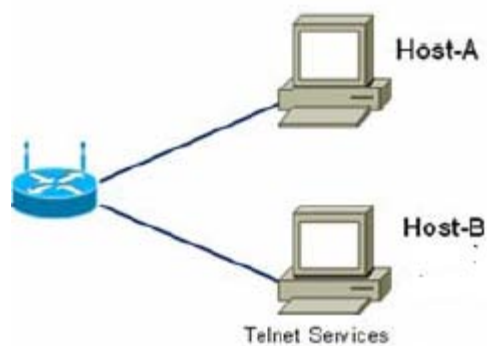


8.9.2 Optional Lab: Configure an Ethernet NIC to Use DHCP in Windows 7

Introduction

Print and complete this lab.



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

Note: The instructor will have a Telnet server configured on Host B.

Recommended Equipment

- Linksys 300N router
- Two Computers running Window 7
- Ethernet patch cable

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.

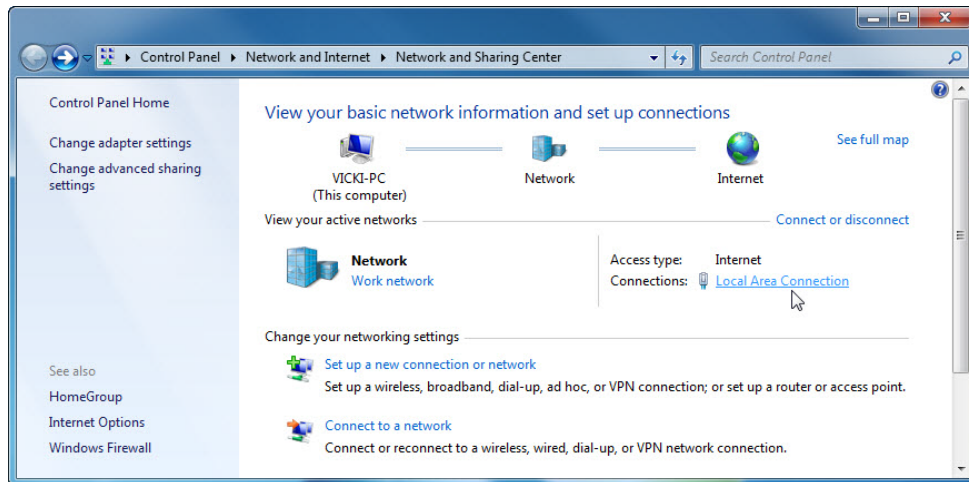
Plug in the power cable of the router if it is not already plugged in.

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

Click **Start**.

Right-click **Network**, and then choose **Properties**.

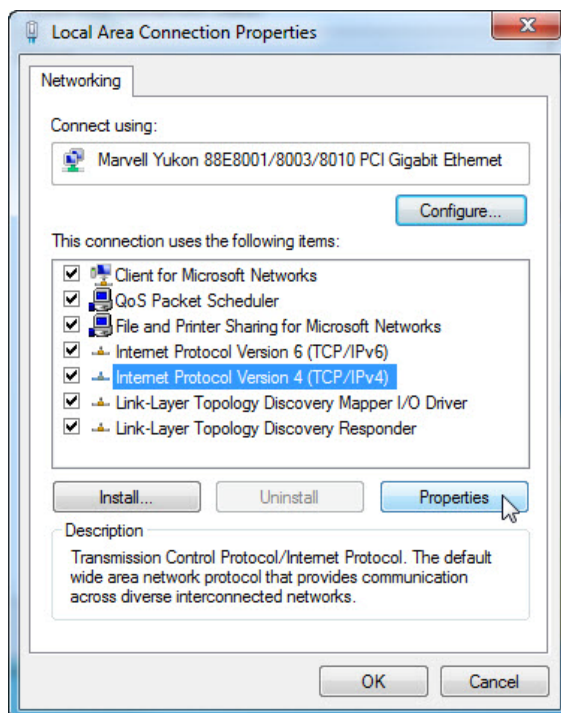
The “Network and Sharing Center” window appears.



Step 2

Click **Local Area Connection**, and then choose **Properties**.

The “Local Area Connection Properties” window appears.



