

TROUBLESHOOTING INTERNET CONNECTION

If you had a working Internet connection at one time, and then suddenly you cannot get onto the internet you may have a setting wrong, a cable may have gone bad, etc. We wrote this troubleshooting guide to help you diagnose your issue, and to get you back up and running as fast as possible. Let's go on to our steps that we need to check.

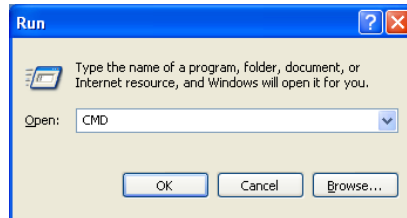
1. First, we will need to make sure our computer is getting the correct IP. Click on the start menu.



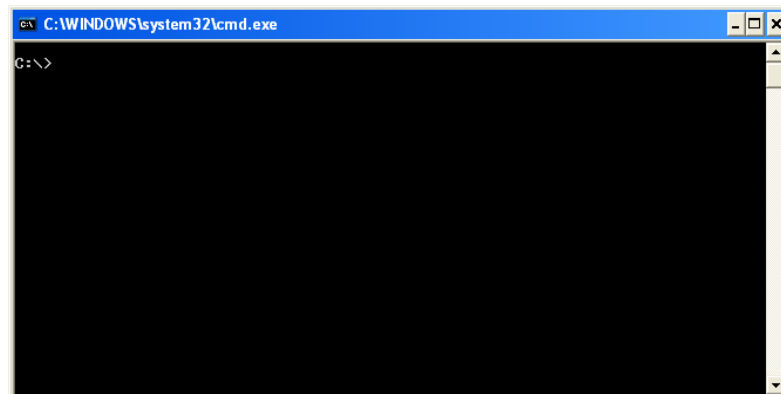
2. Then click on run if you are using Windows XP, or click in the little dialog box that pops up if you are running Windows Vista.



3. Inside the Run box on Windows XP type CMD and press ok. On Windows Vista, type CMD in the Start Search box. Then when you see the icon show up at the top of the menu be sure to **Right-Click** then goto **Run as Administrator**. Then select allow when the dialog box comes up.



4. When you do this you should see a black box that pops up. It should look something like this.



Inside the black box (Command Prompt), type `ipconfig /all`. You should see output like below. Be sure to take note of the IP address you see here. It is circled in red in the example below.

```
C:\WINDOWS\system32\cmd.exe
C:\>ipconfig /all

Windows IP Configuration

Host Name . . . . . : Iceman
Primary Dns Suffix . . . . . : isa.cornerpostsw.com
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : isa.cornerpostsw.com
isa.cornerpostsw.com
cornerpostsw.com

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : isa.cornerpostsw.com
Description . . . . . : Broadcom NetXtreme 57xx Gigabit Controller
Physical Address. . . . . : 00-18-8B-0E-2D-8F
Dhcp Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IP Address. . . . . : 10.0.0.86
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 10.0.0.3
Dhcp Server . . . . . : 10.0.0.20
DNS Servers . . . . . : 10.0.0.20
10.0.0.3
Lease Obtained. . . . . : Tuesday, October 30, 2007 9:48:23 AM
Lease Expires . . . . . : Thursday, November 29, 2007 9:48:23 AM

C:\>
```

5. Ok, now we have all of the information that we need. You should have some numbers separated by a period. For example, my IP was 10.0.0.86. Now you have to find out if you have a router that is connected to your World Wide Packets Switch (the box we installed for you.) If you are using a router it will probably have a Cat-5E cable going from the World Wide Packets switch, into a box that will probably say Linksys, Belkin, or even Netgear. Then from this box you will have another Cat-5E cable going from this Router, into your computer. If you do have this then your IP will most likely start with one of the following examples:
- 192.168.some number.some number
 - 172.16 through 31.some number.some number
 - 10.some number.some number.some number

Where “some number” represents any number from 0 to 255. If you do not have a router between your computer and the World Wide Packets switch, then you should see an IP that does not resemble these above IPs. If you do or do not have a router and your IP is the one below:

- 169.254.some number.some number

Again, “some number” represents any number between 0 and 255. If this is the IP you are getting, then this is most likely the reason you are not getting out to the Internet. If this is the IP you are getting the go to the next step. If you got one of the above IPs and you are using a router go to **STEP 7**, and if you are getting an IP and it isn't any of the above numbers including the 169.254.some number.some number address, and you aren't using a router then proceed to **STEP 8**.

