TP-LINK®

User Guide

TD-8811

External ADSL2+ ROUTER

Rev: 1.1.2
1910010025

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http://www.tp-link.com

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 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:

- 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.

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.
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 user's authority to operate the equipment.

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.

CONTENTS

Package Contents

The following items should be found in your package:

- One TD-8811 External ADSL2+ ROUTER
- One AC power Adapter for TD-8811 External ADSL2+ ROUTER
- One Resource CD for TD-8811 External ADSL2+ ROUTER, including:
  - This User Guide
  - Quick Installation Guide Program
  - Other Helpful Information
  - USB driver
- Quick Installation Guide
- One RJ45 cable
- Two RJ11 cables
- One ADSL splitter
- One USB cable

☞ **Note:**

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact with your distributor.

Chapter 1. Product Overview

With the excellent circuit design and high quality production, we guarantee its high performance, great stability and easy to use.

The TD-8811 is a complete plug-and-play solution. With standard Ethernet interface, it can be directly connected to any 10M/100M Ethernet devices, support Auto-MDI/MDIX.

The TD-8811 not only uses html (web mode through Ethernet port) to configure the router but also uses external utility software, too. You can download it from our website (http://www.tp-link.com).

1.1 Product main specification

- High speed and asymmetrical data transmit mode, provides safe and exclusive bandwidth
- Supports All ADSL2+ industrial standards
- Compatible with all mainstream DSLAM (CO)
- Firmware upgradeable
- Provides integrated access of internet and route function which face to SOHO users
- Advanced DMT modulation and demodulation
- Real-time Configuration and device monitoring
- Quick response semi-conductive surge protection circuit, provides reliable ESD and surge-protect function

1.2 Supporting protocol

- G.992.1 (G.dmt) - Annex A
- G.992.2 (G.lite) - Annex A
- ANSI T1.413
- G.992.3 (ADSL2) - Annex A compliant
- G.992.5 (ADSL2+) Annex A compliant
- ADSL dual latency (fast path and interleaved path)
- I.432 ATM physical layer compliant
-Supports RFC2364 (PPPoA)
-Supports RFC2516 (PPPoE)
-Supports RFC1483 (EoA) (Bridged *and route)
-Supports RFC1577 (IPoA)

1.3 Transmit data-rate

- Max download data-rate: 24Mbps
- Max upload data-rate: 3.5Mbps
- Max line length: 6Km

1.4 ATM property

- 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)

1.5 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
- Support USB 1.1 device interface

1.6 Working environment

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

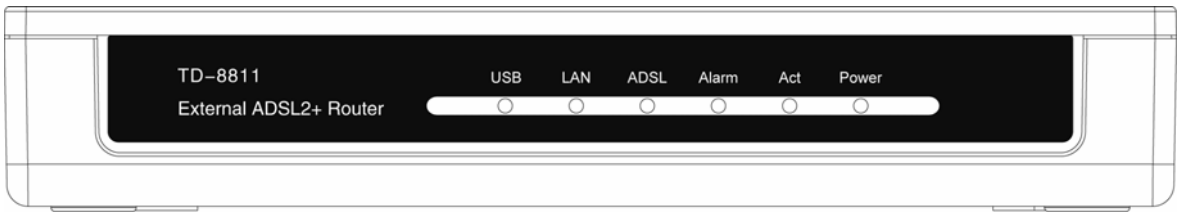
Chapter 2. Hardware Installation Guide

The TD-8811 maintains three separate interfaces, one Ethernet, one USB interface and one ADSL interface. 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 ADSL2+ ROUTER to your computer, with the operating system supporting the TCP/IP protocol.

2.2 LED explanation

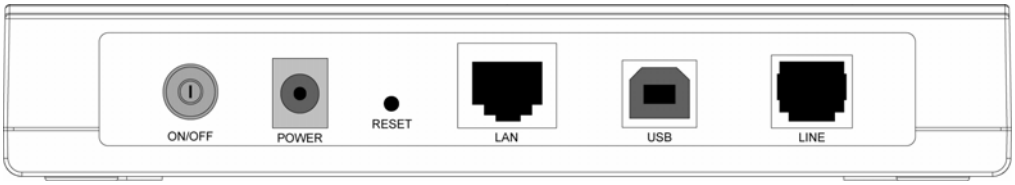


The front panel of ADSL2+ ROUTER includes one power indicator (RED) and five function indicators (GREEN), as explained in chart 1-1:

Indicator	Description	Status	Function Details
Power	Power	On	Power OK
		Off	Power fail
Act	Data	On	There is data transmitting or receiving on WAN port
		Off	No data is transmitting or receiving on WAN port
Alarm	Mistake	On	There is a mistake when ADSL is transmitting or receiving data
		Off	ADSL works normally
ADSL	ADSL status	Slow flash	Self-detecting when power on
		Quick flash	The LINE is connecting to the ISP's network
		On	The LINE has connected to ISP's network
		Off	The LINE port has no connection
LAN	Ethernet	On	LAN port works normally
		Off	Connection on LAN port is abnormal
		Flash	Data is transmitting or receiving on LAN port
USB	USB status	On	Connection to telecom network is OK
		Off	Connection on USB port is abnormal
		Flash	Data is transmitting or receiving

Chart 1-1

2.3 Rear-panel



- **ON/OFF**: Turn on/off the ADSL2+ Router's power.
- **POWER**: please do not use any unknown power adapter; otherwise your ADSL2+ Router may be damaged.
- **RESET (reset default)**: Press the reset button, then turn on the Router's power (keep the button pressed) for at least three seconds, it will restore the settings to the default factory configuration.
- **LAN**: Connect with your computer's NIC.
- **USB**: Connect with your computer's USB interface
- **LINE (WAN)**: Connect to the MODEM Port of Splitter or connect the telephone line.

2.4 Hardware installation procedures

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

First Step: Connect the MODEM port of Splitter with the LINE port of the TD-8811 ADSL2+ ROUTER by telephone line.

Second Step: Connect category 5 cable with RJ45 jacks to ADSL2+ Router's LAN port and your computer's NIC. Or connect USB cable to ADSL2+ Router's USB port and your computer's USB interface.

Third Step: Plug one end of the AC Power Adapter into the Power jack on the Ethernet ADSL2+ 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.

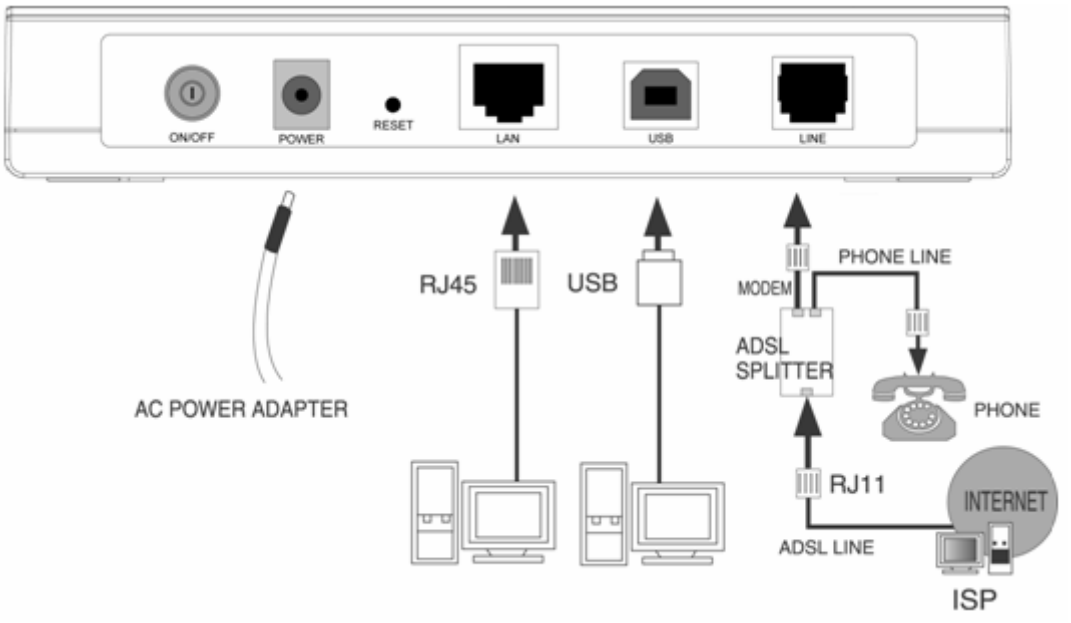

ON/OFF
POWER
RESET
LAN
USB
LINE
AC POWER ADAPTER
RJ45
USB
PHONE LINE
MODEM
ADSL
SPLITTER
PHONE
RJ11
INTERNET
ADSL LINE
ISP

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

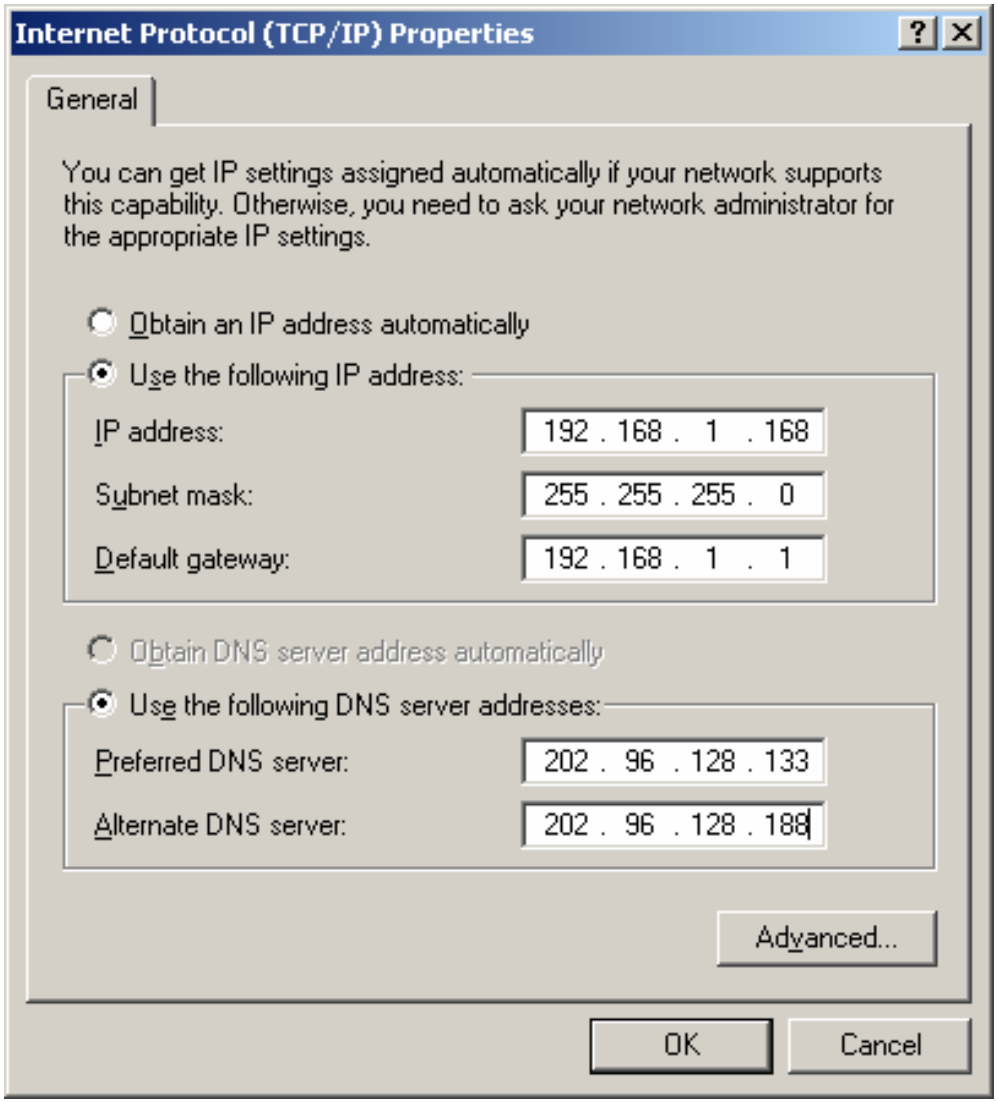


Figure 3-1

Note:

1) Users of Windows 98 can open **TCP/IP Properties** according to the following: Right-click (Mouse) **Network Neighbor** -> Choose **Properties** -> Double-click **TCP/IP PCI Fast Ethernet Adapter**.
2) The users of Windows 2000/NT/XP can do the following: Right-press **Network Neighbor** ->Choose **Properties**->Right-press **Local Connection** ->Choose **Properties**->Double- click

Internet Protocol (TCP/IP).

3) The words may be different with this guide in fact.

You can check whether your configuration is successful through **PING** command. Enter "**Ping 192.168.1.1**".

If the screen looks like the following, the connection between your computer and TD-8811 is OK now.

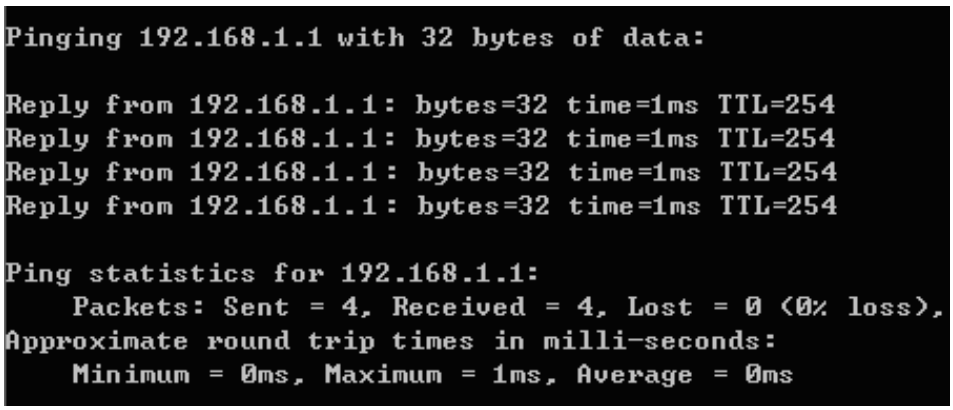


Figure 3-2

If the screen looks like the following, the connection fails. Repeat the previous steps again.

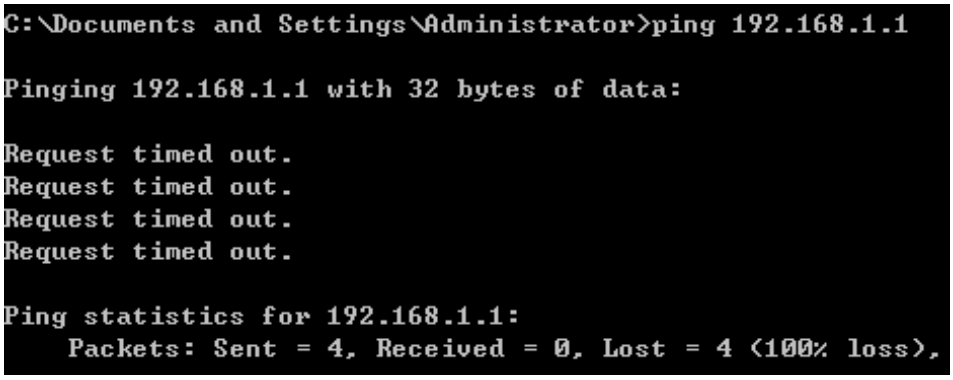


Figure 3-3

3.2 Login

Startup Internet Explorer, and enter 192.168.1.1, then enter default user name(admin)、password(admin), When ADSL2+ connection is OK, you will see the Figure 3-4.

Figure 3-4

3.3 Quick Setup

1) Figure 4 is the main page of the Router.

