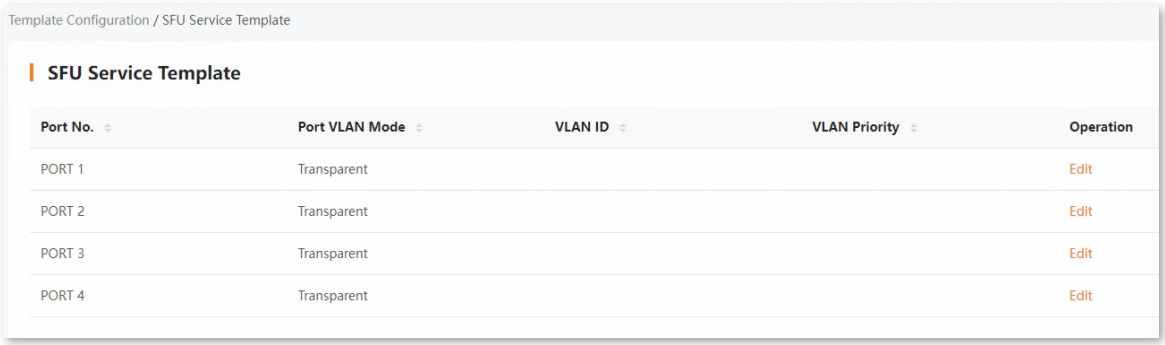
On this page, you can configure the service templates after the SFU ONT is automatically authorized.

Configuration procedure

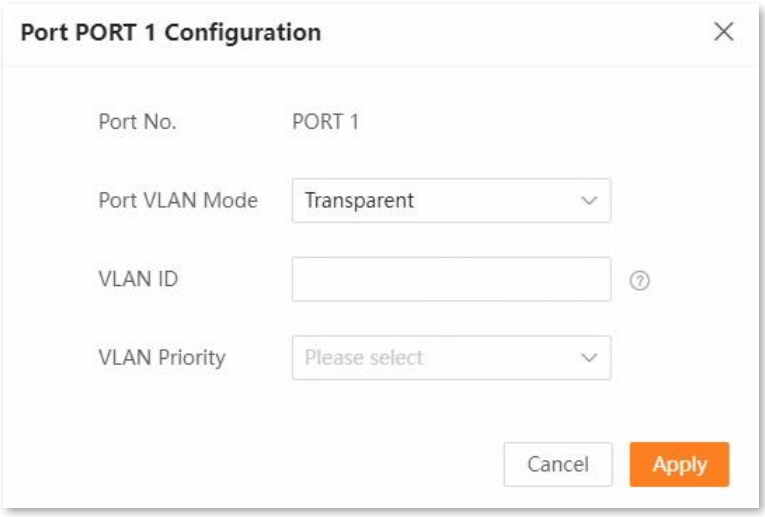
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **SFU Service Template**.

Step 3 Click **Edit** in the line of the template to be modified. The following figure is for reference only.



Step 4 Configure parameters for the LAN port of the SFU ONT, and click **Apply**.



---End

Parameter description

Parameter	Description
Port No.	Specifies the LAN port number of the SFU ONT.
Port VLAN Mode	Specifies the VLAN mode of the LAN port of the SFU ONT. - **Transparent**: If VLAN ID is left blank, the LAN port of the SFU ONT will transparently transmit all VLANs. If VLAN ID is specified, the LAN port of the SFU ONT will transparently transmit the corresponding VLAN ID. - **Tag**: The LAN port corresponding to the SFU ONT tags the VLAN ID for the data without VLAN IDs and forwards the downlink data after the VLAN ID is removed.
VLAN ID	Specifies the VLAN ID of the LAN port of the SFU ONT. The value range is 1 to 4094.
VLAN Priority	Specifies the VLAN priority of the LAN port of the SFU ONT. The value range is 0 to 7.

6.5 Configure PoE templates

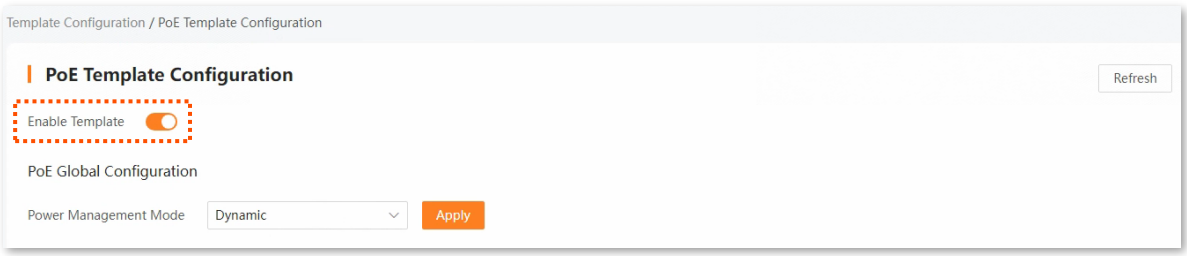
When the PoE template is enabled, you can configure the service templates after the PoE ONT is automatically authorized.

Configuration procedure

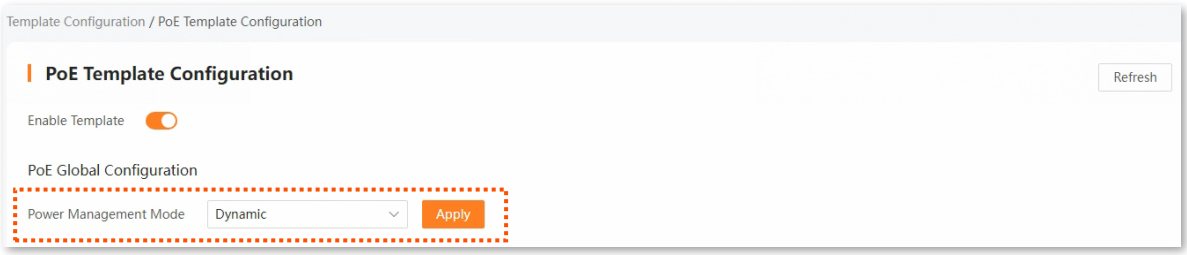
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Template Configuration** > **PoE Template Configuration**.

Step 3 Enable the **Enable Template** function.

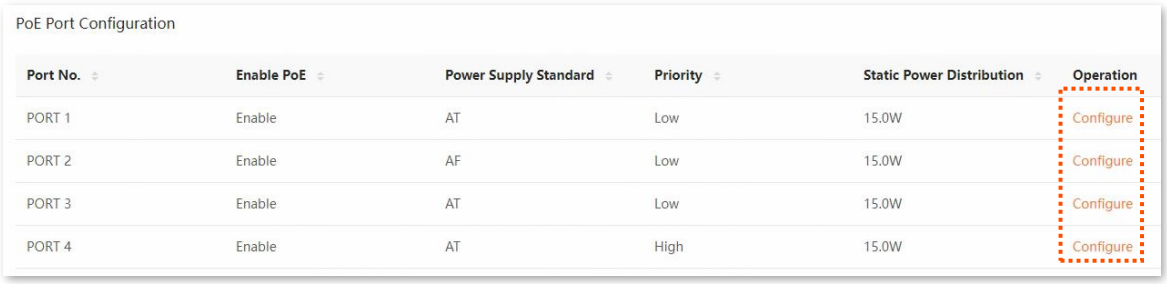


Step 4 Select **Power Management Mode** of the **PoE Global Configuration** as required.

