

# Chapter 2

## Help with Troubleshooting

This chapter gives information about troubleshooting your wireless router. You will find help with the following problems:

- Basic Troubleshooting
  - [“Common Things that Can Go Wrong” on page 2-1](#)
  - [“Basic Functions Not Working” on page 2-2](#)
  - [“Unable to Log In to the Wireless Router” on page 2-4](#)
  - [“The Internet Service Connection Is Not Working” on page 2-4](#)
  - [“How Do I Restore the Default Password and Configuration Settings?” on page 2-7](#)
- Advanced connectivity troubleshooting using the PING utility
  - [“Testing the Path from a PC to Your Router” on page 2-8r](#)
  - [“Testing the Path from a PC to the Internet” on page 2-8](#)

### Basic Troubleshooting

---

Here are some tips for correcting simple problems you may have.

### Common Things that Can Go Wrong

Verify that these common problems are not at fault.

#### **Be sure to always start your network in this sequence:**

1. Turn off and unplug the modem from it's power outlet, and turn off the wireless router and computer.
2. Turn on the modem, and wait two minutes
3. Turn on the wireless router and wait 1 minute
4. Turn on the computer.

### **Make sure the Ethernet cables are securely plugged in.**

- The “[Internet](#)” status light on the wireless router will be lit if the Ethernet cable to the wireless router from the modem is plugged in securely and the modem and wireless router are both turned on.
- For each powered on computer connected to the wireless router with a securely plugged in Ethernet cable, the corresponding wireless router “[LAN](#)” port status light will be lit. “[The Wireless Router Bottom Label](#)” on the bottom of the wireless router identifies the number of each LAN port.

### **Make sure the network settings of the computer are correct.**

- LAN connected computers *must* be configured to obtain an IP address automatically via DHCP. For help with this, please see the documentation for your computer or the links in [Appendix B, “Related Documents”](#).
- Some cable modem services require you to use the MAC address of the computer registered on the account. If so, in the Router MAC Address section of the Basic Settings menu, select, “Use this Computer’s MAC Address.” Click **Apply** to save your settings. Restart the network in the correct sequence.

### **Check the router status lights to verify correct router operation.**

If the Power light does not turn solid green within 2 minutes after turning the router on, reset the router according to the instructions in “[How Do I Restore the Default Password and Configuration Settings?](#)” on [page 2-7](#).

## **Basic Functions Not Working**

After you turn on power to the router, the following sequence of events should occur:

1. When power is first applied, verify that the Power light is on (see “[The Front of the Router](#)” on [page 1-2](#) for an illustration).
2. Verify that the Test light lights within a few seconds, indicating that the self-test procedure is running.
3. After approximately 20 seconds, verify that:
  - a. The Test light turned off.
  - b. The LAN port lights are lit for any local ports that are connected.
  - c. The Internet port is connected and its light is lit.

If a port's light is lit, a link has been established to the connected device. If a LAN port is connected to a 100 Mbps device, verify that the port's light is green. If the port is 10 Mbps, the light will be amber.

## **Power Light Not On**

If the Power and other lights are off (see [“The Front of the Router” on page 1-2](#) for an illustration), check the following:

- Make sure that the power cord is properly connected to your router and that the power supply adapter is properly connected to a functioning power outlet.
- Check that you are using the power adapter supplied by NETGEAR for this product.

If the error persists, you have a hardware problem and should contact technical support.

## **Test Light Never Turns On or Stays On**

When the router is turned on, the Test light (see [“The Front of the Router” on page 1-2](#) for an illustration) turns on for about 20 seconds and then turns off. If the Test light does not turn on or stays on, the router has a problem.

If you experience problems with the Test light, cycle the power to see if the router recovers.

If all lights including the Test light are still on one minute after power up:

- Turn the power off and back on to see if the router recovers.
- Clear the router's configuration to factory defaults. This will set the router's IP address to 192.168.1.1. This procedure is explained in [“How Do I Restore the Default Password and Configuration Settings?” on page 2-7](#).

