DrayTek

Vigor3300V+

Multi WAN Security Router

Quick Start Guide

V.1.0

Vigor 3300 V+
Multi-WAN Security Router

Quick Start Guide

Version: 1.0

Date:30/06/2009

Copyright Information

Copyright Declarations

Trademarks

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- Windows, Windows 95, 98, Me, NT, 2000, XP, Vista and Explorer are trademarks of Microsoft Corp.
- Apple and Mac OS are registered trademarks of Apple Inc.
- Other products may be trademarks or registered trademarks of their respective manufacturers.

Safety Instructions and Approval

Operation Environment

- Make sure the AC power source is within the range of **AC 90-240V**. The router should be used in a sheltered area, within the temperature range from **0** to **+50 °C** and relative humidity within the range from **10%** to **90%**.
- Do not expose the router to direct sunlight or other heat sources. The housing and electronic components may be damaged accordingly.

Safety Instructions

- Read the quick start guide and installation manual before powering on the device.
- Locate the emergency power-off switch near the device before the router powers on.
- It is highly recommended to fix the device to the chassis to maintain air circulation and stable condition.
- Do not work alone if the operation environment is inappropriate.
- Check and avoid the potential hazard under moist environments, and grounding issues of power cabling.
- Please turn off the device when you replace the fuse, install or remove the chassis.
- Do not put the device in a damp or humid place, e.g. a bathroom-like environment.
- Avoid cable connection if lightning arises.
- When you want to dispose of the router, please follow the local regulations on environmental protection.

Warranty

We warrant to the original end user (purchaser) that the router will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from the dealer. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labor, to whatever extent we deem necessary tore-store the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. The warranty does not cover the bundled or licensed software of other vendors. Defects which do not significantly affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

Be a Registered Owner	Web registration is preferred. You can register your Vigor router via http://www.draytek.com.
Firmware & Tools Updates	Please consult the DrayTek web site for more information on newest firmware, tools and documents. http://www.draytek.com

European Community Declarations

Manufacturer:	DrayTek Corp.
Address:	No. 26, Fu Shing Road, HuKou Township, HsinChu Industrial Park, Hsin-Chu County, Taiwan 303
Product:	Vigor3300V+

DrayTek Corp. declares that Vigor3300V+ of routers are in compliance with the following essential requirements and other relevant provisions of R&TTE Directive 1999/5/EEC.

The product conforms to the requirements of Electro-Magnetic Compatibility (EMC) Directive 2004/108/EC by complying with the requirements set forth in EN55022/Class A and EN55024/Class A.

The product conforms to the requirements of Low Voltage (LVD) Directive 2006/95/EC by complying with the requirements set forth in EN60950-1.

Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A 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 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, and

(2) This device may accept any interference received, including interference that may cause undesired operation.

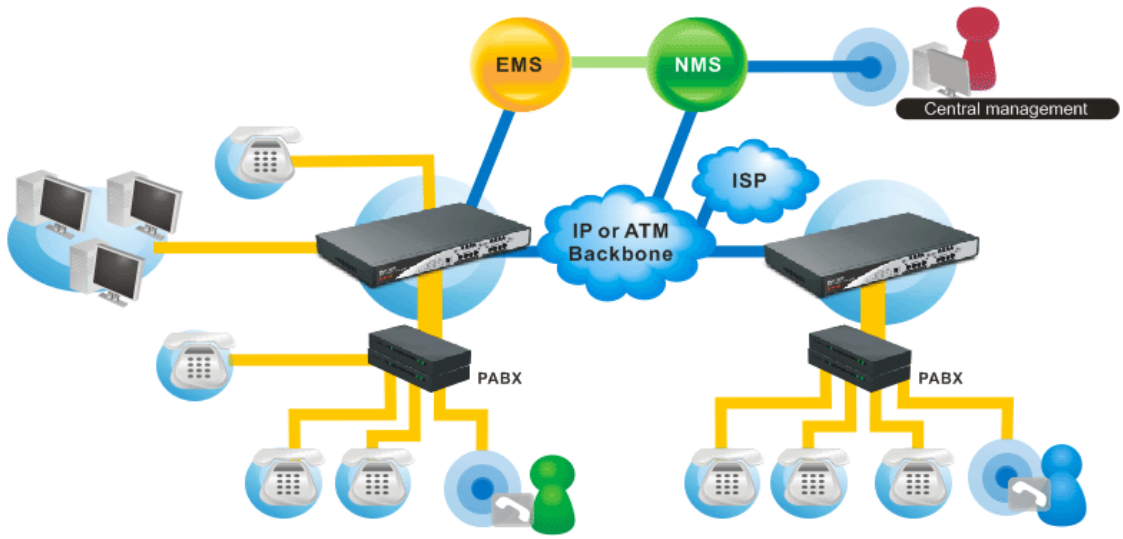
Please visit http://www.draytek.com/user/AboutRegulatory.php.

This product is designed for the ISDN and POTS network throughout the EC region and Switzerland. Please see the user manual for the applicable networks on your product.

Table of Contents

1. Introduction

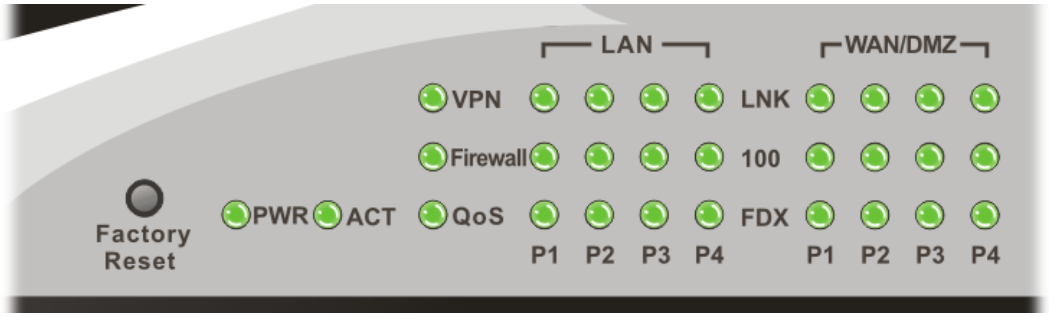
To ensure secure and reliable Internet access over enterprise networks, Vigor3300V+ will be a good solution for you. Vigor3300V+ is a comprehensive NAT and optional security suite that combines firewall, VPN, URL content filtering facilities, with bandwidth management and VoIP capabilities. The application scenario is shown as follows.



This guide provides basic indications and configurations for Vigor3300V+ series:

- Panel Explanation
- Hardware Installation
- Primary Web Configuration

1.1 Panel Explanation

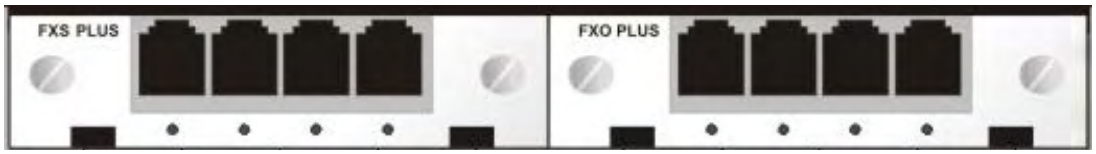


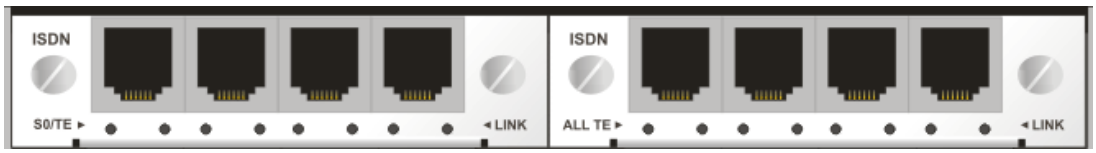
LED Explanation

LED		Status	Explanation
PWR		On	The router is powered on.
		Off	The router is powered off.
ACT		On/Blinking	The system is active.
		Off	The system is hanged.
VPN		On	The VPN tunnel is launched.
		Off	The VPN tunnel is closed.
Firewall		On	The Firewall function is active.
		Off	The Firewall function is inactive.
QoS		On	The QoS function is active.
		Off	The QoS function is inactive.
LAN (1, 2, 3, 4)	LNK	On	The Ethernet link is established on corresponding port.
		Off	No Ethernet link is established.
	100	On	It means that a normal 100 Mbps connection is through its corresponding port.
		Off	It means that a normal 10 Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection on corresponding port.
		Off	It means a half duplex connection on corresponding port.
WAN/DMZ (1, 2, 3, 4)	LNK	On	The Ethernet link is established.
		Blinking	The data transmission is done through the corresponding port.
		Off	No Ethernet link is established.
	100	On	It means that a normal 100Mbps connection is through its corresponding port.
		Off	It means that a normal 10Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection on corresponding port.
		Off	It means a half duplex connection on corresponding port.

Modules (Optional)

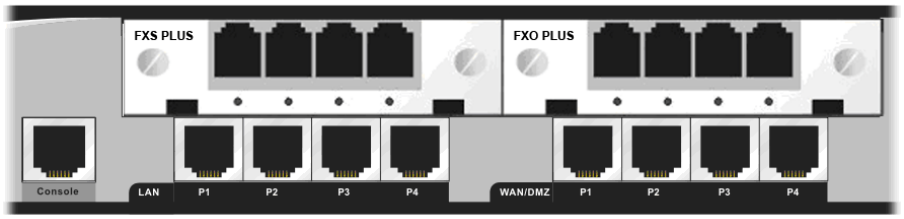
For the router supports functions of ***FXS, FXO, ISDN S0/TE,*** and ***ISDN ALL TE*** modules that are optional, users can purchase them and install them into the router according to the real requirement. The LED description for there four modules are different slightly. Please read the following for detailed explanation.

