Important Note

The following information is for Windows 7—steps will differ if you are using a different operating system

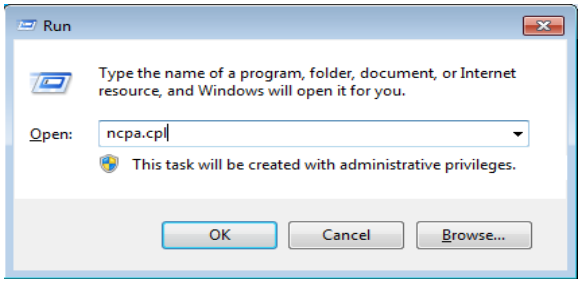
Understand how Network Information is Configured on a Windows Computer.

Many times connectivity issues are attributed to wrong network settings. In troubleshooting connectivity issues, several tools are available to quickly determine the network configuration for any Windows computer.

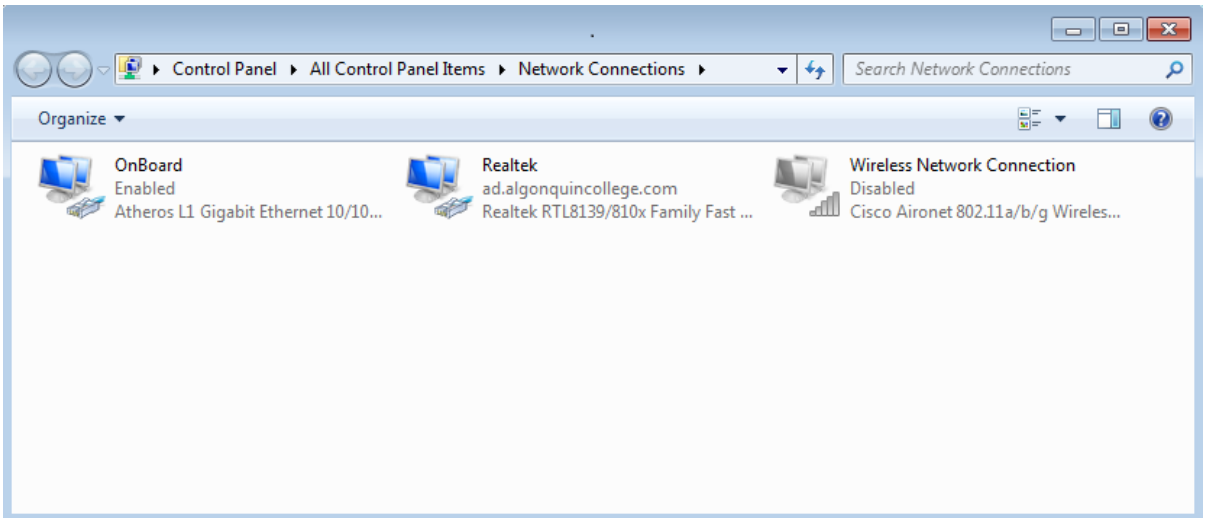
Step 1: Examine network properties settings.

One method that may be useful in determining the network interface IP properties is to examine the pod host computer's Network Properties settings. To access this window:

1. Click **Start > Run.** In the dialog box type **ncpa.cp**l and press **Enter.**



2. This will bring up the Network Connections Control Panel listing all the network devices on your computer. Right-click **Realtek**, and choose **Properties**.



3. On the **Networking** tab, scroll down the list of items in the pane, select **Internet Protocol Version 4 (TCP/IPv4)**, and click the **Properties** button. A window similar to the one in Figure 1 will be displayed.