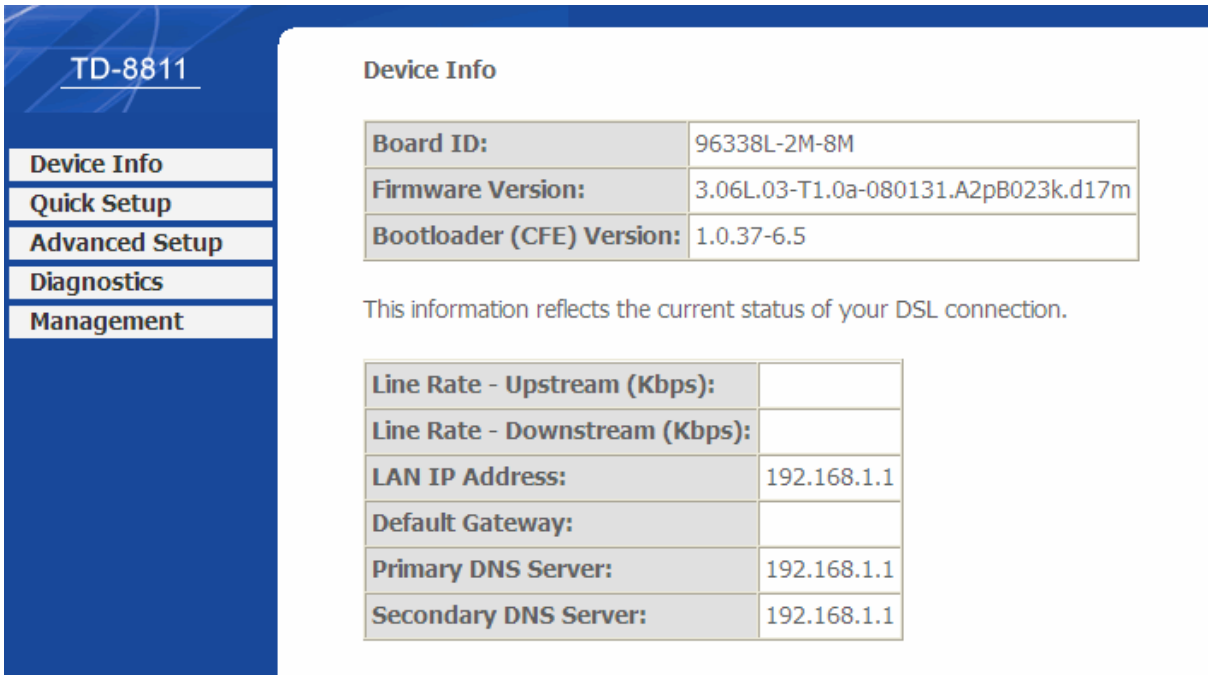


Figure 3-5

2) Please select **Quick Setup**. Enter the **VPI** and **VCI** values provided by your Internet Service Provider and click **Next**.

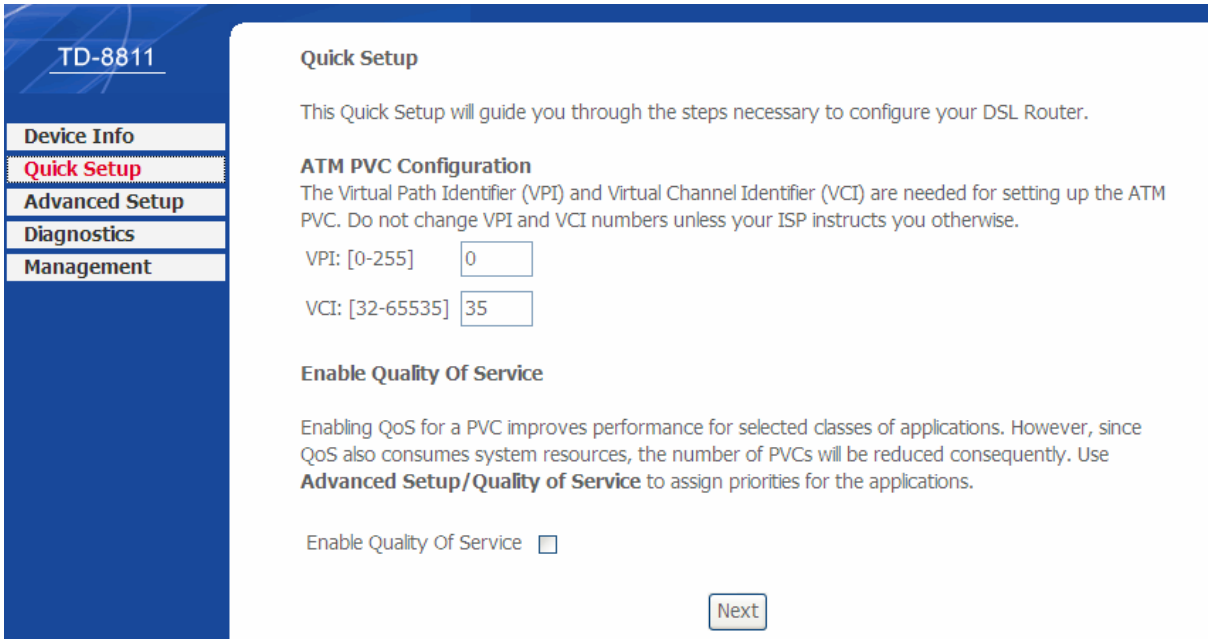


Figure 3-6

3) Select the relevant Connection Type and Encapsulation mode as the settings provided by your Internet Service Provider and click **Next**.

3.3.1 PPPoA

a) Select PPP over ATM (PPPoA) Connection Type, and click **Next.**

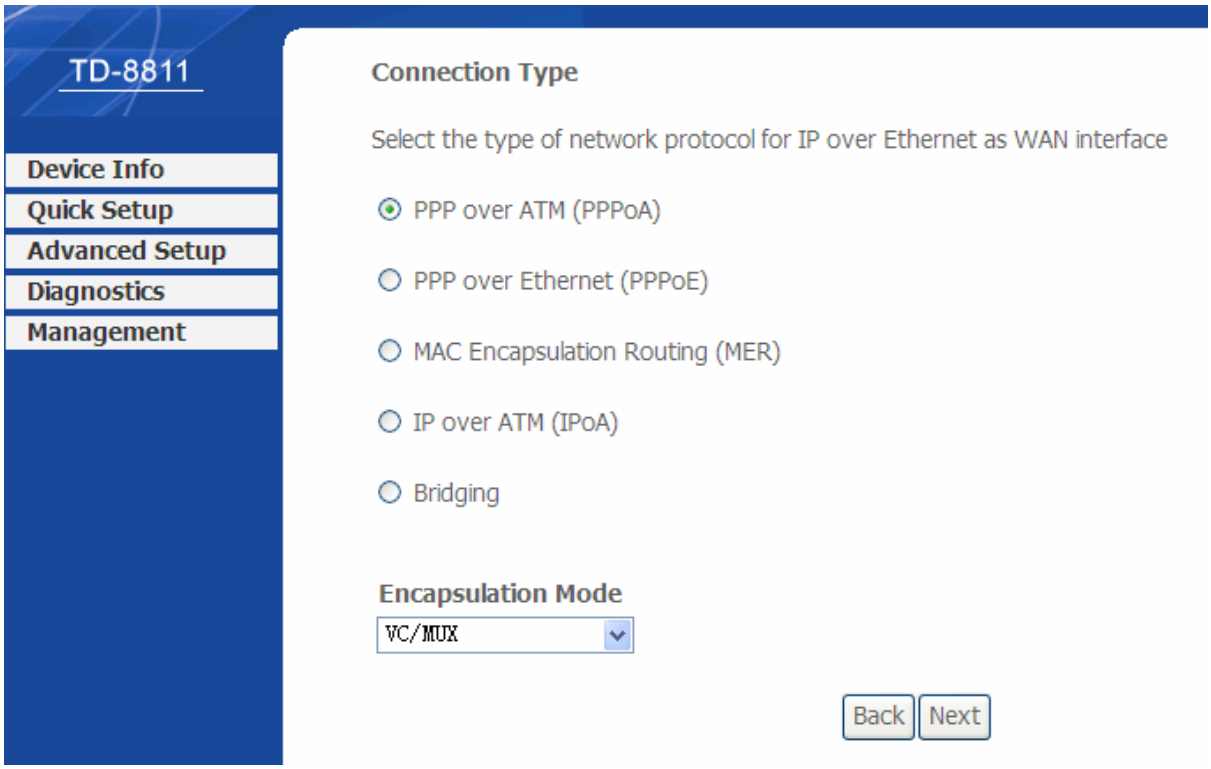


Figure 3-7

b) Enter the Username and Password provided by your Internet Service Provider and click **Next**.

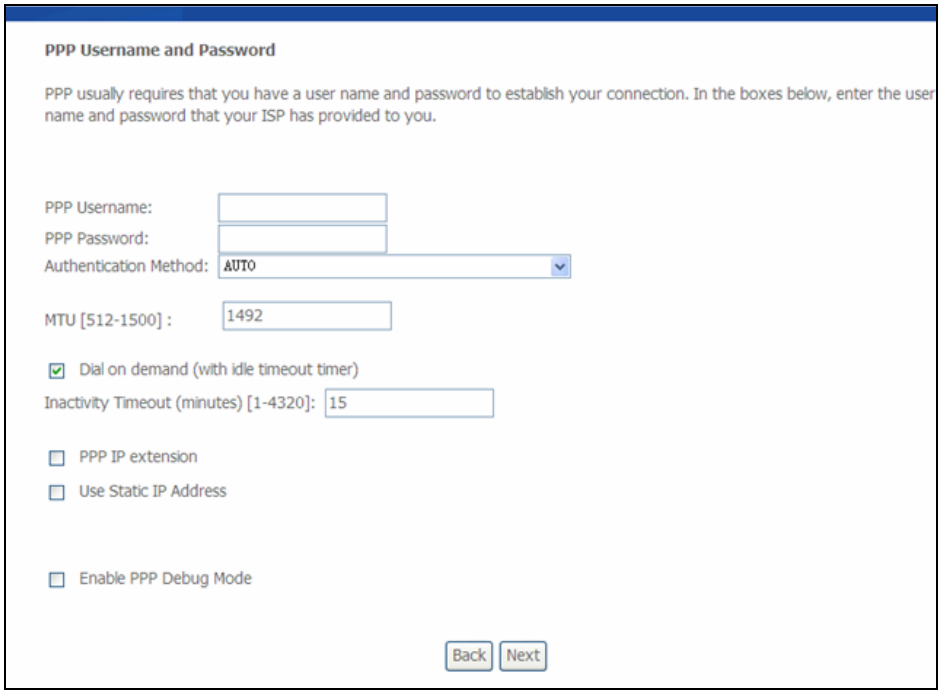


Figure 3-8

c) Turn on the selected functions according to your demands. Clicking the **next** button to enter the next step.

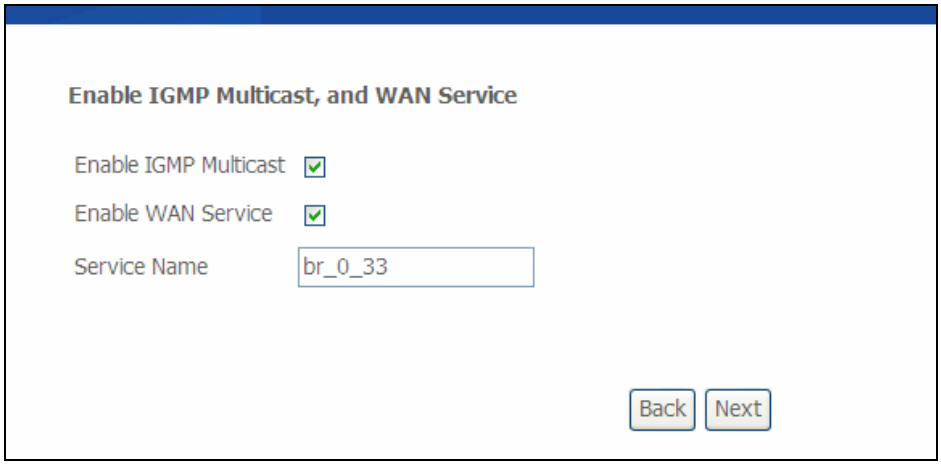


Figure 3-9

d) Click **Save/Reboot**.

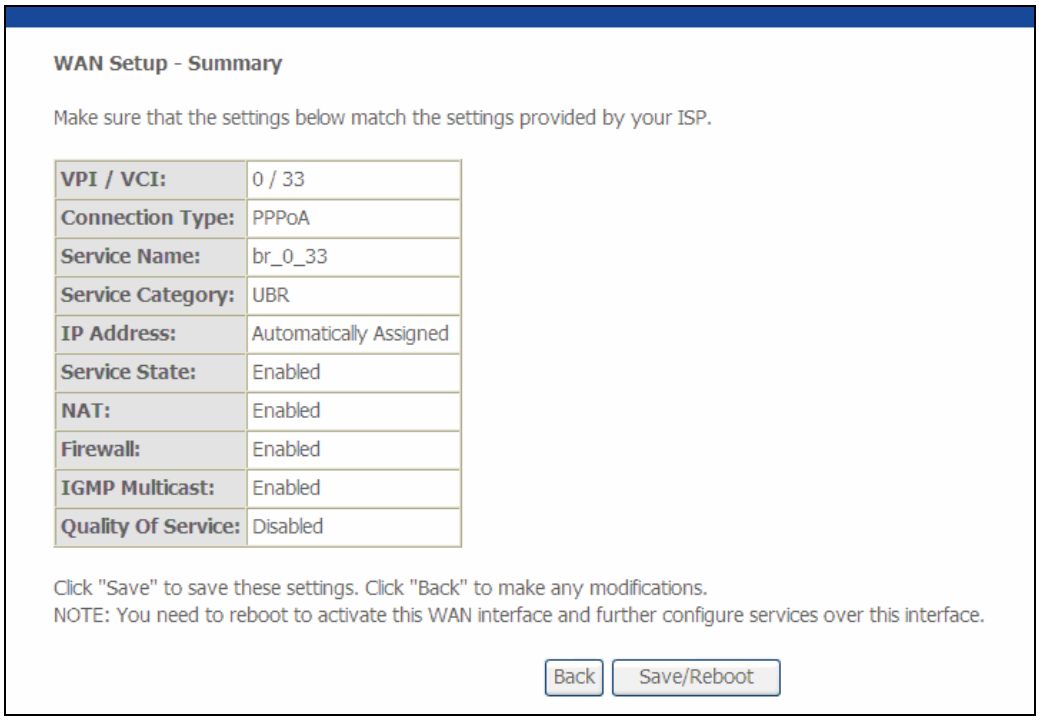


Figure 3-10

3.3.2 PPPoE

a) Select PPP over Ethernet (PPPoE) Connection Type, and click **Next.**

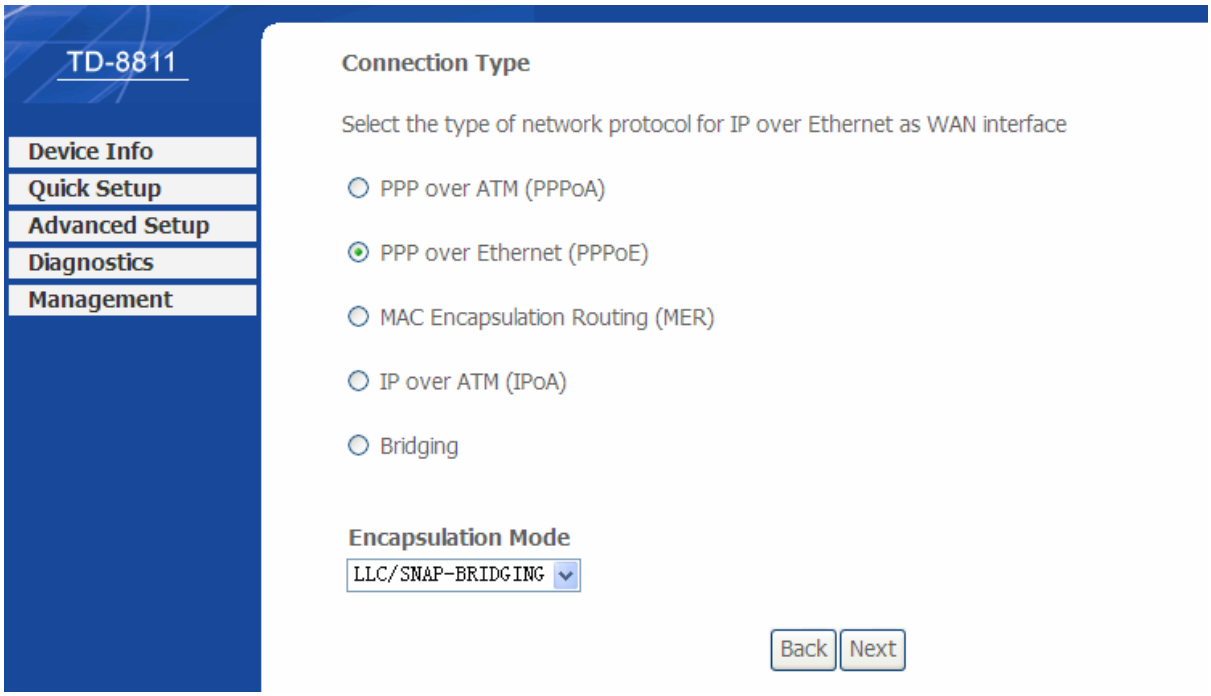


Figure 3-11

b) Enter the Username and Password provided by your Internet Service Provider and click **Next**.

