ASCENT
Communication Technology

ACT AP224B GPON HGU ONT

Quick Reference Guide

Revision D

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ACT Document Number: ACT AP224B GPON HGU ONT

Quick Reference Guide Revision D

This document is produced to assist professional and properly trained personnel with installation and maintenance issues for the product. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

For more information, contact ACT: support@ascentcomtec.com

Revision History

Revision	Date	Reason for Change
A	2/15/2018	Initial release
B	2/17/2018	Updated login information
C	4/16/2019	Minor adjustments
D	5/25/2021	Updated section 3

Table of Contents

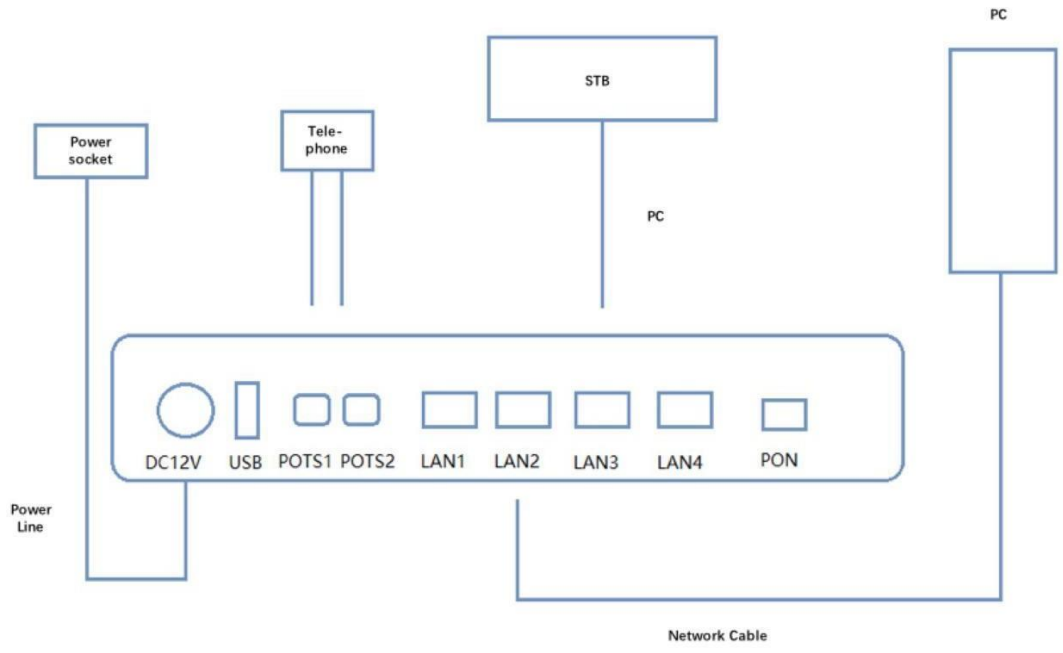
Introduction

ASCENT's AP224B is a handy, flexible and standard device, with high integration, about connection to the net. It is a high-end multi-in-one terminal product up to IEEE802.11b/g/n standard, providing connection with high performance for home users and individual merchants.

Main Characteristics:

- Compliant with ITU-T G.984/988 standard, adopting GPON uplink set and monitored through WEB
- Remote configuration and management through TR069 protocol
- NAT and DHCP help to set the network and make internet access easy
- Firewall protection
- MAC and URL provide customization for Internet safety performance
- Terminal wireless access

1 Hardware Connection



Connection finished, please check the indicators.

POWER	Power indicator	Green	ON: power on OFF: power off
PON	PON indicator	Green	ON: ONU activation OFF: no ONU activation Flickering: ONU activation on
WLAN	WLAN indicator	Green	ON: connected but no data transmission OFF: power off or no connection between port and net Flickering: data transmission
LAN 1 to 4	Ethernet indicators	Green	ON: connected but no data transmission OFF: power off or no connection to terminal device Flickering: data transmission
POTS	Voice indicator	Green	ON: connected but no data transmission OFF: power off or no connection to terminal device Flickering: data transmission.
USB	USB indicator	Green	ON: connected but no data transmission OFF: power off or no connection to terminal device Flickering: data transmission

Note

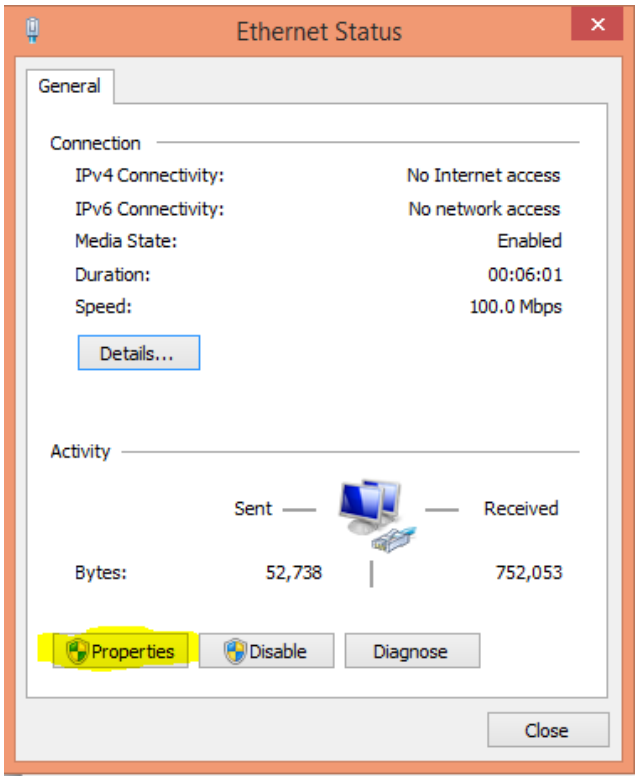
If there is something wrong with the indicators, please check the line connections.

Warning

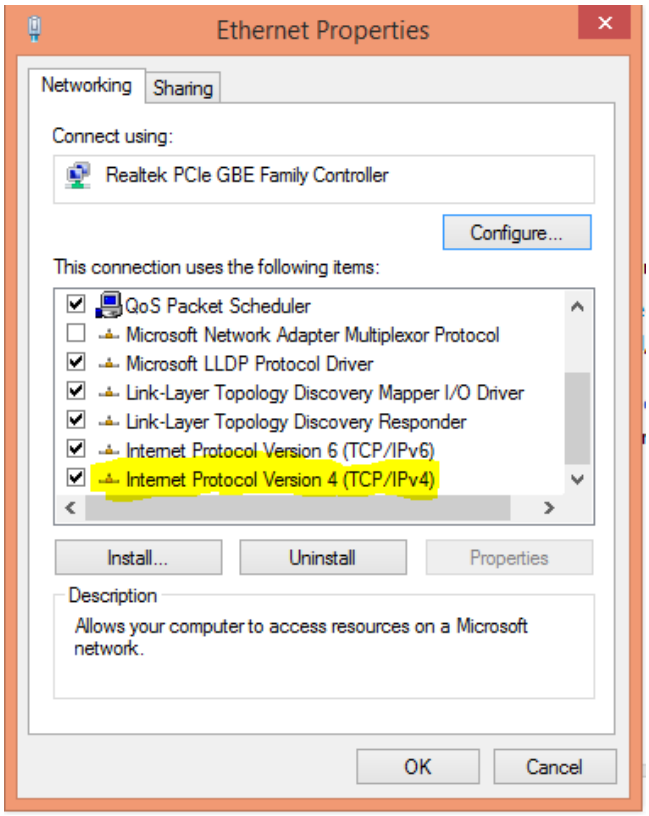
Lay the devices on horizontally flat surface.
Shut down the power supply and unplug all line connections during a lightning storm.
Keep the device away from heaters and keep the ventilation.
Use configured rated power adapter.

2 Computer Setup

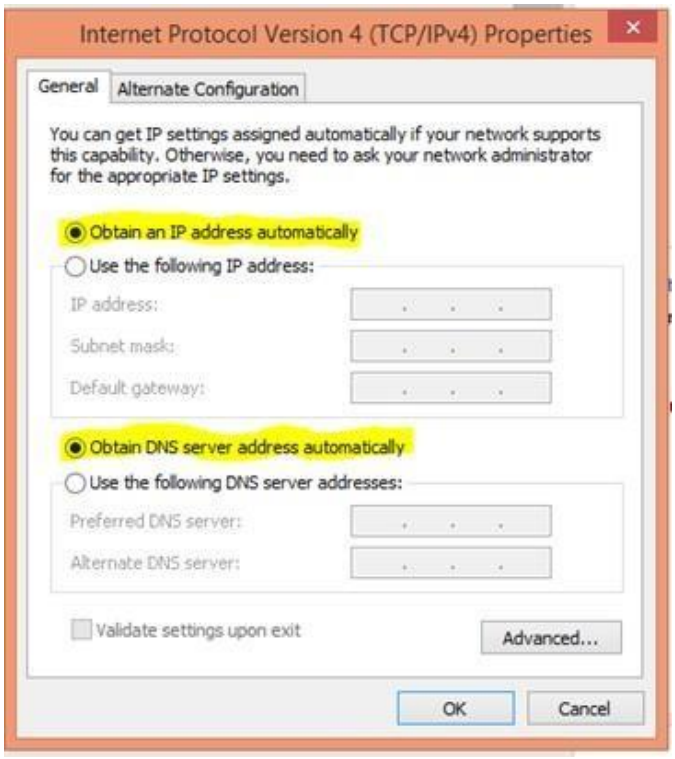
1) Click “Start → Control Panel → Network and Internet → Network and Sharing Center → Local Connection”, choose “Local Connection”, and “Properties”.



2) Double click “Internet Protocol Version 4 (TCP/IPv4)”

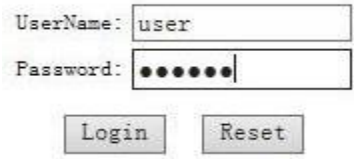


3) Choose “Obtain an IP address automatically” and “Obtain DNS server address automatically”, then click “OK”.



3 Guide Setup

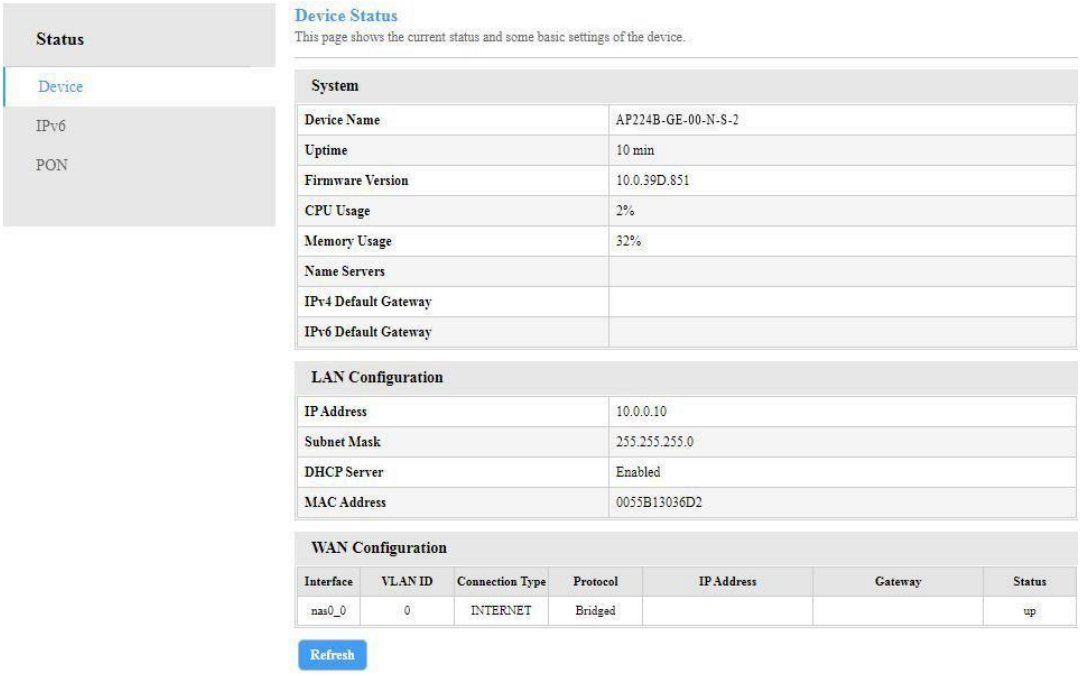
1. Enable the browser.
2. Enter 10.0.0.10 in the address bar of the browser and click “Enter”. Then enter the UserName (admin by default) and Password (super&123 by default) respectively in the interface UserLogin.



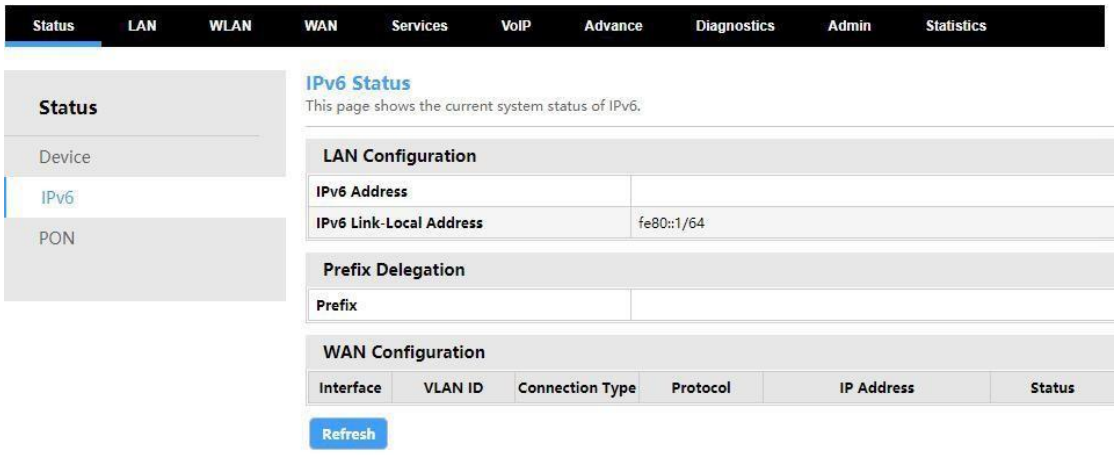
3.1 Status

3.1.1 Device Status

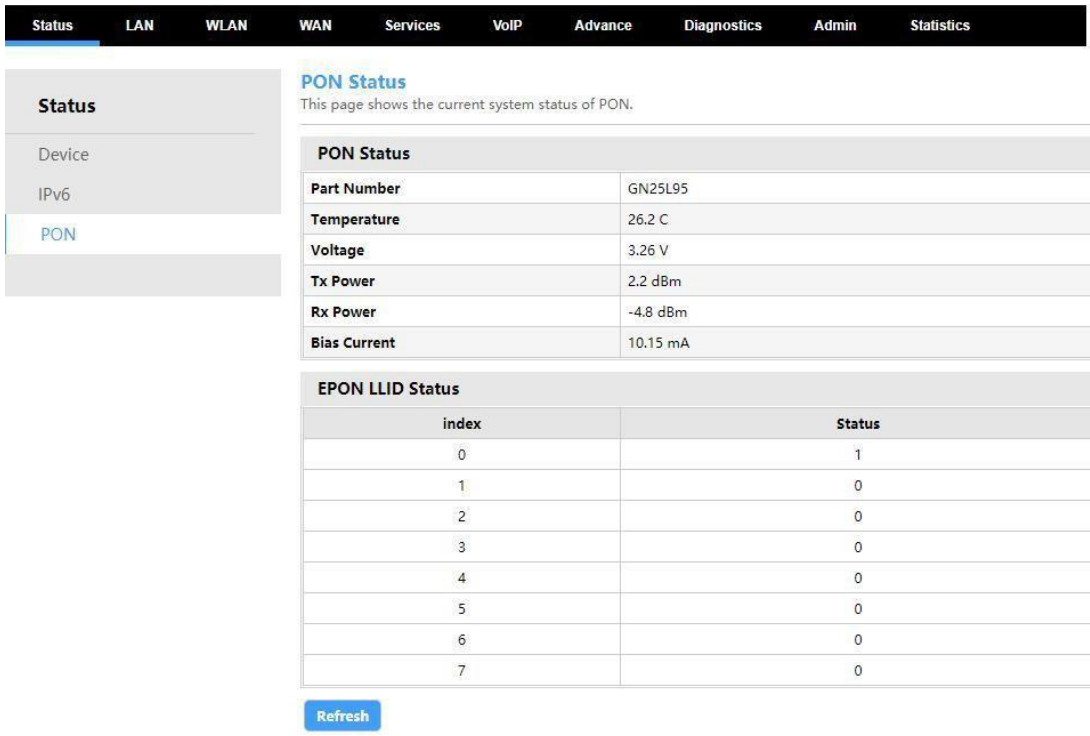
After Login, click “Status” and “Device”. The current status and some basic settings of the device are shown in the following page.



