

Lab Report

Your Performance

Your Score: 0 of 1 (0%)

Elapsed Time: 4 minutes 4 seconds

Pass Status: Not Passed

Required Score: 100%

Task Summary

Actions you were required to perform:

- ✖ In the Support Office, add a new NIC and connect the Ethernet cable to the new NIC

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** command utility
 - The network activity lights for all networking devices
 - The Network and Sharing Center in the Windows 10 or Windows 2016 operating system
- Fix the problem. Use the known good spares on the Shelf as necessary.
- Use the troubleshooting tools to confirm the resolution of the problem.

Complete this lab as follows:

1. In the Support Office, ping the **workstation** in the IT Administration office and other workstations in the network (pinging all other workstations in the network fails). With the information from the Support manager and these ping results, the scope of the problem may be isolated to the workstation in the Support Office.
2. In the IT Administration office, verify the problem by pinging the **workstation** in the Support Office and other workstations in the network (pinging all other workstations in the network is successful, but the ping to the Support workstation fails). This verifies that there is connectivity between all other workstations in the network, except for the Support Office. This confirms that the scope of the problem is limited to the Support Office.
3. In the Support Office, open the **Networking and Sharing Center** or view the **status lights** on the NIC. The diagram in the Network and Sharing Center shows the network connection as disconnected from any network, and the link and status lights on the NIC also show it is disconnected. A disconnected status is displayed when the NIC does not have a connection to the network. Possible causes for a disconnected status include:
 - Bad NIC
 - Faulty cable
 - Unplugged cable
 - Switch or hub port either disabled or faulty
4. Because the scope of the problem is currently limited to the Support Office, you should look for common errors or solutions that you can test quickly. Confirm that the network cable is connected to the NIC and the wall plate. Both ends of the cable are connected correctly.
5. In the Support Office, replace the **cable** between the workstation and the wall plate. After you replace the cable, the disconnected status is still displayed in the Network and Sharing Center. You could replace the NIC in the Support Office, but you should continue to replace cables because you can test those results quickly.
6. In the Networking Closet, check the **switch** to ensure that it is powered on. The power light for the device indicates that it is powered on. Also, since the workstation in the IT Administration office can communicate through the switch, you know that the device is not turned off.
7. In the Networking Closet, observe the **activity lights** for all ports. There are activity lights for other ports, yet there is a lack of activity for Port 6. Possible causes include:
 - The cable between the Support Office's patch panel port and the switch is bad or disconnected.
 - Port 6 on the switch is disabled or shut down.
8. In the Networking Closet, confirm that the **network cable** is connected to Support Office's patch panel port and the switch. Both ends of the cable are connected correctly.

9. In the Networking Closet, replace the **patch panel cable**, as you can test this solution quickly. The activity light for Port 6 still does not indicate network activity.

Making a console connection to the switch to confirm that port 6 is disabled is a viable approach for this problem, but the lab does not provide a console application to confirm the switch's port settings.

10. In the Support Office, open the **case** and add a known good spare NIC.
11. Connect the **cable** to the new NIC and power on the workstation.
12. In the Support Office, check the **Networking and Sharing Center** or the **status lights** on the NIC. The diagram in the Network and Sharing Center shows a connection to the network and internet, and the lights on the NIC also show it is functioning normally.
13. In the Support Office, ping each **workstation** in the network. Each ping attempt now succeeds regardless of the remote workstation.