Lab Report

Your Performance

Your Score: 0 of 2 (0%) Pass Status: Not Passed
Elapsed Time: 33 seconds Required Score: 100%

Task Summary

Actions you were required to perform:

- ✘ In the Networking Closet, activate the DHCP scope for the local network
- ✘ Verify that the Executive Office and IT Administrator workstations can communicate with the internet

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 the resolution of the problem.

Complete this lab as follows:

1. In the Executive Office, begin troubleshooting the problem by verifying the scope of the connectivity problem. From the workstation, ping the ***computer*** in the Networking Closet. The ping to the location fails.
2. Ping the **Internet Service Provider (ISP)**. The ping to the location fails.
3. In the IT Administrator office, verify the connectivity problem between the workstation the Networking Closet computer and the ISP. (The pings to both locations fails). The problem is most likely related to the IP configuration for the network.
4. In the Executive Office, open the command prompt and use the **ipconfig /all** command to check the Local Area Connection configuration. You should notice the following problems:
   - The default gateway and DNS server addresses have not been configured on the workstation. This means that communication is limited to other computers on the local network.
   - The DHCP Enabled line is Yes, meaning that the workstation is configured to use a DHCP server.
   - The DHCP Server address line is not shown. This means that the workstation was unable to contact the DHCP server.
   - The IP address is in the APIPA range (169.254.0.1 to 169.254.255.254). This means that the workstation assigned itself an IP address. The workstation will be able to communicate with other hosts on the local

network that have also configured their own IP address through APIPA.

5. In the Networking Closet, confirm that the DHCP service is enabled and activated for the local network.
    a. In Hyper-V Manager, select **CORPSERVER**. Expand the window to view all virtual machines.
    b. Right-click **CorpDHCP** and select **Connect** (maximize the window for easier viewing if desired).
    c. In Server Manager, select **Tools > DHCP** to start the DHCP console.
    d. Expand **CorpDHCP.CorpNet.com**.
    e. Expand **IPv4**. The down arrow for Scope [192.168.0.1] Subnet1 indicates that the scope is not active.
    f. Right-click **Scope [192.168.0.1] Subnet1** and select **Activate**. The down arrow for the scope is gone, and the DHCP service for the local network is now active.
6. In the Executive Office, open the command prompt and enter **ipconfig /renew**. This will request the new IP address information from the DHCP server, and it will reconfigure the settings for the Ethernet connection.
7. Enter **ipconfig /all** to check the Ethernet configuration. You should notice the lines for the default gateway, DNS server, and DHCP server are now configured, along with a new IP address within the DHCP scope for the local network.
8. In the Executive Office, confirm the resolution of the problem by pinging the ISP. The ping to the ISP succeeds.
9. In the IT Administrator Office, repeat step 6 to fix the problem for that workstation.