If the error persists, you might have a hardware problem and should contact technical support.

## **LAN or Internet Port Lights Not On**

If either the LAN or Internet lights (see [“The Front of the Router” on page 1-2](#) for an illustration) do not light when the Ethernet connection is made, check the following:

- Make sure that the Ethernet cable connections are secure at the router and at the computer.
- Make sure that power is turned on to the connected computer.
- Be sure you are using Ethernet cables like the cable that was supplied with the wireless router.

## Unable to Log In to the Wireless Router

If you are unable to log in to the wireless router, check the following:

- If you are using an Ethernet-connected computer, check the Ethernet connection between the computer and the router as described in the previous section.
- Make sure you are using the correct login information. The factory default login name is **admin** and the password is **password**. Make sure that CAPS LOCK is off when entering this information.
- Typically, your computer's address should be in the range of 192.168.1.2 to 192.168.1.254. Refer to your computer's documentation for help with finding your computer's IP address.



**Note:** If your computer's IP address is 169.254.x.x, verify that you have a good connection from the computer to the router, then restart your computer.

- Make sure your browser has Java, JavaScript, or ActiveX enabled. If you are using Internet Explorer, click Refresh to be sure the Java applet is loaded. Try quitting the browser and launching it again.

## The Internet Service Connection Is Not Working

If your router is unable to access the Internet, check that the Internet connection is working, and then check that the wireless router can get an Internet address.

### Check that the Internet connection is working

- Internet Connection

First verify that your cable or ADSL modem has a successful connection. The cable or ADSL modem status lights indicate if the modem connection is successful or not. Check your modem documentation or call your Internet service provider for help with verifying that the modem has a successful connection.

- Wireless Router Internet Light is Green or Blinking Green

If your Internet light is green or blinking green, then you have a good Internet connection, and your wiring is correct.

- Wireless Router Internet Light Blinking Amber

If your Internet light is blinking amber, then your wireless router is attempting to make an Internet connection with the service provider. The LED should turn green within several minutes. If it does not, check the Internet connection on the modem as described above.

- **Wireless Router Internet Light Off**

If the Internet light is off, verify that the Ethernet cable is securely connected between the cable or ADSL modem, and that both the modem and wireless router are turned on.

## **Obtaining an Internet IP Address**

If your wireless router is unable to access the internet, and your Internet light is amber or blinking amber, check the wireless router to see if it is able to get an Internet IP address from your service provider. Unless you have a static IP address, your wireless router automatically requests an IP address from your service provider.

To check the Internet IP address from the browser interface:

1. Log in to the wireless router.
2. Use the Router Status link under the Maintenance heading to check that an IP address is shown for the Internet Port. If 0.0.0.0 is shown, your wireless router has not obtained an IP address from your service provider.

If your router is unable to obtain an IP address from the your service provider, the problem may be one of the following:

- Your service provider may require a login. Ask your service provider whether they require PPP over Ethernet (PPPoE) login.
- You may have incorrectly set the Service Name, User Name and Password. See [“Troubleshooting PPPoE”](#), below.
- Your service provider may check for your computer's host name. Assign the computer Host Name of your ISP account to the wireless router in the browser-based Basic Settings menu.
- Your service provider only allows one Ethernet MAC address to connect to Internet, and may check for your computer's MAC address.
- In this case, inform your service provider that you have bought a new network device, and ask them to use the wireless router's MAC address.

OR

Configure your router to spoof your computer's MAC address. This can be done in the Basic Settings menu. Refer to the online help in the wireless router main menu.

## Troubleshooting PPPoE

Troubleshoot a PPPoE connection in this way:

3. Log in to the wireless router.
4. Under the Maintenance heading, select the Router Status link.
5. Click the Connection Status button.
6. If all of the steps indicate “OK” then your PPPoE connection is up and working.
7. If any of the steps indicates “Failed”, you can attempt to reconnect by clicking “Connect”. The wireless router will continue to attempt to connect indefinitely.

