

## Lab Report

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### Performance

Your Score: 0 of 1 (0%)

Elapsed Time: 2 minutes 2 seconds

### Task Summary

Actions you were required to perform:

- ✗ On the Office1 computer, configure the network connection to request the IP address information from the DHCP server

### Explanation

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 that the problem is resolved.

Complete this lab as follows:

1. In Office 1, begin troubleshooting the problem by verifying the scope of the connectivity problem.
  - a. From the workstation, ping **CorpServer** in the Networking Closet.
  - b. Ping the **Internet Service Provider (ISP)** (Notice that the ping fails for both CorpServer and the ISP).
2. In the IT Administration office, verify the connectivity problem between the workstation and all other workstations in the network (the ping to all other workstations in the network and the ISP succeeds). Both steps 1 and 2 confirm that there is not a physical connectivity problem in the local network and that the scope of the problem is most likely related to the IP configuration for the Office 1 workstation.
3. On Office 1, open the command prompt and enter the **ipconfig /all** command to check the Ethernet configuration. You should notice the following problems:
  - The subnet mask is incorrectly configured with 255.255.255.240. The workstation can only communicate with other hosts whose IP addresses have the same network address as determined by the local subnet mask. ITAdmin is 192.168.0.20, and Office 1 is 192.168.0.30. With 255.255.255.240 as a subnet mask, the network would only include addresses from 192.168.0.16 to 192.168.0.31. The IP address for CorpServer (192.168.0.10) and the router fall outside of this range.
  - The DHCP Enabled line shows No. This means that the workstation has been configured with a static IP address.
  - The DNS Servers line shows 163.128.78.108, which is not the address of

either of the External DNS Servers.

4. On Office 1, configure the network connection to request the IP address information from the DHCP server:
  - a. Right-click the **Network** icon and select **Open Network and Sharing Center**.
  - b. Select **Ethernet**.
  - c. Select **Properties**.
  - d. Select **Internet Protocol Version 4 (TCP/IPv4)**.
  - e. Select **Properties**.
  - f. Select **Obtain an IP address automatically**.
  - g. Select **Obtain DNS server address automatically**.
  - h. Select **OK**.
  - i. Select **Close**.
  - j. Select **Close**.
5. On Office 1, open the command prompt and enter **ipconfig /all** to check the Ethernet configuration. You should notice the line for DHCP Enabled shows Yes, a new IP address, the correct subnet mask, and the correct DNS Server.
6. Confirm the resolution of the problem by pinging the ISP. The ping to the ISP succeeds.