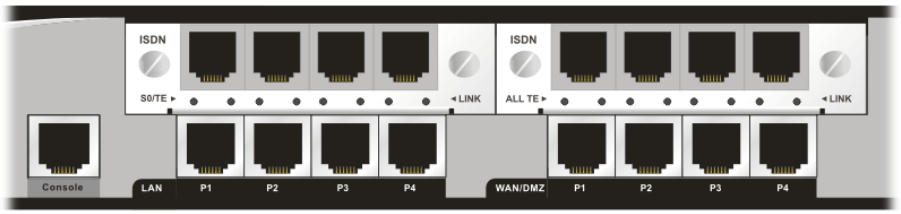




LED	Status	Explanation
FXS/FXO	On	It means VoIP port is connected and ready to use.
	Off	It means VoIP port is not connected.
	Blinking	It means a phone call is coming and the port is ringing.
S0/TE (Left LED)	On	It means S0 port is connected and S0 mode is ready.
	Off	It means TE port is connected and TE mode is ready.
	Blinking	No ISDN phone adapter connected.
S0/TE (Right LED)	On	It means ISDN link is established.
	Off	It means ISDN link is off.
	Blinking	It means the data and voice transmission is on-going.
ALL TE (Left LED)	On	It means TE port is connected and TE mode is ready.
ALL TE (Right LED)	On	It means ISDN link is established.
	Off	It means ISDN link is off.
	Blinking	It means the data and voice transmission is on-going.

Connectors





Interface	Description
Console	Provided for technician use.
LAN (P1 ~ P4)	Connecter for local networked devices.
WAN/DMZ (P1 ~ P4)	Connecter for remote networked devices.
FXS	Connecter for telephone set.
FXO	Connecter for FXS interface of PABX or PSTN line.
ISDN S0/TE	Connecter for ISDN phone/ISDN line.
ISDN ALL TE	Connecter for ISDN line.
Factory Reset button	Used to restore the default settings. Turn on the router (**ACT** LED is blinking). Press the hole and keep for more than 5 seconds. When you see the **ACT** LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
PWR	Connecter for a power cord.s
ON/OFF	Power switch.

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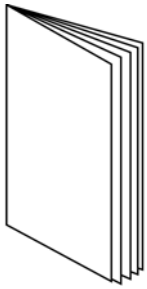
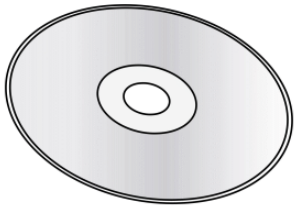
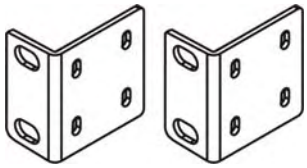
1.2 Package Content



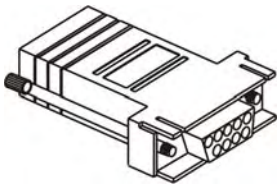
❶ **Quick Start Guide**



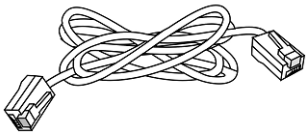
❷ **CD**



❸ **Rack mount kit (brackets)**



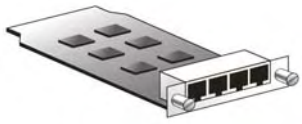
❹ **Console Connector**



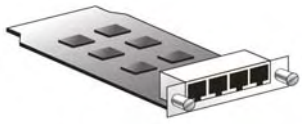
❺ **RJ-45 Cable (Ethernet)x 2**

❻ **RJ-45 to RJ-45 Cable**

❼ **RJ-11 to RJ-11 Cable**



❽ **VoIP Module (Optional)**



❾ **ISDN Module (Optional)**

❿ The type of the power cord depends on the country that the router will be installed:

UK-type power cord

EU-type power cord

USA/Taiwan-type power cord

AU/NZ-type power cord

China-type power cord

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2. Install Your Vigor3300V+ Series Router

This section will guide you to install the router through hardware connection and configure the router's settings through web browser.

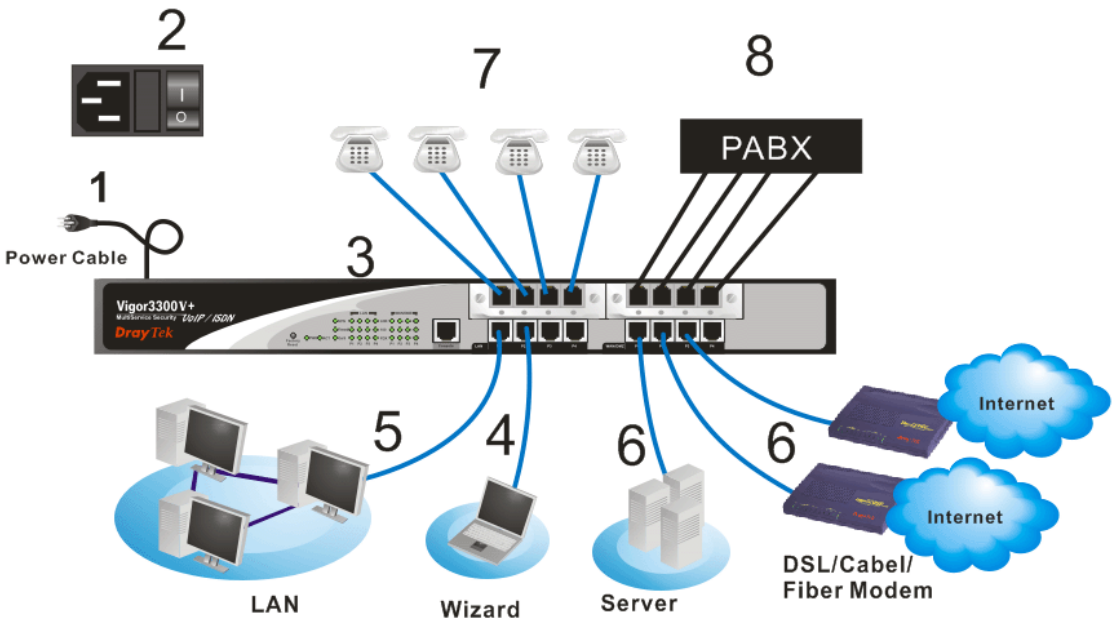
2.1 Hardware Installation

2.1.1 Network Connection

Before starting to configure the router, you have to connect your devices correctly. In this case, we suppose you have *FXS/FXO* module inserted into the router.

1. Connect the power cord to Vigor3300V+'s power port on the rear panel, and the other side into a wall outlet.
2. Power on the device by pressing down the power switch on the rear panel. The **PWR** LED should be **ON**.
3. The system starts to initiate. After completing the system test, the **ACT** LED will light up and start blinking.
4. Connect one end of an Ethernet cable (RJ-45) to one of the **LAN** ports of Vigor3300V+s.
5. Connect the other end of the cable (RJ-45) to the Ethernet port on your computer (that device also can connect to other computers to form a small area network). The **LAN** LED for that port on the front panel will light up.
6. Connect a server/modem/router (depends on your requirement) to any WAN port of Vigor3300V+ with Ethernet cable (RJ-45). The **WAN1 (to WAN4)** LED will light up.
7. Connect telephone sets to the **FXS** ports of Vigor3300V+ with telephone lines (RJ-11 to RJ-11).
8. Connect the **FXO** ports to PABX with telephone lines (RJ-11 to RJ-11).

Below shows an outline of the hardware installation for your reference.



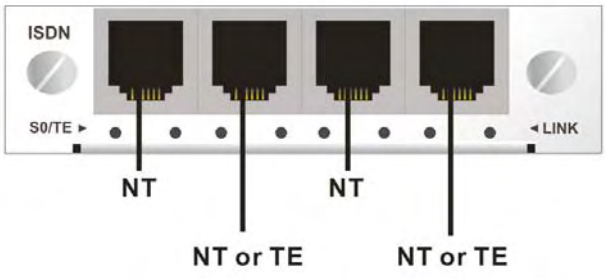
Caution: Each of the Phone ports can be connected to an analog phone only. Do not connect the phone ports to the telephone wall jack. Such connection might damage your router.

2.1.2 ISDN Phone Adapter Installation

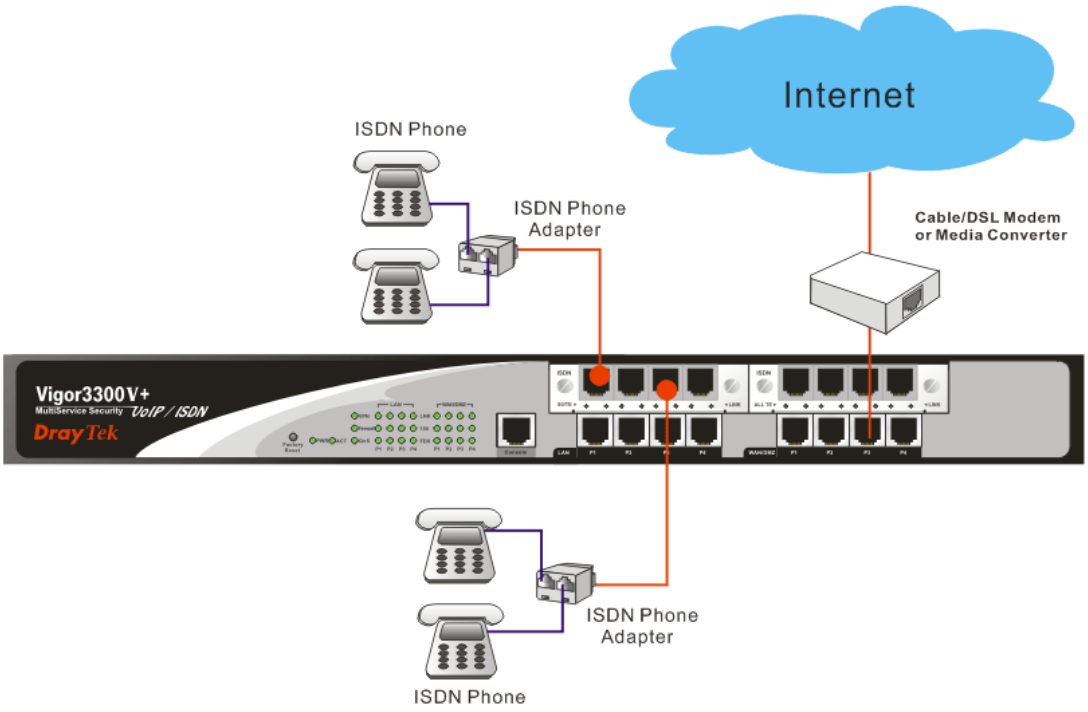
ISDN S0/TE Mode

ISDN NT is always fixed to connect ISDN phone. However, ISDN S0/TE is configurable as NT or TE mode. It can be adjusted in **VoIP>> Port Settings**.

Note:
When NT or TE port is dedicated with TE mode, the Green LED will flash while data transmission.
However, if it is dedicated with NT mode, the Orange LED will light on whenit connect to ISDN phone set.