3.1.2 IPv6 Status



3.1.3 PON Status

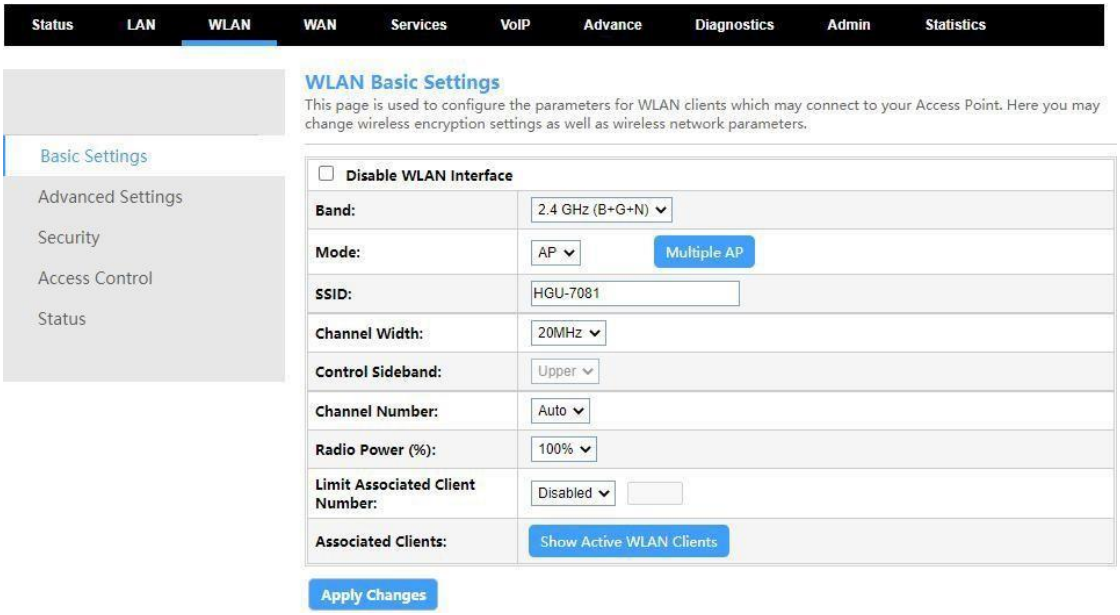


3.2 WLAN

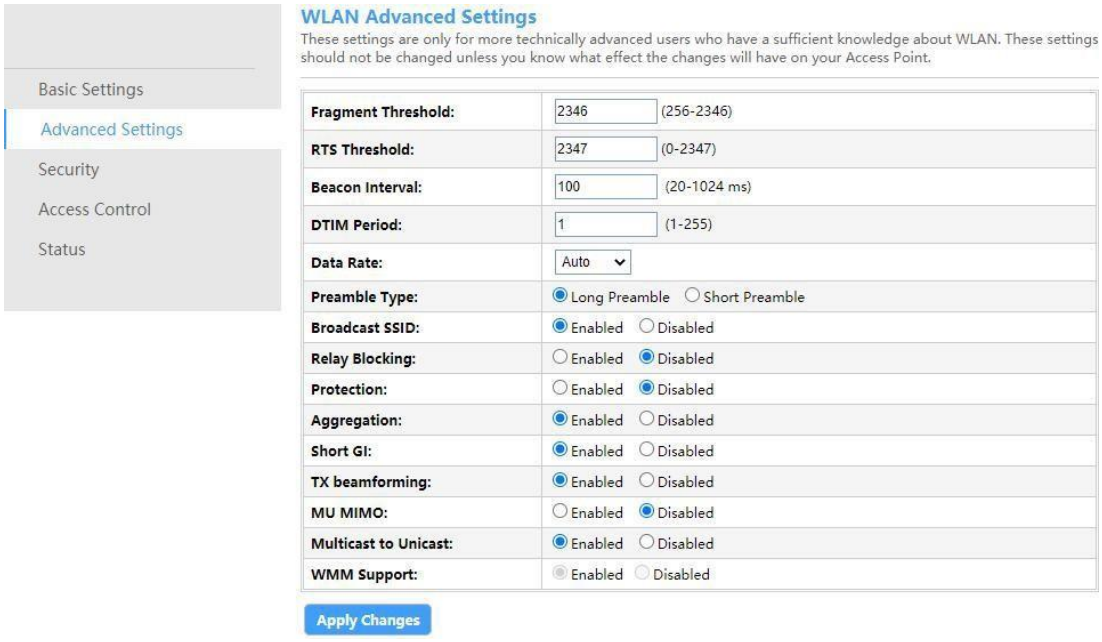
3.2.1 Basic Settings

The default mode is 2.4GHz (B+G+N), and more modes can be set from the dropdown box of Band. SSID is the name of the wireless network. The default SSID is HGU plus the last four digits of the MAC address. The frequency bandwidth is 20MHz or 40MHz. Channel

Number is Auto by default. Tick "Disable WLAN Interface" in the WLAN basic settings page to disable the wireless function.



3.2.2 Advanced Settings

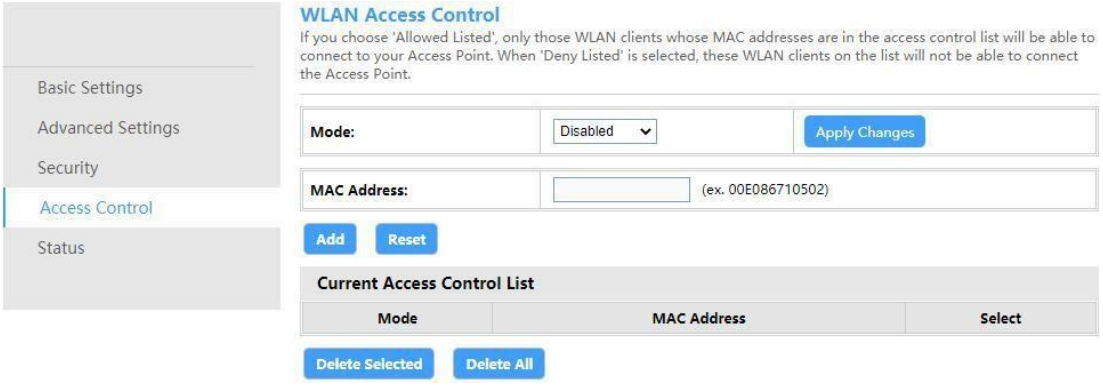


3.2.3 Security Settings

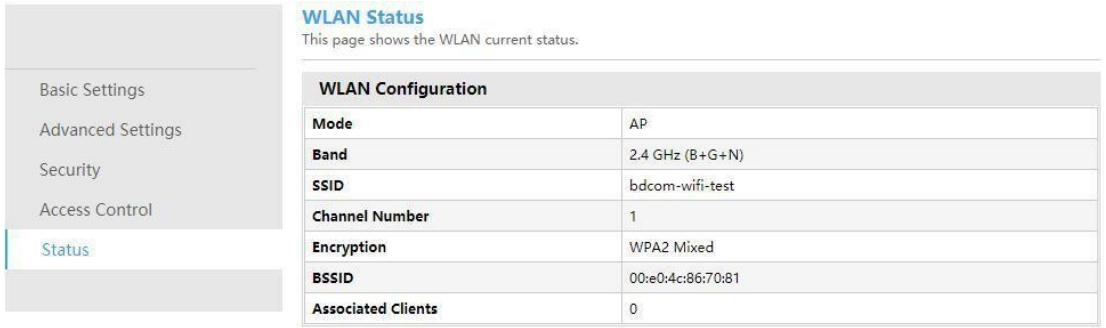
Click "Security" to set the Encryption method of the password and modify the password.

3.2.4 Access Settings

You can set the allowed list and deny list of wireless access. The corresponding allowed list and deny list are respectively selected when Enabled and Disabled in the Mode.

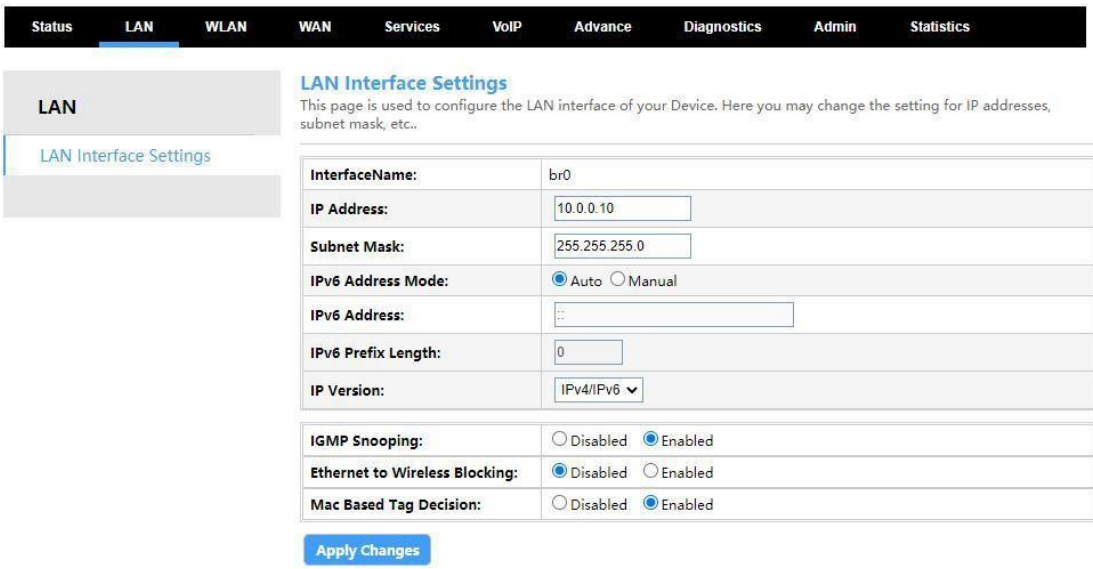


3.2.5 WLAN Status



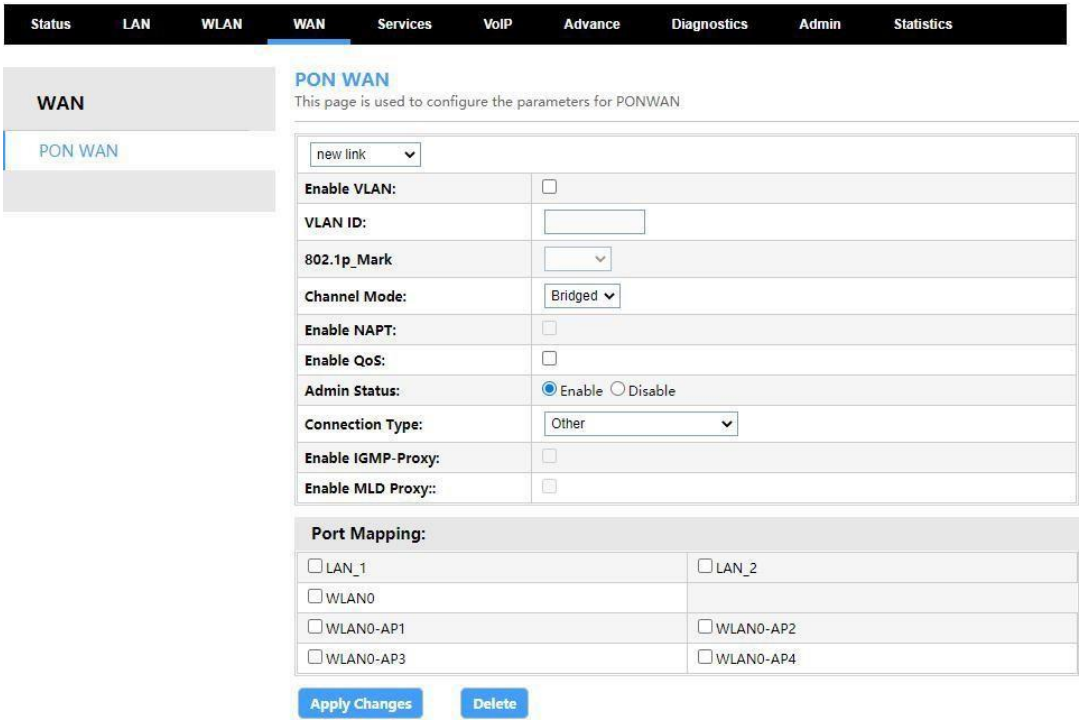
3.3 LAN Interface Settings

The ipv4 address and ipv6 address can be configured in the LAN Interface Settings. IGMP Snooping can also be enabled or disabled.



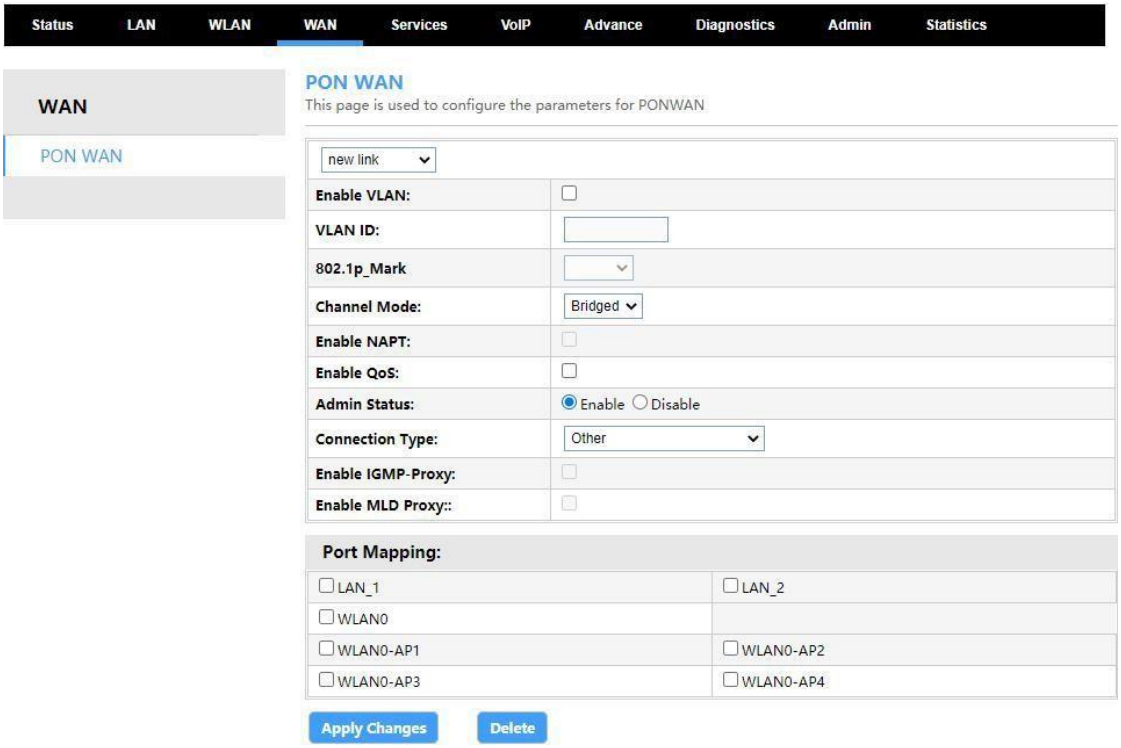
3.4 WAN

On the "WAN" setting page, select "PON WAN", and click "new link" in the options to create a new WAN connection.



