TD-8810/TD-8810B User Guide

External ADSL ROUTER

Rev：1.0.1

COPYRIGHT & TRADEMARKS

Specifications are subject to change without notice. TP-LINK® is a registered trademark of TP-LINK TECHNOLOGIES CO., LTD. Other brands and product names are trademarks or registered trademarks of their respective holders.

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to pro-vide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled 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:

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

CE Mark Warning

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

EC DECLARATION OF CONFORMITY (EUROPE)

In compliance with the EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC, this product meets the requirements of the following standards:

• EN55022

• EN55024

• EN60950

SAFETY NOTICES

Caution:

Do not use this product near water, for example, in a wet basement or near a swimming pool.

Package contents

The following contents should be found in your box:

- One TD-8810/TD-8810B External ADSL ROUTER
- One AC power Adapter for TD-8810 External ADSL ROUTER
- One Resource CD for TD-8810 External ADSL ROUTER, including:
  - This Guide
  - Quick installation Guide Program
  - Other Helpful Information
- Quick installation Guide
- One RJ45 cable
- Two RJ11 cable
- One ADSL splitter (Only for TD-8810)

☞ **Note:**

If any of the listed contents are damaged or missing, please contact the retailer from whom you purchased the product for assistance.

COMMENT

Chapter 1. Introduction

1.1 Product Overview

TP-LINK® TD-8810/TD-8810B External ADSL ROUTER is the latest product designed and manufactured by TP-LINK TECHNOLOGIES CO., LTD. With TP-LINK's excellent circuit design and high quality production, we guarantee the ADSL ROUTER's high performance, great stability and easy to use.

The TD-8810/TD-8810B uses integrated ADSL transceiver. The AFE supports full-rate ADSL connectivity conforming to the ITU and ANSI specifications.

In addition to the basic DMT physical layer functions, the ADSL PHY supports dual latency ADSL framing (fast and interleaved) and the I.432 ATM Physical Layer.

The TD-8810/TD-8810B is a complete plug-and-play solution. With standard Ethernet interface, it can be directly connected to any 10M/100M Ethernet devices, support Auto-MDIX.

The TD-8810/TD-8810B not only uses html (web mode through Ethernet port) to configure the ROUTER but also uses external utility software. You can download it from our website (http://www.tp-link.com).

1.2 Main Features

- High speed and asymmetry data transmit mode, provides safe and exclusive bandwidth
- Support All ADSL industrial standards
- Compatible with all mainstream DSLAM (CO)
- Firmware upgradeable
- Provide integrated access of internet and route function which face to SOHO user
- Advanced DMT modulation and demodulation
- Real-time Configuration and device monitoring
- Quick response semi-conductive surge protect circuit, provides reliable ESD and surge-protect function

1.3 Supporting protocol

- G.992.1 (G.dmt) - Annex A (TD-8810)/Annex B(TD-8810B)

- G.992.2 (G.lite) - Annex A(TD-8810)/Annex B(TD-8810B)

- ANSI T1.413

- G.992.3 (ADSL2) - Annex A(TD-8810)/Annex B(TD-8810B) and Annex M

- G.992.5 (ADSL2+) - Annex A(TD-8810)/Annex B(TD-8810B) and Annex M

- ADSL dual latency (fast path and interleaved path)

- I.432 ATM physical layer compliant

- Supports RFC2364 (PPPoA)

- Supports RFC2516 (PPPoE)

- Supports RFC2684 (EoA)(Bridged *and Router)

- Supports RFC1577 (IPoA)

☞ **Note:**

"*" Needs the third-party software.

1.4 Transmit data-rate

- Max download data-rate: 24Mbps
- Max upload data-rate: 1Mbps
- Max line length: 6Km

1.5 ATM propert

- AAL0, AAL5, OAM, RM, and raw cell types supported
- Direct hardware support for 4 Receive VCs, with additional RX VCs and TX VCs supported in software
- Full 24-bit Virtual Path Identifier (VPI) and Virtual Circuit Identifier (VCI)

1.6 System support

- Support PVC
- Support NAT、DHCP and so on
- Support IEEE 802.3、IEEE 802.3u
- Support 10Base-T/100BASE-TX full-duplex or half duplex Ethernet
- Support Auto-MDIX

1.7 Working environment

- Operating temperature: 0 ℃~40 ℃
- Storage temperature: -40 ℃~70 ℃
- Humidity: 10%~90% (non-condensing)

1.8 Electric parameter

- Adaptor power Output: 9VAC/0.8A，50Hz or 60 Hz
- Power consumption: 4W Maximum

1.9 Conventions

The Router or TD-8810/TD-8810B, or device mentioned in this User guide stands for TD-8810/TD-8810B External ADSL ROUTER without any explanations.

Parameters provided in the pictures are just references for setting up the product, which may differ from the actual situation.

You can set the parameters according to your demand.

Chapter 2. Hardware Installation

The TD-8810/TD-8810B maintains three separate interfaces, one Ethernet, one ADSL and one power adapter inerface.
The Router should not be located where it will be exposed to moisture or excessive heat.
Place the Router in a location where it can be safely connected to the various devices as well as to a power source.

2.1 System requirement

Confirm your computer has been installed with networking interface card (NIC) before connecting ADSL ROUTER to your computer, with operating system supporting the TCP/IP protocol.

2.1.1 LED explanation

The front panel of ADSL ROUTER includes one power indicator (RED) and seven function indicators (GREEN), as explained in chart below:

Indicator	Description	Status	Function Details
PWR	Power	On	Power OK
		Off	Power fail
ADSL	ADSL status	Slow flash	Self-detecting when power up
		Quick flash	Connecting to the telecom network
		On	Connection to telecom network OK
ALARM	Mistake	On	There is mistake when ADSL transmitting data or receiving data
		Off	ADSL normal
ACT	Data	On	There is data transmitting or receiving on WAN port
		Off	No data transmitting or receiving on WAN port
LAN	Ethernet	On	LAN port normal
		Off	Connection on LAN port abnormal
		Flash	Data transmitting or receiving on LAN port

2.2 Rear-panel

- **ON/OFF**: Turn on/off the ADSL ROUTER's power.
- **Power (9VAC/0.8A input)**: Please do not use any unknown power adaptor, otherwise your ADSL ROUTER may be damaged.
- **RESET(reset default)**: First press the reset button of ROUTER, then turn on the ROUTER's

power for at least three seconds. It will resume the default manufacturer's setup.

- **LAN**: Connect with your computer's NIC.
- **LINE(WAN)**: Connect to the MODEM Port of Splitter or Connecting the telephone line.

2.3 Hardware installation procedures

The procedure to install the Router can be described in general terms in the following steps:

First Step: Connect the MODEM port of Splitter with the TD-8810/TD-8810B ADSL ROUTER LINE port by telephone line. While you need to use a telephone, please attach telephone line into the phone of Splitter.

Second Step: Connect category 5 cable with RJ45 jacks to the ADSL ROUTER's LAN port and your computer's NIC.

Third Step: Plug one end of the AC Power Adapter into the Power jack on the Ethernet ADSL ROUTER and the other end to a standard electrical outlet.

Last Step: Check the line connection to see if everything is ready. Power up finally.

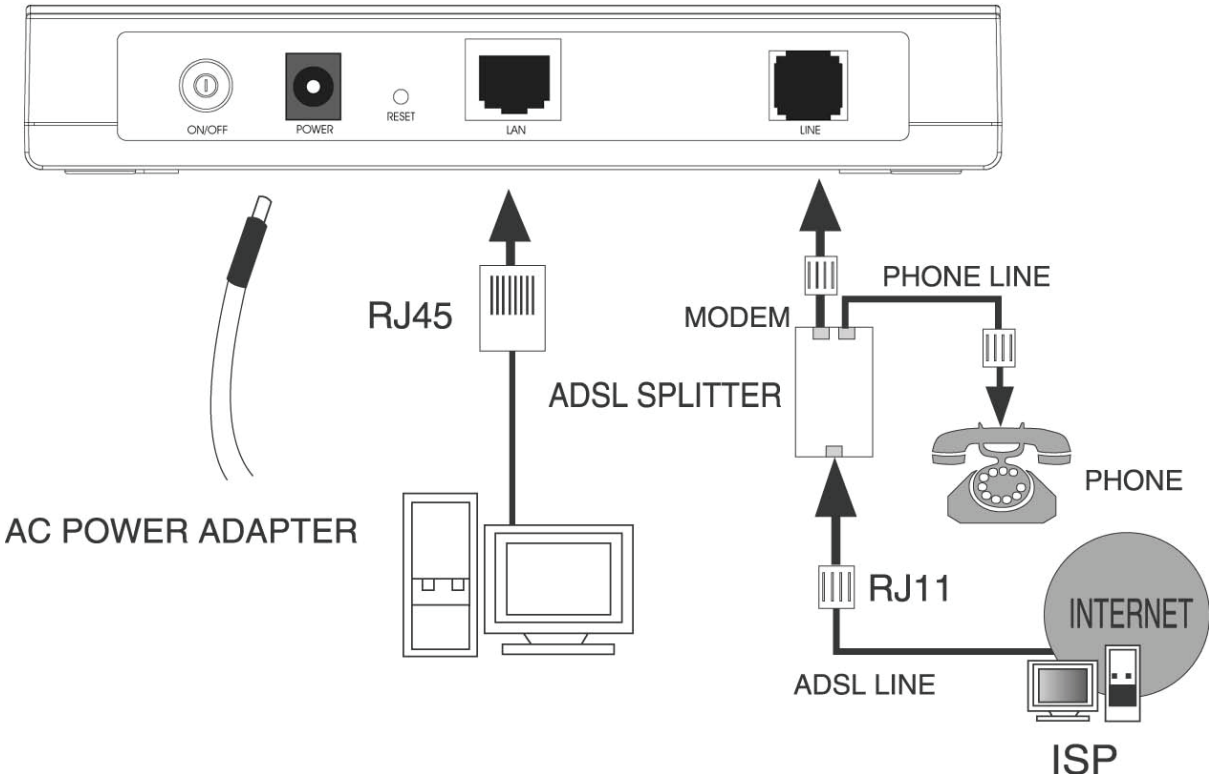

Figure 2-1

Chapter 3. System Configuration

3.1 Computer Configuration

1. Connect the cable according to Chapter 2, turn on the power.
2. Change the IP address of your PC（Figure 3-1）: Open TCP/IP Properties of the LAN card in your PC, enter the IP address as 192.168.1.*.

☞ **Note:**

(* is any value between 2 to 254, Net mask is 255.255.255.0, Gateway is 192.168.1.1, DNS address is the value provided by ISP).

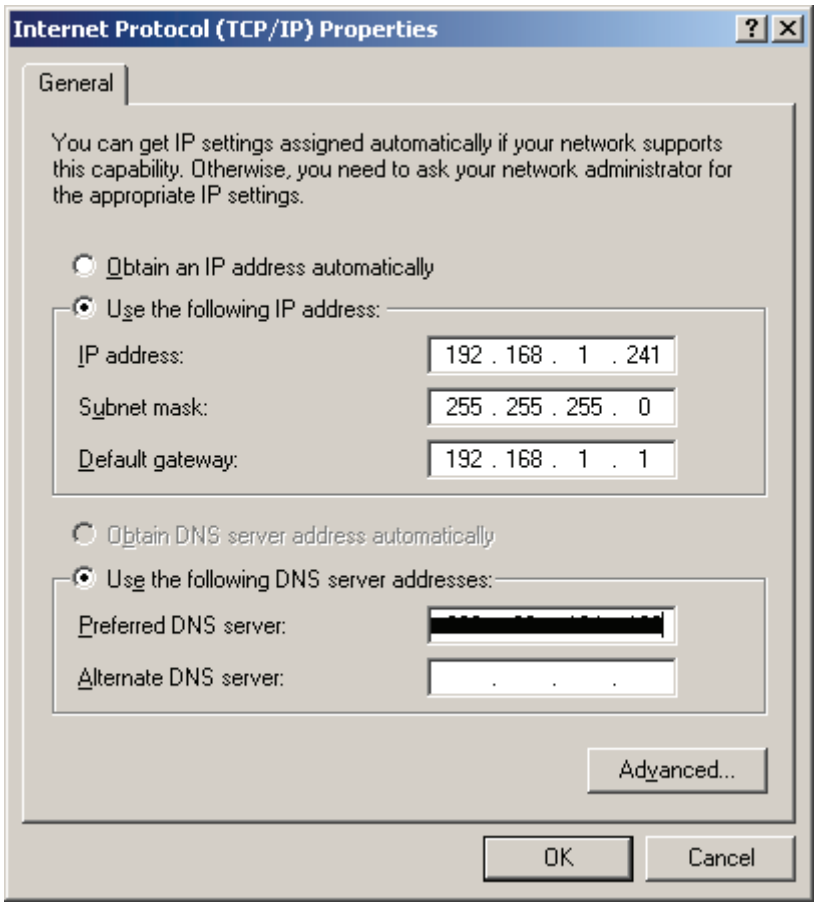

Figure 3-1

☞ **Note:**

Users of Windows 98 can open **TCP/IP Properties** according to the following: Right-click (Mouse) **Network Neighbor** -> Choose **Properties** -> Double-click **TCP/IP.**

Users of Windows 2000/NT/XP can do the following: Right-click **Network Neighbor** -> Choose **Properties** -> Right-click **Local Connection** -> Choose **Properties** -> Double-click **Internet Protocol (TCP/IP).**

☞ **Note:**

The words in fact may be different with this guide.