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

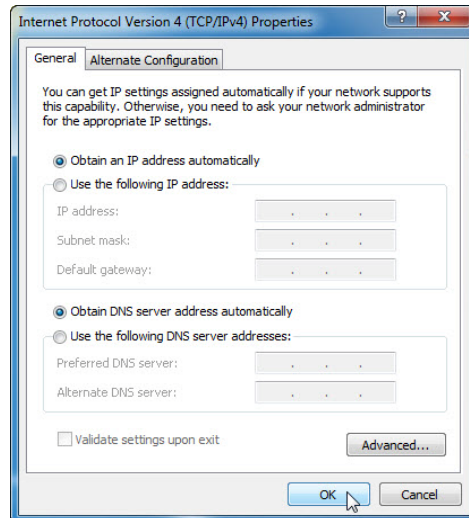
What are the items listed in the “This connection uses the following items:” field?

Step 3

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

Click **Properties**.

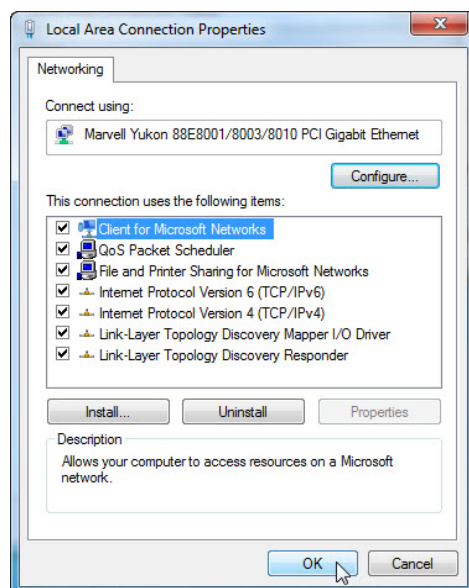
The “Internet Protocol Version 4 (TCP/IPv4) Properties” window appears.



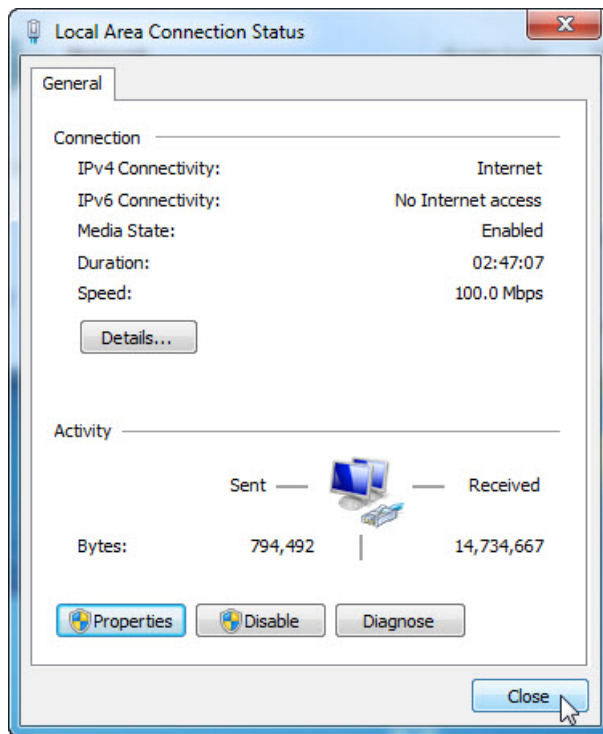
What is the IP address, Subnet mask, and Default gateway, if any, listed in the fields of the “Use the following IP address:” area?

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

Click **OK** for the next two windows.



The “Internet Protocol Version 4 (TCP/IPv4) Properties” window closes.



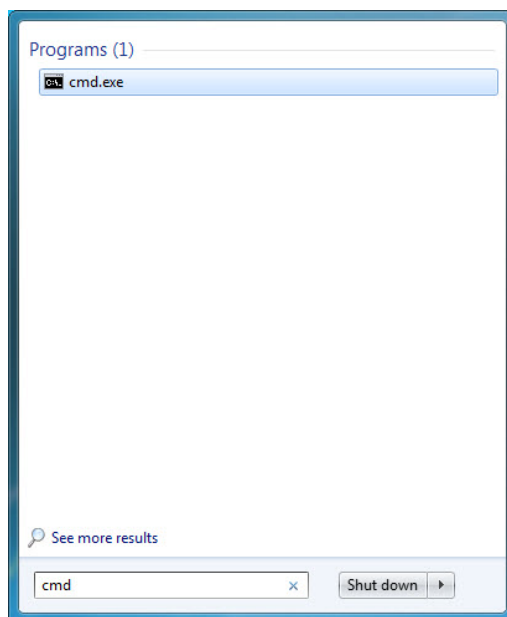
Click **Close**.

