AR-7287WnA

User Manual

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Edimax Technology Co., Ltd.
No. 278, Xinhu 1st Rd., Neihu Dist., Taipei City, Taiwan
Email: support@edimax.com.tw

Edimax Technology Europe B.V.
Fijenhof 2, 5652 AE Eindhoven, The Netherlands
Email: support@edimax.nl

Edimax Computer Company
3350 Scott Blvd., Bldg.15 Santa Clara, CA 95054, USA
Live Tech Support: 1(800) 652-6776
Email: support@edimax.com

Contents

Note: The images/screenshots used in this manual are for reference only – actual screens may vary according to firmware version. The contents of this manual are based on the most recent firmware version at the time of writing.

1. Product Introduction

1.1. Package Contents

Before you start using this product, please check if there is anything missing in the package and contact your dealer to claim the missing item(s):

- ADSL2+ router (AR-7287WnA)
- 12V power adapter
- 1 meter RJ-45 Ethernet cable
- 1 meter RJ-11 telephone line x 2
- Quick installation guide
- CD containing setup wizard, user manual & multi-language QIG
- Splitter

1.2. System Requirements

Recommended system requirements are as follows.

- A 10/100 base-T Ethernet card installed in your PC.
- A hub or Switch (connected to several PCs through one of the Ethernet interfaces on the device).
- Operating system: Windows 98 SE, Windows 2000, Windows ME, Windows XP, Windows 7, Windows 8, Windows 10.
- Internet Explorer V5.0 or higher, Netscape V4.0 or higher or Firefox 1.5 or higher.

1.3. Safety Precautions

Follow the following instructions to prevent the device from risks and damage caused by fire or electric power:

- Use volume labels to mark the type of power.
- Use the power adapter included within the package contents.
- Pay attention to the power load of the outlet or prolonged lines. An overburdened power outlet or damaged lines and plugs may cause an electric shock or fire. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.

- Do not put this device close to heat sources or high temperatures. Keep the device out of direct sunshine.
- Do not put this device close to a place where it is damp or wet. Do not spill any fluid on this device.
- Do not connect this device to any PCs or electronic products, other than those which you are instructed or recommended to do so in the product's documentation, by our customer engineers or by your broadband provider – connecting to incorrect devices may cause a fire risk.
- Place this device on a stable surface.

1.4. LED Status & Button Definitions

Front Panel

LED Status

Front Panel:

LED	Color	Status	Description
Power ⏻	**Green**	**On**	ADSL2+ router is on.
		Off	ADSL2+ router is off.
ADSL	**Green**	**On**	ADSL line is synchronized and ready to use.
		Flashing	ADSL line not synchronized.
Internet	**Green**	**On**	Internet connected in router mode
		Flashing	Internet not connected in router mode
		Off	Device in bridged mode.
LAN1–4	**Green**	**On**	LAN port connected.
		Off	LAN port not connected.
WLAN	**Green**	**On**	Successful WLAN connection.
		Off	WLAN connection failed.
WPS	**Green**	**Off**	WPS is disabled.
		Flashing	WPS is enabled and waiting for client to negotiate.

Note i. ***If the ADSL LED is off, please check your Internet connection. Refer to A. Hardware Installation for more information about how to connect the router correctly. If all connections are correct, please contact your ISP to check if there is a problem with your Internet service.***

Rear Panel:

Item	Description
Power On/Off Button	Switches the router on or off.
Power	Power port for included 12V power adapter.
Wireless / WPS Button	*Hold for less than 5 seconds to enable wireless signal. *Hold for more than 5 seconds to activate WPS function.
LAN 1–4	RJ-45 Ethernet ports 1–4.
Reset Button	Hold for less than 3 seconds to reset the device to factory default settings.
Line	RJ-11 port for standard telephone line.

1.5. Features

The device supports the following features:

- Various line modes (line auto-negotiation)
- External PPPoE dial-up access
- Internal PPPoE/PPPoA dial-up access
- 1483B/1483R/MER access
- Multiple PVCs (eight at most)

- A single PVC with multiple sessions
- Multiple PVCs with multiple sessions
- Auto PVC
- DHCP server
- IPv4/IPv6
- NAT/NAPT
- ALG
- TR-069
- SNMP
- Static route
- Firmware upgrading through Web, TFTP, or FTP
- Resetting to the factory defaults through Reset button or Web
- DNS relay
- Virtual server
- Two-level passwords and usernames
- Web interface
- Telnet CLI
- System status display
- PPP session PAP/CHAP
- IP/Port filter
- Remote access control
- Line connection status test
- Remote management (Telnet; HTTP)
- Backup and restoration of configuration file

- IP quality of service (QoS)
- Universal plug and play (UPnP)
- WLAN with high-speed data transmission rate, compatible with IEEE 802.11b/g/n, 2.4 GHz compliant equipment

2. Hardware Installation

1. Connect the ADSL line.

Connect the line port of the router of the device to the modem interface of a splitter using a telephone cable. Connect a telephone to the Phone interface of the splitter using a telephone cable. Connect the Line interface of the splitter to your existing, incoming line.

The splitter has three interfaces:

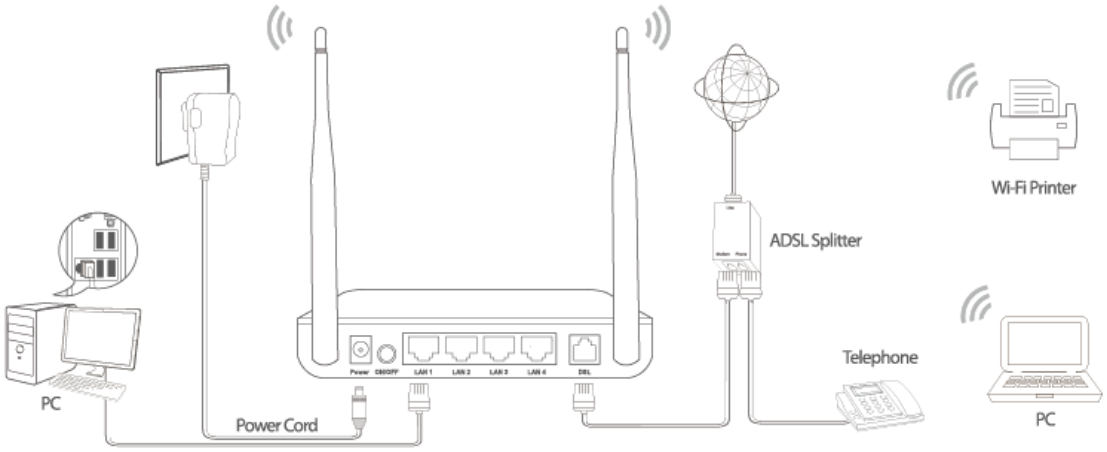
- Line: Connect to a wall phone jack (RJ-11 jack).
- Modem: Connect to the ADSL jack of the device.
- Phone: Connect to a telephone set.

2. Connect the router to your LAN network.

Connect the LAN interface of the router to your PC, hub or switch using an Ethernet cable.

Note:

Use twisted-pair Ethernet cables to connect the router to a hub or switch.



3. Connect the power adapter to the router.

Plug one end of the power adapter into a wall outlet and connect the other end to the 12V interface of the device.

The following diagrams show how to correctly connect the router, PC, splitter and the telephone sets under two different configurations:

Configuration 1

0 shows the correct connection of the router, PC, splitter and the telephone sets, with no telephone set placed before the splitter.

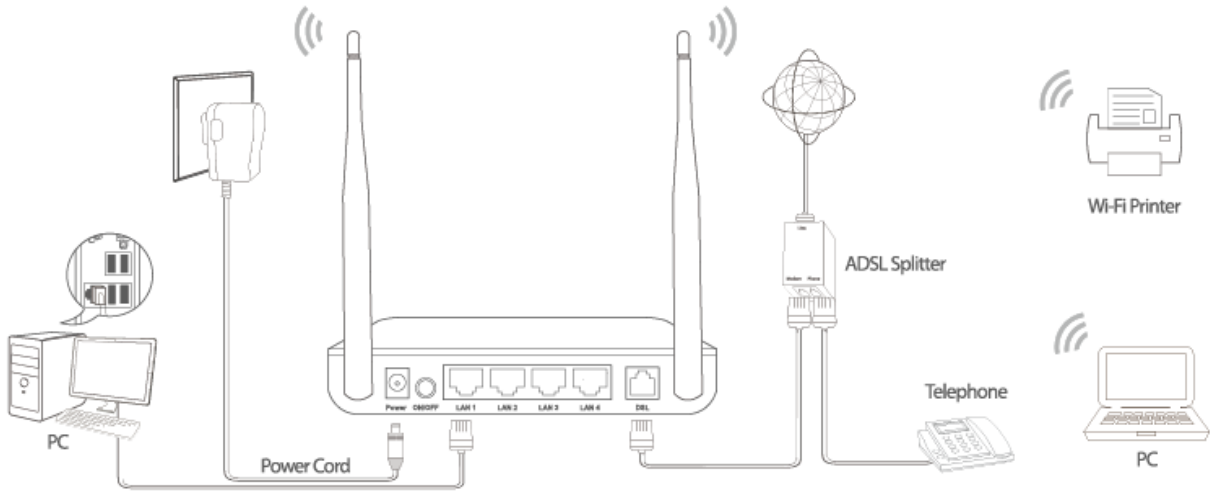


Figure 1 –Connection diagram

(Without connecting telephone sets before the splitter)

Configuration 2

0 shows the correct connection when a telephone set is installed before the splitter.

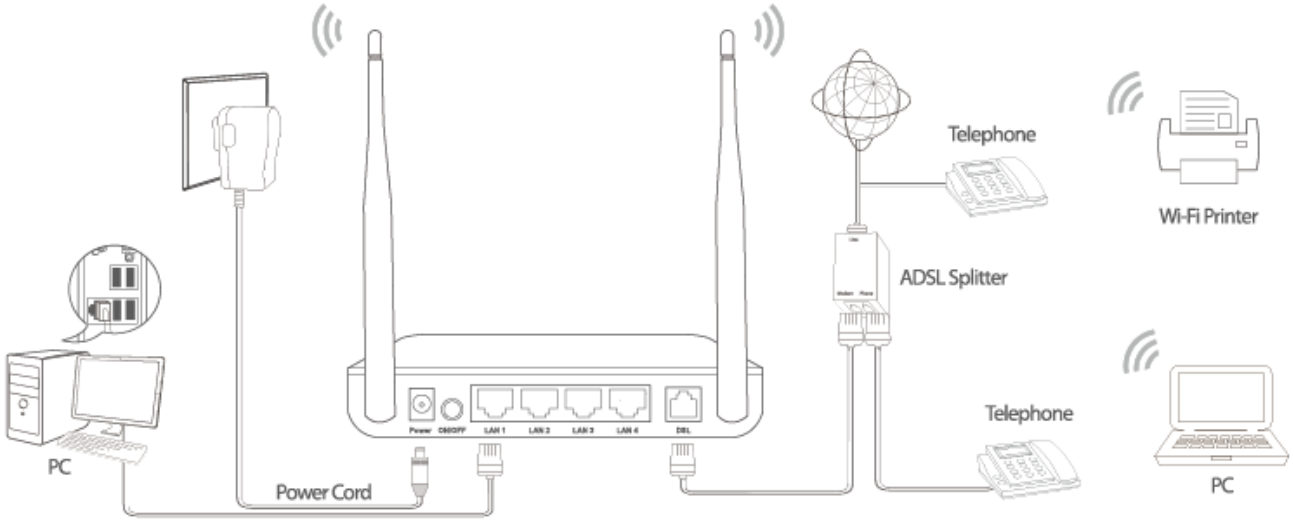


Figure 2 - Connection diagram

(Connecting a telephone set before the splitter)

📖 **Note**:
When **Configuration 2** is used, the filter must be installed close to the telephone cable. Do not use the splitter to replace the filter.

Installing a telephone directly before the splitter may lead to failure of connection between the device and the central office, or failure of Internet access, or slow connection speed. If you really need to add a telephone set before the splitter, you must add a micro filter before a telephone set. Do not connect several telephones before the splitter or connect several telephones with the micro filter.

4. Check the ADSL LED status.

Please check the ADSL LED on the front panel. This light indicates the status of your ADSL broadband through your telephone line. If the light is on, you can continue setup. However if the light is flashing, there is no broadband line detected. Please call your Internet Service Provider (ISP) and inform them about the flashing ADSL light to resolve the issue.

5. Firewall settings.

Please turn off all personal firewalls before you continue the setup – firewalls can block communication between your PC and router.

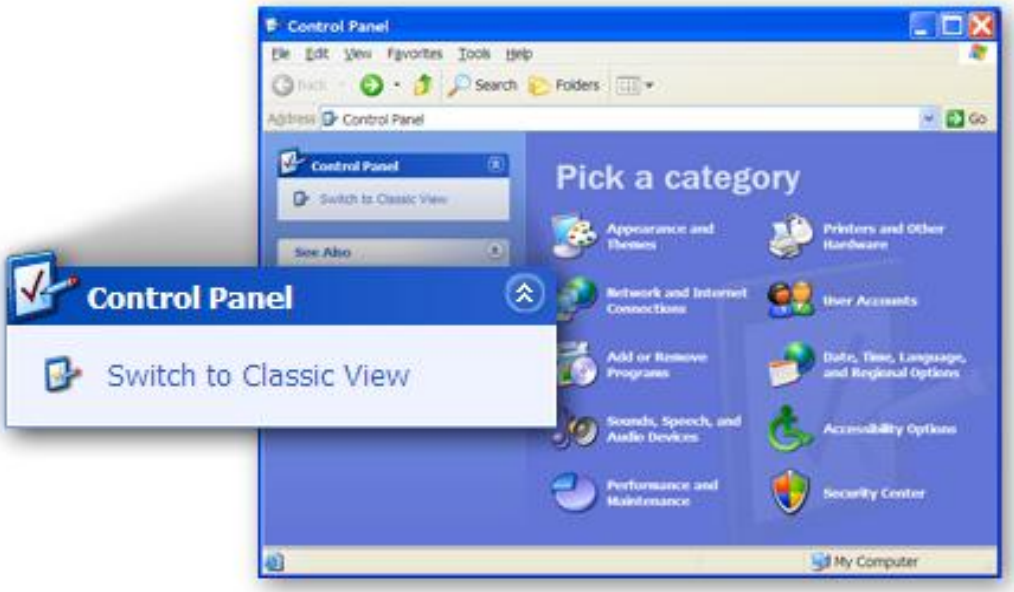
Note: You must use the power adapter included in the package with the router, do NOT attempt to use a third-party power adapter.

6. PC LAN IP configuration.

Configure your PC's LAN settings to automatically obtain an IP address from the router by following the steps below:

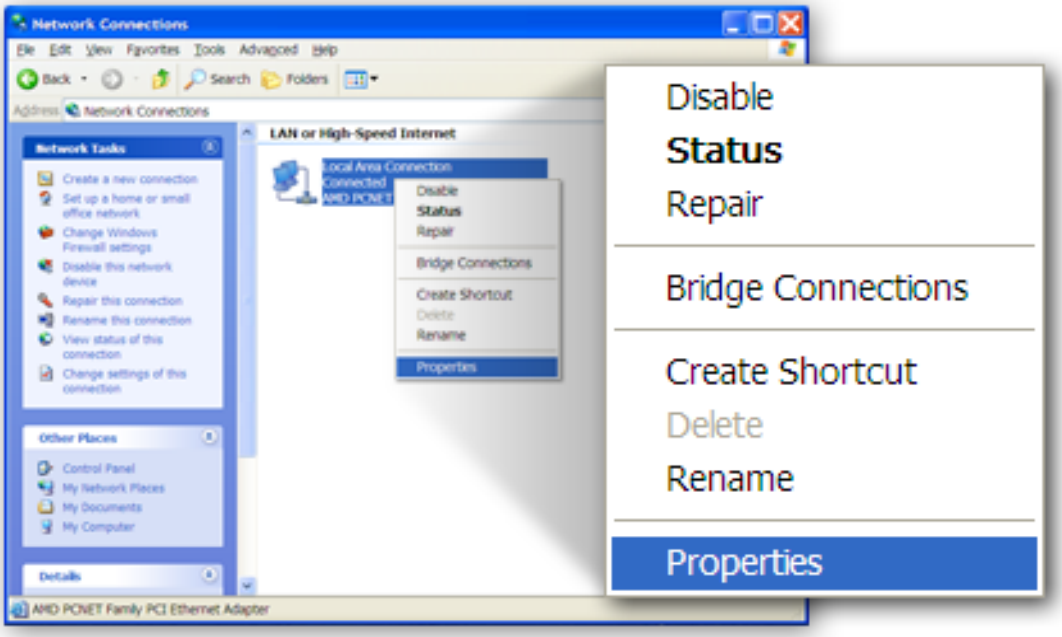
1. Click **"Start"** and then select **"Control Panel"**.

2. Click **"Switch to Classic View"** in the top left to show additional setting icons.

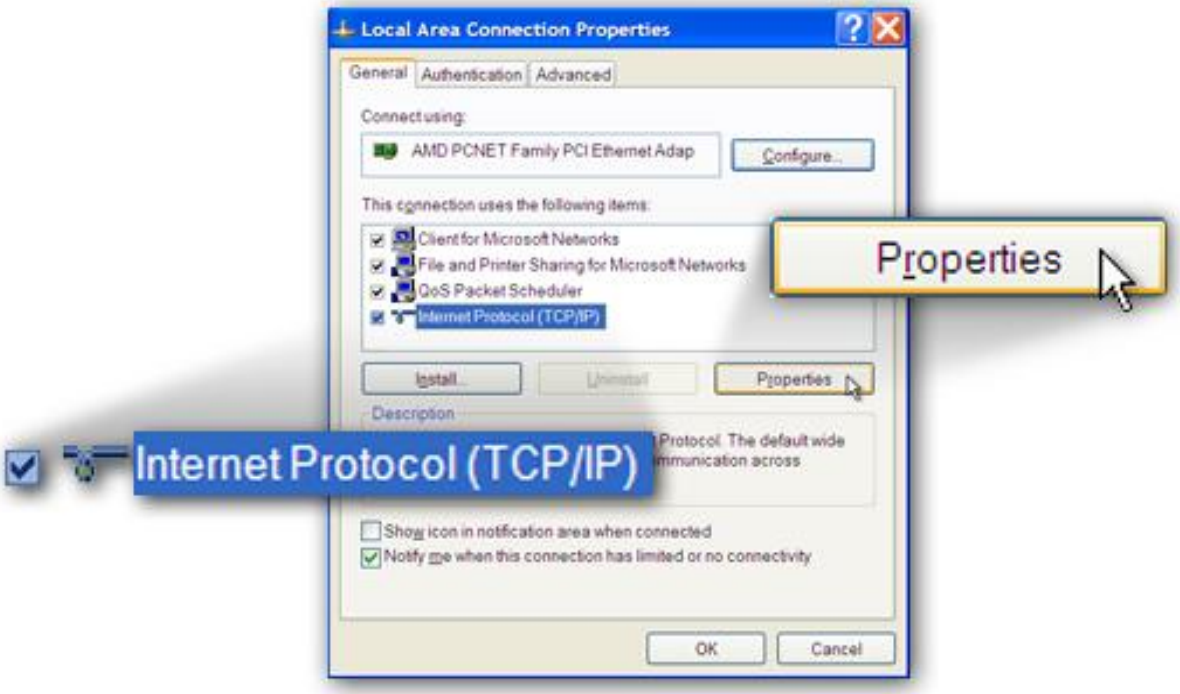


3. Locate the **“Network Connections”** icon and double-click to open network connection settings.

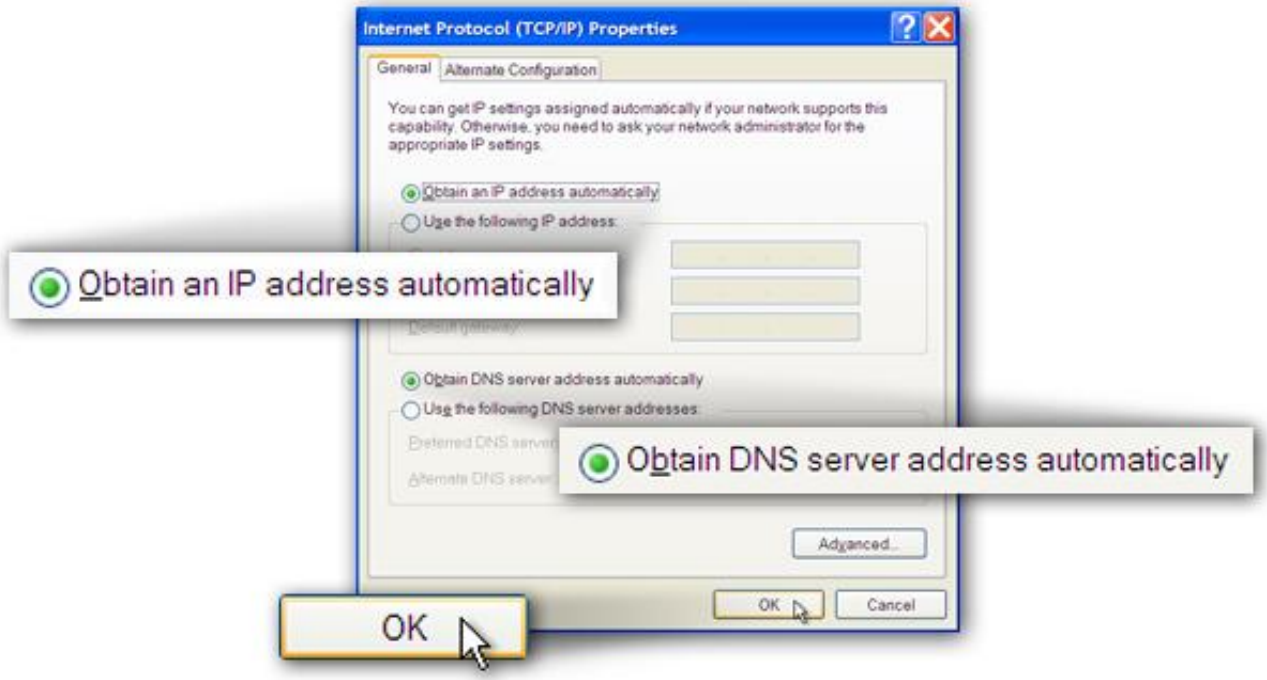
4. Select the **“Local Area Connection”** icon and right-click it to open the sub-menu, then select **“Properties”**.



5. Select **“Internet Protocol (TCP/IP)”** and then click **“Properties”**



6. Ensure that **“Obtain an IP address automatically”** and **“Obtain DNS server address automatically”** are selected and then press **“OK”**.



3. IP Address Setting

To use the router to access the Internet, the PCs in the network must have an Ethernet adapter installed and be connected to the router either directly or through a hub or switch. The TCP/IP protocol of each PC must be installed and the IP Address of each PC has to be set in the same subnet as the router.

The router's default IP Address is **192.168.2.1** and the subnet mask is **255.255.255.0**. PCs can be configured to obtain IP Address automatically through the DHCP Server of the router or a fixed IP Address in order to be in the same subnet as the router. By default, the DHCP Server of the router is enabled and will dispatch IP Address to PC from **192.168.2.100** to **192.168.2.200**. It is strongly recommended to set obtaining IP address automatically.

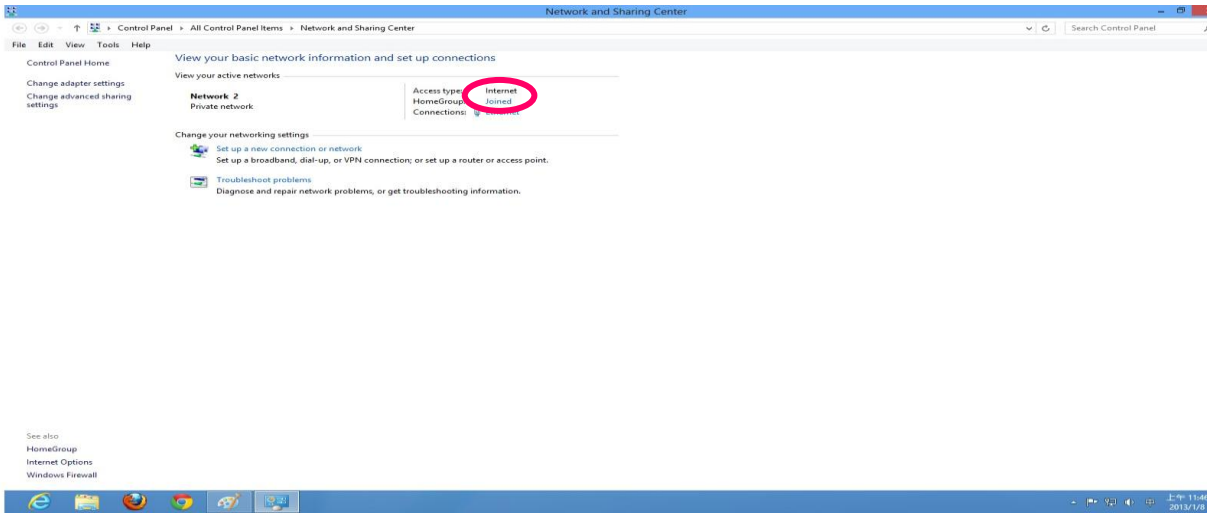
This section shows you how to configure your PC so that it can obtain an IP address automatically for either Windows 95/98/Me, 2000 or NT operating systems. For other operating systems (Macintosh, Sun, etc.), please follow the manual of the operating system. The following is a step-by-step illustration of how to configure your PC to obtain an IP address automatically for **Windows 10, Windows 8, Windows 7, Windows Vista and Windows XP.**

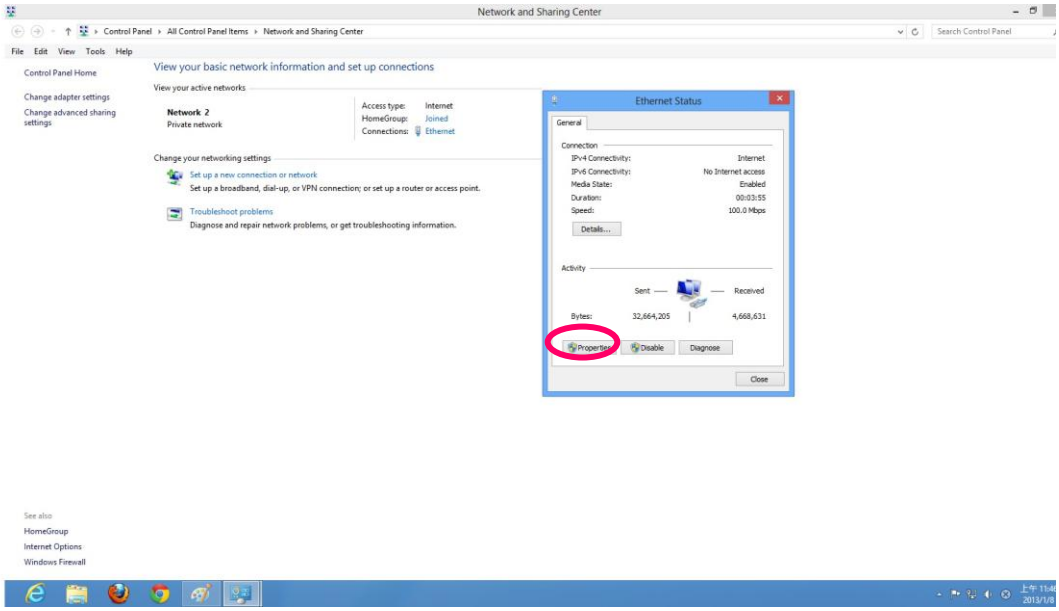
3.1. Windows 10/ 8

1. From the Windows 10/ 8 Start screen, you need to switch to desktop mode. Click the Desktop icon in the bottom left of the screen.

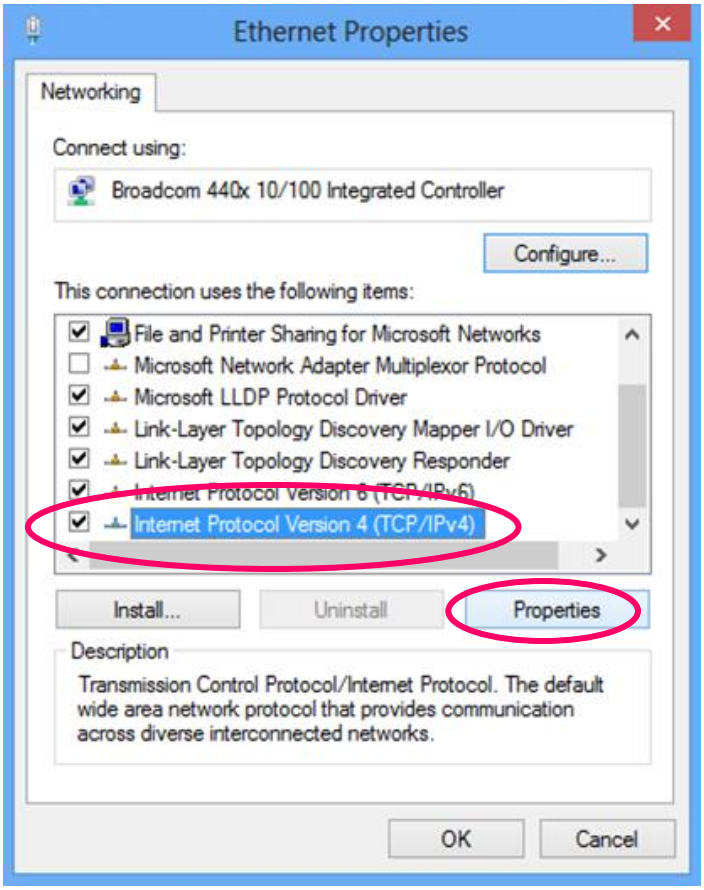
2. Click the Network icon and then select Open Network and Sharing Center to open the Network and Sharing Center window.

3. Click Ethernet to open the Ethernet Status window, and then select Properties. The Local Area Connection window will appear.