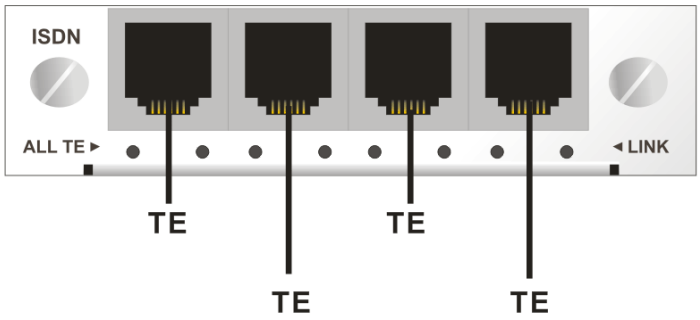
And by using ISDN phone adapters (coming from the router package), the user can connect several phones to the router for communication. Refer to the following figure for reference.



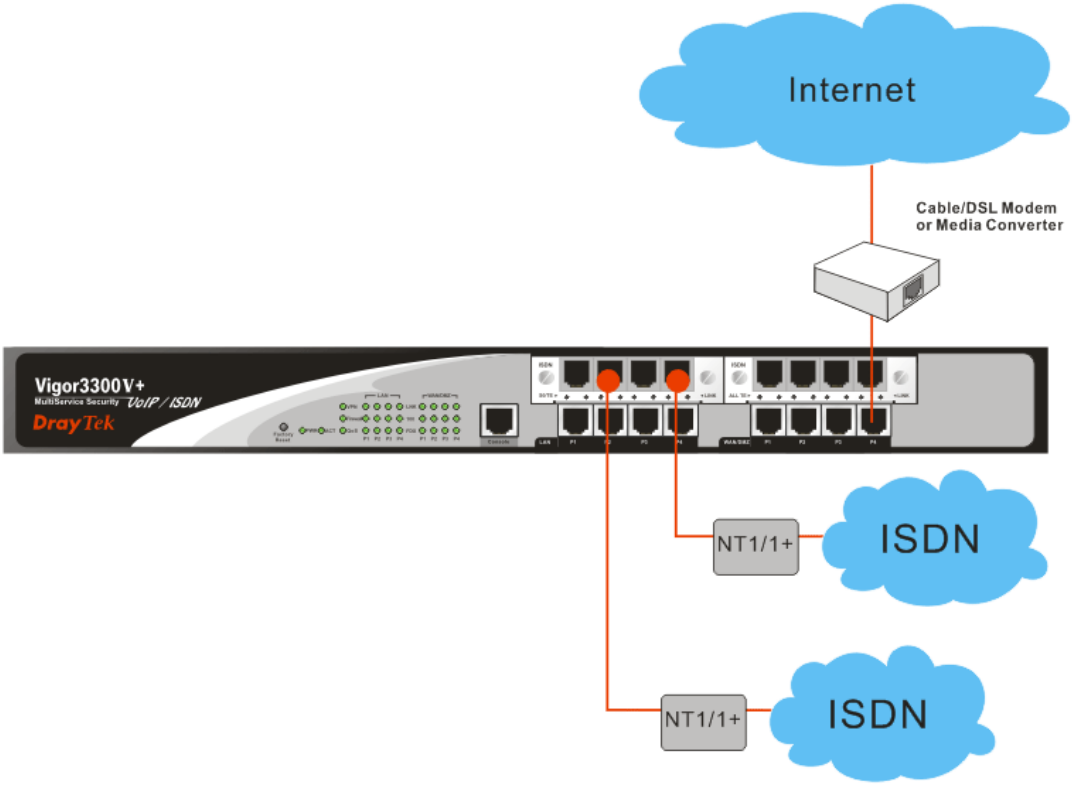
Note: When ISDN phone is connected, the Orange LED will light on.
When there is no ISDN phone connected, the Orange LED will flash.

ISDN ALL TE Mode

Such interface is used for connecting ISDN line. Each port is dedicated to TE mode only. Therefore, you cannot use such interface to connect to any ISDN phone.



For the connection, refer to the following figure for reference.



Note: When data transmission through this interface, the Green LED will flash.

2.2 Primary Web Configuration

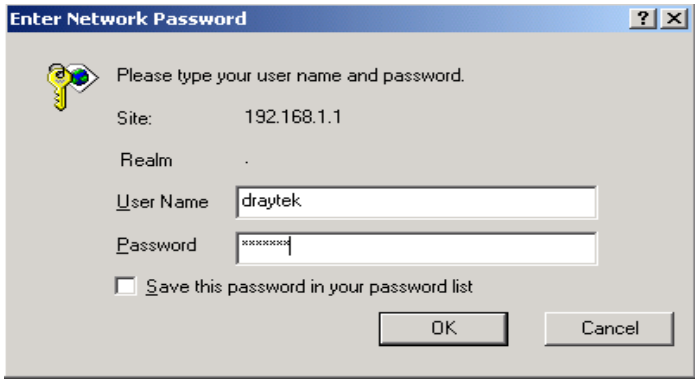
The **Quick Start** is designed for you to easily set up for Internet access. You can directly access the **Quick Start** via Web Configurator.

2.2.1 Accessing Web Browser

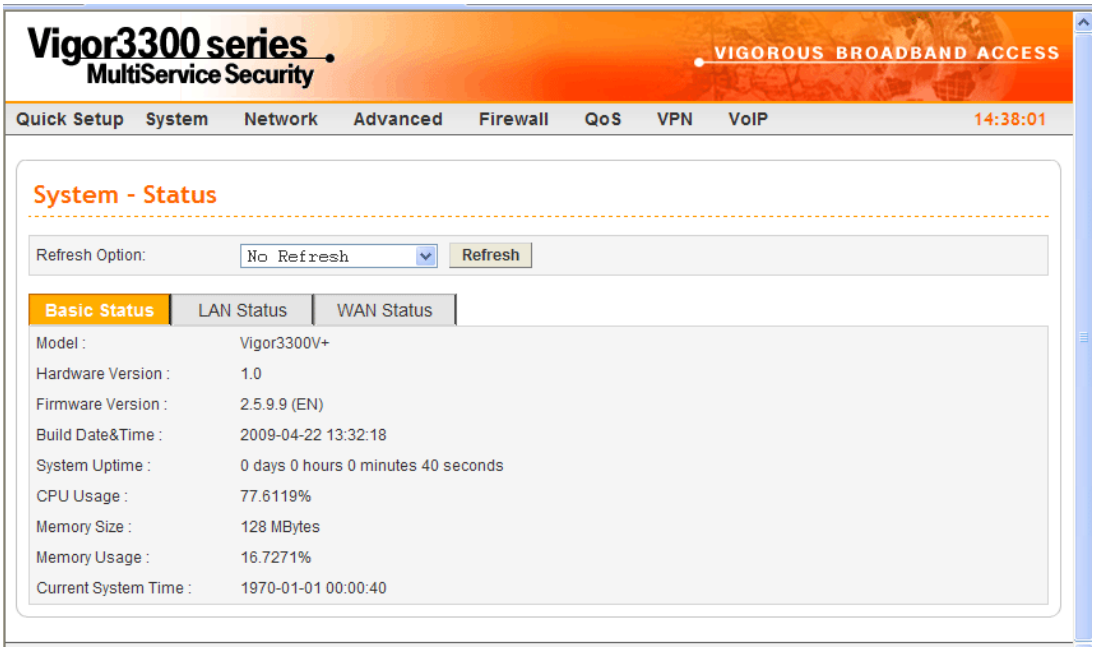
1. Make sure your computer connects to the router correctly.

> Notice: You may either simply set up your computer to get IP dynamically from the router or set up the IP address of the computer to be the same subnet as **the default IP address of Vigor router 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of this guide.

2. Open a web browser (e.g. IE or Netscape) on your PC and type **http://192.168.1.1.** A pop-up window will open to ask for username and password. Please type default values on the window for the first time accessing. The default value for user name is **draytek** and the password is **1234**. Next, click **OK**.



3. Now, the **Main Screen** will pop up.



2.2.2 Changing User Password

The first job that you have to do is changing the user password. Follow the steps below to modify:

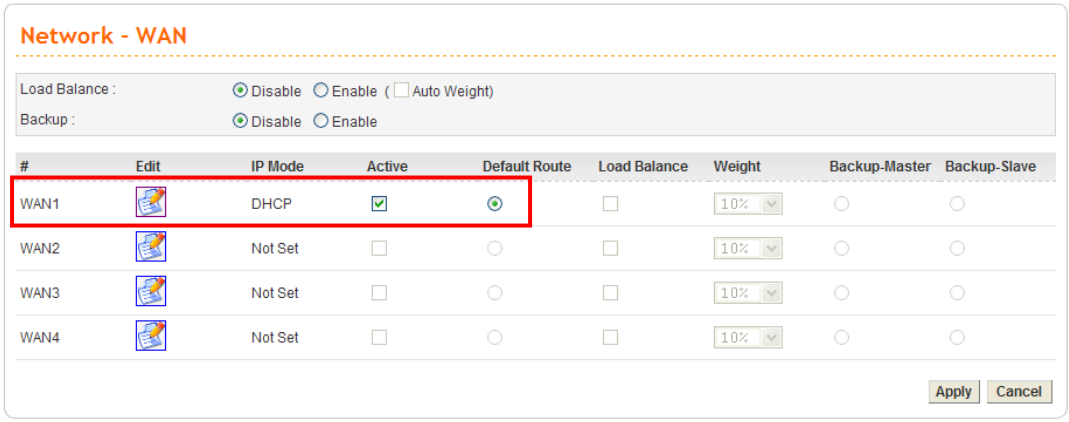
1. Go to **System** page and choose **Change Password**.

2. Enter the login password on the field of Old Password. Type a new one in the field of New Password and retype it on the field of Confirm Password. Then click **Apply** to continue.
3. Now, the password has been changed. Next time, use the new password to access the Web Configurator for this router.