Step 4

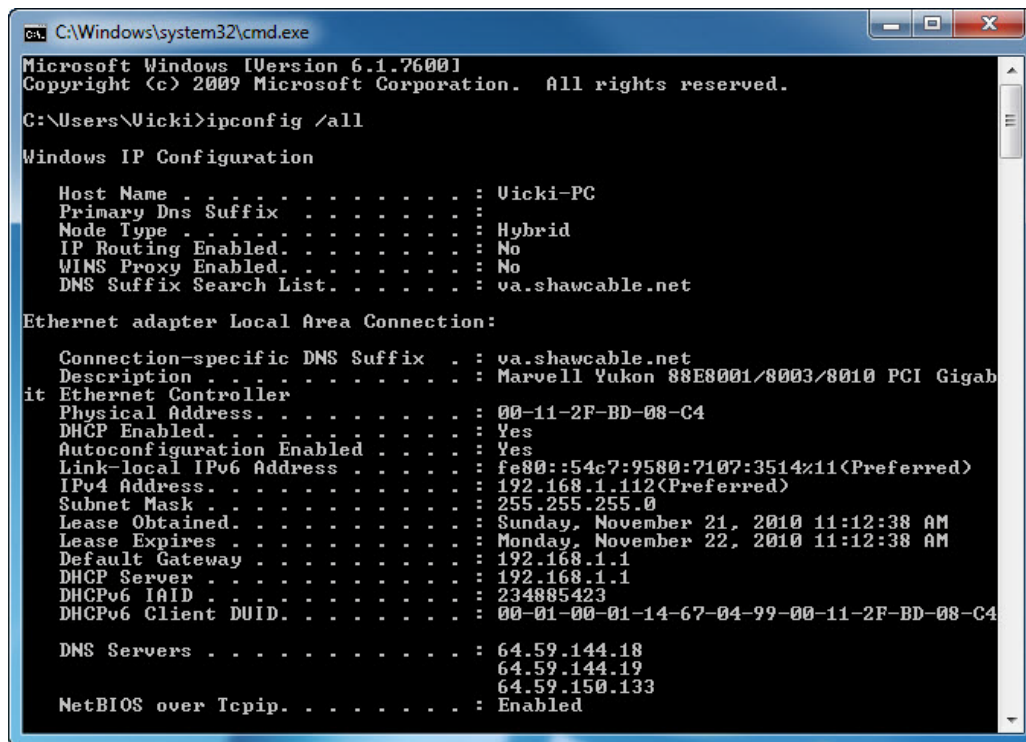
Check the lights on the back of the NIC. These lights will blink when there is network activity.

Click **Start**.

In **Search programs and files** box, type **cmd** and press **Enter**.



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



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Vicki>ipconfig /all

Windows IP Configuration

    Host Name . . . . . : Vicki-PC
    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:

    Connection-specific DNS Suffix . : va.shawcable.net
    Description . . . . . : Marvell Yukon 88E8001/8003/8010 PCI Gigabit Ethernet Controller
    Physical Address. . . . . : 00-11-2F-BD-08-C4
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::54c7:9580:7107:3514%11(Preferred)
    IPv4 Address. . . . . : 192.168.1.112(Preferred)
    Subnet Mask . . . . . : 255.255.255.0
    Lease Obtained. . . . . : Sunday, November 21, 2010 11:12:38 AM
    Lease Expires . . . . . : Monday, November 22, 2010 11:12:38 AM
    Default Gateway . . . . . : 192.168.1.1
    DHCP Server . . . . . : 192.168.1.1
    DHCPv6 IAID . . . . . : 234885423
    DHCPv6 Client DUID. . . . . : 00-01-00-01-14-67-04-99-00-11-2F-BD-08-C4