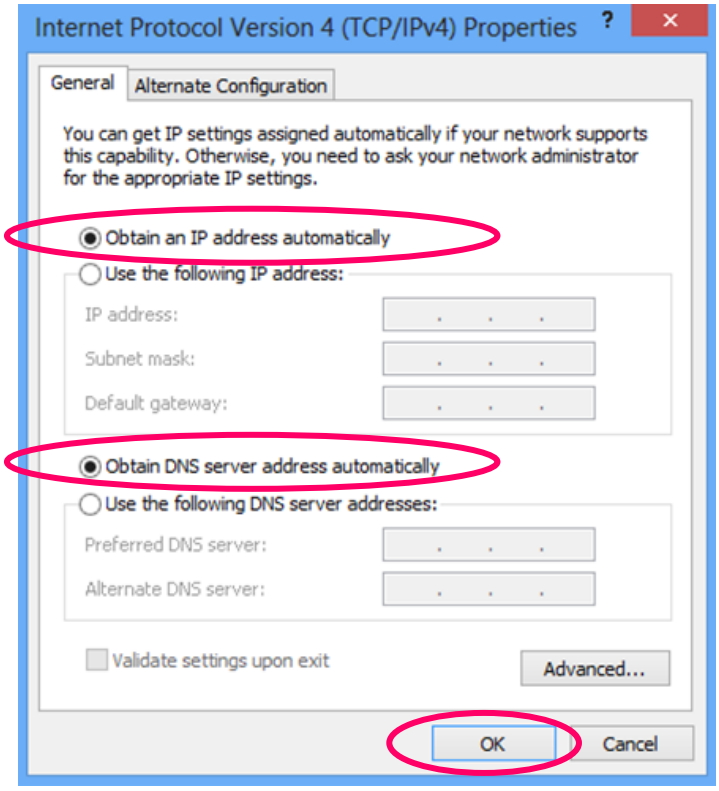




4. Check your list of Network Components. Select Internet Protocol Version 4 (TCP/IPv4) and click the Properties button.



5. In the Internet Protocol Version 4 (TCP/IPv4) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.



6. Click OK (shown above) to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

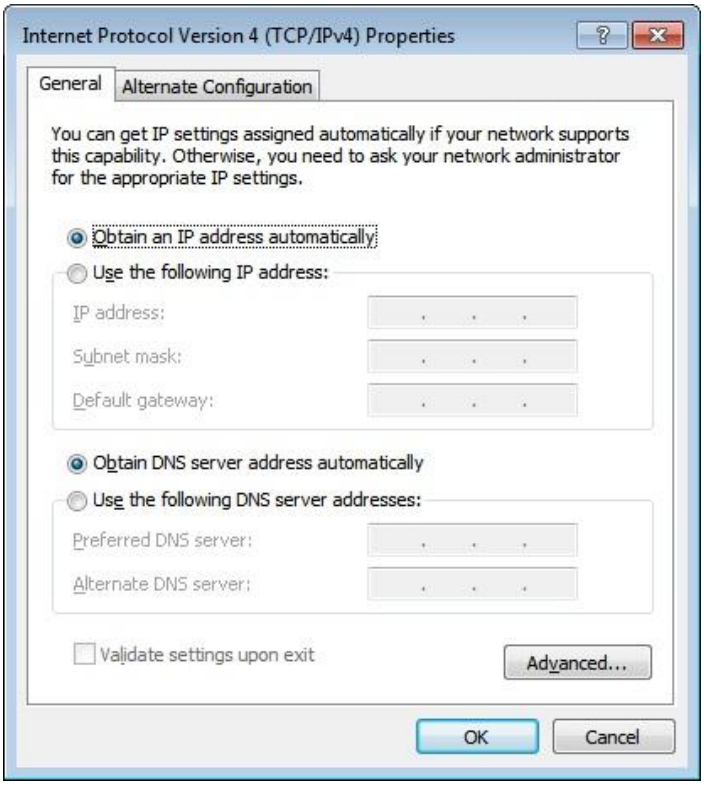
3.2. Windows 7

1. Click the Start button and select Control Panel. Double click Network and Internet and click Network and Sharing Center, the Network and Sharing Center window will appear.

2. Click Change adapter settings and right click on the Local Area Connection icon and select Properties. The Local Area Connection window will appear.

3. Check your list of Network Components. You should see Internet Protocol Version 4 (TCP/IPv4) on your list. Select it and click the Properties button.

4. In the Internet Protocol Version 4 (TCP/IPv4) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.



5. Click OK to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

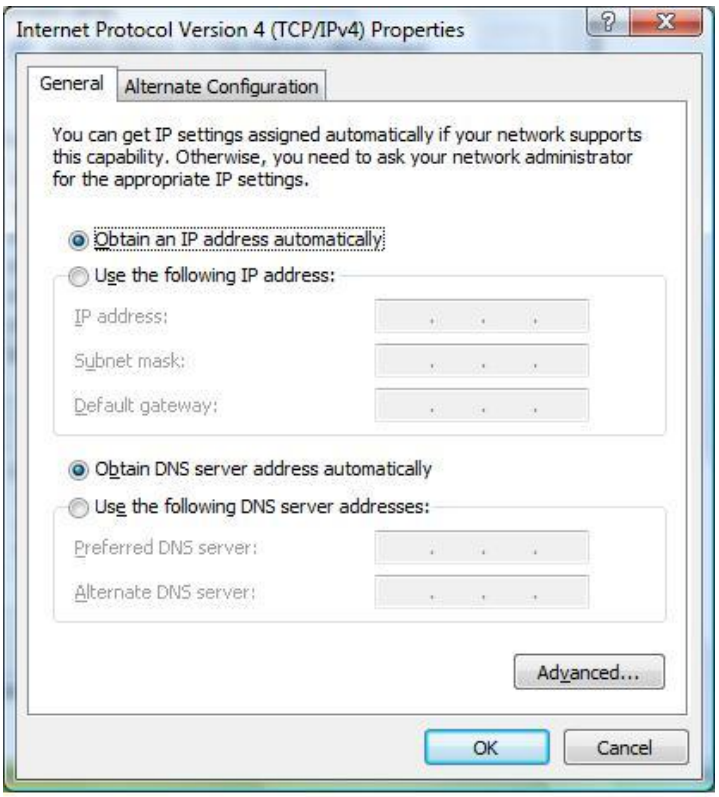
3.3. Windows Vista

1. Click the Start button and select Settings and then select Control Panel. Double click Network and Sharing Center, the Network and Sharing Center window will appear.

2. Click Manage network connections and right click on the Local Area Connection icon and select Properties. The Local Area Connection window will appear.

3. Check your list of Network Components. You should see Internet Protocol Version 4 (TCP/IPv4) on your list. Select it and click the Properties button.

4. In the Internet Protocol Version 4 (TCP/IPv4) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.



5. Click OK to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

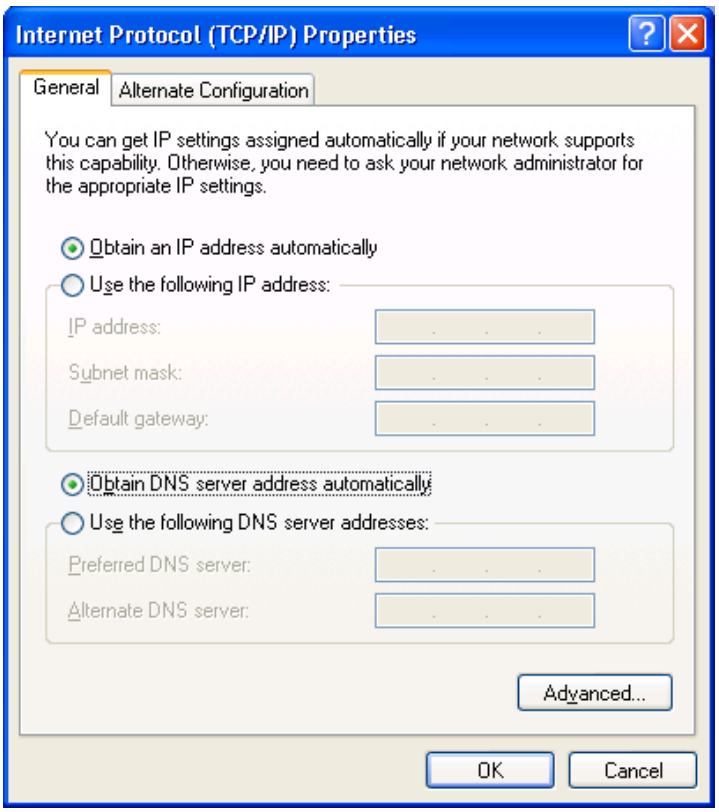
3.4. Windows XP

1. Click the Start button and select Control Panel and then double click Network Connections. The Network Connections window will appear.

2. Right click on the Local Area Connection icon and select Properties. The Local Area Connection window will appear.

3. Check your list of Network Components. You should see Internet Protocol [TCP/IP] on your list. Select it and click the Properties button.

4. In the Internet Protocol (TCP/IP) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.



5. Click OK to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

4. Web Configuration

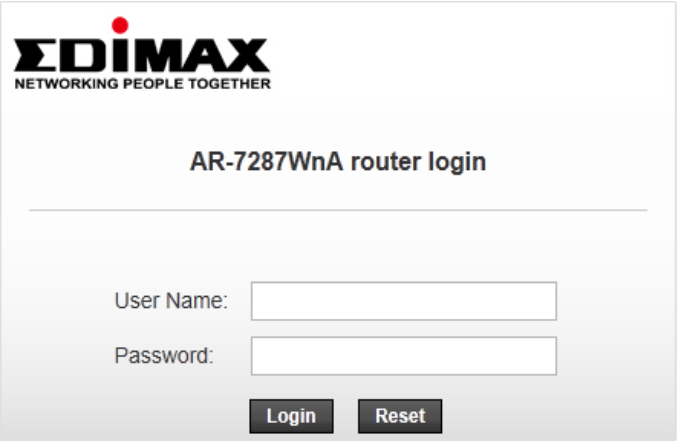
This chapter describes how to configure the router by using the Web-based configuration utility.

4.1 Access the Router

The following is the detailed description of accessing the router for the first time.

Configure the IP address of the PC as 192.168.2.X (2~254), Subnet Mask as 255.255.255.0. Open the Internet Explorer (IE) browser and enter http://192.168.2.1.In the **Login** page that is displayed, enter the username and password.

- The user name and password of the super user are **admin** and 1234



If you log in as a super user, you will see the **Device Info** page as shown below appears. You can check the basic settings of the modem, such as firmware version, upstream speed, downstream speed, LAN MAC address, LAN IP address, DHCP server status. You can also view the basic status of WAN and DNS server.

4.1.1. Status

The tab **Status** contains **Device Info** and **Statistics**. Click **Status** > **Device Info** > **ADSL**, the following page appears. You can see the router settings such as the Adsl Line Status, Vendor ID and Firmware Version.

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ADSL Router

Status | Wizard | Network | Advanced | Service | Firewall | Admin

- Device Info
  - Device Info
  - ADSL
- LAN
- Statistics
- ARP

ADSL Router Status

This page shows the current status and some basic settings of the device.

System

Alias Name	AR-7287WnA
Uptime	0 0:6:19
Date/Time	Sun Jan 1 5:36:19 2012
Firmware Version	RTK V2.2.1
Built Date	Feb 24 2017 14:26:15
Serial Number	00051D030405
Hardware Version	8671x

DSL

Operational Status	--
Upstream Speed	--
Downstream Speed	--

CWMP Status

Inform Status	Inform is broken
Connection Request Status	No connection request

LAN Configuration

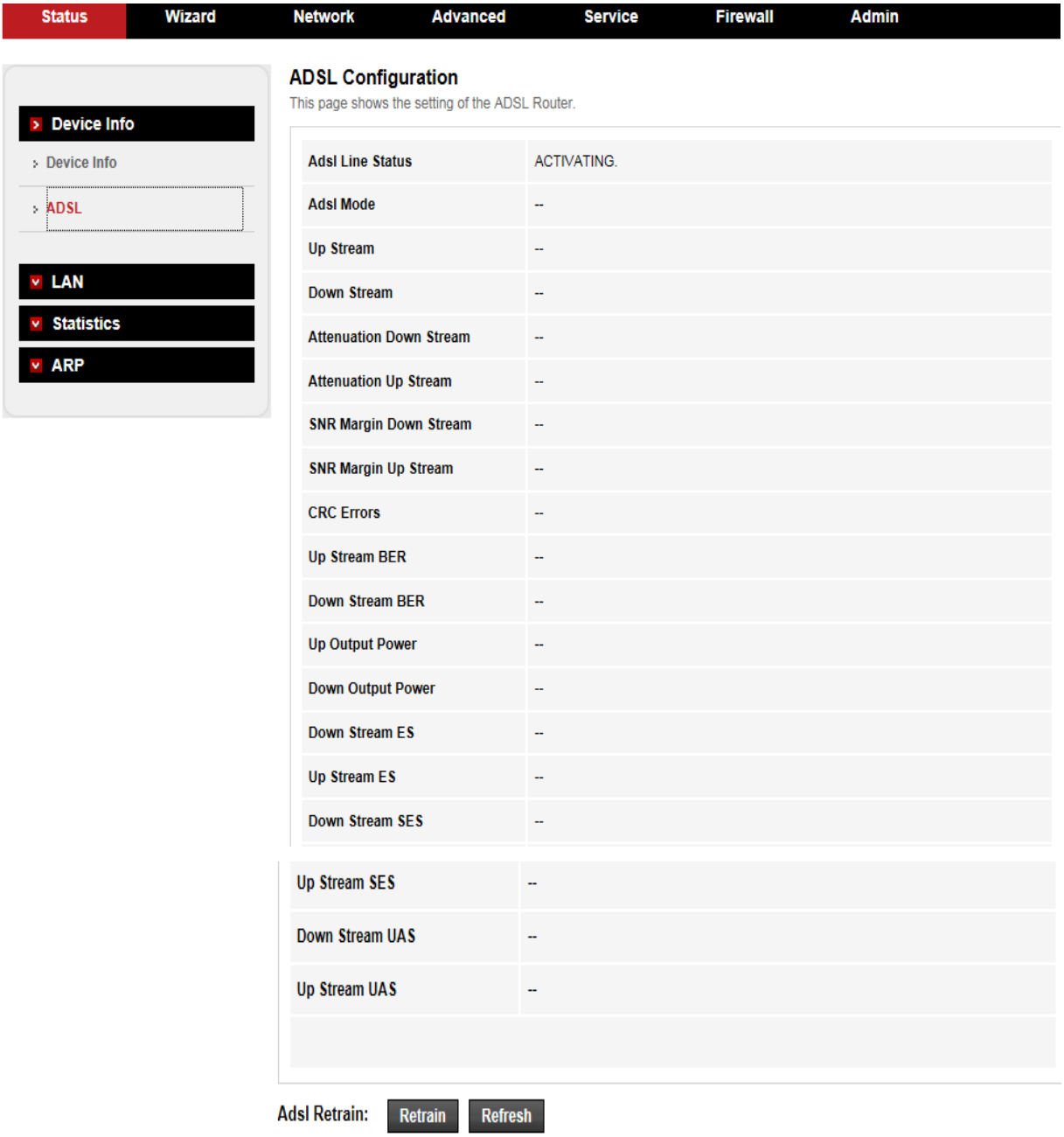
IP Address	192.168.2.1
Subnet Mask	255.255.255.0
DHCP Server	Enable
MAC Address	00:05:1D:03:04:05

DNS Status

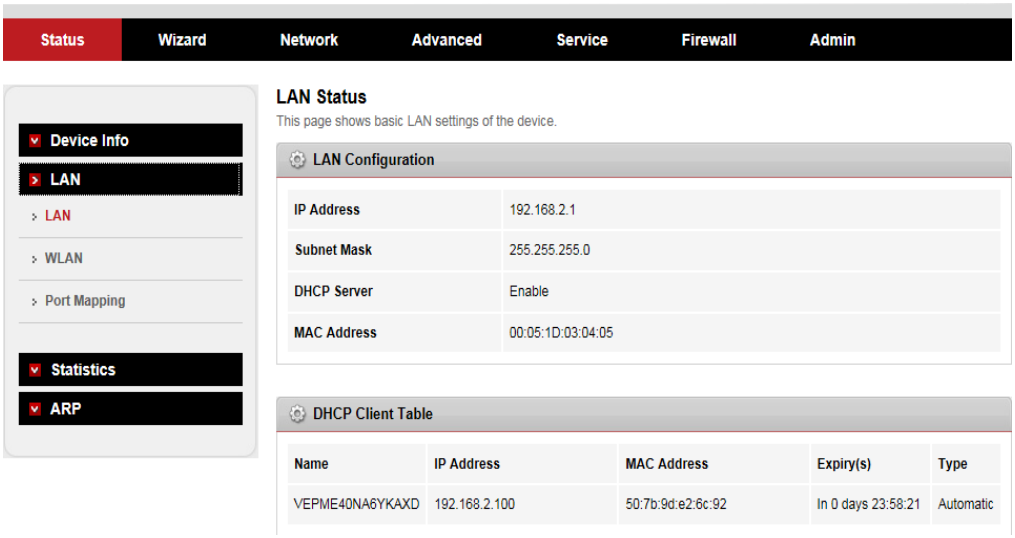
DNS Mode	Auto
DNS Servers	

ADSL WAN Interfaces

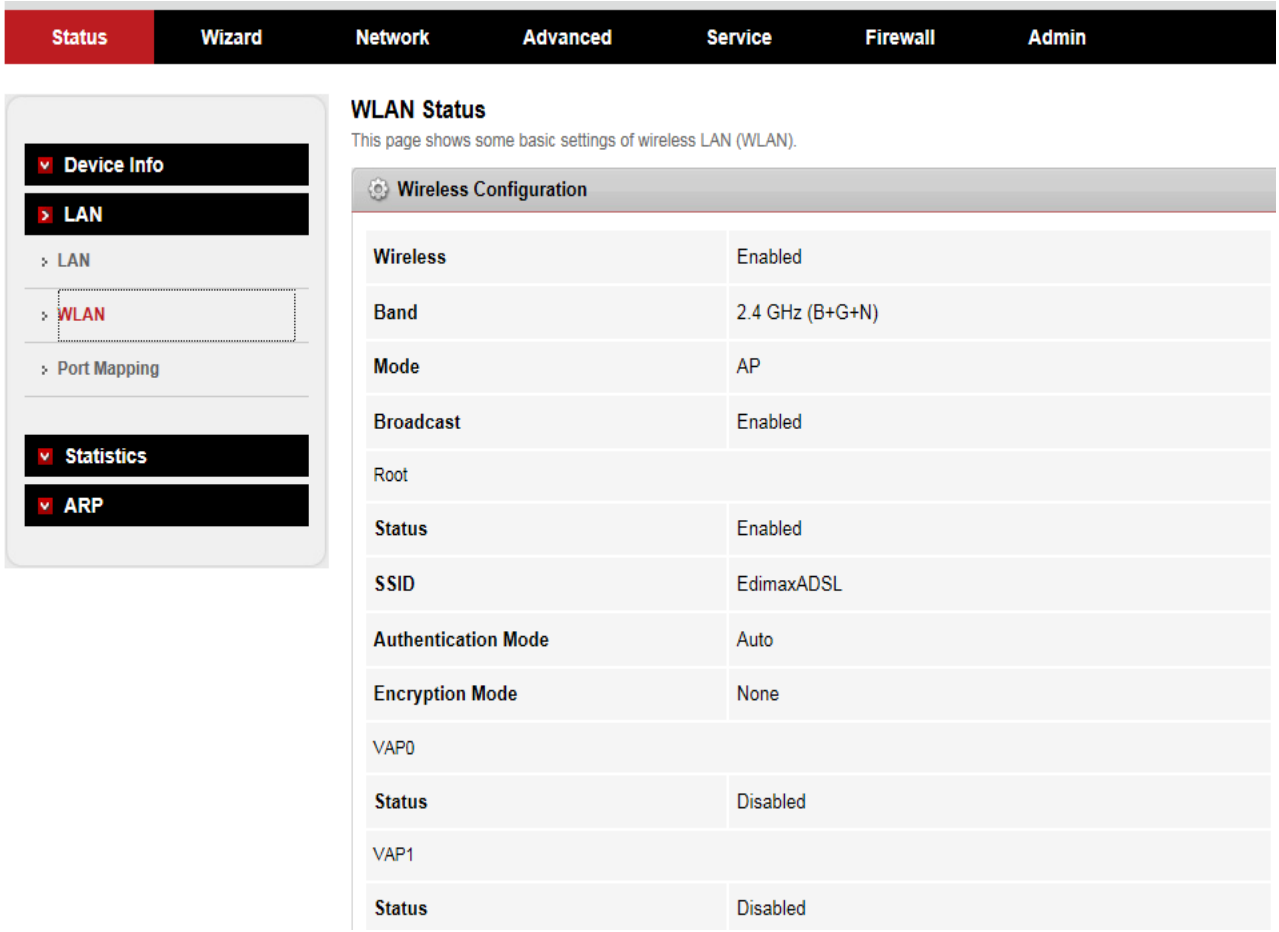
Interface	VPI/VCI	Encap	Droute	Protocol	IP Address	Gateway	Status
pppoe1	0/35	LLC	Off	PPPoE	0.0.0.0	0.0.0.0	down 0 0:0:0 /0 0:0:0 connect



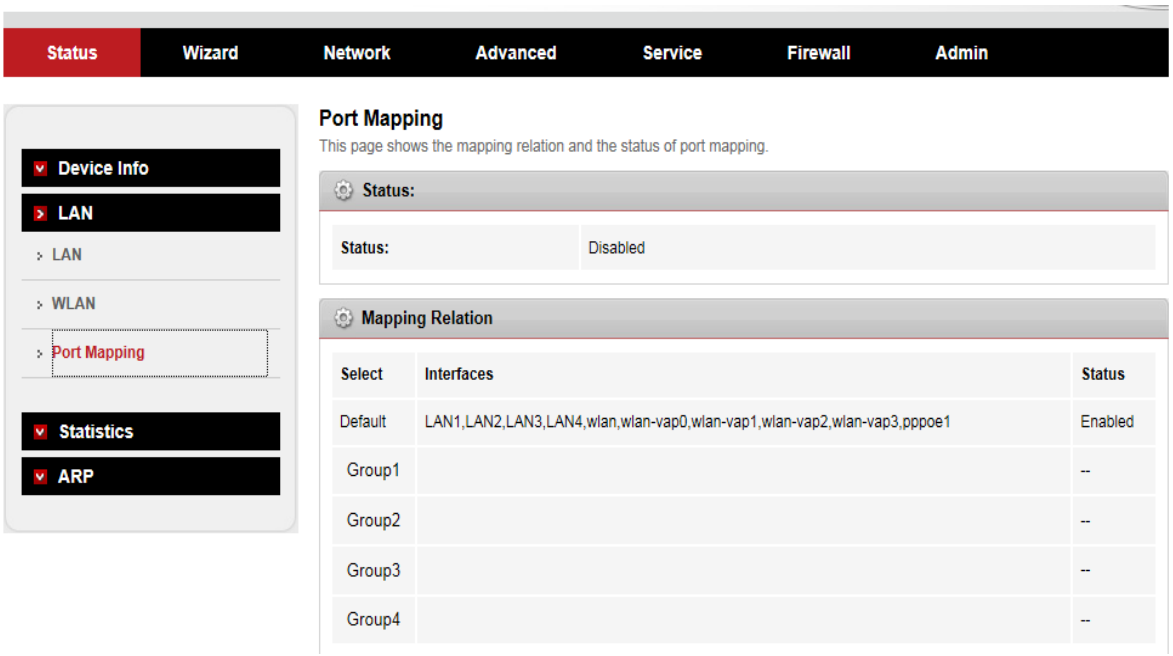
Click **Status** > **LAN** > **LAN**, the following page appears. You can see lan information,



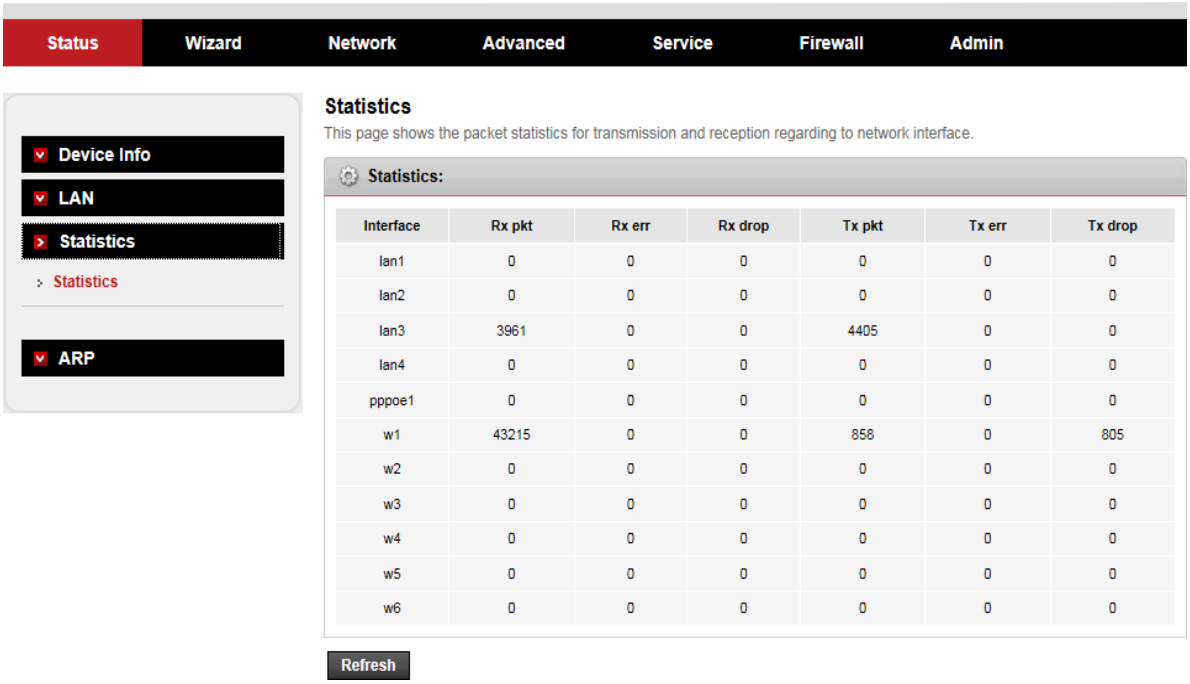
Click **Status** > **LAN** > W**LAN**, the following page appears. You can see Wlan information



Click **Status** > **port Mapping** , the following page appears. In this page, you can view the statistics of IPTV.



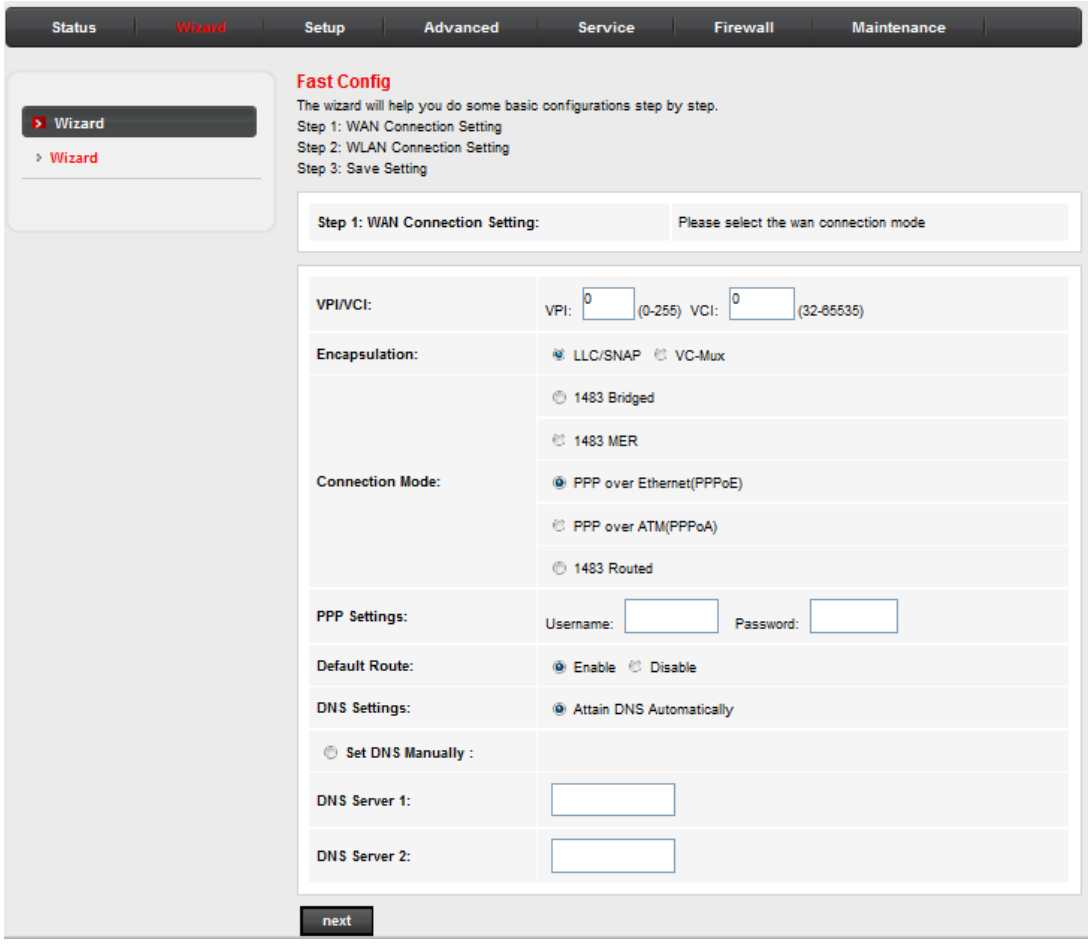
Click **Status** > **Statistics**, the following page appears. In this page, you can view the statistics of each network port.



