Answers: 8.1.2.14 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.

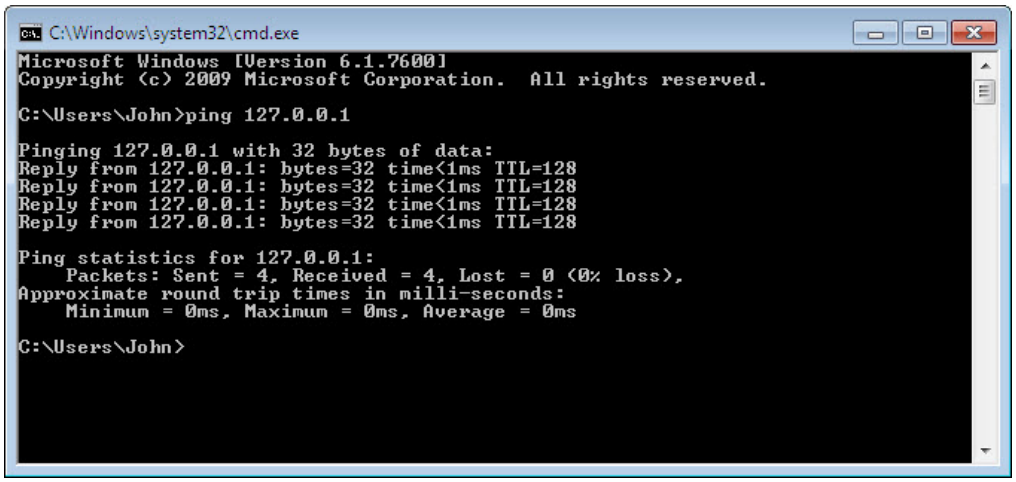
a. Disconnect the Ethernet cable from your computer.

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.

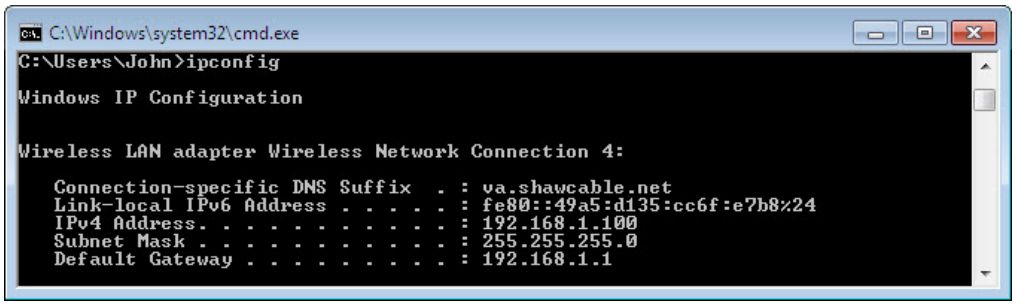


How many Replies did you receive?

Why would you perform this test?

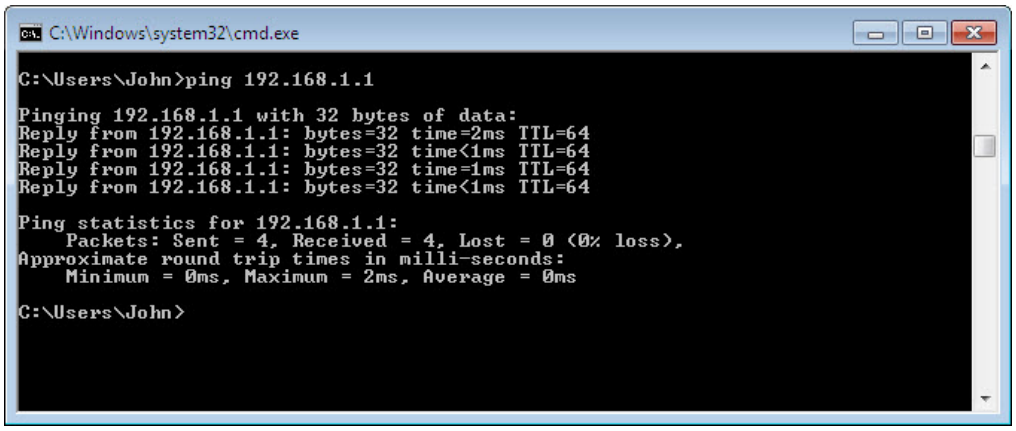
Step 2: Ping the default gateway.

a. Use the **ipconfig** command.



