IT Essentials 5.0

6.3.2.8 Lab - Configure a NIC to Use DHCP in Windows Vista

Introduction

Print and complete this lab.

In this lab, you will configure an Ethernet NIC to use DHCP to obtain an IP address and test connectivity between 2 computers.

Recommended Equipment
- Linksys E2500 router
- Two computers running Window Vista
- Ethernet patch cables

Step 1

For Host A, plug one end of the Ethernet patch cable into "Port 1" on the back of the router.

For Host A, plug the other end of the Ethernet patch cable into the network port on the NIC in your computer.

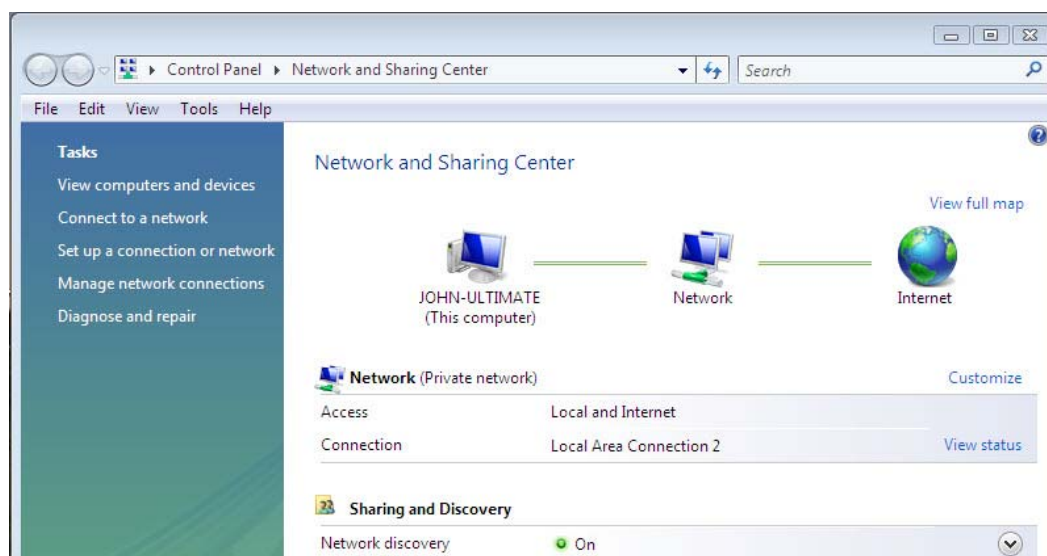For Host B, plug one end of the Ethernet patch cable into "Port 2" on the back of the router.

For Host B, plug the other end of the Ethernet patch cable into the network port on the NIC in your computer.

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

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

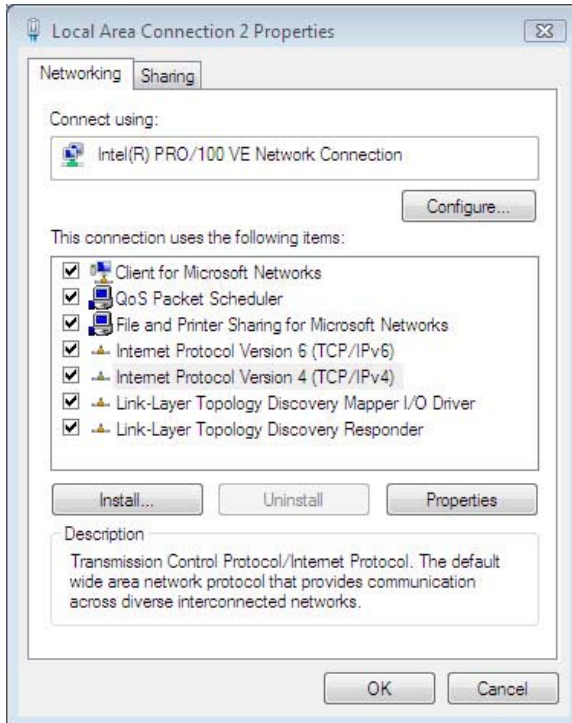Click **Start > Control Panel > Network and Sharing Center**.

The "Network and Sharing Center" window appears.

Step 2

Click **View status**, and then choose **Properties > Continue** if asked.

The "Local Area Connection Properties" window opens.