6. Inside of your black box (Command Prompt), type the following:
- Ipconfig /release

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Benny>ipconfig /release

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . :
    IP Address. . . . . : 0.0.0.0
    Subnet Mask . . . . . : 0.0.0.0
    Default Gateway . . . . . :
```

Once this finishes you should see an IP Address of 0.0.0.0. Then type the following command:

- ipconfig /renew

```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\Benny>ipconfig /renew

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . :
    IP Address. . . . . : 192.168.1.105
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\Documents and Settings\Benny>
```

You should now see an IP of one of the 3 examples I gave you in step 5. In this example I got an IP in the 192.168.some number.some number, so this would be correct with a router. If you got one of the ranges I specified in step 5, then go ahead and try to surf the internet. If you are still unable to surf the internet, then please go to **STEP 8**. If you are able to get to the Internet, then you are finished troubleshooting your issue.

7. In this step we are going to check to see that your Router is getting the correct IP address as well, kind of like we did with your computer. First you will need to open an Internet Browser (Internet Explorer, Firefox, Opera, or Safari any of these will suffice.) From there go to your address bar.



This is the bar in IE 7, but it should look about the same in any of the above listed browsers. Ok, now in the little black box (Command Prompt), after you did the ipconfig /renew, you should see something 2 lines down from the IP Address called "Default Gateway." Write this number down. Ok, in the browser window type http:// followed by the IP of the Default Gateway. If the default gateway is like the previous picture it would be <http://192.168.1.1> but it can be any number. Once this is typed in, press enter, and soon you should be prompted for a username and password. If you have been in the router before you probably know what the credentials are to get in, if you don't know, then we will try the defaults. If you are using