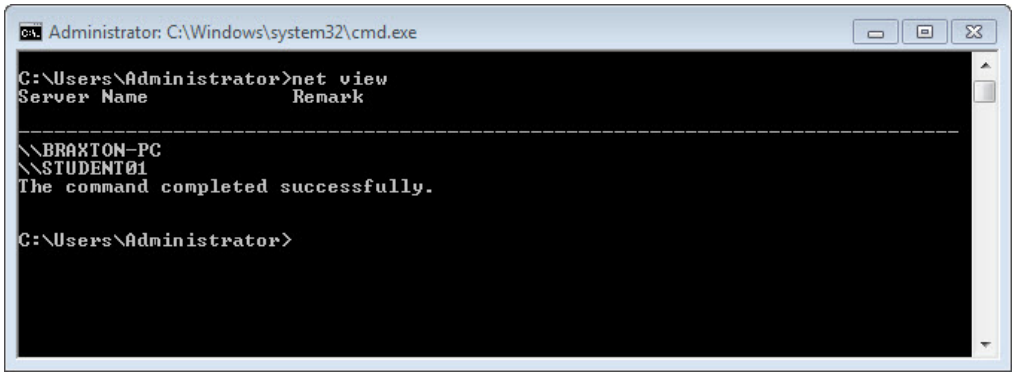
What is the IP address of the default gateway?

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



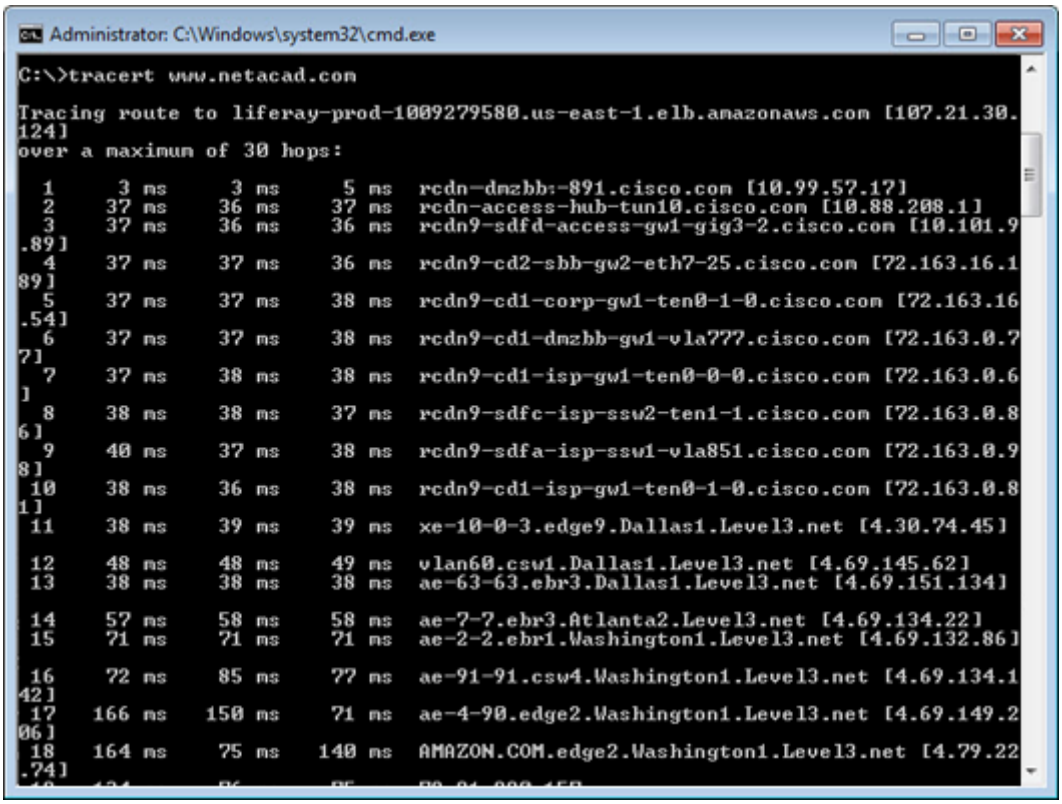
Step 3: Find computers on the network.