3.4.1 Bridged Mode

On page of PON WAN, select “Bridged” in the drop-down box of Channel Mode. If VLAN is necessary, please fill in the VLAN ID and 802.1p_Mark (optional); if VLAN is not enabled, VLAN ID and 802.1p_Mark does not need to configure.



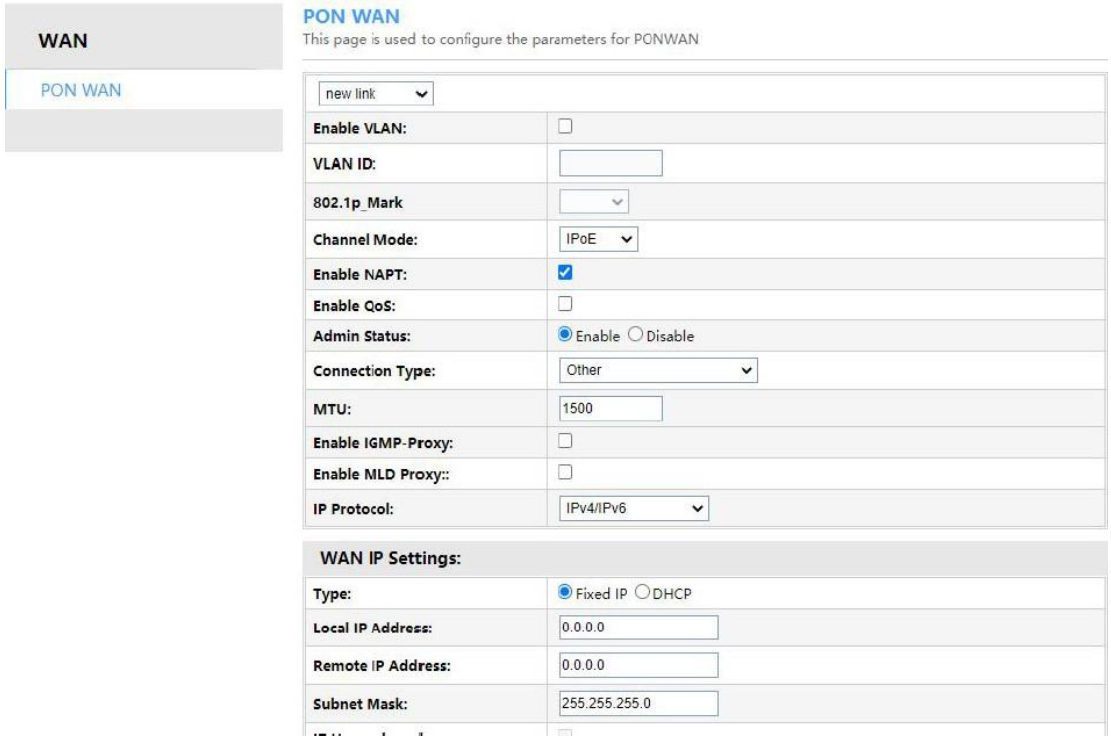
The Connection Type under the mode of Bridged can be divided into two: INTERNET and Other. If choose the mode “Other”, the PC corresponding to the port will not get IP address dynamically by the gateway. At last please tick the port number that need to be bound.

3.4.2 Route Mode

Click "IPoE" or "PPPoE" or "6rd" in the mode option to enter the routing mode setting. The routing mode is divided into three connection modes: DHCP, Static and PPPoE. The differences in configuration parameters will be introduced below.

3.4.2.1 DHCP Mode

The DHCP configuration page is shown as below. If there is IPv6 in the drop-down box of IP Protocol, please configure the method of obtaining IPv6 information. You can self-define the Primary IPv6 Name Servers and Secondary IPv6 Name Servers. If you choose Enable, it means DNS address will be automatically acquired.



WAN IP Settings:

Type:	Fixed IP / DHCP
Local IP Address:	0.0.0.0
Remote IP Address:	0.0.0.0
Subnet Mask:	255.255.255.0
IP Unnumbered	
Attain DNS Automatically:	Enable / Disable
PrimaryName Servers:	
SecondaryName Servers:	

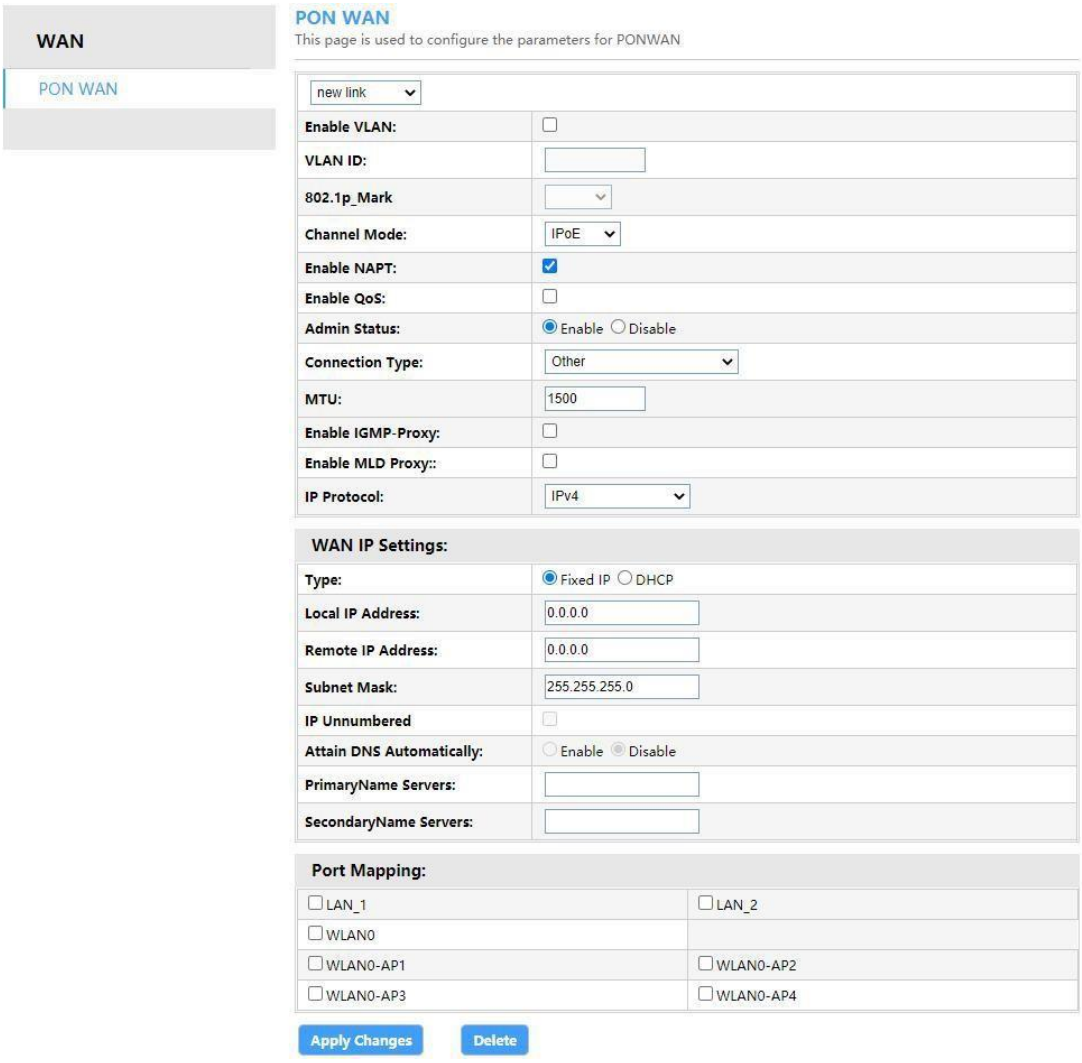
IPv6 WAN Setting:

Address Mode:	SLAAC / Static
Enable DHCPv6 Client:	
Request Options:	Request Address / Request Prefix
Attain DNS Automatically:	Enable / Disable
Primary IPv6 Name Servers:	
Secondary IPv6 Name Servers:	

There are four options in Connection Type: Other, VOICE, TR069 and INTERNETE. It should be noted that if the connection type includes INTERNET, you need to configure the port binding status.

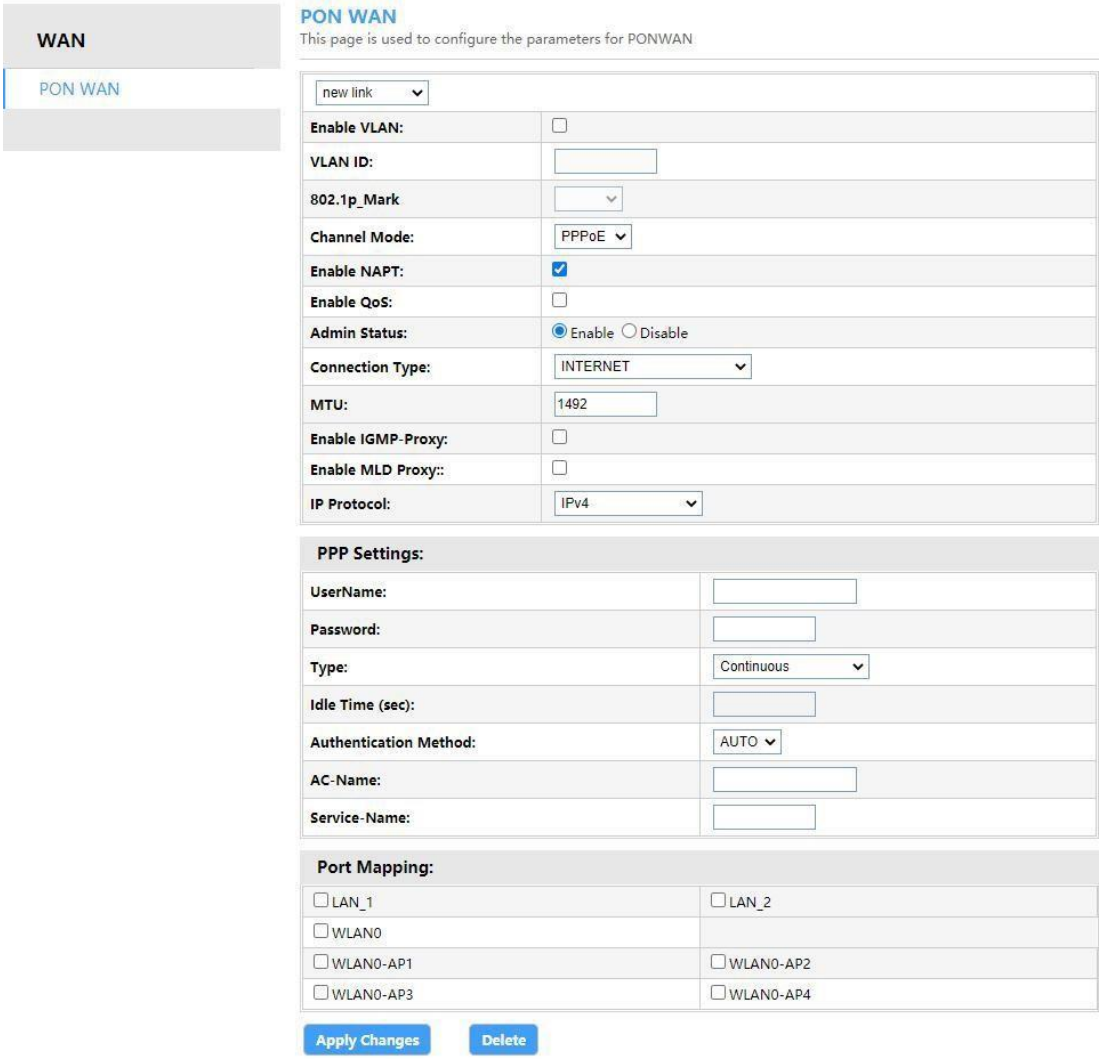
3.4.2.2 Static Mode

Static Mode is different from DHCP mode in the configuration of local IP address, subnet mask and default gateway. The other configuration is basically the same as that of DHCP mode.



3.4.2.3 PPPoE Mode

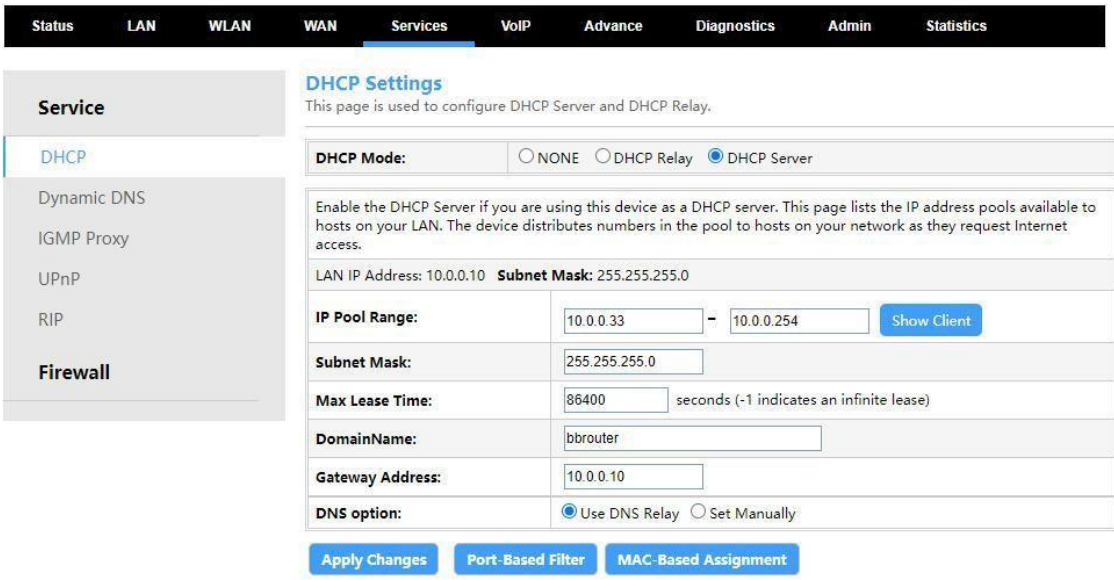
The configuration page of PPPoE is shown below. PPPoE is different from DHCP Mode and Static Mode as it needs to fill in the username, password and service-name. Authentication Method can be AUTO or AUTO in Traffic.



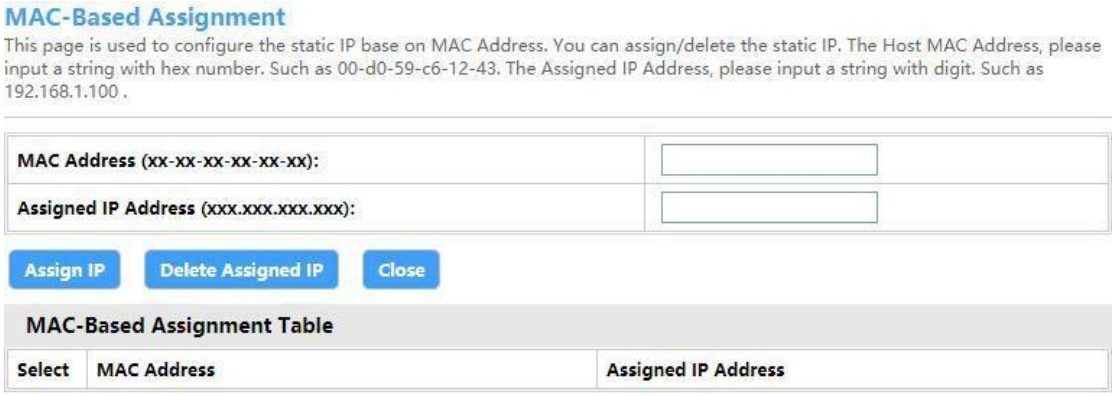
3.5 Network Services

3.5.1 DHCP Settings

In the DHCP configuration interface, the DHCP server can be enabled and disabled. When enabling the DHCP server, the initial and termination IP addresses need to be filled.



