5.1.7 Configure IP Addresses

Demo Id: MjMz-NS4xLjc%3D

You work as the IT administrator for a small corporate network. You need to configure the workstation in the Executive Office so it can connect to the local network and the internet. The workstation has two network interface cards. This will allow the workstation to connect to the local network (as shown in the **Exhibits**) and another small network, which is not yet built.

In this lab, your task is to complete the following:

- Configure the IP version 4 TCP/IP settings for the network connections using the settings in the table below.
- Use the Network and Sharing Center in Windows to confirm that the workstation is properly connected to the small network and the Internet.

TCP/IP Setting	Ethernet	Ethernet 2
Subnet	192.168.0.0/24	10.0.0.0/16
Host address	Use the *last* valid address on the subnet.	Use the *last* valid address on the subnet.
Default gateway address	Choose the appropriate address for the router as shown in the exhibits.	Do not configure a default gateway value.
DNS Server address	Use the address of an External DNS Server as shown in the exhibits.	Do not configure a DNS value.

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5.1.7 Configure IP Addresses

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TCP/IP Setting	Ethernet	Ethernet 2
Subnet	192.168.0.0/24	10.0.0.0/16
Host address	Use the /	se the *last* val ubnet.
Default gateway address	Choose t exhibits.	o not configu value.
DNS Server address	Use the address of an External DNS Server as shown in the exhibits.	Do not configure a DNS value.

192.168.0.254

10.0.255.254

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CompTIA Network+ (Last Valid IP Example)

A network administrator is told to configure a new server and to use the last valid IP address on the subnet, 10.0.0.0/16.

Which IP address should be used?

A. 10.0.0.254

B. 10.0.255.254

C. 10.0.255.255

D. 10.255.255.255

5.8.6 Troubleshoot IP Configuration 1

Demo Id: MjMz-NS44LjY%3D

You are a network technician for a small corporate network. The network is connected to the internet and uses DHCP for address assignment. The employees in the Support Office and Office 2 report that their workstations can communicate with some computers on the network, but not on the internet. You need to diagnose and fix the problem.

In this lab, your task is to complete the following:

- Use the following troubleshooting tools to diagnose the problem in the network:
  - The **ping**, **ipconfig**, or **tracert** command utility
  - The Network and Sharing Center in the Windows 10 or Windows Server 2016 operating system
  - The DHCP server console in the Windows Server 2016 operating system
- Fix the problem at the workstation, the DHCP server, or both as necessary.
- Use the troubleshooting tools to confirm the resolution of the problem.

To see the network diagram and the wiring schematics of the network, use **Exhibits**.

Start Lab **Last Score Report**

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TestOut | Floor 1 Overview | Exhibits | Reset | Done

Scenario

You are a network technician for a small corpor… network i… and use… assignm… Suppor… that th… commu… on the … interne… fix the …

In this … the foll…

- Use… too… the …
  - …
  - …
  - The DH… the Windows Server 2016 operating system
- Fix the problem at the workstation, the DHCP server, or both as necessary.
- Use the troubleshooting tools to confirm the resolution of the problem.

To see the network diagram and the wiring schematics of the network, use **Exhibits**.

Enter **ipconfig /all** to check the Ethernet configuration. You should notice the line for the default gateway is now correctly configured as 192.168.0.5.

Lab Report

…oting the problem by verifying the scope of the …ation, ping the computer in the Networking Closet …ISP) (pinging the computer in the Networking …P fails).
…em between the workstation and all other …all other workstations in the network succeeds, …s 1 and 2 confirm that there is not a physical …rk. The problem is most likely related to the IP …