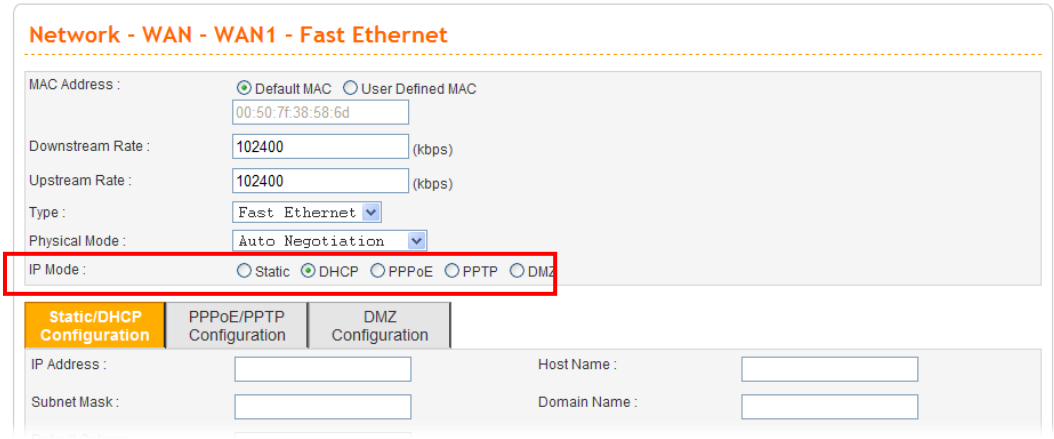
2.2.3 Adjusting WAN Connection Mode

On the next page as shown below, please select the appropriate Internet access type according to the information from your ISP.

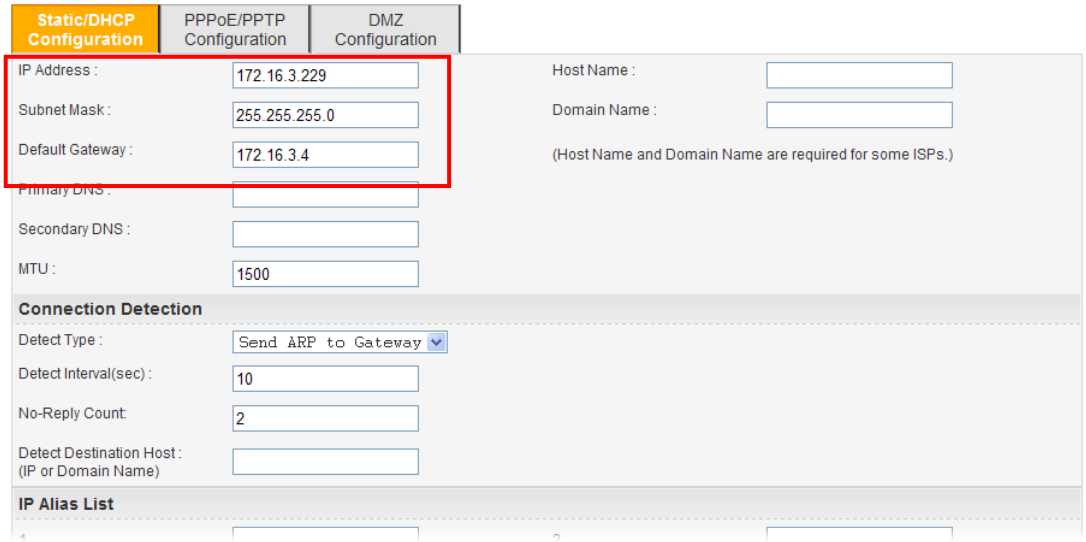
1. Go to **Network** page and choose **WAN**.
2. You have to select an appropriate WAN connection type for connecting to the Internet through this router. For example, choose **WAN1** and click **Edit** icon.



3. There are four IP modes available for you to choose - Static IP, DHCP, PPPoE and PPTP.

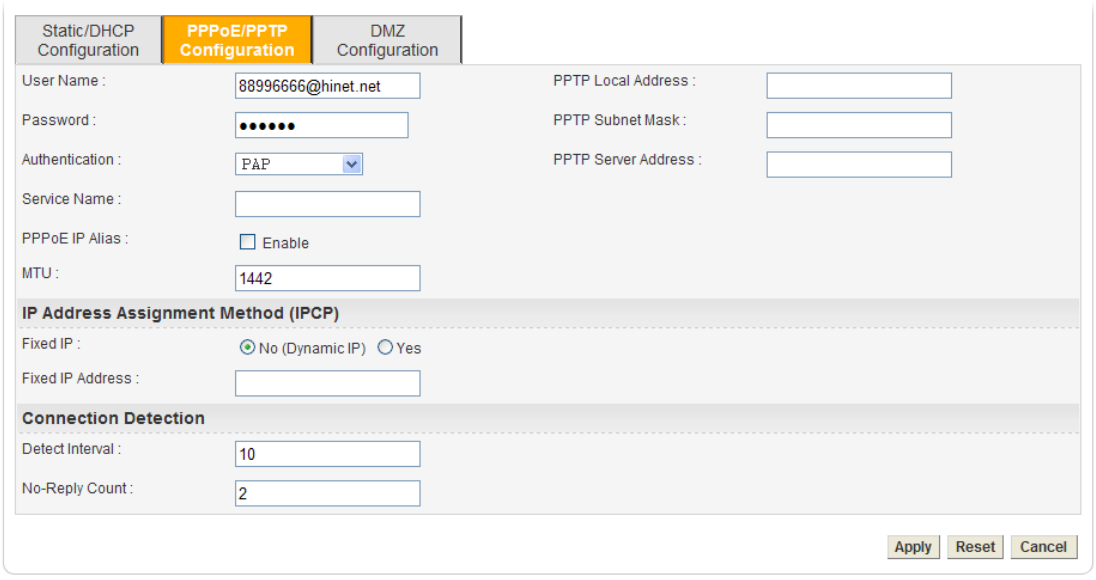


Static IP: If **Static IP** is selected, the following screen will appear. Please type in values for **IP address, Subnet Mask, Default Gateway and Primary DNS** specified by your ISP, and then click **Apply.**

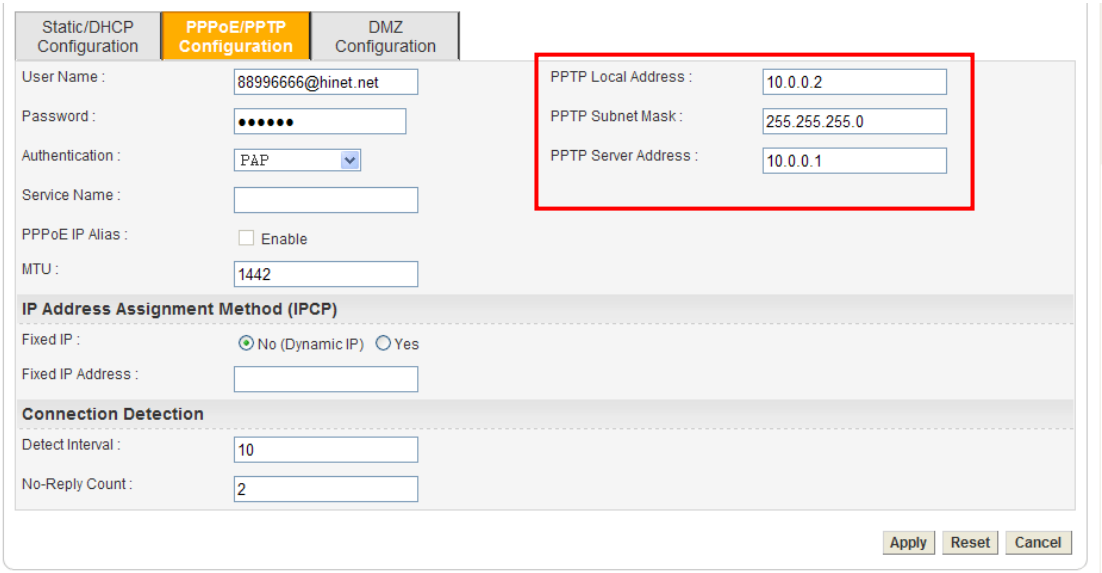


DHCP: If you choose **DHCP** mode, the DHCP server of your ISP will assign a dynamic IP address for Vigor3300 automatically. It is not necessary for you to assign any setting. Click **Apply**.

PPPoE: If your ISP provides you the **PPPoE** (Point-to-Point Protocol over Ethernet) connection, please select **PPPoE** to get the following page. Enter the **username** and **password** provided by your ISP on the web page. And click **Apply**.



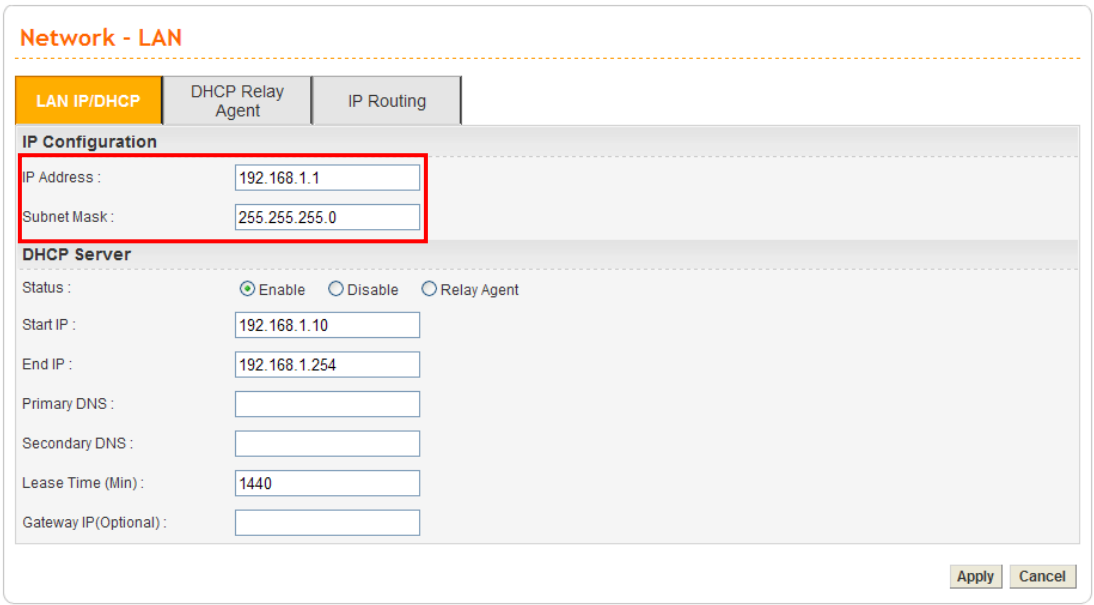
PPTP: If your ISP uses **PPTP** (Point-to-Point Tunneling Protocol), please select **PPTP**. Next, enter the **PPTP Subnet Mask (e.g., 255.255.255.0), PPTP Local Address (e.g., 10.66.99.88)** and **PPTP Remote Address (e.g., 172.66.99.88)** provided by your ISP on the web page. And click **Apply**.