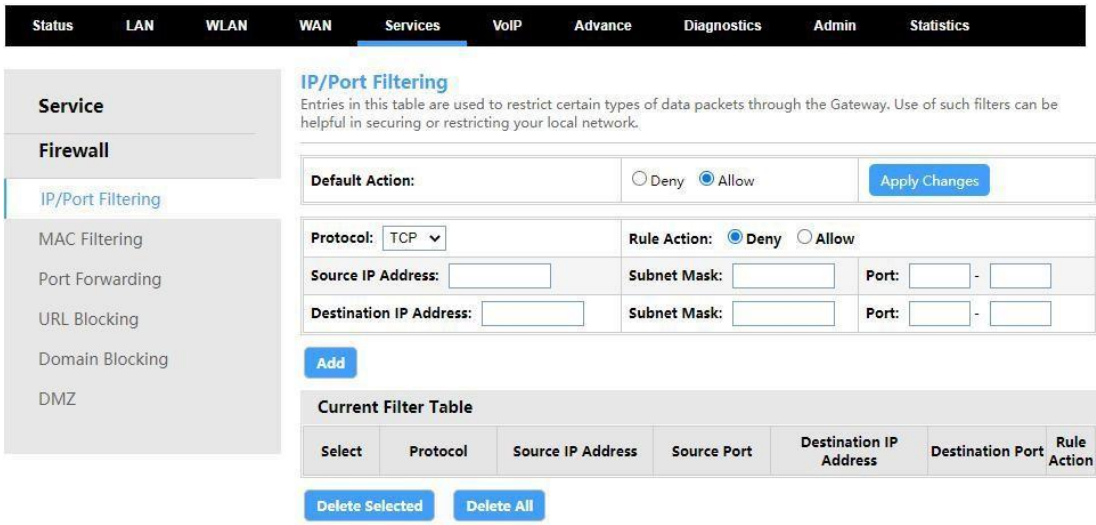
Click "MAC-Based Assignment" to add the Assigned IP address and MAC address for the PC. The Assigned IP address list here means that if a MAC address terminal in the configuration list is connected to the ONU, it will be assigned a designated IP address.



3.5.2 Firewall

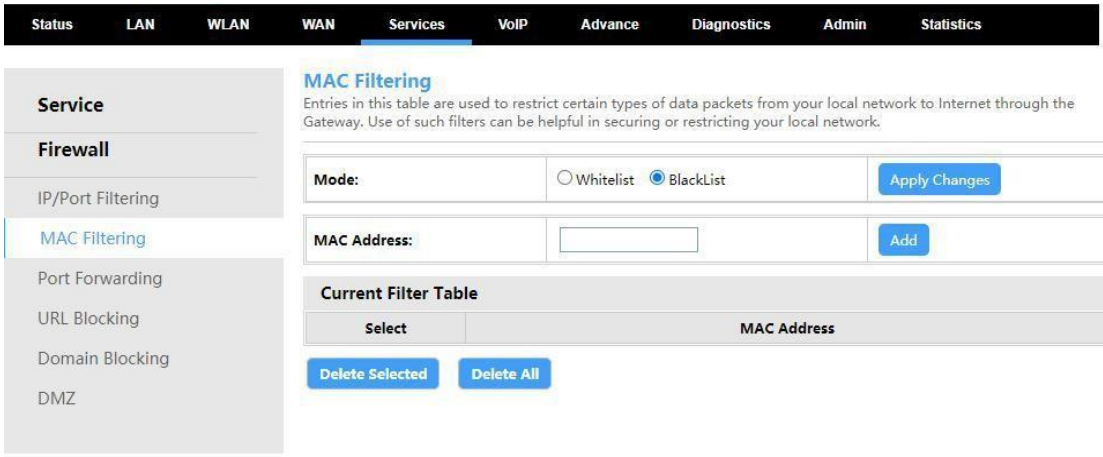
3.5.2.1 IP/Port Filtering

On this page, you can set “Allow” and “Deny” IP address entries. By default, all IP communications are allowed to flow from the LAN, but some IP communications can be blocked by setting up uplink IP filtering. You can add or delete the outgoing IP filter on the LAN.



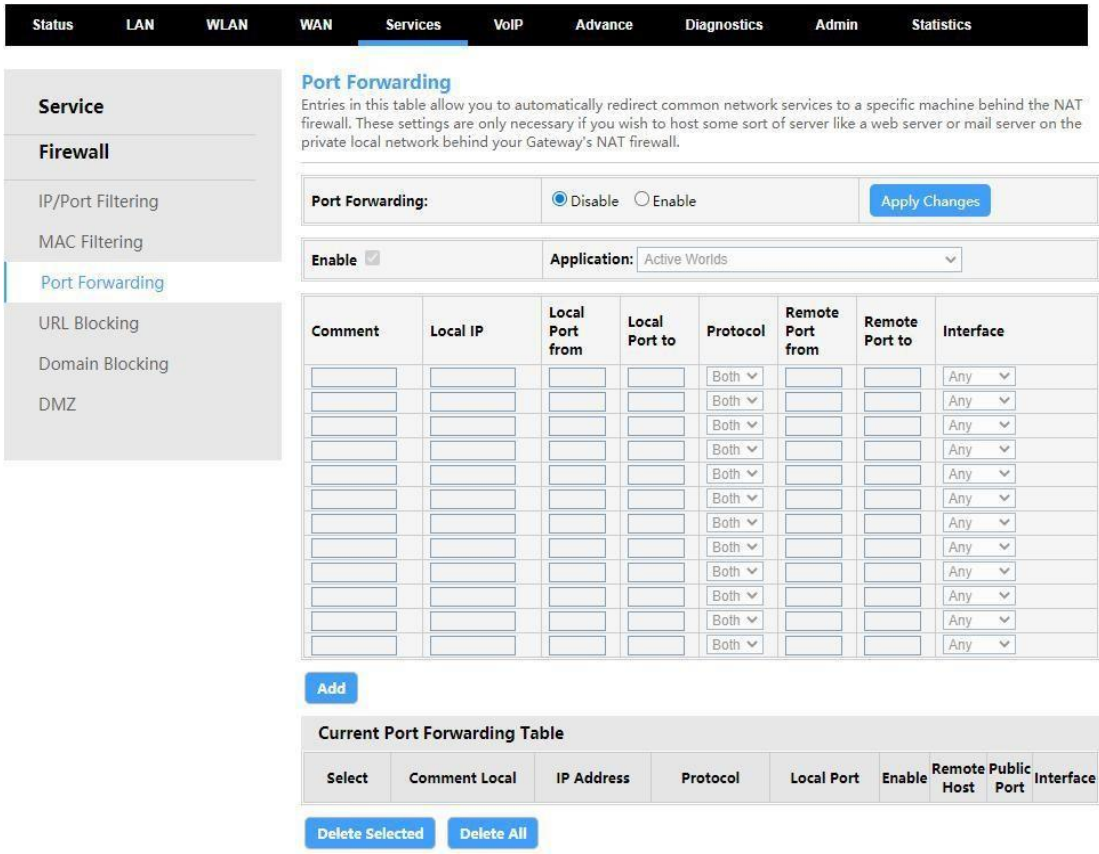
3.5.2.2 MAC Filtering

On this page, you can set blacklist and whitelist mode. You can add or delete mac address filtering table. The MAC filter can filter users connected to the LAN port and wireless users. The black and white lists can be set at the same time and will work at the same time.



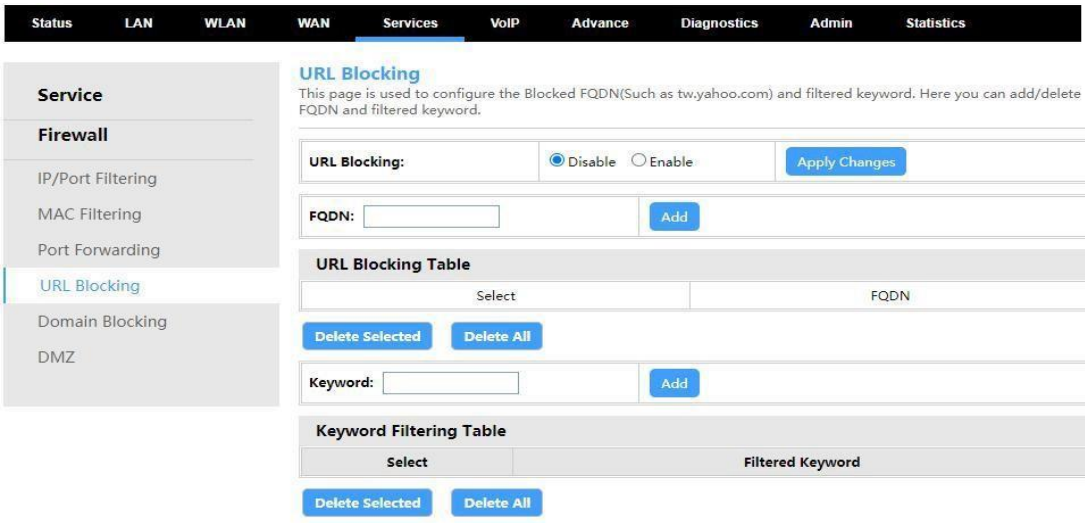
3.5.2.3 Port Forwarding

Port Forwarding Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your Gateway's NAT firewall.

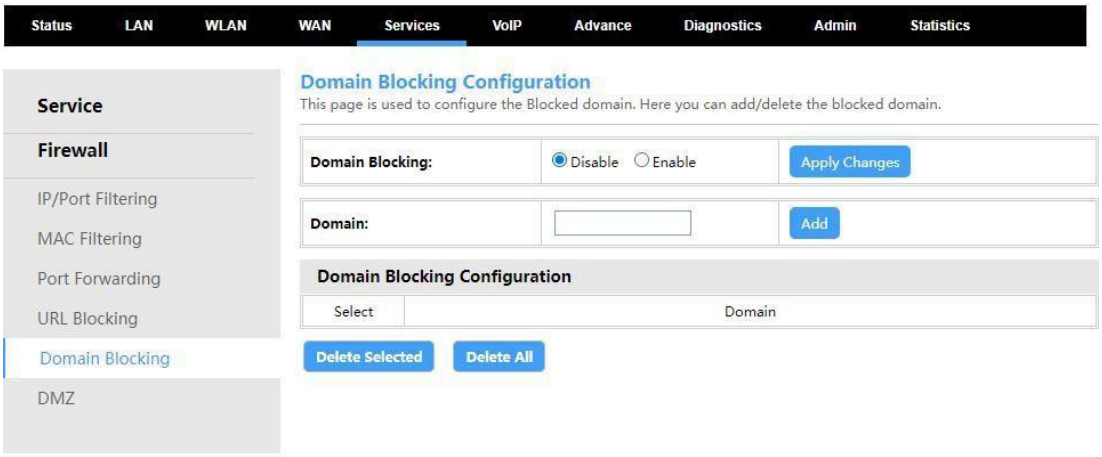


3.5.2.4 URL Blocking

This page is used to configure the Blocked FQDN(Such as tw.yahoo.com) and filtered keyword. Here you can add/delete FQDN and filtered keyword.



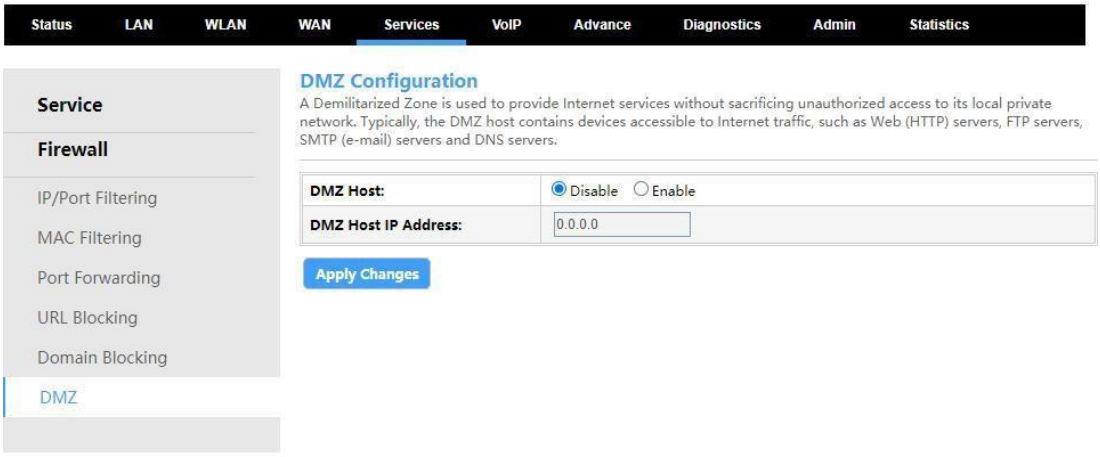
3.5.2.5 Domain Blocking Configuration



On this page, you can enable/disable the Domain Blocking. After enabling, you can add/ delete the blocked domain.

3.5.2.6 DMZ Configuration

On this page, you can tick “Enable” DMZ Host, enter IP address of the computer, and click “Apply Changes” to activate DMZ host.



3.5.3 UPnP Configuration

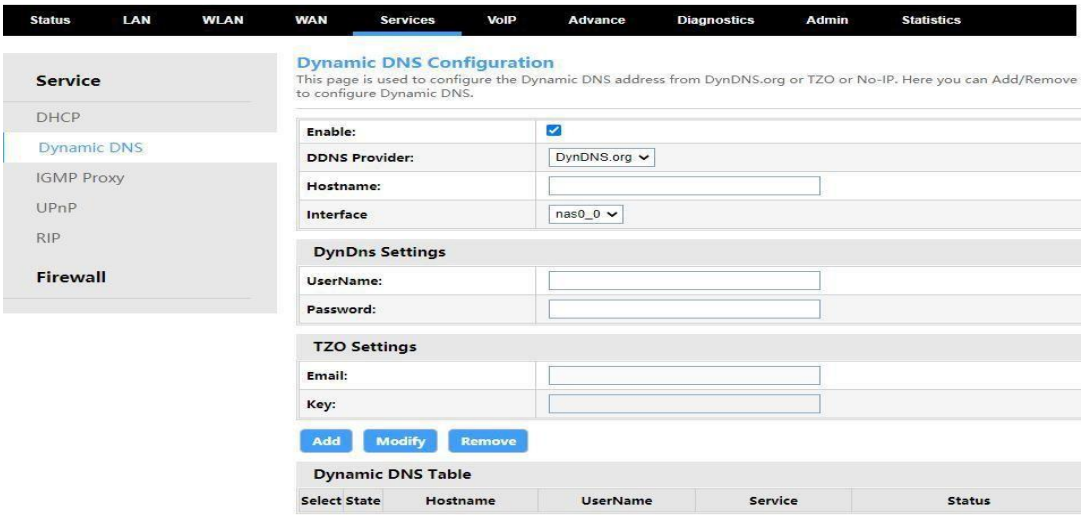
On this page, you can enable/disable UPnP. When enabling the UPnP service, you need to specify which WAN interface is configured.

3.5.4 RIP Configuration

On this page, you can enable/disable the global RIP mode. You can also configure the Receive Mode and the Send Mode. After the configuration, click the “Add” to apply.

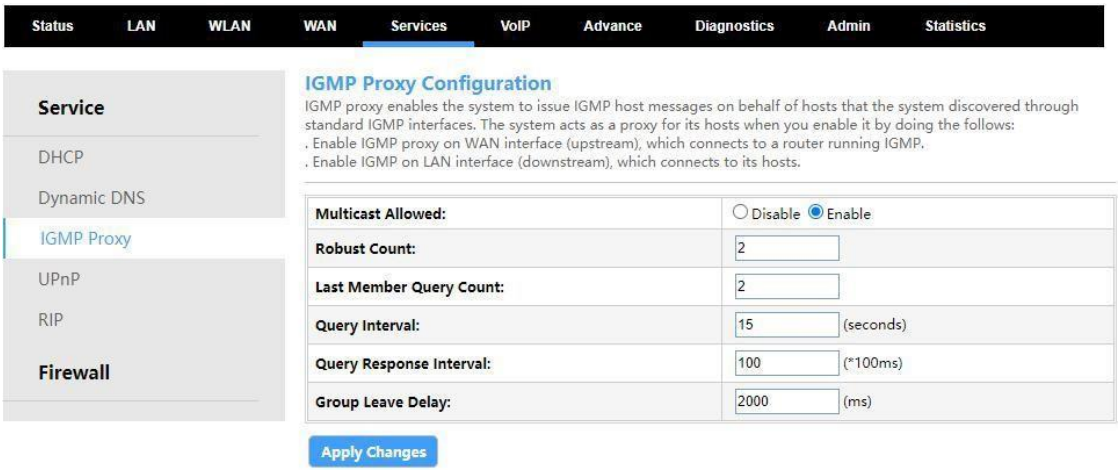
3.5.5 Dynamic DNS Configuration

This page is used to configure the Dynamic DNS address from DynDNS.org or TZO or No-IP. Here you can Add/Remove to configure Dynamic DNS.