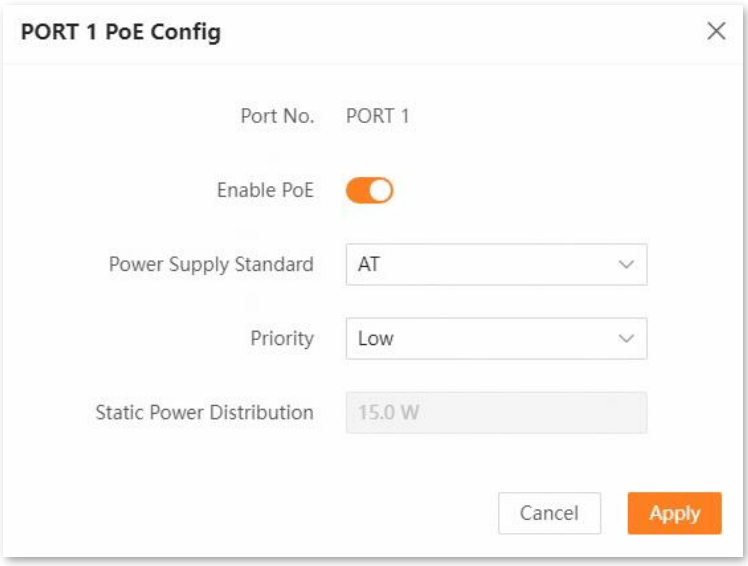


Step 5 Configure parameters of the PoE port.

1. In **PoE Port Configuration** module, select the port to be configured, and click **Configure**. The following figure is for reference only.



2. Configure the PoE port service parameters, and click **Apply**.



---End

Parameter description

Parameter	Description
Enable Template	Specifies whether to enable the PoE template. It is disabled by default.

Refer to Configure PoE parameters of PoE ONT to see other parameter descriptions.

7 Maintenance

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models. The actual product prevails.

7.1 Configure system time

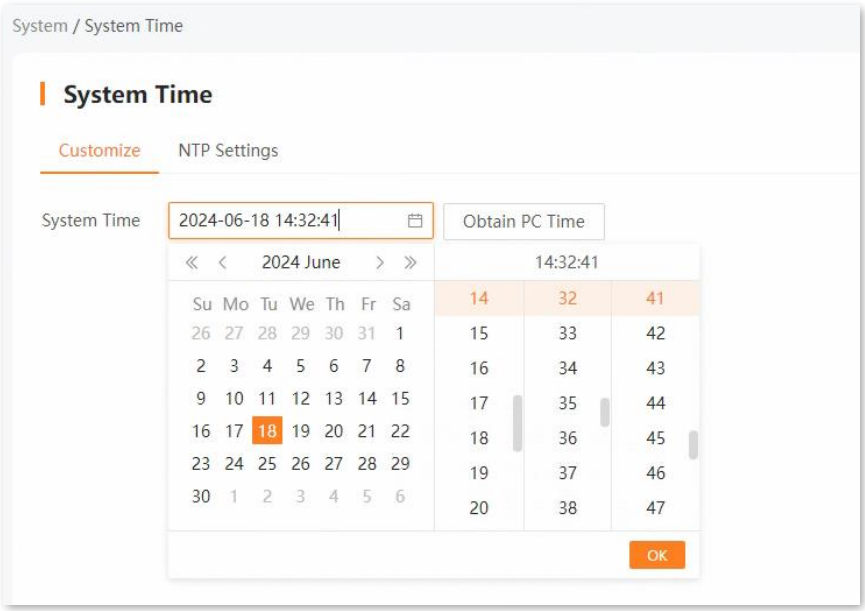
To ensure that the time-based functions of the OLT take effect properly, it is necessary to ensure that the system time of the OLT is accurate. The OLT supports Set system time manually and Sync time with local computer.

7.1.1 Set system time manually

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **System** > **System Time** > **Customize.**

Step 3 click to manually set the date and time, click **OK**, and click **Apply**.



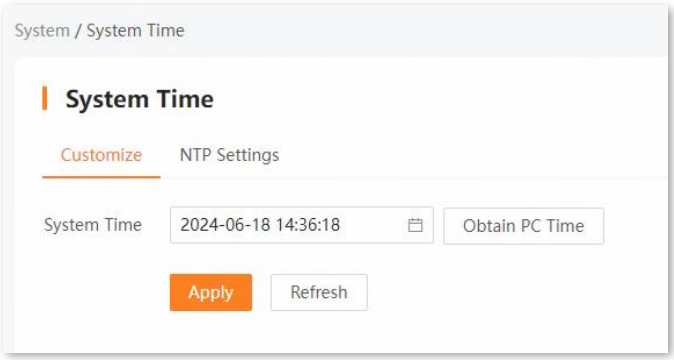
---End

7.1.2 Sync time with local computer

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **System** > **System Time** > **Customize**.

Step 3 Click **Obtain PC Time** to synchronize the time of the computer that is currently managing the OLT to the OLT, and click **Apply**.



---End

7.1.3 Obtain time from NTP server

On this page, you can set the primary and secondary NTP servers and their time zones, so that the OLT can obtain time parameters from the NTP servers and synchronize the time according to time zones.

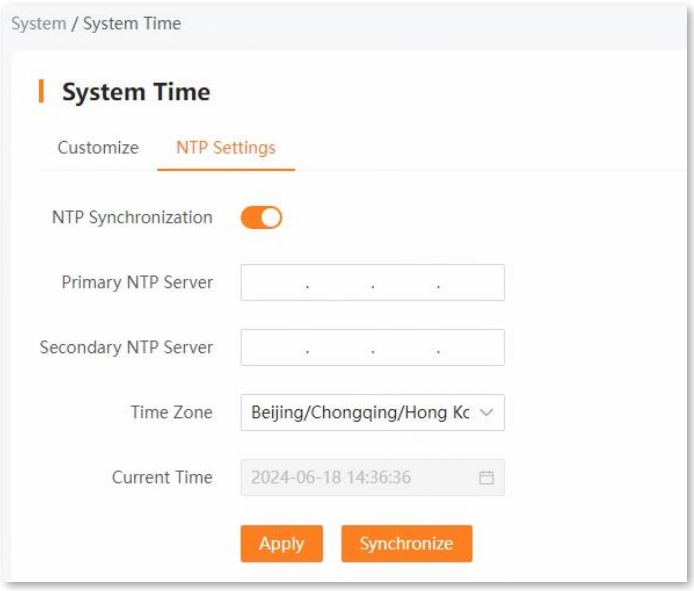
Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **System** > **System Time** > **NTP Settings.**

Step 3 Enable **NTP Synchronization**, set parameters as required, and click **Apply**.

Step 4 Click **Synchronize** to refresh the current time from the NTP server.



---End

Parameter description

Parameter	Description
NTP Synchronization	Specifies whether to enable the NTP synchronization function.
Primary NTP Server	Specifies the IP address of the primary NTP server. It is optional.
Secondary NTP Server	Specifies the IP address of the secondary NTP server. It is optional.
Time Zone	Specifies the time zone that can be selected on the NTP server.

7.2 Access management

7.2.1 Configure web login timeout interval

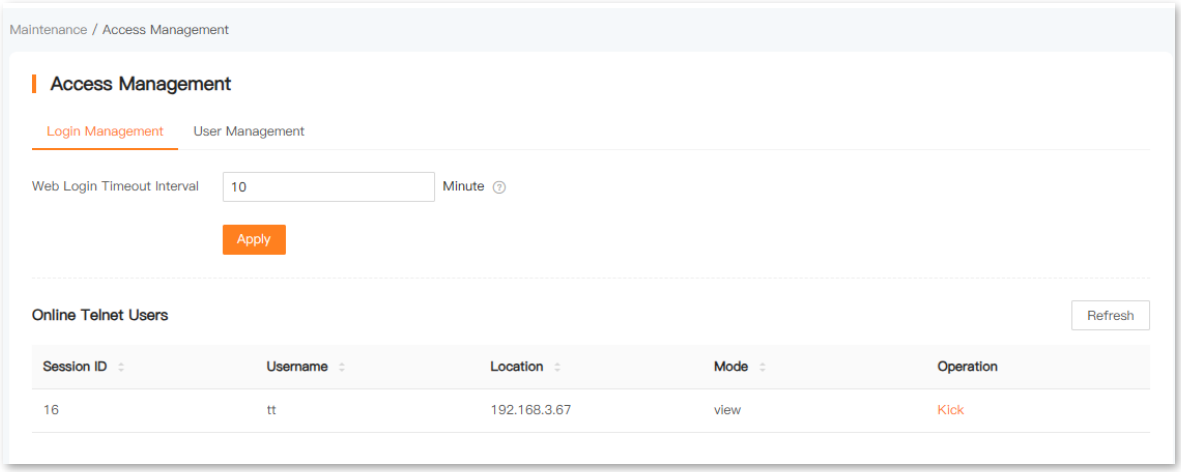
After you log in to the OLT's web UI page, the system will automatically log you out if there is no operation within the web login timeout interval (**10** minutes by default).