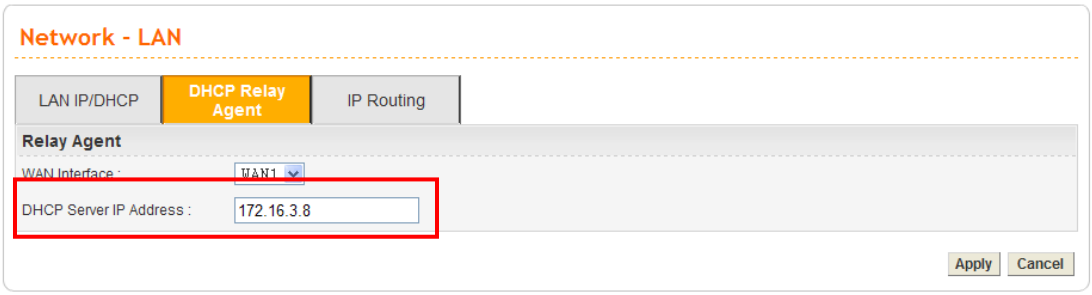
2.2.4 Adjusting LAN Connection

The LAN connection setup comes with parameters of IP address and Subnet Mask.

1. Go to **Network** page and choose **LAN**.



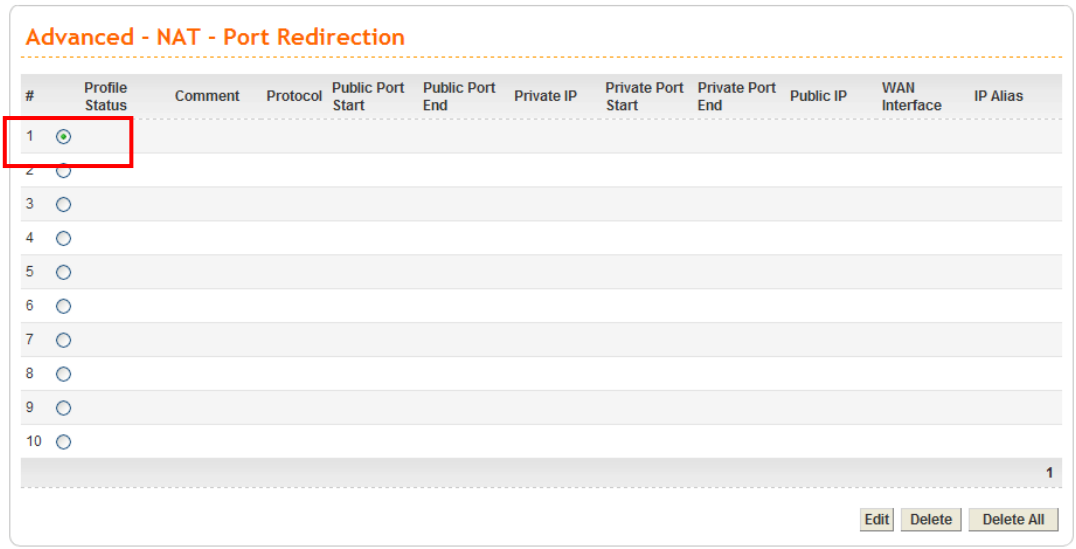
2. For NAT Usage: the local IP address will be translated into a public IP for data transmission. The default values for the router's local IP address and Subnet Mask are **192.168.1.1** and **255.255.255.0**. Keep the default values.
3. Click the tab of **DHCP Relay Agent.** It will enable the router to serve as a DHCP server for your network. A DHCP server automatically assigns an IP address and related parameters to each computer on your network.



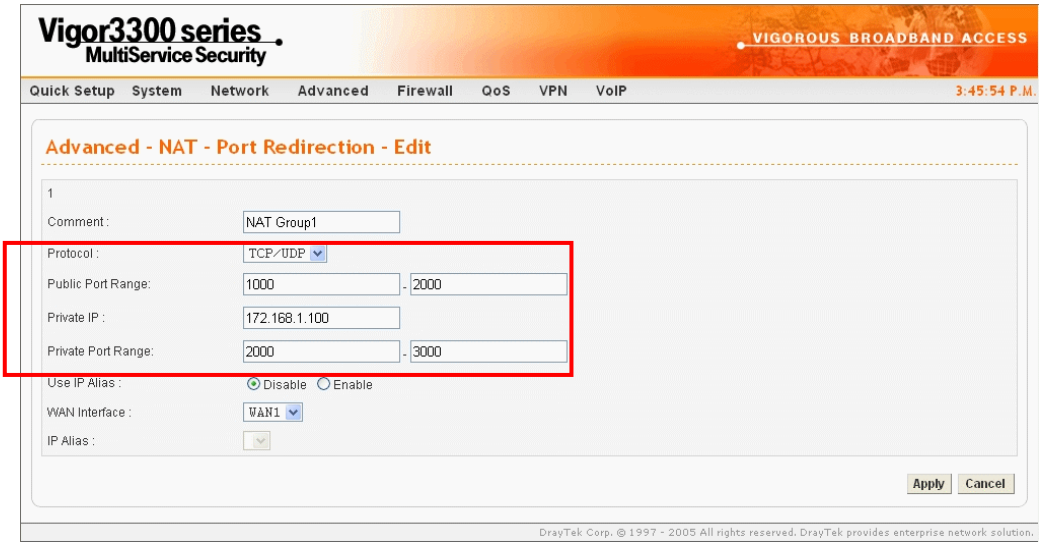
2.2.5 Setting NAT Port Redirection Table

The **NAT Port Redirection** means port forwarding. Port forwarding sets up public services on your network such as web servers, FTP servers and other special Internet applications. When other users send this type of request to your network through the Internet, the router will direct these requests to an appropriate host inside. For example, port number with 1024 can be transferred into IP address of 192.168.1.100 of LAN. Whenever the incoming packet from the WAN side with the port number within 1000~2000, the packet will be directly forwarded to LAN IP address.

1. Go to **Advanced** page and choose **NAT** and then **Port Redirection**.



2. Click radio button of #1 and click **Edit**.

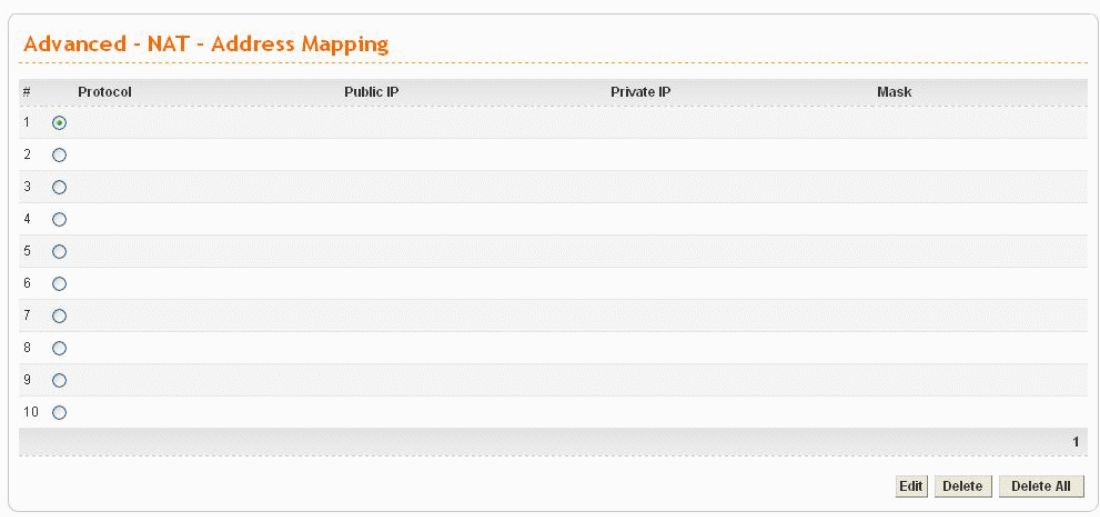


3. Select TCP/UDP as the protocol.
4. Type in public port range from 1000 to 2000.
5. Type in private IP with 172.168.1.100.
6. Type in private port range from 2000 to 3000.

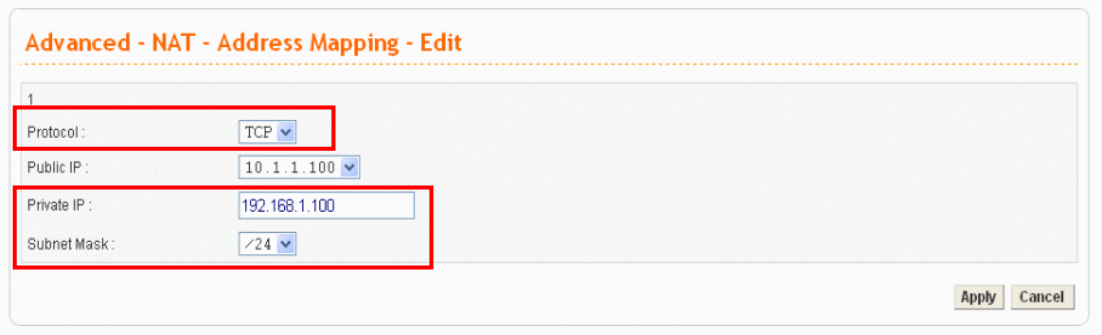
2.2.6 Setting NAT Address Mapping Table

NAT (Network Address Translation) converts IP addresses on a private network (designated as "LAN") into public IP addresses, so the packets can be forwarded to another registered network (designated as "WAN"). It enables multiple PCs inside the LAN to access the Internet by means of one public IP address. **NAT** is enabled by default. By setting **NAT Table,** the public IP is provided by your ISP.