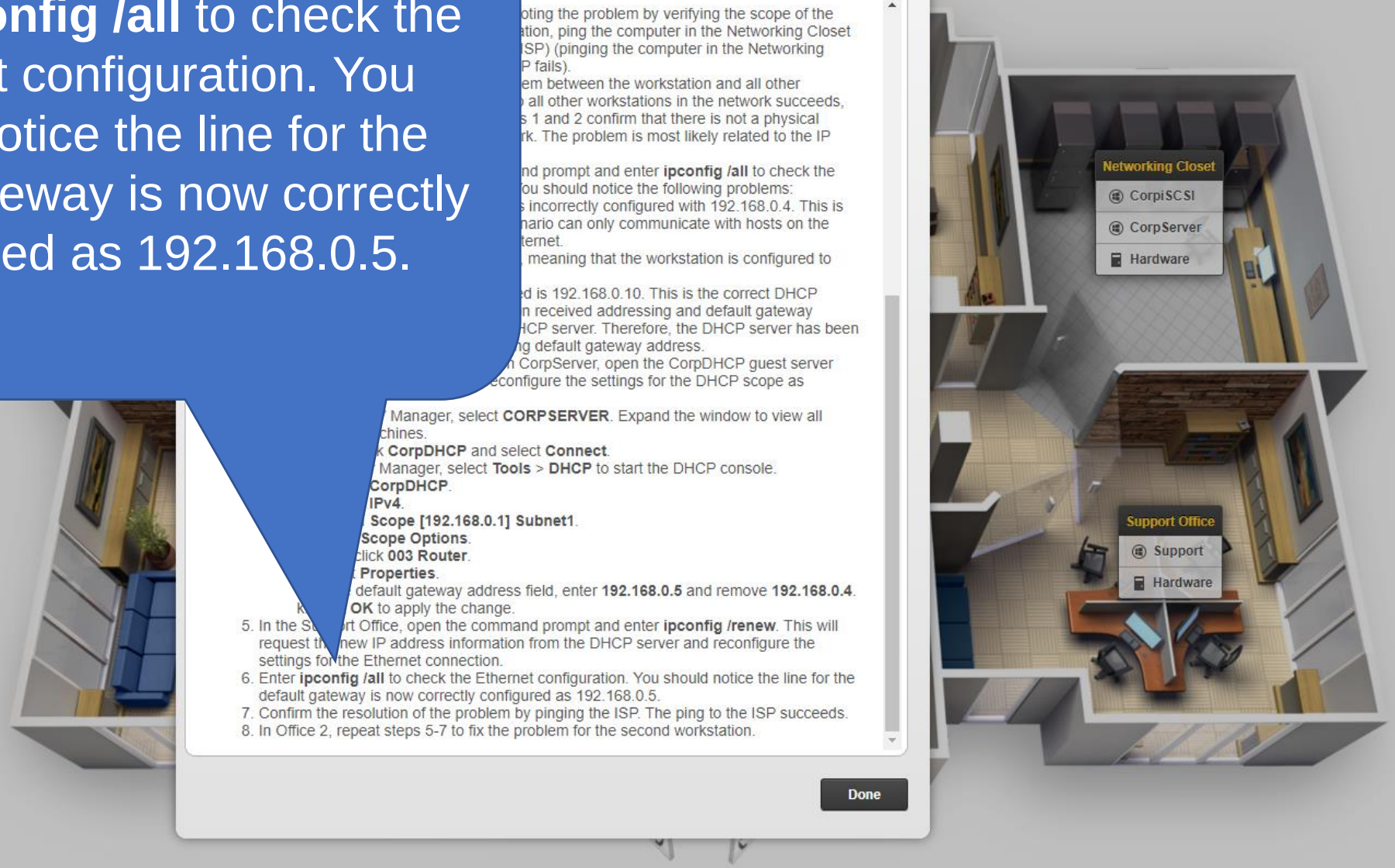
…nd prompt and enter **ipconfig /all** to check the …ou should notice the following problems:
…s incorrectly configured with 192.168.0.4. This is …nario can only communicate with hosts on the …ternet.
…, meaning that the workstation is configured to …

…d is 192.168.0.10. This is the correct DHCP …n received addressing and default gateway …HCP server. Therefore, the DHCP server has been …g default gateway address.
…n CorpServer, open the CorpDHCP guest server …econfigure the settings for the DHCP scope as …

… Manager, select **CORPSERVER**. Expand the window to view all …chines.
…k **CorpDHCP** and select **Connect**.
… Manager, select **Tools** > **DHCP** to start the DHCP console.
… **CorpDHCP**.
… **IPv4**.
… **Scope [192.168.0.1] Subnet1**.
… **Scope Options**.
…Click **003 Router**.
… **Properties**.
… default gateway address field, enter **192.168.0.5** and remove **192.168.0.4**.
…k **OK** to apply the change.

5. In the S…rt Office, open the command prompt and enter **ipconfig /renew**. This will request th…new IP address information from the DHCP server and reconfigure the settings for the Ethernet connection.
6. Enter **ipconfig /all** to check the Ethernet configuration. You should notice the line for the default gateway is now correctly configured as 192.168.0.5.
7. Confirm the resolution of the problem by pinging the ISP. The ping to the ISP succeeds.
8. In Office 2, repeat steps 5-7 to fix the problem for the second workstation.

Done



CompTIA Network+ (Wrong Gateway Example)

A network technician receives a call from a user in the sales department stating that internet connectivity has been lost after receiving a new workstation. No other users in sales are reporting similar issues. The network technician is able to ping the machine from the accounting department's router but is not able to ping the machine from the IT network.

Which of the following is MOST likely the cause?

A. Incorrect default gateway

B. Duplicate IP address

C. Misconfigured OSPF

D. Improper VLAN assignment