3.5.6 IGMP proxy

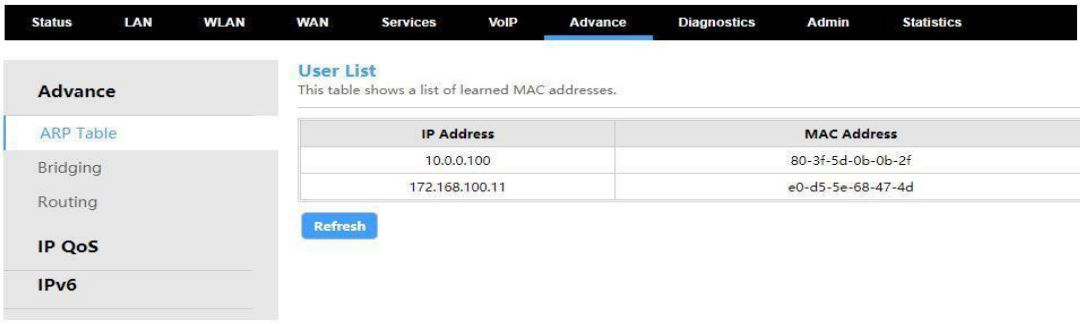
On IGMP proxy configuration page, you can disable/enable IGMP proxy, and set relevant parameters.



3.6 Advance

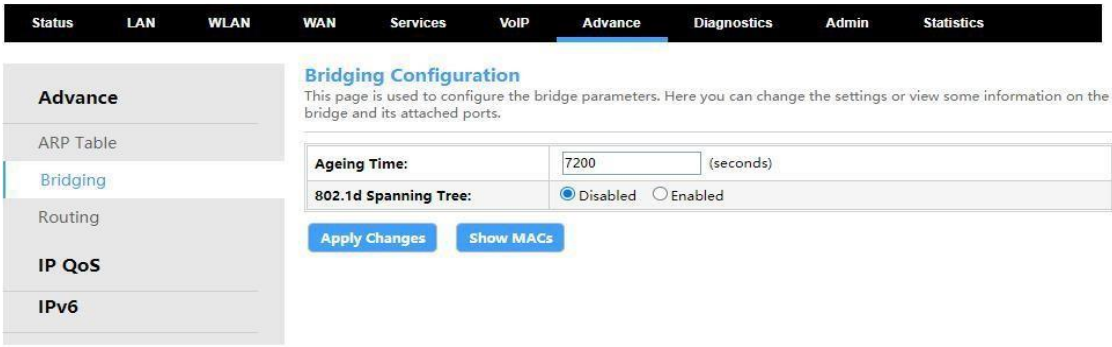
3.6.1 ARP Table

The ARP table shows the assigned IP address and the corresponding MAC address of the access device.



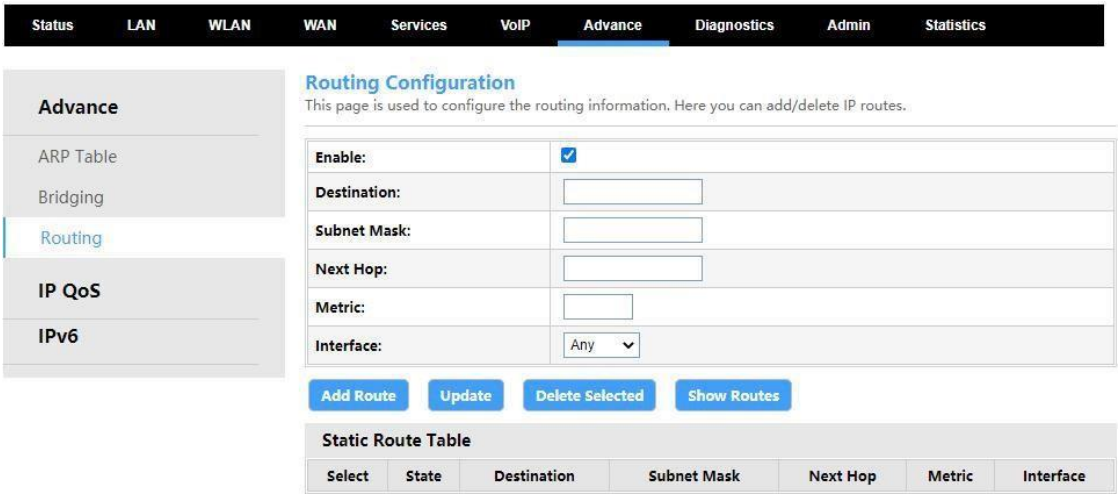
3.6.2 STP Parameter Settings

This page is used to configure the bridge parameters. Here you can change the settings or view some information on the bridge and its attached ports.



3.6.3 Routing Configuration

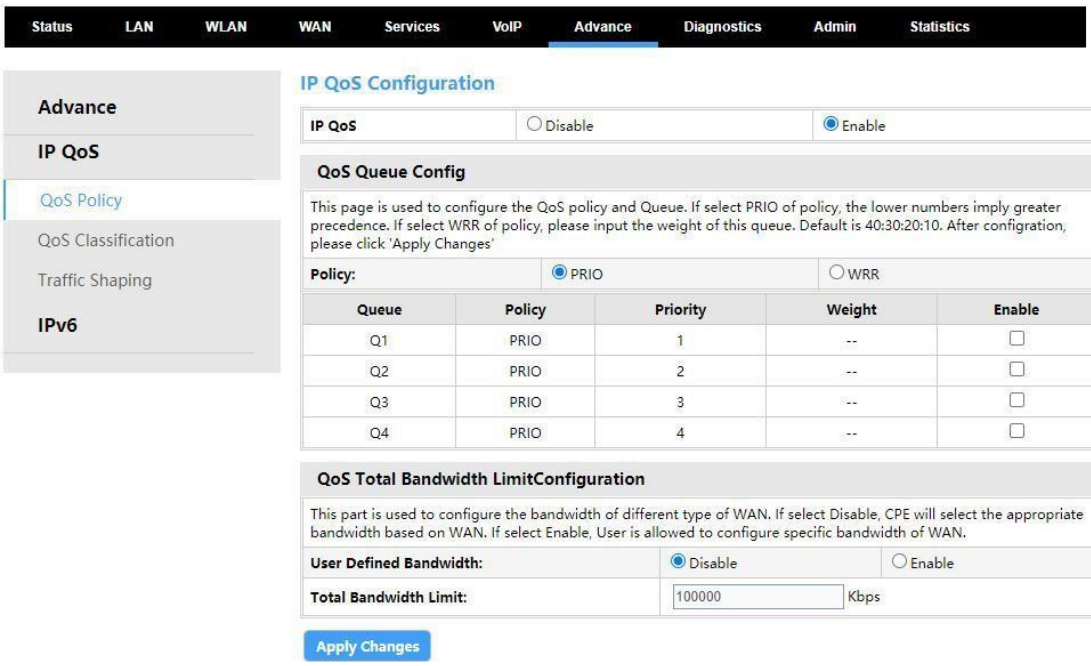
The static routing configuration page supports manual configuration of basic routing information including destination, subnet mask, next hop, and interface.



3.6.4 QOS

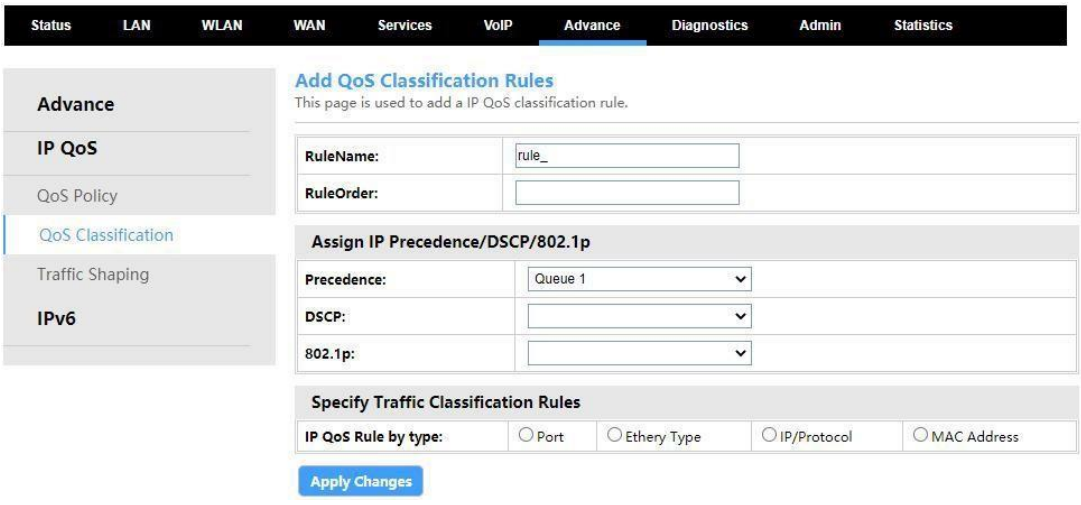
3.6.4.1 QoS Policy

On this page, you can enable/disable uplink total bandwidth limit, the DSCP/TC remarking switch. You can also configure IP QoS, which is divided into PRIO (priority) policy and WRR policy. If you choose PRIO, each Ethernet port has 4 queues after enabling QoS. Each queue corresponds to one priority. The smaller the queue value, the higher the priority. If you choose WRR, you can set 4 weights of priority queue and the default is 40:30:20:10. Click “Apply” to save and activate the configuration.



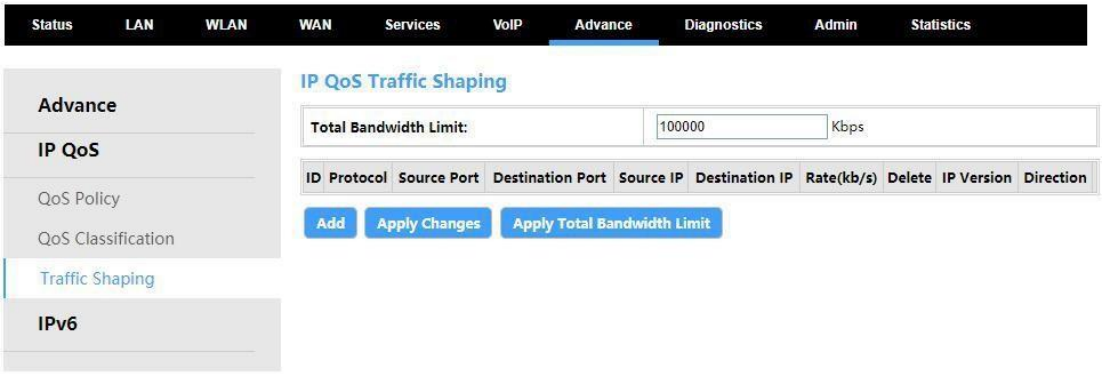
3.6.4.2 QoS Classification

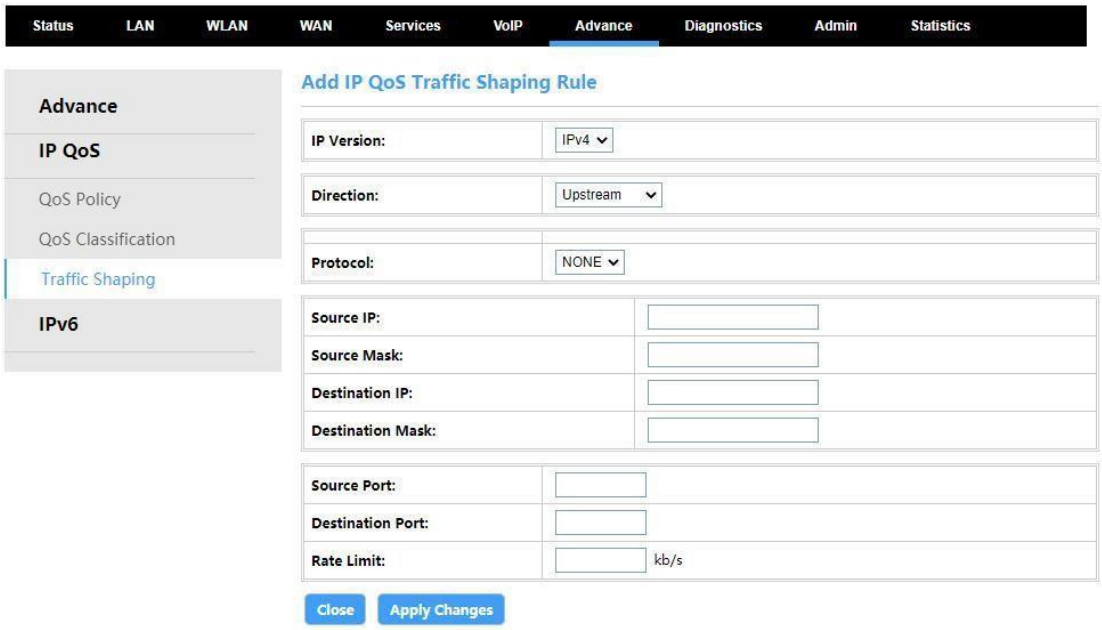
On this page, you can add or delete QoS Classification Rules. The information in the table can be further edited by clicking the “Edit”. The four rules and the four queues above can be set to correspond. Ifthe corresponding filter rules are not filled in here, the corresponding queues will not take effect.



3.6.4.3 Traffic Shaping

On this page, you can configure Total Bandwidth Limit, below which information such as Protocol, Source Port, Destination Port, Source IP, Destination IP, can be modified. Here traffic shaping refers to the overall bandwidth of uplink traffic.