1. Go to **Advanced** page and choose **NAT** and then **Address Mapping**.



2. Click radio button of #1 and click **Edit**.



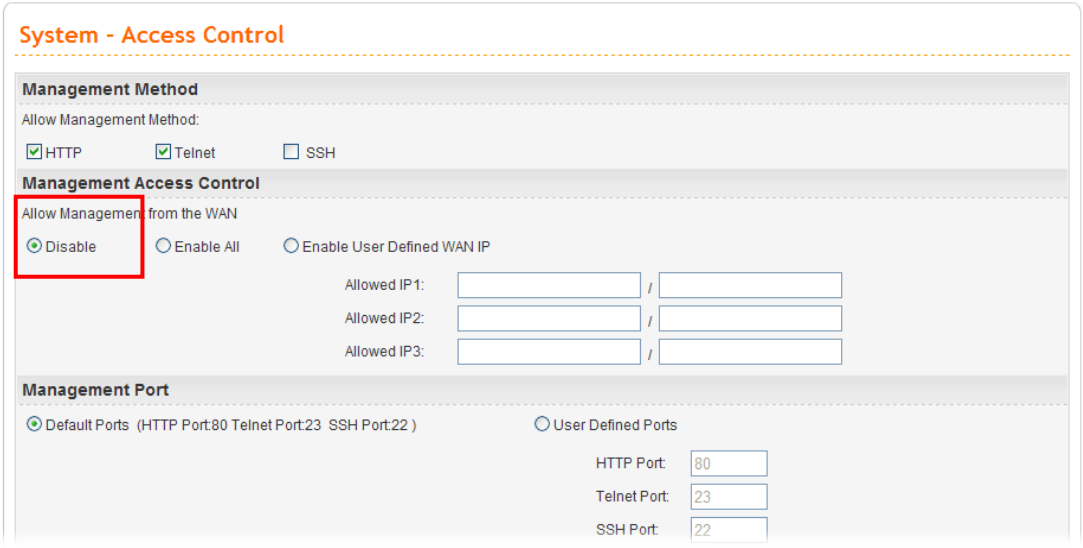
3. Select **TCP** as the protocol.
4. Set the Private IP with **192.168.1.100** and select **/24** as the Subnet Mask.

Note: If you want to choose any on of the Public IP settings, you must specify some IP addresses in the IP Alias List of the Static/DHCP Configuration page first. If you did not type in any IP address in the IP Alias List, the Public IP setting will be empty in this field. And when you click **Apply**, a message will appear to inform you.

2.2.7 Setting ICMP Access Control

The **Access Control** can prevent viruses from using ICMP packets to attack the device. You can disable the ping from the LAN/WAN side when there are worm-type viruses detected on your network. The mechanism can avoid virus spread, but in most cases it should not be enabled because its activation may make the device block normal query packets. You can allow or reject the management from WAN interface in this function by your selection.

1. Go to **System** page and choose **Access Control**.

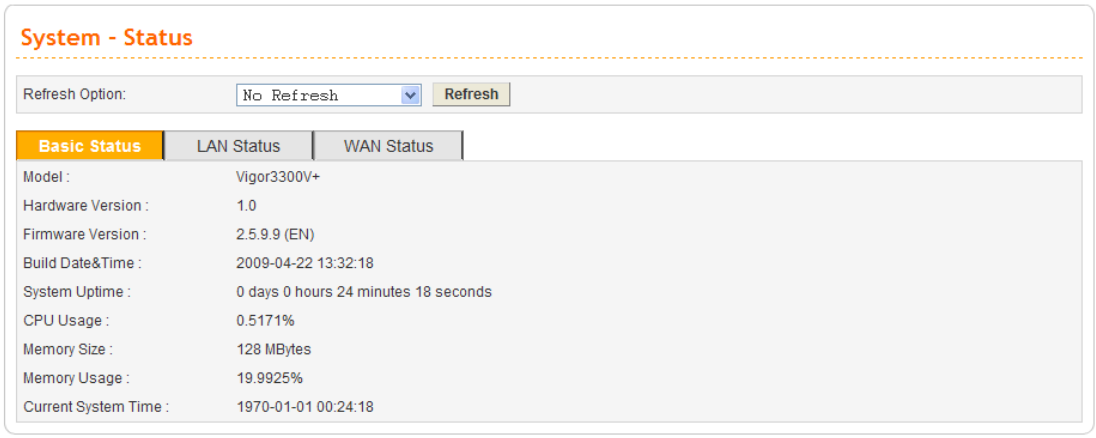


2. Select **Disable** for Allow Management from the WAN.

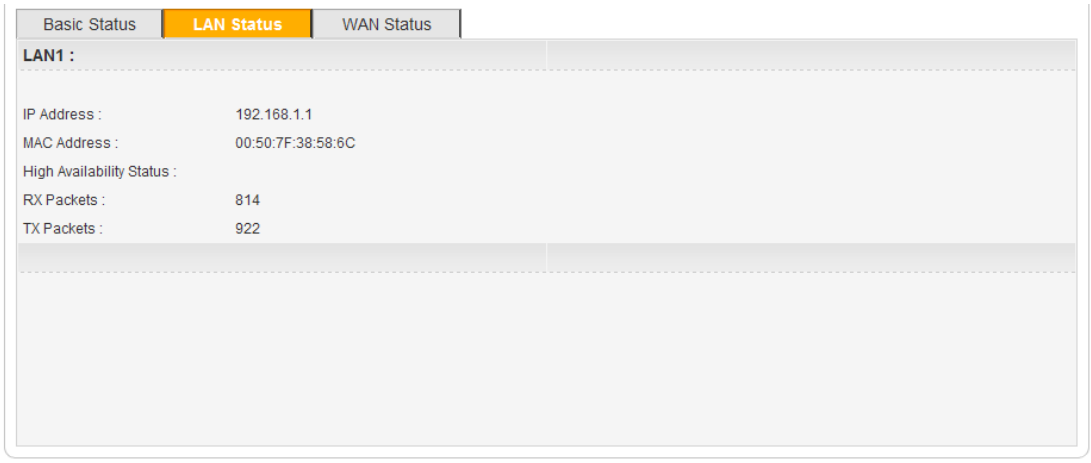
2.2.8 Observing the Status

To monitor the router's operating status, click the **Status** tab for the information. The screen pops up displaying the current settings of Vigor3300, including three windows – **Basic**, **LAN**, and **WAN**.

1. Go to **System** page and choose **Status**. The **Basic Status** will appear and display the main information of Vigor3300. The related items are Model, Hardware Version, Firmware Version, Build Date&Time, System Uptime, CPU Usage, Memory Size and Memory Usage and Current System Time.

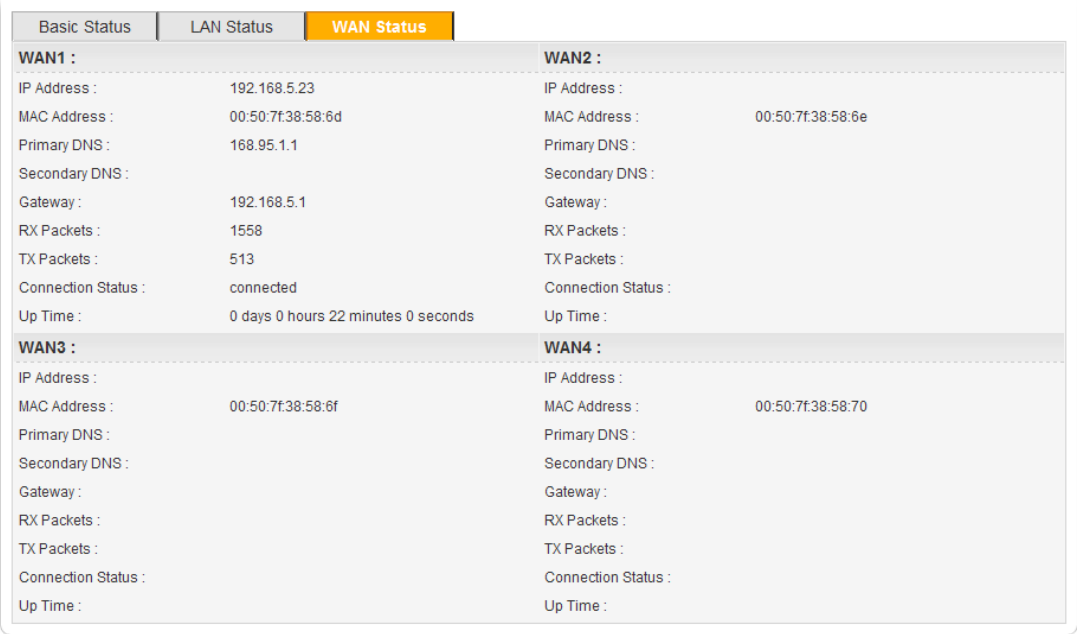


2. Click the tab of **LAN Status**.



It displays the information about the LAN interface, including the **IP address**, **MAC Address**, **High Availability Status**, **RX Packets**, and **TX Packets**.

3. Click the tab of **WAN Status**.



It displays the information for all the WAN interfaces at the same time, including IP address, MAC Address, Primary DNS, Secondary DNS, Gateway, RX Packets, TX Packets, Connection Status and Up Time.

3. Trouble Shooting

This section will guide you to solve abnormal situations if you cannot access into the Internet after installing the router and finishing the web configuration. Please follow below sections to check your basic installation stage by stage.

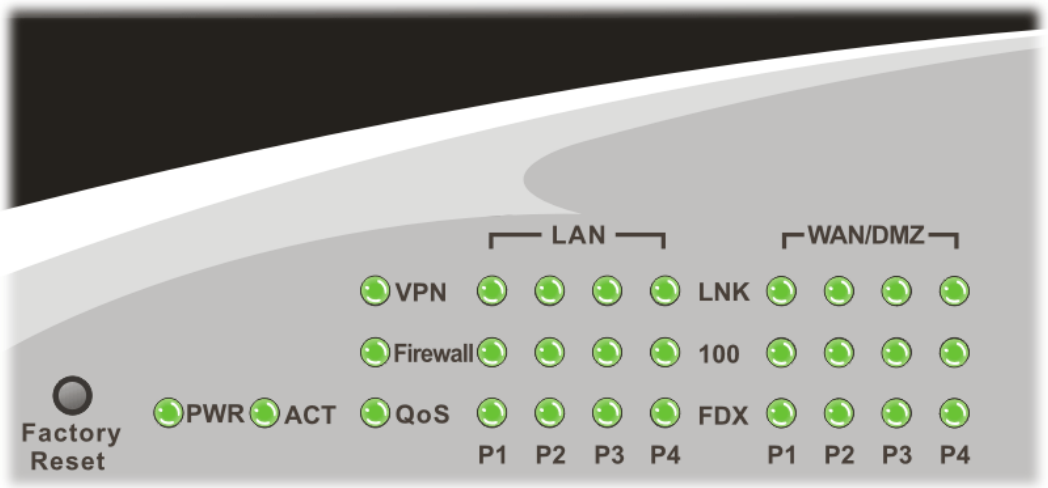
- Checking if the hardware status is OK or not.
- Checking if the Network Connection Settings on your computer is OK or not.
- Pinging the Router from your computer.
- Checking if the ISP Settings are OK or not.
- Backing to factory default setting if necessary.