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.



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**.



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Administrator: C:\Windows\system32\cmd.exe
C:\>tracert www.netacad.com

Tracing route to liferay-prod-1009279580.us-east-1.elb.amazonaws.com [107.21.30.
124]
over a maximum of 30 hops:

  1     3 ms     3 ms     5 ms  rcdn-dmzbb:-891.cisco.com [10.99.57.17]
  2    37 ms    36 ms    37 ms  rcdn-access-hub-tun10.cisco.com [10.88.208.1]
  3    37 ms    36 ms    36 ms  rcdn9-sdfd-access-gw1-gig3-2.cisco.com [10.101.9
.89]
  4    37 ms    37 ms    36 ms  rcdn9-cd2-sbb-gw2-eth7-25.cisco.com [72.163.16.1
89]
  5    37 ms    37 ms    38 ms  rcdn9-cd1-corp-gw1-ten0-1-0.cisco.com [72.163.16
.54]
  6    37 ms    37 ms    38 ms  rcdn9-cd1-dmzbb-gw1-vla777.cisco.com [72.163.0.7
7]
  7    37 ms    38 ms    38 ms  rcdn9-cd1-isp-gw1-ten0-0-0.cisco.com [72.163.0.6
]
  8    38 ms    38 ms    37 ms  rcdn9-sdfc-isp-ssw2-ten1-1.cisco.com [72.163.0.8
6]
  9    40 ms    37 ms    38 ms  rcdn9-sdfa-isp-ssw1-vla851.cisco.com [72.163.0.9
8]
 10    38 ms    36 ms    38 ms  rcdn9-cd1-isp-gw1-ten0-1-0.cisco.com [72.163.0.8
1]
 11    38 ms    39 ms    39 ms  xe-10-0-3.edge9.Dallas1.Level3.net [4.30.74.45]

 12    48 ms    48 ms    49 ms  vlan60.csw1.Dallas1.Level3.net [4.69.145.62]
 13    38 ms    38 ms    38 ms  ae-63-63.ebr3.Dallas1.Level3.net [4.69.151.134]

 14    57 ms    58 ms    58 ms  ae-7-7.ebr3.Atlanta2.Level3.net [4.69.134.22]
 15    71 ms    71 ms    71 ms  ae-2-2.ebr1.Washington1.Level3.net [4.69.132.86]

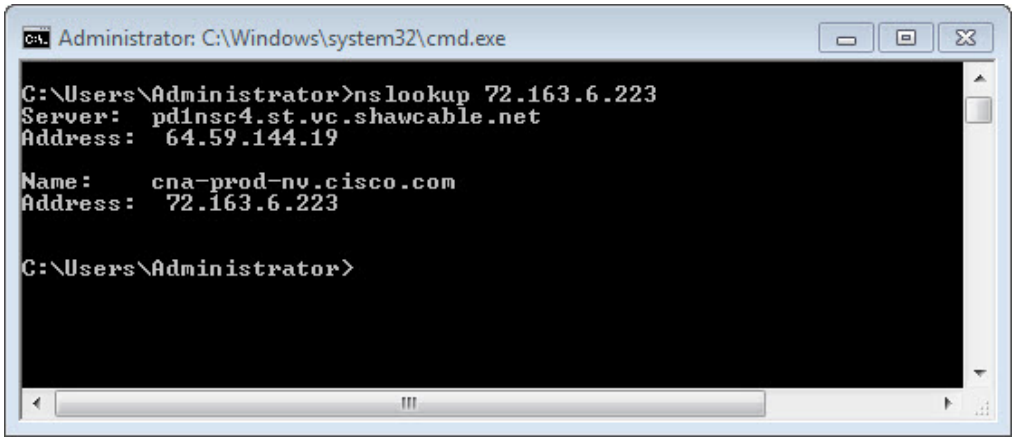
 16    72 ms    85 ms    77 ms  ae-91-91.csw4.Washington1.Level3.net [4.69.134.1
42]
 17   166 ms   150 ms    71 ms  ae-4-90.edge2.Washington1.Level3.net [4.69.149.2
06]
 18   164 ms    75 ms   140 ms  AMAZON.COM.edge2.Washington1.Level3.net [4.79.22
.24]
```

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**.