Remarks: you can check whether your configuration is successful through **PING** command. Enter **Ping 192.168.1.1**

If the screen looks like the following, you have been successful.

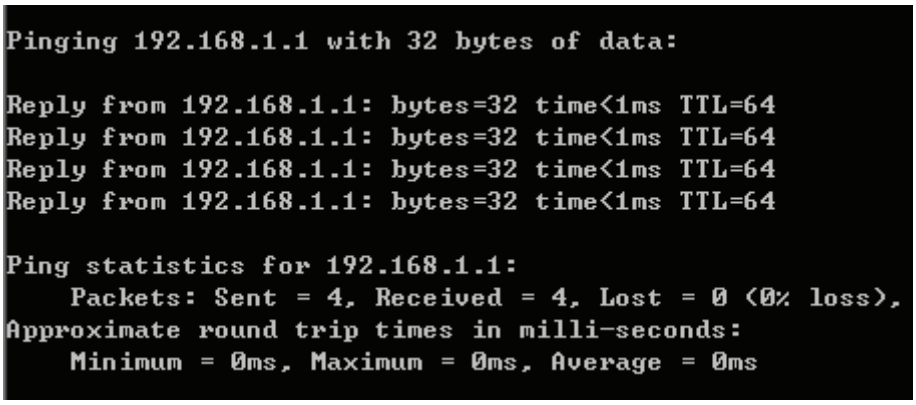

Figure 3-2

If the screen looks like the following, the connection has failed. Please try again.

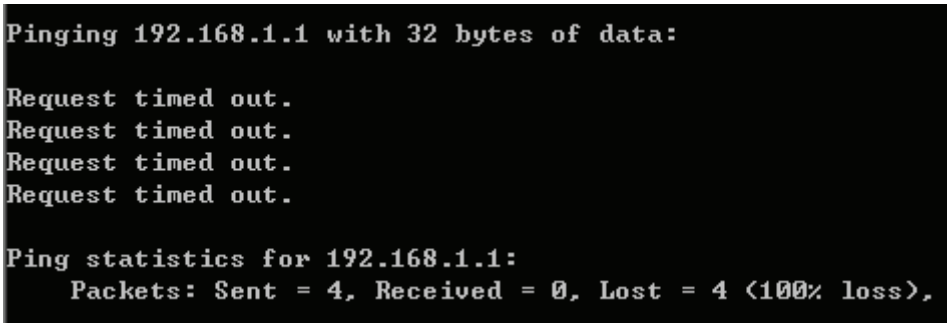

Figure 3-3

3.2 Login

Startup Internet Explorer, and enter 192.168.1.1;then enter default user name(admin)、password(admin), When ADSL connection is OK, you will see the Figure 3-2.

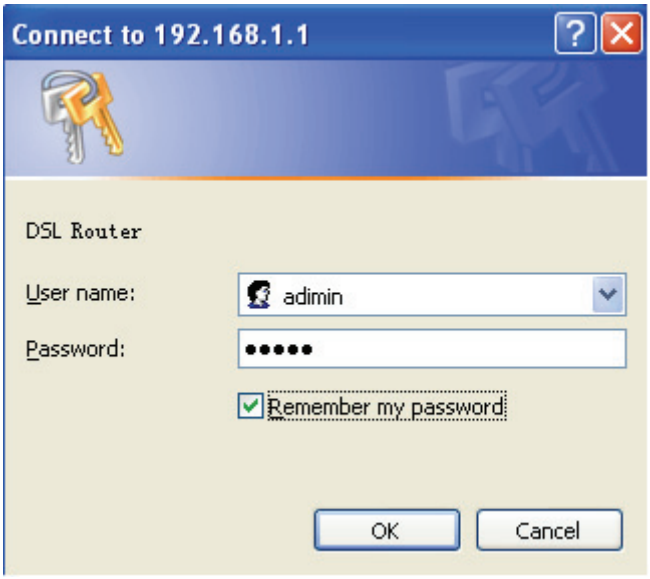

Figure 3-4

You will then see the Figure 3-5, you will see some information such as link rate and so on.

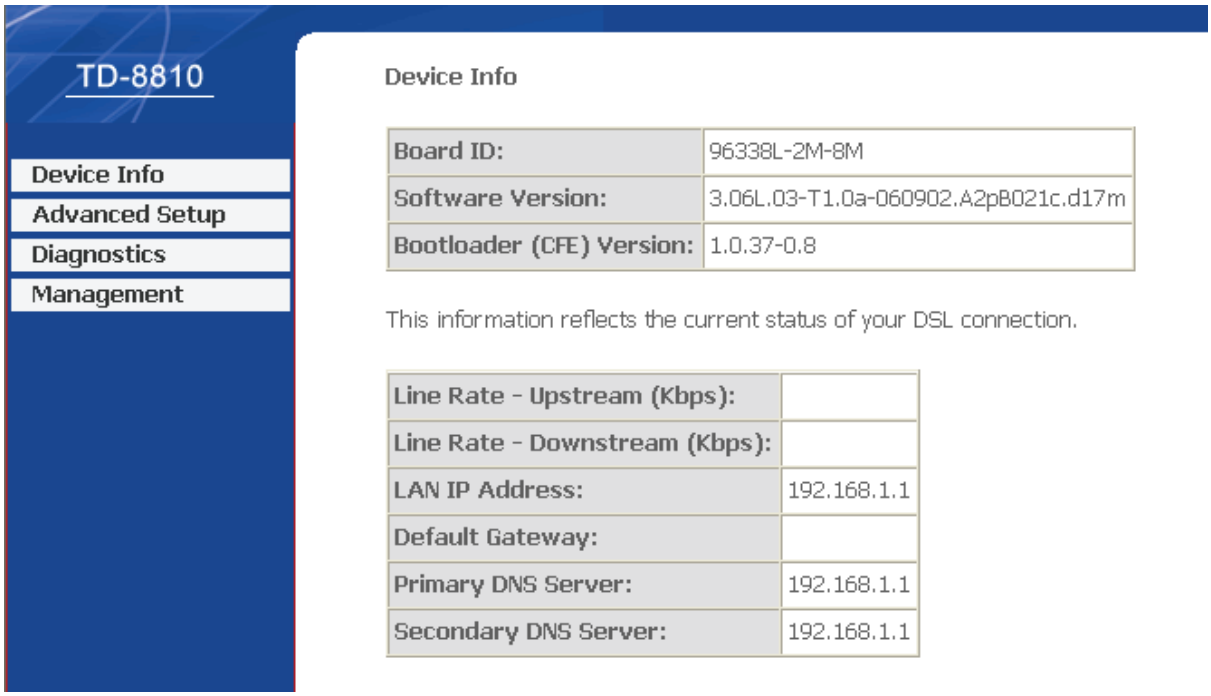

Figure 3-5

Default user name and password is “admin”; if you want to change them, please go to “Management” → “Access control”→“Passwords” changing them. (Figure 3-6)

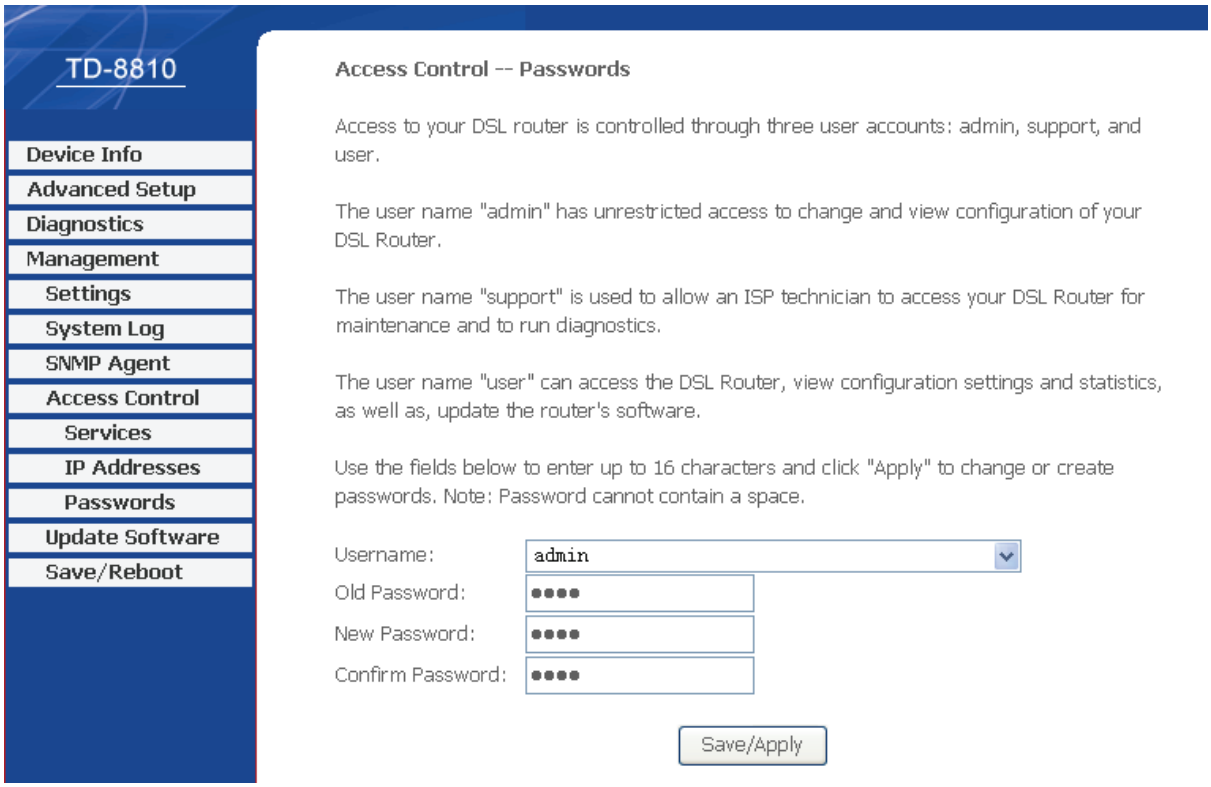

Figure 3-6

3.3 Web Setup

Choose "**Advanced Setup**"→"**WAN**", you will enter the page of Wide Area Network (WAN) Setup, you will see the Figure 3-7.