Interface	Rx pkt	Rx err	Rx drop	Tx pkt	Tx err	Tx drop
lan1	0	0	0	0	0	0
lan2	0	0	0	0	0	0
lan3	3961	0	0	4405	0	0
lan4	0	0	0	0	0	0
pppoe1	0	0	0	0	0	0
w1	43215	0	0	858	0	805
w2	0	0	0	0	0	0
w3	0	0	0	0	0	0
w4	0	0	0	0	0	0
w5	0	0	0	0	0	0
w6	0	0	0	0	0	0

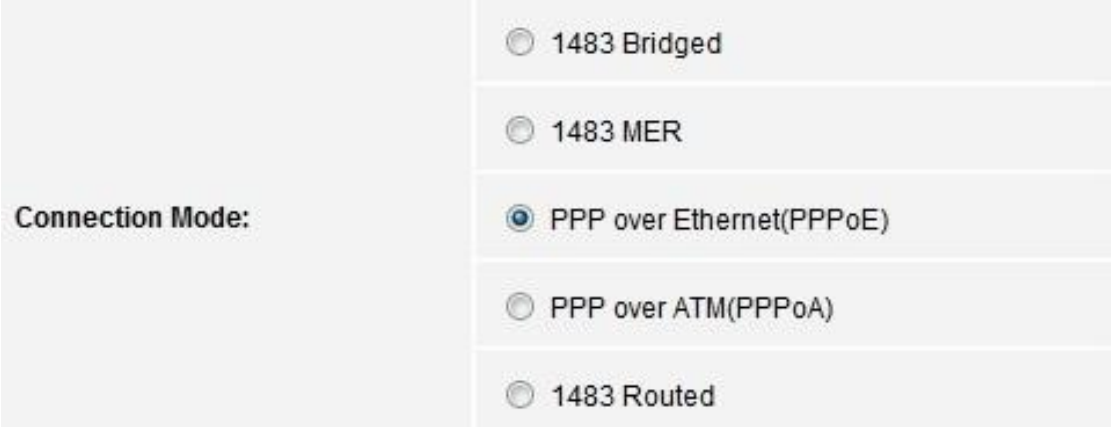
4.1.2. Wizard

In the navigation bar, click **Wizard**. The tab **Wizard** only contains **Wizard.**



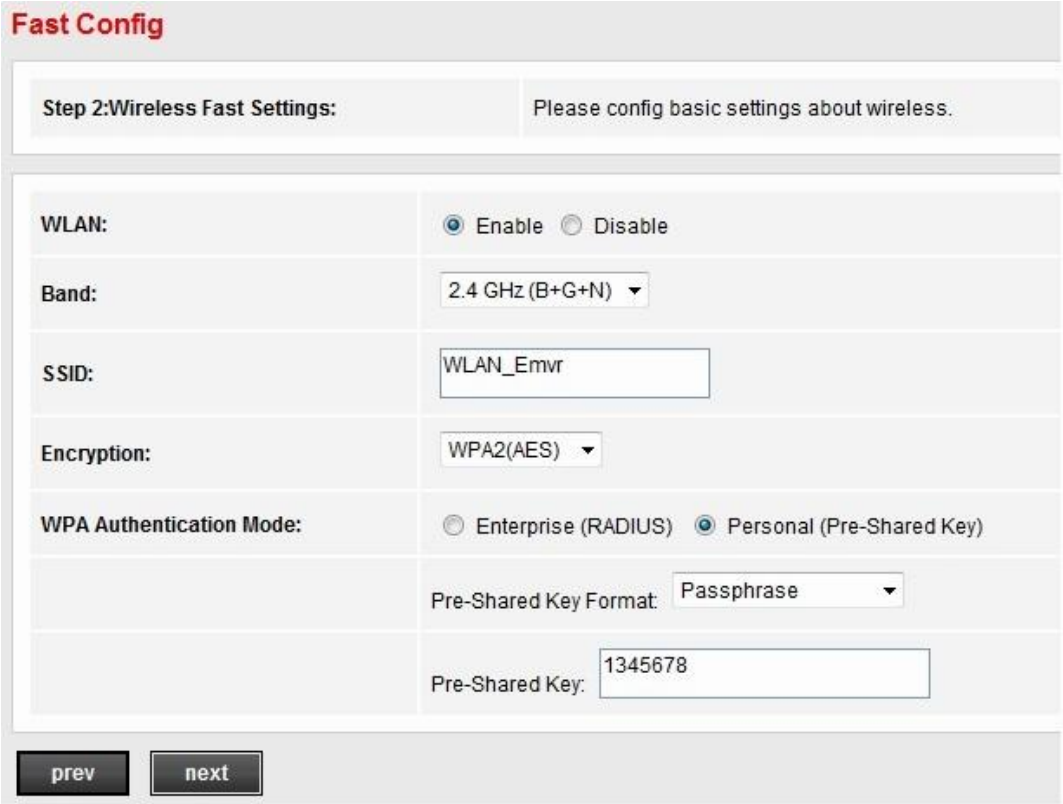
1) Change the VPI or VCI values which are used to define a unique path for your connection. If you have been given specific settings for this to configuration, type in the correct values assigned by your ISP.

2) Please select the Connection Type given by your ISP.

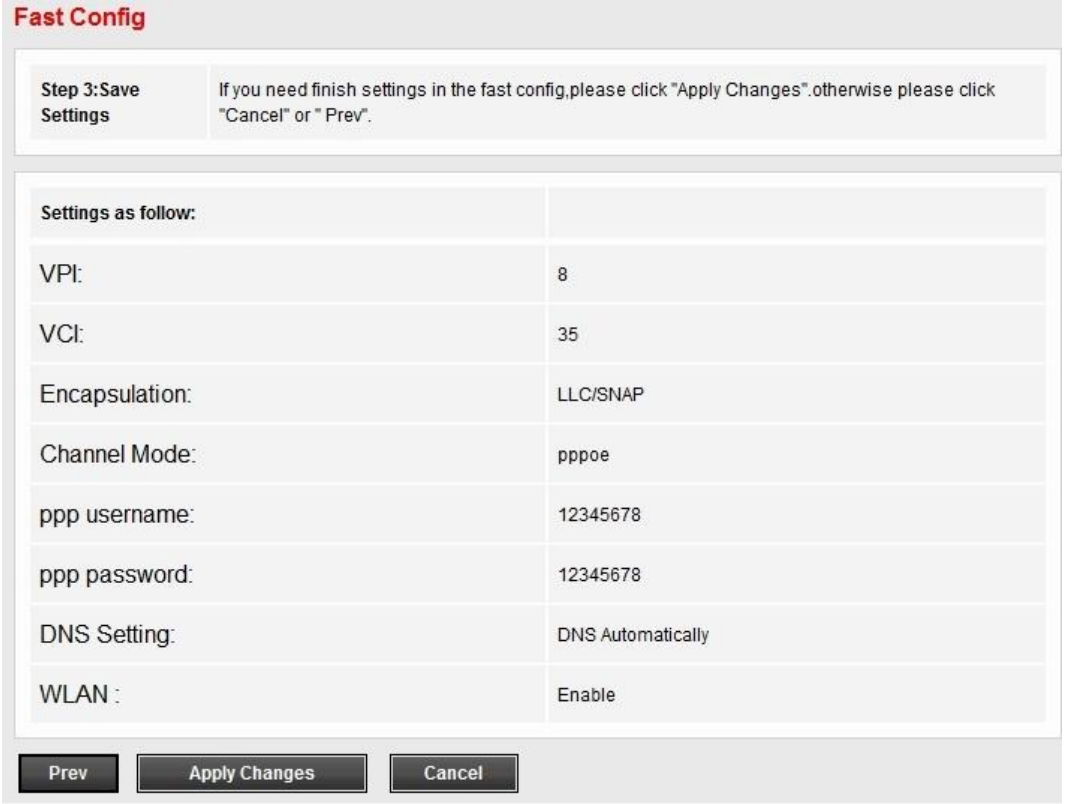


3) Here we use PPPoE as an example. Enter the Username, Password and Confirm Password given by your ISP, and then click Next.

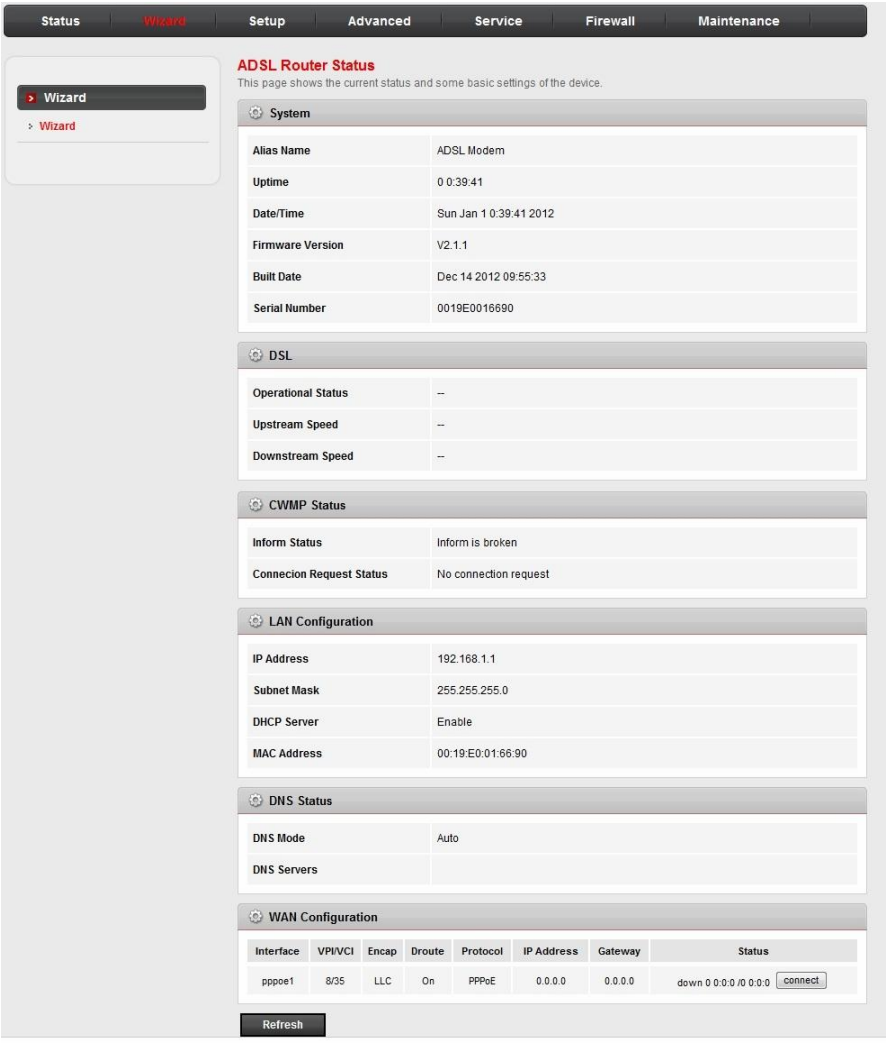
4) On the Wireless screen, we use the default SSID, select a Mode. Set a Password or select Disable Security(Disable Security is not recommended.), and then click **Next** to continue.



5) On this page, please confirm all parameters. Click **Prev** to modify or click the **Apply Changes** button to save your configuration.



6) You will see the Complete screen below.



4.1.3. Setup

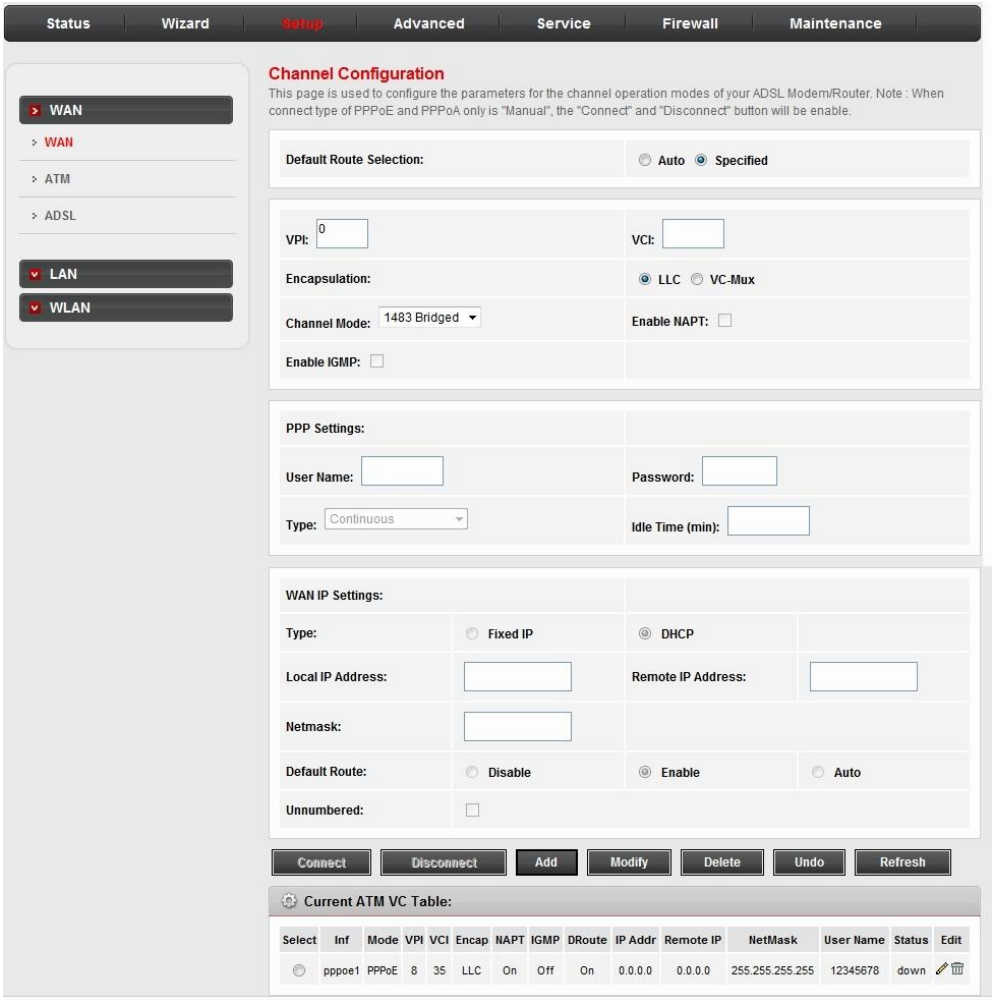
In the navigation bar, click **Setup**. The tab **Setup** contains **WAN, LAN** and **WLAN.**

4.1.3.1. WAN Configuration

***WAN**

Choose **Setup** > **WAN** > **WAN** and the page shown in the following figure appears.

In this page, you can configure WAN interface of your router.



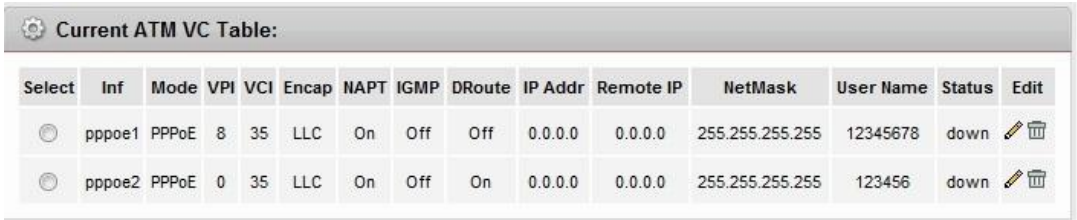
The following table describes the parameters of this page.

Field	Description
Default Route Selection	You can select **Auto** or **Specified**.
VPI	The virtual path between two points in an ATM network, ranging from 0 to 255.

Field	Description
VCI	The virtual channel between two points in an ATM network, ranging from 32 to 65535 (1 to 31 are reserved for known protocols)
Encapsulation	You can choose **LLC** and **VC-Mux**.
Channel Mode	You can choose **1483 Bridged**, **1483 MER**, **PPPoE**, **PPPoA**, **1483 Routed** or **IPoA**.
Enable NAPT	Select it to enable Network Address Port Translation (NAPT) function. If you do not select it and you want to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, it is enabled.
Enable IGMP	You can enable or disable Internet Group Management Protocol (IGMP) function.
IP Protocol	Select this interface support ipv4/ipv6, ipv4 or ipv6.
PPP Settings	
User Name	Enter the correct user name for PPP dial-up, which is provided by your ISP.
Password	Enter the correct password for PPP dial-up, which is provided by your ISP.
Type	You can choose **Continuous**, **Connect on Demand** or **Manual**.
Idle Time (min)	If set the type to **Connect on Demand**, you need to enter the idle timeout time. Within the preset minutes, if the router does not detect the flow of the user continuously, the router automatically disconnects the PPPoE connection.
WAN IP Settings	
Type	You can choose **Fixed IP** or **DHCP**. ● If select **Fixed IP**, you should enter the local IP address, remote IP address and subnet mask. ● If select **DHCP**, the router is a DHCP client, the WAN IP address is assigned by the remote DHCP server.
Local IP Address	Enter the IP address of WAN interface provided by your ISP.
Netmask	Enter the subnet mask of the local IP address.
Unnumbered	Select this checkbox to enable IP unnumbered function.
IPv6 WAN Setting	Set ipv6 wan setting if this interface support ipv6
Address Mode	Select this interface support Slaac or Static to generate wan ipv6

Field	Description
	addresses.
Enable DHCPv6 Client	Enable or disable dhcpv6 client on this interface, if enable, user can specify if the dhcpv6 client request Address or request Prefix.
Add	After configuring the parameters of this page, click it to add a new PVC into the **Current ATM VC Table**.
Modify	Select a PVC in the **Current ATM VC Table**, then modify the parameters of this PVC. After finishing, click it to apply the settings of this PVC.
Delete	Select a PVC in the Current ATM VC Table, and then click **Delete** to delete it
Current ATM VC Table	This table shows the existed PVCs. It shows the interface name, channel mode, VPI/VCI, encapsulation mode, local IP address, remote IP address and other information. The maximum item of this table is eight.

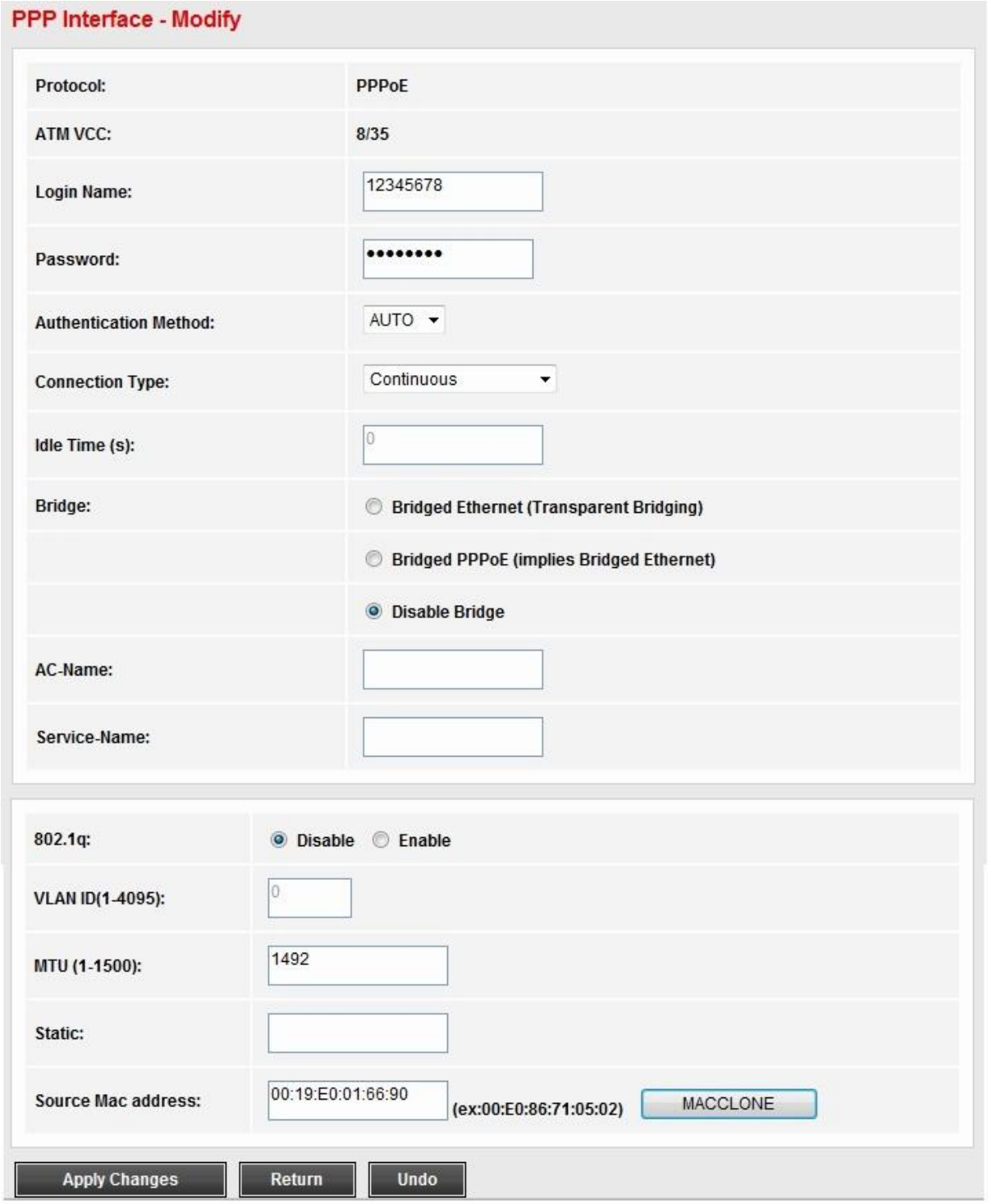
After proper settings, click Add and the following page appears.



Current ATM VC Table:

Select	Inf	Mode	VPI	VCI	Encap	NAPT	IGMP	DRoute	IP Addr	Remote IP	NetMask	User Name	Status	Edit
	pppoe1	PPPoE	8	35	LLC	On	Off	Off	0.0.0.0	0.0.0.0	255.255.255.255	12345678	down	
	pppoe2	PPPoE	0	35	LLC	On	Off	On	0.0.0.0	0.0.0.0	255.255.255.255	123456	down	

Click in the **PPPoE** mode, the page shown in the following figure appears. In this page, you can configure parameters of this PPPoE PVC.



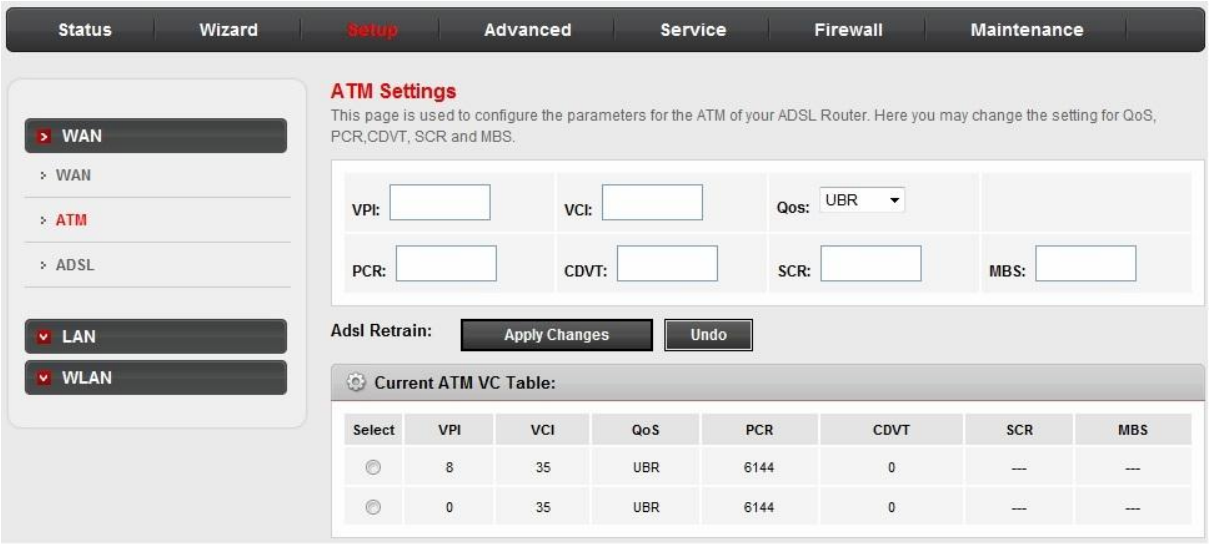
The following table describes the parameters and buttons of this page.

Field	Description
Protocol	It displays the protocol type used for this WAN connection.
ATM VCC	The ATM virtual circuit connection assigned for this PPP interface (VPI/VCI).
Login Name	The user name provided by your ISP.

Field	Description
Password	The password provided by your ISP.
Authentication Method	You can choose **AUTO**, **PAP** or **CHAP**.
Connection Type	You can choose **Continuous**, **Connect on Demand** or **Manual**.
Idle Time (s)	If choose **Connect on Demand**, you need to enter the idle timeout time. Within the preset minutes, if the router does not detect the flow of the user continuously, the router automatically disconnects the PPPoE connection.
Bridge	You can select **Bridged Ethernet**, **Bridged PPPoE** or **Disable Bridge**.
AC-Name	The accessed equipment type.
Service-Name	The service name.
802.1q	You can select **Disable** or **Enable**. After enable it, you need to enter the VLAN ID. The value ranges from 1 to 4095.
Apply Changes	Click it to save the settings of this page temporarily.
Return	Click it to return to the **Channel Configuration** page.
Reset	Click it to refresh this page.
Source Mac address	The MAC address you want to clone.
MAC Clone	Click it to enable the MAC Clone function with the MAC address that is configured.

4.1.3.2. ATM Setting

Click **ATM** in the left pane, the page shown in the following figure appears. In this page, you can configure the parameters of the ATM, including QoS, PCR, CDVT, SCR and MBS.

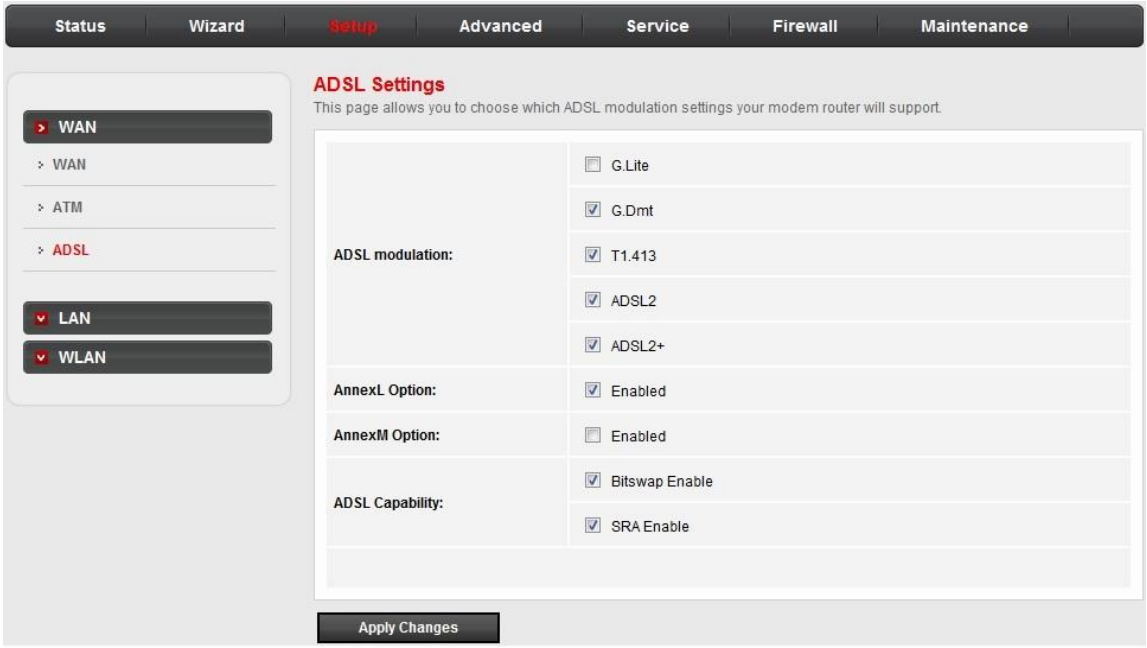


The following table describes the parameters of this page.

Field	Description
VPI	The virtual path identifier of the ATM PVC.
VCI	The virtual channel identifier of the ATM PVC.
QoS	The QoS category of the PVC. You can choose **UBR**, **CBR**, **rt-VBR** or **nrt-VBR**.
PCR	Peak cell rate (PCR) is the maximum rate at which cells can be transmitted along a connection in the ATM network. Its value ranges from 1 to 65535.
CDVT	Cell delay variation tolerance (CDVT) is the amount of delay permitted between ATM cells (in microseconds). Its value ranges from 0 to 4294967295.
SCR	Sustain cell rate (SCR) is the maximum rate that traffic can pass over a PVC without the risk of cell loss. Its value ranges from 0 to 65535.
MBS	Maximum burst size (MBS) is the maximum number of cells that can be transmitted at the PCR. Its value ranges from 0 to 65535.

4.1.3.3. ADSL Setting

Click **ADSL** in the left pane, the page shown in the following figure appears. In this page, you can select the DSL modulation. Generally you need to remain this factory default settings. The router negotiates the modulation modes with the DSLAM.

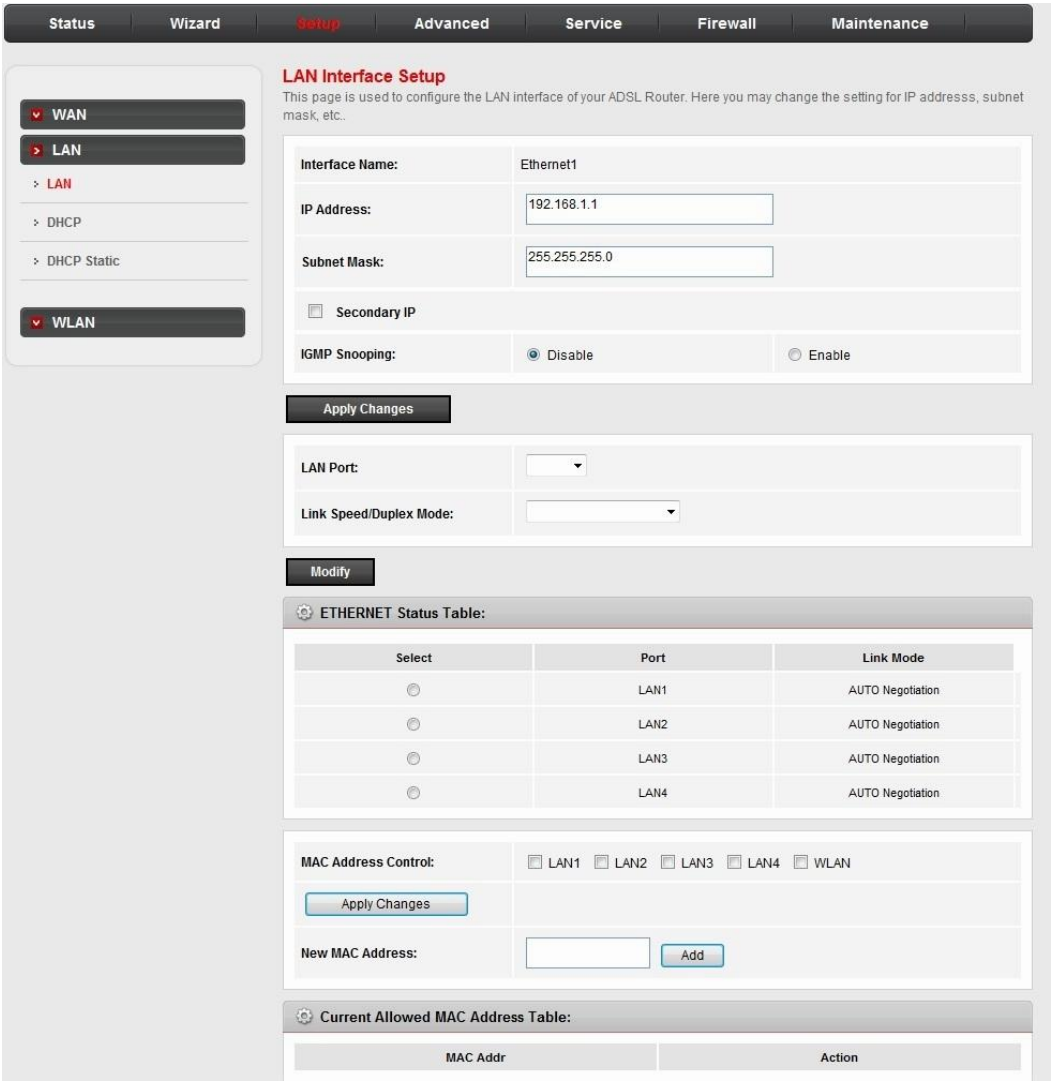


4.1.4. LAN

4.1.4.1. LAN

Click **LAN** in the left pane, the page shown in the following figure appears.

