gLab - Determine the IP Address Configuration of a Computer

Objectives

In this lab, you will determine the IP address assigned to your computer.

Required Resources

- 1 PC (Windows 10)
- Network access

Instructions

Part 1: Determine the IP Address using the Command Prompt

Step 1: Verify network access

a. Open a web browser.

b. Navigate to any website, such as **www.netacad.com**.

Note: If you do not have any internet access, you can still continue with this lab. Your computer may use Automatic Private Internet Protocol Addressing (APIPA) for IP address information.

Step 2: The command ipconfig

The **ipconfig** command provides you with the IP address, subnet mask and default gateway.

a. Open a **Command Prompt**. Click **Start**. Search for **Command Prompt**.

b. At the prompt, enter **ipconfig** to determine the IP address assigned to each network adapter on your computer.

```
C:\Users\Student> ipconfig

Ethernet adapter Ethernet0:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::ac29:44a8:6409:c30e%6
   IPv4 Address. . . . . . . . . . . : 192.168.1.11
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.1.1
```

What is the IPv4 address of the computer? 192.168.4.50

What is the subnet mask of the computer? 255.255.255.0

What is the default gateway of the computer? 192.168.4.254

Step 3: The command ipconfig /all

a. At the prompt, enter **ipconfig /all** command to view IP configuration on PC-A.

```
C:\Users\Student> ipconfig /all

Ethernet adapter Ethernet0:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel(R) 82574L Gigabit Network Connection
   Physical Address. . . . . . . . . : 00-50-56-B3-E8-C1
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::ac29:44a8:6409:c30e%6(Preferred)
   IPv4 Address. . . . . . . . . . . : 192.168.1.11(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Lease Obtained. . . . . . . . . . : Sunday, July 24, 2016 9:33:49 AM
   Lease Expires . . . . . . . . . . : Monday, July 25, 2016 10:33:17 AM
   Default Gateway . . . . . . . . . : 192.168.1.1
   DHCP Server . . . . . . . . . . . : 192.168.1.1
   DHCPv6 IAID . . . . . . . . . . . : 50334761
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-25-84-55-DE-00-50-56-B3-E8-C1
   DNS Servers . . . . . . . . . . . : 8.8.8.8
                                       8.8.4.4
   NetBIOS over Tcpip. . . . . . . . : Enabled
```

What are the DNS servers for the computer? 192.168.4.2

What is the MAC address (physical address) of the network adapter? 54-BF-64-A4-96-78

Is DHCP enabled? If yes, what is the IP address of the DHCP server? 192.168.4.2

If DHCP is enabled, on what date was the Lease Obtained? On what date does the Lease Expire?
Obtained: Tuesday, June 24, 2025 5:09:49 PM Expires: Tuesday, July 8, 2025 4:01:19 PM

Part 2: Test the Network Interface TCP/IP Stack.

Step 1: Test TCP/IP stack using the loopback address.

To verify that the TCP/IP protocol is functioning, pinging your loopback address (127.0.0.1). Enter the **ping 127.0.0.1** command at the prompt.

```
C:\Users\Student> ping 127.0.0.1
```

Step 2: Test TCP/IP stack using the configured IP address.

You can also ping your IP address. In this example, enter the **ping 192.168.1.11** command at the prompt.

Record one of the replies from your ping command.

Record:

C:\Users\PJohnson>ping 192.168.4.50

Pinging 192.168.4.50 with 32 bytes of data:

Reply from 192.168.4.50: bytes=32 time<1ms TTL=128

Reply from 192.168.4.50: bytes=32 time<1ms TTL=128

Reply from 192.168.4.50: bytes=32 time<1ms TTL=128

Reply from 192.168.4.50: bytes=32 time<1ms TTL=128

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