

PT Activity 8.4.6: Troubleshooting Network Problems

Learning Objectives

- Gather network documentation
- Test connectivity
- Gather data and implement solutions
- Test connectivity

Introduction

In this activity, you will troubleshoot connectivity issues between PCs routed through XYZCORP. The activity is complete when you achieve 100% and all the PCs can ping each other and the www.cisco.com server. Any solution you implement must conform to the topology diagram.

Task 1: Gather Network Documentation

To successfully complete this activity, you need your final documentation for the PT Activity 8.1.2: Network Discovery and Documentation you completed previously in this chapter. This documentation should have an accurate topology diagram and addressing table. If you do not have this documentation, then ask your Instructor for accurate versions.

Task 2: Test Connectivity

At the end of this activity, there should be full connectivity between all PCs and between PCs and the www.cisco.com server. To begin troubleshooting connectivity failures, ping the following:

- PCs to www.cisco.com server
- PC to PC
- PC to default gateway

Were any of the pings successful? Which failed?

Task 3: Gather Data and Implement Solutions

Step 1. Choose a PC to begin gathering data.

Choose any PC and begin gathering data by testing connectivity to the default gateway. You can also use **tracert** to see where connectivity fails.

Step 2. Telnet to the default gateway and continue gathering data.

If the PC you chose does not have connectivity to its default gateway, choose another PC to approach the problem from a different direction.

Step 3. Use troubleshooting tools to verify the configuration.

- Addressing information
- Interface activation
- Encapsulation
- Routing
- VLAN configuration
- Duplex or speed mismatches
- VTP operation

Step 4. Document network symptoms and possible solutions.

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Step 5. Make changes based on your solutions from the previous step.

Task 4: Test Connectivity

Step 1. Test PC connectivity.

All PCs should now be able to ping each other and the www.cisco.com server. If you changed any IP configurations, create new pings because the prior pings use the old IP address.

If there are still connectivity issues between PCs or PC to server, return to Task 3 and continue troubleshooting.

Step 2. Check results.

Your completion percentage should be 100%. If not, return to Task 3 and continue to troubleshoot and implement your suggested solutions. You will not be able to click **Check Results** and see which required components are not yet completed.