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Access Management** > **Login Management**.

Step 3 Set **Web Login Timeout Interval** in the range of 1 to 30, and click **Apply**.



---End

7.2.2 Kick Telnet user offline

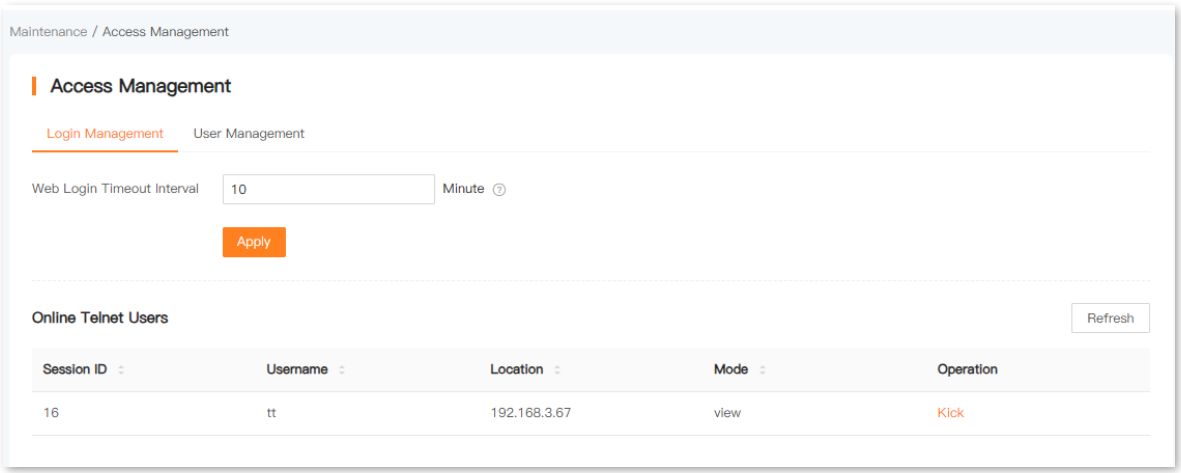
On this page, **Online Telnet Users** displays Telnet users that are connected to the OLT currently. After the Telnet user is disconnected from the OLT, the user cannot remotely connect to the OLT again.

Configuration procedure

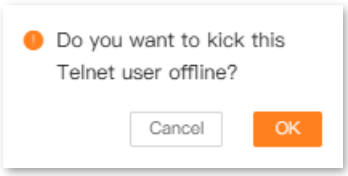
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Access Management** > **Login Management**.

Step 3 In **Online Telnet Users** module, select the Telnet user to be disconnected from the OLT, and click **Kick**. The following figure is for reference only.



Step 4 Confirm the prompt information, and click **OK**.



---End

Parameter description

Parameter	Description
Session ID	Specifies the ID number of the remote connection device.
Username	Specifies the login user name of the remotely connected user host.
Location	Specifies the IP address of the remotely connected user host.
Mode	Specifies the user permission of the remotely connected user host.

7.2.3 Add user management

Adding new administrative users can help administrators effectively manage user accounts and ensure system security and stability. Administrators can assign roles and permissions to users to control users' access and operation in web network management access and remote telnet. In addition, administrators can also restrict users' access and operation in web network management access and remote telnet by deleting user accounts.

TIP

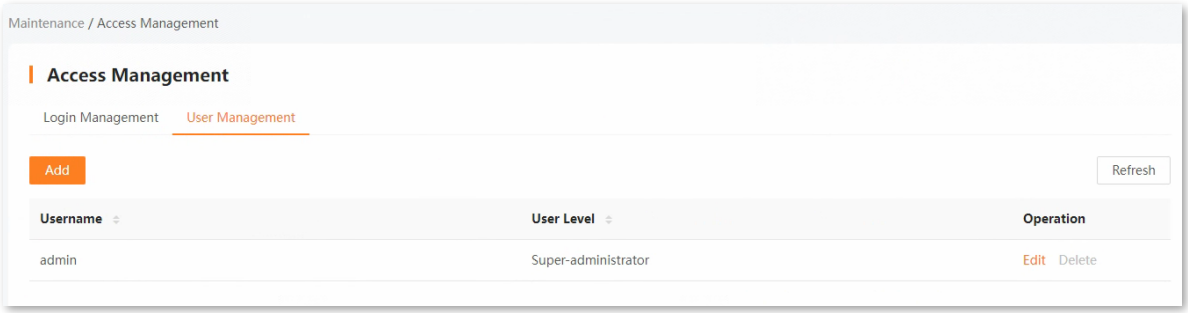
The default user cannot be deleted, and manually added users can be deleted.

Configuration procedure

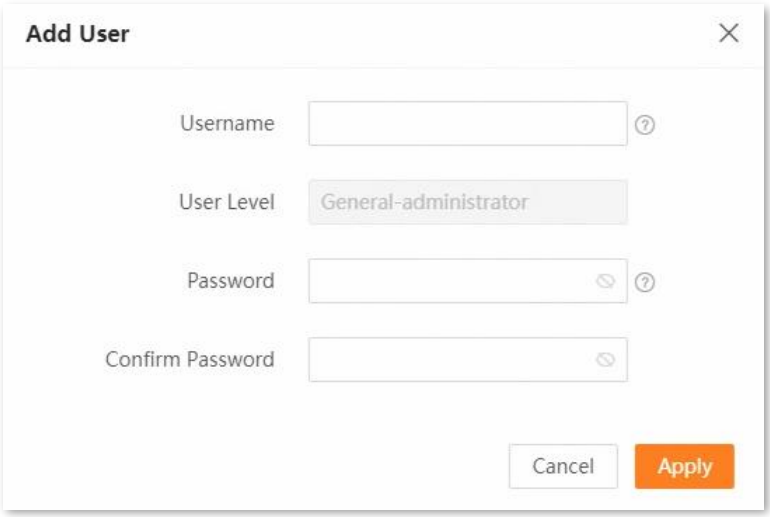
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Access Management** > **User Management**.

Step 3 Click **Add**.



Step 4 Configure the username and password of the new user, and click **Apply**.



---End

Parameter description

Parameter	Description
Username	Specifies the username of the new user. The first character of the username must be a letter. 3 to 20 bytes consisting of letters, digits and underscores (_) are allowed.
User Level	By default, only **General-administrator** is selected.
Password	Specifies the password of the new user. Spaces are not allowed. All other parameters can be input. The length of the characters that can be entered is 1 to 20 characters.
Confirm Password	Specifies the password confirmation for the new user, which is consistent with the password.

