

Lab - Test the Wireless NIC in Windows

Introduction

In this lab, you will check the status of your wireless connection, investigate the availability of wireless networks, and test connectivity.

Recommended Equipment

- A computer running Windows
- A wireless NIC installed
- An Ethernet NIC installed
- A wireless router
- Internet connectivity

Step 1: Ping the loopback.

a. Disconnect the Ethernet cable from your computer.

What are the names of the wireless connections that are available?

- b. Connect to the classroom wireless network. Ask your instructor for the SSID and log on credentials if necessary.
- c. Open a command window.
- d. Ping 127.0.0.1 to test the loopback.

```
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\John\ping 127.0.0.1

Pinging 127.0.0.1 with 32 bytes of data:
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128

Ping statistics for 127.0.0.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\John\
```

How many Replies did you receive?

Why would you perform this test?

Step 2: Ping the default gateway.

a. Use the ipconfig command.

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

C:\Users\John>ipconfig

Windows IP Configuration

Wireless LAN adapter Wireless Network Connection 4:

Connection-specific DNS Suffix : va.shawcable.net
Link-local IPv6 Address : : fe80::49a5:d135:cc6f:e7b8:24
IPv4 Address : : 192.168.1.100
Subnet Mask : : : 255.255.255.0
Default Gateway : : 192.168.1.1
```

What is the IP address of the default gateway?

b. **Ping** the **default gateway**. A successful ping indicates that there is a connection between the computer and the default gateway.

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

C:\Users\John\ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=2ms TTL=64
Reply from 192.168.1.1: bytes=32 time(1ms TTL=64
Reply from 192.168.1.1: bytes=32 time=1ms TTL=64
Reply from 192.168.1.1: bytes=32 time(1ms TTL=64
Reply from 192.168.1.1: bytes=32 time(1ms TTL=64

Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\Users\John\
```

Step 3: Find computers on the network.

a. Type **net view** to make sure that you can see the other computers on the network. This indicates that there are no problems with the network between your computer and other computers on the same network.

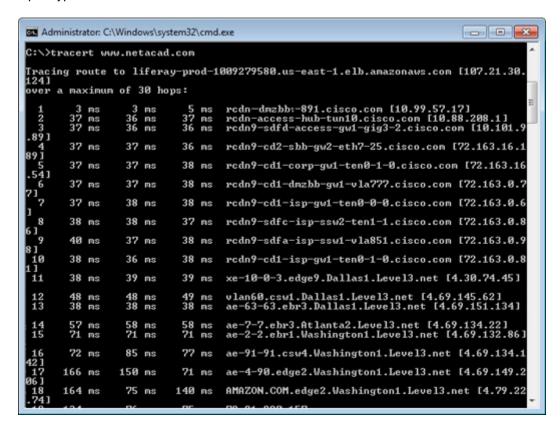
```
C:\Users\Administrator\net view
Server Name Remark

\BRAXION-PC
\STUDENT01
The command completed successfully.

C:\Users\Administrator>
```

List the computer names that are displayed.

b. Use the **tracert** command along with your school's Web site or the Cisco Networking Academy Web site. Example: type **tracert www.netacad.com**.

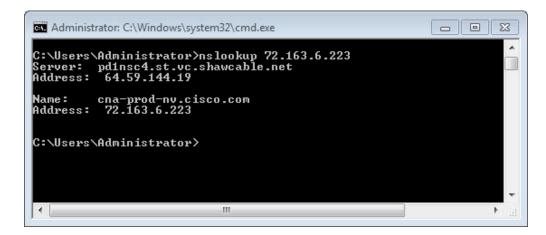


What IP address was returned?

How many devices (hops) are displayed?

Why would you perform this test?

c. Use the nslookup command with the IP address you just discovered. Type nslookup 72.163.6.233.

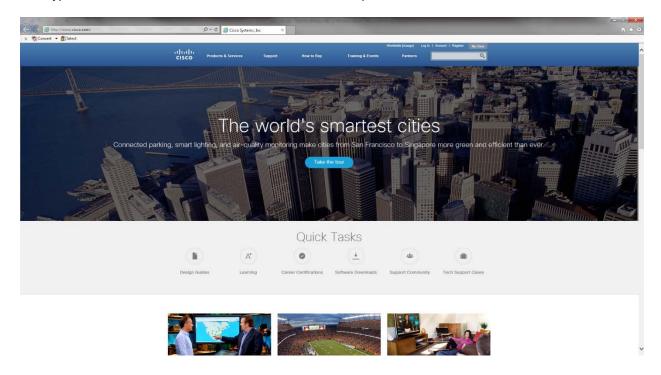


What name was returned?

Why would you perform this test?

Step 4: Test your Internet connection.

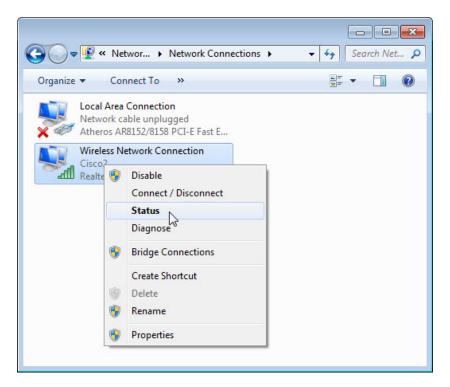
- a. Open a web browser.
- b. Type www.cisco.com in the Address field, and then press Enter.



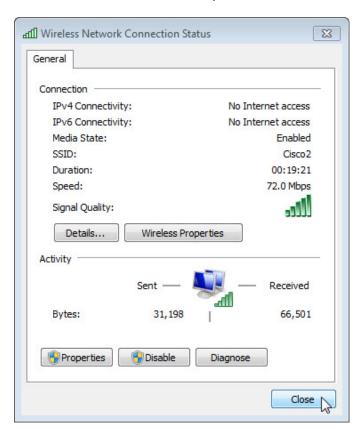
c. Click Control Panel > Network and Sharing Center >. Change adapter settings

Note: In Windows Vista, click Control Panel > Network and Sharing Center >. Manage network connections

d. Right-click the Wireless Network Connection icon > Status.



The Wireless Network Connection Status window opens.



	What is the state of the Media?
	What is the signal quality?
e.	Click Close.

Reflection

- 1. What information does a positive response from the default gateway provide for you when the computer has no Internet connection?
- 2. If you receive a positive response from the default gateway, but you have no Internet access, where is the problem?