If all above stages are done and the router still cannot run normally, it is the time for you to contact with your dealer for advanced help.

3.1 Checking If the Hardware Status Is OK or Not

Follow the steps below to verify the hardware status.

1. Check if the power line and WLAN/LAN cable connections is OK.
   If not, refer to "**2.1 Hardware Installation"** for reconnection.
2. Turn on the router. Make sure the **ACT LED** blinks once per second and the correspondent **WAN/LAN LED** is bright.



3. If not, there must be something wrong with the hardware connection. Simply back to **"2.1 Hardware Installation"** to execute the hardware installation. And then, try again.

3.2 Checking If the Network Connection Settings on Your Computer Is OK or Not

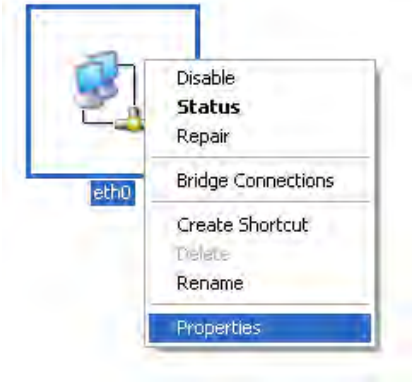
Sometimes the link failure occurs due to the wrong network connection settings. After trying the above section, if the link is stilled failed, please do the steps listed below to make sure the network connection settings is OK.

For Windows

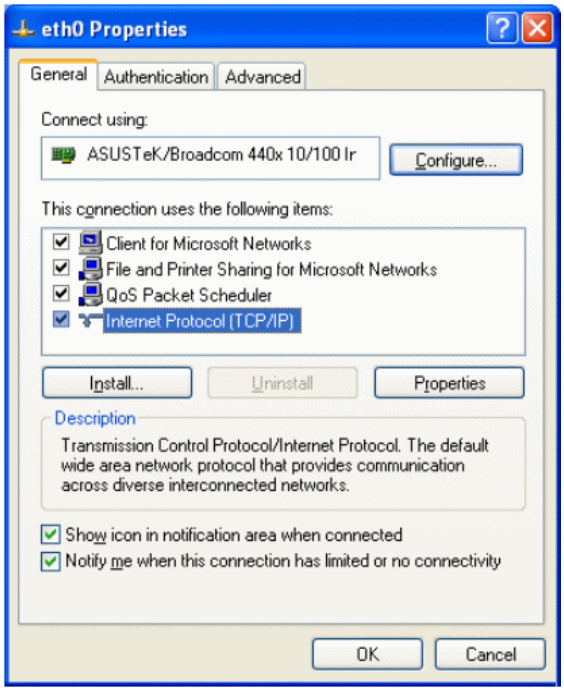
The example is based on Windows XP. As to the examples for other operation systems, please refer to the similar steps or find support notes in **www.draytek.com**.

1. Go to **Control Panel** and then double-click on **Network Connections.**

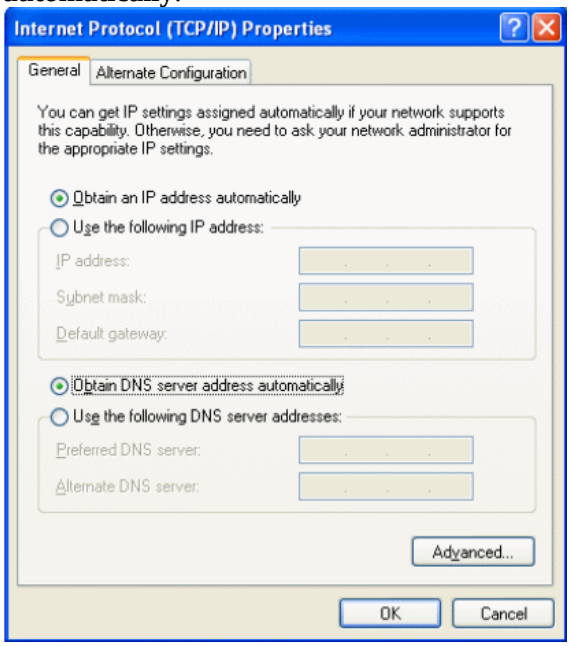
2. Right-click on **Local Area Connection** and click on **Properties**.



3. Select **Internet Protocol (TCP/IP)** and then click **Properties**.

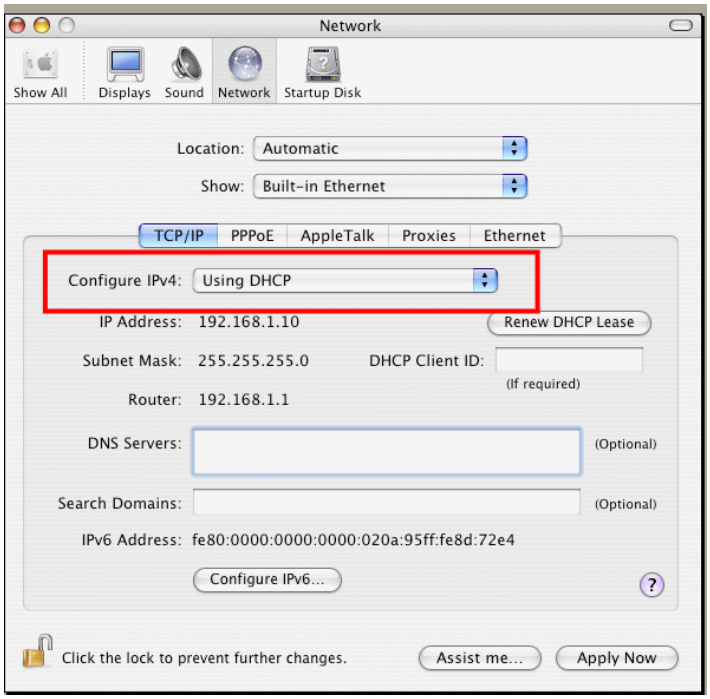


4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



For MacOs

1. Double click on the current used MacOs on the desktop.
2. Open the **Application** folder and get into **Network**.
3. On the **Network** screen, select **Using DHCP** from the drop down list of Configure IPv4.



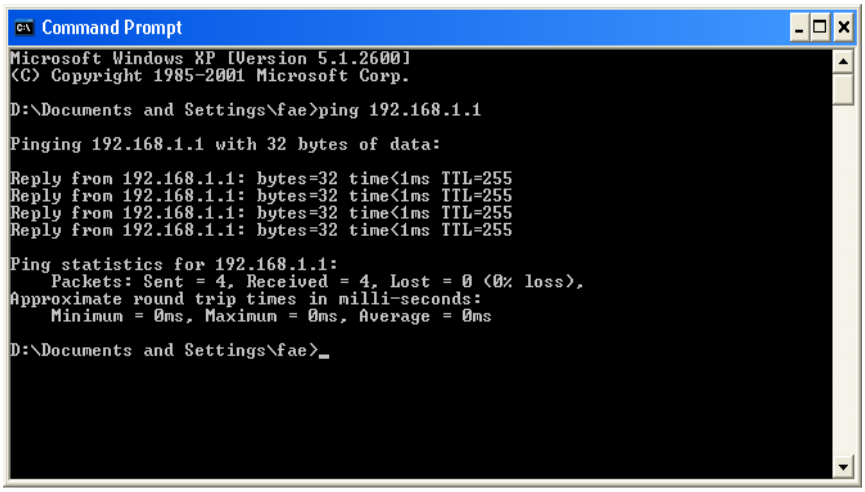
3.3 Pinging the Router from Your Computer

The default gateway IP address of the router is 192.168.1.1. For some reason, you might need to use “ping” command to check the link status of the router. **The most important thing for this command is that the computer will receive a reply from 192.168.1.1 for correct link.** If not, please check the IP address of your computer. We suggest you setting the network connection as **get IP automatically**. (Please refer to the section 3.2)

Please follow the steps below to ping the router correctly.

For Windows

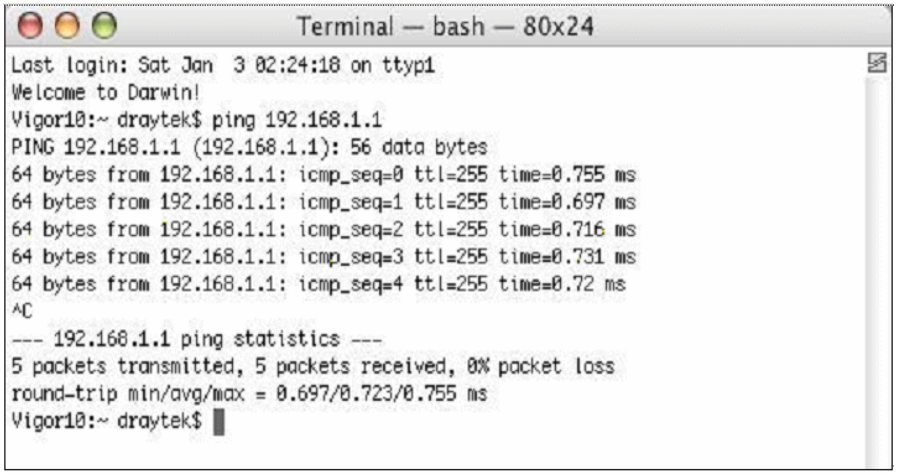
1. Open the **Command** Prompt window (from **Start menu>> Run**).
2. Type **command** (for Windows 95/98/ME) or **cmd** (for Windows NT/ 2000/XP). The DOS command dialog will appear.



3. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of **Reply from 192.168.1.1:bytes=32 time<1ms TTL=255** will appear.
4. If the line does not appear, please check the IP address setting of your computer.

