PPP Validation (Instructor Version)

Instructor Note: Red font color or Gray highlights indicate text that appears in the instructor copy only.

Objective

Use **show** and **debug** commands to troubleshoot PPP.

Instructor Note: This activity should be completed by groups of three students, but it can be completed by all individuals in a class at one time.

Scenario

Three friends who are enrolled in the Cisco Networking Academy want to check their knowledge of PPP network configuration.

They set up a contest where each person will be tested on configuring PPP with defined PPP scenario requirements and varying options. Each person devises a different configuration scenario.

The next day they get together and test each other's configuration using their PPP scenario requirements.

Resources

- Packet Tracer software
- Stopwatch or timer

Step 1: Open Packet Tracer.

a. Create a two-router topology with a serial connection.

b. Include one PC and switch attached to each router.

Step 2: Complete the scenarios.

a. Start the Scenario 1 configuration.

b. The instructor calls the time when the scenario is completed; all students and groups must stop their configuration work at that time.

c. The instructor checks the validity of the completed scenario configuration.

   1) The devices must be able to successfully ping from one end of the topology to the other.

   2) All scenario options requested must be present in the final topology.

   3) The instructor may ask you to prove your work by choosing different **show** and **debug** commands to display the configuration output.

The student, or group, completing the scenario correctly is declared the winner.

d. Begin the same process as Scenario 2.

   1) Delete Scenario 1 configurations, but you can re-use the same.

   2) Complete Steps 1 and 2 again using the next scenario's requirements.

Suggested Scenarios include:

Scenario 1

- Address the topology using IPv4.
- Configure PPP encapsulation with CHAP.

- Configure OSPF routing.
- Configure the clock to read today's date.
- Change the OSPF router priorities on both serial interfaces.

Scenario 2

- Address the topology using IPv6.
- Configure PPP encapsulation with PAP.
- Configure EIGRP routing.
- Configure the clock to read the current time.
- Place a description on both connected serial interfaces.

Scenario 3

- Address the topology using IPv6.
- Configure a Message of the Day.
- Configure PPP with CHAP.
- Configure OSPF routing.
- Configure the clock to read today's time and date.

Identify elements of the model that map to IT-related content:

- PPP
- CHAP
- PAP
- EIGRP
- OSPF
- Clock set (variations)
- Interface descriptions
- Interface priorities