7.2.4 Configure login password

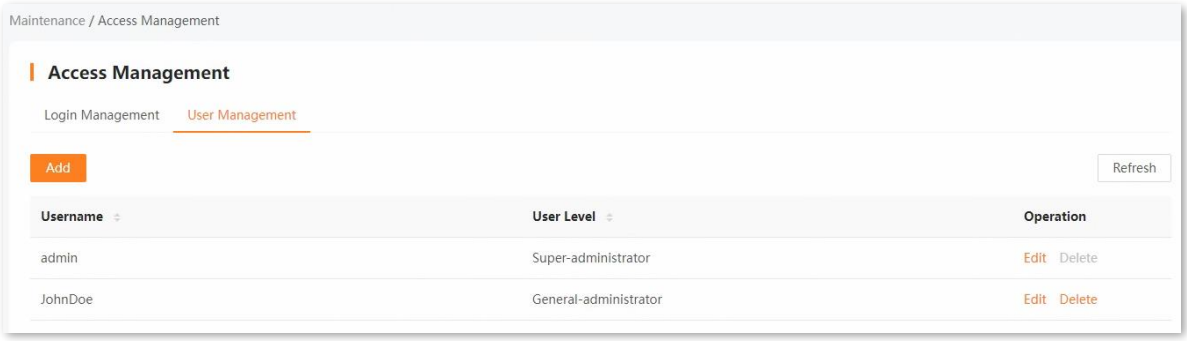
On this page, you can manage the login password of the OLT web UI. To prevent unauthorized users from entering the OLT web UI to change settings and affecting the normal use of the network, it is recommended to configure a complex login password.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Access Management** > **User Management.**

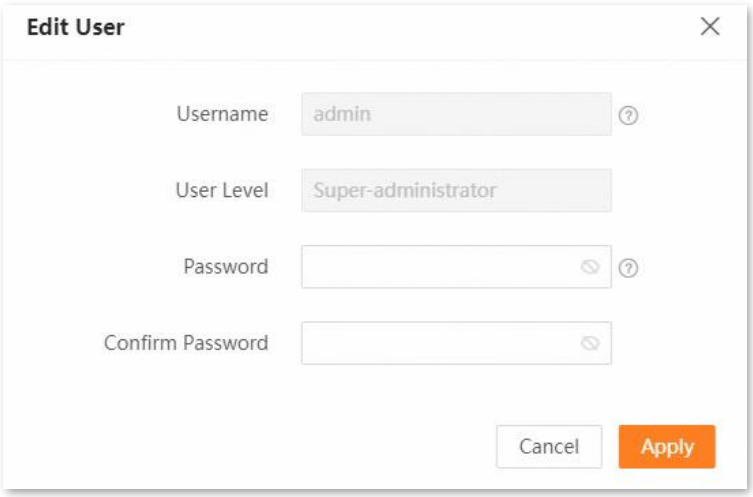
Step 3 Select the username to be modified the password, and click **Edit.**



Step 4 Set the login password, and click **Apply**.

TIP

1 to 20 letters, digits and special characters are allowed.


Edit User
Username
admin
User Level
Super-administrator
Password
Confirm Password
Cancel
Apply

---End

7.3 Device upgrade

With the software upgrade, you can experience more functions and get a better user experience.

NOTE

To avoid damage to the device, ensure that the upgrade is correct.

- Before upgrading, ensure that the new software is applicable to this device.
- During the upgrade process, ensure that the device is powered on properly.

7.3.1 Upgrade the OLT

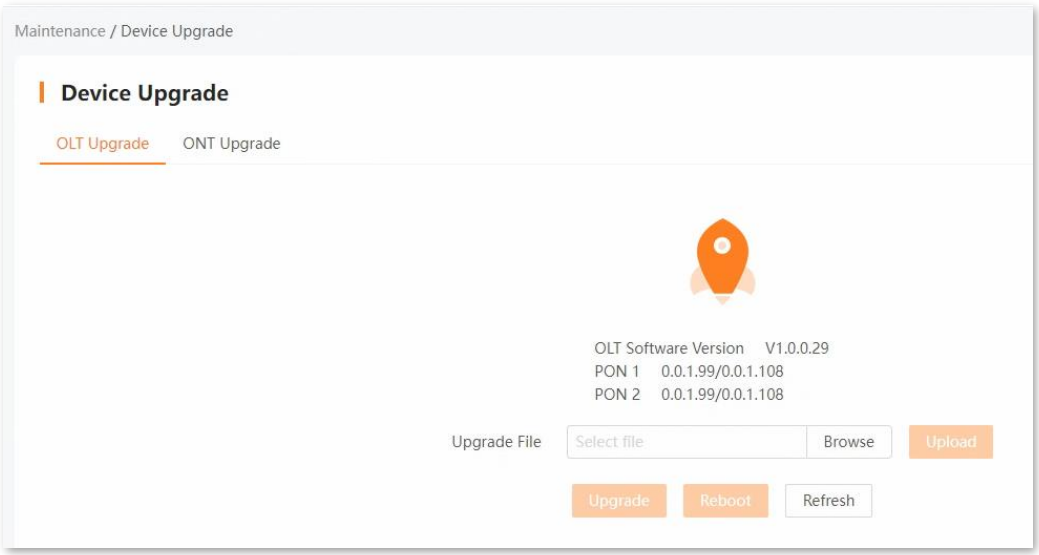
TIP

The OLT upgrade file cannot exceed 64 MB.

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Device Upgrade** > **OLT Upgrade.**

Step 3 Click **Browse**, select the upgrade file from the local computer (The upgrade file format is **.img**), and click **Upload**.



Step 4 After the upgrade file is uploaded successfully, complete the OLT upgrade and OLT reboot according to the page prompts.

NOTE

After the OLT is upgraded successfully, you can save the OLT configuration first, and then reboot the OLT. Otherwise, it will lead to OLT configuration loss.

---End

After the OLT is rebooted successfully, you can log in to the web UI of the OLT again. Then, you can check the software version of the OLT on the **Home** page and confirm whether it is the same as the software version you just upgraded. If the software version is same, the upgrade is successful. Otherwise, upgrade again.

7.3.2 Upgrade the ONT

TIP

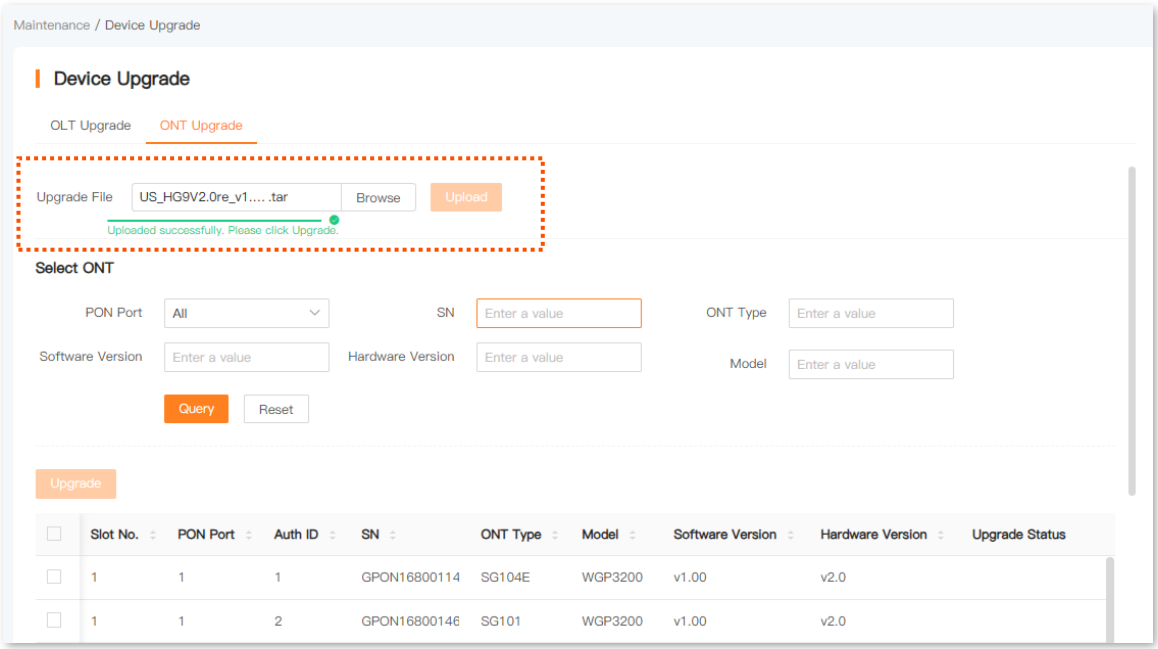
The ONT upgrade file cannot exceed 32 MB.

