

# Chapter 2

## Troubleshooting

This chapter gives information about troubleshooting your wireless router.

### Quick Tips

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

#### **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 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. Please see the links see links in [Appendix B, "Related Documents"](#) for help with this.

- 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 [“Restoring the Default Configuration and Password” on page 2-6](#).

## To Verify Basic Functioning

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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 Wireless Router” on page 1-2](#) for an illustration).
2. Verify that the power light turns amber within a few seconds, indicating that the self-test procedure is running.
3. After approximately 30 seconds, verify that:
  - a. The color of the power light changes to green.
  - 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 1000 Mbps device, verify that the port’s light is green. If the port is 10/100 Mbps, the light will be amber.

## Power Light Not On

If the Power and other lights are off, 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.

## Power Light Stays Amber

When the router is turned on, the power light turns amber for about 30 seconds and then turns green. If the light does not turn green the router has a problem.

If the power light is still amber 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 [“Restoring the Default Configuration and Password” on page 2-6](#).

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 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.

## Power LED Blinks Green Once Per Second

If the Power LED keeps blinking once every second, there is a problem with the wireless router software. Go to <http://kbserver.netgear.com/products/WNR854T.asp> for instructions on how to load new software into your wireless router.

## Troubleshooting Logging In to the Wireless Router

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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.

- 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.

## Troubleshooting the Internet Service Connection

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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.

### 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 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, 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:

1. Log in to the wireless router.
2. Under the Maintenance heading, select the Router Status link.

3. Click the Connection Status button.
4. If all of the steps indicate “OK” then your PPPoE connection is up and working.
5. 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.

## Restoring the Default Configuration and Password

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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. You can erase the current configuration and restore 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](#)).
2. Release the reset button and wait for the router to reboot.

## Advanced Troubleshooting Using the Ping Utility

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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.