In this page, you can change IP address of the router. The default IP address is 192.168.1.1, which is the private IP address of the router.



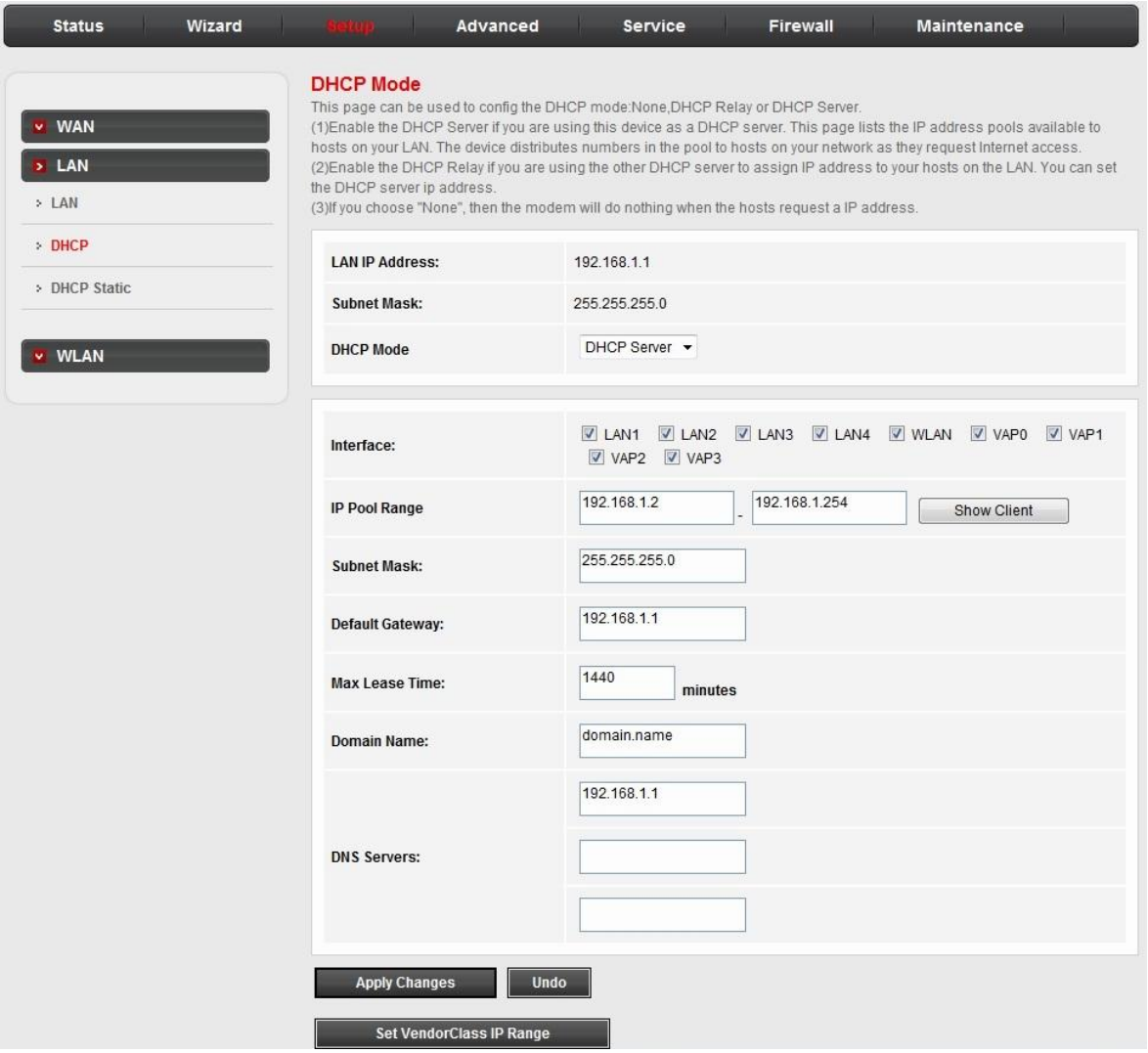
The following table describes the parameters of this page.

Field	Description
IP Address	Enter the IP address of LAN interface. It is recommended to use an address from a block that is reserved for private use. This address block is 192.168.1.1- 192.168.255.254.
Subnet Mask	Enter the subnet mask of LAN interface. The range of subnet mask is from 255.255.0.0-255.255.255.254.
Secondary IP	Select it to enable the secondary LAN IP address. The two LAN IP addresses must be in the different network.
LAN Port	You can choose the LAN interface you want to configure.
Link Speed/Duplex Mode	You can select the following modes from the drop-downlist:**100Mbps/FullDuplex**,**100Mbps/Half Duplex**,**10Mbps/FullDuplex**,**10Mbps/Half Duplex** and **Auto Negotiation**.
Modify	Select the index from Ethernet status table, and then click **modify**.

Field	Description
Ethernet Status Table	It shows the current Ethernet status list.
MAC Address Control	Select the LAN interface on which you want to run MAC Address Control.
New MAC Address	A MAC address to be added.
Current Allowed MAC Address Table	It shows the current allowed MAC address list.

4.1.4.2. DHCP

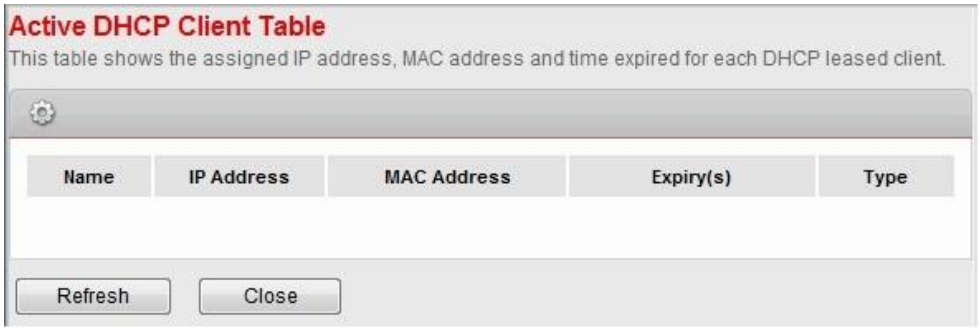
Click **DHCP** in the left pane, the page shown in the following figure appears.



The following table describes the parameters of this page.

Field	Description
DHCP Mode	If set to **DHCP Server**, the router can assign IP addresses, IP default gateway and DNS Servers to the host in Windows95, Windows NT and other operation systems that support the DHCP client.
IP Pool Range	It specifies the first IP address in the IP address pool. The router assigns IP address that base on the IP pool range to the host.
Pool Size	It allows the size machines that can be set up
Show Client	Click it, the **Active DHCP Client Table** appears. It shows IP addresses assigned to clients.
Default Gateway	Enter the default gateway of the IP address pool.
Max Lease Time	The lease time determines the period that the host retains the assigned IP addresses before the IP addresses change.
Domain Name	Enter the domain name if you know. If you leave this blank, the domain name obtained by DHCP from the ISP is used. You must enter host name (system name) on each individual PC. The domain name can be assigned from the router through the DHCP server.
DNS Servers	You can configure the DNS server ip addresses for DNS Relay.
Set VendorClass IP Range	Click it, the **Device IP Range Table** page appears. You can configure the IP address range based on the device type.

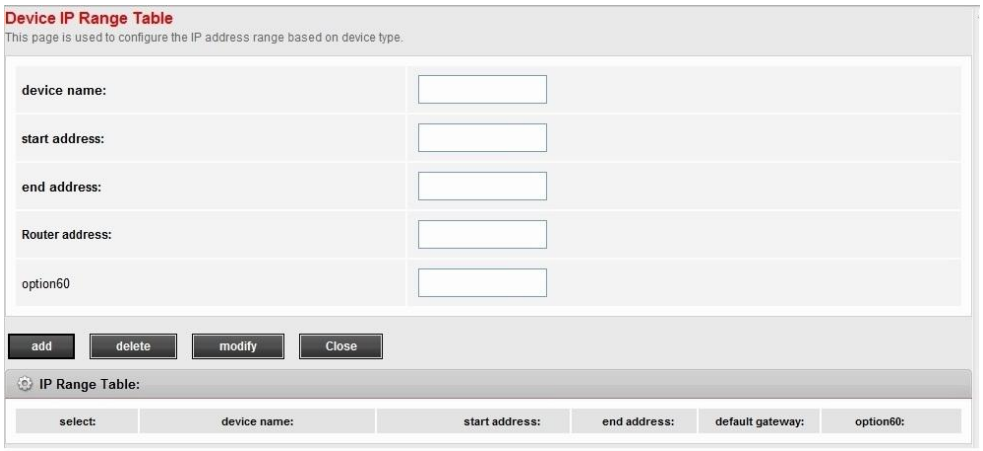
Click **Show Client** in the **DHCP Mode** page, the page shown in the following figure appears. You can view the IP address assigned to each DHCP client.



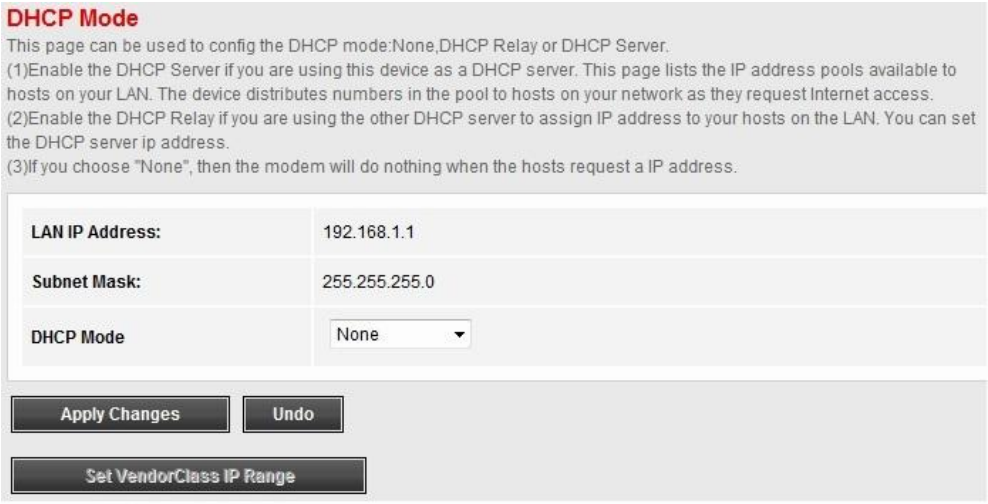
The following table describes the parameters and buttons in this page.

Field	Description
IP Address	It displays the IP address assigned to the DHCP client from the router.
MAC Address	It displays the MAC address of the DHCP client. Each Ethernet device has a unique MAC address. The MAC address is assigned at the factory and it consists of six pairs of hexadecimal character, for example, 00-A0-C5-00-02-12.
Expiry (s)	It displays the lease time. The lease time determines the period that the host retains the assigned IP addresses before the IP addresses change.
Refresh	Click it to refresh this page.
Close	Click it to close this page.

Click **Set VendorClass IP Range** in the **DHCP Mode** page, the page as shown in the following figure appears. In this page, you can configure the IP address range based on the device type.



Choose **None** in the **DHCP Mode** field, and the page shown in the following figure appears.



In the **DHCP Mode** field, choose **DHCP Relay**. The page shown in the following figure appears.

The following table describes the parameters and buttons of this page.

Field	Description
DHCP Mode	If set to **DHCP Relay**, the router acts a surrogate DHCP Server and relays the DHCP requests and reponses between the remote server and the client.
Relay Server	Enter the DHCP server address provided by your ISP.
Apply	Click it to save the settings of this page.

Field	Description
Changes	
Undo	Click it to refresh this page.

4.1.4.3. DHCP Static

Click **DHCP Static** in the left pane, the page shown in the following figure appears. You can assign the IP addresses on the LAN to the specific individual PCs based on their MAC address.

The following table describes the parameters and buttons of this page.

Field	Description
IP Address	Enter the specified IP address in the IP pool range, which is assigned to the host.
MAC Address	Enter the MAC address of a host on the LAN.
Add	After entering the IP address and MAC address, click it. A row will be added in the **DHCP Static IP Table**.
Delete Selected	Select a row in the **DHCP Static IP Table**, then click it, this row is deleted.
Undo	Click it to refresh this page.
DHCP Static IP Table	It shows the assigned IP address based on the MAC address.

4.1.5. WLAN

Choose **Setup** > **WLAN**. The WLAN page that is displayed contains **Basic**, **Security**, **MBSSID**, **Access Control**, **Advanced** and **WPS**.

4.1.5.1. Basic Settings

Choose **WLAN** > **Basic**, and the following page appears. In this page, you can configure the parameters for wireless LAN clients that may connect to the modem.

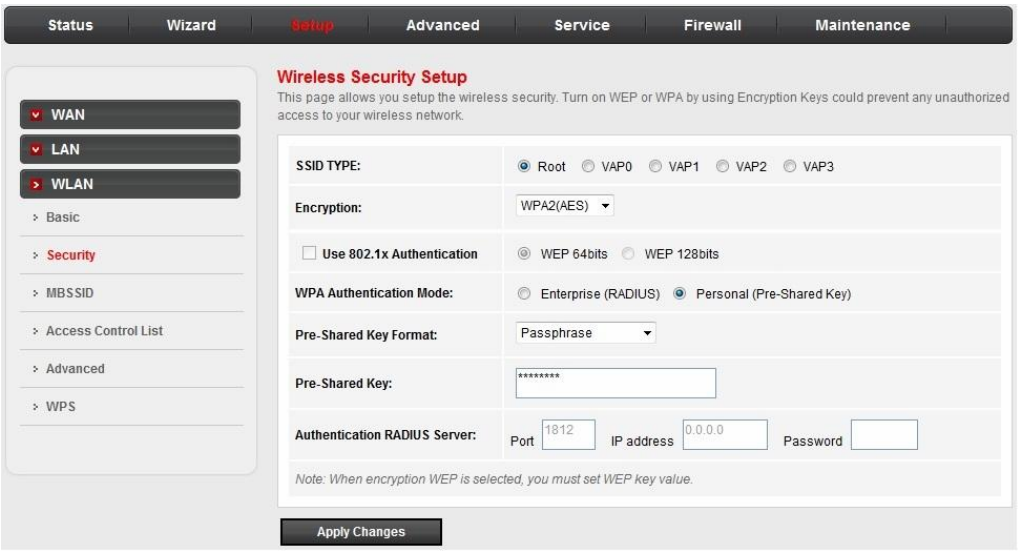
The following table describes the parameters of this page.

Field	Description
Band	Choose the working mode of the modem. You can choose from drop-down list. 2.4 GHz (B+G+N) 2.4 GHz (B) 2.4 GHz (G) 2.4 GHz (B+G) 2.4 GHz (N) 2.4 GHz (G+N) 2.4 GHz (B+G+N)
Mode	Choose the network model of the modem, which is varied according to the software. By default, the network model of the modem is **AP**.
SSID	The service set identification (SSID) is a unique name to identify the modem in the wireless LAN. Wireless stations associating to the modem

Field	Description
	must have the same SSID. Enter a descriptive name that is used when the wireless client connecting to the modem.
Broadcast SSID	Enable or disable this function.
Channel Width	You can choose **20MHZ**, **40MHZ** or **20/40MHZ**.
Control Sideband	You can choose Upper or Lower.
Country/Area	Select the country from the drop-down list.
Channel Number	A channel is the radio frequency used by 802.11b/g/n wireless devices. You should use a different channel from an adjacent AP to reduce the interference. Interference and degrading performance occurs when radio signal from different APs overlap. Choose a channel from the drop-down list box.
Radio Power	You can choose the transmission power of the radio signal. The default one is **100%**. It is recommended to choose the default value**100%**.
Show Active Clients	Click it to view the information of the wireless clients that are connected to the modem.
Apply Changes	Click it to apply the settings temporarily. If you want to save the settings of this page permanently, click **Save** in the lower left corner.

4.1.5.2. Security

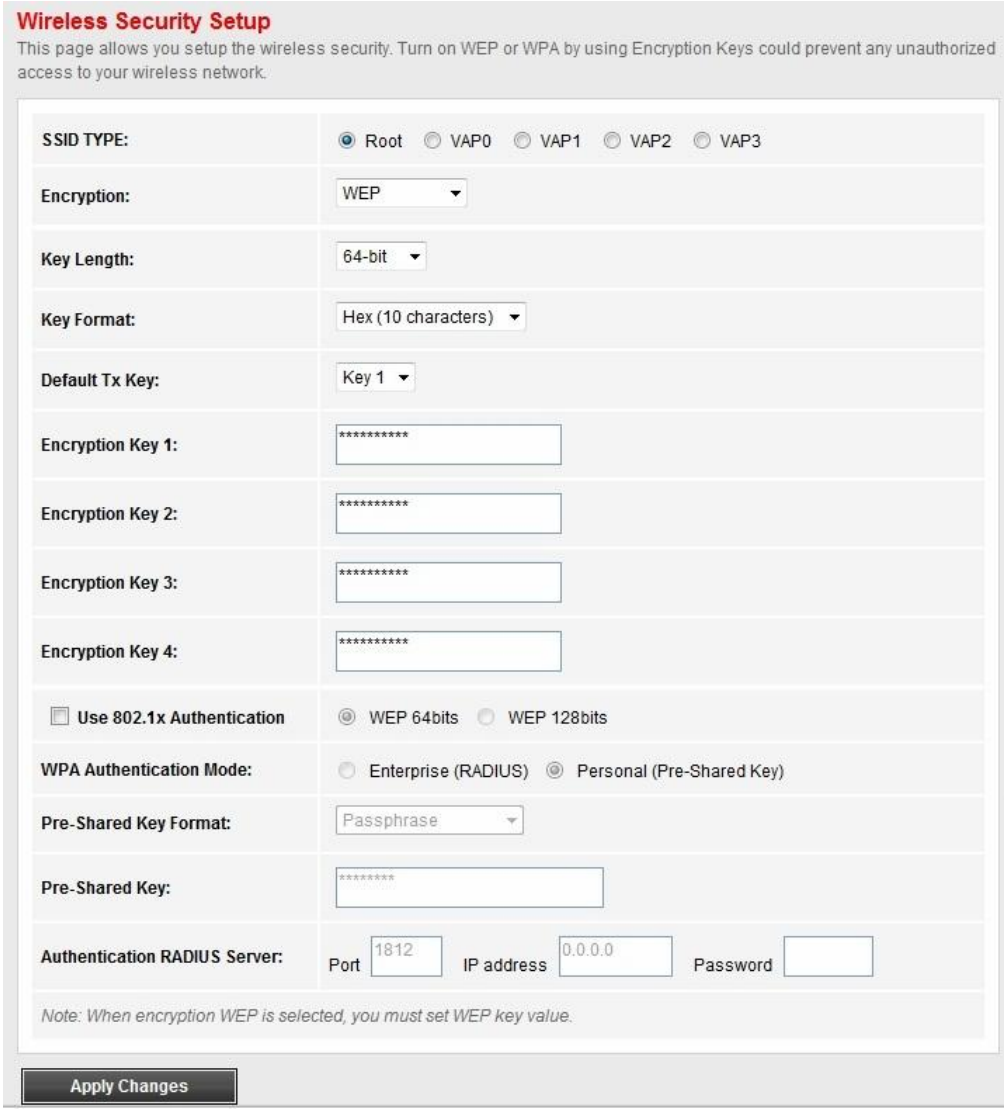
Choose **WLAN** > **Security**, and the following page appears.



The following table describes the parameters of this page.

Field	Description
SSID Type	Service Set Identifier, is a name of a local area network
Encryption	Configure the wireless encryption mode. You can choose **None**, **WEP**, **WPA (TKIP)**, **WPA (AES)**, **WPA2 (AES)**, **WPA2 (TKIP)** or **WPA2 Mixed**. ● Wired equivalent privacy0 (WEP) encrypts data frames before transmitting over the wireless network. ● Wi-Fi protected access (WPA) is a subset of the IEEE802.11i security specification draft. ● WPA2 Mixed is the collection of WPA and WPA2 encryption modes. The wireless client establishes the connection between the modem through WPA or WPA2. Key differences between WPA and WEP are user authentication and improved data encryption.
Set WEP Key	It is available when you set the encryption mode to **WEP**. Click it, the **Wireless WEP Key Setup** page appears.
WPA Authenticati on Mode	● Select **Personal (Pre-Shared Key)**, enter the pre-shared key in the **Pre-Shared Key** field. ● Select **Enterprise (RADIUS)**, enter the port, IP address, and password of the Radius server. You need to enter the username and password provided by the Radius server when the wireless client connects the modem. If the encryption is set to **WEP**, the modem uses 802.1 X authentication, which is Radius authentication.

Click **Set WEP Key**, and the following page appears.



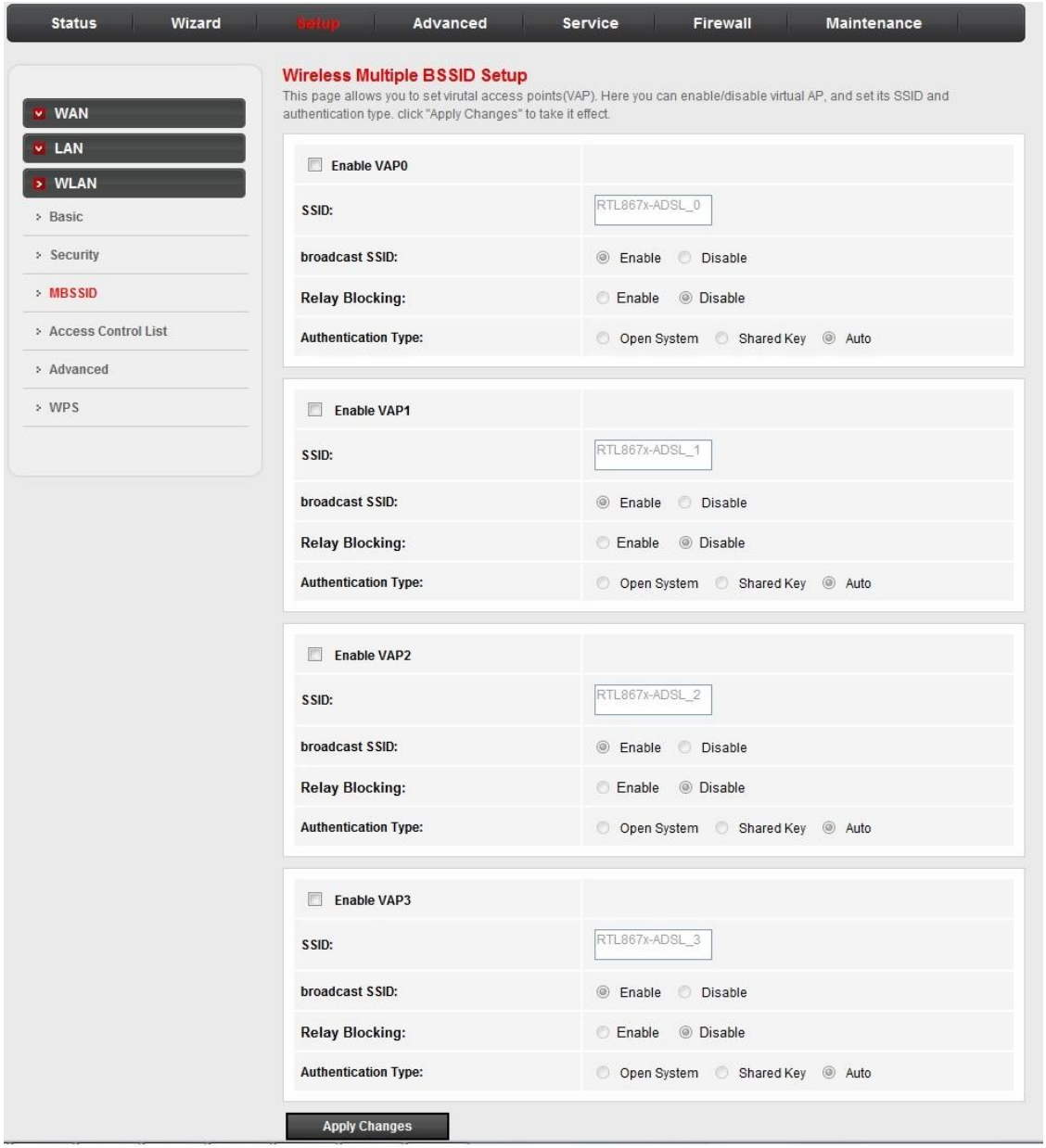
The following describes the parameters of this page.

Field	Description
Key Length	Choose the WEP key length. You can Choose **64-bit** or **128-bit**.
Key Format	● If you choose **64-bit**, you can choose ASCII (5 characters) or Hex (10 characters). ● If you choose **128-bit**, you can choose ASCII (13 characters) or Hex (26 characters).
Default Tx Key	Choose the index of WEP Key. You can choose **Key 1**, **Key 2**, **Key 3** or **Key 4**.
Encryption Key 1 to 4	The Encryption keys are used to encrypt the data. Both the modem and wireless stations must use the same encryption key for data transmission. ● If you choose **64-bit** and **ASCII (5 characters)**, enter any 5 ASCII characters. ● If you choose **64-bit** and **Hex (10 characters)**, enter any 10 hexadecimal characters.

Field	Description
	● If you choose **128-bit** and **ASCII (13 characters)**, enter any 13 ASCII characters. ● If you choose **128-bit** and **Hex (26 characters)**, enter any 26 hexadecimal characters.
Apply Changes	Click it to apply the settings temporarily. If you want to save the settings of this page permanently, click **Save** in the lower left corner.

4.1.5.3. Multi-BSSID

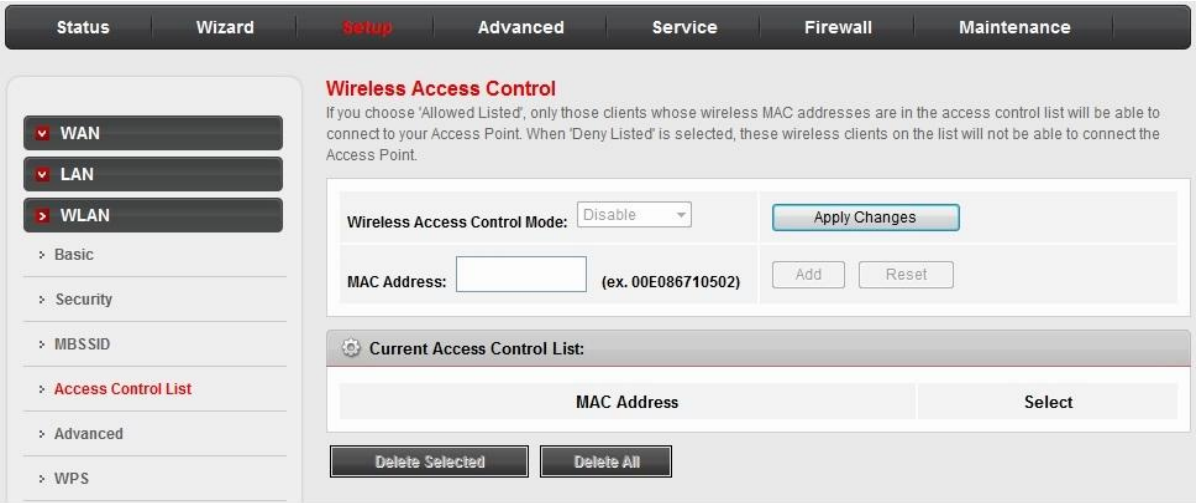
Choose **WLAN** > **MBSSID**, and the following page appears. In this page, you can configure the multi-BSSID of the wireless clients.



It supports 4 virtual access points (VAPs).It is a unique name to identify the modem in the wireless LAN. Wireless stations associating to the modem must have the same name. Enter a descriptive name that is used when the wireless client connecting to the modem.

4.1.5.4. Access Control

Choose **WLAN** > **Access Control List**, and the following page appears. In this page, you can configure the access control of the wireless clients.



Choose **Allow Listed** as the access control mode to enable white list function. Only the devices whose MAC addresses are listed in the **Current Access Control List** can access the modem.