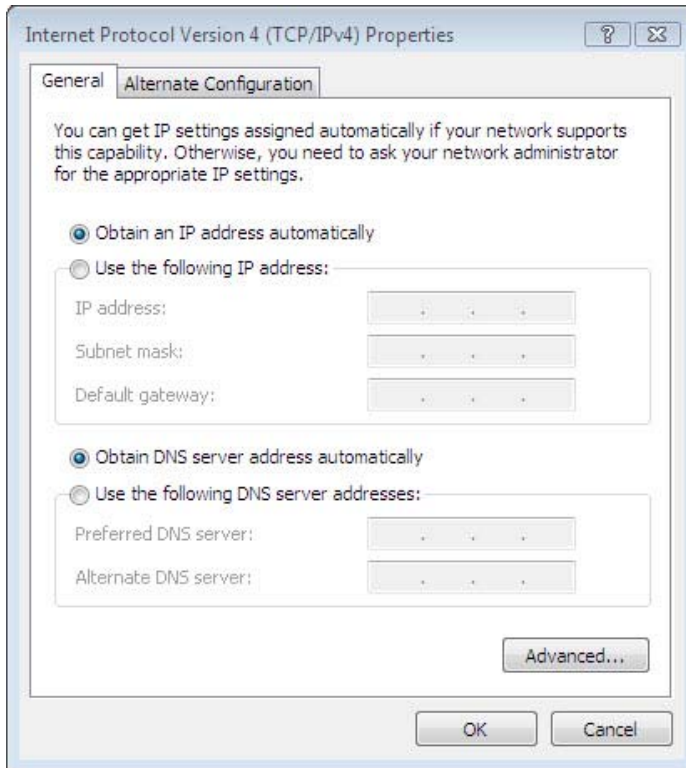What is the name and model number of the NIC in the "Connect using:" field?

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

Step 3

Select **Internet Protocol Version 4 (TCP/IPv4)**.

Click **Properties**.

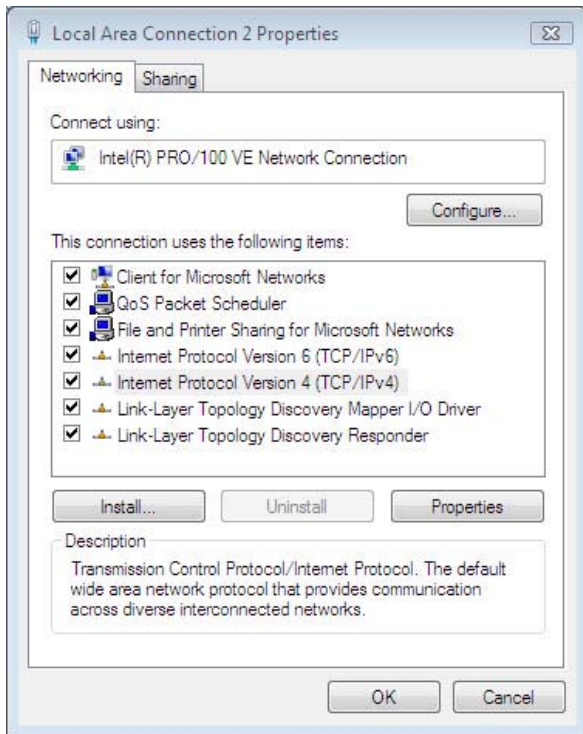The "Internet Protocol Version 4 (TCP/IPv4) Properties" window opens.

What is the IP address, Subnet mask, and Default gateway listed in the fields of the "Use the following IP address:" area?

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

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

Click **OK**.