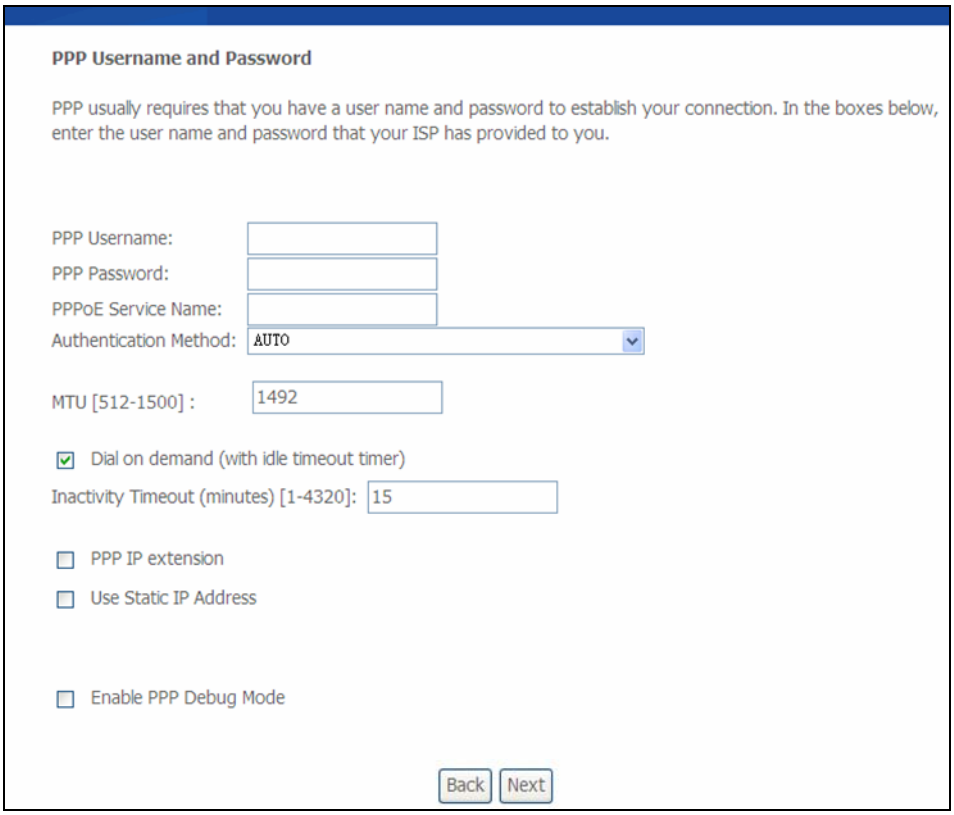


Figure 3-12

c) Click **Save/Reboot**.

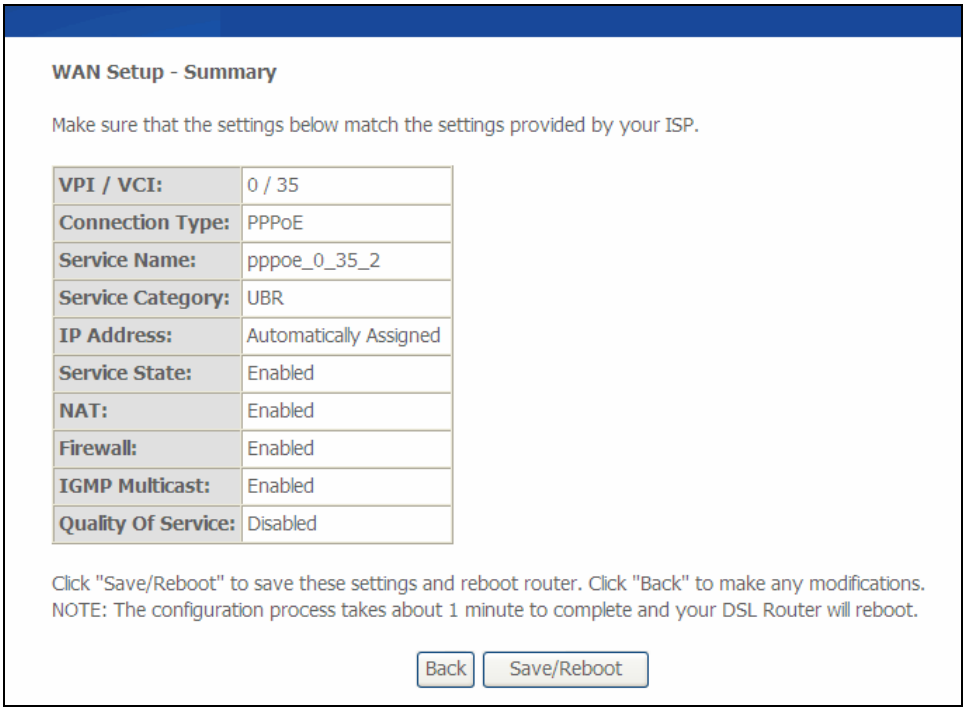


Figure 3-13

Note:

The Router will restart when you complete the configuration, so you have to wait for a while until it restarts successfully.

3.3.3 MER

a) Select MAC Encapsulation Routing (MER) Connection Type, and click **Next.**

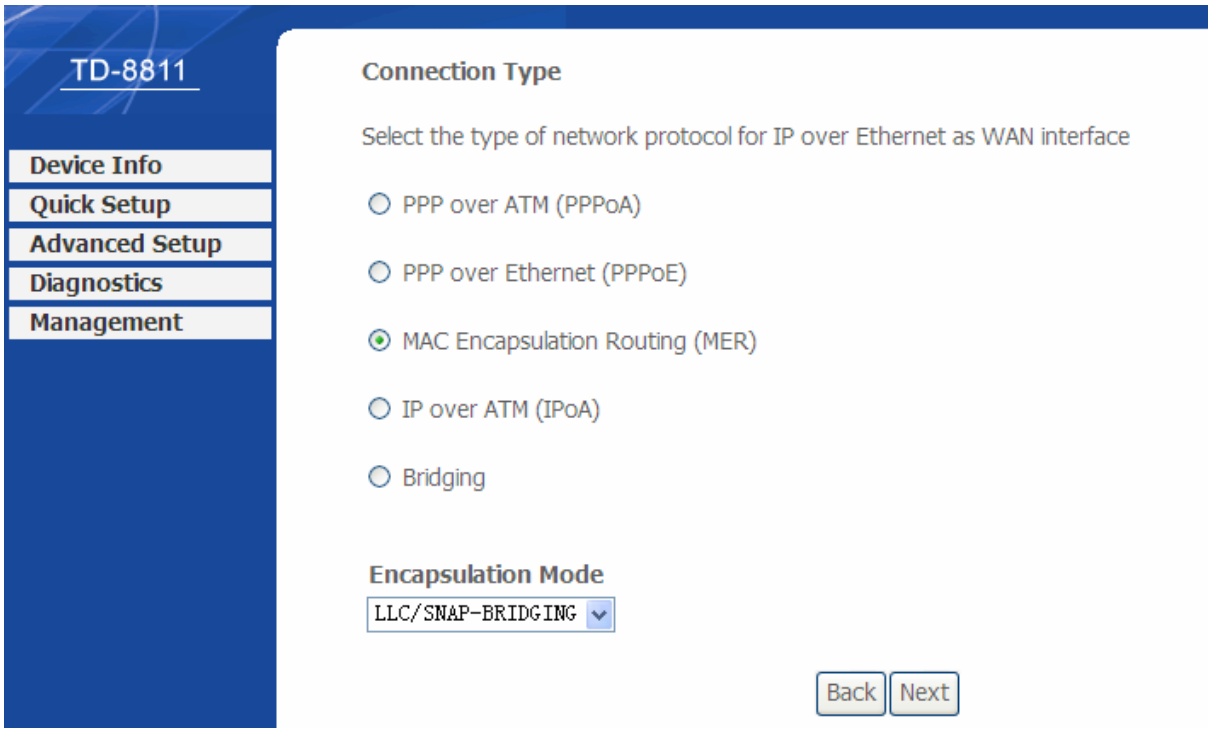


Figure 3-14

b) Enter the parameter and the way which is provided by your ISP, then click **Next**.

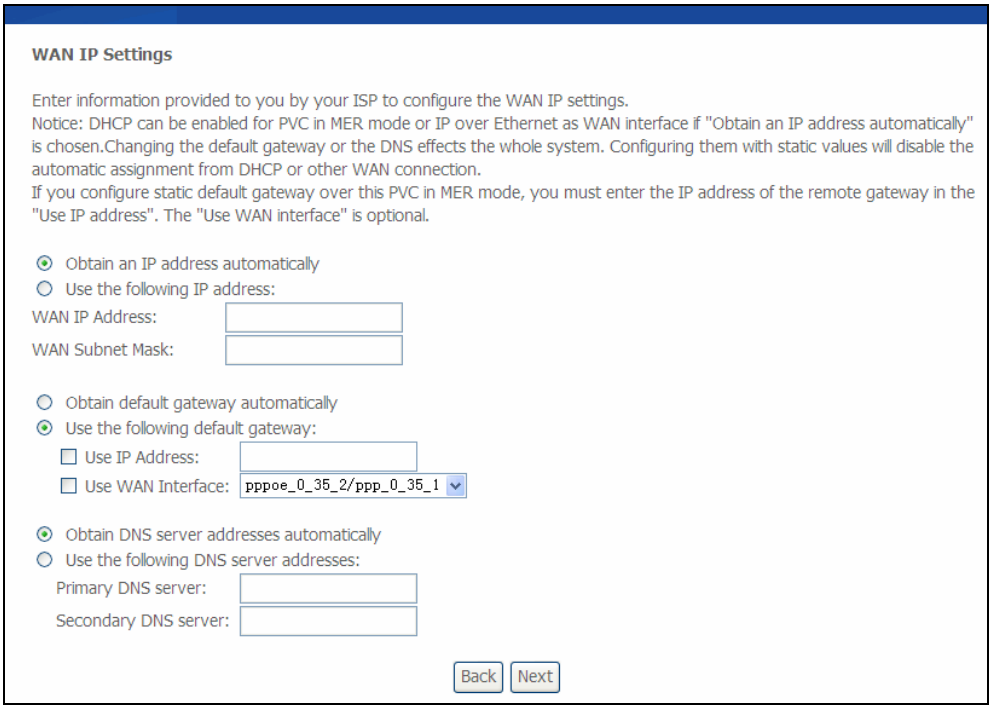


Figure 3-15

c) Turn on the selected functions according to your needs. Click **Next**.

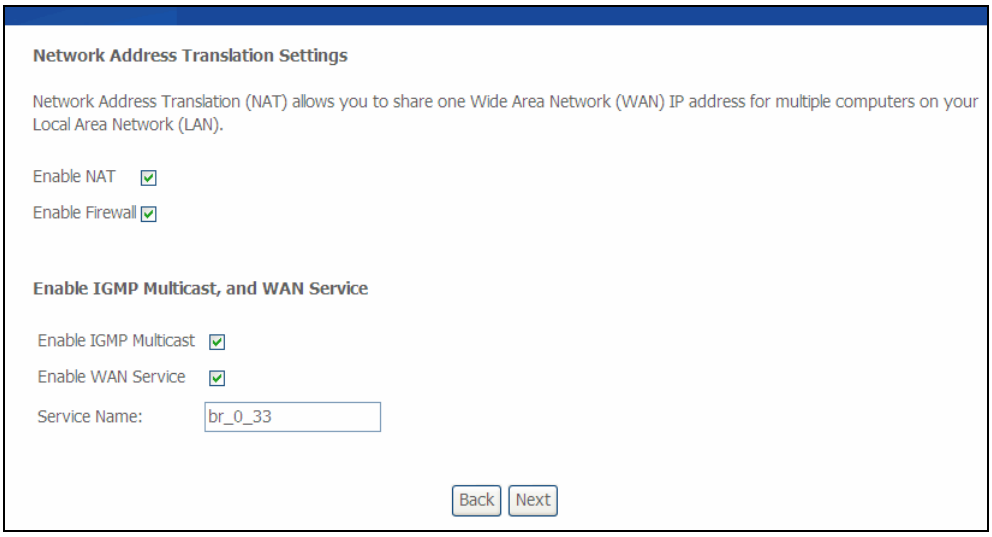


Figure 3-16

d) Click **Save/Reboot**.