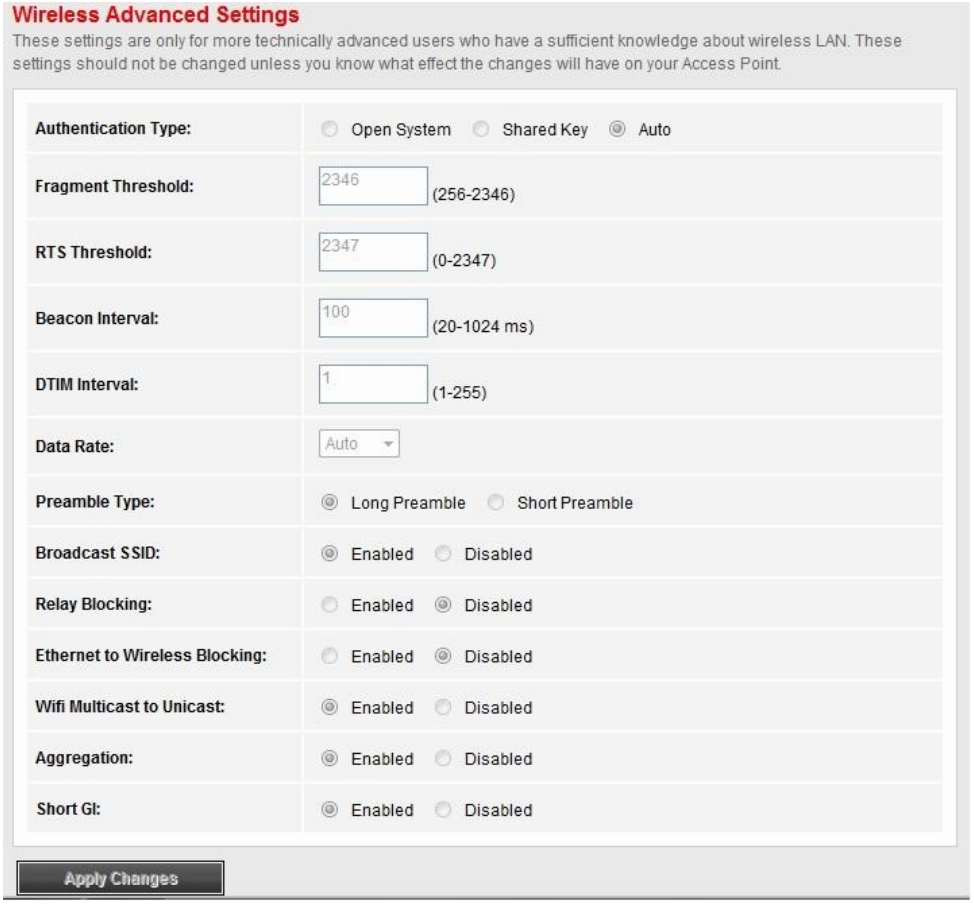
Choose **Deny Listed** as the access control mode to to enable black list function. The devices whose MAC addresses are listed in the **Current Access Control List** are denied to access the modem.

4.1.5.5. Advanced

Choose **Wireless** > **Advanced**, and the following page appears. In this page, you can configure the wireless advanced parameters. It is recommended to use the default parameters.

Note:

The parameters in the **Advanced** are modified by the professional personnel, it is recommended to keep the default values.



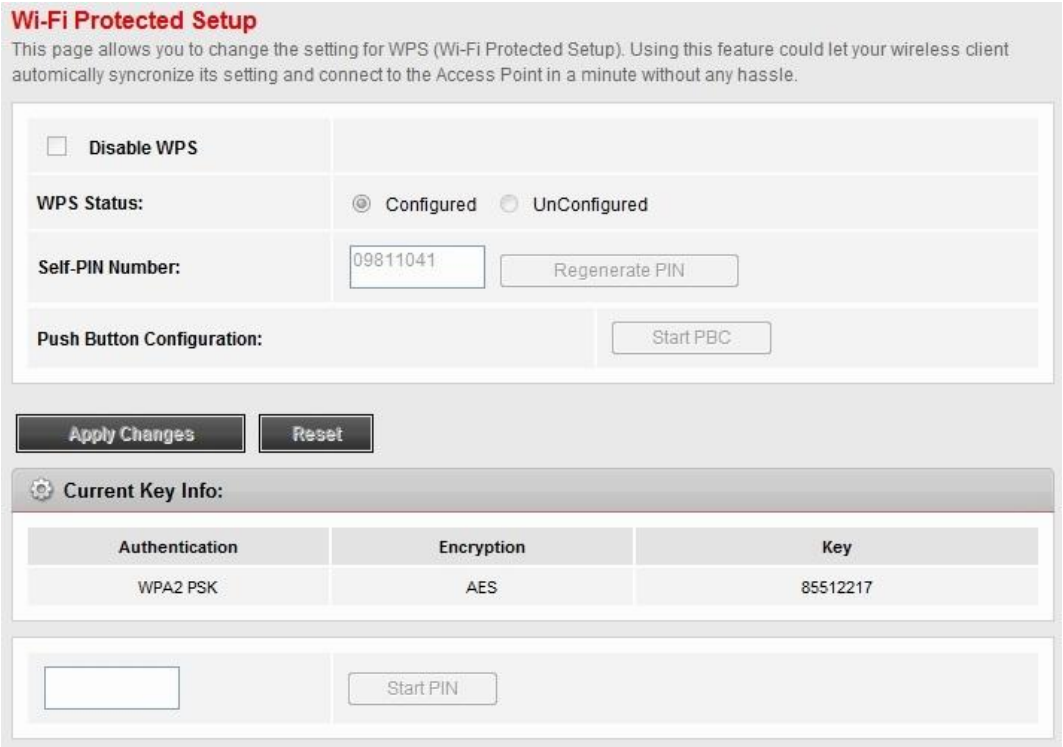
The following table describes the parameters of this page.

Field	Description
Authentication	Select the modem operating in the open system or encryption authentication. You can choose **Open System, Shared Key** or **Auto**. ● In the open system, the wireless client can directly connect to the device ● In the encryption authentication, the wireless client connects to the modem through the shared key.
Data Rate	Choose the transmission rate of the wireless data. You can choose **Auto**, **1 M**, **2 M**, **5.5 M**, **11 M**, **6 M**, **9 M**, **12 M**, **18 M**, **24 M**, **36 M**, **48 M**, **54M, MSC0 ~ MSC7.**
Preamble Type	● **Long Preamble**: It means this card always use long preamble. ● **Short Preamble**: It means this card can support short preamble capability.

Field	Description
Broadcast SSID	Select whether the modem broadcasts SSID or not. You can select **Enable** or **Disable**. ● Select **Enable**, the wireless client searches the modem through broadcasting SSID. ● Select **Disable** to hide SSID, the wireless clients can not find the SSID.
Relay Blocking	Wireless isolation. Select **Enable**, the wireless clients that are connected to the modem can not intercommunication.
Ethernet to Wireless Blocking	Whether the wireless network can communicate with the Ethernet network or not.
Wifi Multicast to Unicast	Enable it to using unicast to transmit multicast packet
Aggregation	It is applied when the destination end of all MPDU are for one STA.
Short GI	It is not recommended to enable GI in obvious environment of Multi-path effect.
Apply Changes	Click it to apply the settings temporarily. If you want to save the settings of this page permanently, click **Save** in the lower left corner.

4.1.5.6. WPS

Choose **WLAN** > **WPS** and the following page appears.



There are two ways for the wireless client to establish the connection with the modem through WPS. The modem generates PIN, see the above figure. Click **Regenerate PIN** to generate a new PIN, and then click **Start PBC**, In the wireless client tool, enter the PIN which is generated by the modem, start connection. The client will automatically establish the connection with the modem through the encryption mode, and you need not to enter the key. The other way is the wireless client generates PIN. In the above figure, enter PIN of the wireless client in the **Client PIN Number** field, then click **Start PIN** to establish the connection.

Note:

The wireless client establishes the connection with the modem through WPS negotiation.The wireless client must support WPS

4.2. Advanced

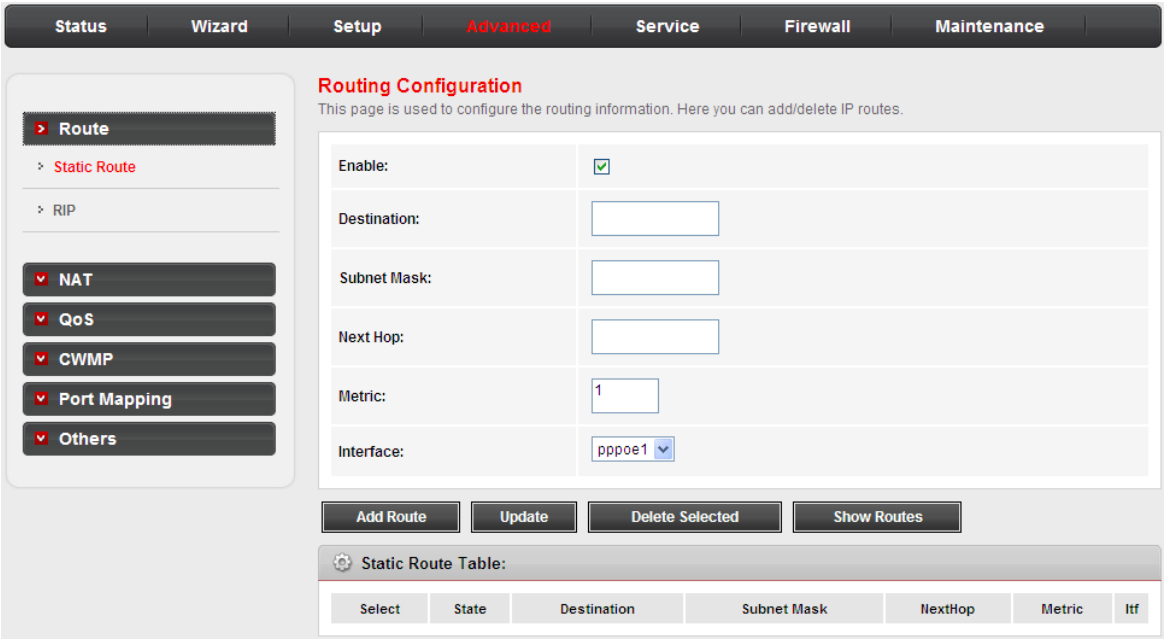
In the navigation bar, click **Advanced**. The tab **Advanced** contains **Route**, **NAT**, **QoS**, **CWMP**, **Port Mapping** and **Others**.

4.2.1. Route

Choose **Advanced** > **Route**, the page shown in the following figure appears. The page that is displayed contains **Static Route**, **RIP.**

4.2.1.1. Static Route

Click **Static Route** in the left pane, the page shown in the following figure appears. This page is used to configure the routing information. You can add or delete IP routes.



The following table describes the parameters and buttons of this page.

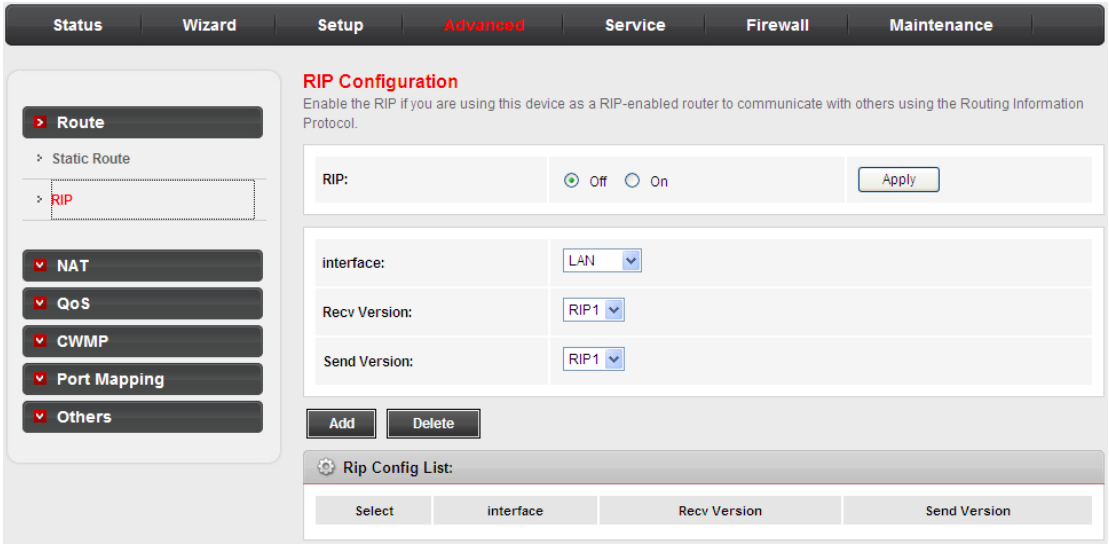
Field	Description
Enable	Select it to use static IP routes.
Destination	Enter the IP address of the destination device.
Subnet Mask	Enter the subnet mask of the destination device.
Next Hop	Enter the IP address of the next hop in the IP route to the destination device.
Metric	The metric cost for the destination.
Interface	The interface for the specified route.
Add Route	Click it to add the new static route to the **Static Route Table**.
Update	Select a row in the **Static Route Table** and modify the parameters. Then click it to save the settings temporarily.
Delete Selected	Select a row in the **Static Route Table** and click it to delete the row.
Show Routes	Click it, the **IP Route Table** appears. You can view a list of destination routes commonly accessed by your network.
Static	A list of the previously configured static IP routes.

Field	Description
Route Table	

Click **Show Routes**, the page shown in the following figure appears. The table shows a list of destination routes commonly accessed by your network.

4.2.1.2. RIP

Click **RIP** in the left pane, the page shown in the following figure appears. If you are using this device as a RIP-enabled router to communicate with others using Routing Information Protocol (RIP), enable RIP. This page is used to select the interfaces on your devices that use RIP, and the version of the protocol used.



The following table describes the parameters and buttons of this page.

Field	Description
RIP	Select **On**, the router communicates with other RIP-enabled devices.
Apply	Click it to save the settings of this page.
Interface	Choose the router interface that uses RIP.
Recv Version	Choose the interface version that receives RIP messages. You can choose **RIP1**, **RIP2**, or **Both**.

Field	Description
	● Choose **RIP1** indicates the router receives RIP v1 messages. ● Choose **RIP2** indicates the router receives RIP v2 messages. ● Choose **Both** indicates the router receives RIP v1 and RIP v2 messages.
Send Version	The working mode for sending RIP messages. You can choose **RIP1** or **RIP2**. ● Choose **RIP1** indicates the router broadcasts RIP1 messages only. ● Choose **RIP2** indicates the router multicasts RIP2 messages only.
Add	Click it to add the RIP interface to the **Rip Configuration List**.
Delete	Select a row in the **Rip Configuration List** and click it to delete the row.

4.2.2. NAT

4.2.2.1. DMZ

Demilitarized Zone (DMZ) is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.

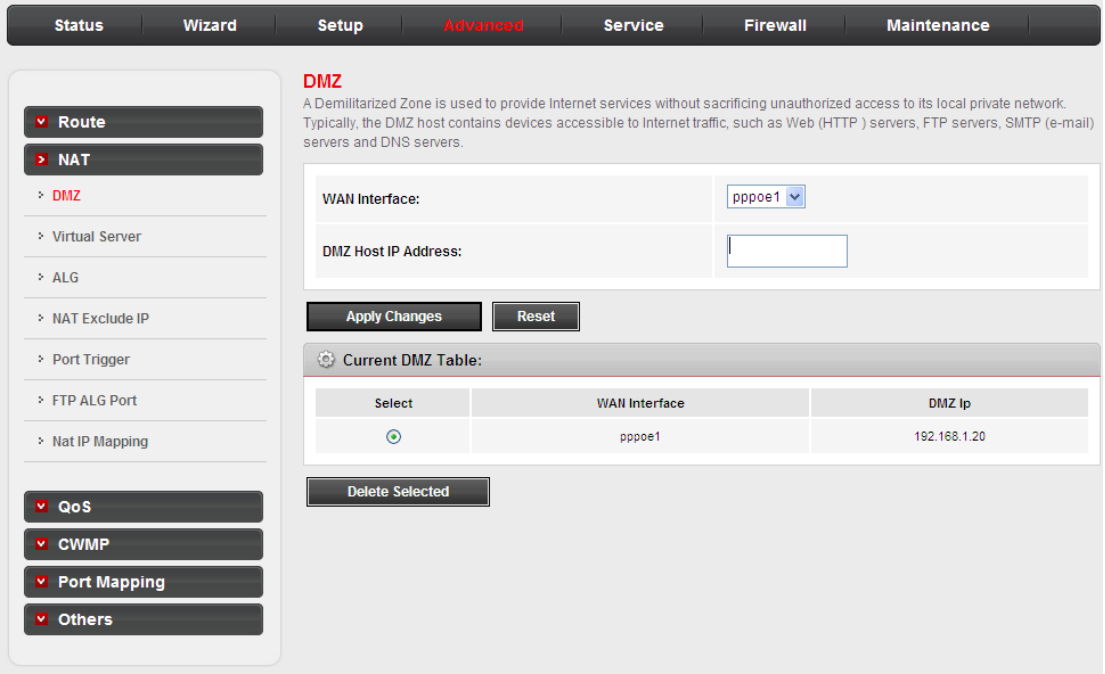
Click **NAT>DMZ** in the left pane, the page shown in the following figure appears.

The following describes how to configure manual DMZ.

Step 1 Select **WAN Interface**.

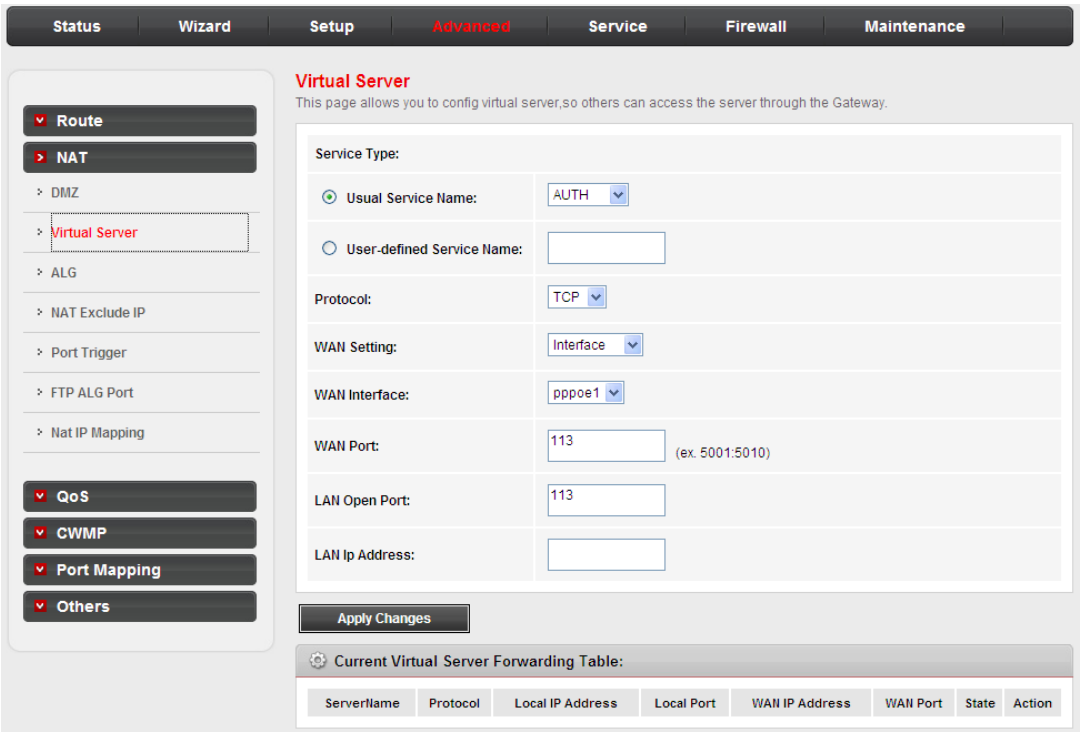
Step 1 Enter an IP address of the DMZ host.

Step 2 Click **Apply Changes** to save the settings of this page temporarily.



4.2.2.2. Virtual Server

Click **Virtual Server** in the left pane, the page shown in the following figure appears.



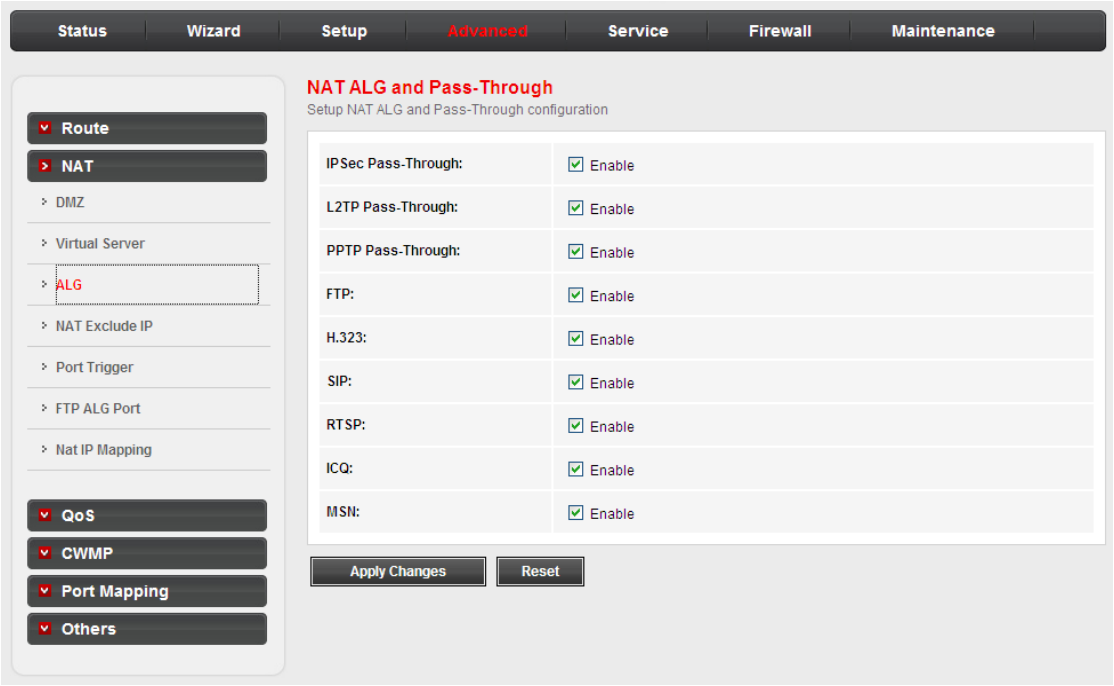
The following table describes the parameters of this page.

Field	Description
Service Type	You can select the common service type, for example, **AUTH**, **DNS**,**FTP** or **POP3**. You can also define a service name.

Field	Description
	● If you select **Usual Service Name**, the corresponding parameter has the default settings. ● If you select **User-defined Service Name**, you need to enter the corresponding parameters.
Protocol	Choose the transport layer protocol that the service type uses. You can choose **TCP** or **UDP**.
WAN Setting	You can choose **Interface** or **IP Address**.
WAN Interface	Choose the WAN interface that will apply virtual server.
WAN Port	Choose the access port on the WAN.
LAN Open Port	Enter the port number of the specified service type.
LAN IP Address	Enter the IP address of the virtual server. It is in the same network segment with LAN IP address of the router.

4.2.2.3. ALG

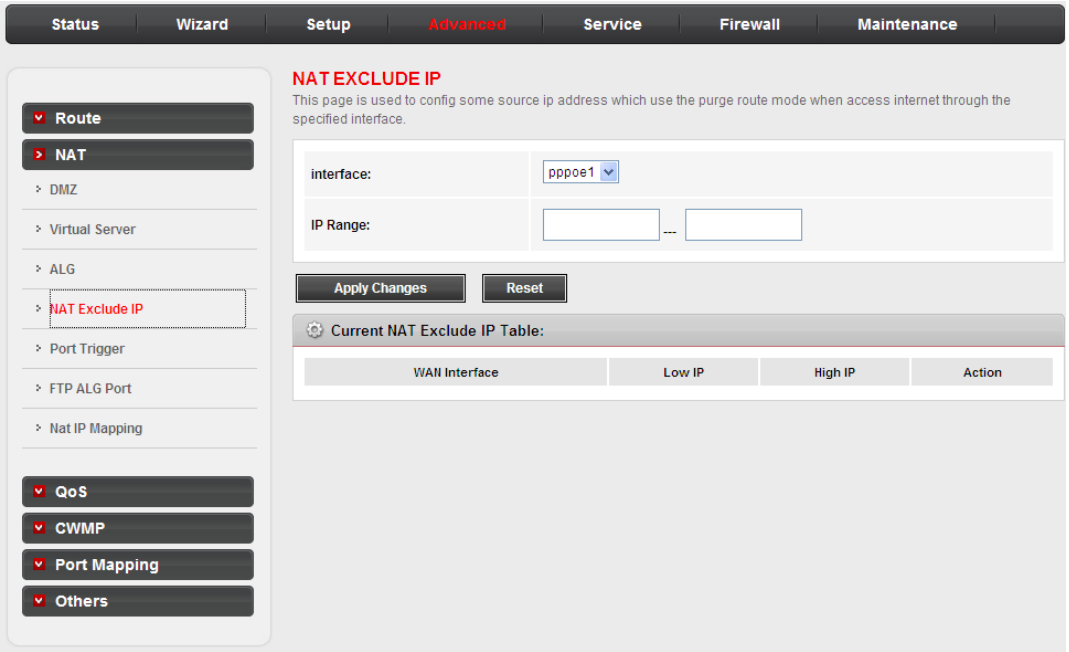
Click **ALG** in the left pane, the page shown in the following figure appears. Choose the NAT ALG and Pass-Through options, and then click **Apply Changes**.



4.2.2.4. NAT Exclude IP

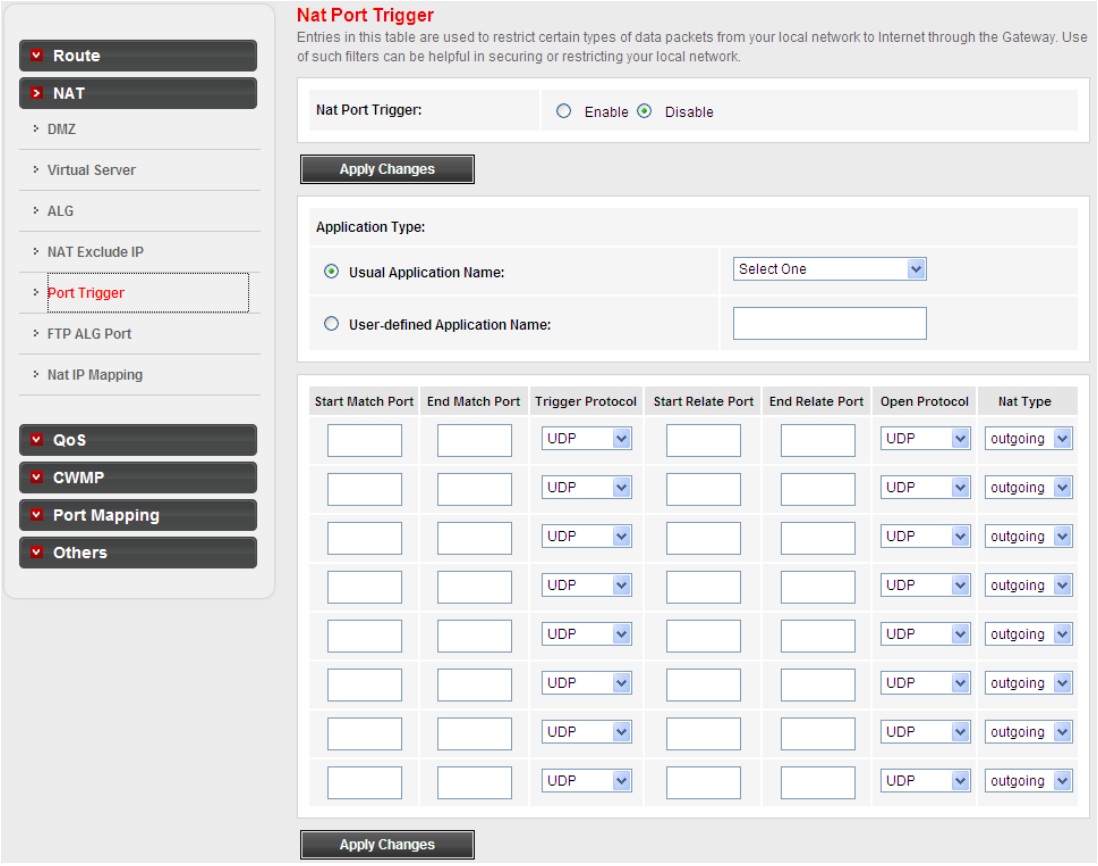
Click **NAT Exclude IP** in the left pane, the page shown in the following figure appears.

In the page, you can configure some source IP addresses which use the purge route mode when accessing internet through the specified interface.



4.2.2.5. Port Trigger

Click **Port Trigger** in the left pane, the page shown in the following figure appears.



Click the **Usual Application Name** drop-down menu to choose the application you want to setup for port triggering. When you have chosen an application the default Trigger settings will populate the table below.

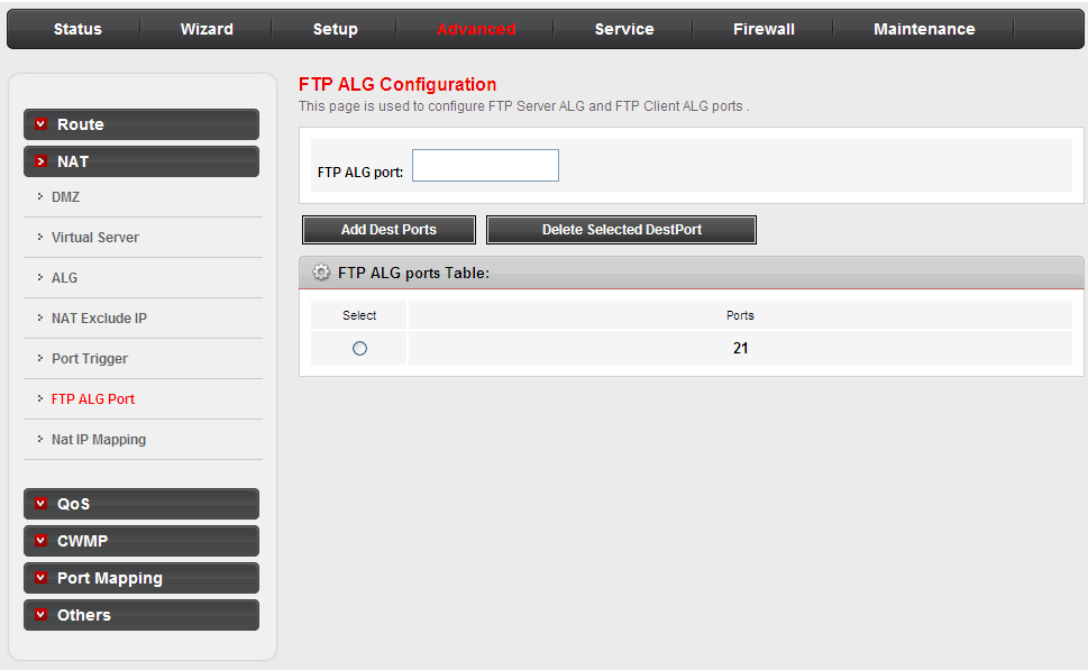
If the application you want to setup isn't listed, click the **User-defined Application Name** radio button and type in a name for the trigger in the Custom application field. Configure the **Start Match Port**, **End Match Port**, **Trigger Protocol**, **Start Relate Port**, **End Relate Port, Open Protocol** and **Nat type** settings for the port trigger you want to configure.