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Device Upgrade** > **ONT Upgrade.**

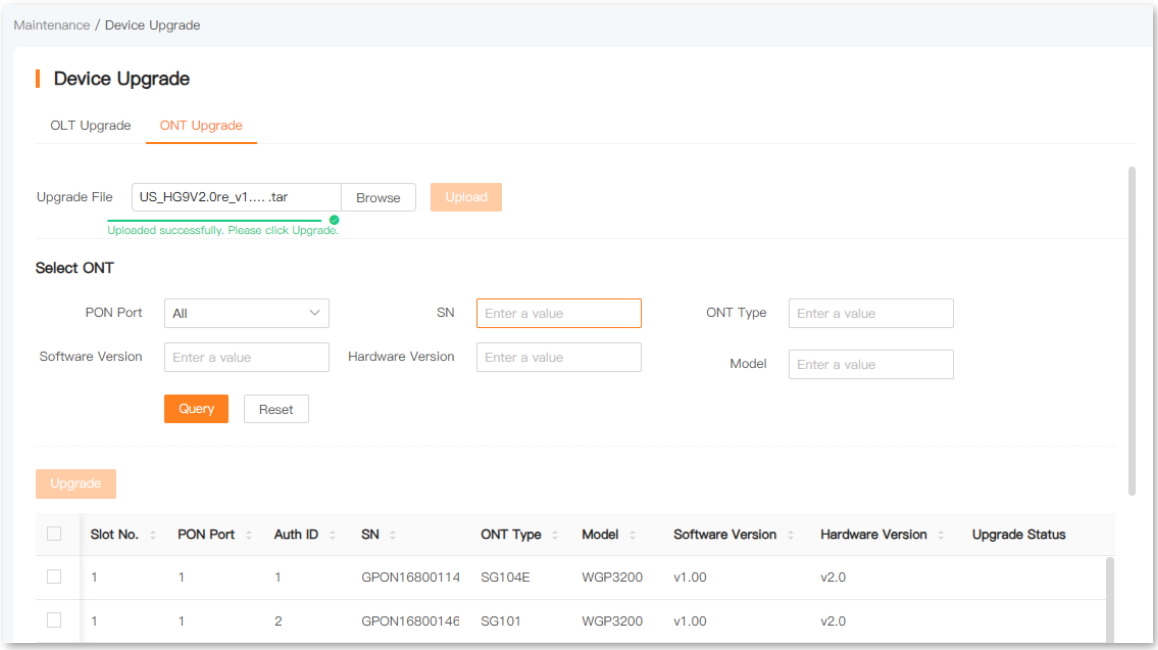
Step 3 Upload the ONT upgrade file.

Click **Browse**, and select the ONT upgrade file from the local computer. Then, click **Upload** and wait for the upgrade file to be uploaded.



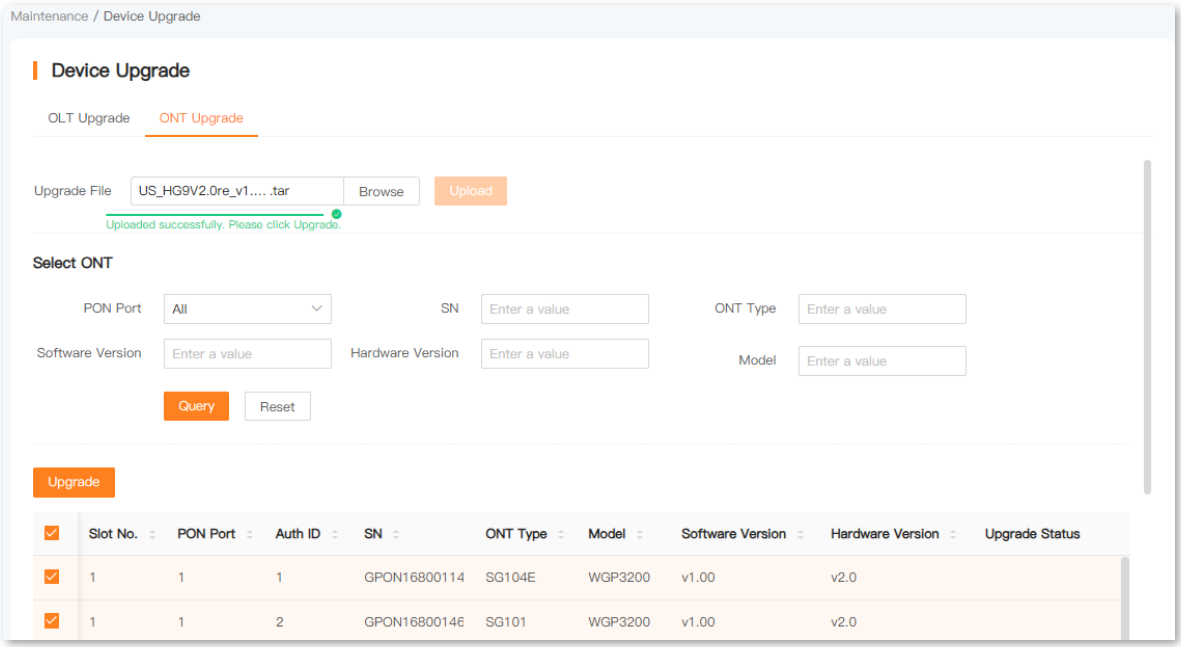
Step 4 Filter the ONTs to be upgraded.

Set the filter conditions (**PON Port**, **SN**, **ONT Type**, **Model, Software Version** and **Hardware Version**), and click **Query**.



Step 5 Upgrade the ONTs.

Select the ONTs to be upgraded, and click **Upgrade**.



---End

Wait until the upgrade is completed.

Parameter description

Parameter	Description
PON Port	Specifies the PON port number of the OLT.
Auth ID	Specifies the authorization number of the ONT. The value range is 1 to 128.
SN	Specifies the serial number of the ONT. TIP Fuzzy queries are supported. You can enter the partial or complete serial number to query.
ONT Type	Specifies the ONT type. The ONT type is divided into two main classes, including SFU (beginning with SG) and HGU (beginning with HG.) The SFU main class is divided into 9 subclasses, including SG101, SG102, SG104, SG501, SG502, SG504, SG104E, SG108E and SG108. The HGU main class is divided into 13 subclasses, including HG101, HG501, HG601, HG602, HG604, HG702, HG704, HG802, HG804, HG904, HG1002, HG1004 and HG1104. For details, refer to ONT Type. TIP Fuzzy queries are supported. You can enter the partial or complete ONT type to query.
Model	Specifies the ONT model. TIP Fuzzy queries are supported. You can enter the partial or complete ONT model to query.
Software Version	Specifies the software version of the ONT.
Hardware Version	Specifies the hardware version of the ONT.
Upgrade Status	Specifies the software upgrade status of the ONT. If the upgrade status shows that the upgrade failed, check whether the ONT upgrade file is correct, and ensure that the ONT is powered on properly.

7.4 Reboot system

On this page, you can reboot the OLT system.

NOTE

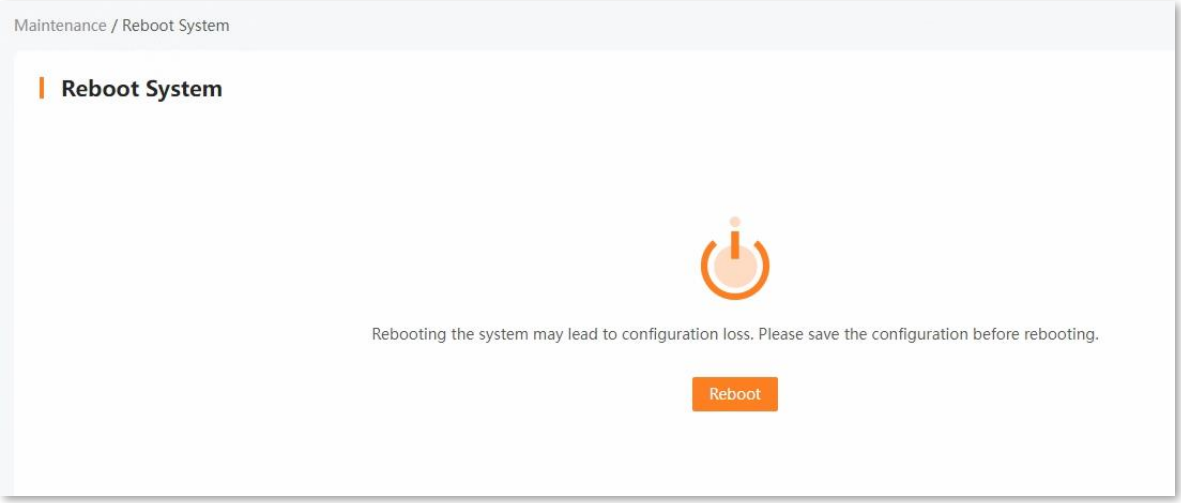
- Rebooting will interrupt all services. Therefore, be cautious when performing this operation.
- Before rebooting, click **Save** in the upper right corner of the page to save globally to avoid losing the configuration information.