    DNS Servers . . . . . : 64.59.144.18
                           64.59.144.19
                           64.59.150.133
    NetBIOS over Tcpip. . . . . : Enabled
```

What is the IP address and subnet mask of the “Ethernet adapter Local Area Connection”?

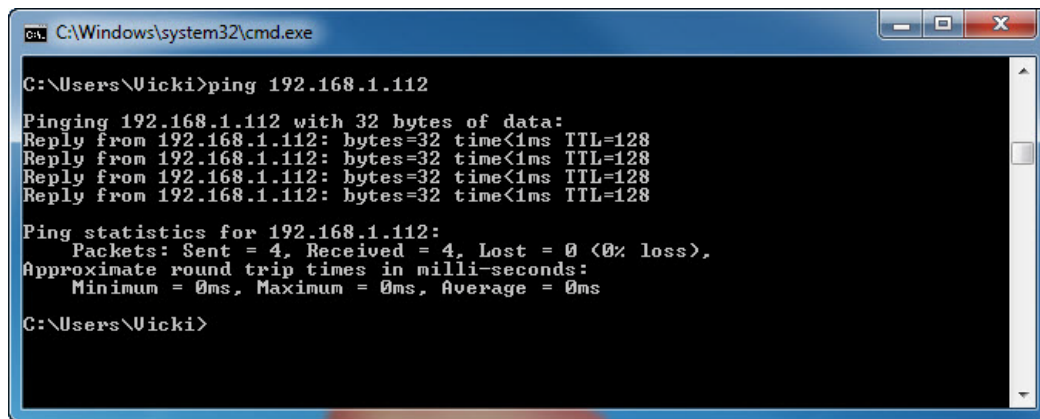
What is the IP address of the DHCP Server?

On what date was the Lease Obtained?

On what date does the Lease Expire?

Step 5

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



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

C:\Users\Vicki>ping 192.168.1.112

Pinging 192.168.1.112 with 32 bytes of data:
Reply from 192.168.1.112: bytes=32 time<1ms TTL=128
Reply from 192.168.1.112: bytes=32 time<1ms TTL=128
Reply from 192.168.1.112: bytes=32 time<1ms TTL=128
Reply from 192.168.1.112: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.112:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

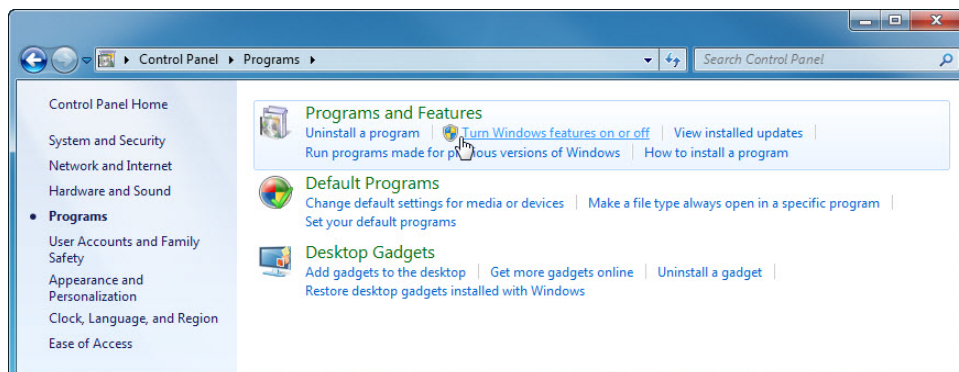
C:\Users\Vicki>
```

Record one of the replies from your ping command.

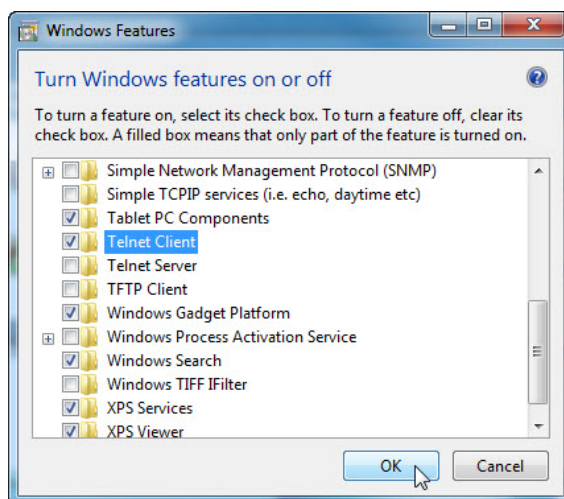
Step 6

To install Telnet Client, log in to Host A as an administrator, if not already done.