a Linksys Router then leave the “Username” field empty, and in the “Password” box, type admin. Then press ok. If you are using a Belkin Router, then leave both “Username” field and “Password” field blank, and then press OK. If you are using a Netgear Router, then the Username is admin, and the password is “password.” Below are examples:

Linksys Router:

Username:
Password: admin

Belkin Router:

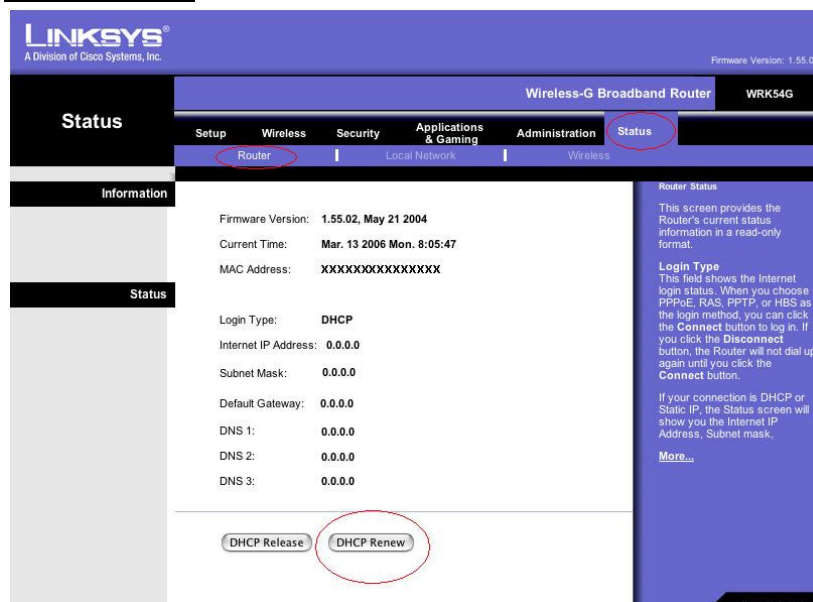
Username:
Password:

Netgear Router:

Username: admin
Password: password

For once you are logged into the Router you will need to do the following.

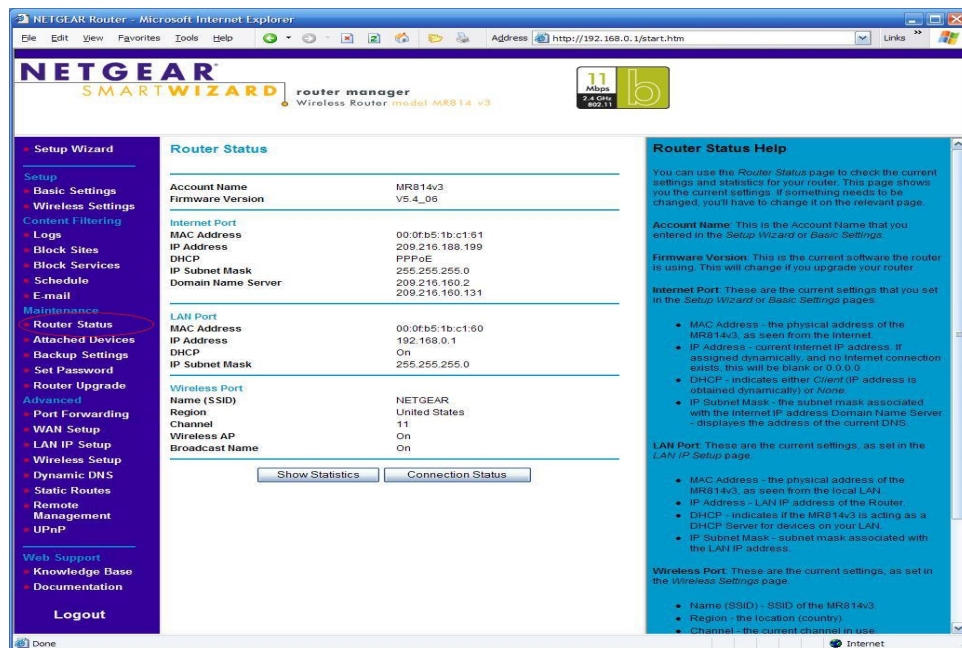
- **For the Linksys**



- Click on Status on the far right, then router, and then click DHCP Renew. Once you click the DHCP Renew you should see the Internet IP Address have some numbers (anything except for 0.0.0.0). After about 1 minute, refresh the page if it doesn't for you. If you see the IP that has 0.0.0.0, then proceed to **STEP 8**.
- **For the Belkin**



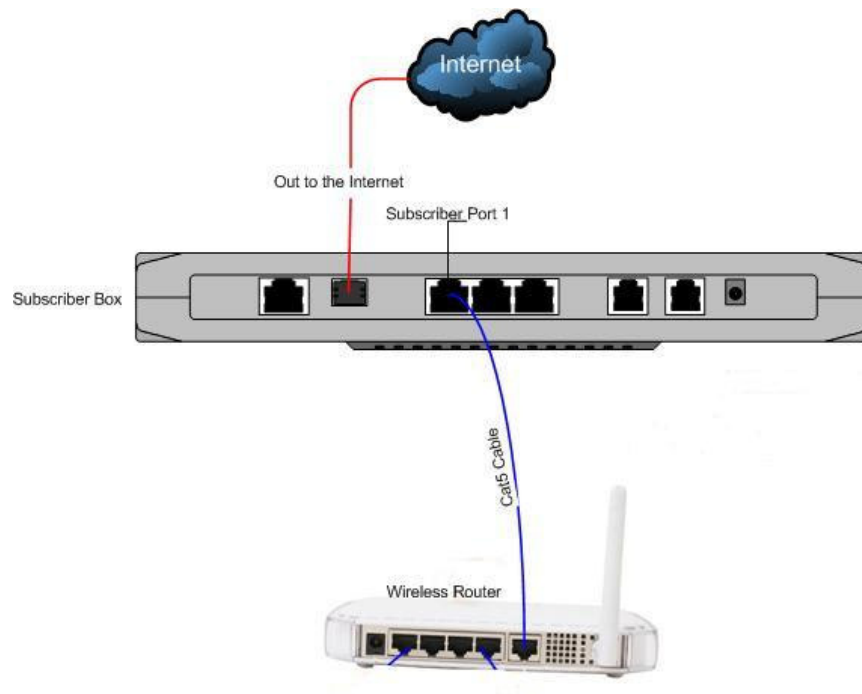
- Click on System Settings on the far left bottom corner. Then check the WAN IP, it should have some numbers out from it. If it shows 0.0.0.0, or it is blank, try to reboot the router, or see if you can find a place that says DHCP renew. This may be in different locations on the Belkin routers, but should be in this area. After rebooting it (unplugging from the wall for about 20 seconds, then plugging it back in), check to see if the router has an IP. If you see the IP that has 0.0.0.0, or is blank, then proceed to **STEP 8**.
- For the Netgear



- Click on Router Status on the mid-left side. Then check the IP Address under “Internet Port”, it should have some numbers out from it. If it shows 0.0.0.0,

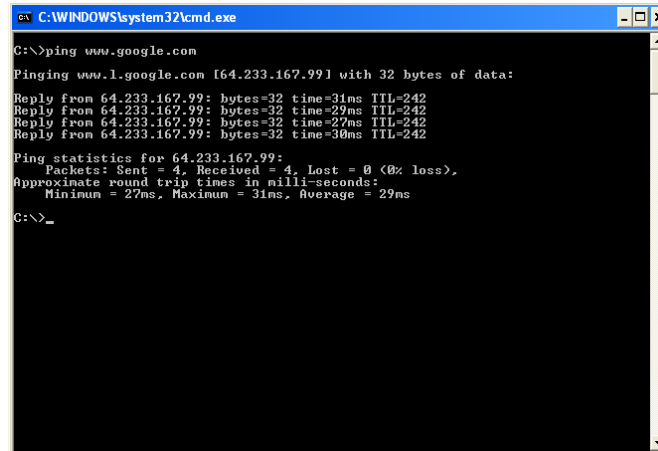
