Answers: 7.4.1.11 Lab - Configure a NIC to Use DHCP in Windows
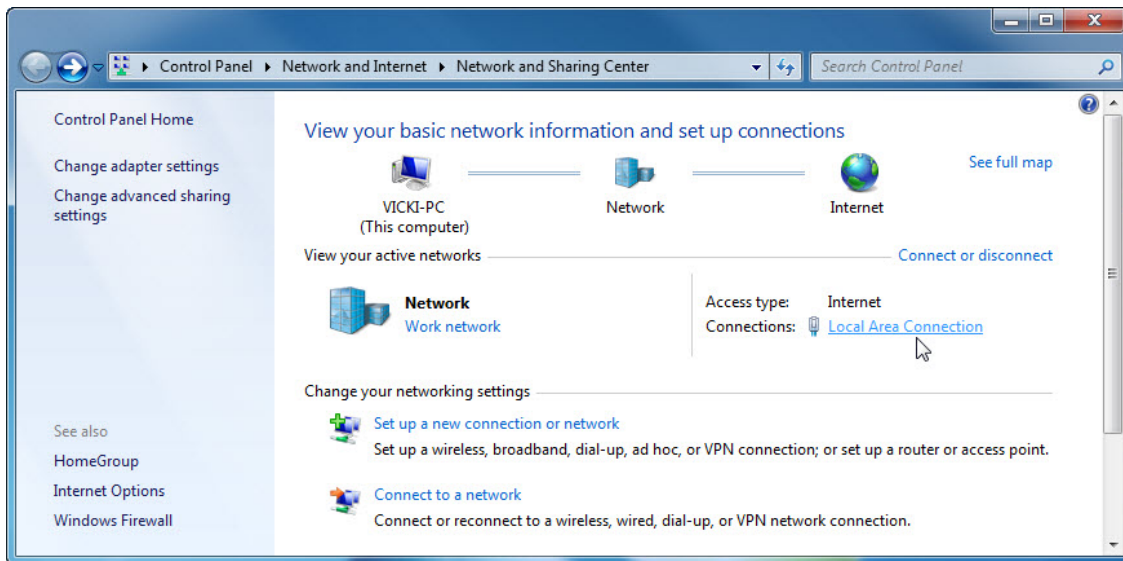
Introduction

In this lab, you will configure an Ethernet NIC to use DHCP to obtain an IP address and test connectivity between two computers.

Recommended Equipment

- Wireless router
- Two computers running Windows
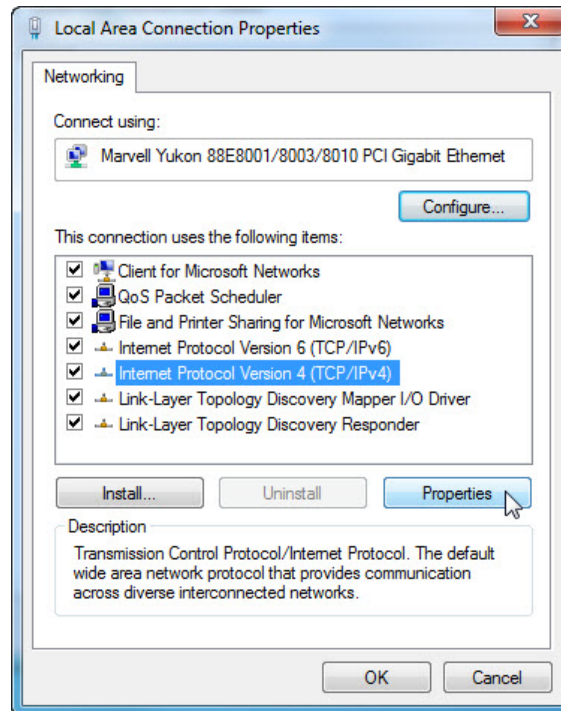- Ethernet patch cables (straight-through cable)

Step 1: Connect the hosts to the router.

a. For **Host A**, plug one end of the Ethernet patch cable into **Port 1** of the router.

b. For **Host A**, plug the other end of the Ethernet patch cable into the **network** port on the computer.

c. For **Host B**, plug one end of the Ethernet patch cable into **Port 2** on the back of the router.

d. For **Host B**, plug the other end of the Ethernet patch cable into the **network** port on the computer.

e. Plug in the power cable of the router, if it is not already plugged in.

f. Turn on both computers and log on to Windows on **Host A** as an **administrator**.

g. Click **Control Panel > Network and Sharing Center**. The **Network and Sharing Center** window opens.