Click **Start > Control Panel > Programs > Turn Windows features on or off**.



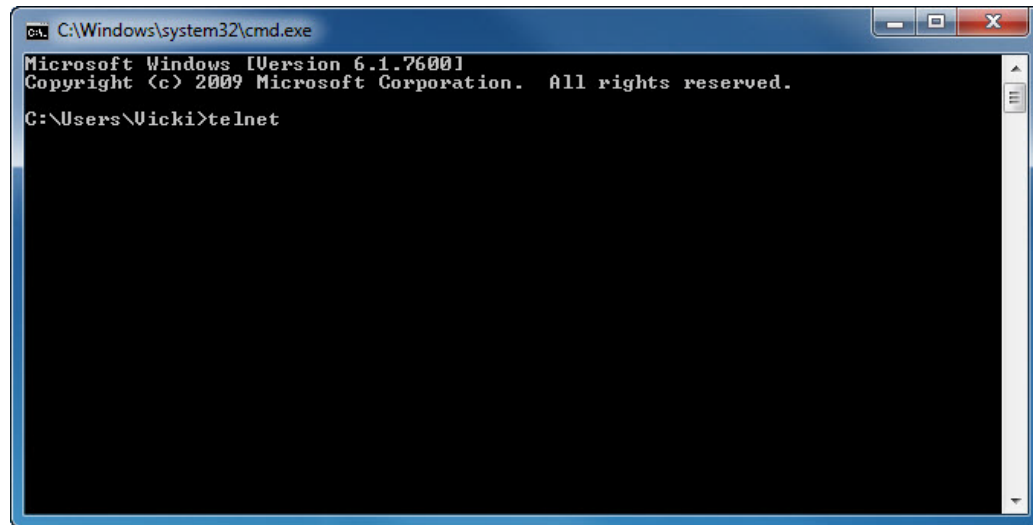
In the **Windows Features** list, select **Telnet Client**, and then click **OK**.



Close all windows.

Click **Start > Run > type cmd > OK**.

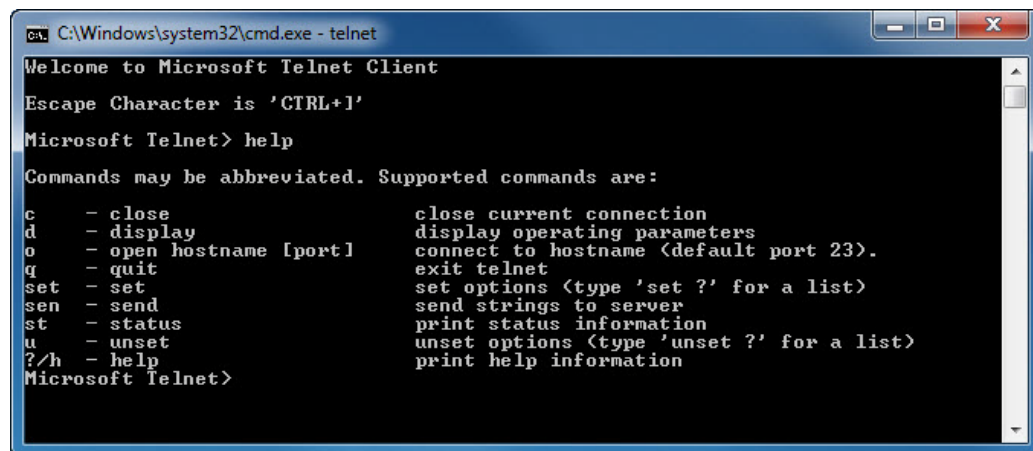
Type **telnet** and press **Enter**.