When you have finished click the **Apply changes** button.

4.2.2.6. FTP ALG PORT

Click **FTP ALG PORT** in the left pane, the page shown in the following figure appears.

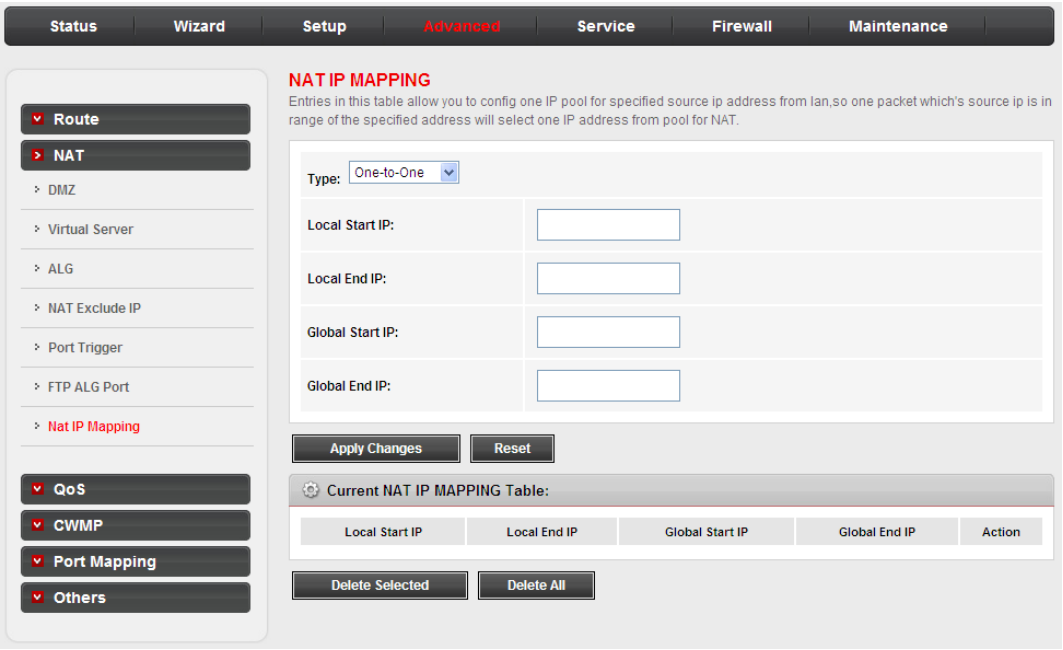
This page is used to configure FTP Server ALG and FTP Client ALG ports.



4.2.2.7. Nat IP Mapping

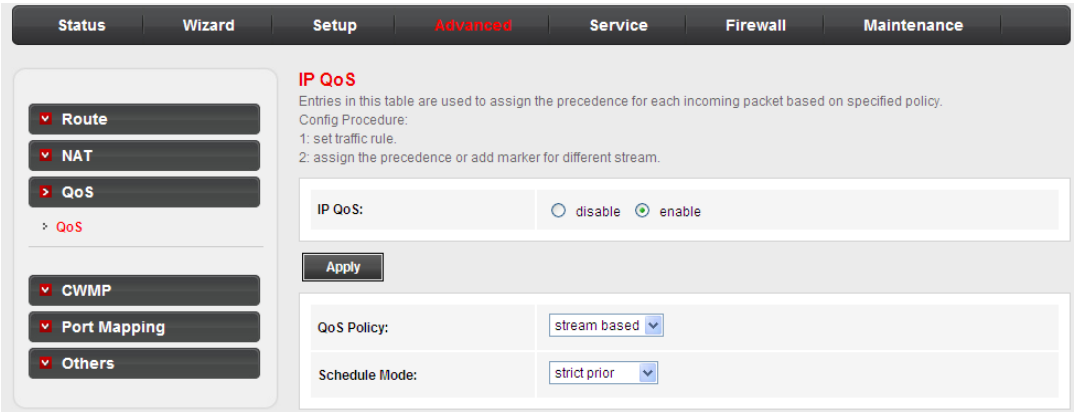
Click **Nat IP Mapping** in the left pane, the page shown in the following figure appears.

Entries in this table allow you to config one IP pool for specified source ip address from lan,so one packet which's source ip is in range of the specified address will select one IP address from pool for NAT.



4.2.3. QoS

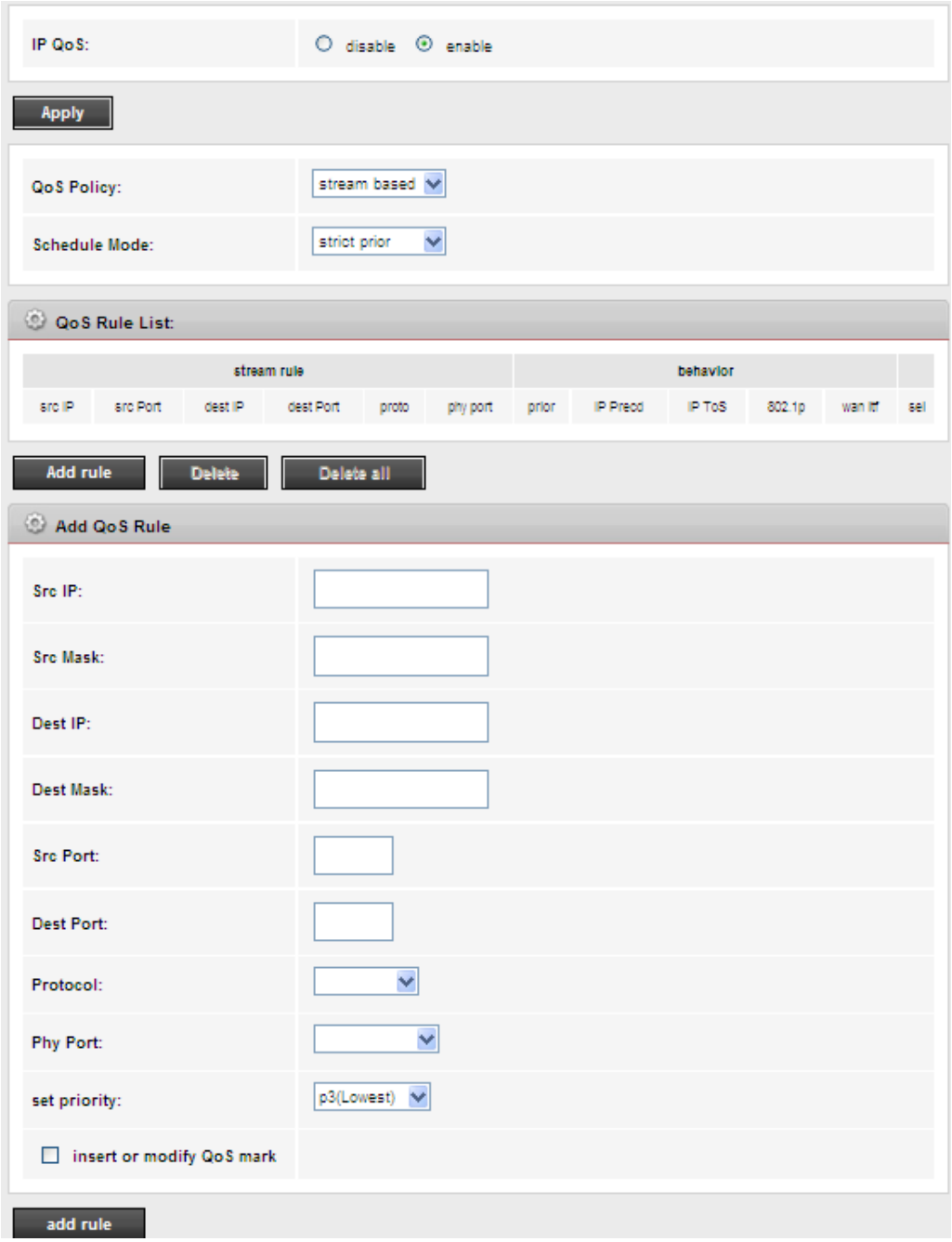
Choose **Advanced** > **QoS**, the page shown in the following figure appears. Entries in the **QoS Rule List** are used to assign the precedence for each incoming packet based on physical LAN port, TCP/UDP port number, source IP address, destination IP address and other information.



Step 1 Enable IP QoS and click **Apply** to enable IP QoS function.

Step 2 Click **add rule** to add a new IP QoS rule.

The page shown in the following figure appears.

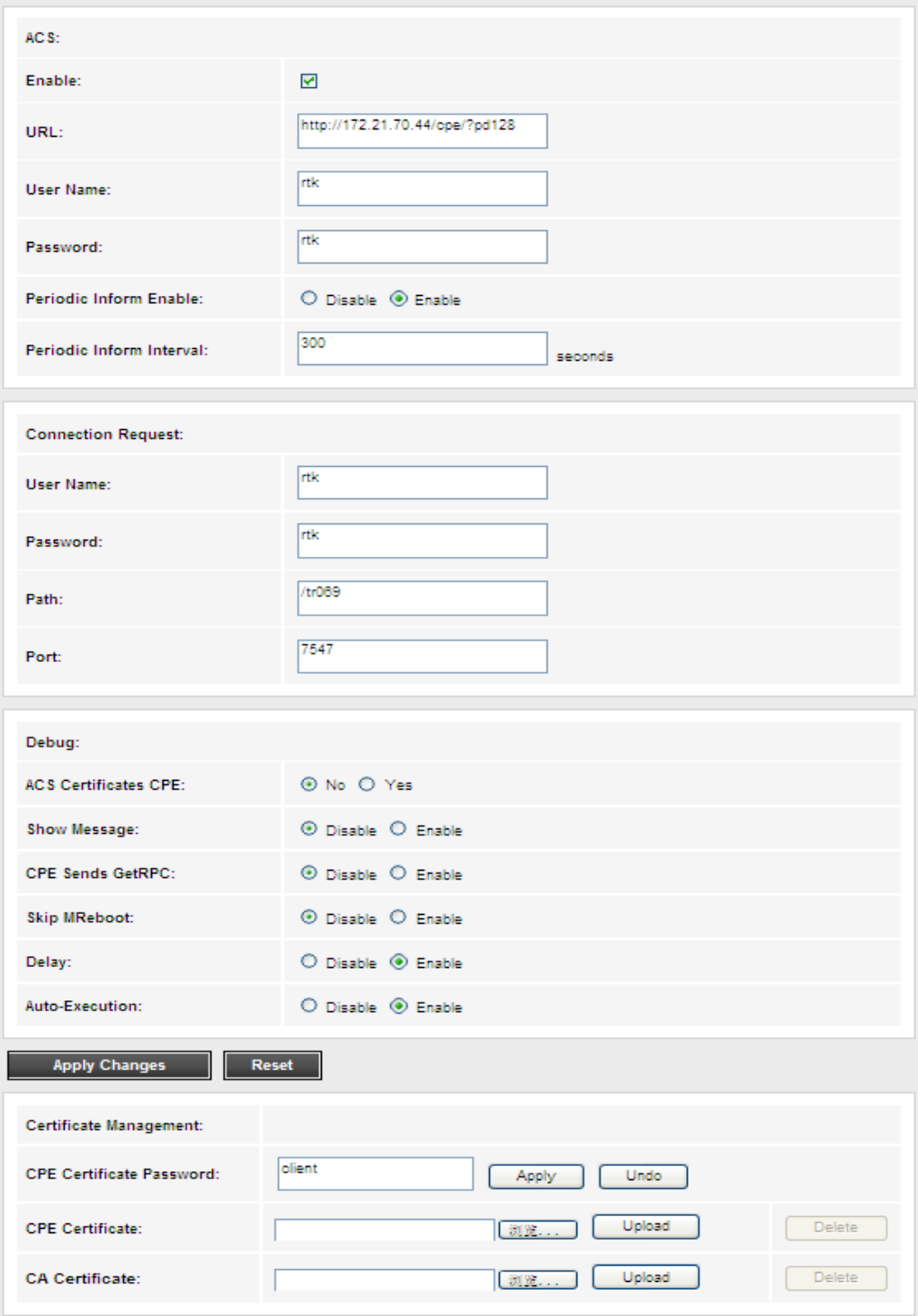


The following table describes the parameters and buttons of this page.

Field	Description
IP QoS	Select to enable or disable IP QoS function. You need to enable IP QoS if you want to configure the parameters of this page.
QoS Policy	You can choose **stream based**, **802.1p based** or **DSCP based**.
Schedule Mode	You can choose **strict prior** or **WFQ (4:3:2:1)**.
Source IP	The IP address of the source data packet.
Source Mask	The subnet mask of the source IP address.
Destination IP	The IP address of the destination data packet.
Destination Mask	The subnet mask of the destination IP address.
Source Port	The port of the source data packet.
Destination Port	The port of the destination data packet.
Protocol	The protocol responds to the IP QoS rules. You can choose **TCP**, **UDP**, **ICMP** or **TCP/UDP**.
Physical Port	The LAN interface responds to the IP QoS rules.
Set priority	The priority of the IP QoS rules. P0 is the highest priority and P3 is the lowest.
802.1p	You can choose from 0 to 7.
delete	Select a row in the **QoS Rule list** and click it to delete the row.
delete all	Select all the rows in the **QoS Rule list** and click it to delete the rows.

4.2.4. CWMP

Choose **Advanced** > **CWMP**, the page shown in the following page appears. In this page, you can configure the TR-069 CPE.



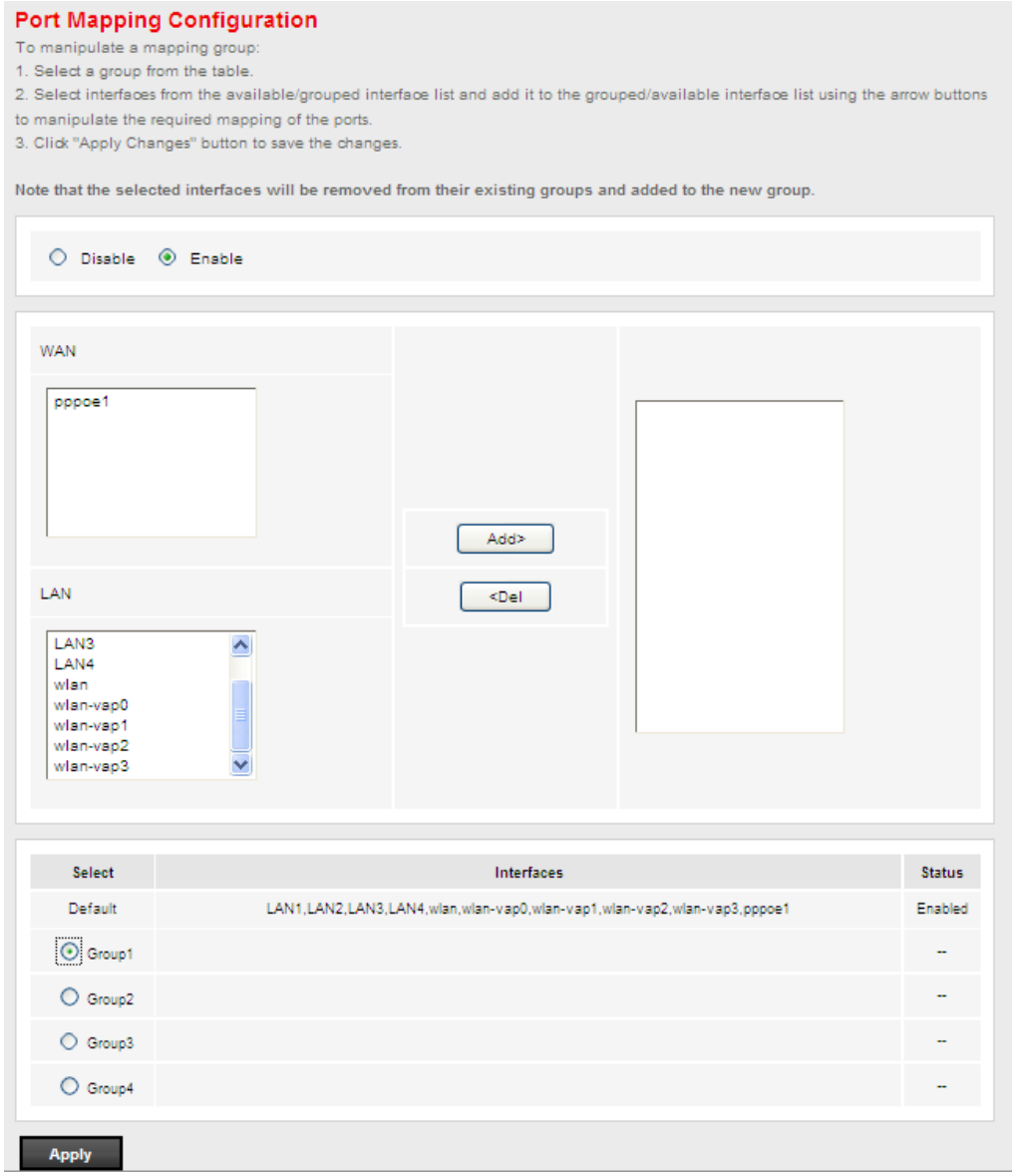
The following table describes the parameters of this page:

Field	Description
ACS	
URL	The URL of the auto-configuration server to connect to.
User Name	The user name for logging in to the ACS.
Password	The password for logging in to the ACS.
Periodic Inform Enable	Select **Enable** to periodically connect to the ACS to check whether the configuration updates.

Field	Description
Periodic Inform Interval	Specify the amount of time between connections to ACS.
Connection Request	
User Name	The connection username provided by TR-069 service.
Password	The connection password provided by TR-069 service.
Debug	
Show Message	Select **Enable** to display ACS SOAP messages on the serial console.
CPE sends GetRPC	Select **Enable**, the router contacts the ACS to obtain configuration updates.
Skip MReboot	Specify whether to send an MReboot event code in the inform message.
Delay	Specify whether to start the TR-069 program after a short delay.
Auto-Execution	Specify whether to automatically start the TR-069 after the router is powered on.

4.2.5. Port Mapping

Choose **Advanced** > **Port Mapping**, the page shown in the following page appears.



Create four rules through Group1 to Group4. The procedure is as follows:

Step 1 Select **Enable** to enable port mapping.

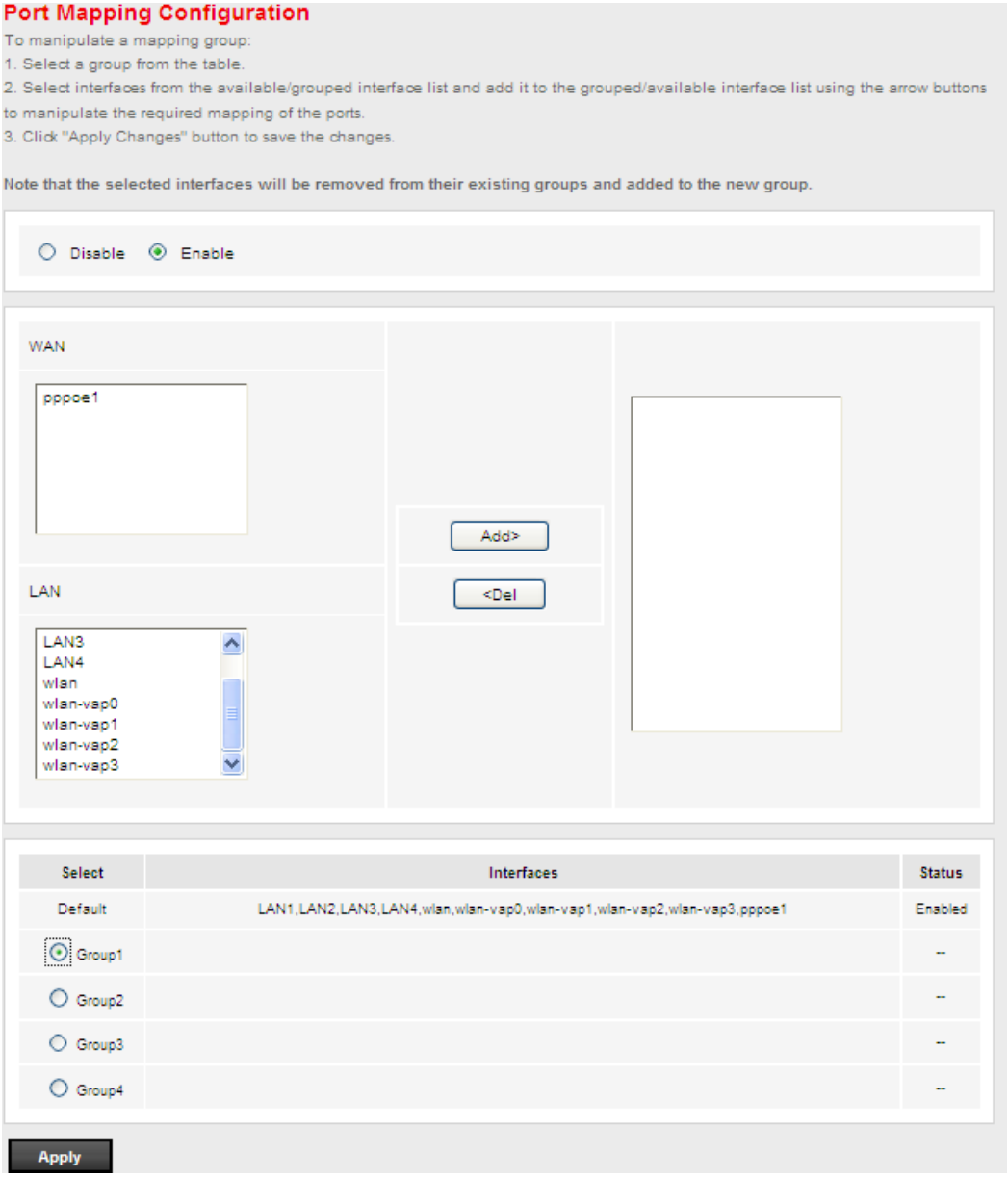
Step 2 Select Group1. Then the interfaces are added in the WAN and LAN table.

The following page appears.

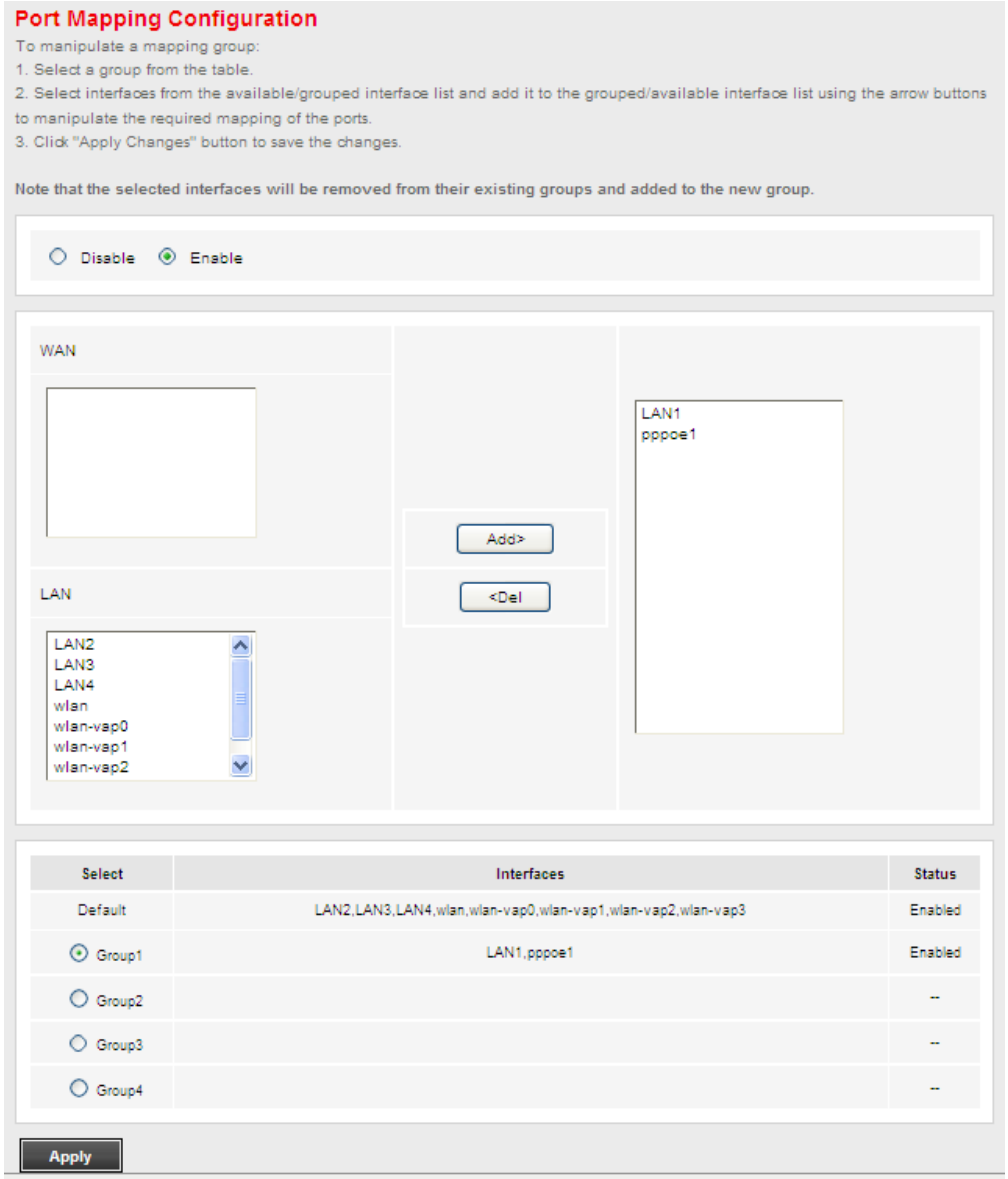
Step 3 Select the interfaces that are respectively added to WAN and LAN. Press Ctrl while selecting multiple interfaces.

Step 4 Click Add to add the interface to the rule.

The following page appears.



Step 5 Click Apply to apply the settings, and the following page appears.



In this example, only interfaces of pppoe1 and LAN1 can communicate with each other.

That is, only LAN1 can access the Internet through pppoe1 interface.

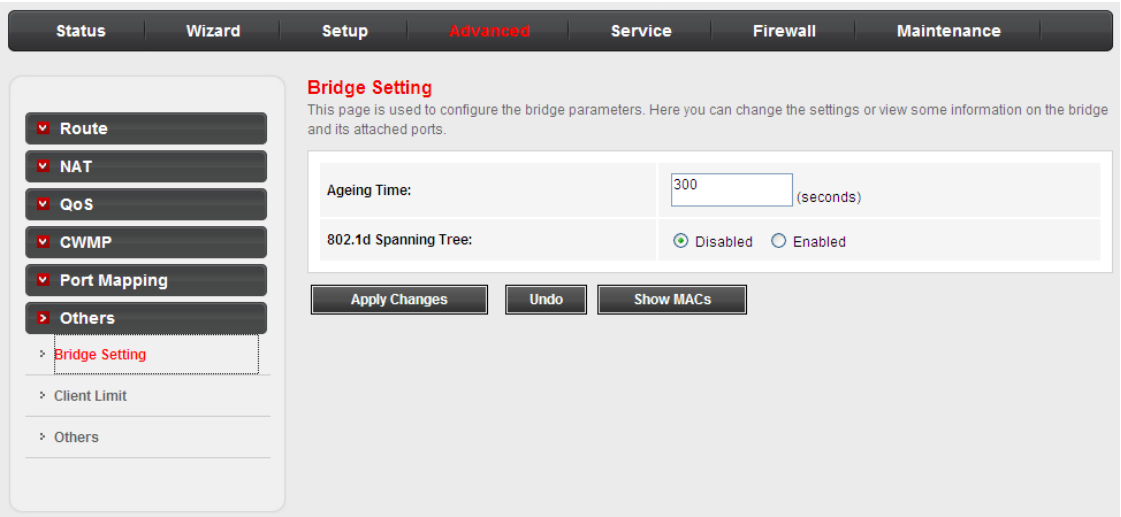
4.2.6. Others

Choose **Advanced** > **Others**. The page that is displayed contains **Bridge Setting**, **Client Limit**, **Tunnel** and **Others**.

4.2.6.1. Bridge Setting

Choose **Bridge Setting** in the left pane, the page shown in the following figure appears.

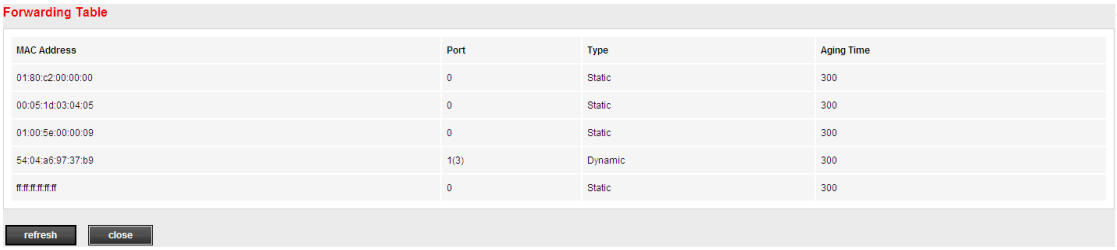
This page is used to configure the bridge parameters. You can change the settings or view some information on the bridge and its attached ports.



