



Lab 4.1.2 Correcting Problems at the Physical and Data Link Layers

Objective

Complete the lab exercise by correcting the problems you isolated in the previous lab.

In this exercise, you will use various Cisco commands to correct network problems.

The steps include:

- Implement a troubleshooting plan
- Verify that the data flow in the network matches your network baseline

Required Resources

These are the resources and equipment required to complete this exercise:

- Access to a protocol analyzer (either software or hardware)
- A network baseline documenting the laboratory installation
- A troubleshooting log listing isolated physical or data link problems
- An implementation plan for correcting documented physical and data link layer problems

Scenario

You recently joined the second-level Network Support team for Acme. This evening you are on-call for network outages. You read the following during your review of the activity log:

Network Support Activity Log

Time	Report
5:30 pm	One Acme user reported that access to the server seemed to be slower than usual. -- Help Desk -- [Assigned to Network Operations]
6:01 pm	We checked and could ping the server. We scanned the configs on all the network devices. They look fine. -- 2 nd shift ops --
6:15 pm	Multiple users started reporting that they are can no longer reach anything. - Help Desk -
6:37 pm	We can ping the core devices, but also noticed some network latency from the access router. Escalated to Level 1 Network Support. -- 2 nd shift ops -- [Assigned to Mike]
6:52 pm	I asked Network Operations if anyone changed anything. They do not think they changed anything important. Not sure what they changed. -- Mike --
7:23 pm	I tried to fix up the configs to resolve the user access and resolve the network latency issues. I am not sure what to take out, but the issues are worse. -- Mike --
7:33 pm	Escalated to Level 2 Network Support
7:47 pm	Checked Syslog server messages and noticed that the line protocol on interface port-channel 6 changed state to down from host 172.28.170.2

Step 1

Connect to the workgroup devices as needed.

Step 2

Execute the plan you developed to correct the identified problems.

Step 3

Verify the network data flows match the network baseline and you have not introduced any new problems onto the network.

Step 4

You have completed the lab activity when you achieve these results:

1. Do your network data flows match the network baseline? _____
2. Can you use Telnet to connect to the host named Cisco (simulated on ISP)? _____
3. Can you ping the host named ISP? _____
4. Can you browse the web files on CCNP4_Server? _____
5. Can you use Telnet to connect to CCNP4_Server from your PC? _____
6. Can you FTP a file from CCNP4_Server to your PC? _____