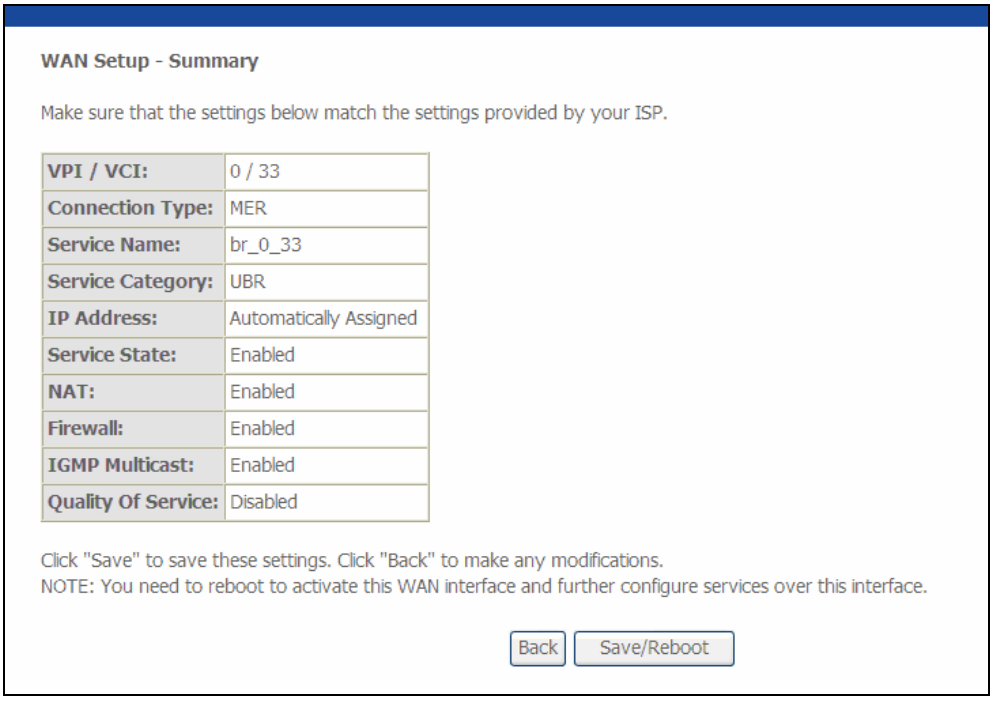


Figure 3-17

3.3.4 IPoA

a) Select IP over ATM (IPoA) Connection Type, and click **Next.**

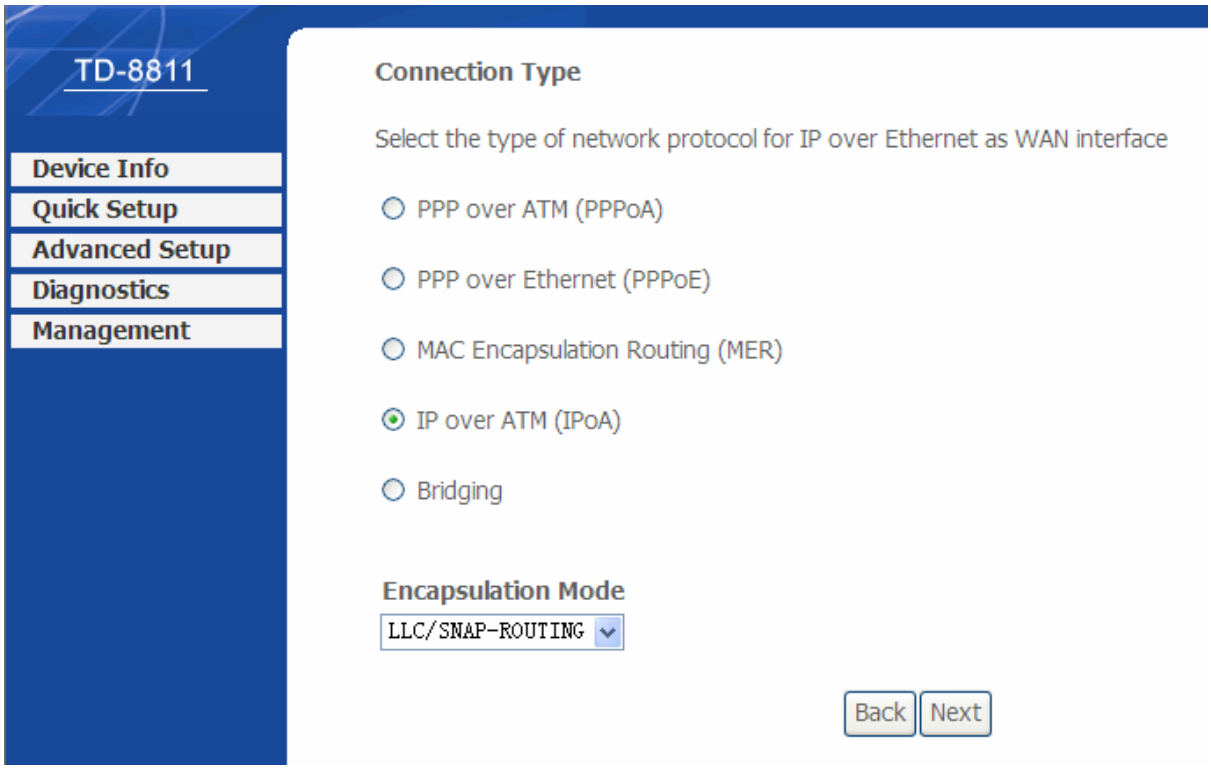


Figure 3-18

b) Enter the parameter and the way which is provided by your ISP, then click **Next**.

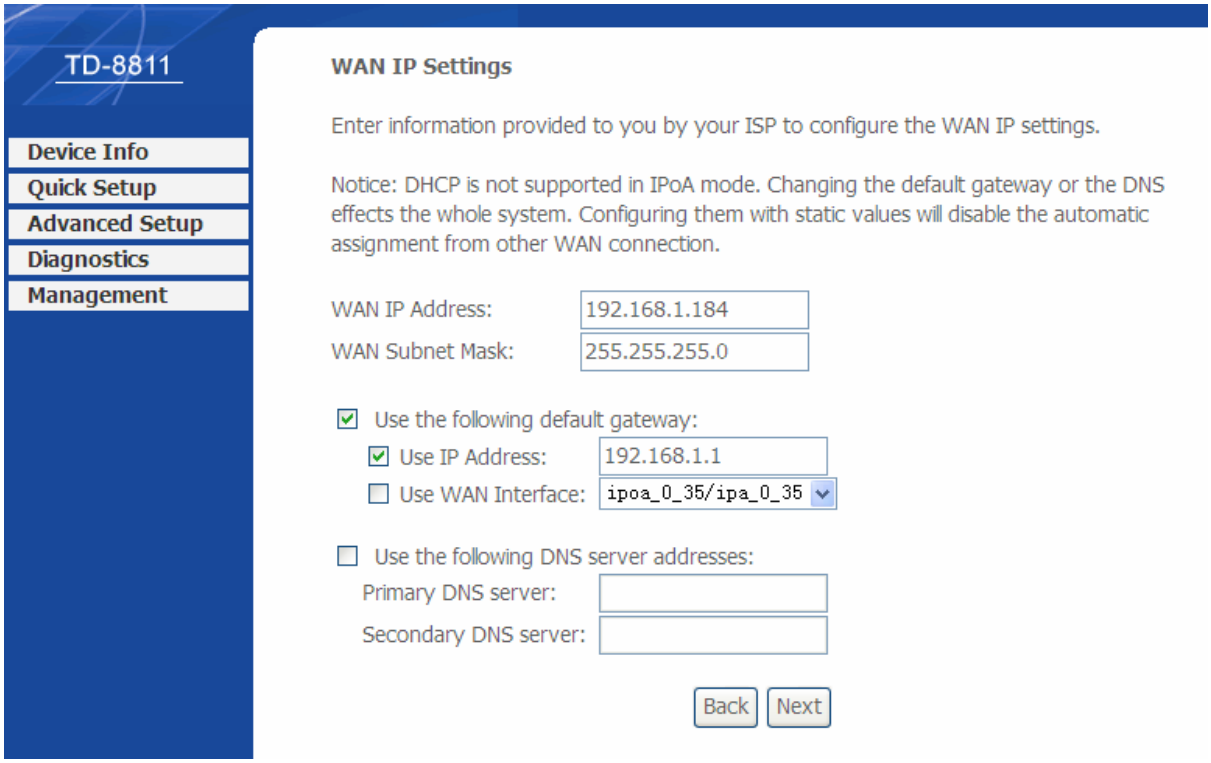


Figure 3-19

c) Turn on the selected functions according to your needs. Click **Next**

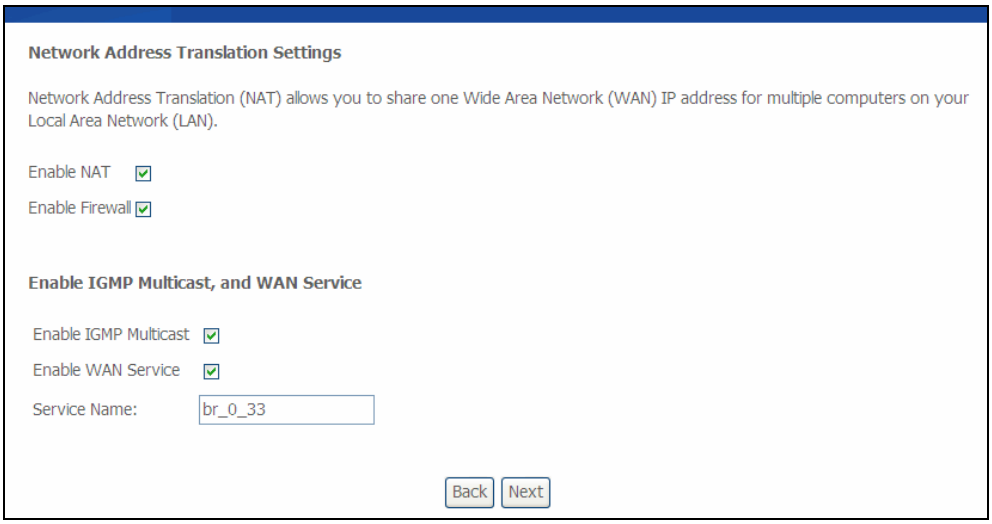


Figure 3-20

d) Click **Save/Reboot**.

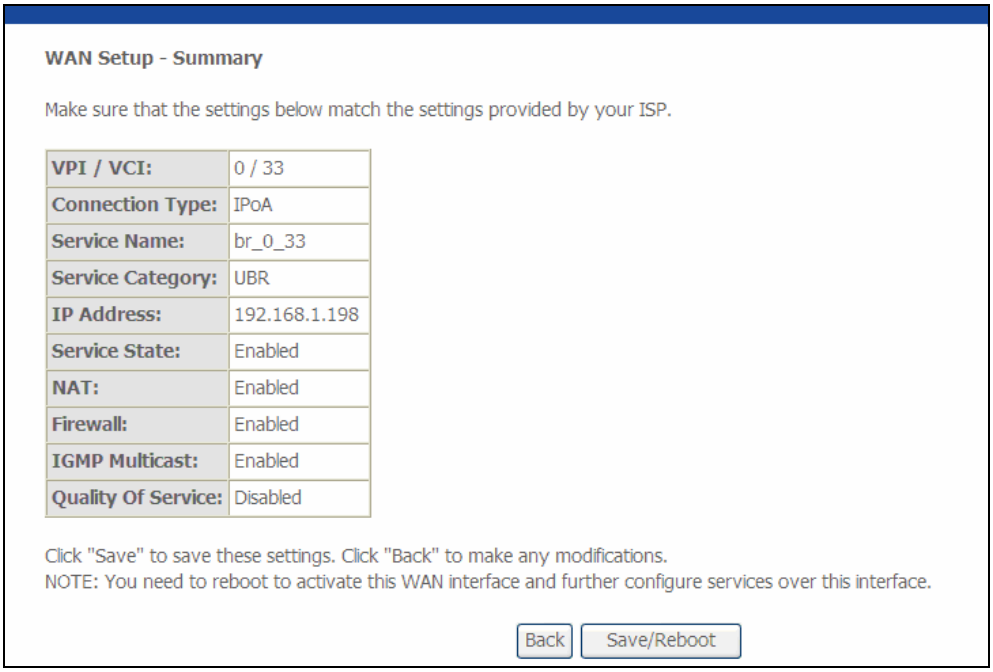


Figure 3-21

3.3.5 Bridging

a) Select **Bridging** Connection Type, and click **Next.**

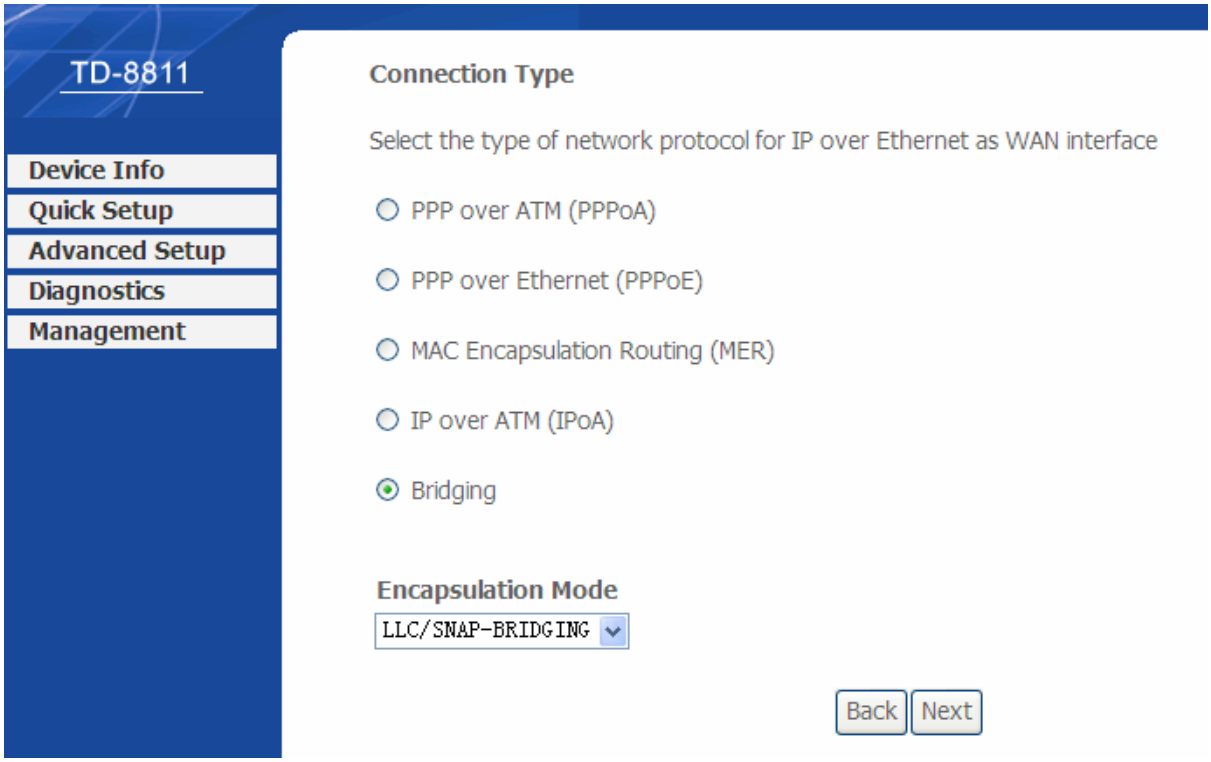


Figure 3-22

b) Click **Save/Reboot**.

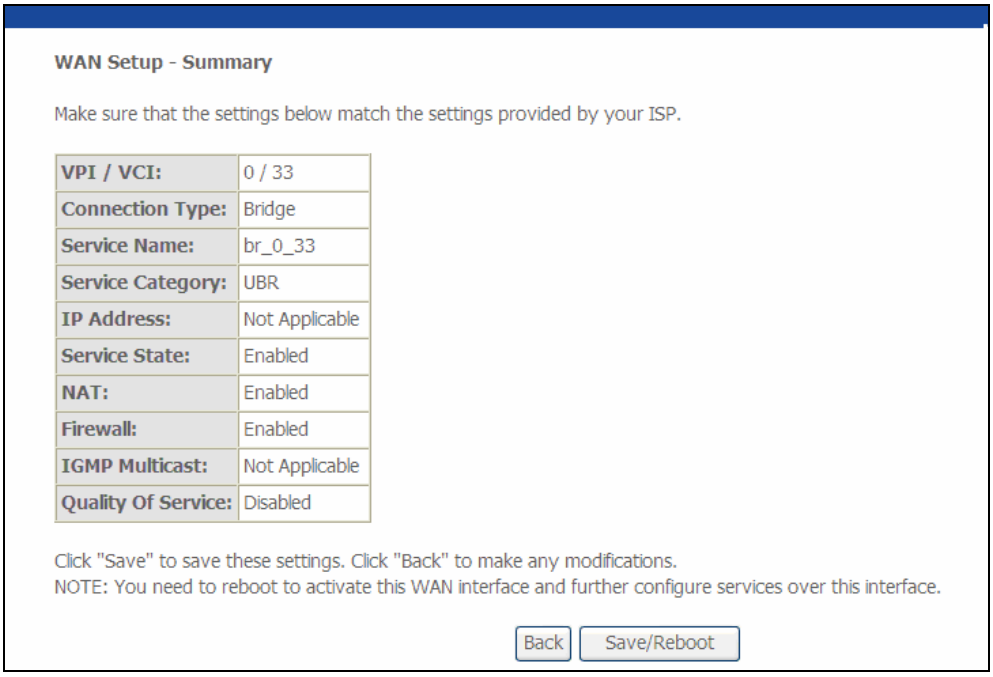


Figure 3-23

☞ **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.