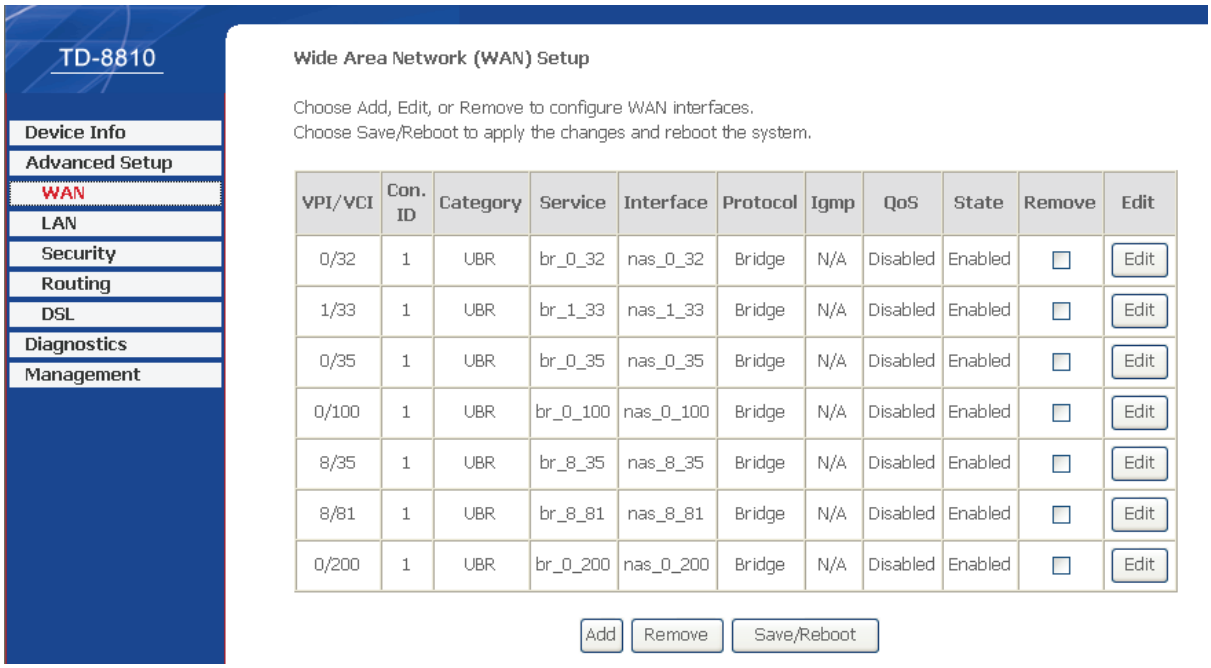

Figure 3-7

There are 7 PVC links in the **WAN** setup page, choose the appropriate PVC according to your

need, and then click the **edit** button, you will enter the page of ATM PVC Configuration (See Figure 3-8)

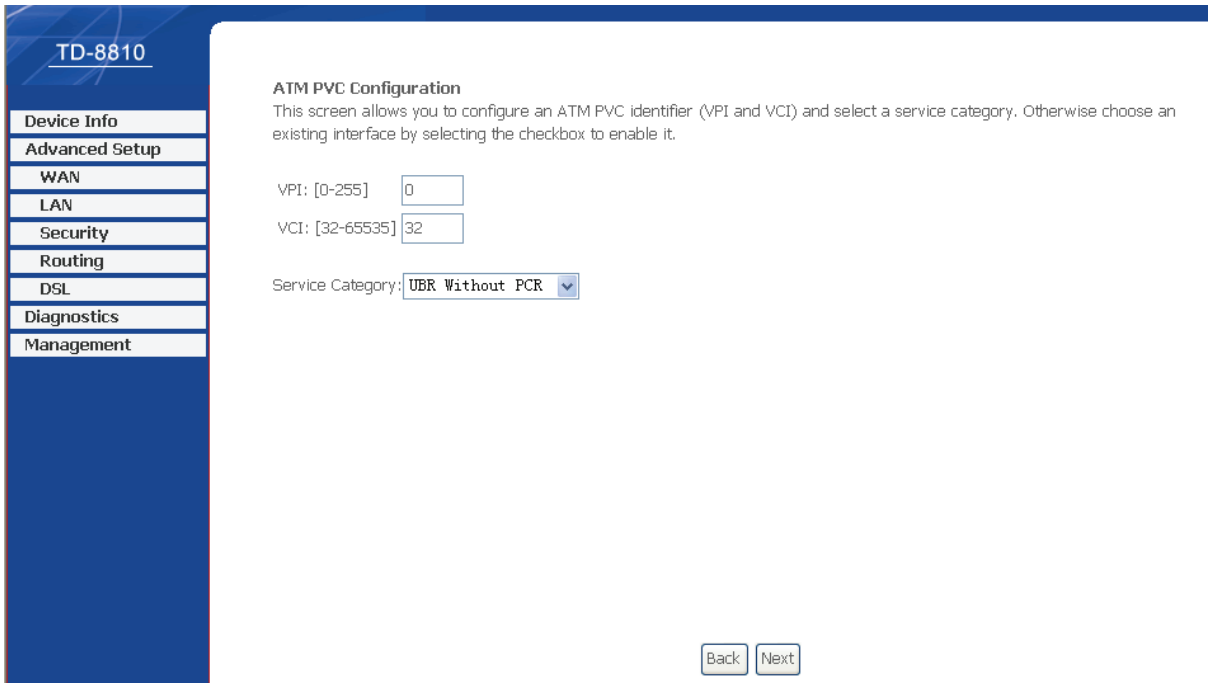

Figure 3-8

Enter **VPI/VCI** value and service category which is provided by your ISP, click **next** to enter the next step. You will see the Figure 3-9.

Note:

The type of network protocol selected may be different in different areas, there are five types （Figure 3-9）, So you should ask your ISP to acquire the local type of network protocol and Encapsulation mode.

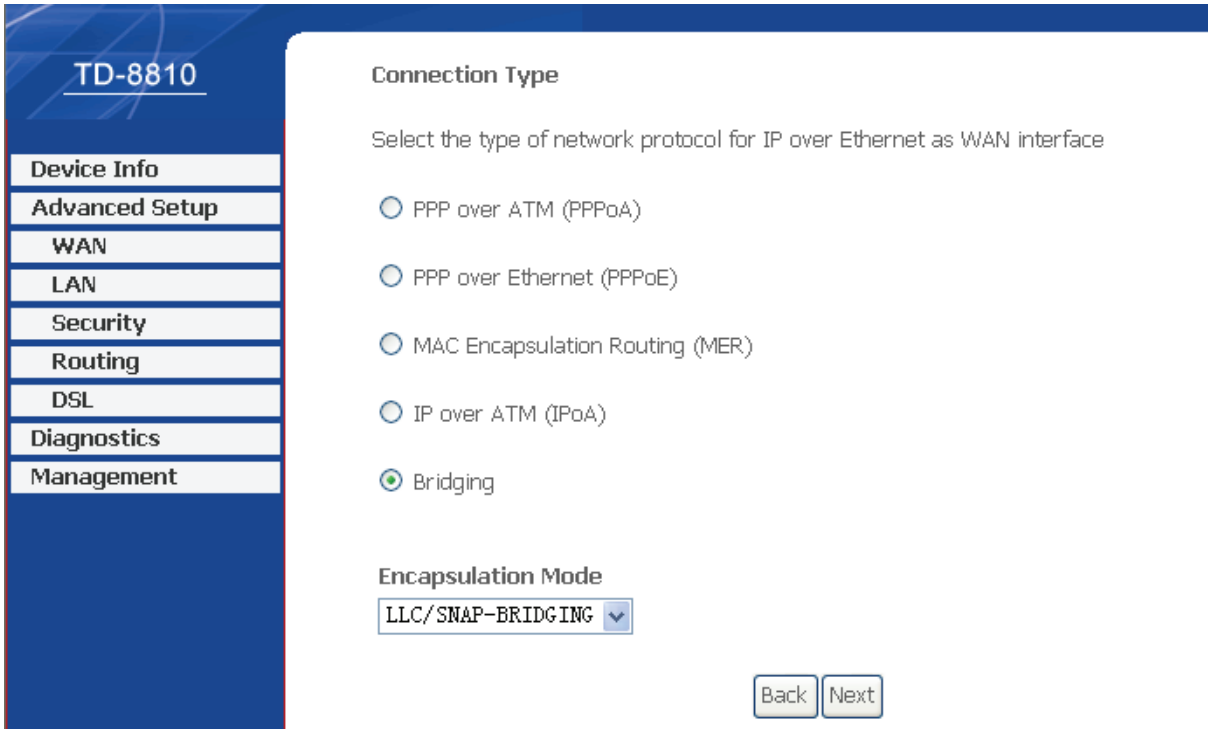

Figure 3-9

After choosing the proper protocol, enter the correct parameters supported by your ISP. Enable the configurations, then you will go to Internet.

➢ **PPP over ATM (PPPoA)**

If you select the protocol of PPP over ATM (PPPoA), you will see the Figure 3-10, enter the value of user name and password which is provided by your ISP, after selecting the other function(often using the default setup), click the **next** button.

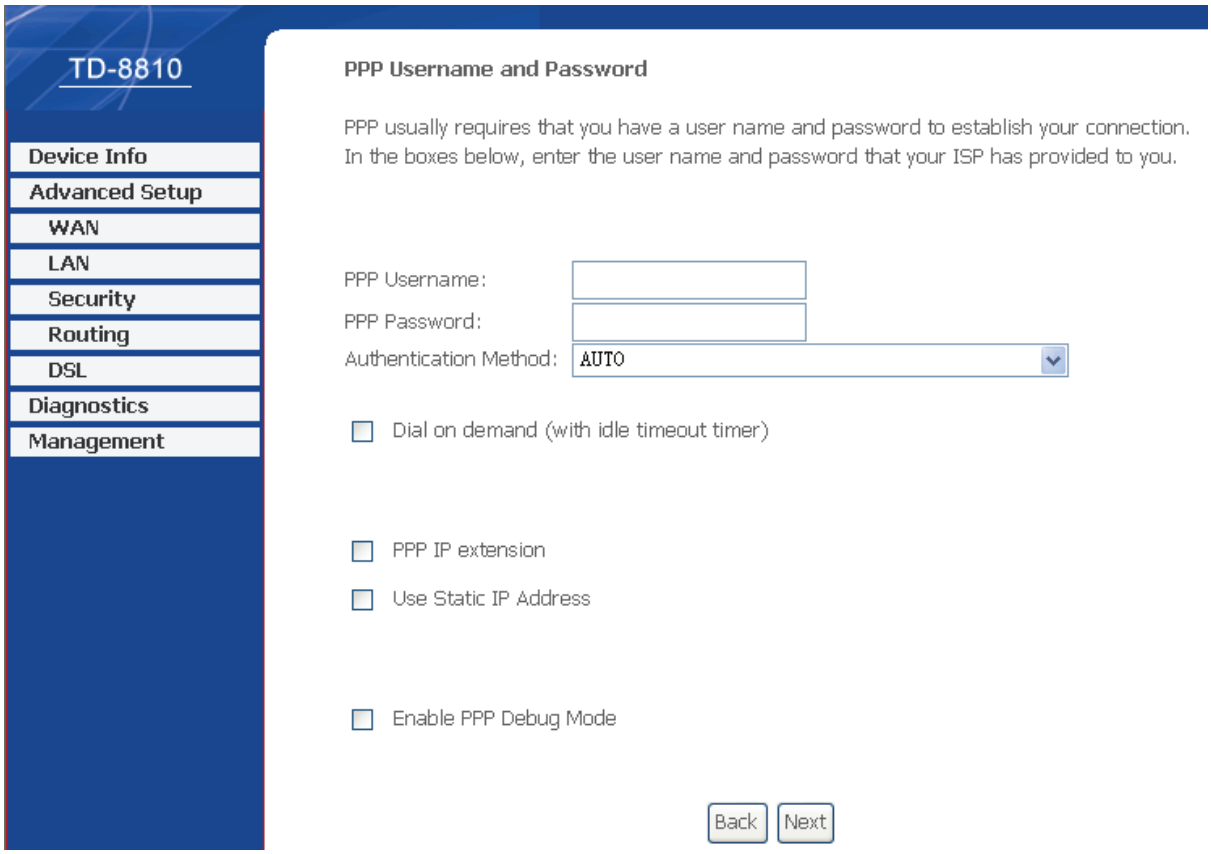

Figure 3-10

You will see the Figure 3-11, then turn on the selected functions according to your demands. Clicking the **next** button to enter the next step, you will see the Figure 3-12, finally click **save** to complete the configuration.