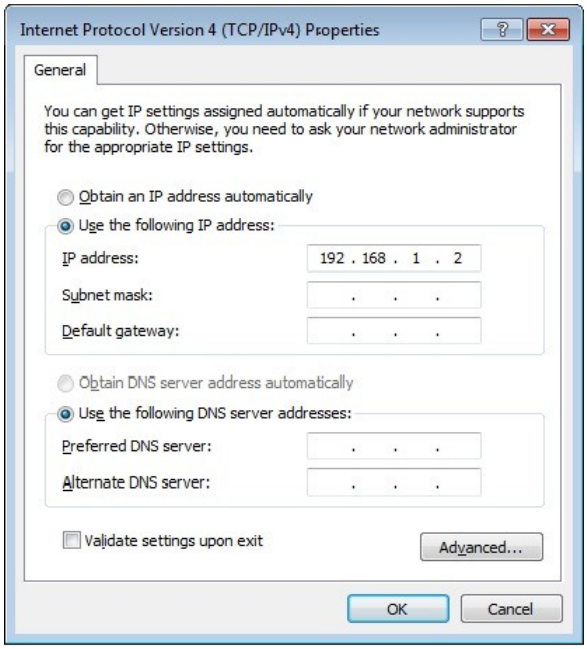


Figure 1. Network Interface with Static IP Address

However, a dynamic IP address may be configured, as shown in Figure 2. In this case, the Network Properties settings window is not very useful for determining IP address information.

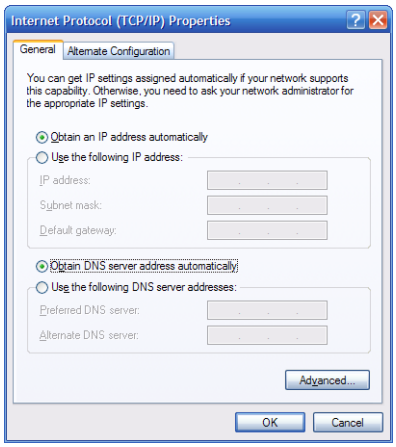


Figure 2. Network Interface with Dynamic IP Address

A more consistently reliable method for determining network settings on a Windows computer is to use the **`ipconfig`** command:

```
C:\ >ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
        Connection-specific DNS Suffix  . :
      ❶ IP Address. . . . . . . . . . . . : 172.16.1.2
      ❷ Subnet Mask . . . . . . . . . . . : 255.255.0.0
      ❸ Default Gateway . . . . . . . . . : 172.16.255.254
```

❶ IP address for this pod host computer
❷ Subnet mask
❸ Default gateway address

There are several options available with the **ipconfig** command, accessible with the command **ipconfig /?**.

To show the most information about the network connections, use the command **ipconfig /all**.

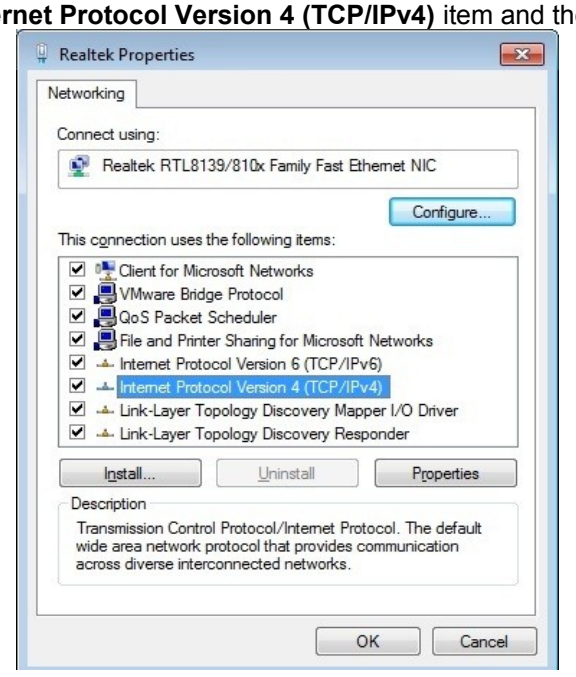
```
C:\>ipconfig /all
Windows IP Configuration
        Host Name . . . . . . . . . . . . : GW-desktop-hom
        Primary Dns Suffix  . . . . . . . :
        Node Type . . . . . . . . . . . . : Unknown
        IP Routing Enabled. . . . . . . . : No
        WINS Proxy Enabled. . . . . . . . : No
Ethernet adapter Local Area Connection:
        Connection-specific DNS Suffix  . :
        Description . . . . . . . . . . . : Intel(R) 82562V 10/100
Network Connection
        Physical Address. . . . . . . . . : 00-16-76-AC-A7-6A
        Dhcp Enabled. . . . . . . . . . . : No
        IP Address. . . . . . . . . . . . : 172.16.1.2
        Subnet Mask . . . . . . . . . . . : 255.255.0.0
        Default Gateway . . . . . . . . . : 172.16.255.254
      ❶ DNS Servers . . . . . . . . . . . : 192.168.254.254
C:\ >
```