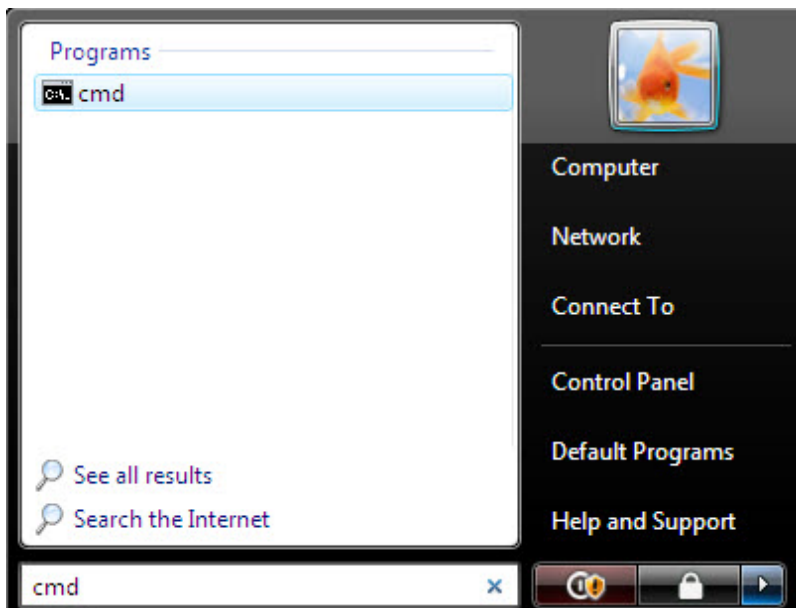The "Internet Protocol Version 4 (TCP/IPv4) Properties" window closes.
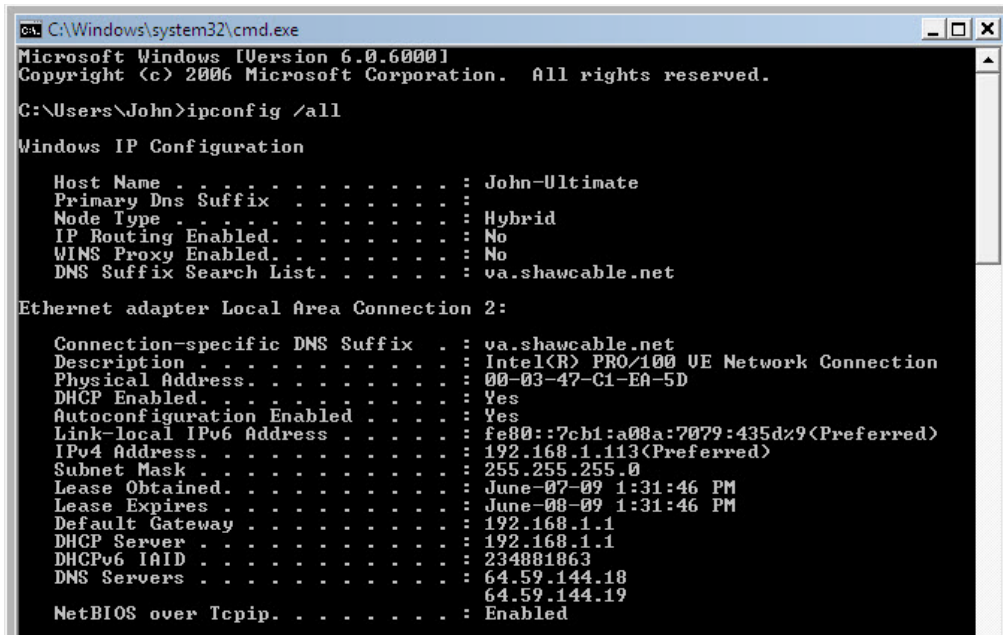
Click **OK**.

Step 4

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

Click **Start**.

In **Start Search** type **cmd** and press **Enter**.

The "cmd.exe" window opens.

```
C:\Windows\system32\cmd.exe                                                        _ □ ×
Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation.  All rights reserved.

C:\Users\John>ipconfig /all

Windows IP Configuration

    Host Name . . . . . . . . . . . . : John-Ultimate
    Primary Dns Suffix  . . . . . . . :
    Node Type . . . . . . . . . . . . : Hybrid
    IP Routing Enabled. . . . . . . . : No
    WINS Proxy Enabled. . . . . . . . : No
    DNS Suffix Search List. . . . . . : va.shawcable.net

Ethernet adapter Local Area Connection 2:

    Connection-specific DNS Suffix  . : va.shawcable.net
    Description . . . . . . . . . . . : Intel(R) PRO/100 VE Network Connection
    Physical Address. . . . . . . . . : 00-03-47-C1-EA-5D
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::7cb1:a08a:7079:435d%9(Preferred)
    IPv4 Address. . . . . . . . . . . : 192.168.1.113(Preferred)
    Subnet Mask . . . . . . . . . . . : 255.255.255.0
    Lease Obtained. . . . . . . . . . : June-07-09 1:31:46 PM
    Lease Expires . . . . . . . . . . : June-08-09 1:31:46 PM
    Default Gateway . . . . . . . . . : 192.168.1.1
    DHCP Server . . . . . . . . . . . : 192.168.1.1
    DHCPv6 IAID . . . . . . . . . . . : 234881863
    DNS Servers . . . . . . . . . . . : 64.59.144.18
                                        64.59.144.19
    NetBIOS over Tcpip. . . . . . . . : Enabled
```

Type **ipconfig /all**, and then press **Enter**.