Configuration procedure

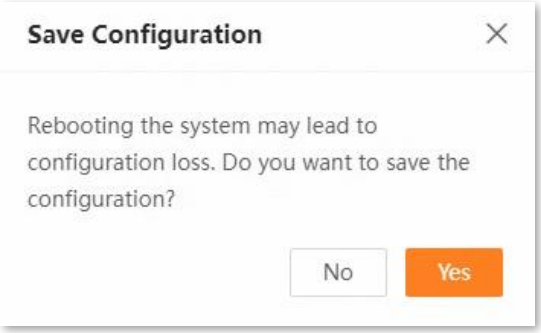
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Reboot System.**

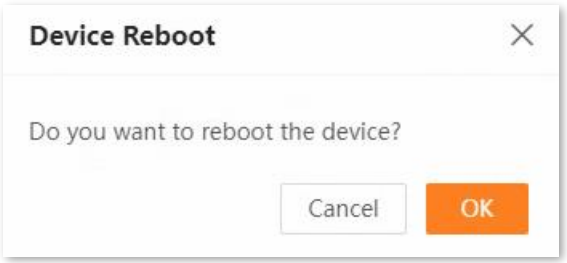
Step 3 Click **Reboot**.



Step 4 Confirm the prompt information, and click **Yes**.



Step 5 Confirm the prompt information, and click **OK**.



---End

7.5 Restore factory settings

On this page, you can restore the factory settings of the OLT.

NOTE

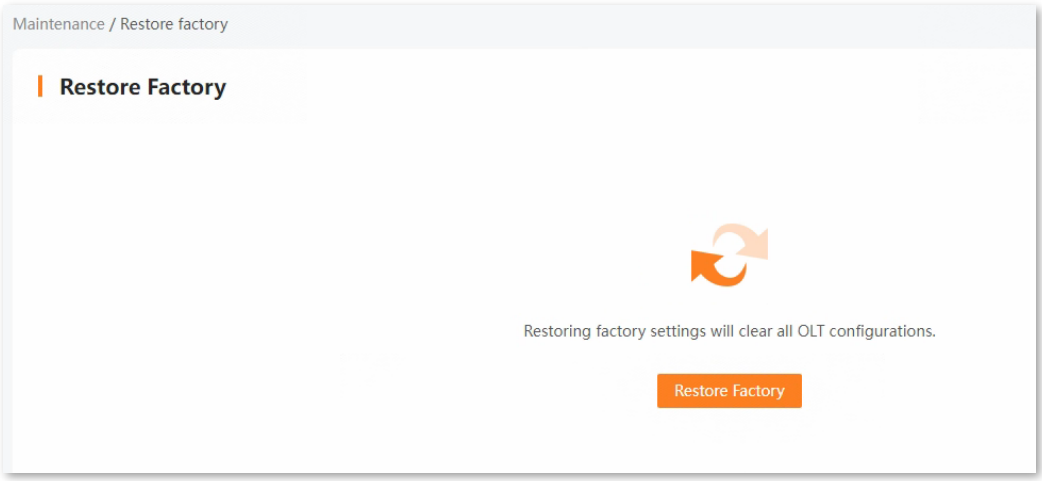
- After the OLT is restored the factory settings, all configurations of the OLT will be restored to the factory default state, and all connections will be disconnected. Therefore, use the factory reset operation with caution.
- To avoid damage to the OLT, ensure that the OLT is powered on properly during the factory reset process.

Configuration procedure

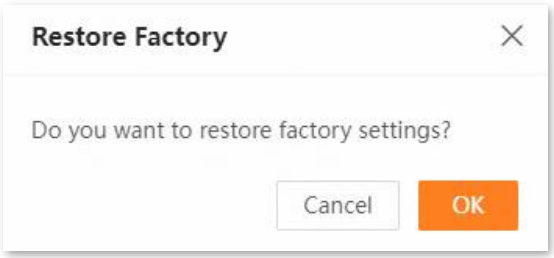
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Restore Factory.**

Step 3 Click **Restore Factory**.



Step 4 Confirm the prompt information, and click **OK**.



---End

A restoring progress bar appears. When the progress bar reaches 100%, the OLT is restored successfully.

7.6 Autosave configuration

When you want the system to automatically save all configurations of the OLT to configuration files on a regular basis, and avoid configuration loss due to forgetting to save the configuration manually, you can enable the autosave function and set the autosave interval of the OLT. The autosave function is disabled by default.

Assume that you want the system to automatically save all configurations of the OLT to configuration files every hour.

Configuration procedure

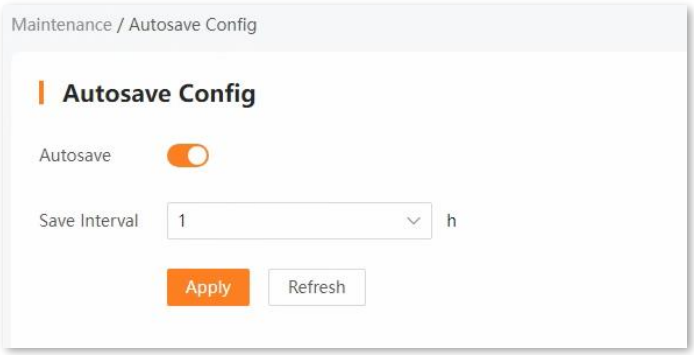
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Autosave Config**.

Step 3 Enable **Autosave.**

Step 4 Set **Save Interval** to **1** hour.

Step 5 Click **Apply**.



---End

After the above settings are completed, the OLT will automatically save all the configurations of the OLT every hour from now on.

Parameter description

Parameter	Description
Autosave	Specifies whether to enable the autosave function.
Save Interval	Used to set the autosave interval. Click the drop-down box to select the save interval preset by the system, which cannot be customized.

7.7 Import and export configuration file

7.7.1 Import configuration file

On this page, you can import the configuration file from your local computer to the OLT. The configuration file cannot exceed 4 MB.

TIP

After the configuration file is imported to the OLT,

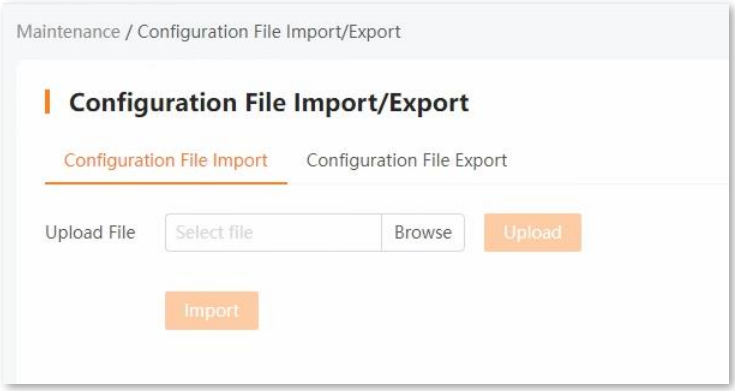
- The current configuration of the OLT will be replaced.
- Rebooting the device can make settings take effect.

Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Configuration File Import/Export** > **Configuration File Import**.

Step 3 Click **Browse**, select the configuration file from the local computer, and click **Upload.**



Step 4 After the configuration file is uploaded successfully, you can follow the page prompts to complete the import configuration and reboot the OLT.

---End

7.7.2 Export configuration file

On this page, you can export the OLT configuration file to your local computer.