❶ Domain name server IP address

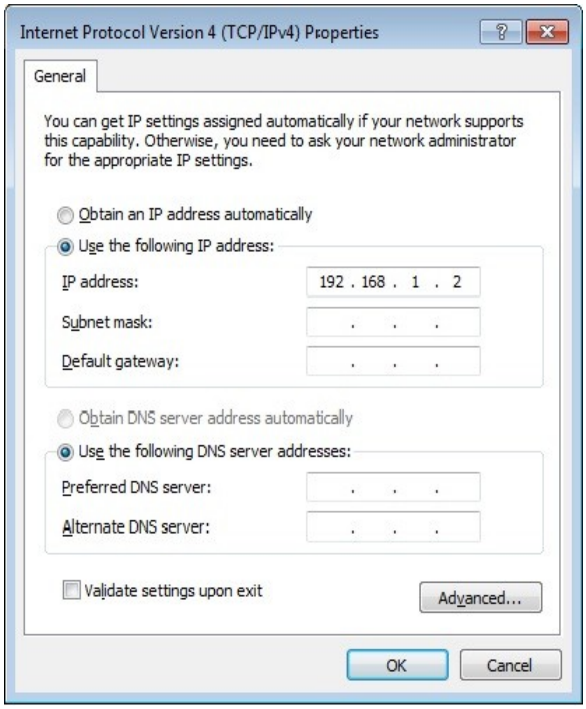
Applying a IP address to your computer

Follow the step-by-step instructions below.

1. **Click Start > Run.** In the dialog box type **ncpa.cp**l and press **Enter.** The Network Connections Control panel window should appear, with icons showing the different network connections.
2. Right-click on the network connection you wish to configure (normally **Local Area Connection)** and click **Properties**.
3. Select the **Internet Protocol Version 4 (TCP/IPv4)** item and then click the **Properties** button.



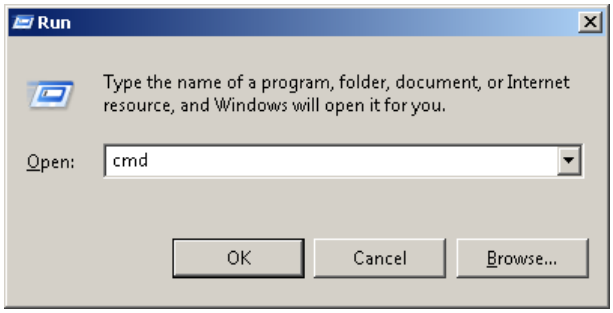
4. On the General tab of the Internet Protocol (TCP/IP) Properties window, select the **Use the following IP address** option.



5. In the **IP address** box, enter the IP address – this will depend on the network you are on.
6. Press the tab key and the Subnet mask is automatically entered. The subnet address – again, this will depend on your network settings. If this address is not automatically entered, enter this address manually.
7. Click **OK**.
8. Give your gateway IP if you have one.
9. Close the Local Area Connection Properties window.

Verify network connectivity.

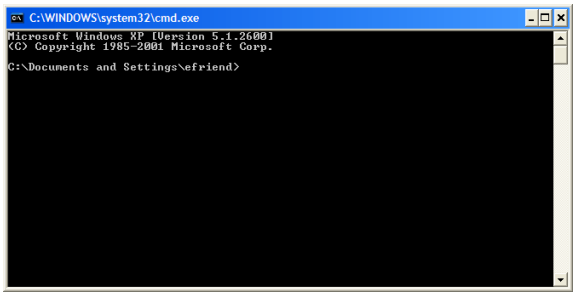
1. On your computer, click **Start**, and then click **Run**.



2. Type **cmd** in the Open box and then click **OK**.

   The DOS command (cmd.exe) window will appear. You can enter DOS commands using this

window. For the purposes of this lab, basic network commands will be entered to allow you to test you computer connections.



3. Use the **`ping`** command to test whether a host is reachable across the network or not.
4. You should usually ping:
   - ping <you_own_ip_address>
   - ping <your_gateway>
   - ping <some_other_ip>