You will then see the Figure 3-24. This screen displays some information about the device such as link rate.

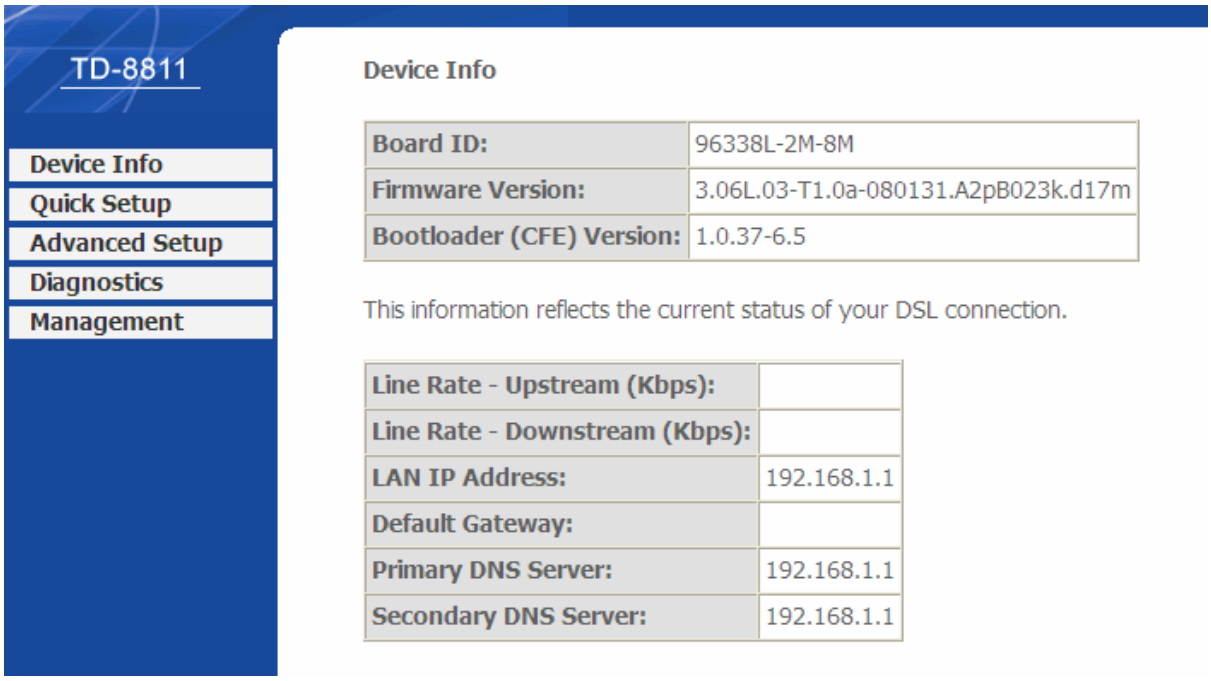


Figure 3-24

Default user name and password both are “admin”; if you want to change them, please go to “**Management**” → “**Access control**”→“**Passwords**”. (Figure 3-25)

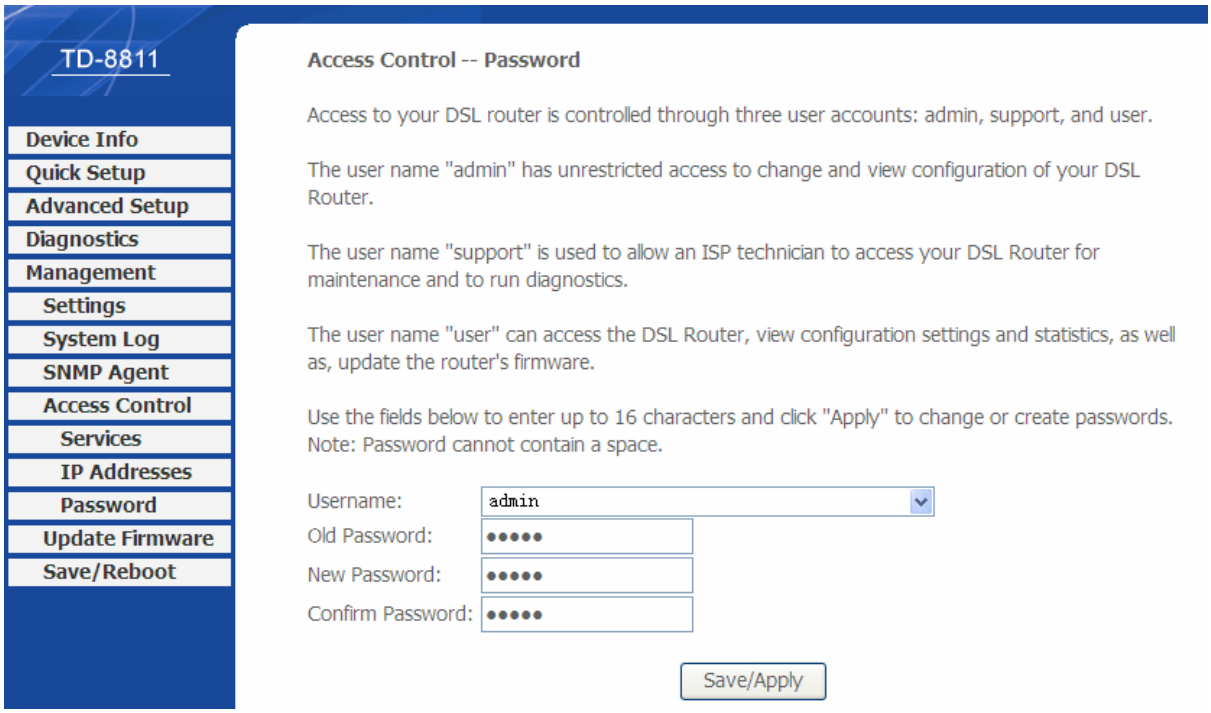


Figure 3-25

3.4 Web Setup

Choose “**Advanced Setup**”→”**WAN**”, you will enter the page of Wide Area Network (WAN) Setup, you will see the Figure 3-26.

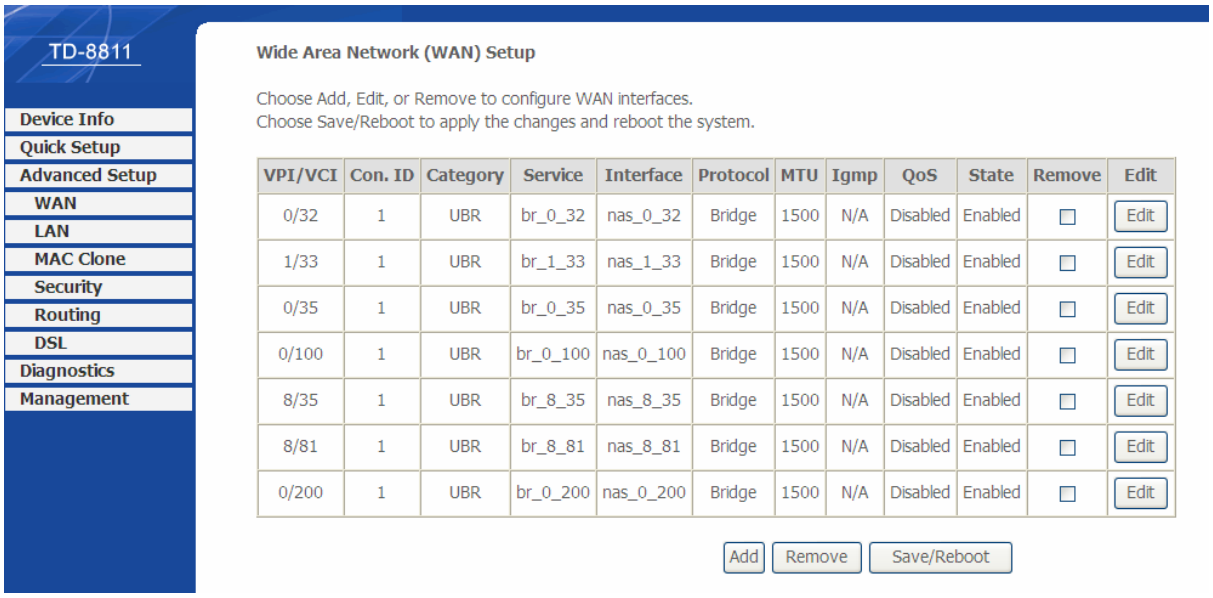


Figure 3-26

There are 7 PVC links in the **WAN** setup page, choose the right PVC according to your needs, and then click the **edit** button, you will enter the page of ATM PVC Configuration (See Figure 3-27).

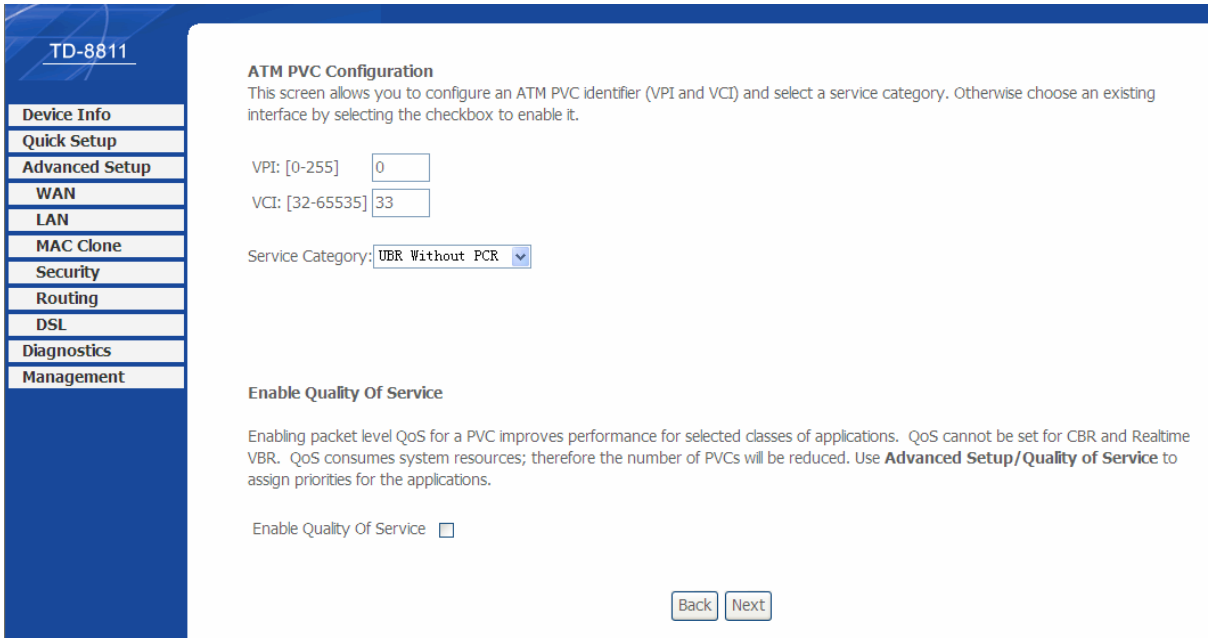


Figure 3-27

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 3-28.

Note:

The type of network protocol selected may be different in different areas, there are five types （Figure 3-28）, so you should ask your ISP to acquire the local type of network protocol and Encapsulation mode.

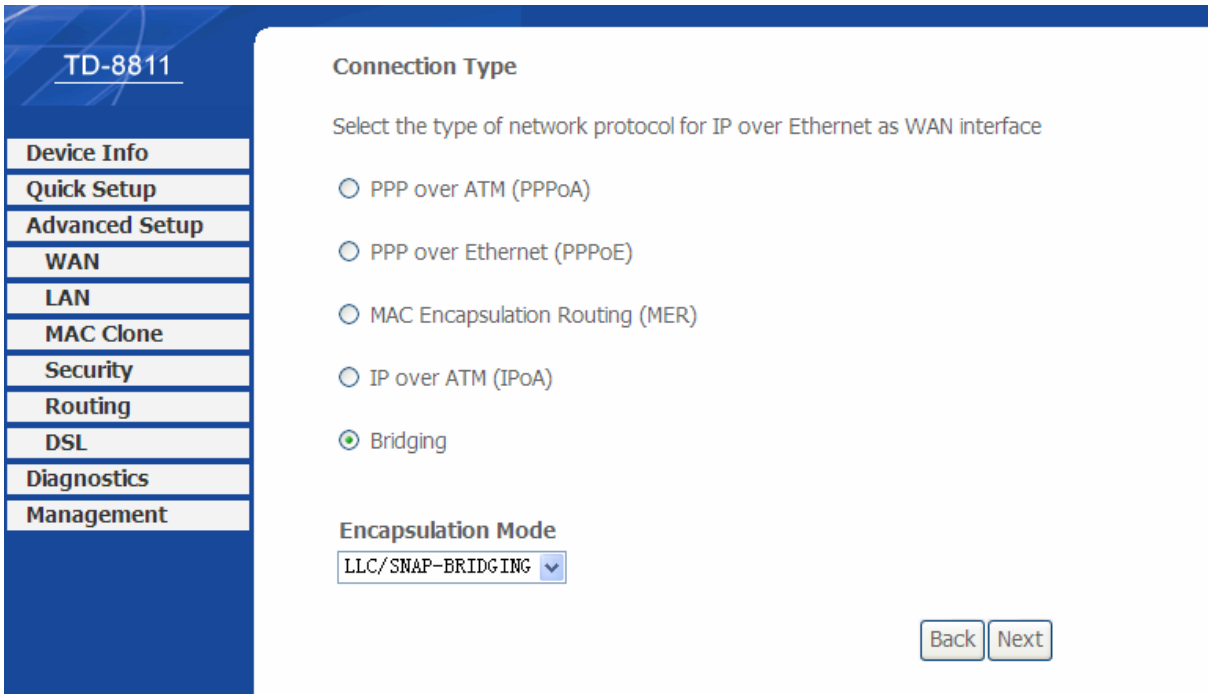


Figure 3-28

After choosing the proper protocol, enter the correct parameters supported by your ISP. Enable the configurations, then you can surf on the Internet.

➢ **PPP over ATM (PPPoA)**

If you select the protocol of PPP over ATM (PPPoA), you will see the Figure 3-29, enter the value of user name and password which is provided by your ISP. After selecting other functions (often using the default setup), click the **next** button.