The following table describes the parameters and button of this page:

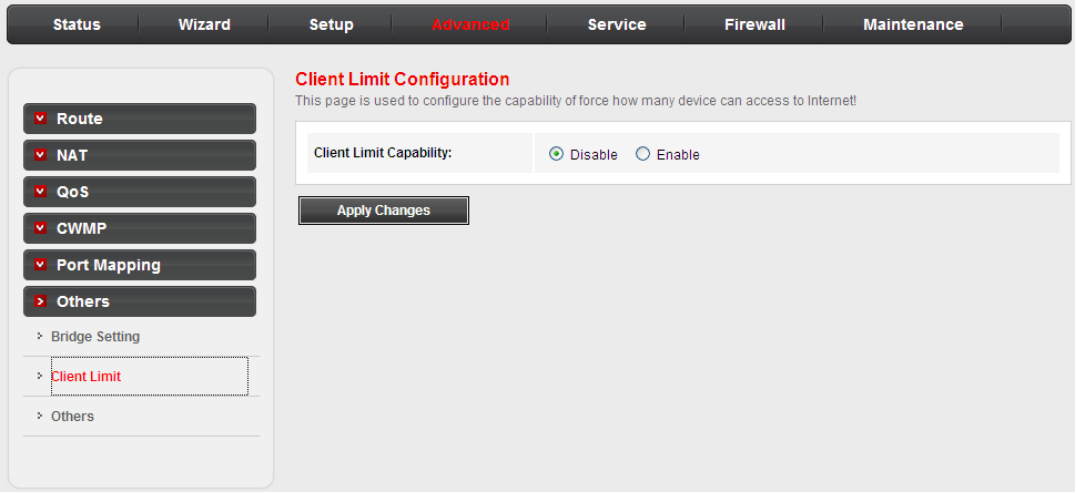
Field	Description
Ageing Time	If the host is idle for 300 seconds (default value), its entry is deleted from the bridge table.
Show MACs	Click it to show a list of the learned MAC addresses for the bridge.

Click **Show MACs**, the page shown in the following figure appears. This table shows a list of learned MAC addresses for this bridge.



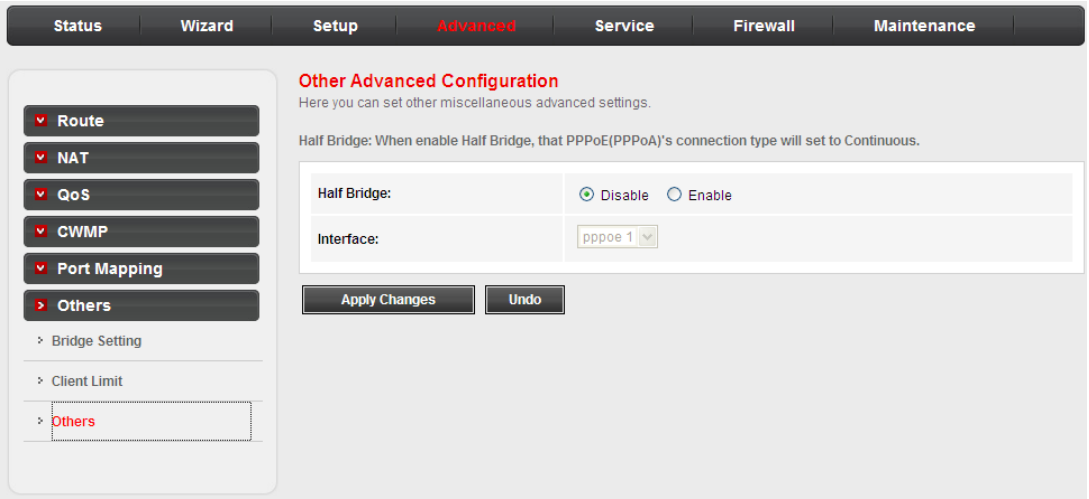
4.2.6.2. Client Limit

Choose **Client Limit** in the left pane, the page shown in the following figure appears. This page is used to configure the capability of forcing how many devices can access to the Internet.



4.2.6.3. Others

Choose **Others** in the left pane, the page shown in the following figure appears.



4.3. Service

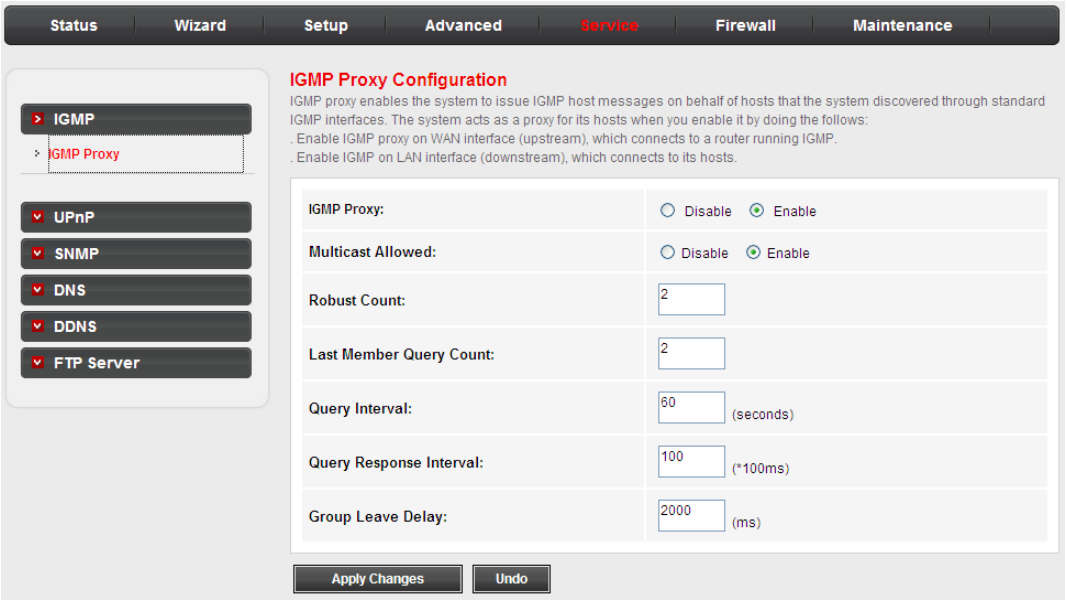
In the navigation bar, click **Service**. The tab **Service** contains **IGMP**, **UPnP**, **SNMP**, **DNS** and **DDNS.**

4.3.1. IGMP

Choose **Service** > **IGMP**, and the following page appears. The page that is displayed contains **IGMP Proxy**.

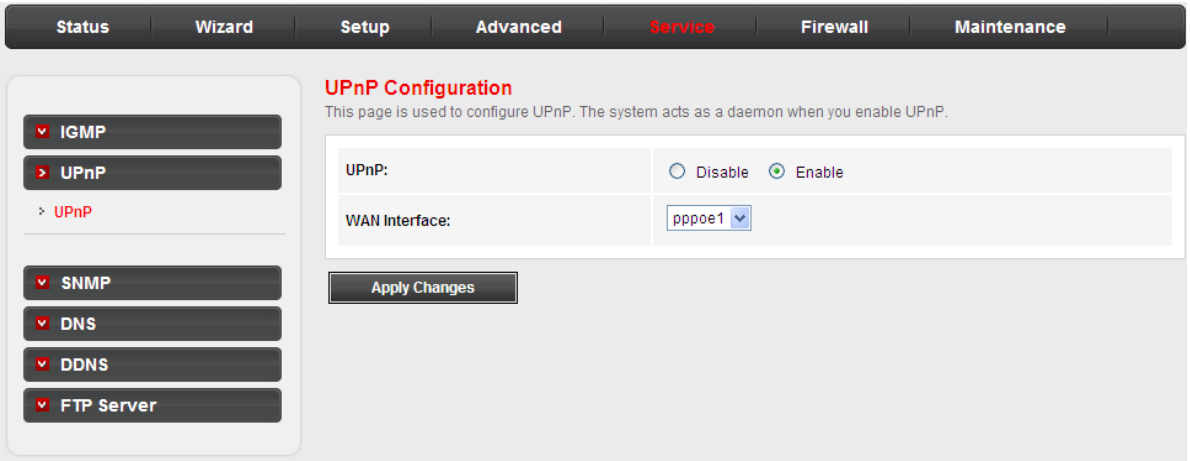
4.3.1.1. IGMP Proxy

Click **IGMP Proxy** in the left pane, the page shown in the following figure appears. In this page, you can enable or disable IGMP proxy. If you disable IGMP proxy, the modem will discard all the received multicast data packets.



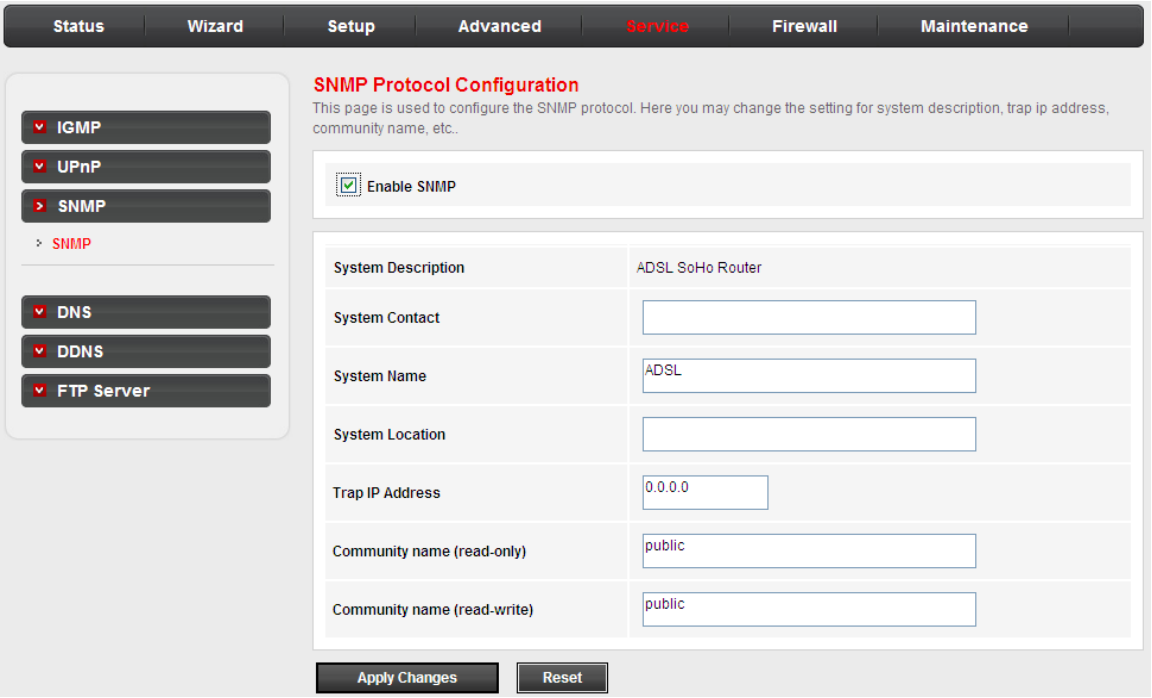
4.3.2. UPnP

Click **UPnP** in the left pane, the page shown in the following figure appears. The system acts as a daemon after you enable UPnP.



4.3.3. SNMP

Click **SNMP** in the left pane, the page shown in the following figure appears. You can configure the SNMP parameters.



Field	Description
Enable SNMP	Select it to enable SNMP function. You need to enable SNMP, and then you can configure the parameters of this page.
Trap IP Address	Enter the trap IP address. The trap information is sent to the corresponding host.
Community name (read-only)	The network administrators must use this password to read the information of this router.

Community name (read-write)	The network administrators must use this password to configure the information of the router.

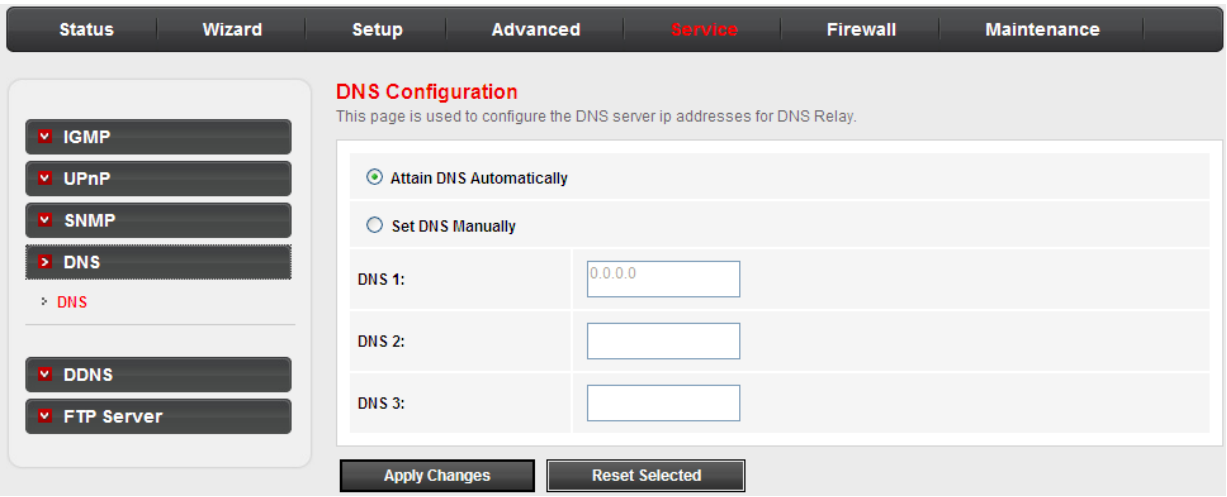
4.3.4. DNS

Domain Name System (DNS) is an Internet service that translates the domain name into IP address. Because the domain name is alphabetic, it is easier to remember. The Internet, however, is based on IP addresses. Every time you use a domain name, DNS translates the name into the corresponding IP address. For example, the domain name www.example.com might be translated to 198.105.232.4. The DNS has its own network. If one DNS server does not know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

Choose **Service** > **DNS**. The **DNS** page that is displayed contains **DNS**.

4.3.4.1. DNS

Click **DNS** in the left pane, and the page shown in the following figure appears.



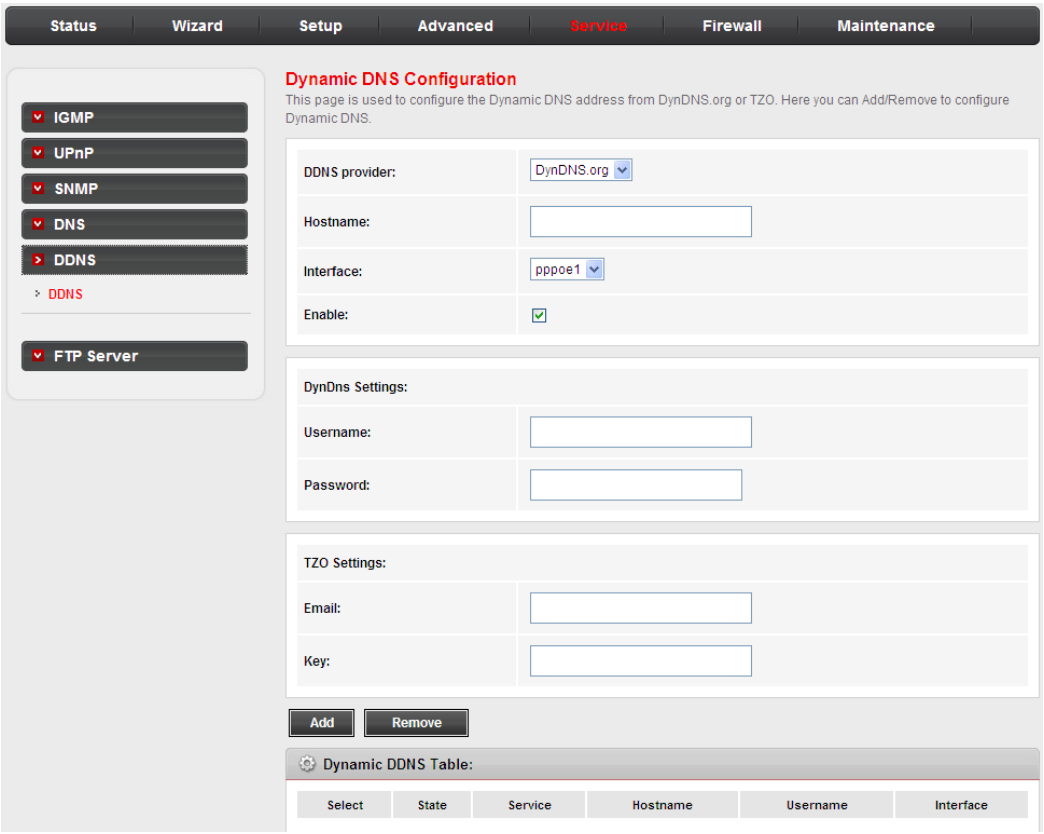
The following table describes the parameters and buttons of this page.

Field	Description
Attain	Select it, the router accepts the first received DNS assignment from one of

Field	Description
DNS Automatically	the PPPoA, PPPoE or MER enabled PVC(s) during the connection establishment.
Set DNS Manually	Select it, enter the IP addresses of the primary and secondary DNS server.
Apply Changes	Click it to save the settings of this page.
Reset Selected	Click it to start configuring the parameters in this page.

4.3.5. DDNS

Choose **Service** > **DDNS**, the page shown in the following figure appears. This page is used to configure the dynamic DNS address from DynDNS.org or TZO. You can add or remove to configure dynamic DNS.



The following table describes the parameters of this page.

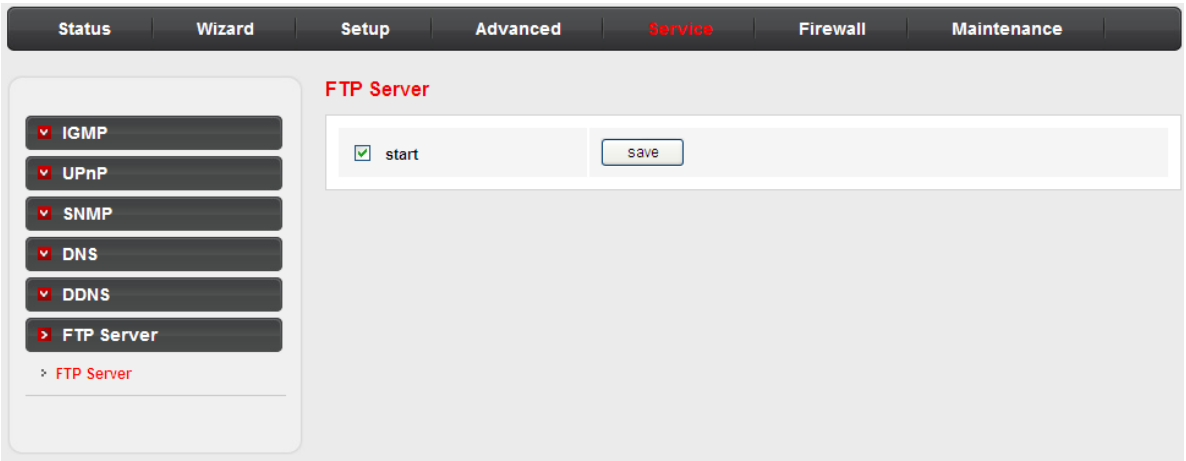
Field	Description
DDNS	Choose the DDNS provider name. You can choose **DynDNS.org** or **TZO**.

Field	Description
provider	
Host Name	The DDNS identifier.
Interface	The WAN interface of the router.
Enable	Enable or disable DDNS function.
Username	The name provided by DDNS provider.
Password	The password provided by DDNS provider.
Email	The email provided by DDNS provider.
Key	The key provided by DDNS provider.

4.3.6. FTP Server

Choose **Service** > **FTP Server**, the page shown in the following figure appears.

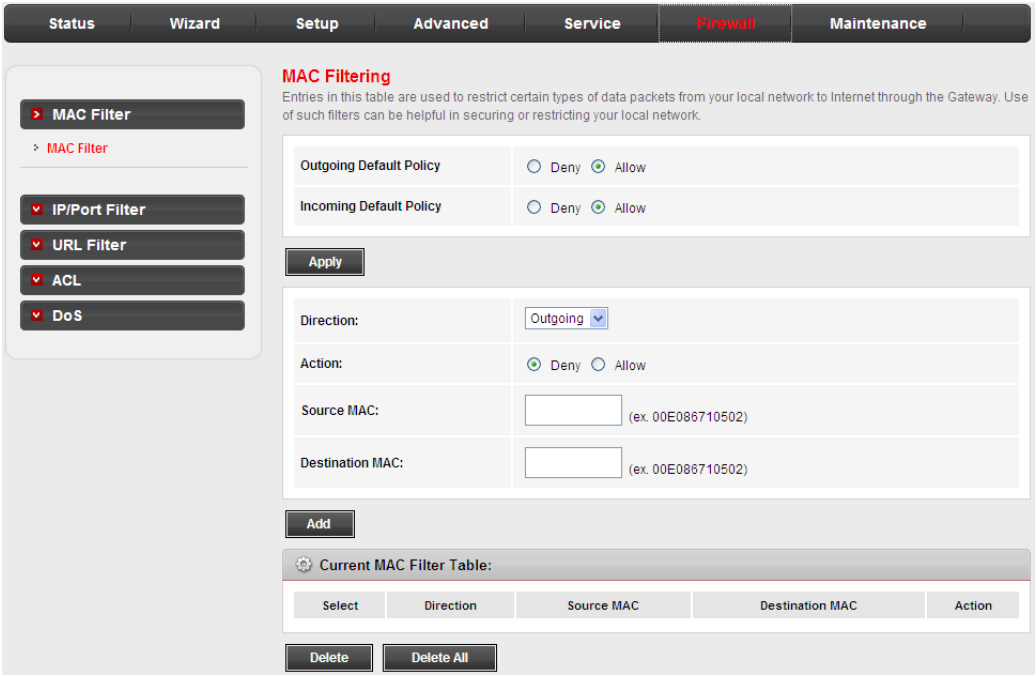
This page is used to start the FTP Server.



4.4. Firewall

4.4.1. MAC Filter

Click **MAC Filter** in the left pane, the page shown in the following figure appears. Entries in the table are used to restrict certain types of data packets from your local network to Internet through the gateway. These filters are helpful in securing or restricting your local network.



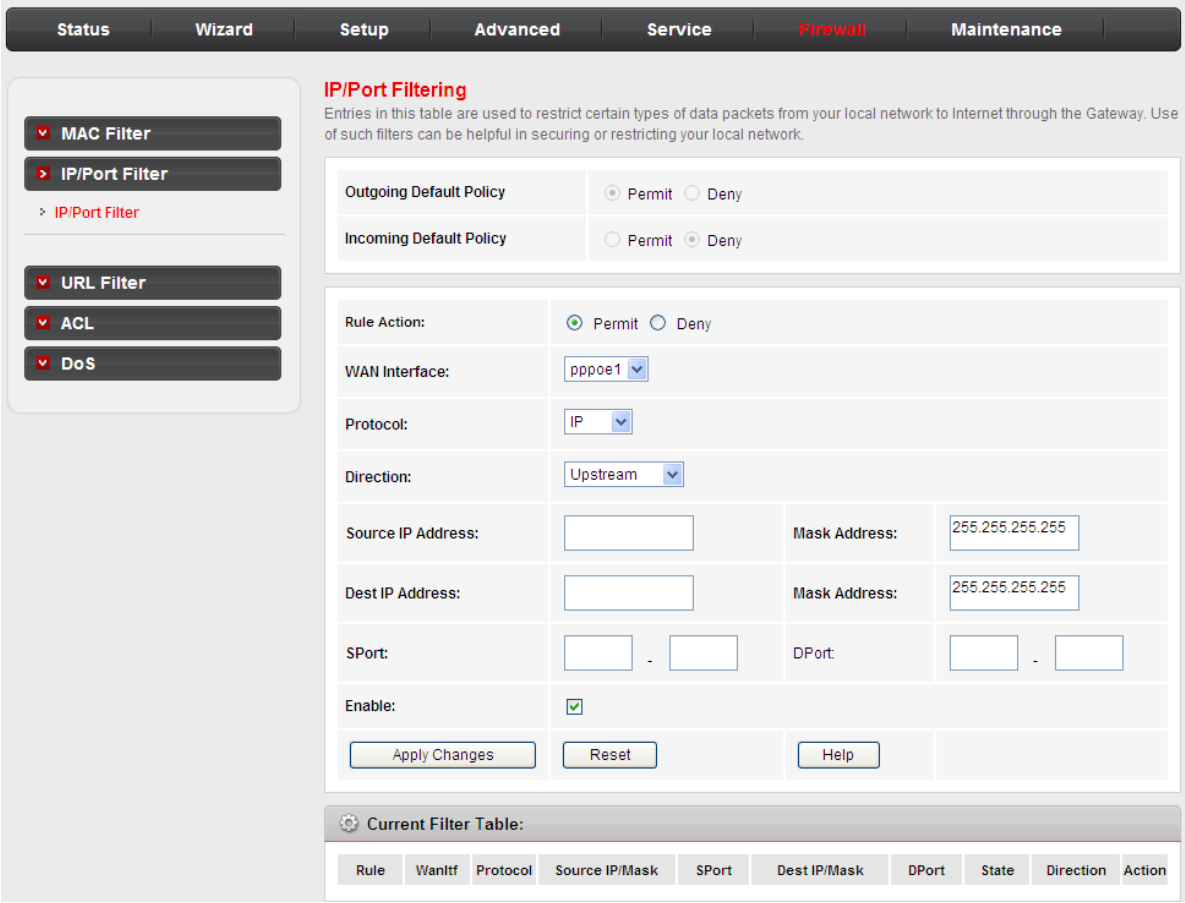
4.4.2. IP/Port Filter

Choose **Firewall** > **IP/Port Filter**, the page shown in the following figure appears. The page that is displayed contains **IP/Port Filter**.

4.4.2.1. IP/Port Filter

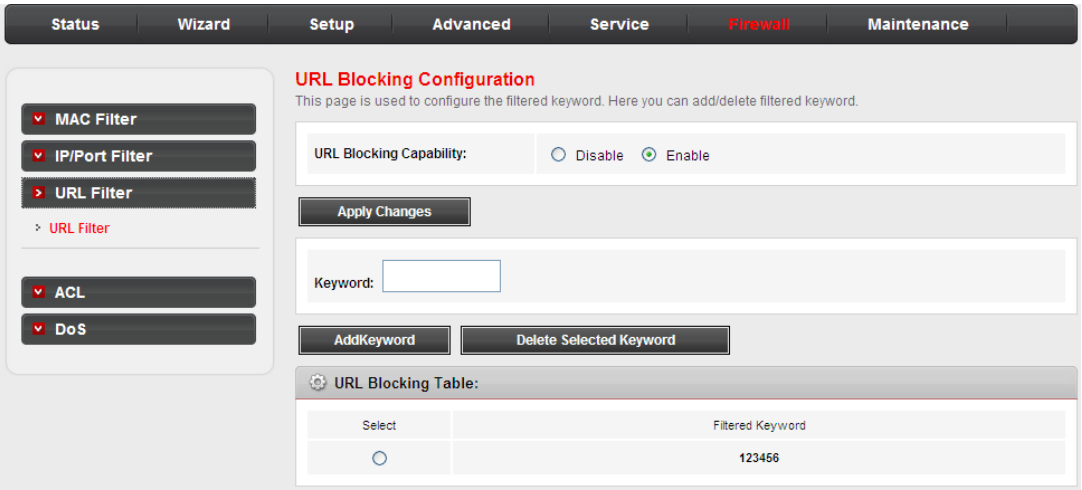
Click **IP/Port Filter** in the left pane, the page shown in the following figure appears.

Entries in the table are used to restrict certain types of data packets through the gateway. These filters are helpful in securing or restricting your local network.



4.4.3. URL Filter

Choose **Firewall** > **URL Filter**, the page shown in the following figure appears. This page is used to configure the filtered keyword. Here you can add/delete filtered keyword



4.4.4. ACL

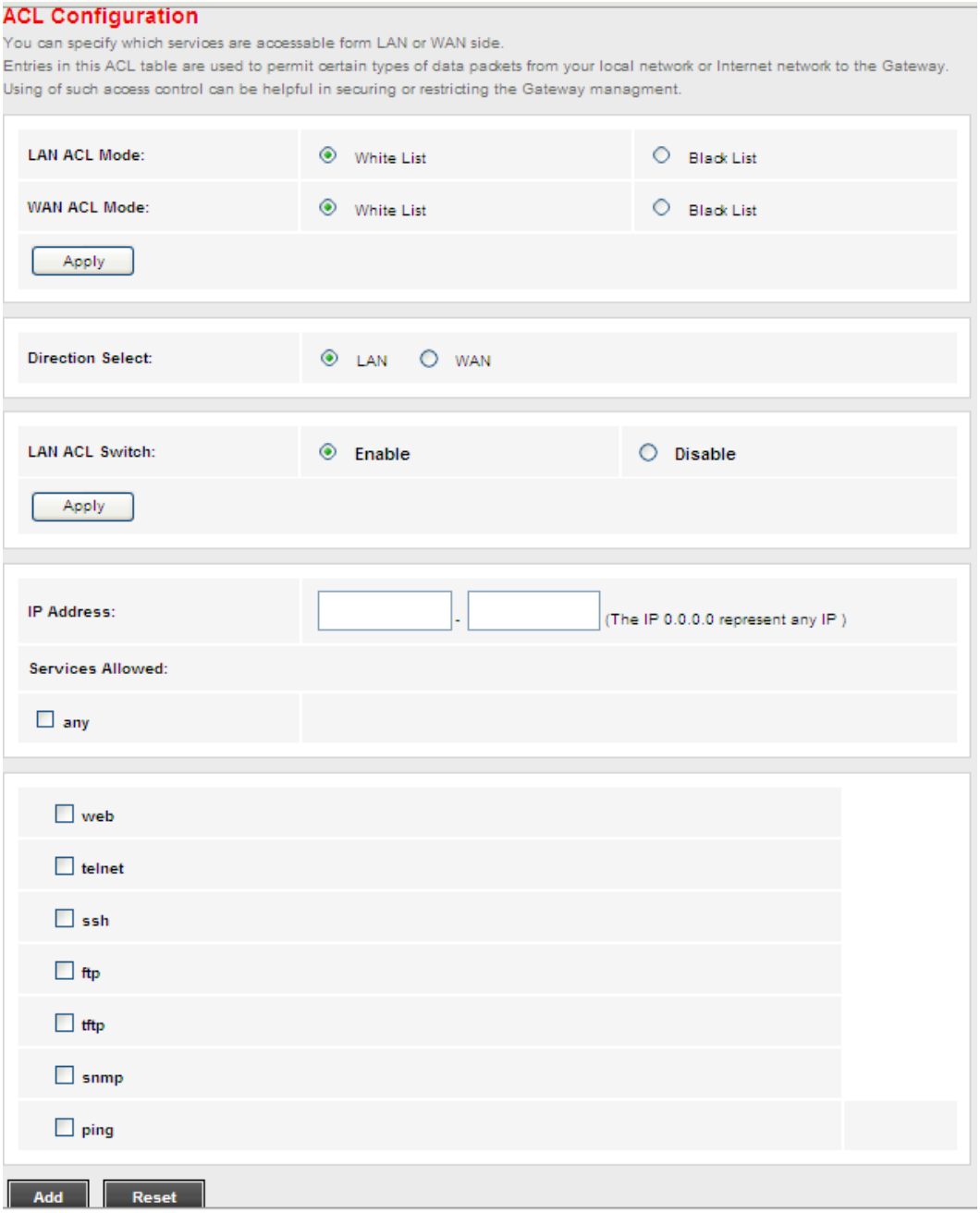
Choose **Firewall** > **ACL**, the page shown in the following figure appears. The page that is displayed contains **ACL.**

4.4.4.1. ACL

Click **ACL** in the left pane, the page shown in the following figure appears. In this page, you can permit the data packets from LAN or WAN to access the router. You can configure the IP address for Access Control List (ACL). If ACL is enabled, only the effective IP address in the ACL can access the router.