or it is blank, try to reboot the router, or see if you can find a place that says DHCP renew. This may be in different locations on the Netgear routers, but should be in this area. Try clicking show statistics, and connection status and finding a button that says DHCP Renew. After renewing the IP, or rebooting it (unplugging from the wall for about 20 seconds, then plugging it back in), check to see if the router has an IP. If you see the IP that has 0.0.0.0, or is blank, then proceed to **STEP 8**.

8. If your router was unable to get an IP address (either blank or 0.0.0.0) then we need to check a few things. First check to see that you have a Cat-5 (looks like a big phone cable), going from Subscriber Port 1 on the World Wide Packets Switch, into the Internet Port on the Router.



If you don't have it set up like this, then please change it to where it will be like this, and then repeat **STEP 7**. If you do have it set up like this, check the front of the Router for blinking lights on the Internet port, as well as the World Wide Packets switch for a blinking light on Subscriber Port 1. If you do not have any blinking lights (if you see the World Wide Packets blinking only, then you should be ok), then you probably have a bad Cat-5 cable. Just to be sure check to make sure that the World Wide Packets switch has the power cord attached, and is plugged into a working outlet, and the same with the router. You should see a power light. If you still see no blinking lights on Subscriber Port 1 on the World Wide Packets switch, try replacing this cable with another cat-5. You can get these at Wal-Mart for pretty cheap. Once you have blinking lights, you should have Internet Connectivity, so try to surf the Internet. If not repeat **STEP 7**, and if the router does have an IP now try to surf again. If you still have no luck, then proceed to **STEP 9**.

9. Repeat STEPS 1, 2, 3, 6. For STEP 6 come back here instead of going to STEP 8. You should now have an IP on your computer at this point. Inside of the black box (Command Prompt), type ping www.google.com. You should see something that looks like this.