If you cannot connect after several minutes, you may be using an incorrect Service Name, User Name or Password. There also may be a provisioning problem with your ISP.



**Note:** Unless you connect manually, the wireless router will not authenticate using PPPoE until data is transmitted to the network.

## Troubleshooting Internet Browsing

If your wireless router can obtain an IP address but your computer is unable to load any Web pages from the Internet, check the following.

- Your computer may not recognize any DNS server addresses.

A DNS server is a host on the Internet that translates Internet names (such as www addresses) to numeric IP addresses. Typically your ISP will provide the addresses of one or two DNS servers for your use. If you entered a DNS address during the wireless router’s configuration, restart your computer. Alternatively, you can configure your computer manually with DNS addresses, as explained in the documentation for your computer.

- Your computer may not have the wireless router configured as its default gateway.

Reboot the computer and verify the wireless router address (192.168.1.1) is listed by your computer as the default gateway address.



**Note:** The factory default wireless router address is 192.168.1.1. However, if the router detects a conflict with the address it gets from your modem, it will automatically pick a different address for itself. In this case, you can log in to the router using [www.routerlogin.net](http://www.routerlogin.net) to verify its LAN IP Address. Click the LAN IP Setup link in the Advanced section. Take note of the LAN TCP/IP Setup IP Address, which should match the default gateway IP address on your computer.

## How Do I Restore the Default Password and Configuration Settings?

This section explains how to restore the factory default configuration settings, changing the router's administration password to **password** and the IP address to 192.168.1.1.



**Warning:** This procedure will erase all the current configuration settings and restore the factory defaults.

To restore the factory default configuration settings, use the Default Reset button on the rear panel of the router.

1. Use a sharp object like a pen or a paper clip to press and hold the default reset button for about 20 seconds (see [page 1-3](#)), until the test light on the front turns on.
2. Release the reset button and wait for the router to reboot.

## Advanced Connectivity Troubleshooting Using the Ping Utility

---

Most computers and routers have a diagnostic utility called *ping* that sends an request to a target device. The device then replies. The ping utility makes it easy to troubleshoot a network.

## Testing the Path from a PC to Your Router

You can ping the wireless router to verify that the LAN path from your computer to your router is set up correctly.

1. From the Windows toolbar, click **Start** and select **Run**.
2. In the field provided, type Ping followed by the address of the router, as in this example:

```
ping www.routerlogin.net
```

or

```
ping 192.168.1.1
```

3. Click **OK**.

You should see a message like this one:

```
Pinging 192.168.1.1 with 32 bytes of data
```

If the path is working, you see this message:

```
Reply from 192.168.1.1: bytes=32 time=NN ms TTL=xxx
```

If the path is not working, you see this message:

```
Request timed out
```

If the path is not functioning correctly, you could have one of the following problems:

- Wrong physical connections
  - Make sure the LAN port light is on. If the light is off, follow the instructions in [“LAN or Internet Port Lights Not On”](#) on page 2-3.
  - Check that the corresponding lights are on for your computer’s network interface card.
- Wrong network configuration
  - Verify that the Ethernet card driver software and TCP/IP software are both installed and configured on your computer.
  - Verify that the IP address for your router and your computer are correct and that the addresses on both begin with 192.168.1.

## Testing the Path from a PC to the Internet

After verifying that the path between your computer and the wireless router works correctly, test the path from your PC to the Internet. From the Windows run menu, type:

```
PING -n 10 <IP address>
```

where *<IP address>* is the IP address of a remote device such as your ISP’s DNS server.



If the path is functioning correctly, replies as in the previous section are displayed. If you do not receive replies:

- Check that your PC has the IP address of your router listed as the default gateway. If the IP configuration of your PC is assigned by DHCP, this information will not be visible in your PC's Network Control Panel. Verify that the IP address of the router is listed as the TCP/IP default gateway.
- Check to see that the network address of your PC (the portion of the IP address specified by the netmask) is different from the network address of the remote device.
- If your ISP assigned a host name to your PC, enter that host name as the Account Name in the Basic Settings menu.