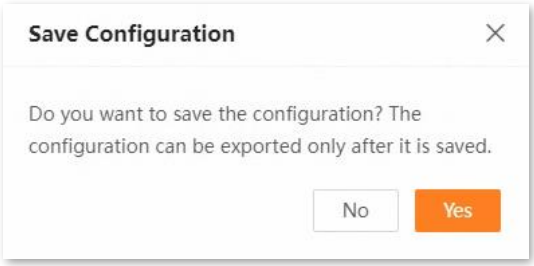
Configuration procedure

Step 1 Log in to the web UI of the OLT.

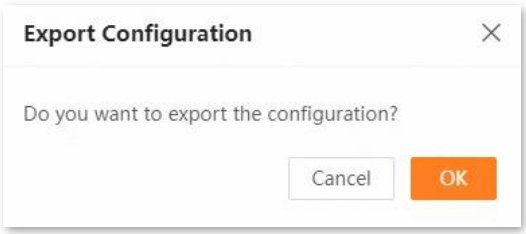
Step 2 Navigate to **Maintenance** > **Configuration File Import/Export** > **Configuration File Export**.

Step 3 Click **Export**.

Step 4 Confirm the prompt information, and click **Yes**.



Step 5 Confirm the prompt information, and click **OK**.



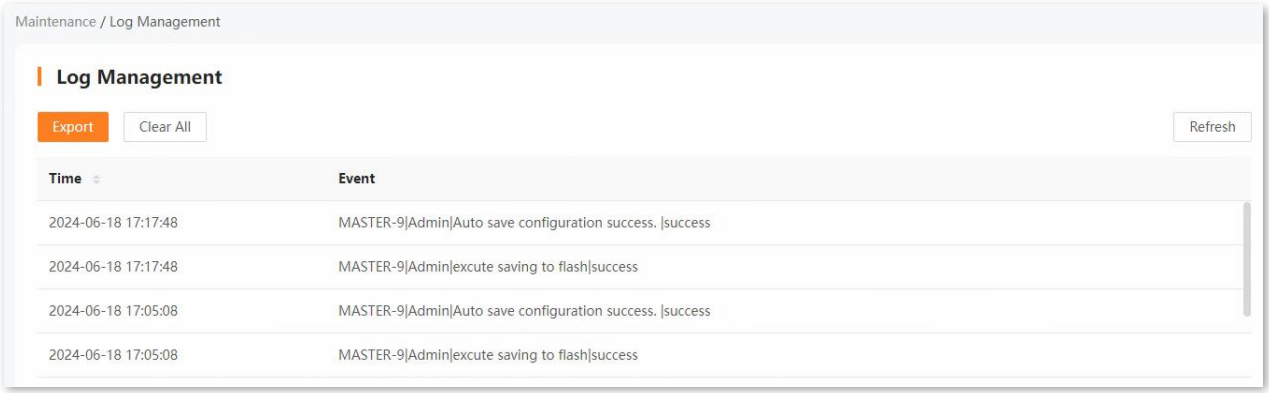
---End

The configuration file named config_*OLT IP address_download time*.txt is downloaded by the browser and saved to the local computer.

7.8 Log management

Log in to the web UI of the OLT, and navigate to **Maintenance** > **Log Management**. On this page, you can check the system logs of the OLT.

If you click **Export**, you can export the log file to your local computer. If you click **Clear All**, you can clear all system logs of the OLT.



7.9 Configure syslog server

On this page, you can enable the syslog server to receive and save the syslog information sent by the OLT.

Configuration procedure

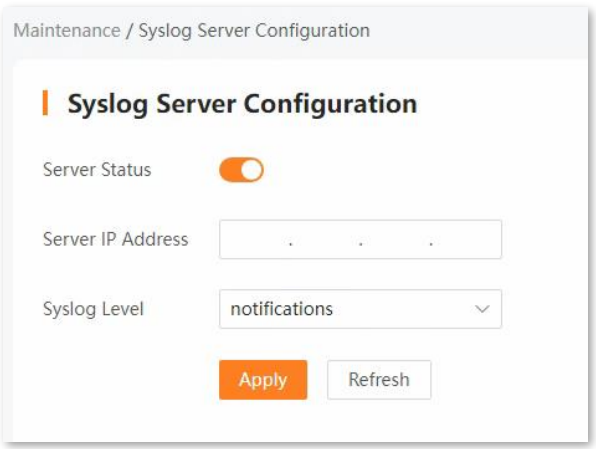
Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Syslog Server Configuration**.

Step 3 Enable **Server Status**.

Step 4 Set **Server IP Address**, and select a syslog level from the **Syslog Level** drop-down list box.

Step 5 Click **Apply**.



---End

Parameter description

Parameter	Description
Server Status	Specifies whether to enable syslog server function.
Server IP Address	Specifies the IP address of the computer where the syslog server is deployed. TIP This parameter is available only when the **Server Status** is enabled.

Parameter	Description
Syslog Level	Specifies the syslog level, including **emergencies**, **alerts**, **critical**, **errors**, **warnings**, **notifications**, **informational** and **debugging**. The different syslog level is selected, and the log management interface will display the log information of the corresponding level.  This parameter is available only when the **Server Status** is enabled.

7.10 Diagnosis tool

On this page, you can check whether the connection between the OLT and remote device is normal.

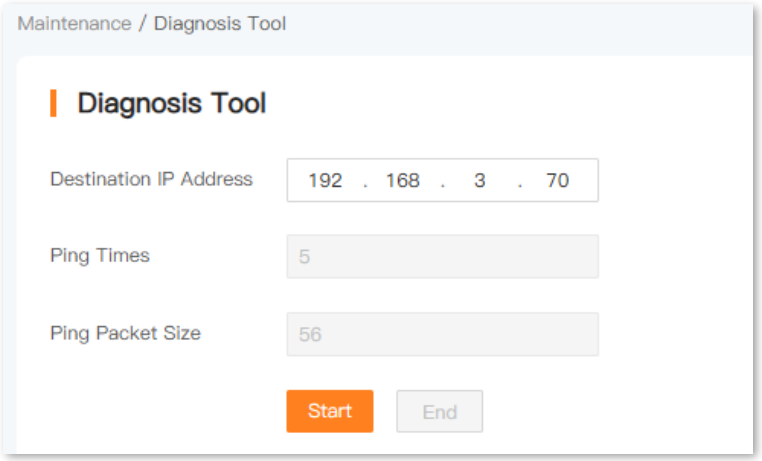
Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Maintenance** > **Diagnosis Tool**.

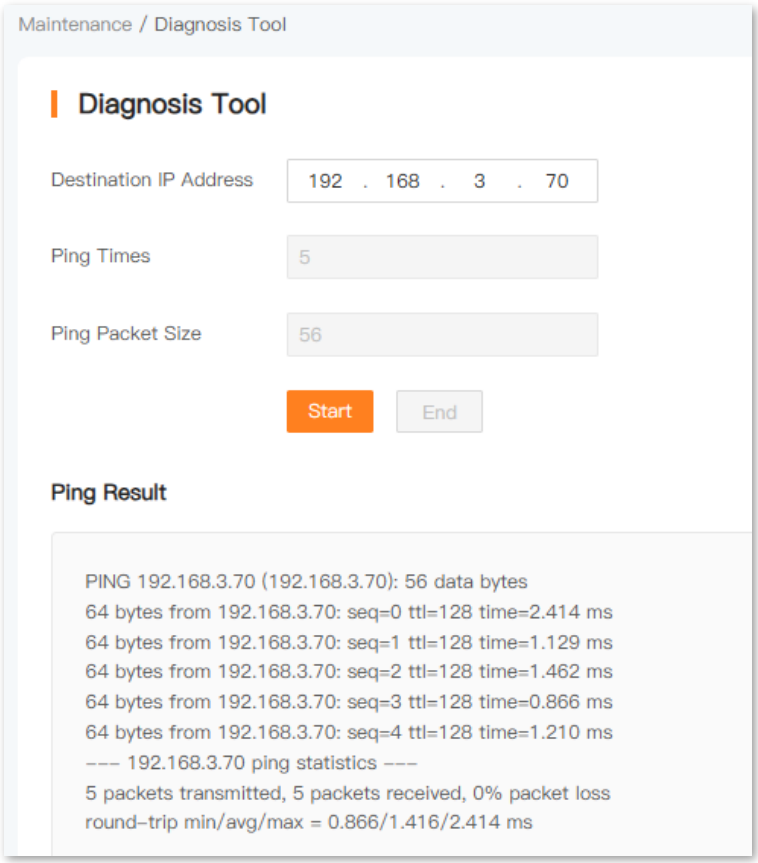
Step 3 Set **Destination IP Address** for the destination host. The following figure is for reference only.