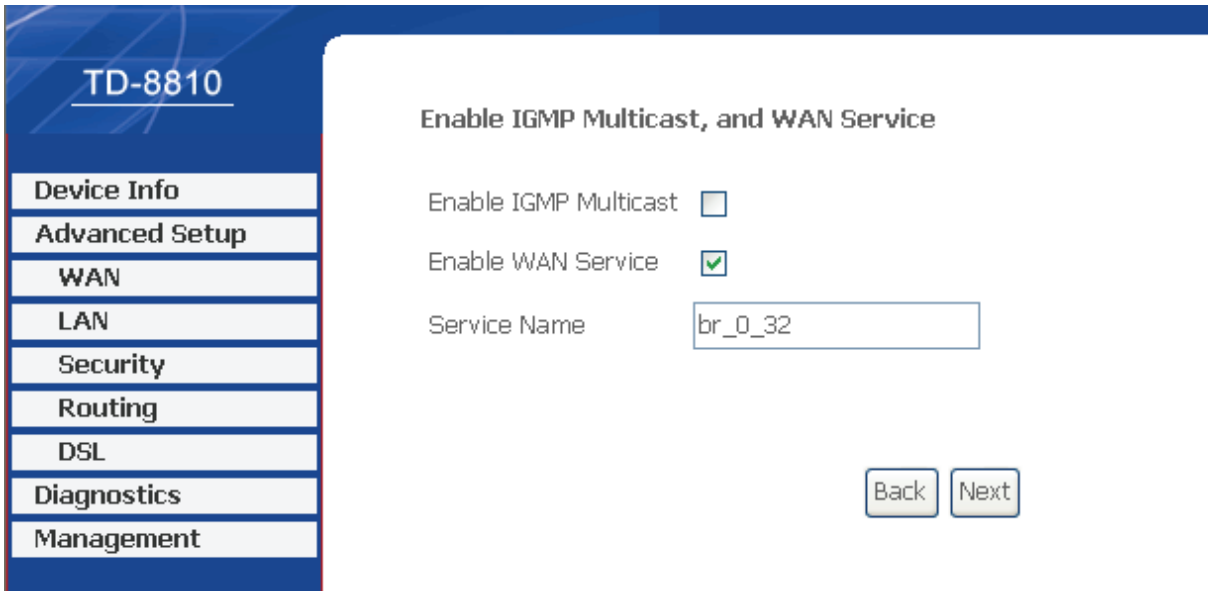

Figure 3-11

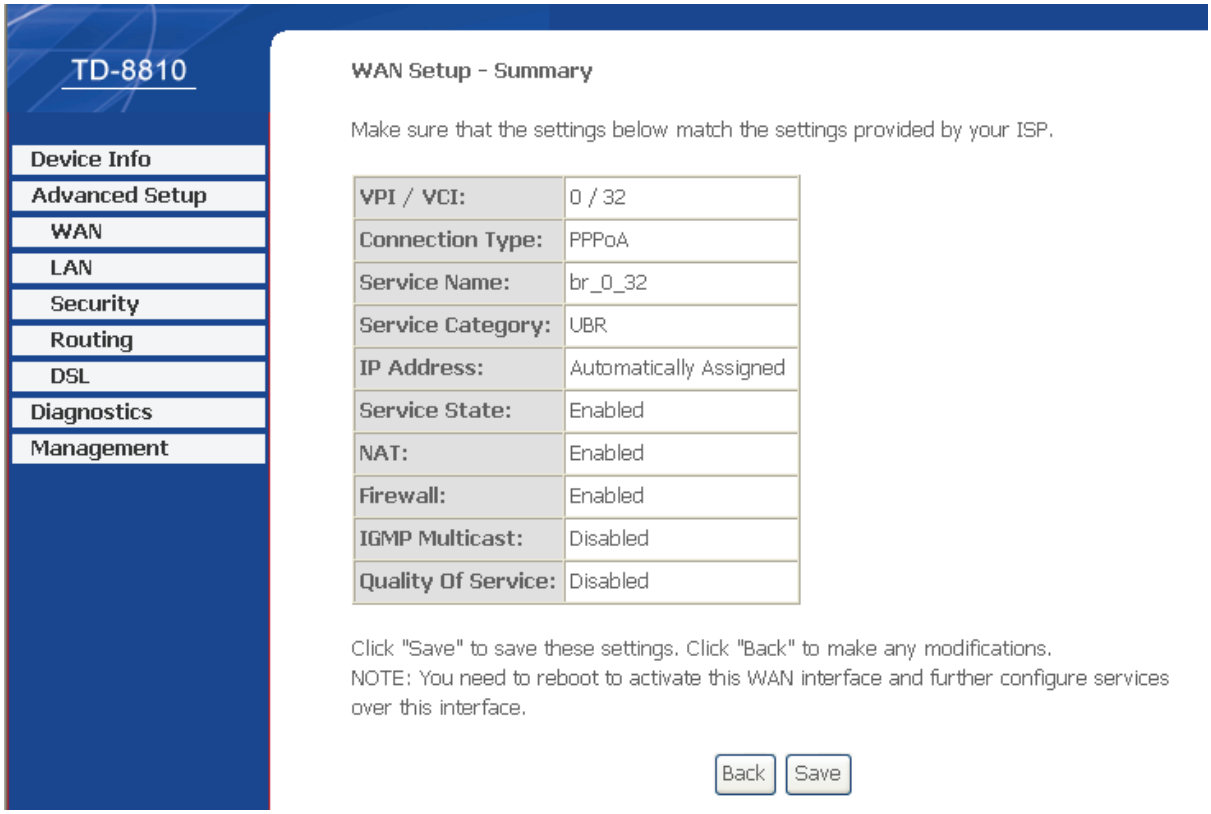

Figure 3-12

➢ **PPP over Ethernet (PPPoE)**

If you select the protocol of PPP over Ethernet (PPPoE), you will see the Figure 3-13, enter the value of user name and password which is provided by your ISP, after selecting the other function (often using the default setup), click the **next** button.

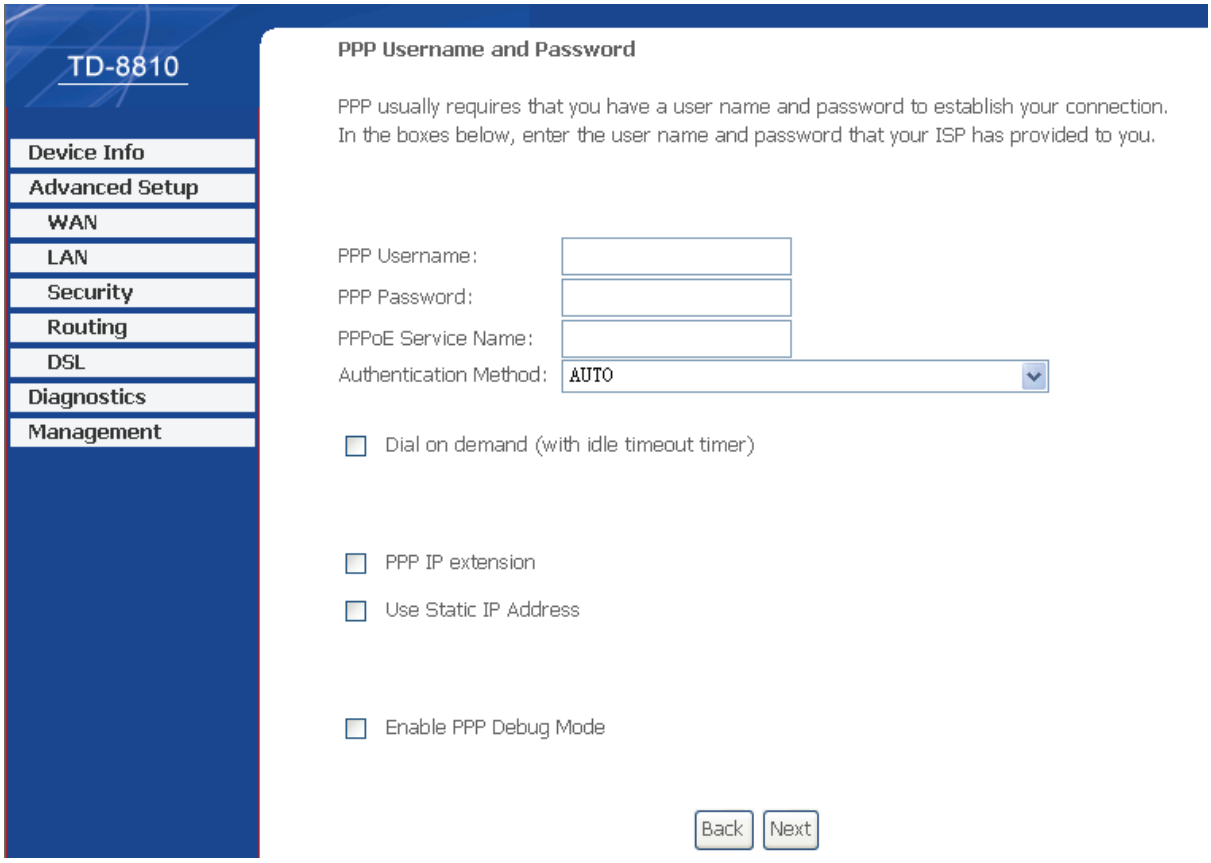

Figure 3-13

You will see the Figure 3-14, then turn on the selected functions according to your needs. Clicking the **next** button to enter the next step, you will see the Figure 3-15, finally click **save** to complete the configuration.

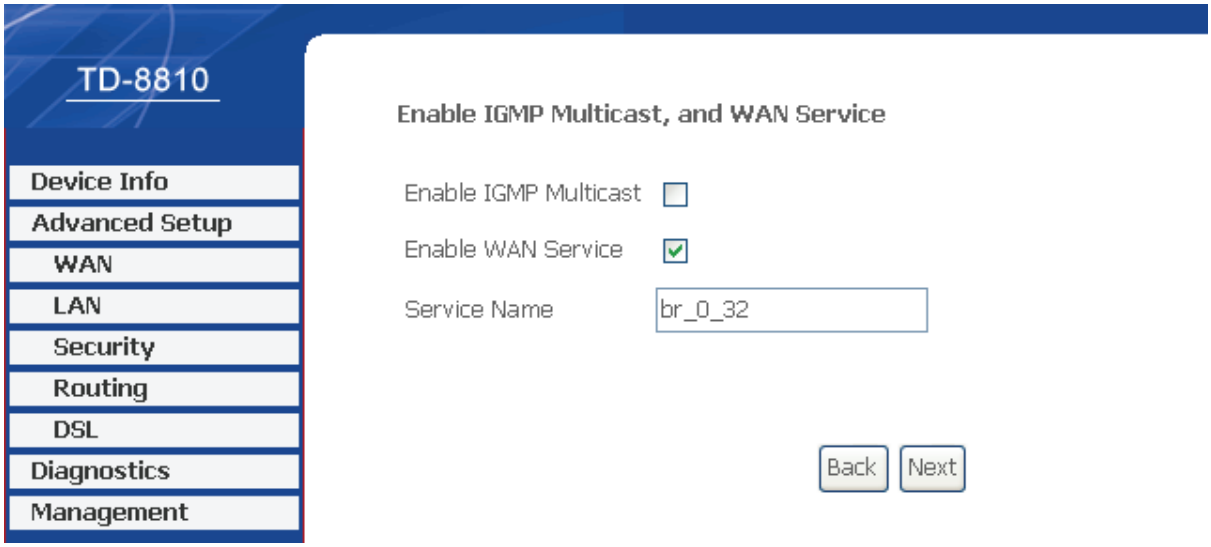

Figure 3-14

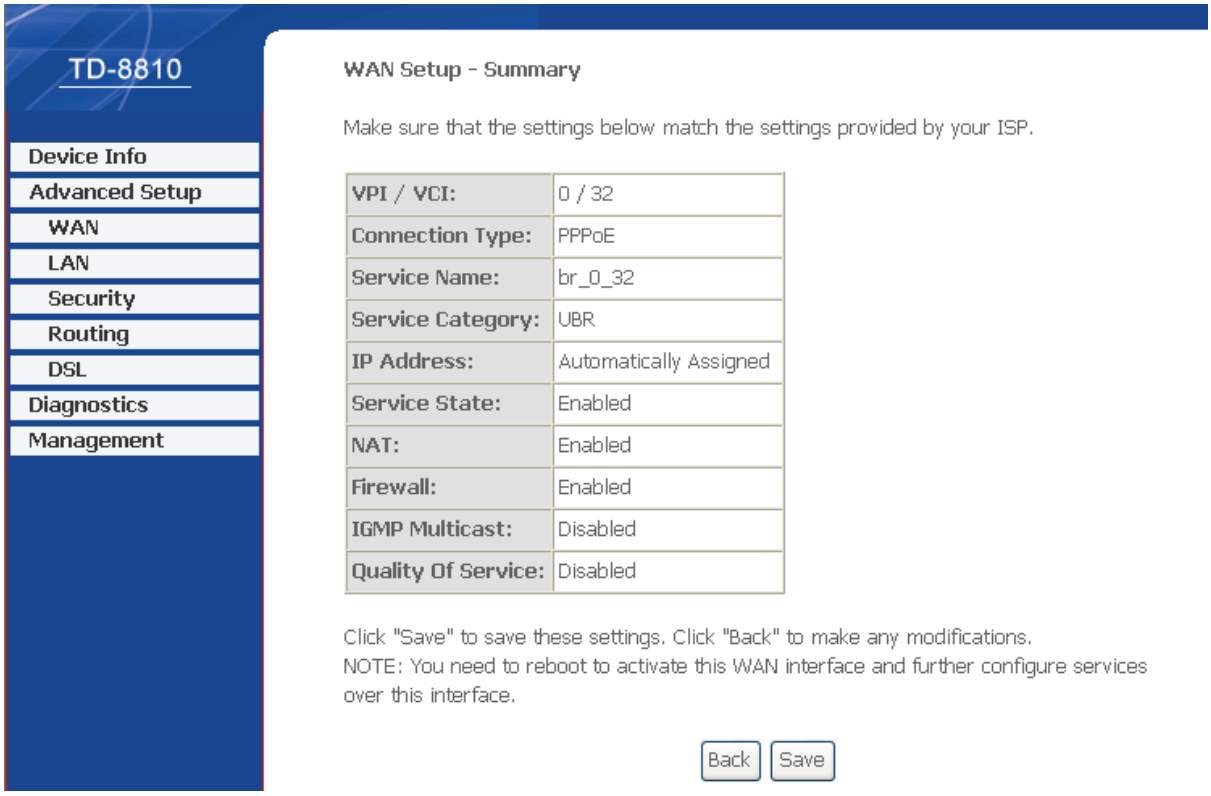

Figure 3-15

➢ **MAC Encapsulation Routing (MER)**

If you select the protocol of MAC Encapsulation Routing (MER), you will see the page(Figure 3-16), Enter the parameter and the way which is provided by your ISP, then click the **next** button.