Step 2:   Set Host A's NIC to use DHCP.

a.   Click **Local Area Connection > Properties**. The **Local Area Connection Properties** window opens.
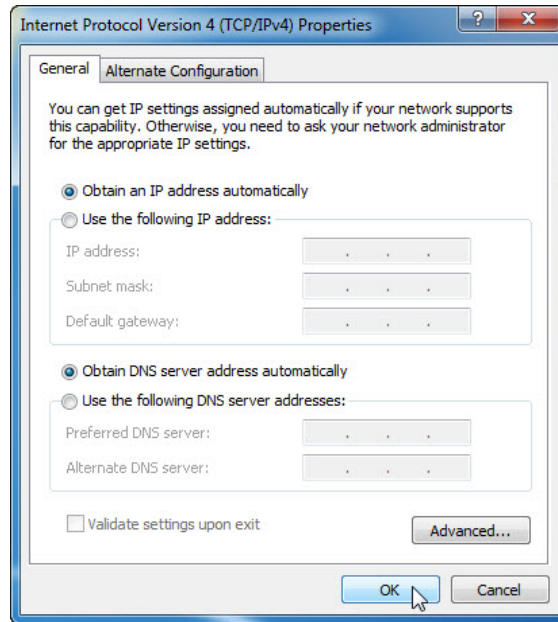

What is the name and model number of the NIC in the **Connect using:** field?

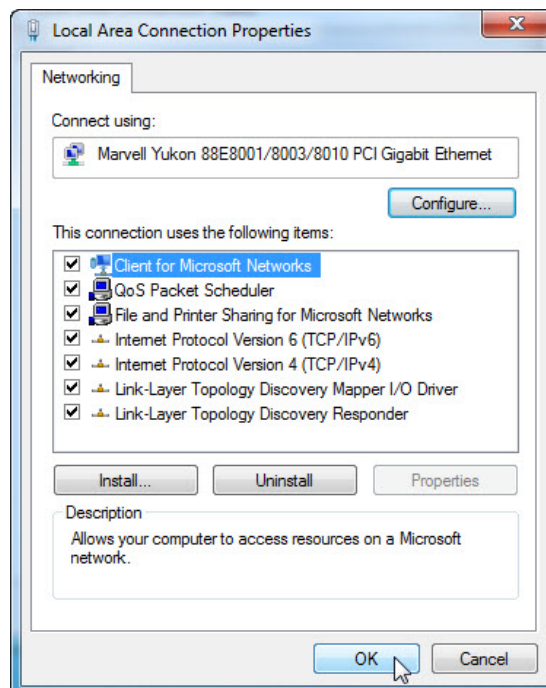What are the items listed in the **This connection uses the following items:** field?

b. Click **Internet Protocol Version 4 (TCP/IPv4) > Properties**. The **Internet Protocol Version 4 (TCP/IPv4) Properties** window opens.
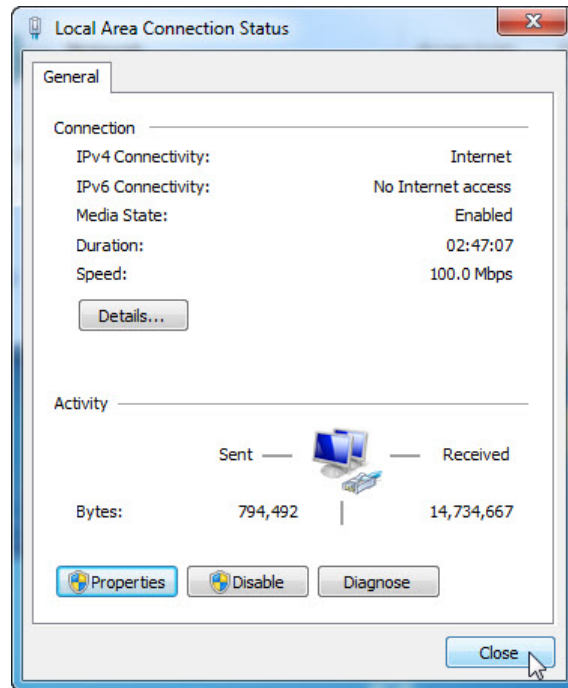
What is listed for the IP address, Subnet mask, and Default gateway in the fields of the **Use the following IP address:** area?

c. Select the **Obtain an IP address automatically** radio button, if it is not already selected.

d. Select the **Obtain DNS server address automatically** radio button, if it is not already selected.

e. Click **OK** to close the **Internet Protocol Version 4 (TCP/IPv4) Properties** window.