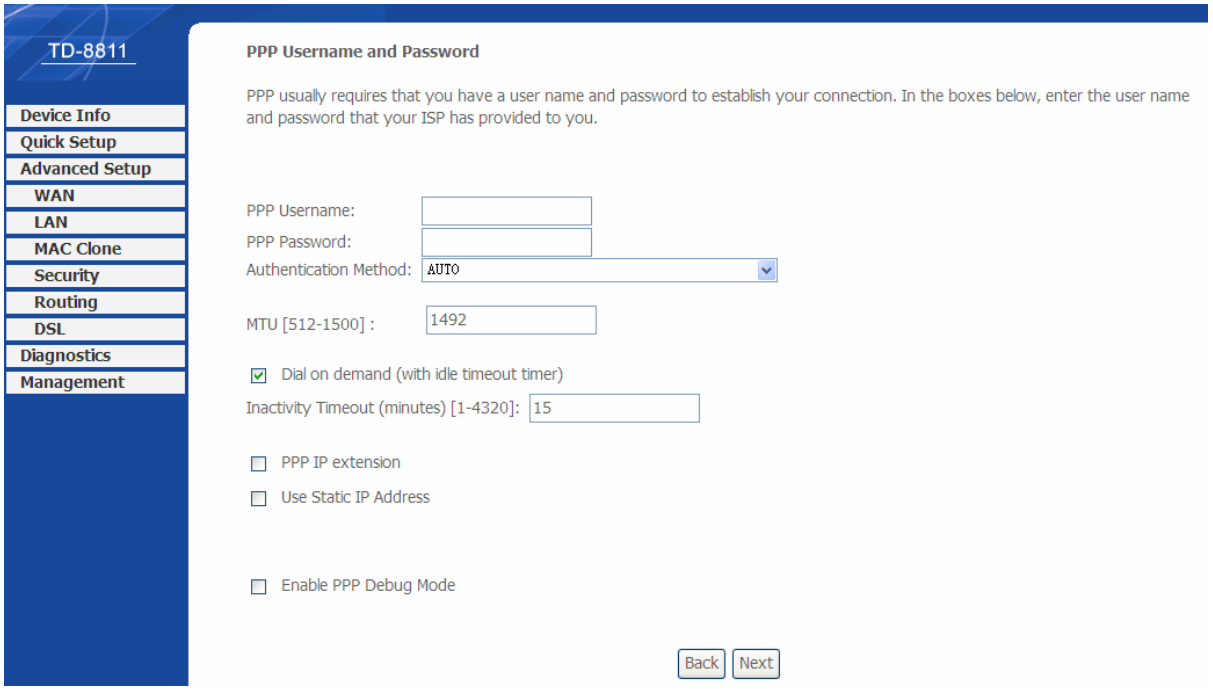


Figure 3-29

After that, the Figure 3-30 will appear. Turn on the selected functions according to your demands. Clicking the **next** button to enter the next step, you will see the Figure 3-31, finally click **save** to

complete the configuration.

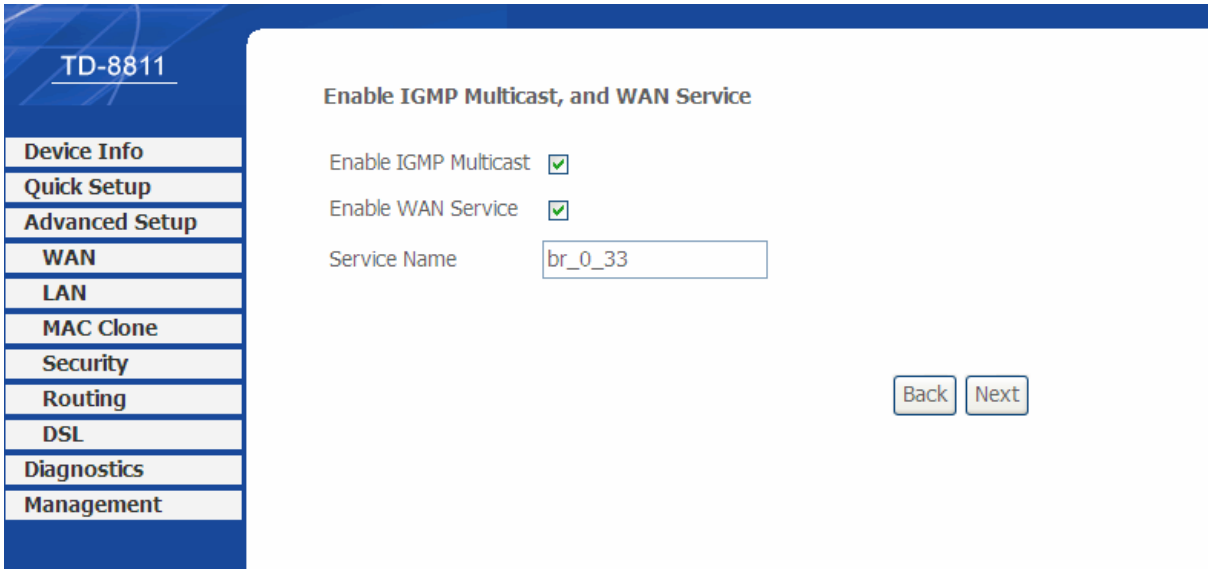


Figure 3-30

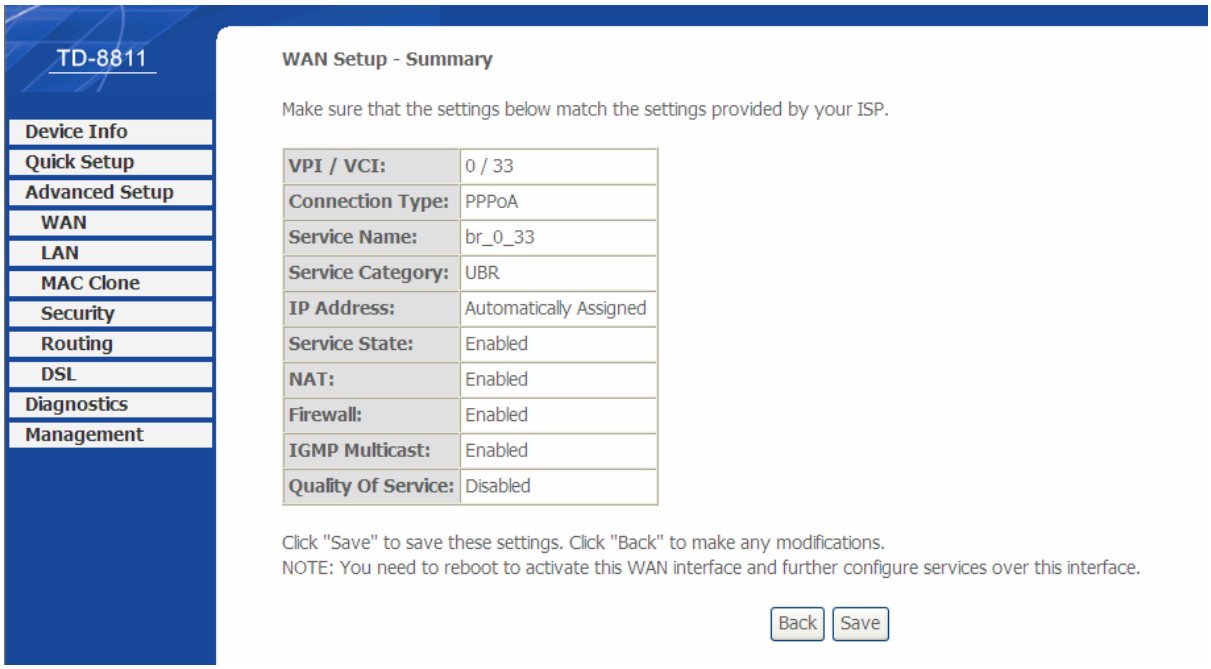


Figure 3-31

➢ **PPP over Ethernet (PPPoE)**

If you select the protocol of PPP over Ethernet (PPPoE), you will see the Figure 3-32, enter the value of user name and password which is provided by your ISP, after selecting other functions (often using the default setup), click the **next** button.

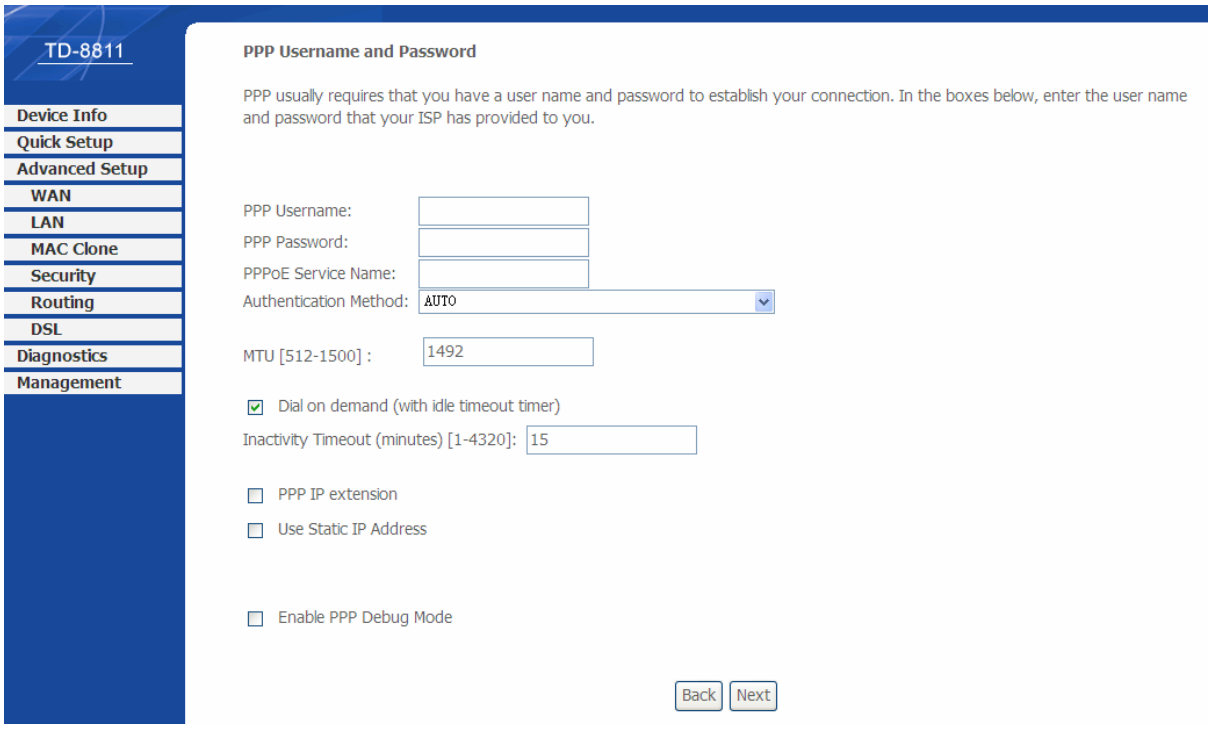


Figure 3-32

You will see the Figure 3-33. Then turn on the selected functions according to your needs. Clicking the **next** button to enter the next step, you will see the Figure 3-34, finally click **save** to complete the configuration.

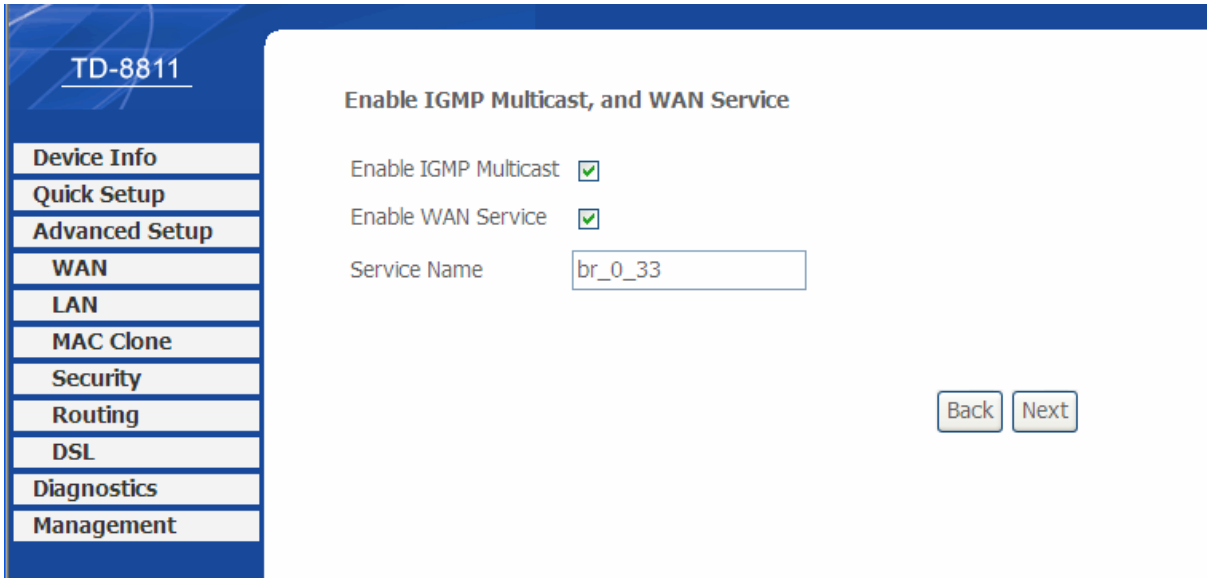


Figure 3-33

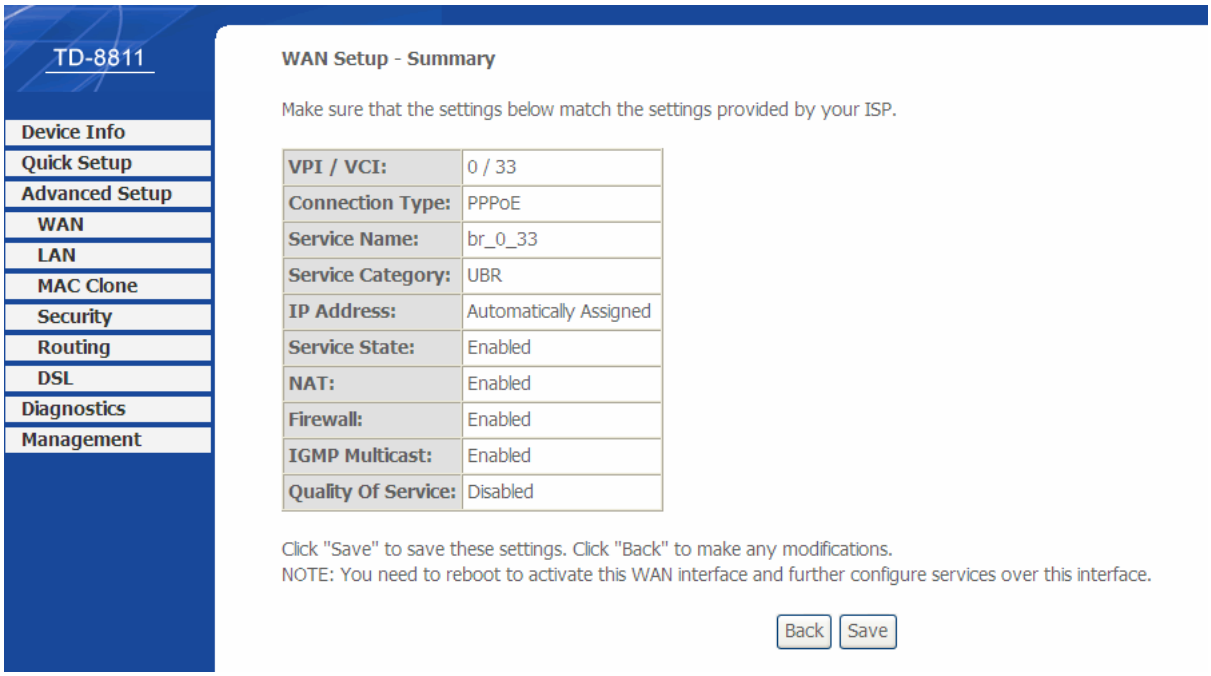


Figure 3-34

➢ **MAC Encapsulation Routing (MER)**

If you select the protocol of MAC Encapsulation Routing (MER), you will see the page (Figure 3-35). Enter the parameter and the way which is provided by your ISP, then click the **next** button.