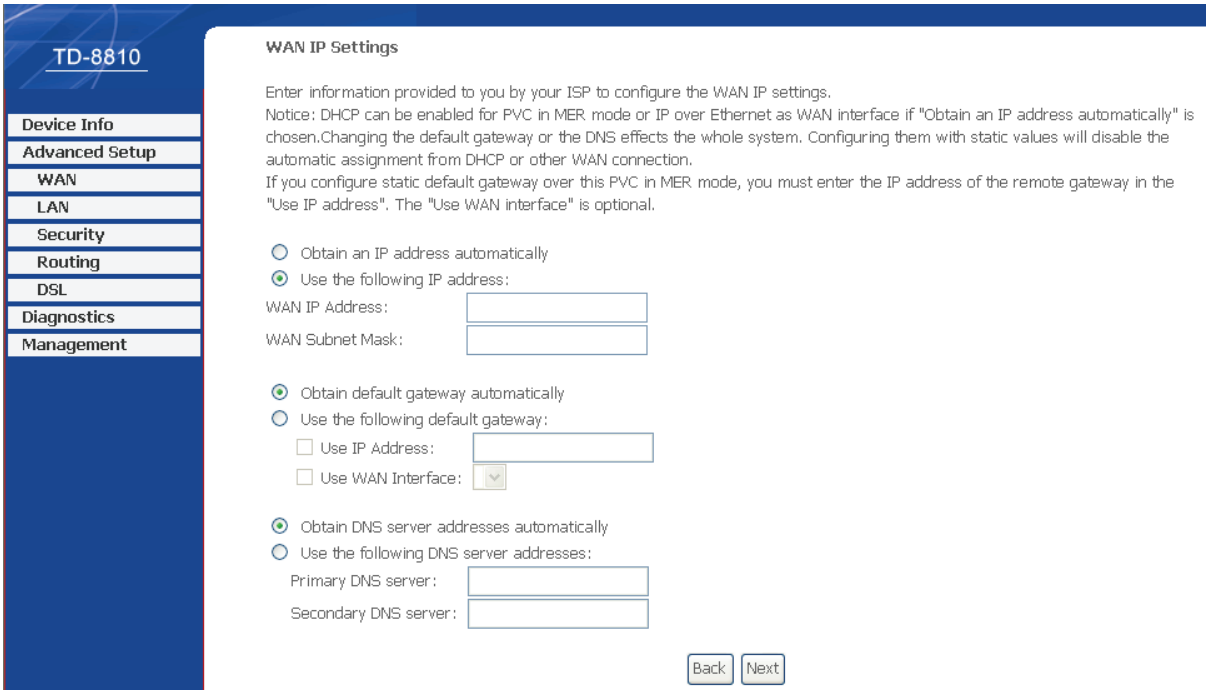

Figure 3-16

You will see the Figure 3-17, then turn on the selected functions according to your needs. Clicking

the **next** button to enter the next step, you will see the Figure 3-18, finally click **save** to complete the configuration.

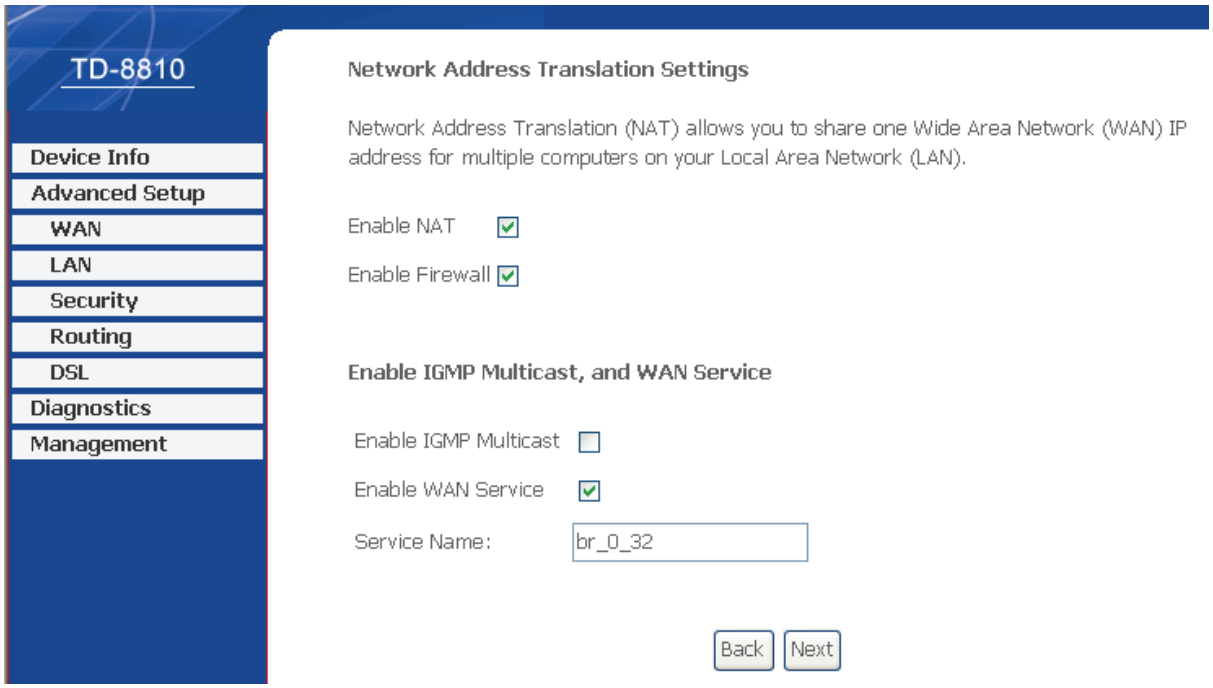

Figure 3-17

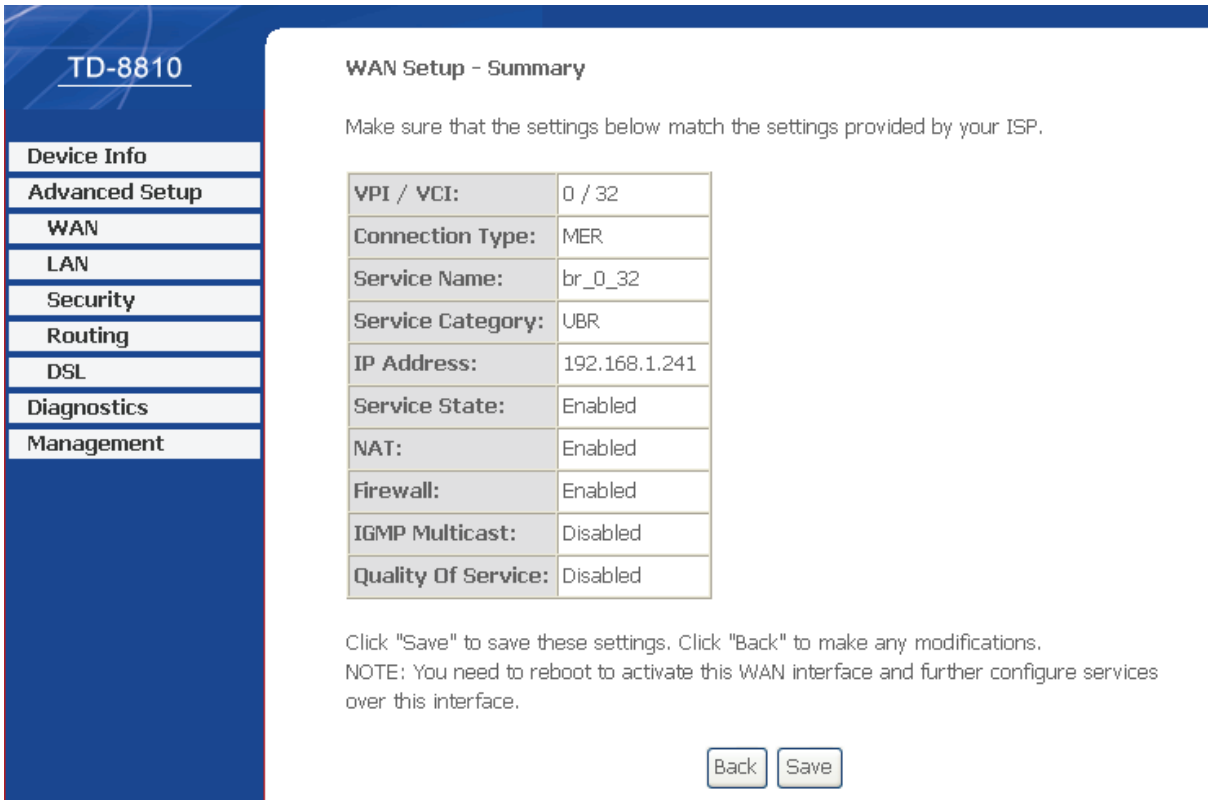

Figure 3-18

➢ **IP over ATM (IPoA)**

If you select the protocol of IP over ATM (IPoA), you will see the Figure 3-19, enter the parameter

and the way which is provided by your ISP, then click the **next** button.

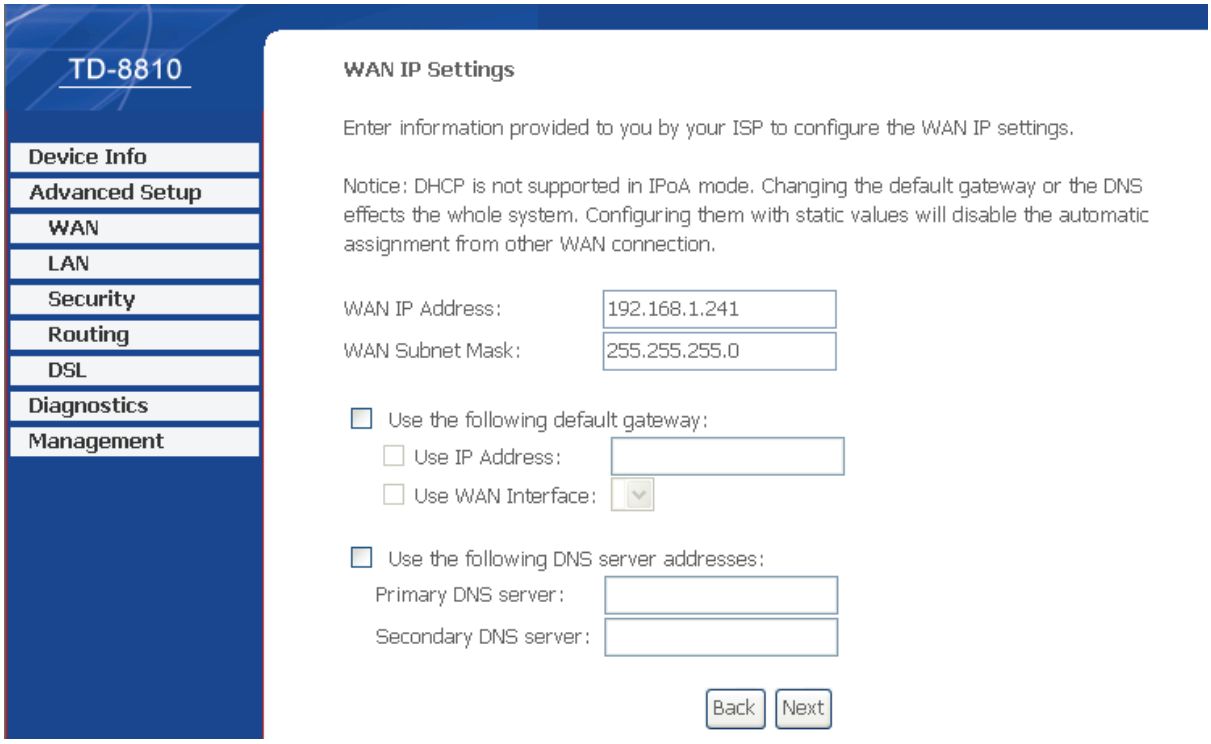

Figure 3-19

You will see the page (Figure 3-20), then turn on the selected functions according to your needs. Clicking the **next** button to enter the next step, you will see the Figure 3-21, finally click **save** to complete the configuration.

