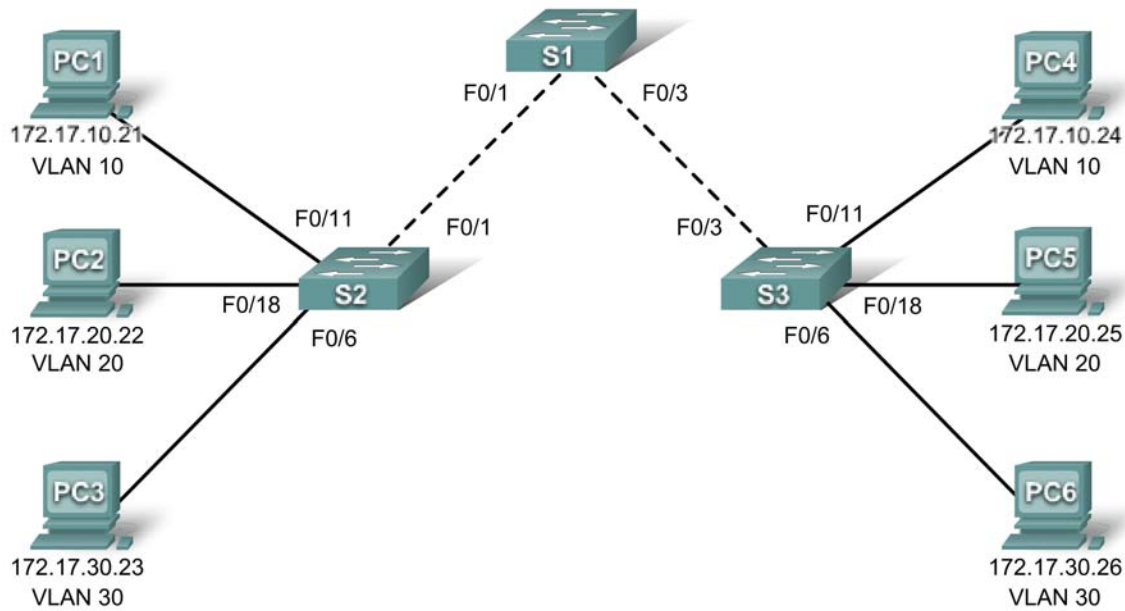


PT Activity 3.4.2: Troubleshooting a VLAN Implementation

Topology Diagram



Addressing Table

Device	IP Address	Subnet Mask	Default Gateway
PC1	172.17.10.21	255.255.255.0	172.17.10.1
PC2	172.17.20.22	255.255.255.0	172.17.20.1
PC3	172.17.30.23	255.255.255.0	172.17.30.1
PC4	172.17.10.24	255.255.255.0	172.17.10.1
PC5	172.17.20.25	255.255.255.0	172.17.20.1
PC6	172.17.30.26	255.255.255.0	172.17.30.1

Learning Objectives

- Test connectivity.
- Investigate connectivity problems by gathering data.
- Implement the solution and test connectivity.

Introduction

In this activity, you will troubleshoot connectivity problems between PCs on the same VLAN. The activity is complete when you achieve 100% and the PCs can ping the other PCs on the same VLAN. Any solution you implement must conform to the topology diagram.

Task 1: Test Connectivity between PCs on the same VLAN

From the **Command Prompt** on each PC, ping between PCs on the same VLAN. The following tests should be successful at the conclusion of this activity. However, these tests will fail at this point.

- PC1 cannot ping PC4.
- PC2 cannot ping PC5.
- PC3 cannot ping PC6.

Task 2: Gather Data on the Problem

Step 1. Verify the configuration on the PCs.

Are the following configurations for each PC correct?

- IP address
- Subnet mask
- Default gateway

Step 2. Verify the configuration on the switches.

Are the configurations on the switches correct? Be sure to verify the following:

- Ports assigned to the correct VLANs.
- Ports configured for the correct mode.
- Ports connected to the correct device.

Step 3: Document the problem and suggest solutions.

What are the reasons why connectivity failed between the PCs? What are the solutions? There could be more than one problem and more than one solution. All solutions must conform to the topology diagram.

PC1 to PC4

Problem: _____

Solution: _____

PC2 to PC5

Problem: _____

Solution: _____

PC3 to PC6

Problem: _____

Solution: _____

Task 3: Implement the Solution and Test Connectivity

Step 1: Make changes according to the suggested solutions in Task 2.

Step 2: Test connectivity between PCs on the same VLAN.

If you change any IP configurations, you should create new pings, because the prior pings use the old IP address.

- PC1 should be able to ping PC4.
- PC2 should be able to ping PC5.
- PC3 should be able to ping PC6.

Can PC1 ping PC4? _____

Can PC2 ping PC5? _____

Can PC3 ping PC6? _____

If any pings fail, return to Task 2 to continue troubleshooting.

Step 3. Check completion percentage.

Your completion percentage should be 100%. If not, return to Step 1 and continue to implement your suggested solutions. Information found via the **Assessment Items** tab under **Check Results** has been hidden which will prevent viewing any required components that are still incomplete.