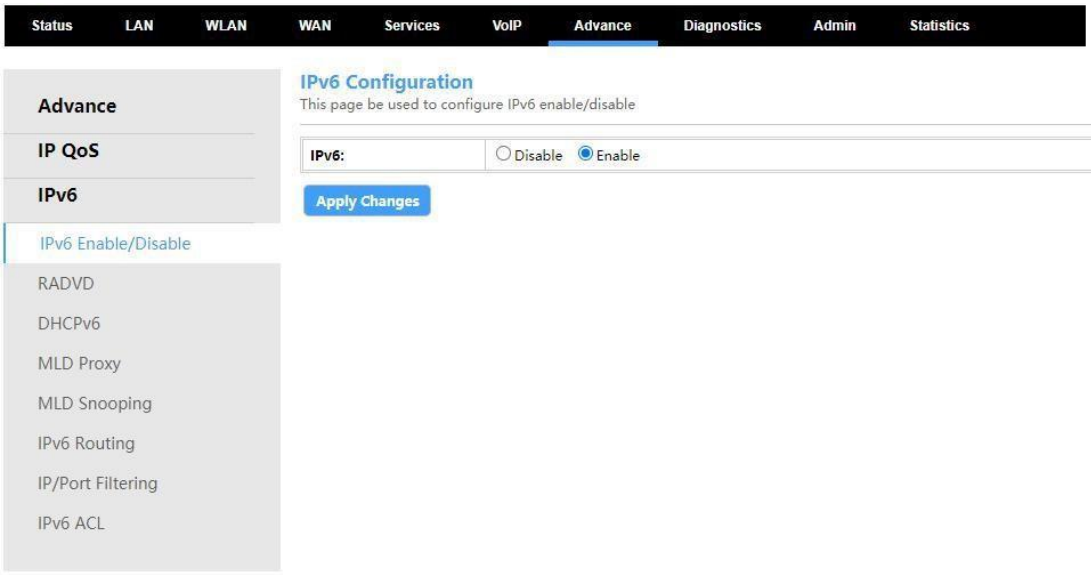




3.6.5 IPv6

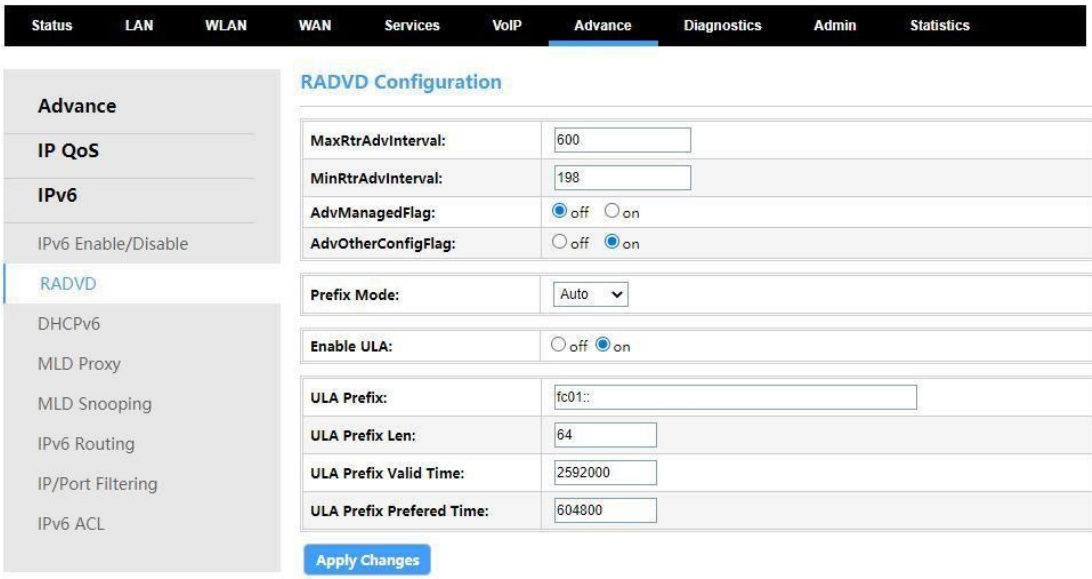
3.6.5.1 IPv6 Configuration

This page can be used to enable/disable IPv6.



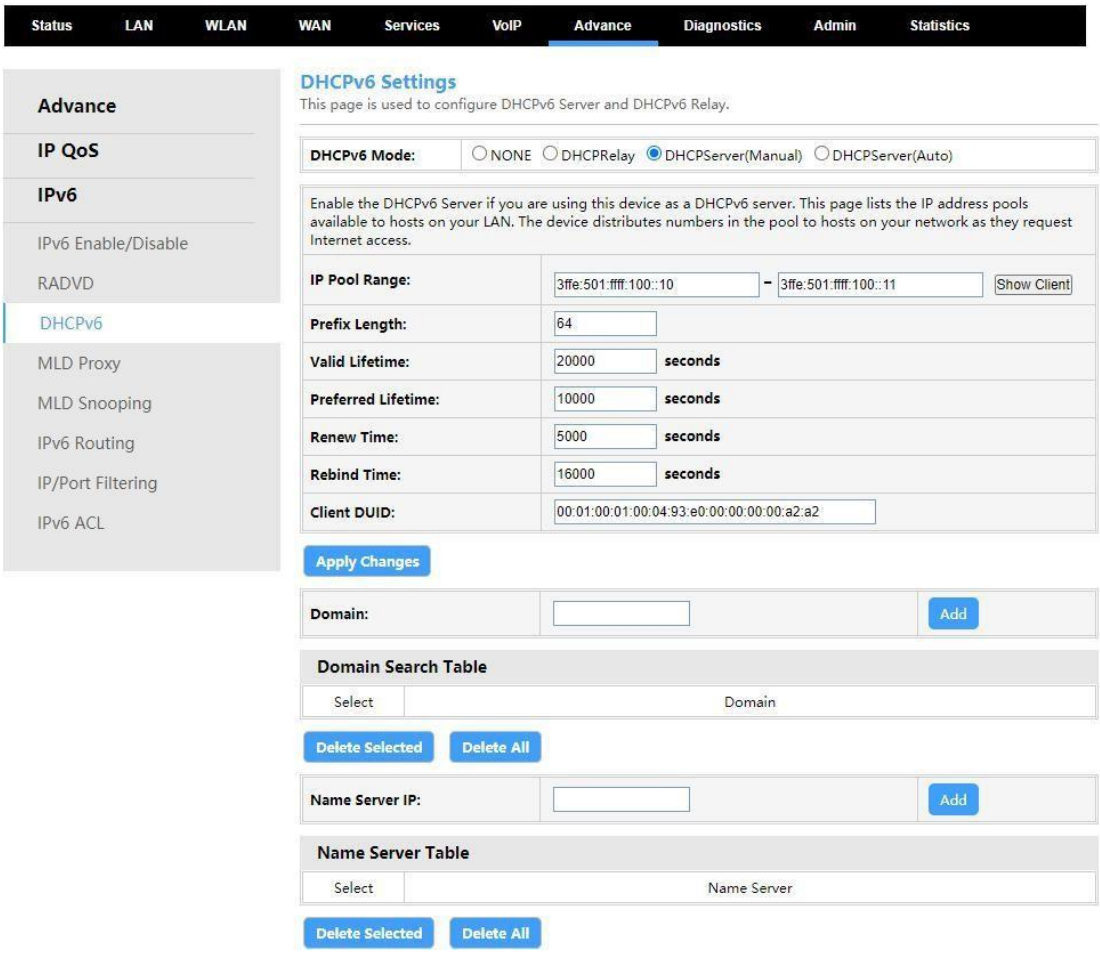
3.6.5.2 RA Configuration

On this page, you can enable or disable the RA (router advertisement) function. RA refers to the IPv6 neighbor discovery protocol. When the RA function is enabled, it is equivalent to the IPv4 ARP, redirection and router discovery function. The maximum sending interval ranges from 4 to 1800, the minimum sending interval ranges from 3 to 0.75.



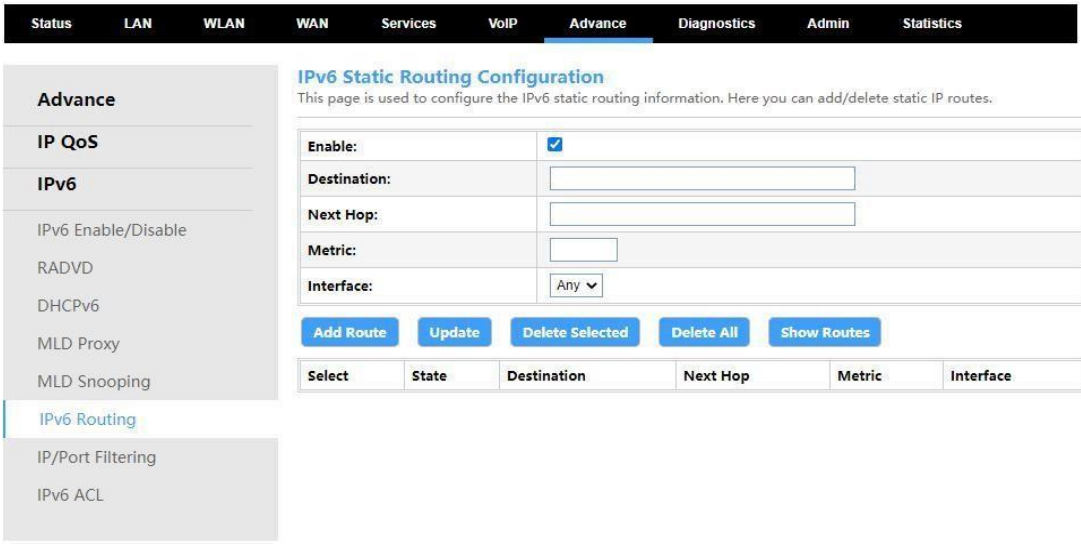
3.6.5.3 IPv6 DHCP Server Settings

This page is used to configure DHCPv6 Server. When enabling DHCP Server, you need to fill in the start address and end address of the address allocation.



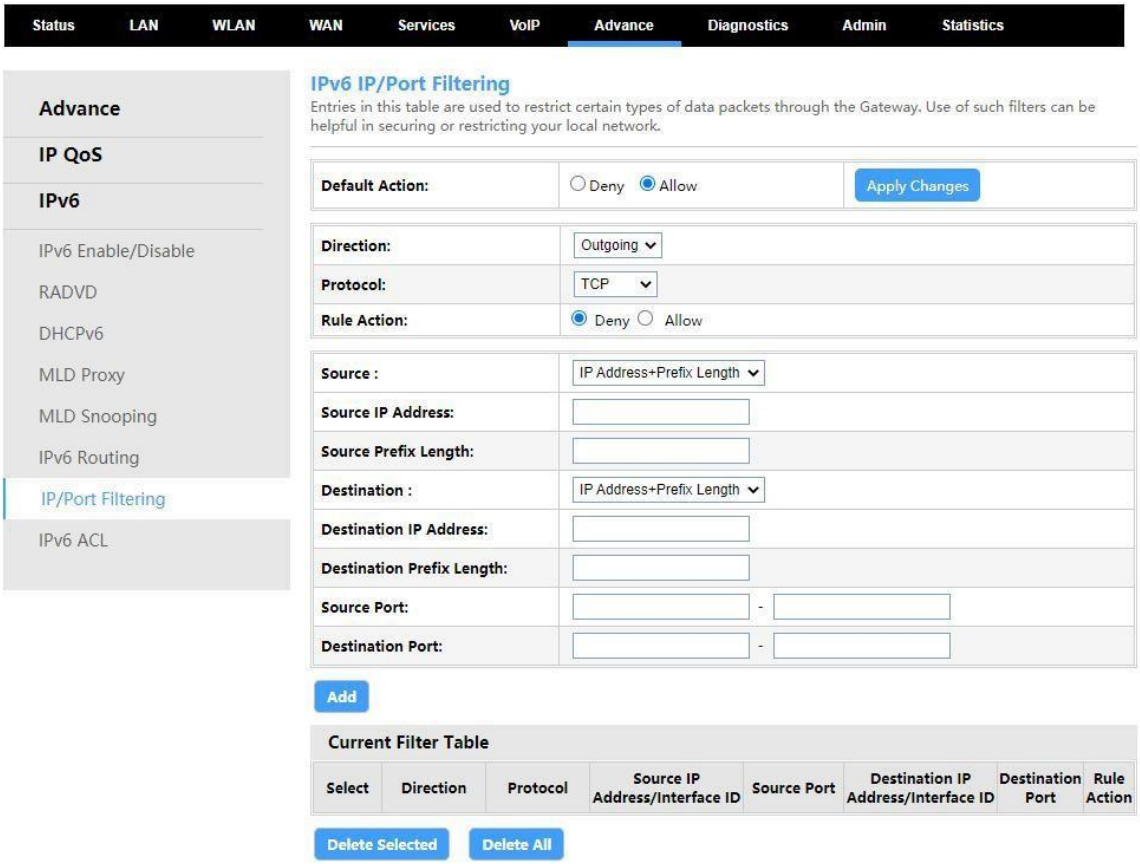
3.6.5.4 IPv6 Static Routing Configuration

This page is used to configure ipv6 static routing. You can add/delete static routing entries.



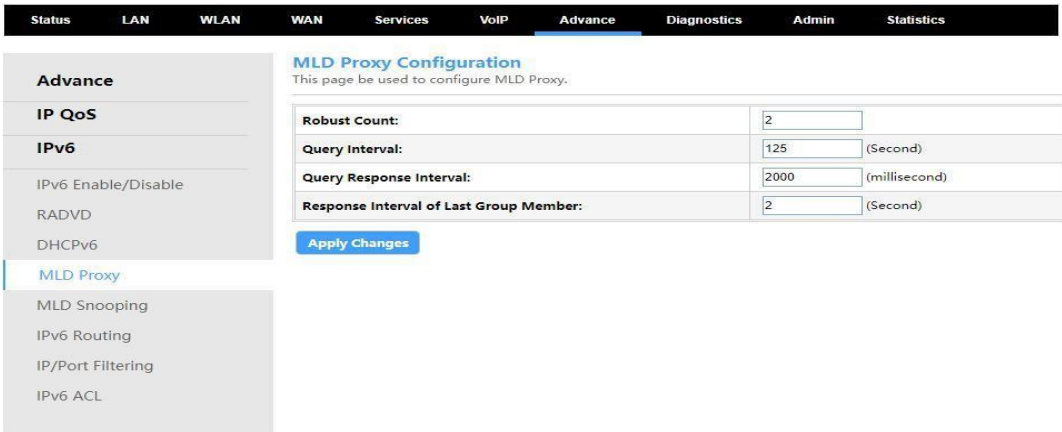
3.6.5.5 IP/Port Filtering

Filtering Rules are used to restrict certain types of data packets through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

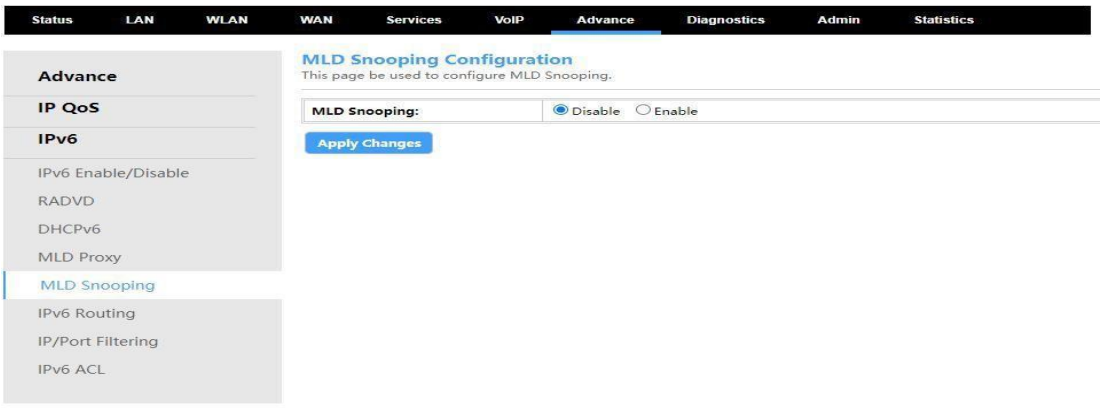


3.6.5.6 MLD Proxy

This page is used to configure the related parameters of MLD Proxy.