```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\Administrator>nslookup 72.163.6.223
Server:  pd1nsc4.st.vc.shawcable.net
Address:  64.59.144.19

Name:    cna-prod-nv.cisco.com
Address:  72.163.6.223


C:\Users\Administrator>
```

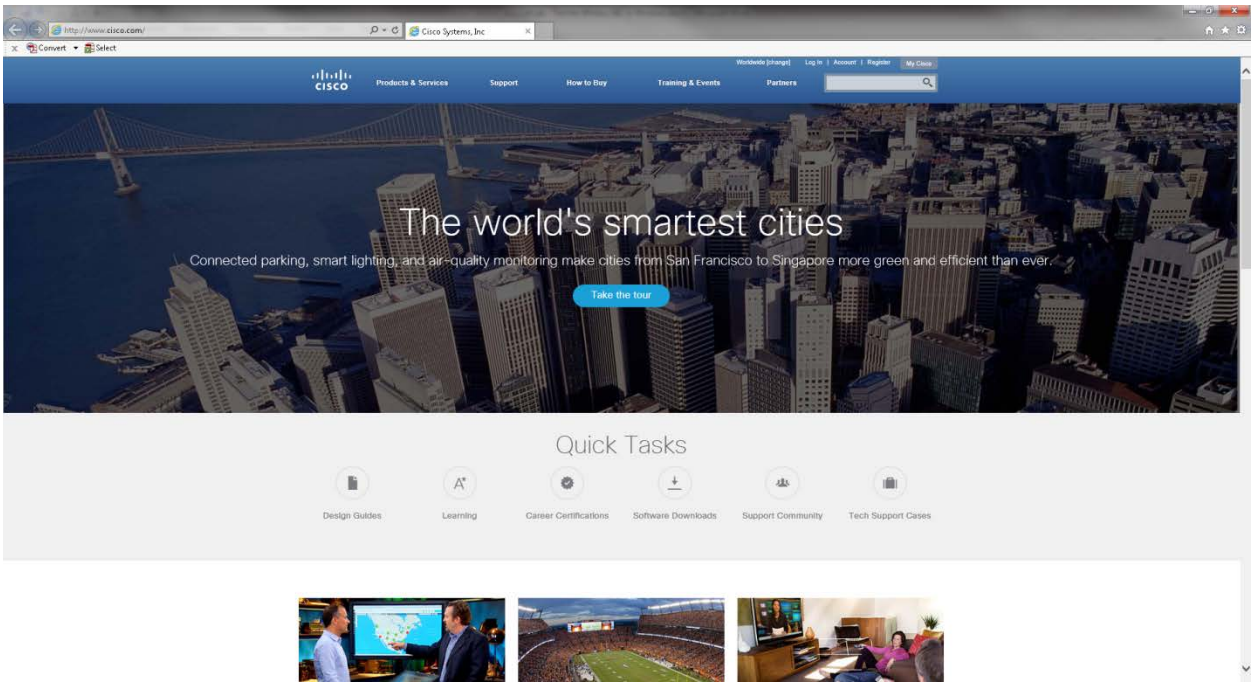
What name was returned?

Why would you perform this test?