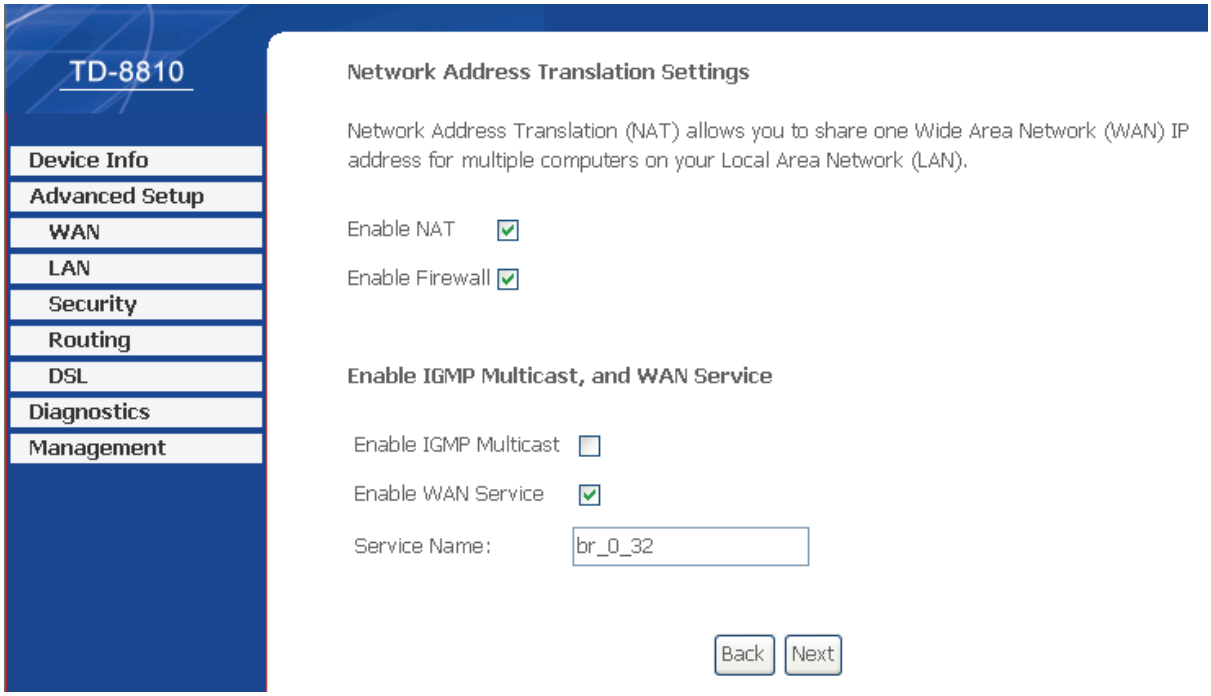

Figure 3-20

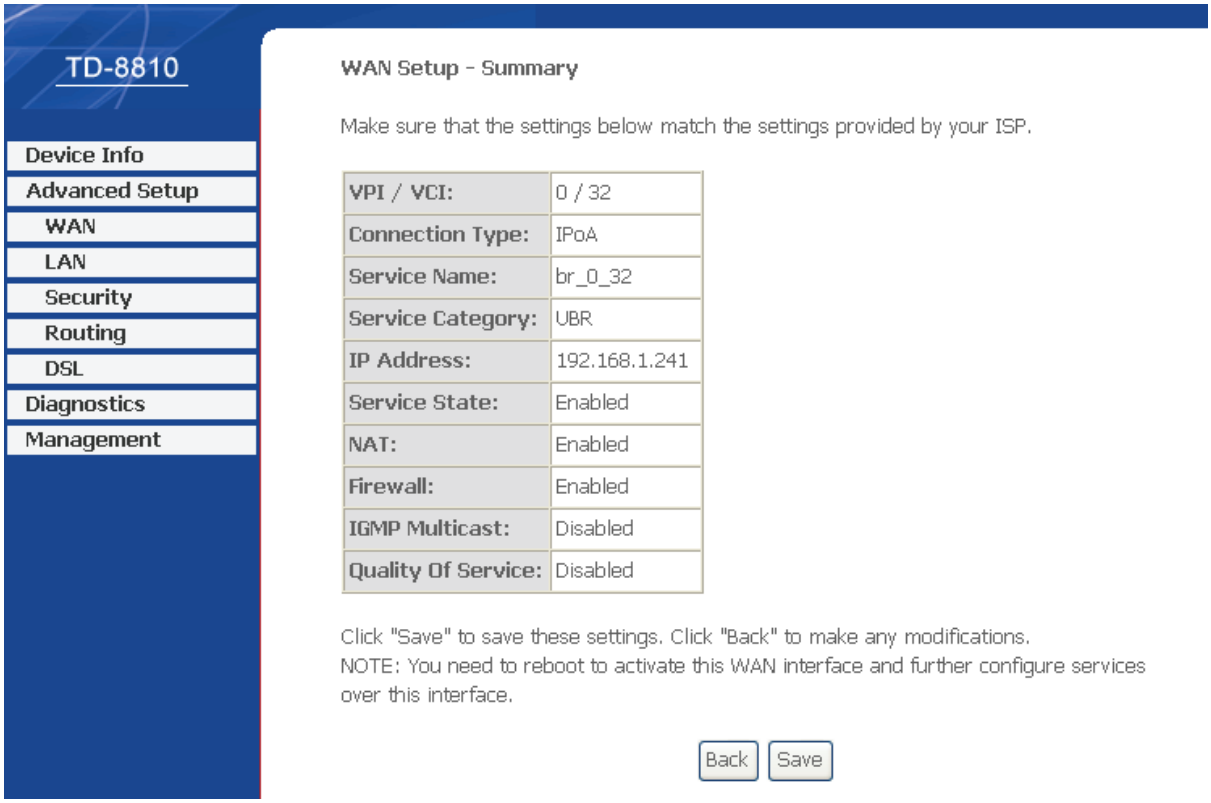

Figure 3-21

➢ **Bridging**

If you select the Bridging protocol, you just open the bridge service function options, you will see the Figure 3-22, then click the **next** button, you will see the Figure 3-23, finally click **save** to complete the configuration.

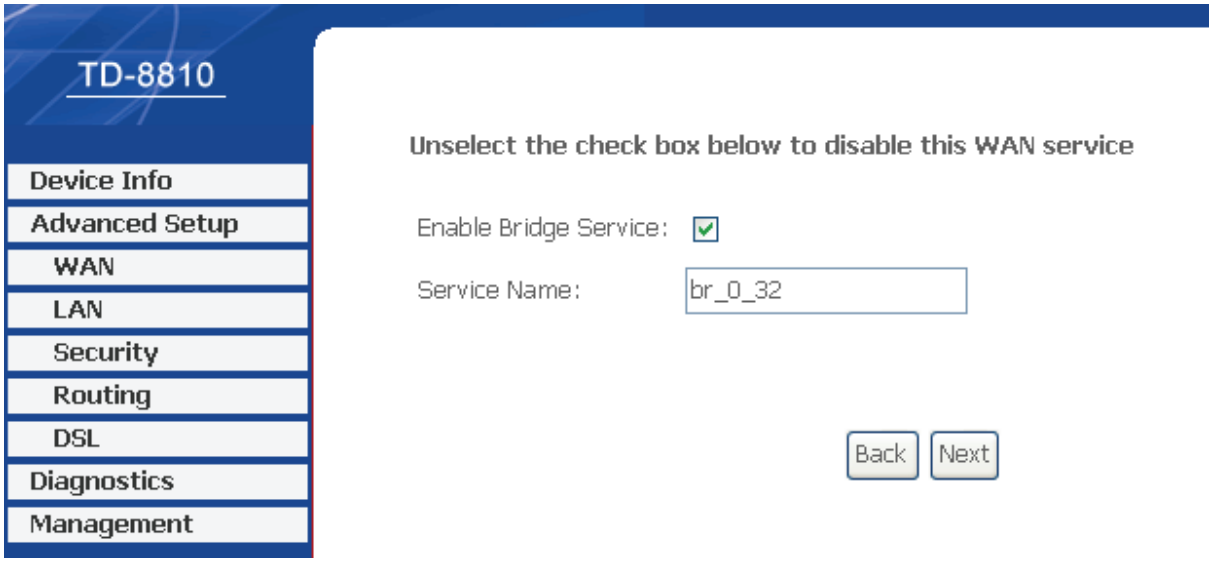

Figure 3-22

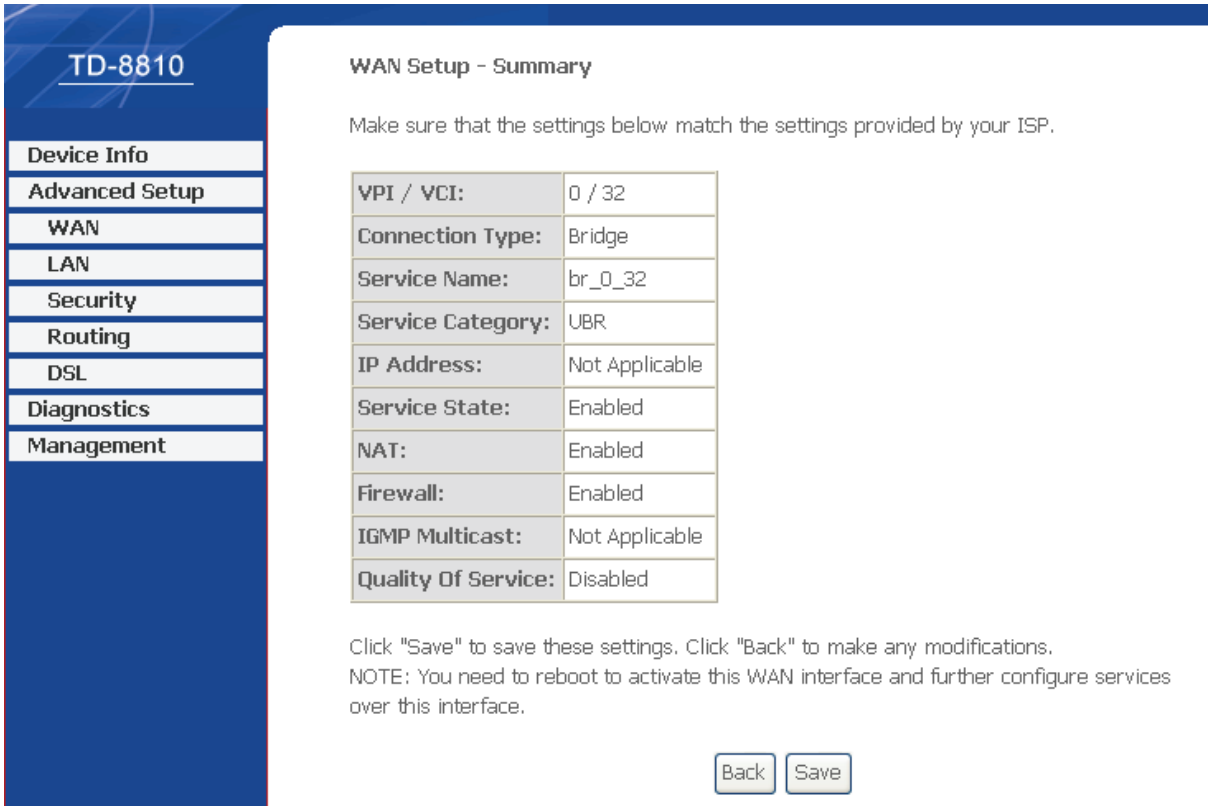

Figure 3-23

Note:

After you complete any setup, the new setup must be saved and the Router must be restarted for the configuration to go into effect. Please click the **Save/Reboot** button to restart, referring to the Figure 3-24.