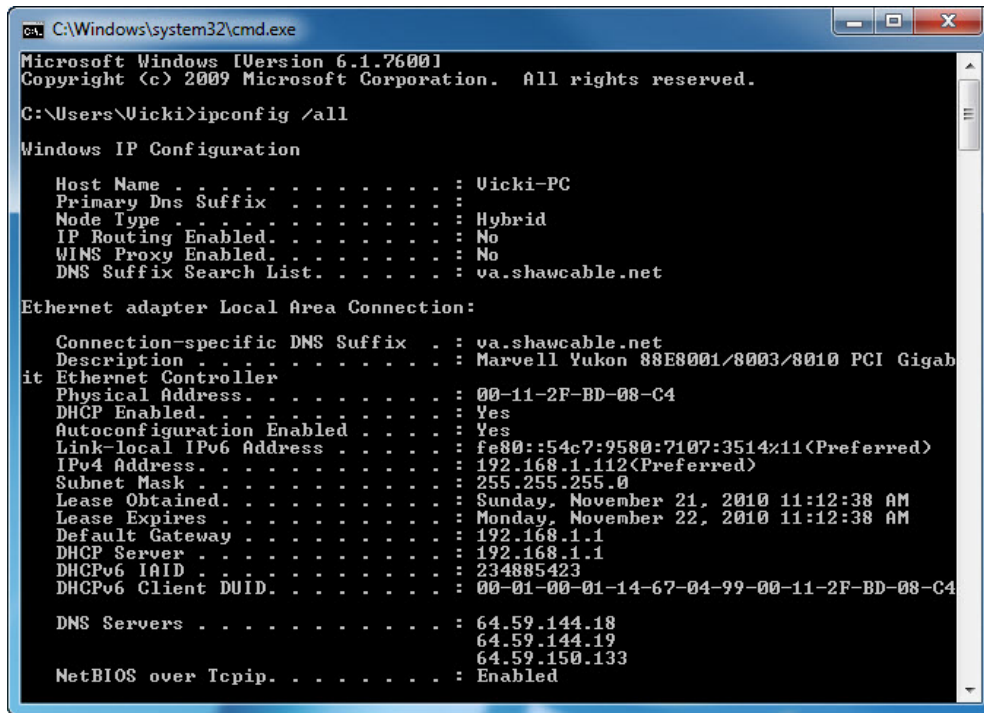f.   Click **OK** to close the **Local Area Connection Properties** window.

g.   Click **Close** to close the **Local Area Connection Status** window.

Step 3: Record Host A's IP address information.

a.   Check the lights on the back of the NIC. These lights will blink when there is network activity.

b.   Open a command window.

c. Type **ipconfig /all**, and then press the **Enter** key.

What is the IP address of the computer?

What is the subnet mask of the computer?

What is the default gateway of the computer?

What are the DNS servers for the computer?

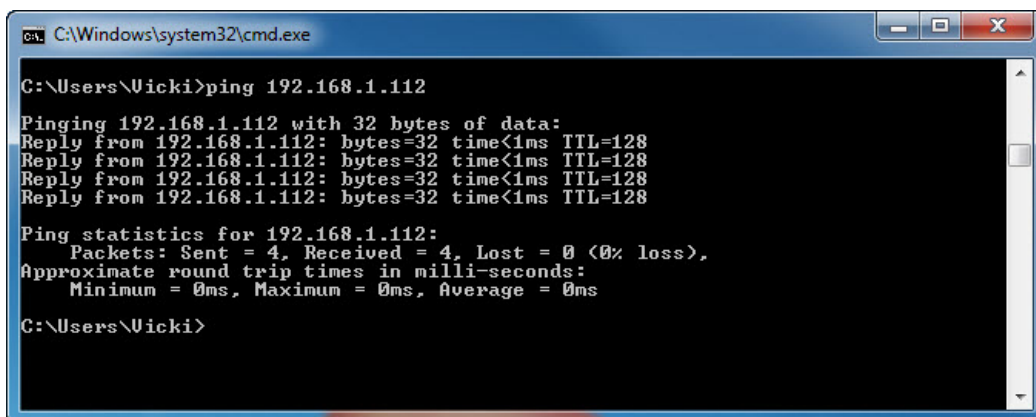What is the MAC address of the computer?

Is DHCP enabled?

What is the IP address of the DHCP server?

On what date was the lease obtained?

On what date does the lease expire?

d. Type **ping** *your IP address*. For example, **ping 192.168.1.112**.

Record one of the replies from your ping command.

If the ping was not successful, ask the instructor for assistance.

Step 4:   Record Host B's IP address information.

a.   Log in to **Host B** as an administrator and ensure the **Obtain an IP address automatically** and the **Obtain DNS server address automatically** radio buttons are selected.

b.   Click **OK > OK**.

c.   Open a command window.

d.   Type **ipconfig /all**.

What is the IP address of the computer?

What is the subnet mask of the computer?

What is the default gateway of the computer?

What are the DNS servers for the computer?

What is the IP address of the DHCP server?

Step 5:   Set static IP address information.

a.   Select the radio buttons **Use the following IP address** and **Use the following DNS server address**.

b.   Enter in the IP address information for the NIC from the previous step.

c.   Click **OK > OK**.

d.   Open a command window.

e.   Type **ping *IP address for Host B***.

If the ping was not successful, ask the instructor for assistance.

Step 6:   Verify Connectivity.

a.   From **Host B**, type **ping *IP address for Host A***.

Was the ping successful?

b.   From **Host A** type **ping *IP address for Host B***.

Was the ping successful?

c.   Return all network configurations to their original settings, unless stated otherwise by the instructor.

d.   Set the NIC to **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

e.   Click **OK** > **OK**.