Lab Report: 5.9.8 Explore Network Communications

Your Performance

Your Score: 1 of 1 (100%)   Pass Status: Pass

Elapsed Time: 6 minutes 17 seconds   Required Score: 100%

Task Summary

Actions you were required to perform:

   ⊟ Use tracert on Exec

Explanation

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

1. Right-click **Start > Command Prompt (Admin)** to open the command prompt.
2. At the command prompt, enter **ping 192.168.0.30** and press **Enter** to ping Office1.
3. You can successfully ping the IP address of Office1 from ITAdmin.
4. Enter **ping 199.92.0.33** and press **Enter** to ping Support.
5. You cannot ping Support from ITAdmin. Notice that the IP address for Support is on a different network (network 199.92.0.0 instead of network 192.168.0.0). Devices on the same local network must have IP addresses in the same network range. If you want to communicate with Support, you will need to change the IP address assigned to Support.
6. Enter **ping 192.168.0.5** and press **Enter** to ping the router's internal interface.
7. You can successfully ping the router's internal interface from ITAdmin. Because ITAdmin and the router's address (192.168.0.5) are on the same network, the ping tests succeed.
8. Enter **ping 163.128.78.93** and press **Enter** to ping the external DNS Server.
9. ITAdmin and the ISP are on a different network (network 192.168.0.0 and 163.128.78.0 respectively). Because ITAdmin does not have a default gateway set, it cannot communicate with devices on other networks.
10. Trace the path between Exec and the internet router's interface as follows:
    a. From the top navigation tabs, select **Floor 1 Overview**.
    b. Under Executive Office, select **Exec**.
    c. Right-click **Start > Command Prompt (Admin)** to open the command prompt.
    d. At the command prompt, enter **tracert 198.28.56.1** and press **Enter**.
11. When you communicate with devices on other networks, the packets go first to the default gateway (the router between the two networks). The packets are sent to the router interface on the same network as the sending host and then to the next hop in the path as necessary. In this case, there are two IP addresses listed in the tracert output, but only one router (hop) between Exec and the internet router. The last address in the tracert output is the internet router.
12. Enter **tracert 163.128.78.93** and press **Enter** to trace the path to one of the ISP's DNS servers.
13. When you trace the path between Exec and the ISP's DNS server, the path has additional hops. The first lines in the **tracert** output are the routers (hops)

between Exec and the DNS server. The last address in the **tracert** output is the DNS server.