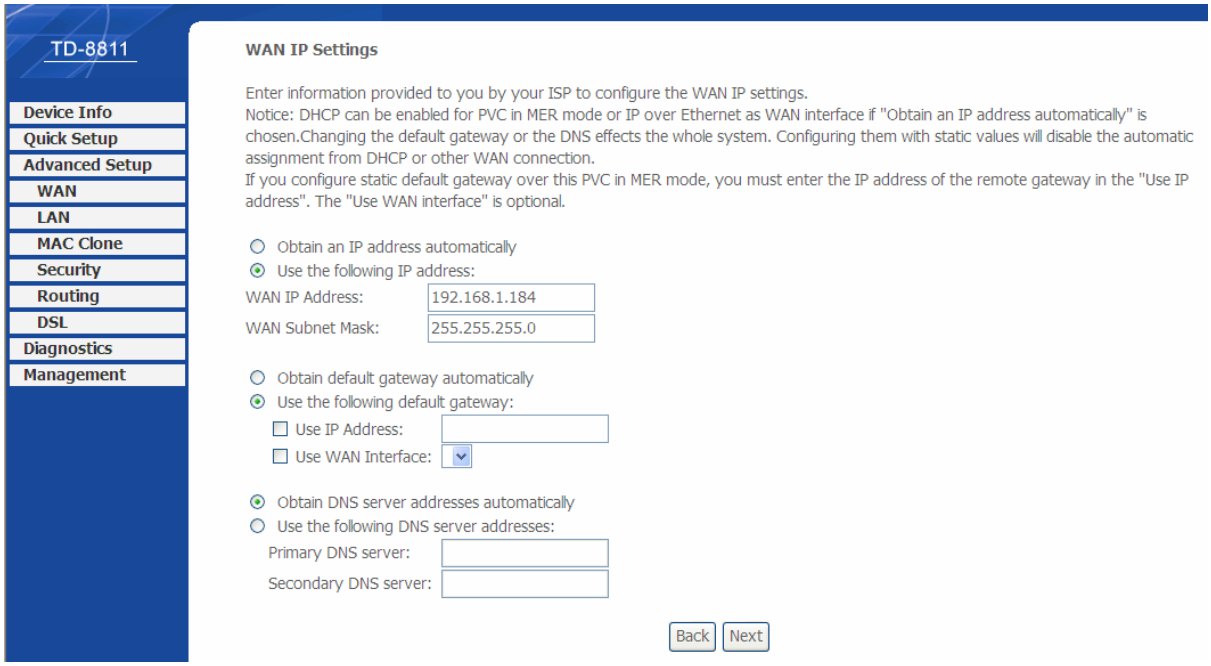


Figure 3-35

After that, Figure 3-36 will be available. You can select the functions according to your needs. Clicking the **next** button to enter the next step, you will see the Figure 3-37, finally click **save** to complete the configuration.

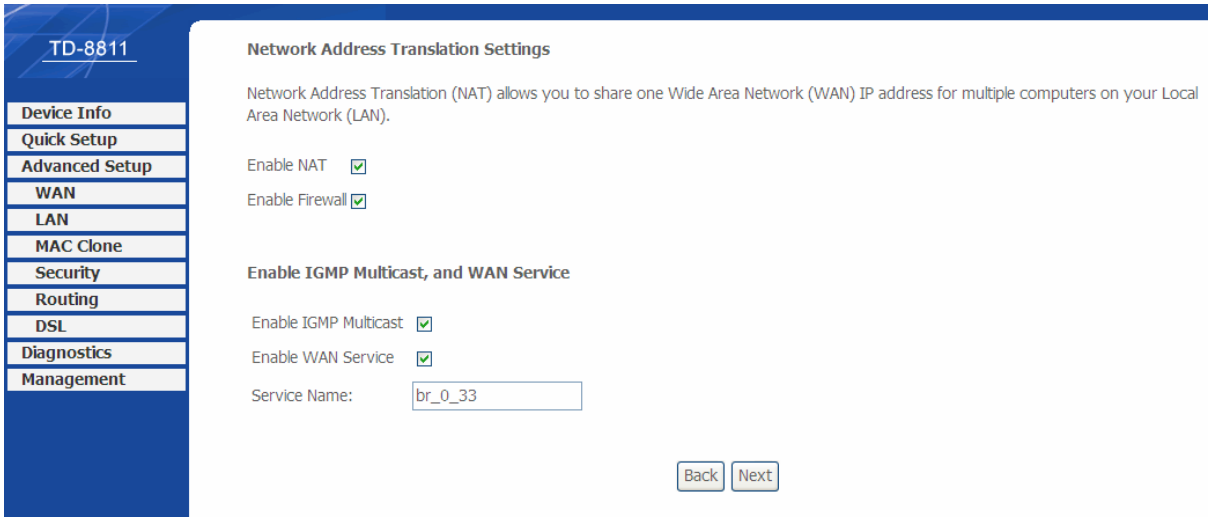


Figure 3-36

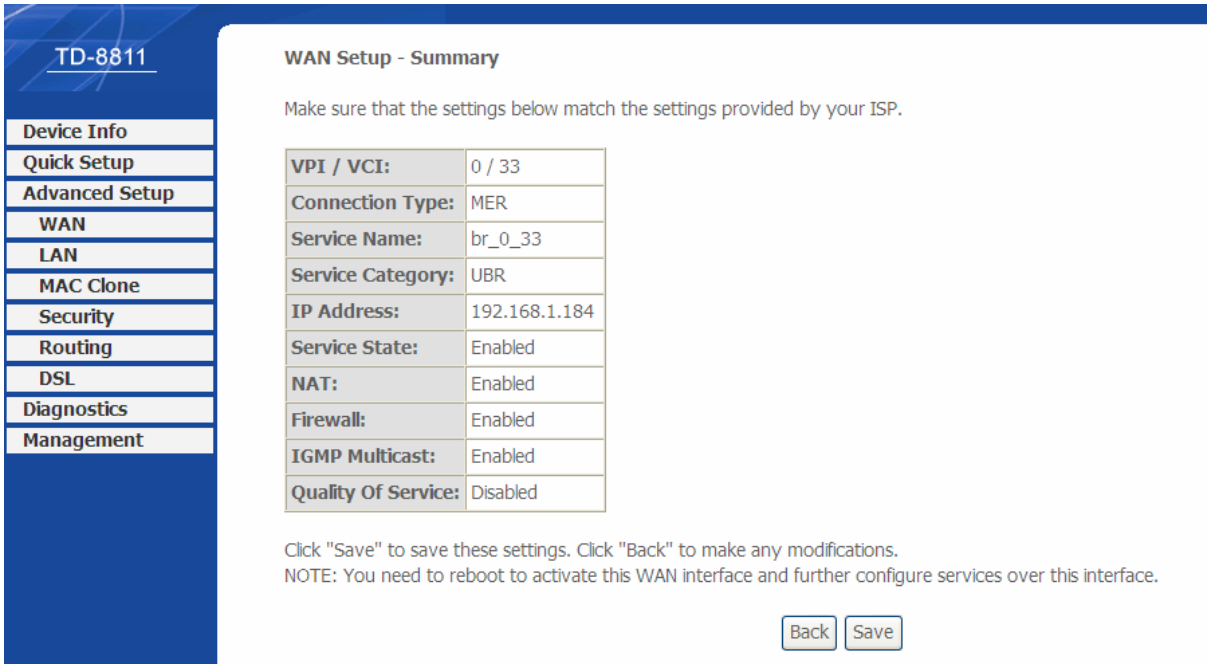


Figure 3-37

➢ **IP over ATM (IPoA)**

If you select the protocol of IP over ATM (IPoA), the Figure 3-38 will display, enter the parameter and the way which is provided by your ISP, then click the **next** button.

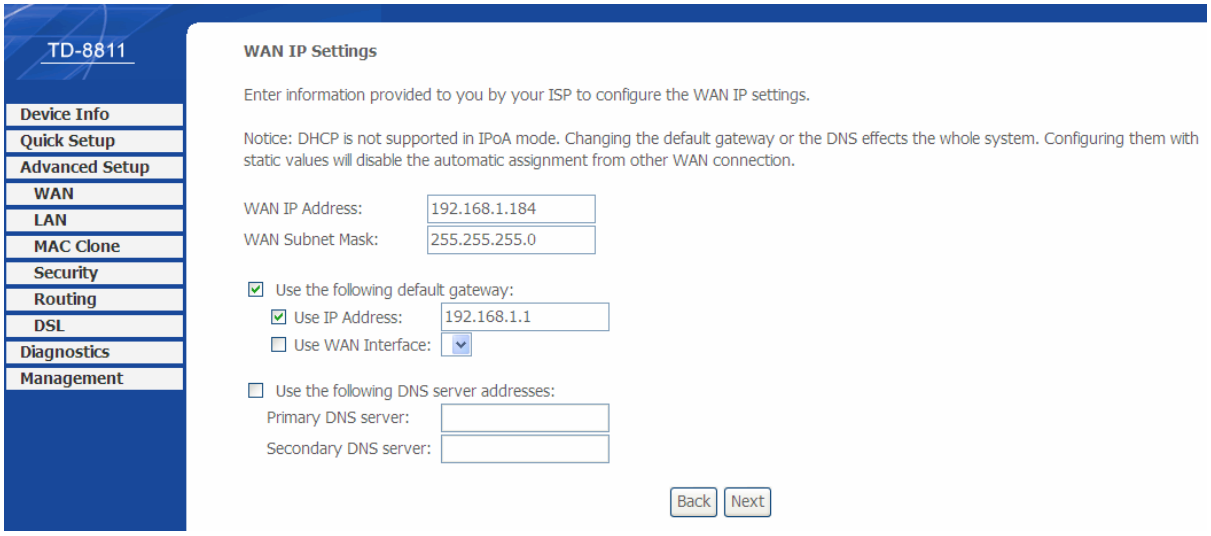


Figure 3-38

You will see the page (Figure 3-39), then turn on the selected functions according to your needs. Clicking the **next** button to enter the next step, you will see the Figure 3-40, finally click **save** to complete the configuration.

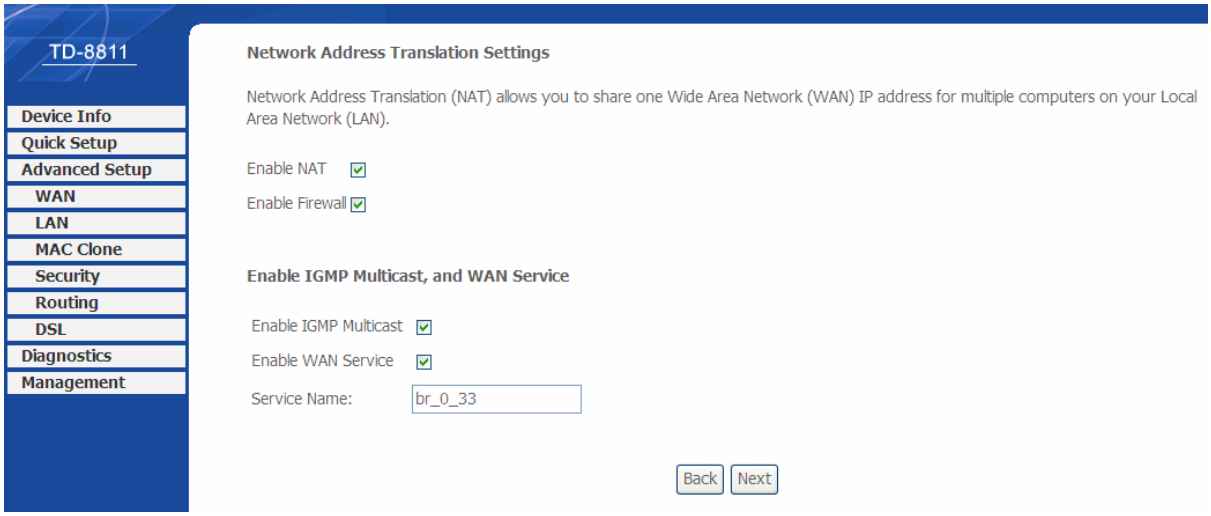


Figure 3-39

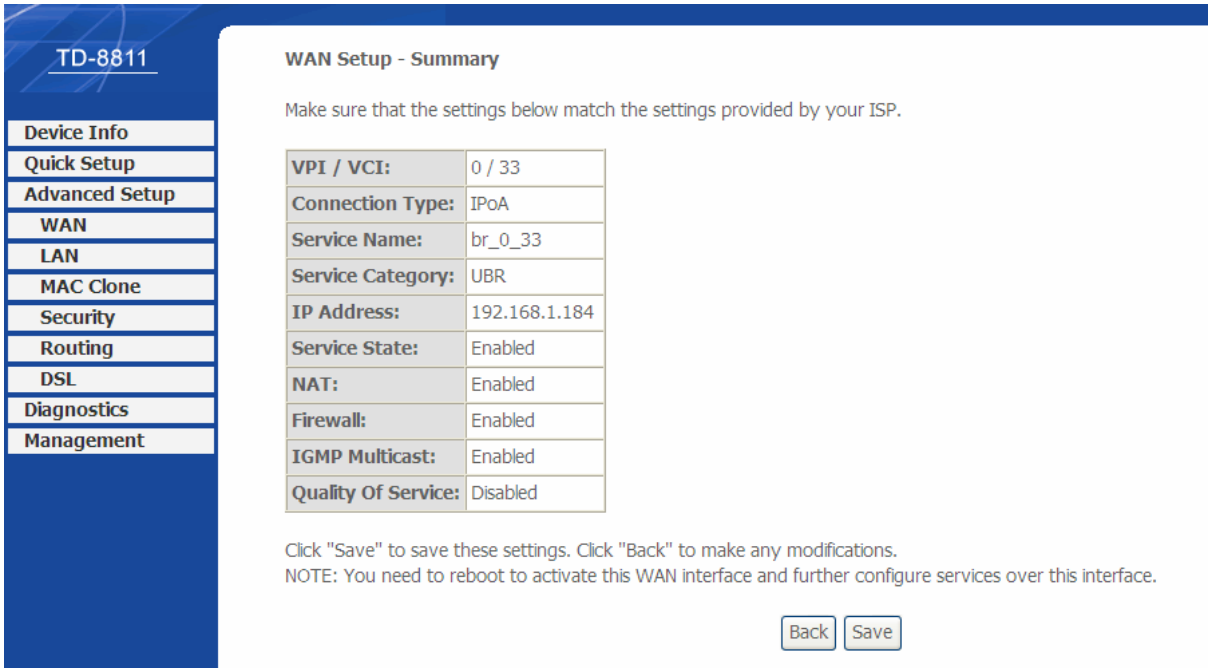


Figure 3-40

➢ **Bridging**

If you select the Bridging protocol, you just open the bridge service function options, you will see the Figure 3-41, then click the **next** button, you will see the Figure 3-42, press **save** to complete the configuration finally.