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Vicki>telnet
```

Type **help** and press **Enter**.

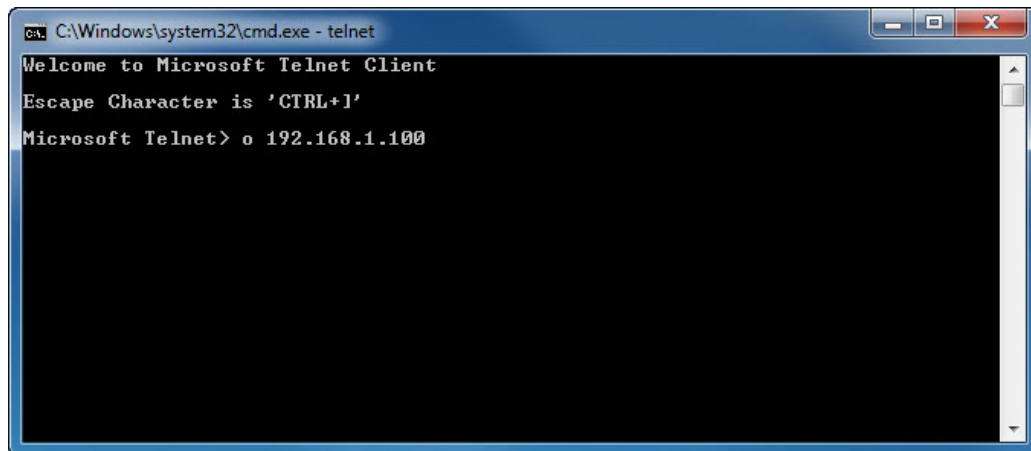


```
C:\Windows\system32\cmd.exe - telnet
Welcome to Microsoft Telnet Client
Escape Character is 'CTRL+I'
Microsoft Telnet> help
Commands may be abbreviated. Supported commands are:

c      - close           close current connection
d      - display         display operating parameters
o      - open hostname [port] connect to hostname <default port 23>.
q      - quit           exit telnet
set    - set            set options <type 'set ?' for a list>
sen    - send          send strings to server
st     - status         print status information
u      - unset         unset options <type 'unset ?' for a list>
?/h   - help          print help information
Microsoft Telnet>
```

List each of the Windows telnet supported commands and descriptions.

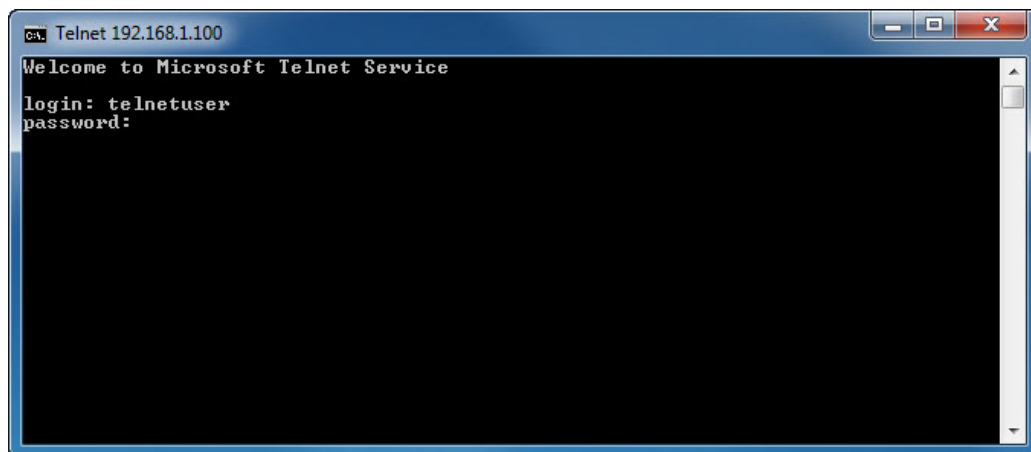
At the Microsoft Telnet> prompt type: **o hostname** (IP address of Host B).



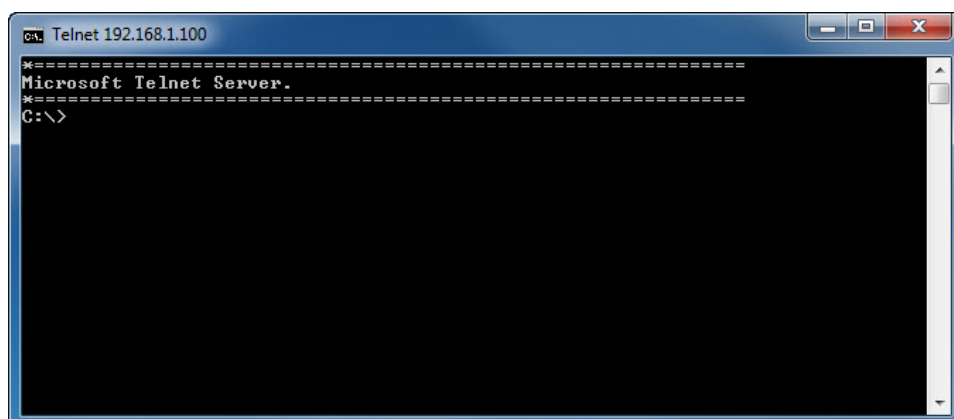
Log in to the telnet server (Host B).
Ask your instructor for the account username and password.

Username:

Password:



The telnet server command window appears.

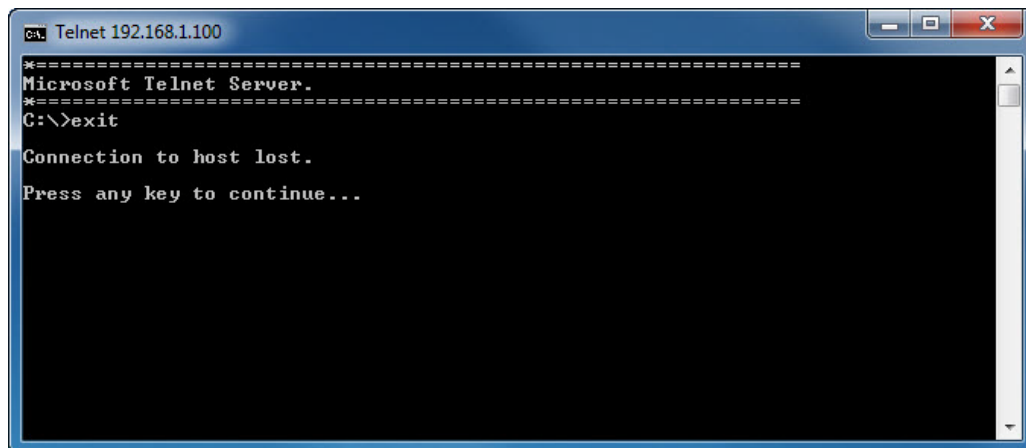


What message is displayed on the telnet server to indicate you are connected?

What directory are you connected to?

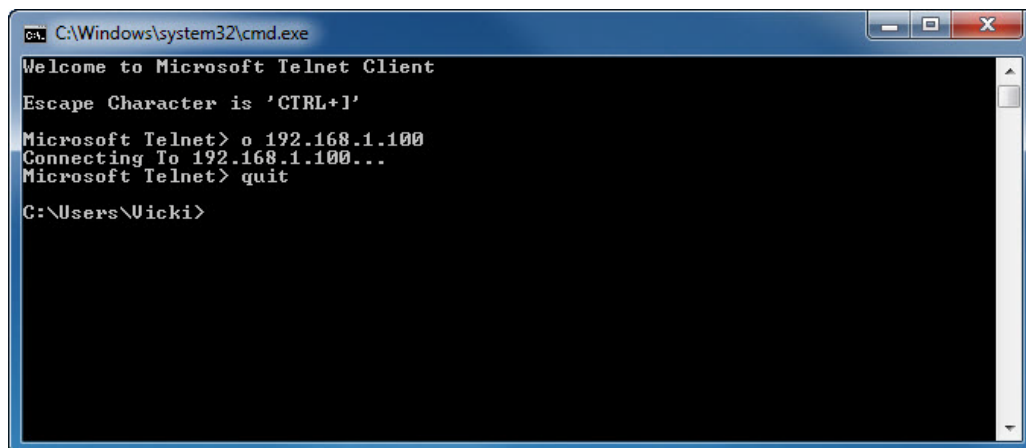
Type **exit** and press **Enter**, to disconnect from the telnet server.

Press any key to continue.



```
CA> Telnet 192.168.1.100
*****
Microsoft Telnet Server.
*****
C:\>exit
Connection to host lost.
Press any key to continue...
```

Type the proper command to exit the telnet session, and then press **Enter**.



```
CA> C:\Windows\system32\cmd.exe
Welcome to Microsoft Telnet Client
Escape Character is 'CTRL+I'
Microsoft Telnet> o 192.168.1.100
Connecting To 192.168.1.100...
Microsoft Telnet> quit
C:\Users\Vicki>
```

Close all windows and properly log off both computers.