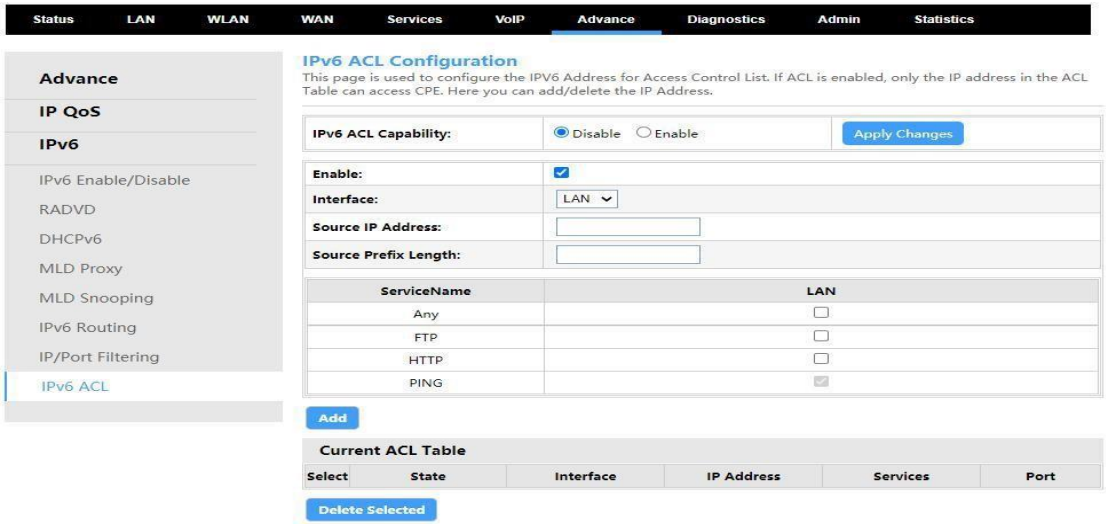


3.6.5.7 MLD Snooping



3.6.5.8 IPv6 ACL

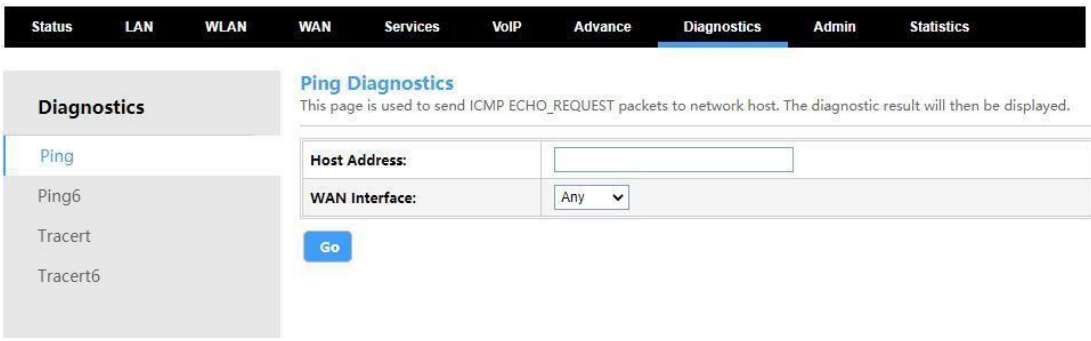
This page is used to configure the IPV6 Address for Access Control List. If ACL is enabled, only the IP address in the ACL Table can access CPE. Here you can add/delete the IP Address.



3.7 Diagnostics

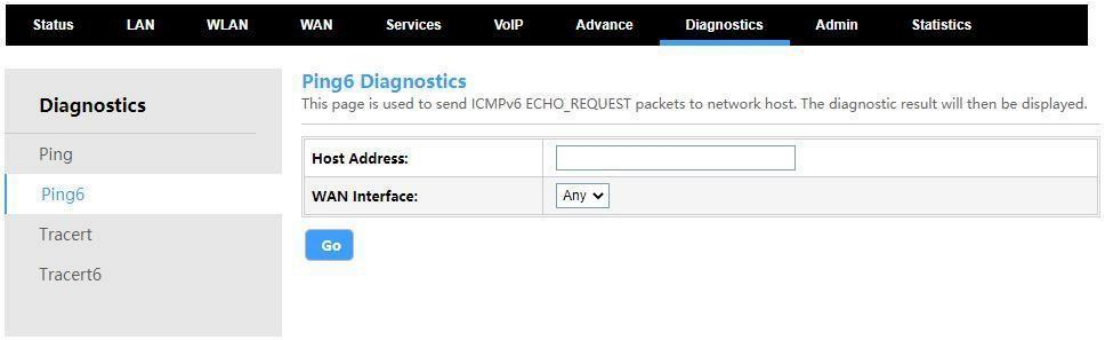
3.7.1 PING Diagnostics

This page is used to test whether the WAN interface of the device can ping an IP address.



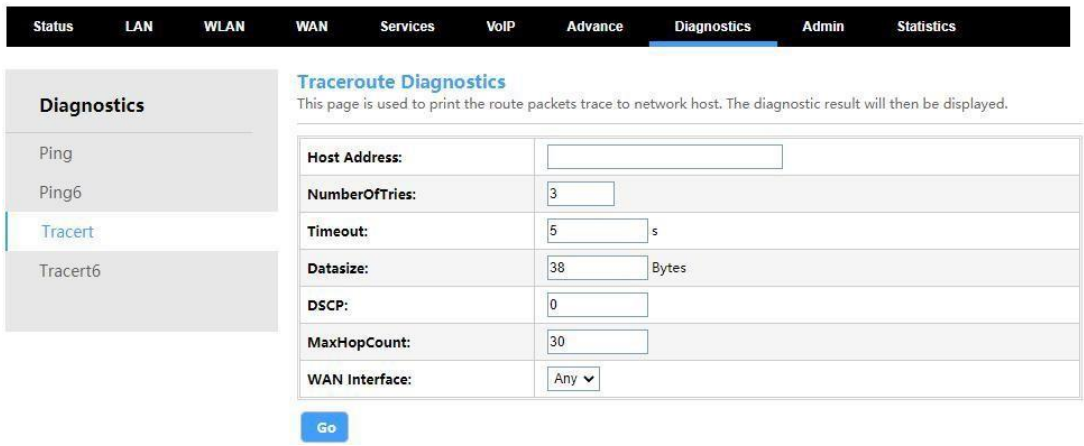
3.7.2 PING6 Diagnostics

This page is used to test whether the WAN interface of the device can ping an IPv6 address.



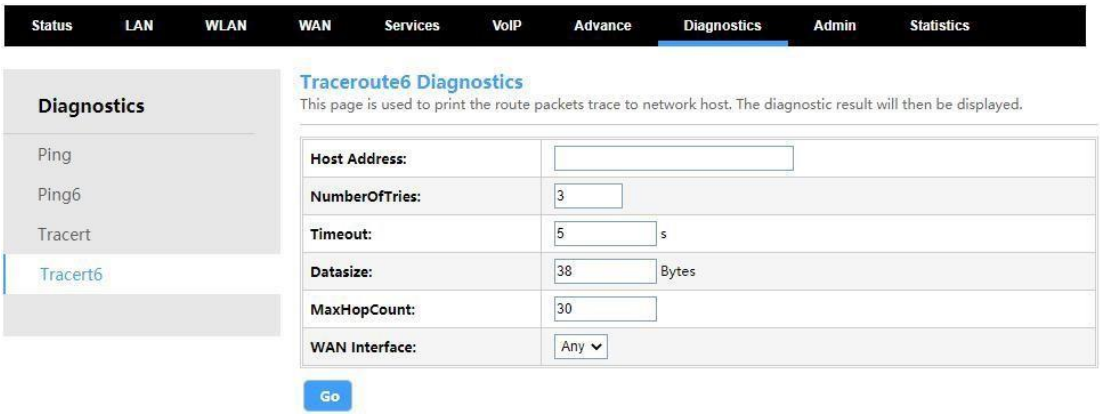
3.7.3 Tracert Diagnostics

This page is used to print the route IP packets trace to network host. The diagnostic result will then be displayed.



3.7.4 Tracert6 Diagnostics

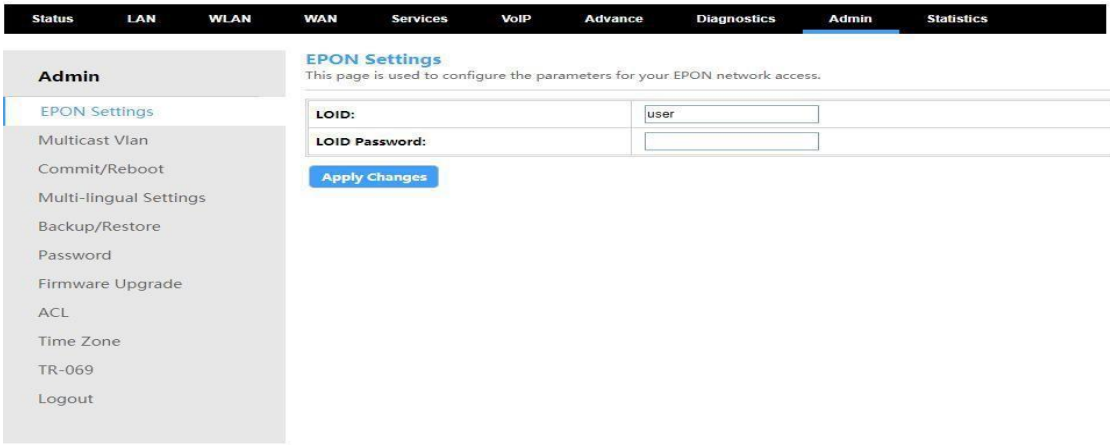
This page is used to print the route IPv6 packets trace to network host. The diagnostic result will then be displayed.



3.8 Admin Setting

3.8.1 EPON Settings

This page is generally used for the registration and delivery of new devices. It is not recommended to change the content of this page. If the service is abnormal due to the change, please restart the gateway.

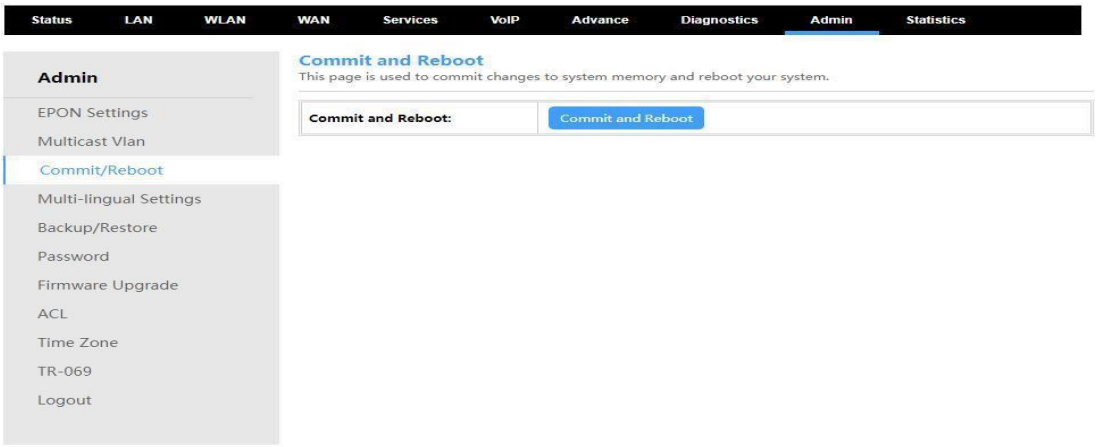


3.8.2 Multicast VLAN

This page is used to configure the multicast VLAN of the corresponding interface.

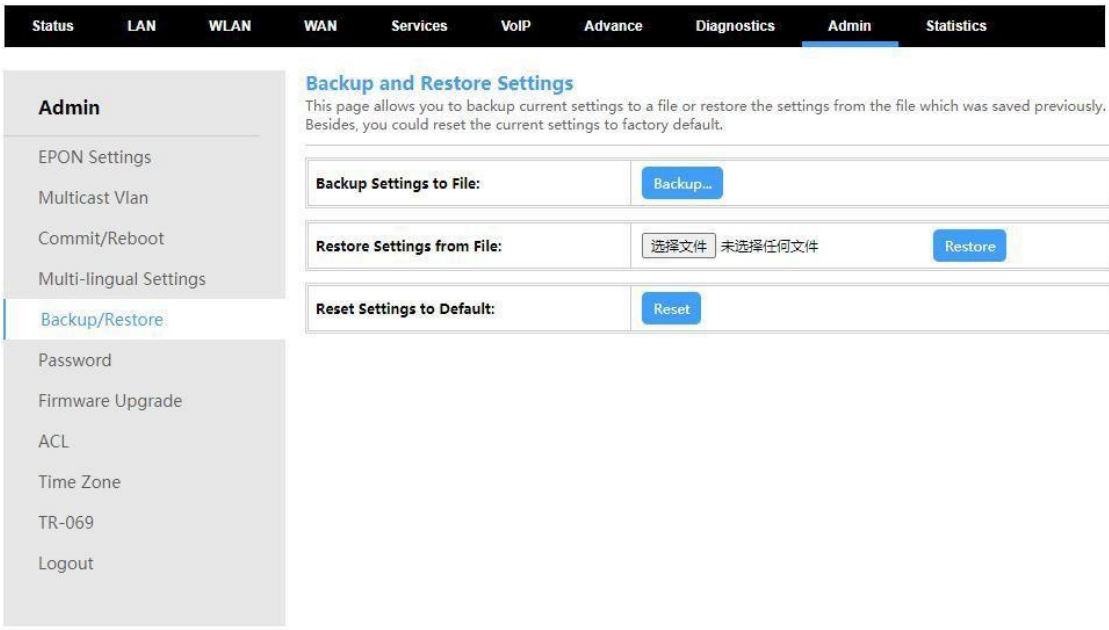
3.8.3 Commit/Reboot

This page is used to commit changes to system memory and reboot your system.



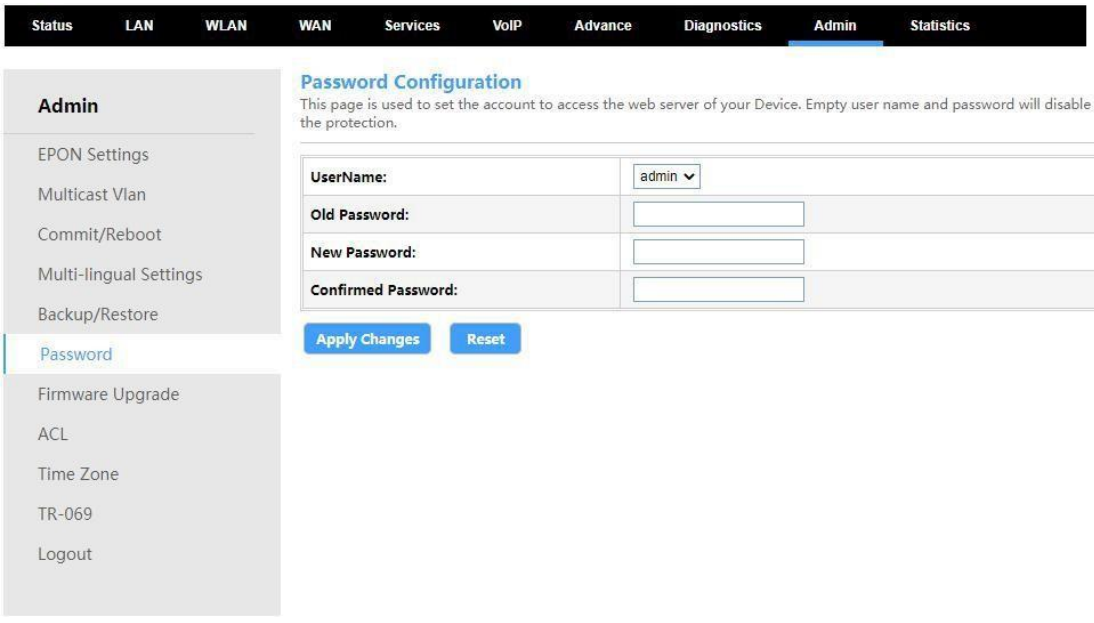
3.8.4 Backup/Restore

On this page, you can configure the backup and restore settings. Click the "Backup" to back up the information on the page, click the "Restore" to import the backup file into the device, and click the "Reset" to restore the factory settings.