Note:

If you select **Enable** in ACL capability, ensure that your host IP address is in ACL list before it takes effect.

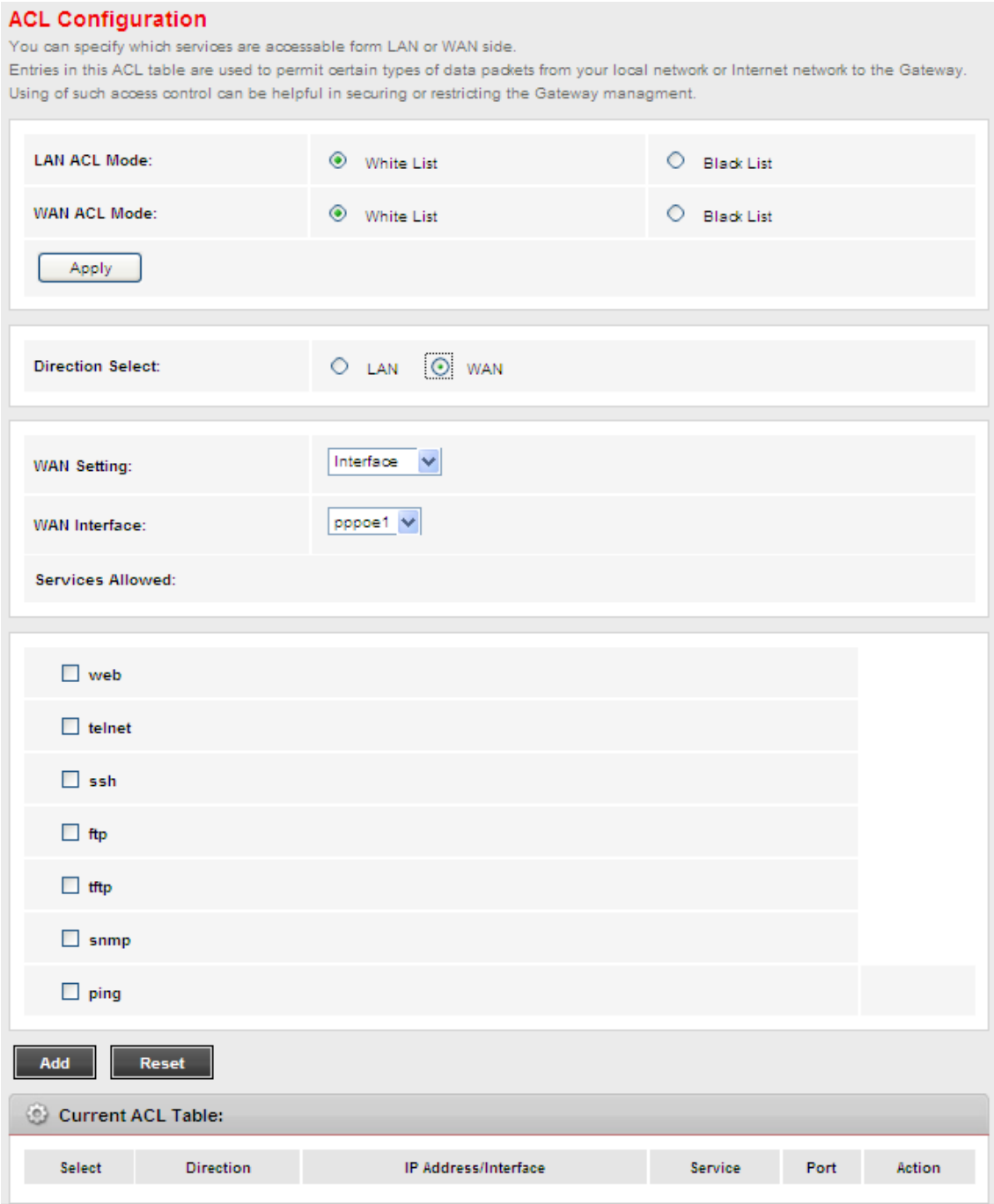


The following table describes the parameters and buttons of this page.

Field	Description
Direction Select	Select the router interface. You can select **LAN** or **WAN**. In this example, **LAN** is selected.
LAN ACL Switch	Select it to enable or disable ACL function.
IP Address	Enter the IP address of the specified interface. Only the IP address that is in the same network segment with the IP address of the specified interface can access the router.
Services	You can choose the following services from LAN: **Web**, **Telnet**, **FTP**, **TFTP**,

Field	Description
Allowed	**SNMP** or **PING**. You can also choose all the services.
Add	After setting the parameters, click it to add an entry to the **Current ACL Table**.
Reset	Click it to refresh this page.

Set direction of the data packets to **WAN**, the page shown in the following figure appears.



The following table describes the parameters and buttons of this page.

Field	Description
Direction Select	Select the router interface. You can select **LAN** or **WAN**. In this example, **WAN** is selected.
WAN Setting	You can choose **Interface** or **IP Address**.
WAN Interface	Choose the interface that permits data packets from WAN to access the router.
IP Address	Enter the IP address on the WAN. Only the IP address that is in the same network segment with the IP address on the WAN can access the router.
Services Allowed	You can choose the following services from WAN: **Web**, **Telnet**, **FTP**, **TFTP**, **SNMP**, or **PING**. You can also choose all the services.
Add	After setting the parameters, click it to add an entry to the **Current ACL Table**.
Reset	Click it to refresh this page.

4.4.5. DoS

Denial-of-Service Attack (DoS attack) is a type of attack on a network that is designed to bring the network to its knees by flooding it with useless traffic.

Choose **Firewall** > **DoS**, the page shown in the following figure appears. In this page, you can prevent DoS attacks.

DoS Setting

A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

- [ ] Enable DoS Prevention

[ ] Whole System Flood: SYN	100	Packets/Second
[ ] Whole System Flood: FIN	100	Packets/Second
[ ] Whole System Flood: UDP	100	Packets/Second
[ ] Whole System Flood: ICMP	100	Packets/Second
[ ] Per-Source IP Flood: SYN	100	Packets/Second
[ ] Per-Source IP Flood: FIN	100	Packets/Second
[ ] Per-Source IP Flood: UDP	100	Packets/Second
[ ] Per-Source IP Flood: ICMP	100	Packets/Second
[ ] TCP/UDP PortScan	Low	Sensitivity
[ ] ICMP Smurf		
[ ] IP Land		
[ ] IP Spoof		
[ ] IP TearDrop		
[ ] PingOfDeath		
[ ] TCP Scan		
[ ] TCP SynWithData		
[ ] UDP Bomb		
[ ] UDP EchoChargen		

Select ALL | Clear ALL

[ ] Enable Source IP Blocking	300	Block time (sec)

Apply Changes

4.5. Maintenance

In the navigation bar, click **Maintenance**. The **Maintenance** page that is displayed contains **Update**, **Password**, **Reboot**, **Time**, **Log** and **Diagnostics**.

4.5.1. Update

Choose **Maintenance** > **Update**. The **Update** page that is displayed contains **Firmware Update** and **Backup/Restore**.

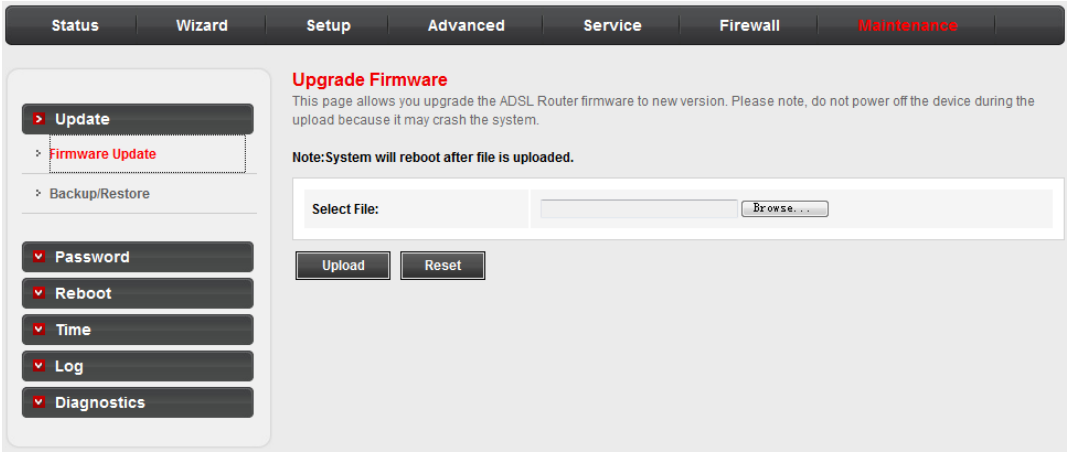
Caution:

Do not turn off the router or press the Reset button while the procedure is in progress.

4.5.1.1. Firmware Update

Click **Upgrade Firmware** in the left pane, the page shown in the following figure appears.

In this page, you can upgrade the firmware of the router.



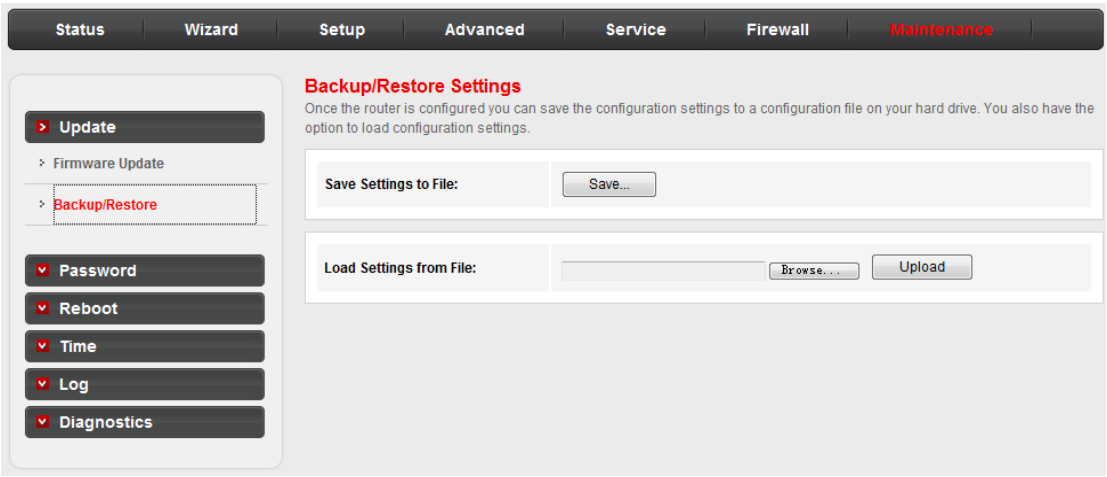
The following table describes the parameters and button of this page.

Field	Description
Select File	Click **Browse** to select the firmware file.
Upload	After selecting the firmware file, click **Upload** to starting upgrading the firmware file.
Reset	Click it to starting selecting the firmware file.

4.5.1.2. Backup/Restore

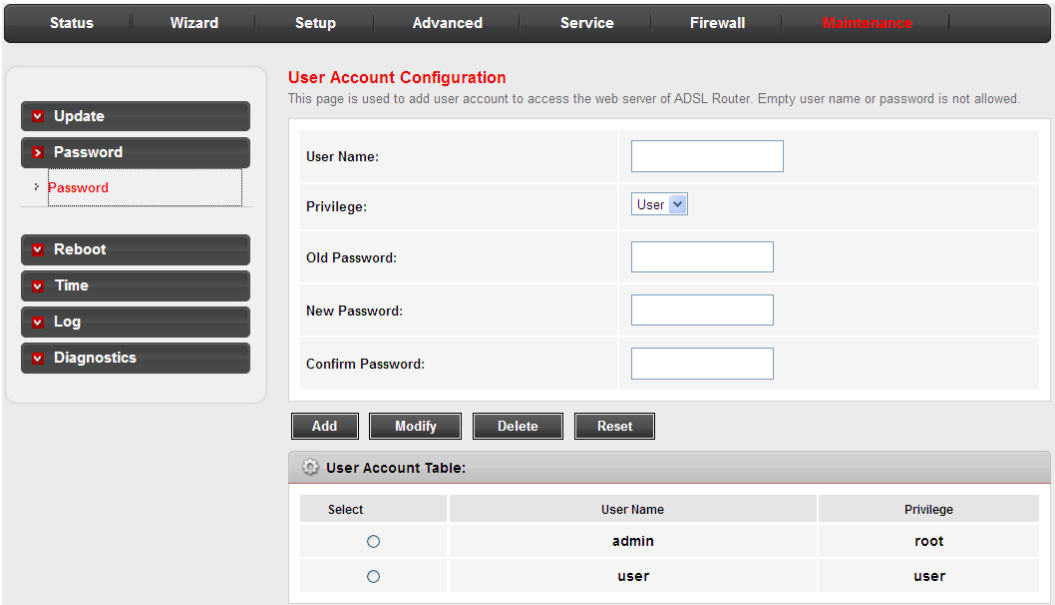
Click **Backup/Restore** in the left pane, the page shown in the following figure appears.

You can backup the current settings to a file and restore the settings from the file that was saved previously.



4.5.2. Password

Choose **Maintenance** > **Password**, the page shown in the following figure appears. By default, the user name and password are **admin** and **admin** respectively. The common user name and password are **user** and **user** respectively.

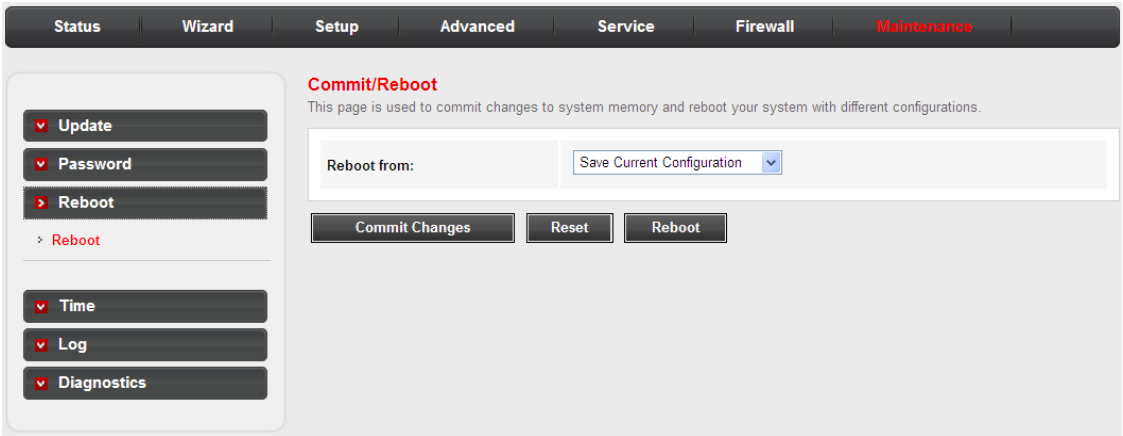


The following table describes the parameters of this page.

Field	Description
User Name	Choose the user name for accessing the router. You can choose **admin** or **user**.
Privilege	Choose the privilege for the account.
Old Password	Enter the old password
New Password	Enter the password to which you want to change the old password.
Confirm Password	Enter the new password again.

4.5.3. Reboot

Choose **Maintenance** > **Reboot**, the page shown in the following figure appears. You can set the router reset to the default settings or set the router to commit the current settings.

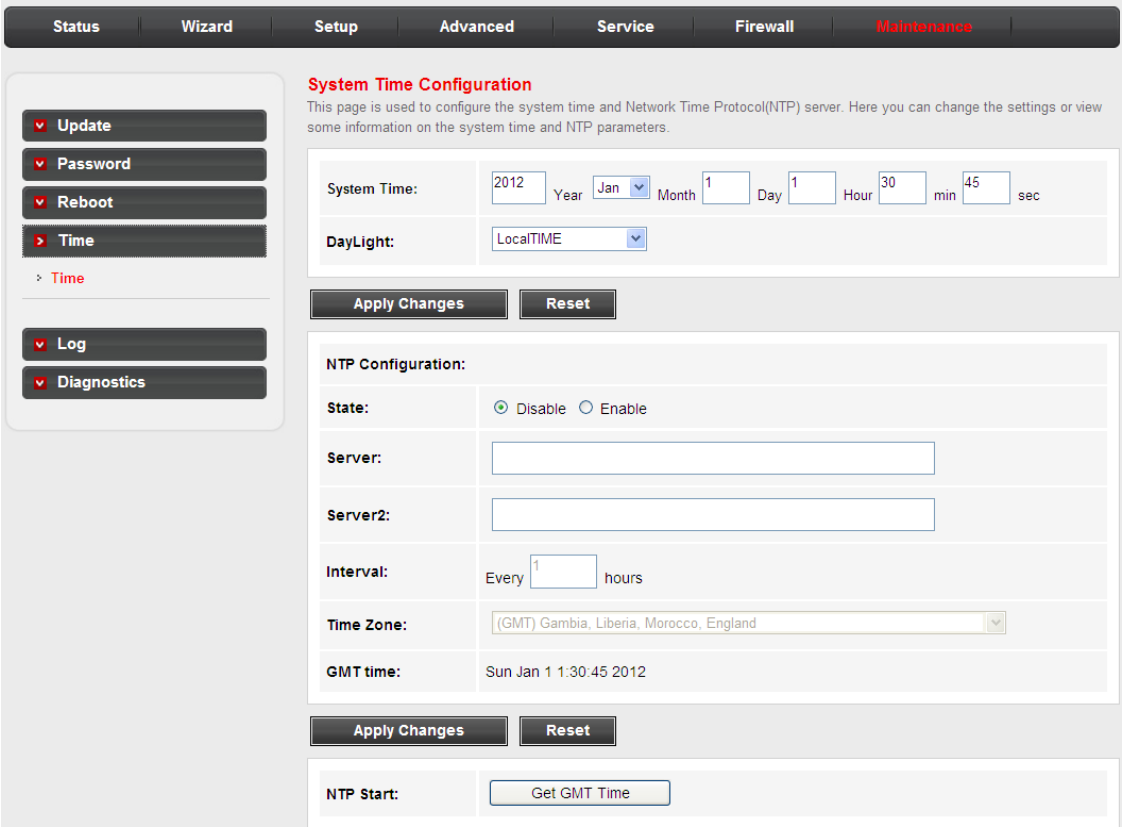


The following table describes the parameters and button of this page.

Field	Description
Reboot from	You can choose **Save Current Configuration** or **Factory Default Configuration**. Click **Reboot** to reboot the router. ● **Save Current Configuration**: Save the current settings, and then reboot the router. ● **Factory Default Configuration**: Reset to the factory default settings, and then reboot the the router.

4.5.4. Time

Choose **Maintenance** > **Time**, the page shown in the following figure appears. You can configure the system time manually or get the system time from the time server.

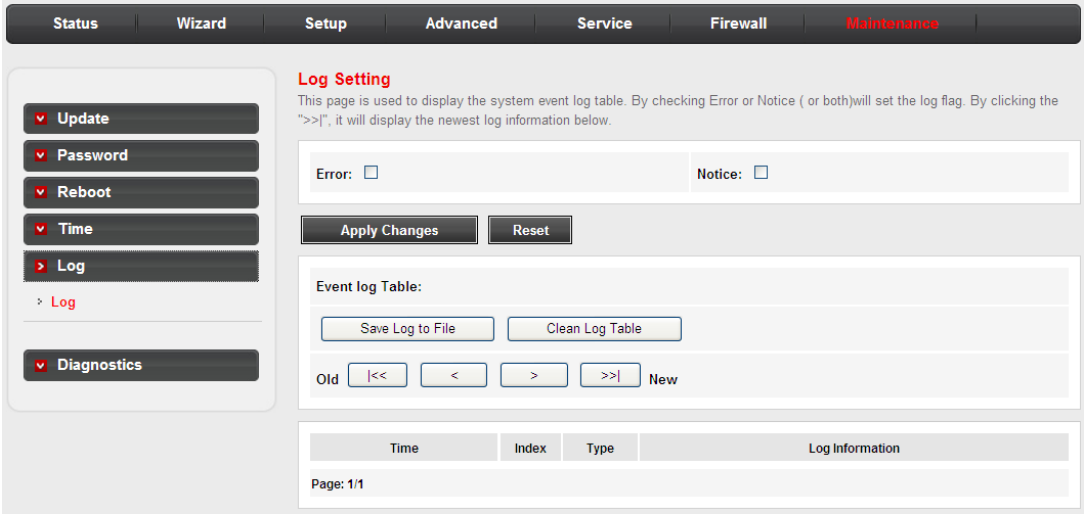


The following table describes the parameters of this page.

Field	Description
System Time	Set the system time manually.
NTP Configuration	
State	Select enable or disable NTP function. You need to enable NTP if you want to configure the parameters of NTP.
Server	Set the primary NTP server manually.
Server2	Set the secondary NTP server manually.
Time Zone	Choose the time zone in which area you are from the drop down list.

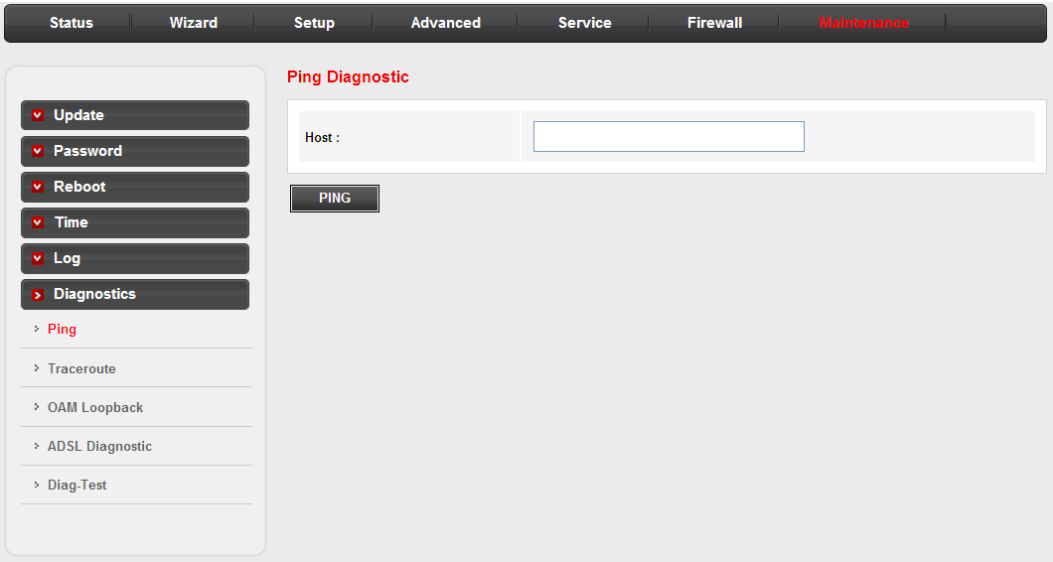
4.5.5. Log

Choose **Maintenance** > **Log**, the page shown in the following figure appears. In this page, you can enable or disable system log function and view the system log.



4.5.6. Diagnostics

Choose **Maintenance** > **Diagnostics**, the page shown in the following page appears. The page that is displayed contains **Ping**, **Tracert**, **OAM Loopback**, **ADSL Diagnostic** and **Diag-test**. Select the option that you want to run diagnostics.



5. Trouble Shooting

Question	Answer
Why are all the indicators off?	• Check the connection between the power adapter and the power socket. • Check whether the power switch is turned on.
Why is the **LAN** indicator off?	• Check the connection between the device and your PC, hub or switch. • Check the running status of the computer, hub, or switch.
Why is the **ADSL** indicator off?	Check the connection between the **Line** port of the device and the wall jack.
Why does Internet access fail while the ADSL indicator is on?	Check whether the VPI, VCI, user name and password are correctly entered.
Why can I not access the web configuration page of the DSL router?	Choose **Start** > **Run** from the desktop, and ping ***192.168.2.1*** (IP address of the DSL router). If the DSL router is not reachable, check the type of network cable, the connection between the DSL router and the PC, and the TCP/IP configuration of the PC.
How to load the default settings after incorrect configuration?	To restore the factory default settings, turn on the device, and press the reset button for about 3 seconds, and then release it. The default IP address and the subnet mask of the DSL router are **192.168.2.1** and **255.255.255.0**, respectively. • User/password of super user: **admin/1234** • User/password of common user: **user/user**

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 2.5cm (1 inch) during normal operation.

Federal Communications Commission (FCC) RF Exposure Requirements

SAR compliance has been established in the laptop computer(s) configurations with PCMCIA slot on the side near the center, as tested in the application for certification, and can be used in laptop computer(s) with substantially similar physical dimensions, construction, and electrical and RF characteristics. Use in other devices such as PDAs or lap pads is not authorized. This transmitter is restricted for use with the specific antenna tested in the application for certification. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

RED Compliance Statement

Compliance with 2014/53/EU Radio Equipment Directive (RED)

In accordance with Article 10.8(a) and 10.8(b) of the RED, the following table provides information on the frequency bands used and the maximum RF transmit power of the product for sale in the EU:

Frequency range (MHz)	Max. Transmit Power (dBm/mW)
WLAN Wi-FI 802.11b/g/n; 2, 4 GHz	100 mW

A simplified DoC shall be provided as follows: Article 10(9)

Hereby, **Edimax Technology Co., Ltd.** declares that the radio equipment type **N300 Wireless ADSL2/2+ Modem router** is in compliance with Directive 2014/53/EU

The full text of the EU declaration of conformity is available at the following internet address: http://www.edimax.com/edimax/global/

Safety
This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

EU Countries Intended for Use
The ETSI version of this device is intended for home and office use in Austria, Belgium, Bulgaria, Cyprus, Czech, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, and United Kingdom. The ETSI version of this device is also authorized for use in EFTA member states: Iceland, Liechtenstein, Norway, and Switzerland.

EU Countries Not Intended for Use
None

EU Declaration of Conformity

English: This equipment is in compliance with the essential requirements and other relevant provisions of Directive 2006/95/EC, 2011/65/EC.

Français: Cet équipement est conforme aux exigences essentielles et autres dispositions de la directive 2006/95/CE, 2011/65/CE.

Čeština: Toto zařízení je v souladu se základními požadavky a ostatními příslušnými ustanoveními směrnic 2006/95/ES, 2011/65/ES.

Polski: Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE 2006/95/EC, 2011/65/EC..

Română: Acest echipament este în conformitate cu cerinţele esenţiale şi alte prevederi relevante ale Directivei 2006/95/CE, 2011/65/CE.

Русский: Это оборудование соответствует основным требованиям и положениям Директивы 2006/95/EC, 2011/65/EC.

Magyar: Ez a berendezés megfelel az alapvető követelményeknek és más vonatkozó irányelveknek (2006/95/EK, 2011/65/EK).

Türkçe: Bu cihaz 2006/95/EC, 2011/65/EC direktifleri zorunlu istekler ve diğer hükümlerle ile uyumludur.

Українська: Обладнання відповідає вимогам і умовам директиви 2006/95/EC, 2011/65/EC.

Slovenčina: Toto zariadenie spĺňa základné požiadavky a ďalšie príslušné ustanovenia smerníc 2006/95/ES, 2011/65/ES.

Deutsch: Dieses Gerät erfüllt die Voraussetzungen gemäß den Richtlinien 2006/95/EC, 2011/65/EC.

Español: El presente equipo cumple los requisitos esenciales de la Directiva 2006/95/EC, 2011/65/EC.

Italiano: Questo apparecchio è conforme ai requisiti essenziali e alle altre disposizioni applicabili della Direttiva 2006/95/CE, 2011/65/CE.

Nederlands: Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van richtlijn 2006/95/EC, 2011/65/EC..

Português: Este equipamento cumpre os requesitos essênciais da Directiva 2006/95/EC, 2011/65/EC.

Norsk: Dette utstyret er i samsvar med de viktigste kravene og andre relevante regler i Direktiv 2006/95/EC, 2011/65/EC.

Svenska: Denna utrustning är i överensstämmelse med de väsentliga kraven och övriga relevanta bestämmelser i direktiv 2006/95/EG, 2011/65/EG.

Dansk: Dette udstyr er i overensstemmelse med de væsentligste krav og andre relevante forordninger i direktiv 2006/95/EC, 2011/65/EC.

suomen kieli: Tämä laite täyttää direktiivien 2006/95/EY, 2011/65/EY oleelliset vaatimukset ja muut asiaankuuluvat määräykset.

FOR USE IN AT BE CY CZ DK EE FI FR DE GR HU IE IT LV LT LU MT NL PL PT SK SI ES SE GB IS LI NO CH BG RO RU TR UA

WEEE Directive & Product Disposal

At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

Declaration of Conformity

We, Edimax Technology Co., LTD., declare under our sole responsibility, that the equipment described below complies with the requirements of the European Council directive (2014/53/EU).

Equipment : **N300 Wireless ADSL2/2+ Modem router**
Model No. : **AR-7287WnA**

The following European standards for essential requirements have been followed:

Spectrum : **ETSI EN 300 328 : V2.1.1(2016-11)**
EMC : **EN 301 489-1 V2.1.1(2017-02)**
EN 301 489-17 V3.1.1(2017-02)
EMF : **EN 62311：2008**
Safety : **IEC 60950-1 :**
(LVD) **2005+A1 :2009+A2:2013**
EN 60950-1 :
2006+A11:2009+A1:2010+A12:2011+A2:2013

Edimax Technology Co., Ltd.
No. 3, Wu Chuan 3rd Road,
Wu-Ku Industrial Park.
New Taipei City, Taiwan

Date of Signature: April, 2017
Signature:

Printed Name: Albert Chang
Title: : Director
Edimax Technology Co., Ltd.

EDIMAX
NETWORKING PEOPLE TOGETHER

Edimax Technology Co., Ltd.
No.3, Wu-Chuan 3rd Road, Wu-Gu,
New Taipei City 24891, Taiwan

Edimax Technology Europe B.V.
Nijverheidsweg 25 5683 CJ Best
The Netherlands

Edimax Computer Company
3350 Scott Blvd., Bldg.15 Santa Clara,
CA 95054, USA

www.edimax.com