Step 4 Click **Start**.



---End

The diagnosis result is shown in the lower part of the page. The following figure is for reference only.



Parameter description

Parameter	Description
Destination IP Address	Specifies the IP address of the remote device.
Ping Times	Specifies the number of Ping packets sent. The default value is 5.
Ping Packet Size	Specifies the Ping packet size. The default value is 56.

8 Alarm management

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models. The actual product prevails.

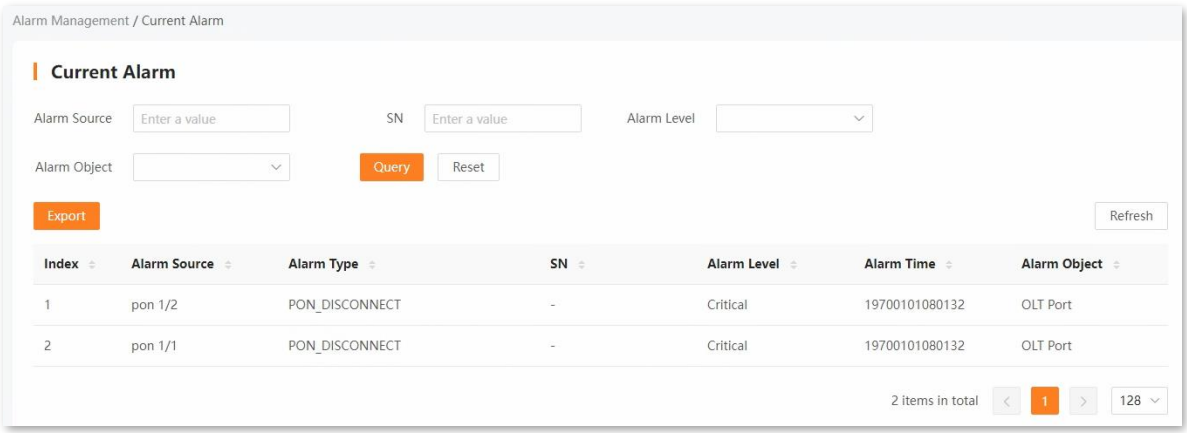
8.1 Export current alarm

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Alarm Management** > **Current Alarm**.

Step 3 Set the filter conditions (**Alarm Source**, **SN**, **Alarm Level**, or **Alarm Object**), and click **Query**. The following figure is for reference only.

Step 4 Click **Export** to export the current alarm information to the local computer.



---End

Parameter description

Parameter	Description
Index	Specifies the serial numbers automatically added by the system, which are added one by one starting from 1.

Parameter	Description
Alarm Source	Specifies the alarm source of the current alarm. TIP Fuzzy queries are supported. You can enter the partial or complete alarm source to query.
Alarm Type	Specifies the alarm type of the current alarm.
SN	Specifies the serial number of the current alarm. TIP Fuzzy queries are supported. You can enter the partial or complete serial number to query.
Alarm Level	Specifies the alarm level of the current alarm, including critical alarm, major alarm, minor alarm, warning alarm and empty. It is left blank by default, which means all levels alarm information is displayed.
Alarm Time	Specifies the alarm time of the current alarm. For example, “20240101080059” means 08:00:59 on January 1, 2024.
Alarm Object	Specifies alarm object of the current alarm, including line card, OLT port, ONT, ONT port and empty. It is left blank by default, which means all object information is displayed.

8.2 Export history alarm

After the current alarm generated by the OLT is eliminated, the corresponding alarm information will be transferred to the history alarm.

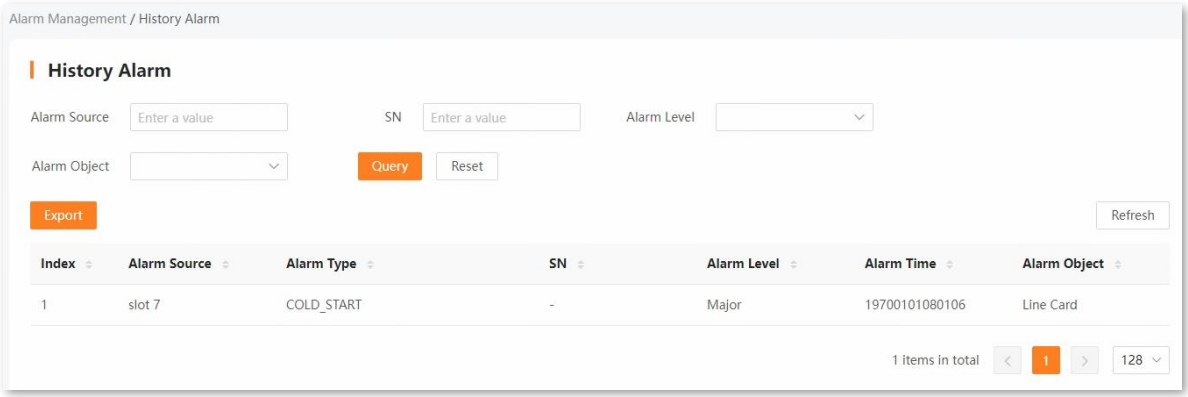
Configuration procedure

Step 1 Log in to the web UI of the OLT.

Step 2 Navigate to **Alarm Management** > **History Alarm**.

Step 3 Set the filter conditions (**Alarm Source**, **SN**, **Alarm Level**, or **Alarm Object**), and click **Query**. The following figure is for reference only.

Step 4 Click **Export** to export the history alarm information to the local computer.



---End

Parameter description

Parameter	Description
Index	Specifies the serial numbers automatically added by the system, which are added one by one starting from 1.
Alarm Source	Specifies the alarm source of the history alarm. TIP Fuzzy queries are supported. You can enter the partial or complete alarm source to query.
Alarm Type	Specifies the alarm type of the history alarm.

Parameter	Description
SN	Specifies the serial number of the history alarm. TIP Fuzzy queries are supported. You can enter the partial or complete serial number to query.
Alarm Level	Specifies the alarm level of the history alarm, including critical alarm, major alarm, minor alarm, warning alarm and empty. It is left blank by default, which means all level information is displayed.
Alarm Time	Specifies the alarm time of the history alarm. For example, “20240101080059” means 08:00:59 on January 1, 2024.
Alarm Object	Specifies alarm object of the history alarm, including line card, OLT port, ONT, ONT port and empty. It is left blank by default, which means all object information is displayed.

Appendix

Acronym or Abbreviation	Full Spelling
AF	IEEE 802.3 af Standard
AT	IEEE 802.3 at Standard
CATV	Cable television service
DBA	Dynamic Bandwidth Allocation
DHCP	Dynamic Host Configuration Protocol
DL	Downlink
DNS	Domain Name System
DSCP	Differentiated services code point
DSP	Digital Signal Processors
GPON	Gigabit Passive Optical Network
HGU	Home Gateway Unit
IGMP	Internet Group Management Protocol
IPTV	Internet Protocol Television
LAN	Local area network
LOID	Logical identification
MAC	Media Access Control
MTU	Maximum Transmission Unit
NMS	Network Management System

Acronym or Abbreviation	Full Spelling
NTP	Network Time Protocol
OLT	Optical Line Terminal
ONT	Optical Network Terminal
PD	Powered Device
PoE	Power Over Ethernet
PON	Passive Optical Network
PPPoE	Point-to-Point Protocol over Ethernet
SFU	Single Family Unit
UI	User interface
VEIP	Virtual Ethernet interface point
VLAN	Virtual LAN