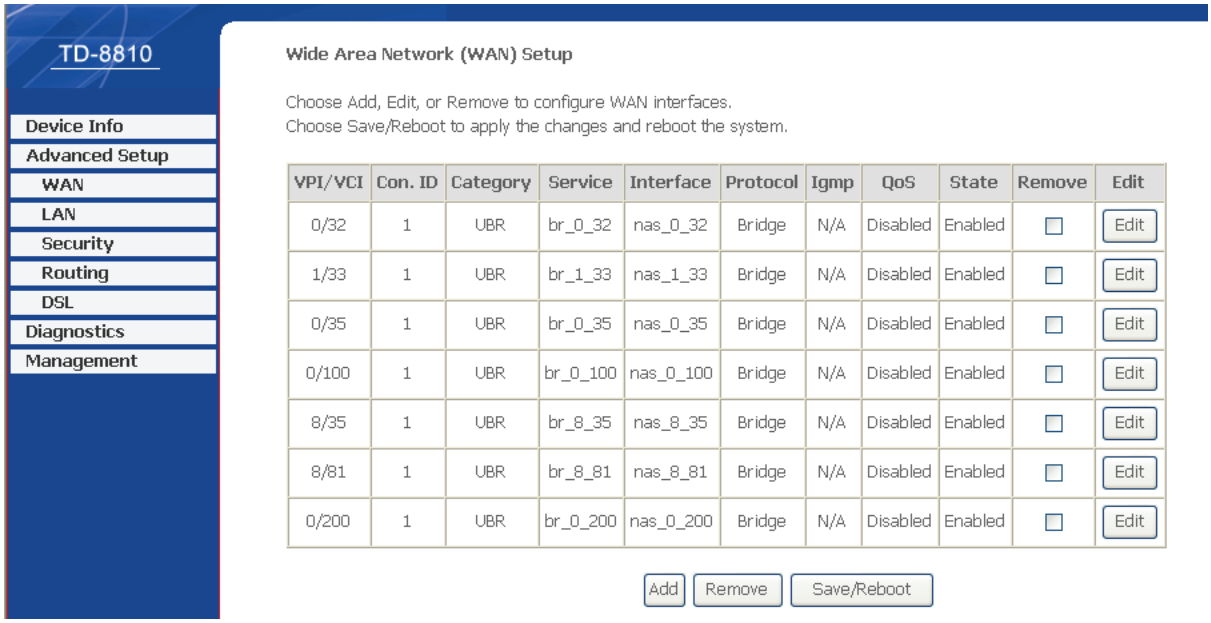

Figure 3-24

Note:

All of the above setup is under windows XP OS.

3.3.1 DHCP IP Reservation

When you specify a reserved IP address for a PC on the LAN, that PC will always receive the same IP address each time when it accesses the DHCP server. Reserved IP addresses should be assigned to servers that require permanent IP settings.

To setup an Address Reservation entry:

☞ **Note:**

1. DHCP IP Reservation are not available for the connection type of **Bridge** here, they won't display on the screen below since only Bridge is selected.
2. DHCP IP Reservation are not available for the connection type of **PPPoE** with PPP IP Extention function selected, and they won't display on the screen below since PPP IP Extention is selected.

Choose "**Advanced Setup**"→"**LAN**", and you will see the LAN screen, the section allows you to configure the Router's LAN ports settings, and you can configure the DHCP IP Reservation function in this screen.

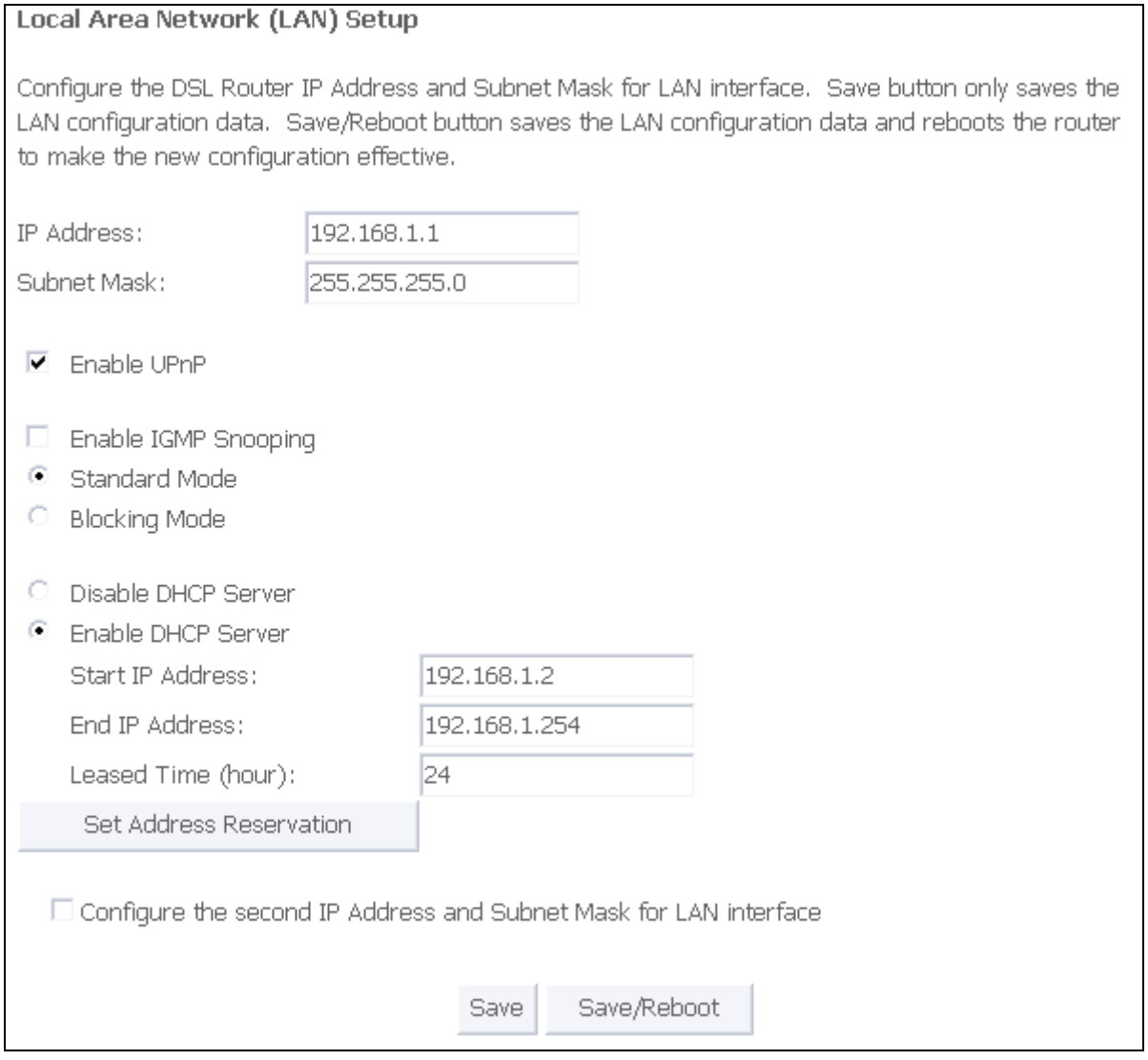

Figure 3-25

1. Click the **Set Address Reservation** botton, and the **Address Reservation** screen pop up, as it showed below ;

Figure 3-26

2. Click **New Entry** botton to add new entries, and the screen showed below pop up, you can modify an address reservation entry in this screen;

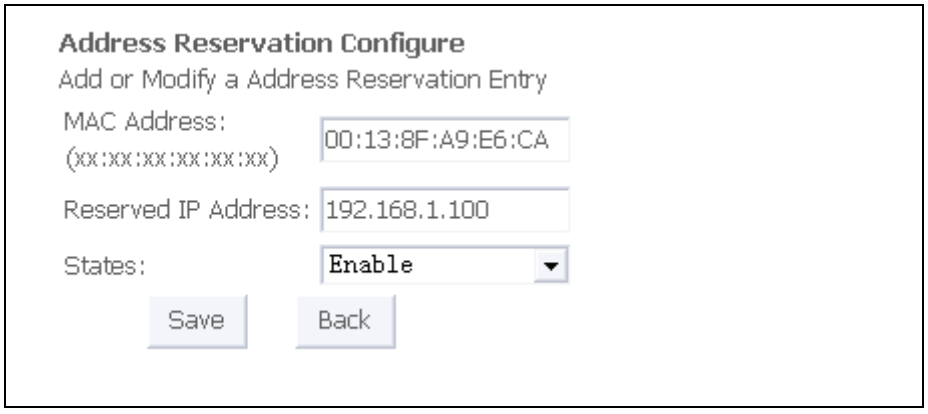

Figure 3-27

3. Type the MAC Address(00:13:8F:A9:E6:CA for instance) of the computer which you want to reserve an IP(192.168.1.100 for instance) for in the **MAC Address** text box;

4. Type the IP Address(192.168.1.100 for instance) you have reserved in the **Reserved IP Address** text box;

5. Click **save** botton to save the settings you have set;

☞ **Note:**

The MAC Address and IP Address added in the text box used for illustrating. That may be differences with your circs.

6. When you have saved the settings, the new entry will added to the **Address Reservation** screen showed below.

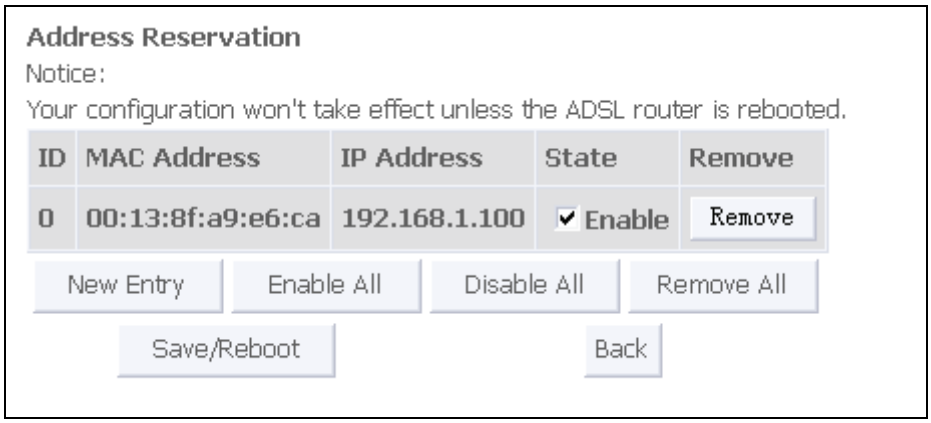

Figure 3-28

7. Click **Save/Reboot** button to save the settings and reboot the router.

Note:

The function won't take effect until the router reboots.

3.3.2 DNS

When you select the connection type **PPPoE, PPPoA**, **MER** or **IPoA** for WAN configuration, you will see the **DNS** menu in the Web-based Utility (shown in Figure 3-29). It includes **DNS Server** and **Dynamic DNS** submenus.

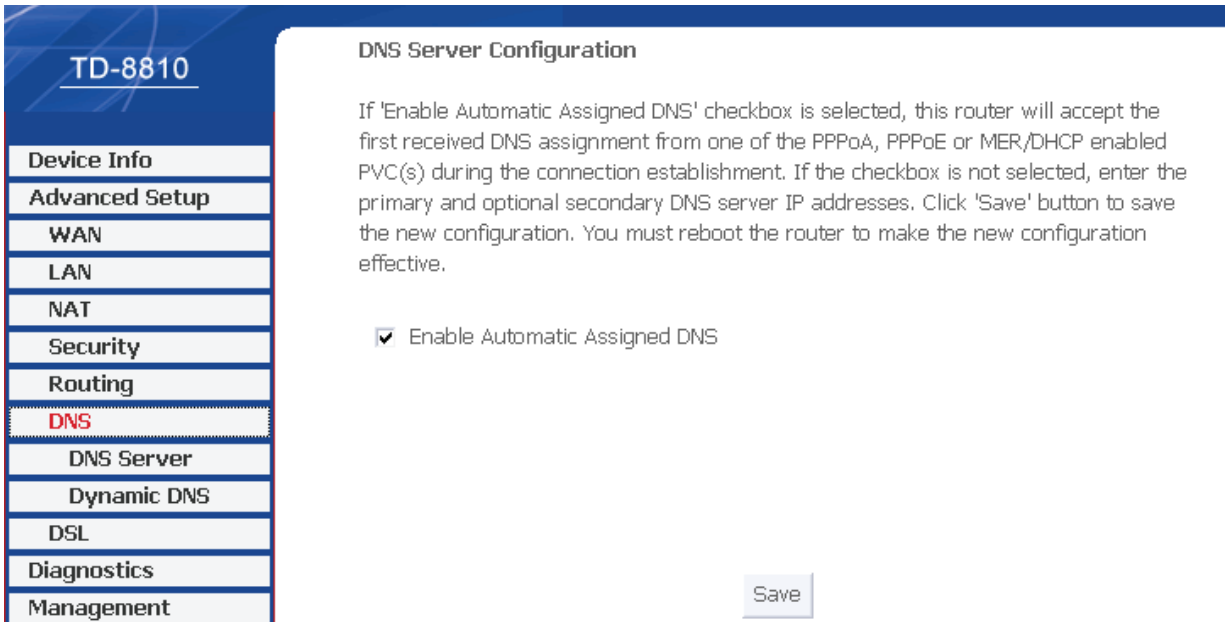

Figure 3-29

3.3.2.1. DNS Server

Choose "**Advanced Setup**"→"**DNS**"→"**DNS Server**". You can see the **DNS Server** screen, this screen allows you to configure the DNS Server Addresses (shown in Figure 3-30).