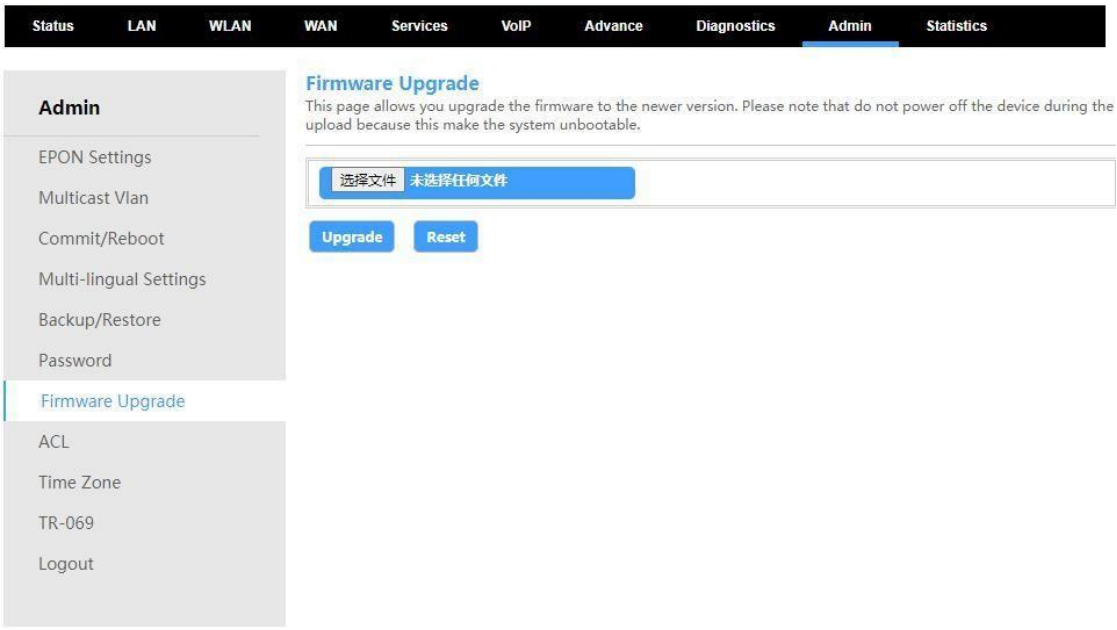
3.8.5 Password

On this page, you can set new password for the common user.



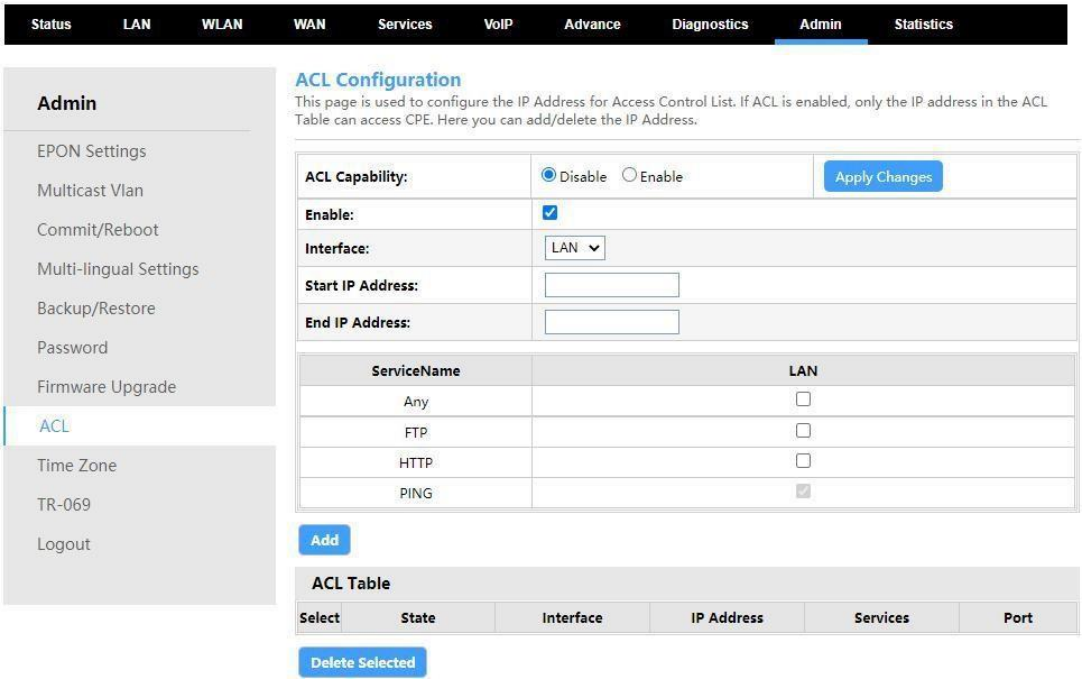
3.8.6 Firmware Upgrade

On this page, you can click “Choose File” to locate the upgrade file and then click “Upgrade” below to upgrade the device. Please note that do not power off the device during the upgrade. The system will automatically reboot after upgrade.



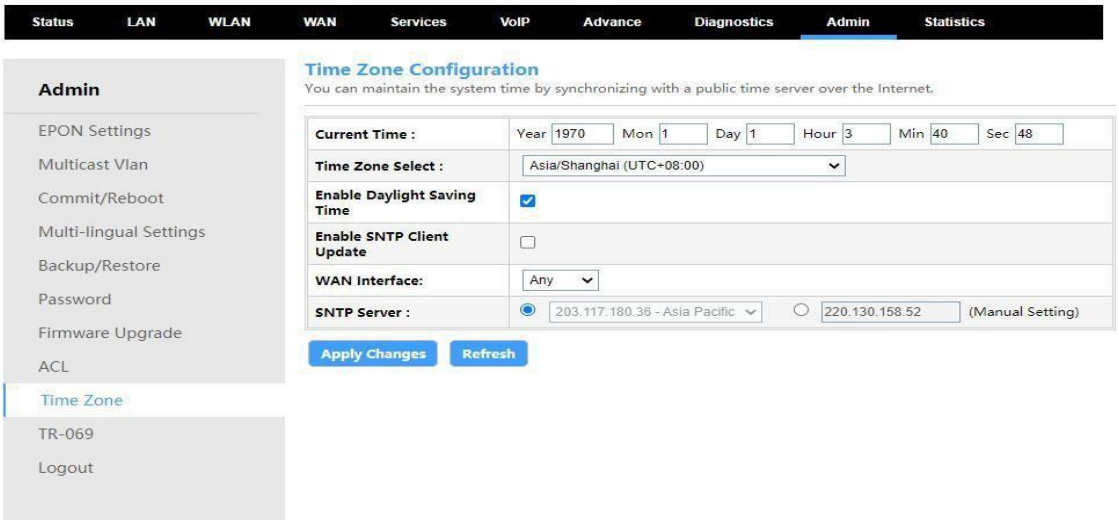
3.8.7 ACL Configuration

On this page, you can set the user's access authority to the lan interface and wan interface, which are open to all users by default.



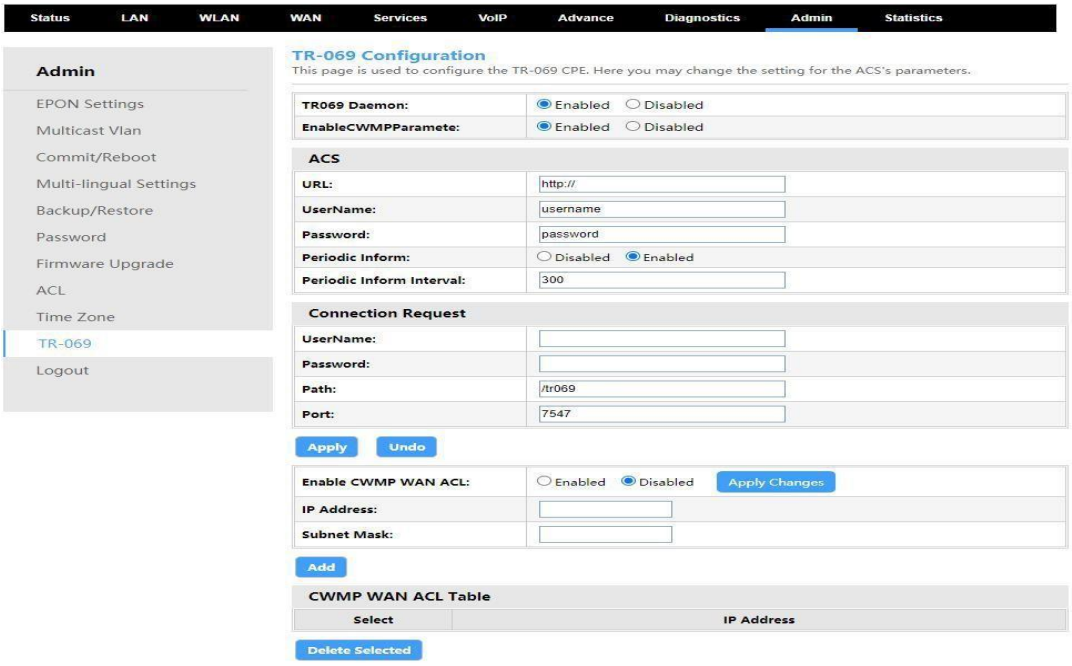
3.8.8 Time Zone Configuration

On this page, you can configure the router time. After checking the Enable Daylight Saving Time, you can configure the router to obtain the time server and synchronization channel, synchronized WAN connection and interval information.

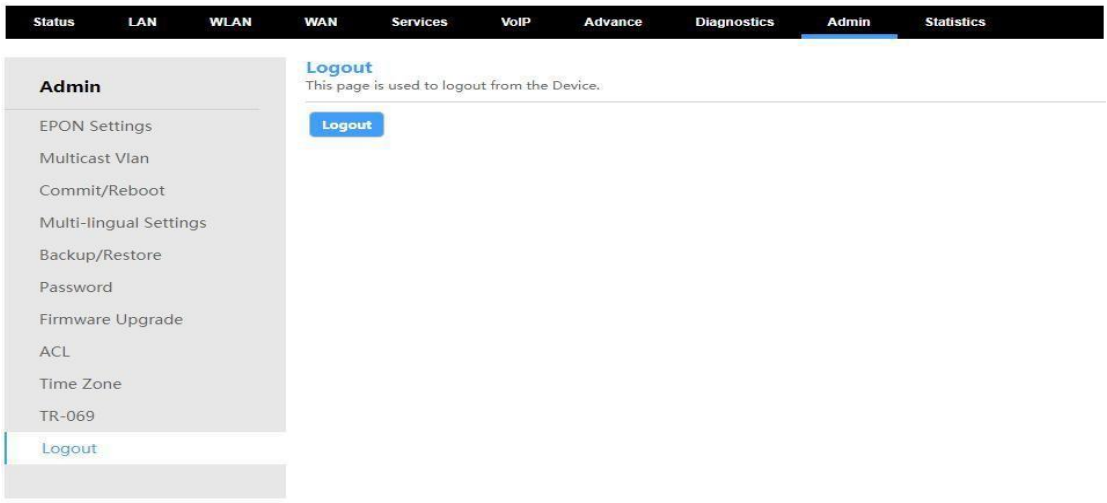


3.8.9 TR-069 Configuration

This page is used to configure TR-069 related parameters, and you can set the URL username and password.

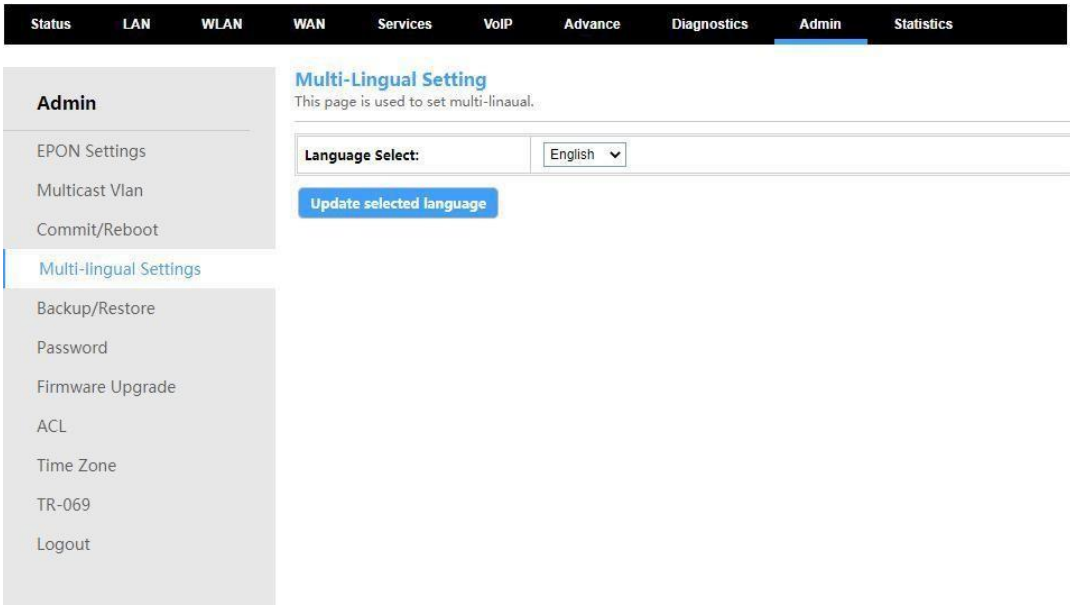


3.8.10 Logout



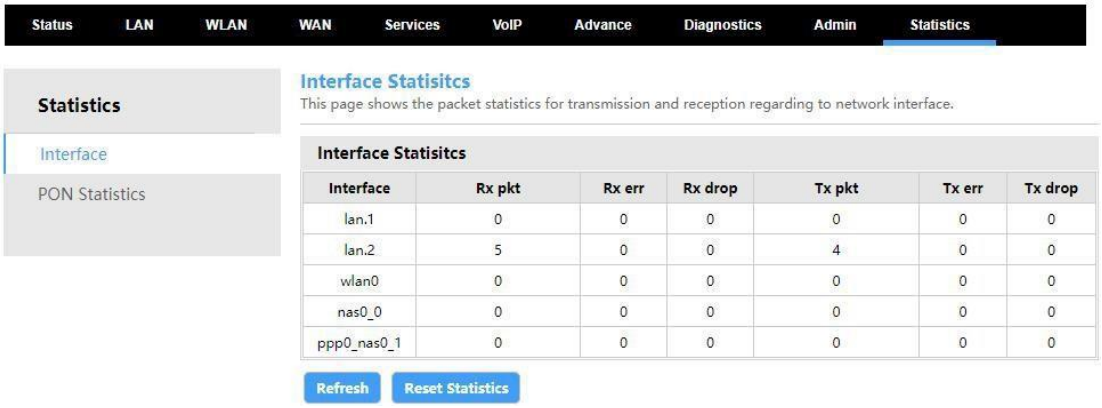
3.8.11 Multi-Lingual Setting

This page is used to set multi-lingual.

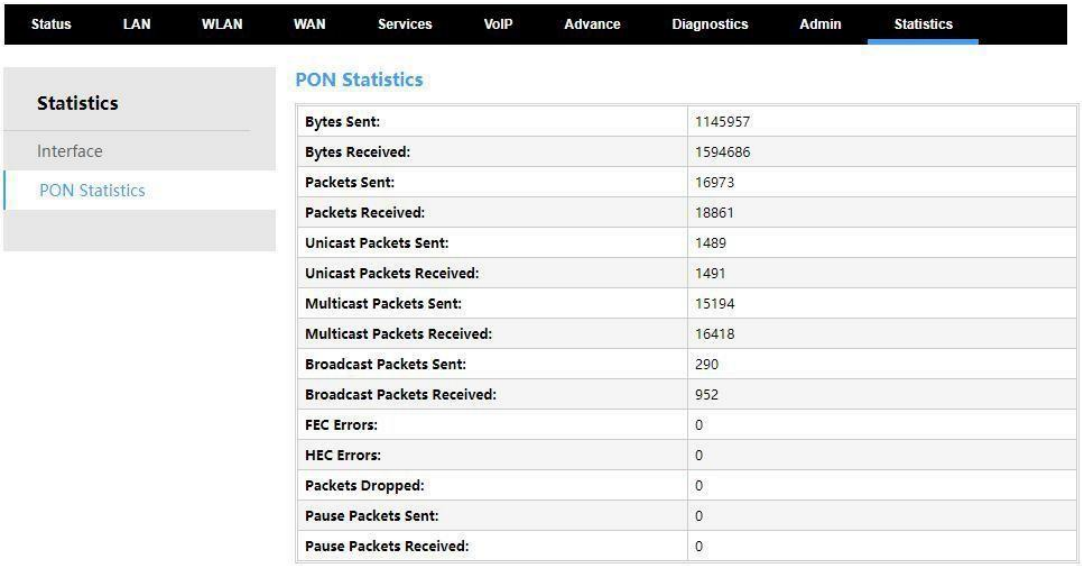


3.9 Statistics

3.9.1 Interface Statistics



3.9.2 PON Statistics



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