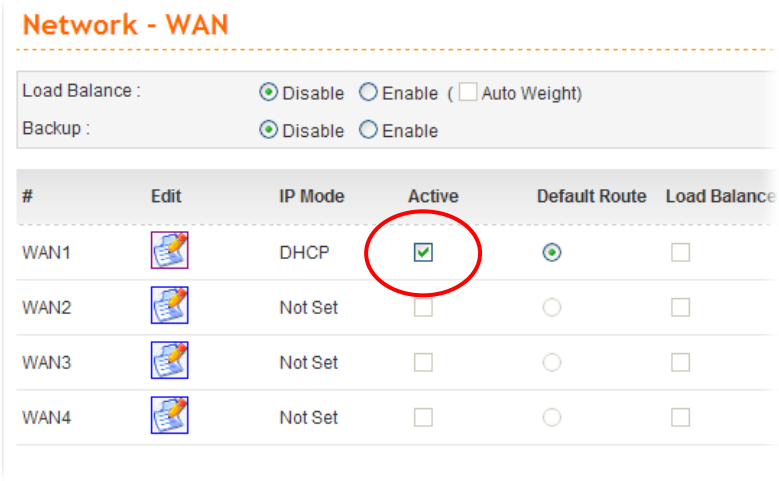
For MacOs (Terminal)

1. Double click on the current used MacOs on the desktop.
2. Open the **Application** folder and get into **Utilities**.
3. Double click **Terminal**. The Terminal window will appear.
4. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of **64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=xxxx ms** will appear.



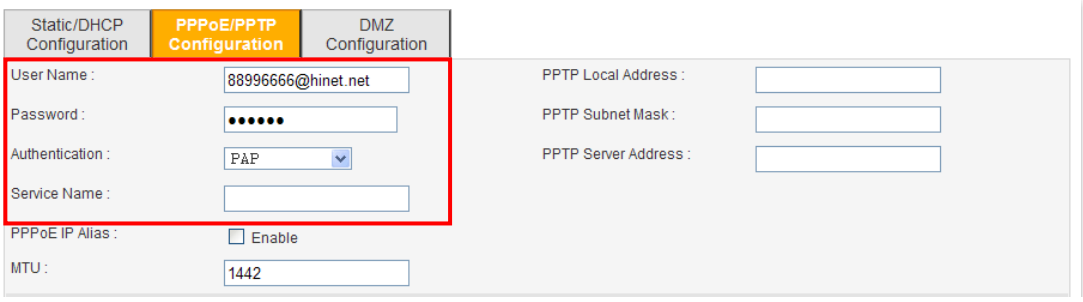
3.4 Checking If the ISP Settings Are OK or Not

1. Go to the web configuration GUI **(http://192.168.1.1),** click **Network >> WAN** to check your ISP settings for IP modes.
2. Make sure the **Active** check box has been selected.

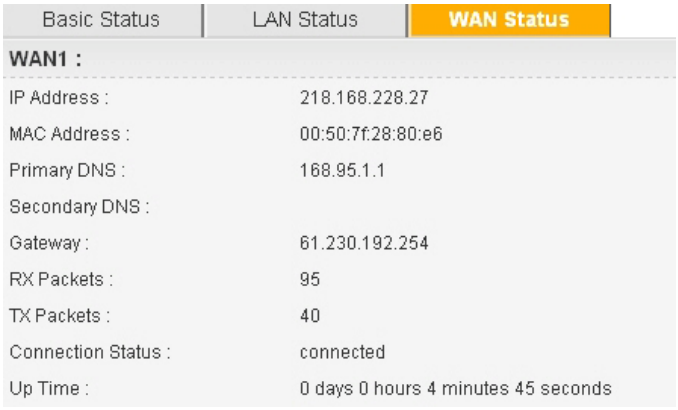


For PPPoE Mode

1. Check if **Username** and **Password** are entered with correct values that you **got from** your **ISP**.
2. Check if the setting of **Authentication** is correct or not. You may need to try both **PAP** and **CHAP.**
3. Check if **Service Name** (optional) is correct or not. It is required by some ISPs.

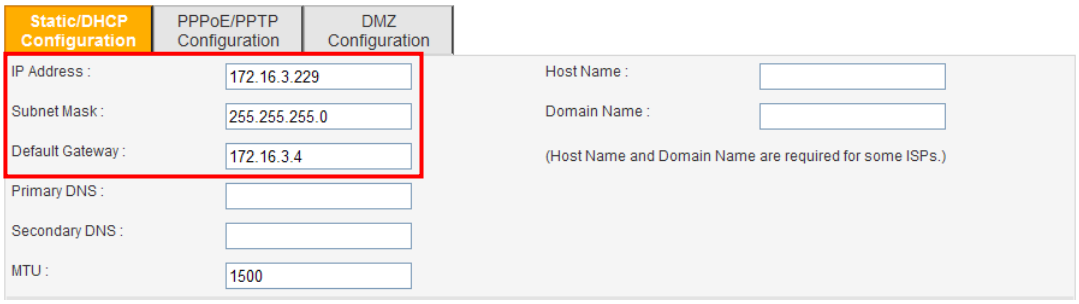


4. After finishing the settings, go to **System - Status** page and click **WAN Status**. You will get a correct web page of WAN settings.



For Static Mode

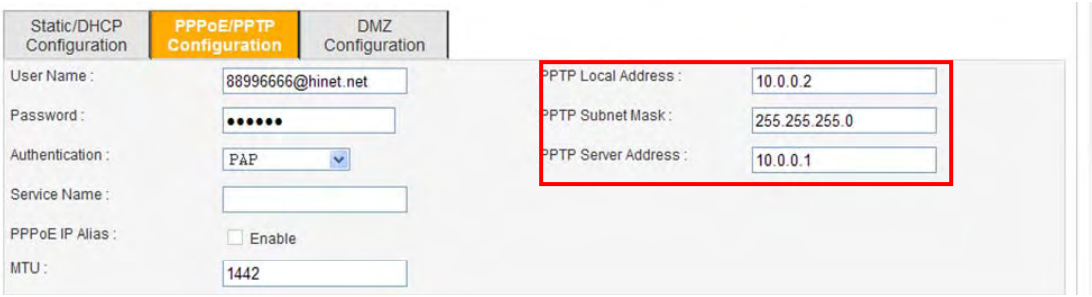
1. Check if the values of **IP Address**, **Subnet Mask**, **Gateway IP Address** and **Primary DNS** that you got from ISP are set properly or not. If you forget, please contact with ISP for getting new ones.



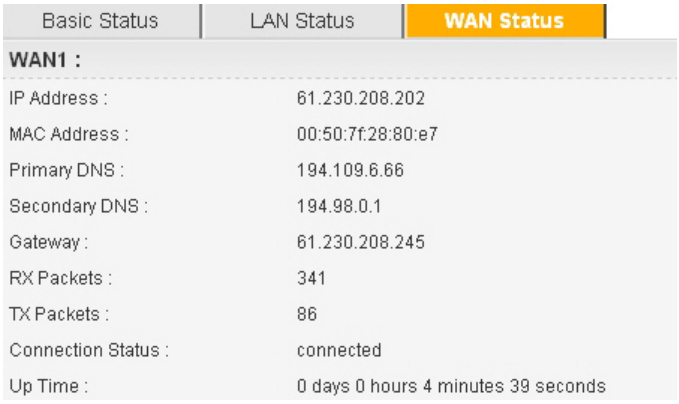
2. If anything wrong, please retype correct values and try the network connection again.
3. After finishing the settings, go to **System - Status** page and click **WAN Status**. You will get a correct web page of WAN settings.

For PPTP Mode

1. Check if the settings of **Username** and **Password** are correct or not.
2. Check if the setting of **Authentication** is correct or not. You may need to try both **PAP** and **CHAP.**
3. Check if the value of **PPTP Local Address**, **PPTP Subnet Mask**, and **PPTP Remote Address** are correct or not.



4. After finishing the settings, go to **System - Status** page and click **WAN Status**. You will get a correct web page of WAN settings.



3.5 Backing to Factory Default Setting If Necessary

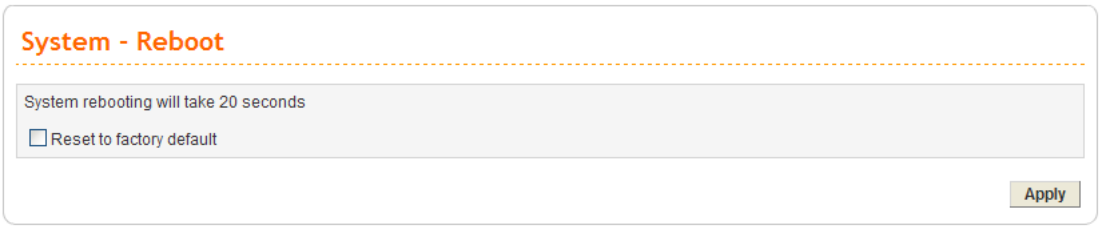
Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the router by software or hardware.

Warning: After pressing **factory default setting**, you will loose all settings you did before. Make sure you have recorded all useful settings before you pressing. The password of the factory default is null.

Software Reset

You can reset router to factory default via Web page.

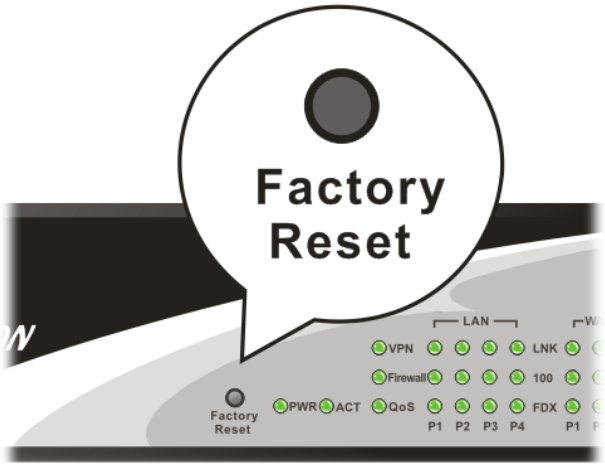
1. Go to **System** page and choose **Reboot**.



2. Check **Reset to factory default** to retrieve the factory settings or uncheck this box to invoke the newly configured settings.
3. Click **Apply**.

Hardware Reset

While the router is running (ACT LED blinking), press the **Factory Reset** button and hold for more than 5 seconds. When you see the ACT LED blinks rapidly, please release the button. Then, the router will restart with the default configuration.



After restore the factory default setting, you can configure the settings for the router again to fit your personal request.

3.6 Contacting Your Dealer

If the router settings are correct at all, and the router still does not connect to internet, please contact your ISP technical support representative to help you for configuration.

Also, if the router still cannot work correctly, please contact your dealer for help. For any further questions, please send e-mail to **support@draytek.com.**