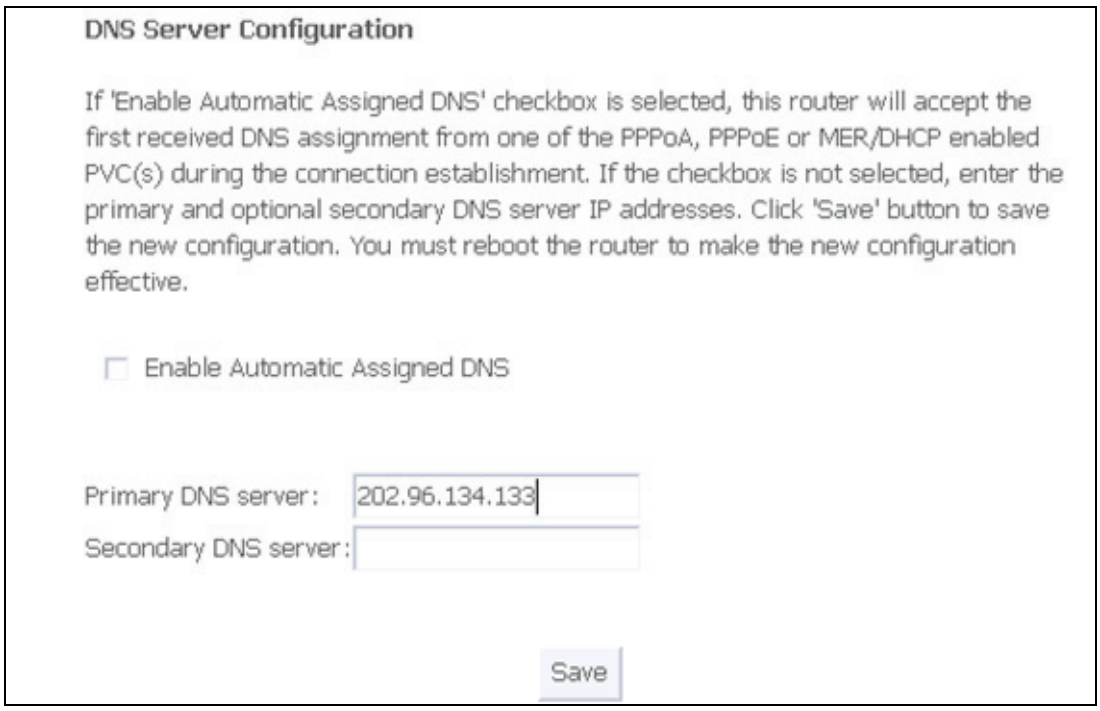

Figure 3-30

If you select **Enable Automatic Assigned DNS**, this Router will accept automatically the first received DNS assignment from one of **PPPoA**, **PPPoE** or **MER/DHCP** enabled PVC(s) during the connection establishment. If the checkbox is not selected, please enter the primary and /or optional secondary DNS server IP addresses provided by your ISP. Then click the **Save** button to save the new configuration.

☞ **Note:**

You have to reboot the Router to make the new configuration take effect.

3.3.2.2. Dynamic DNS

Choose "**Advanced Setup**"→"**DNS**"→"**Dynamic DNS**", you can see the **Dynamic DNS** screen, this screen allows you to configure the Dynamic DNS (shown in Figure 3-31).

The Router offers a Dynamic Domain Name System (**DDNS**) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP Address. The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains, allowing your Router to be more easily accessed from various locations on the Internet.

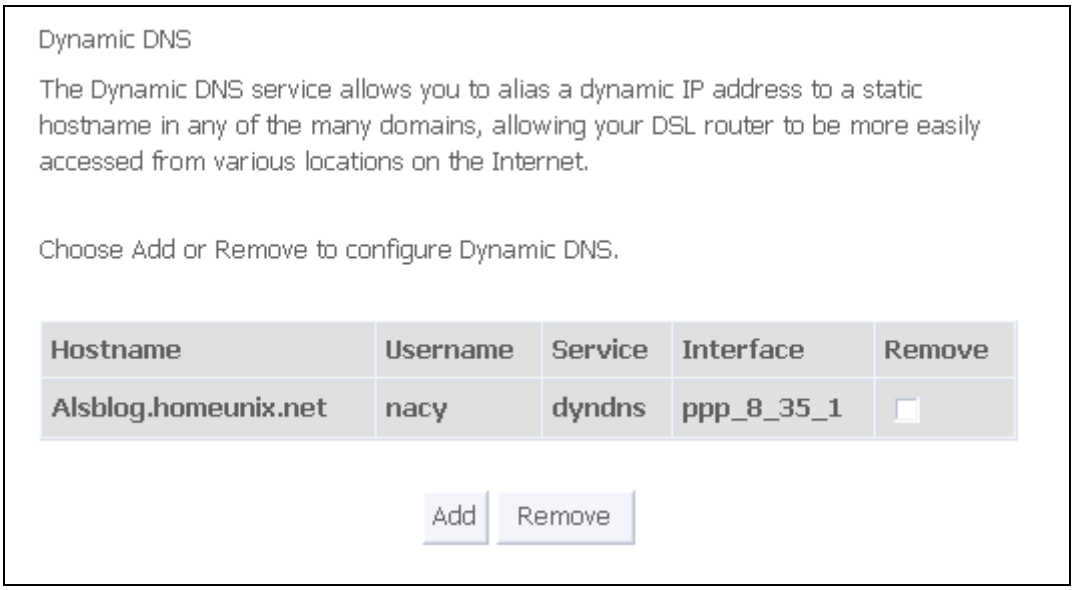

Figure 3-31

To setup DDNS, follow these instructions:

1. Click the **Add** button (pop-up Figure 3-31), then you will set the DDNS in the next screen (shown in Figure 3-32).

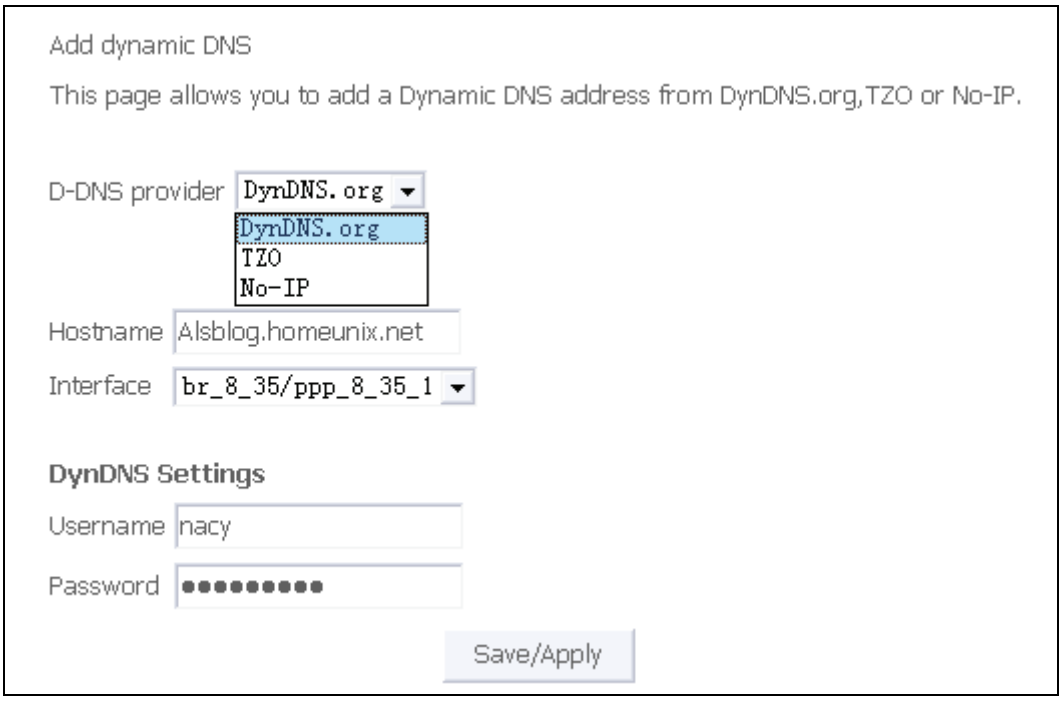

Figure 3-32

☞ **Note:**

This page allows you to add a Dynamic DNS address from DynDNS.org,TZO or No-IP.

2. Select **D-DNS provider**(DynDNS.org,TZO or No-IP) in the drop-down list.
3. Enter the Hostname of the DNS Server, and select the corresponding Interface for the

DDNS, you can leave it default.

4. Type the **User Name** and **Password** for your DDNS account.
5. Click the **Save/Apply** button to save the entry.

3.4 Software Dial

If TD-8810/TD-8810B CPE work in bridged (RFC 1483 Bridged) mode when it connecting Internet. You must install dial software on your PC. There are some software working on WINDOWS in market, example for EnterNet3000、RASPPPoE and WinPeET.

How do I set up the connection in the windows XP?

- The users of Windows XP can click the "**start->All Programs->Accessories-> Communications->New connection wizard**", then click **Next** to enter the configuration page.
- Please you select the "**connect to the internet**" ,and then click the **Next** button to enter the next page and select the "**set up my connection manually**", click **Next** to enter the next page.
- Please select the "**connect using a broadband connection that requires user name and password**", click **Next** to type the name of your ISP in the current page, and then click **Next.**
- Enter an **ISP account name** and **password**, if you have forgotten an existing account name or password, please connect with your ISP, click **Next**.
- To create the connection and close this wizard, click **finish** to add a shortcut to this connection to your desktop.
- When you assess the internet by ADSL, double-click this shortcut of dial connection in your desktop, enter the account name and password, then click **connect** to connect the internet.

Chapter 4. Advantage management setup

In order to satisfy our customer's needs we offer an excellent Web management interface. Feel free to utilize the Advantage application and online software upgrades. The functions of the Web management interface are as follows:

- Upgrade software
- Modify the default IP address of the port of LAN(192.168.1.1)
- Modify the login password
- Configure DHCP
- Check the information of IP and the operation status
- Configure the NAT function
- Configure the DNS parameters
- Configure Security rule
- Configure DSL parameter

Appendix A: FAQ

1. What related parameters are required to acquire ISP when you want to access the internet by ADSL Router?

1) Dial user: Connection protocol, User name, Password, Value of VPI/VCI, Encapsulation mode of AAL5 and so on.

2) Static IP user: Connection protocol, WAN IP Address, Subnet Mask, Gateway, Value of VPI/VCI, Encapsulation mode of AAL5 and so on.

2. About Connection protocol, VCI/VPI, Encapsulation mode of AAL5

1) This product supports the PPP protocol over ATM (PPPoA)、PPP over Ethernet (PPPoE)、MAC Encapsulation Routing (MER)、IP over ATM (IPoA) and Bridging. You may be used with any one of the five protocols above. Because the ISP in different areas supports different protocol, you must choose the protocol which is supported by your ISP.

2) The VPI is the English abbreviation of the Virtual Path Identifier, the VCI is the English abbreviation of the Virtual Channel Identifier, the value of VCI/VPI must be compatible with the value that provided by ISP.

3) Encapsulation mode of AAL5 include: LLC/SNAP and VC_MAX(often using LLC/SNAP).

3. Why the LAN's and the NIC's LED both bright, but the configuration interface is inaccessible?

1) Use the order of **ping 192.168.1.1** to check the Accuracy of connection.

2) Check the Accuracy of working NIC.

3) Whatever the setup of the IP address on your computer (if you close the DHCP function, you can't obtain the IP address automatically, must specify the IP address of your computer manually).

4) Run the winipcfg order in the windows 95/98(run the ipconfig order in the windows 2000) to check whether setup the IP address, subnet mask, default gateway by DHCP.

5) Resume the ADSL Modem default configuration if necessary.

4. Have complete all configurations, but can't dial through computer

1) Check the indicator of ADSL, it should be working in normally.

2) Check the accuracy of parameter of value of VPI/VCI, Encapsulation mode of AAL5 and so on, whether you need to install the dial software, such as Winpoet, Enternet.

3) This product has the PPP dial procedure inside, so you will not need to use the dial software if your protocol is PPPoA or PPPoE, ADSL Modem will connect automatically.

4) You can check whether your ADSL Modem succeeds in connection with **PING** command.

Appendix B: Default Config

User name	admin
Password	admin
IP Address	192.168.1.1

Appendix C: Contact Information

For help with the installation or operation of TP-LINK Product, please visit our website.

http://www.tp-link.com