Step 4: Test your Internet connection.

a. Open a web browser.

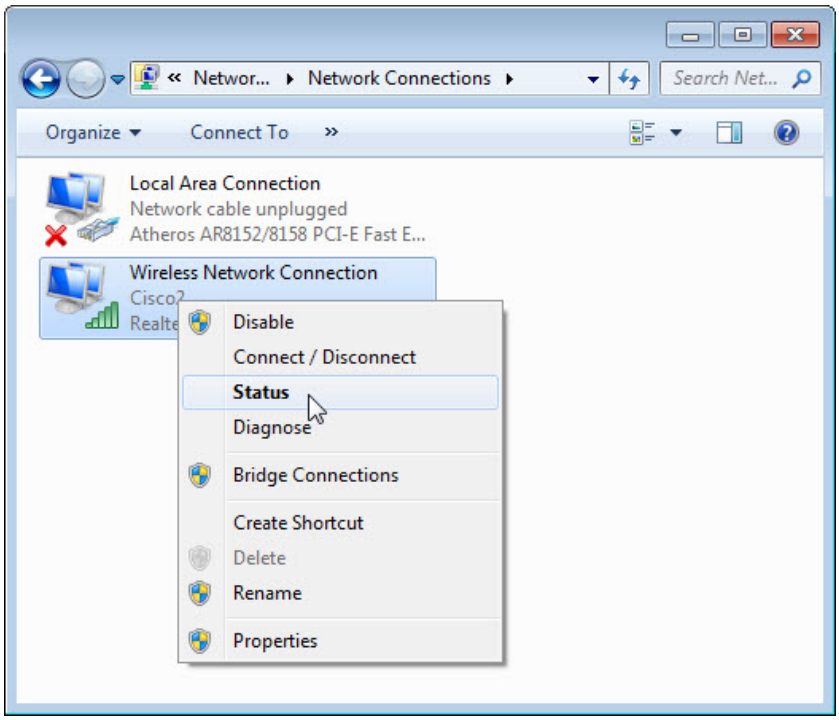
b. Type **www.cisco.com** in the **Address** field, and then press **Enter**.



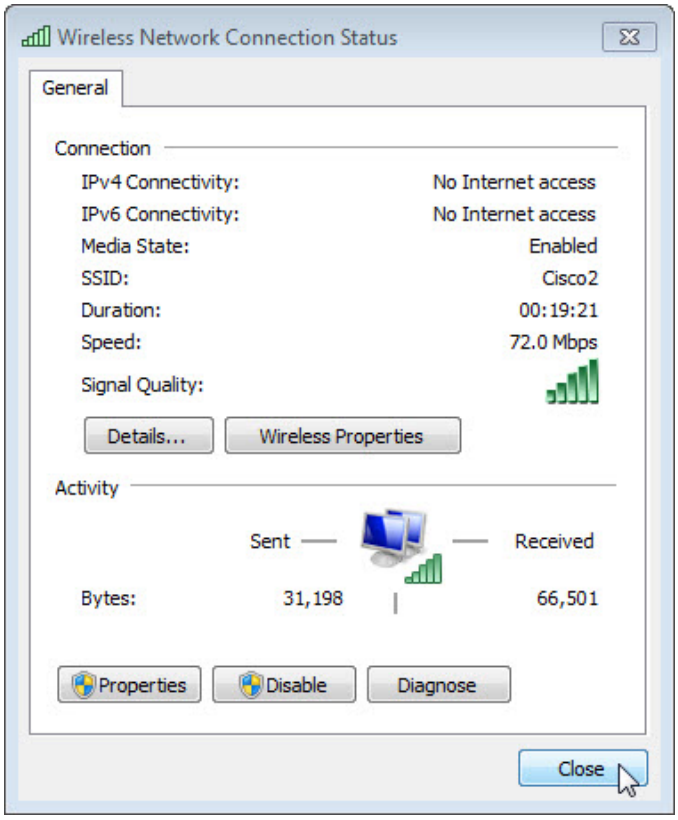
c. Click **Control Panel > Network and Sharing Center >**. **Change adapter settings**

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?