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?

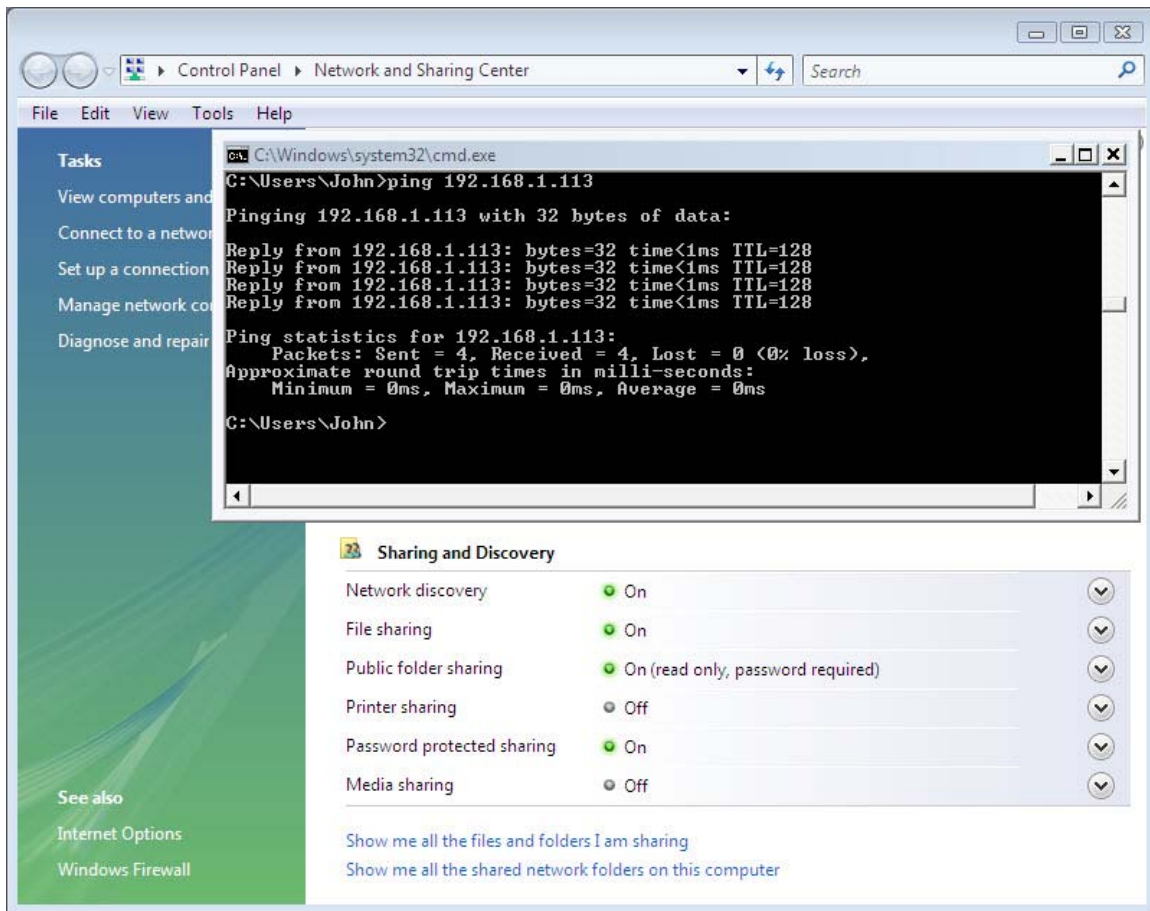What is the MAC address of the comptuer?

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?

Step 5

Type **ping** *your IP address*. For example, **ping 192.168.1.113**

Record one of the replies of your ping command.

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

Step 6

Login to Host B as an administrator and make sure the **Obtain an IP address automatically** and the **Obtain DNS server address automatically** radio buttons are selected.

Click **OK > OK**.

Open a command window.

Type **ipconfig /all** in the command window.

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 7

Return to the "Internet Protocol Version 4 (TCP?IP4) Properties" window.

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

Enter in the IP address information for the NIC.

Click **OK > OK**.

Open the command window.

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

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

Step 8

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

Was the ping successful?

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

Was the ping successful?

Step 9

Return configurations to the settings at the start of the lab, unless stated otherwise by the instructor.

Select the radio buttons **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

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