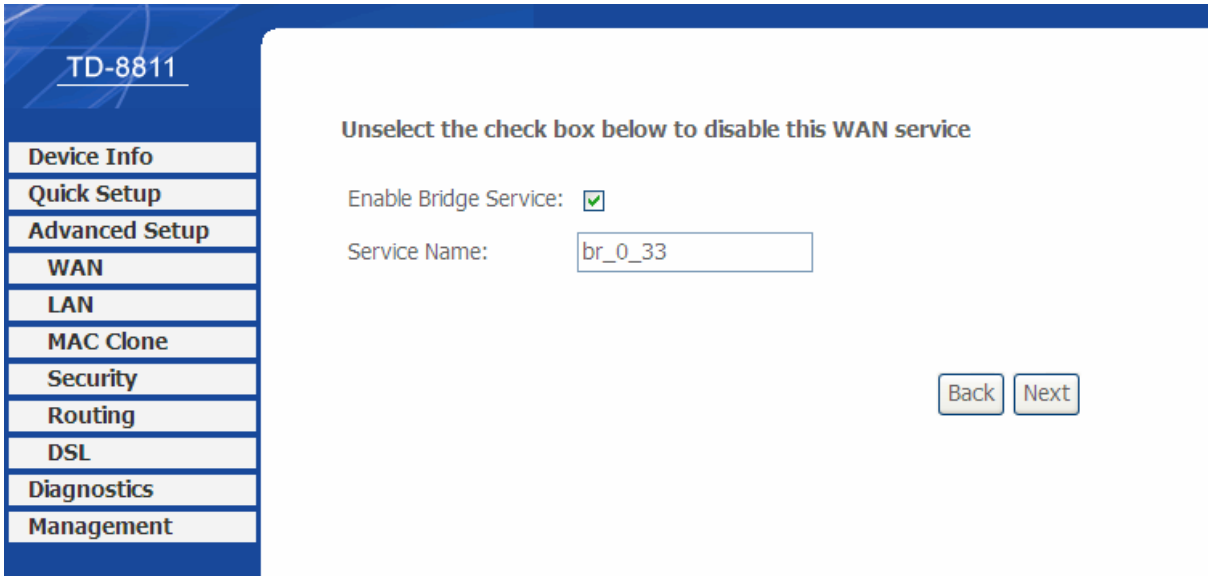


Figure 3-41

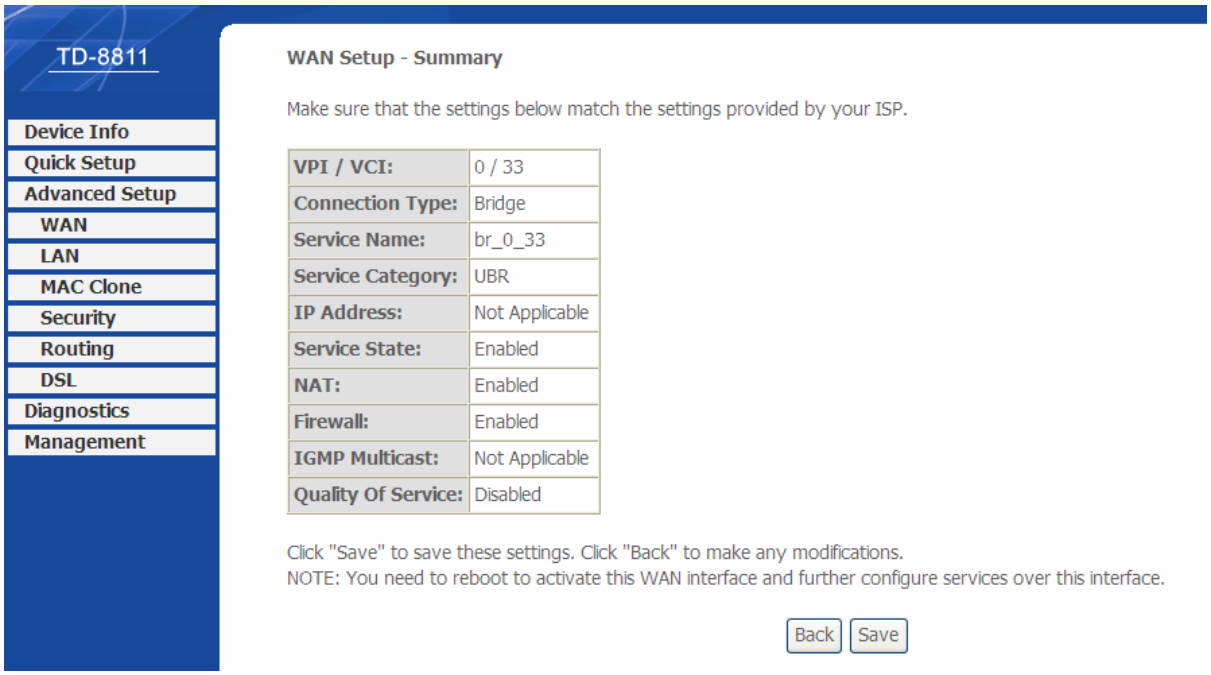


Figure 3-42

Note:

After you complete the settings, the new settings must be saved and the Router must be restarted for the settings to take effect. Please press the **Save/Reboot** button on the Figure 3-43 to restart.

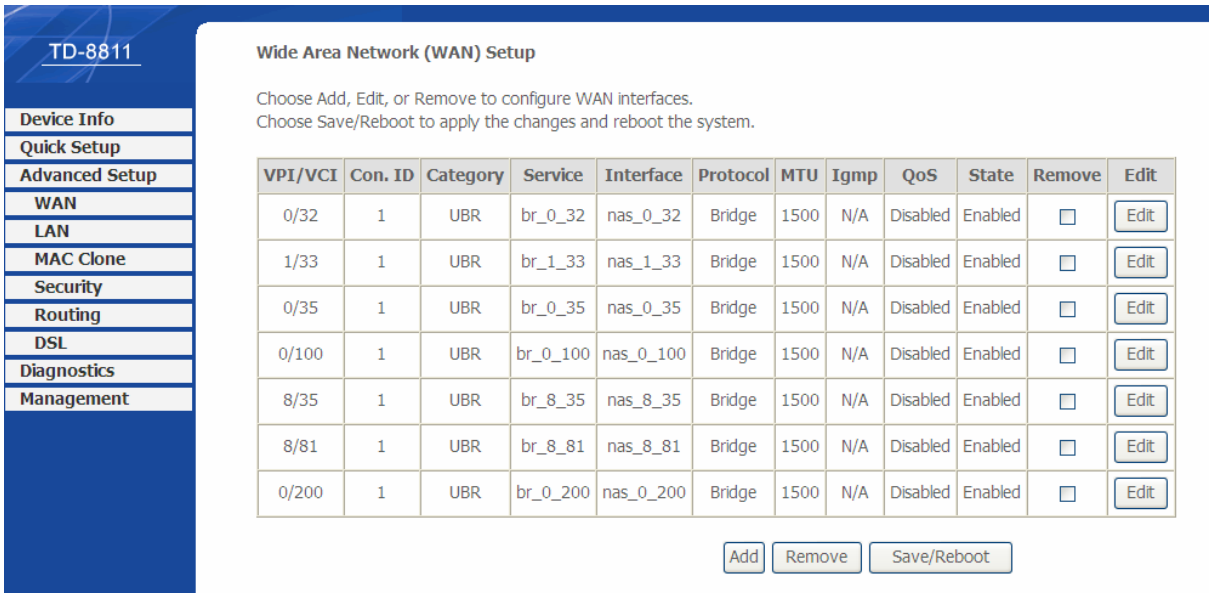


Figure 3-43

Note:

All of the above setting is under windows XP OS.

3.5 Software Dial

If TD-8811 CPE work in bridged (RFC 1483 Bridged) mode when it connects 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 setting page.
- Please 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.**
- Type 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, type the account name and password, then click **connect** to connect the Internet.

3.6 USB Configuration

If you use the USB interface, First, you must install the USB driver to the computer. You can obtain the drives from the provided CD or download from our website. (http://www.tp-link.com)

USB Drive installation procedures

If the hardware is installed before the computer is Power On. Please turn on the computer and enter the operating system, Then the operating system will identify the device. If the hardware is installed after the computer is Power On, the desktop will display the information about finding the new hardware.

Then you will see the Figure 3-44 require install software for USB Device, select 'Install from a list or specific location (Advanced)'and Clicking the **next** button to enter the next step, then Figure 3-45 will display.

Figure 3-44

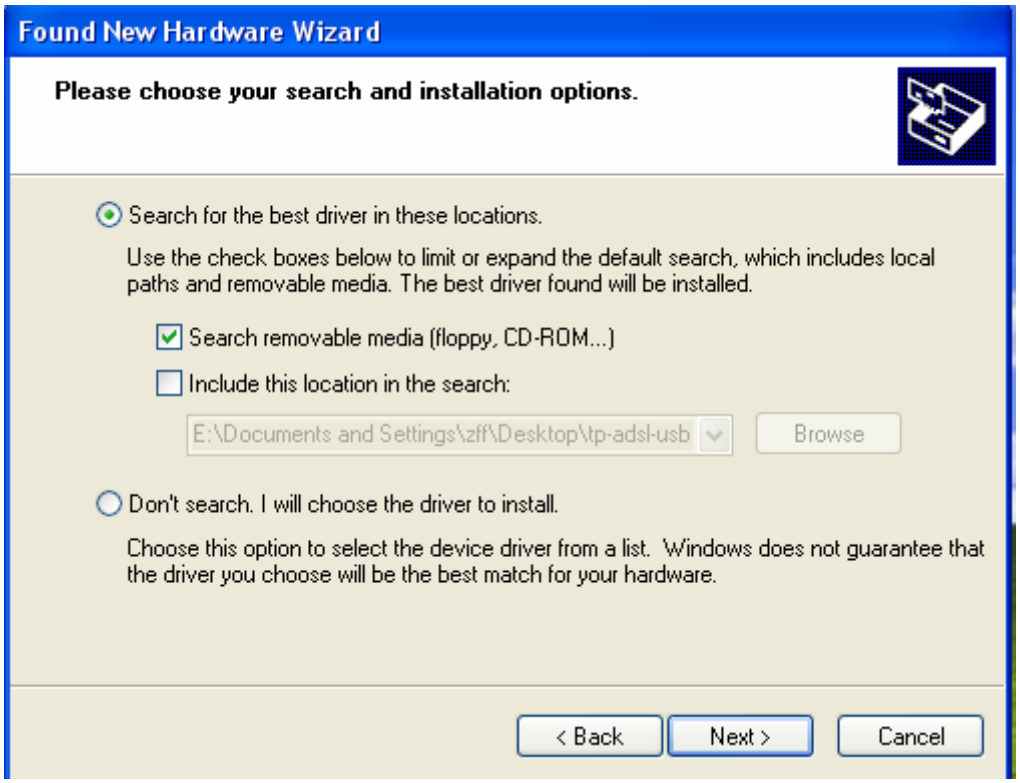


Figure 3-45

Select the 'search removable media(floppy, CD-ROM…)' and click the **next** button, then Figure 3-46 is available. The driver will be searched and installed.

Note:

You must insert the CD first.

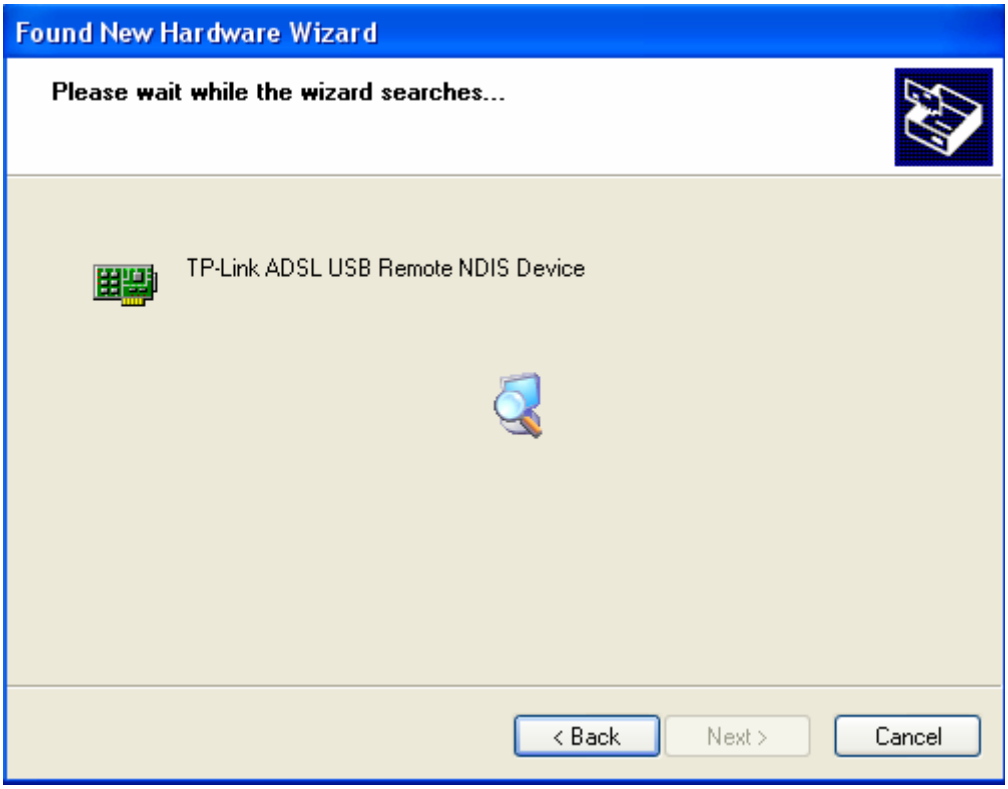


Figure 3-46

After that, you will see the Figure 3-47. The installation completes, click **Finish** to close the installation.

Please refer to chapter 3.1 to finish the IP configuration for USB connect. Then you could use the USB device.

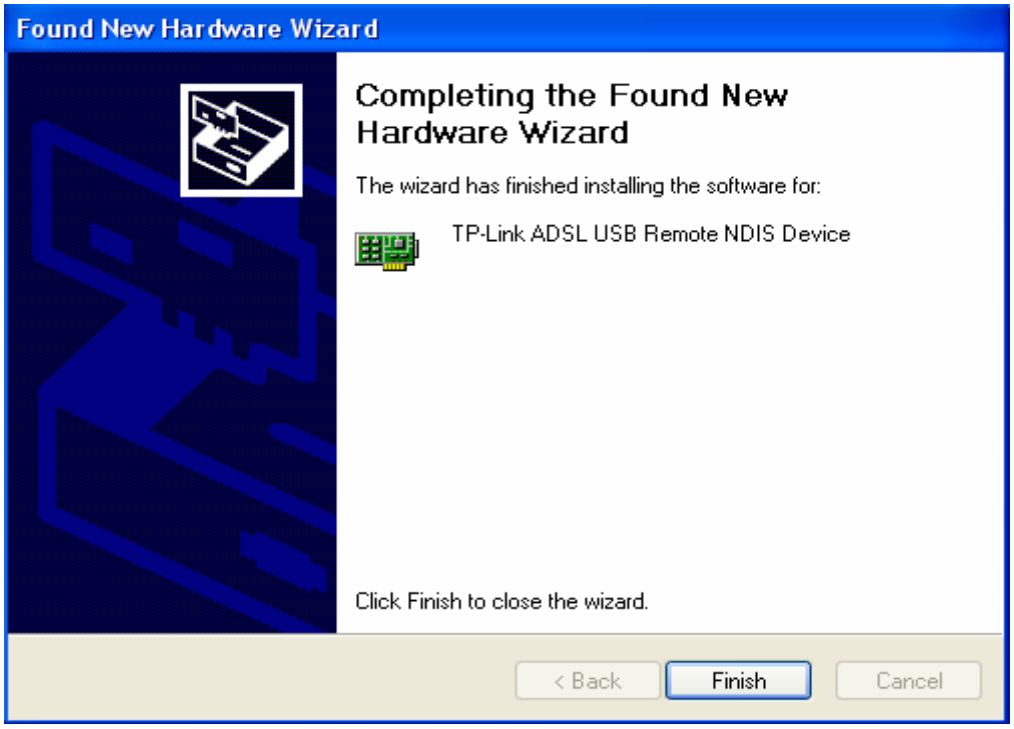


Figure 3-47

Note:

1) All of the above settings are under windows XP.
2) If you want to pull out the USB device you must disconnect the network of USB first.

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 RIP(Routing Information Protocol）
- Configure IP route
- Configure Security rule
- Configure DSL parameter

Note:

If you want to acquire further details, please access our website (www.tp-link.com) and consult the User Guide of TD-8811.

Appendix A: FQA

1. What related parameters are required to acquire ISP when you want to access the internet by ADSL2+ 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. The LAN's and the NIC's LED both are bright, but why 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 ADSL2+ Router's default configuration if necessary.

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

1) Check the indicator of ADSL2+, it should be working 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 software of dial the number, such as Winpoet, Ethernet.
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, ADSL2+ Router will connect automatically.
4) You can check whether your ADSL2+ ROUTER succeeds in connection with **PING** command.

Appendix B: Default Configuration

USER NAME	admin
PASSWORD	admin
IP ADDRESS	192.168.1.1
VPI/VCI	0/32,1/33,0/35,0/100,0/200,8/35,8/81