```
C:\WINDOWS\system32\cmd.exe
C:\>ping www.google.com
Pinging www.l.google.com [64.233.167.99] with 32 bytes of data:
Reply from 64.233.167.99: bytes=32 time=31ms TTL=242
Reply from 64.233.167.99: bytes=32 time=29ms TTL=242
Reply from 64.233.167.99: bytes=32 time=27ms TTL=242
Reply from 64.233.167.99: bytes=32 time=30ms TTL=242

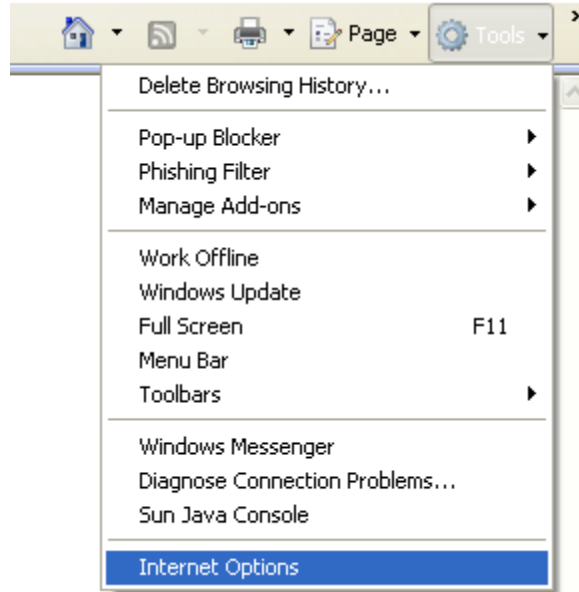
Ping statistics for 64.233.167.99:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 27ms, Maximum = 31ms, Average = 29ms
C:\>_
```

If you see the “Reply From”, then you are in great shape. This shows you have internet connectivity; we just need to adjust the browser settings. If you see a “Request Timed Out”, you have followed all the previous steps, your computer has an IP of something other than 169.254.some number.some number, and you have blinking lights on the World Wide Packets switch Subscriber Port 1, and the Router Internet Port, then call Sunset Digital Technical Support. If you see the “Reply From” go to the next step, and we will have you up in no time.

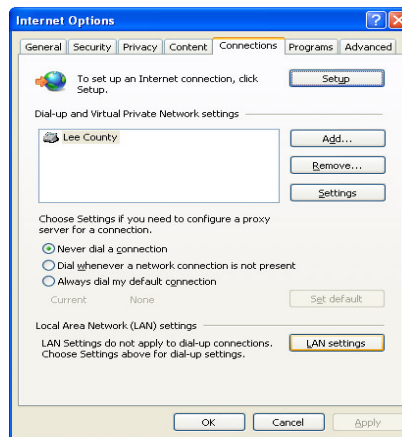
10. Most users use either Internet Explorer, or Mozilla Firefox, so I will be giving examples of changing the settings in these browsers. Chances are that if you are using a different version like Opera, that you already know how to change the settings, and if not they are similar to that of Mozilla Firefox.

Internet Explorer

- Open Internet Explorer, and wait for it to stop loading. Once this is done click tools -> Internet Options.

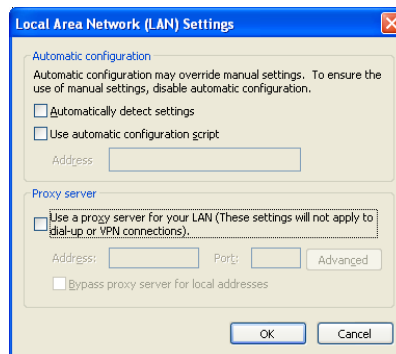


- From here click on the Connections Tab, then click on LAN Settings.



Also, be sure that the “Never Dial a Connection” option is marked.

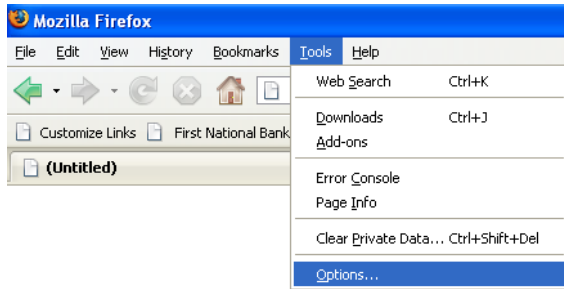
- Be sure that there is nothing set in the next box. It should look like the figure below.



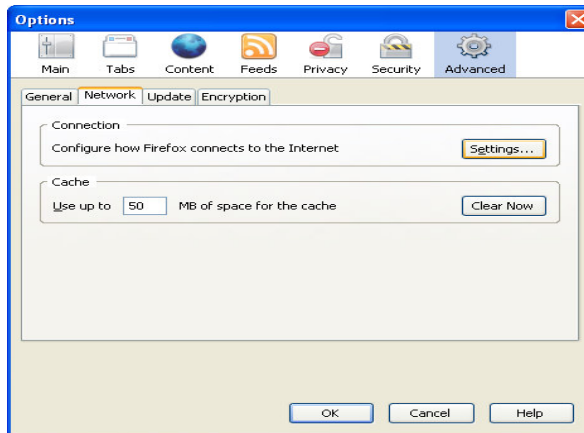
- When this is set like this, click on everything, then close and open Internet Explorer. You should now be able to surf on the internet.

Mozilla Firefox

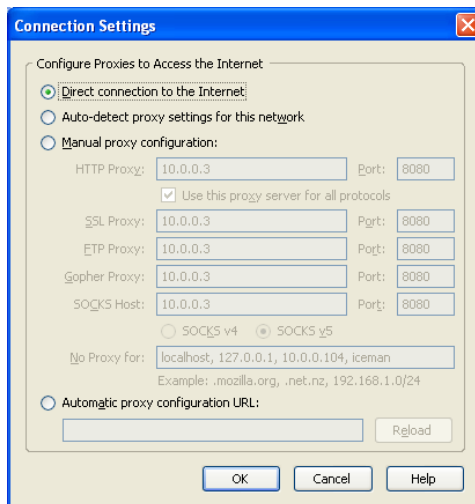
- Click Tools, then Options.



- From here click Advanced, select the Network Tab, and click the Settings button.



- You will need to be sure that you have the option set to “Direct Connection to the Internet.” If you don’t change it to this. Your settings should look like below.



- Don’t worry about the grayed out area in the picture, yours may be different. All that matters is you have the top option checked. Once this is done, click Ok, on all the windows, then close and reopen Firefox. You should be surfing now.

At this point if you are still unable to get to the internet, and you have followed everything there may be a bigger issue. As a last resort, try rebooting your computer, and then try some of the steps listed in the guide. If you still have no luck, then please call our Sunset Technical Support for further troubleshooting.