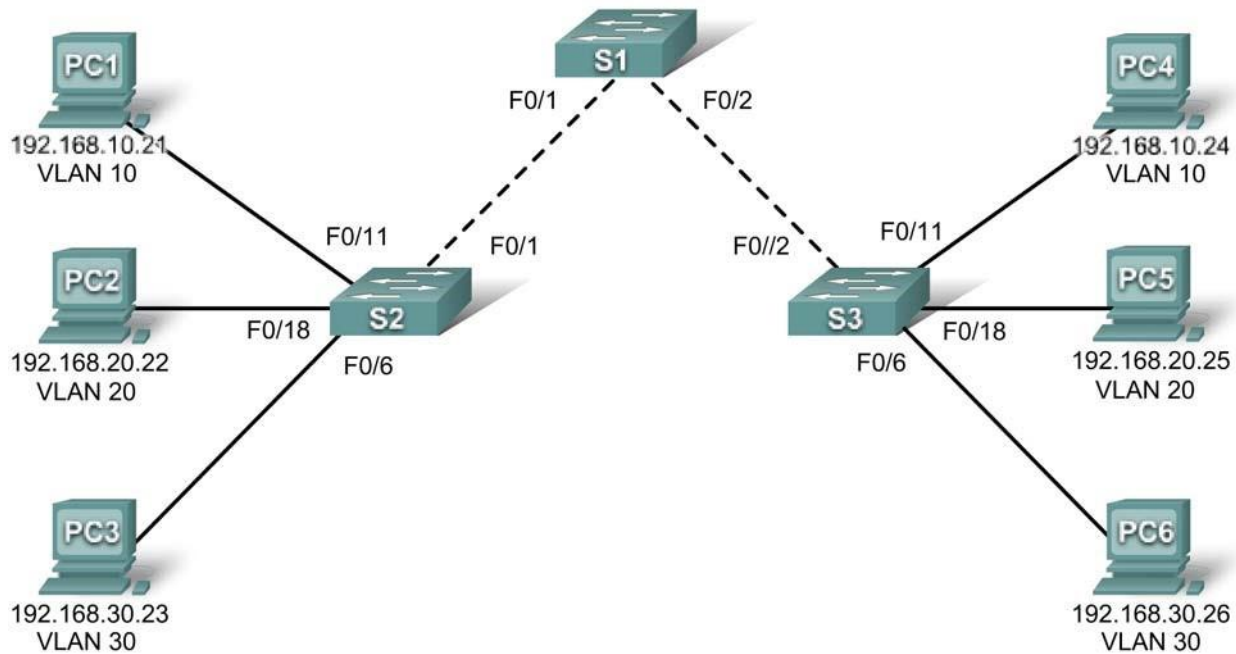


Felix Rohrer

PT Activity 3.5.3: Troubleshooting VLAN Configurations

Topology Diagram



Addressing Table

| Device | Interface | IP Address | Subnet Mask | Default Gateway |
|--------|-----------|---------------|---------------|-----------------|
| S1 | VLAN 56 | 192.168.56.11 | 255.255.255.0 | N/A |
| S2 | VLAN 56 | 192.168.56.12 | 255.255.255.0 | N/A |
| S3 | VLAN 56 | 192.168.56.13 | 255.255.255.0 | N/A |
| PC1 | NIC | 192.168.10.21 | 255.255.255.0 | 192.168.10.1 |
| PC2 | NIC | 192.168.20.22 | 255.255.255.0 | 192.168.20.1 |
| PC3 | NIC | 192.168.20.23 | 255.255.255.0 | 192.168.30.1 |
| PC4 | NIC | 192.168.10.24 | 255.255.255.0 | 192.168.10.1 |
| PC5 | NIC | 192.168.20.25 | 255.255.255.0 | 192.168.20.1 |
| PC6 | NIC | 192.168.30.26 | 255.255.255.0 | 192.168.30.1 |

Port Assignments (Switches 2 and 3)

| Ports | Assignment | Network |
|---------------|-----------------------------|-----------------|
| Fa0/1 – 0/5 | VLAN 56 – Management&Native | 192.168.56.0/24 |
| Fa0/6 – 0/10 | VLAN 30 – Guest(Default) | 192.168.30.0/24 |
| Fa0/11 – 0/17 | VLAN 10 – Faculty/Staff | 192.168.10.0/24 |
| Fa0/18 – 0/24 | VLAN 20 – Students | 192.168.20.0/24 |

Learning Objectives

- Find and correct the network errors.
- Document the corrections to the network.

Introduction

In this activity, you will practice troubleshooting a misconfigured VLAN environment. The initial network has errors. Your objective is to locate and correct any and all errors in the configurations and establish end-to-end connectivity. Your final configuration should match the topology diagram and addressing table. All passwords are set to **cisco**, except the **enable secret** password, which is set to **class**.

Task 1: Find and Correct Network Errors

Once all errors are corrected, PCs belonging to the same VLAN should be able to ping each other. In addition, S1, S2, and S3 should be able to ping each other.

Your completion percentage should be 100%. If not, find and correct any errors.

Task 2: Document the Corrected Network

S1: Vlan56: name Management&Native
S1: Fa0/1: switchport trunk native vlan 56
S1: Fa0/2: switchport trunk native vlan 56
S1: Vlan56: no shutdown
S1: Add Vlan10 / Vlan20 / Vlan30 (name & ip address)

S2: Fa0/1: switchport mode trunk
S2: Vlan1: no ip address
S2: Vlan56: ip address 192.168.56.12 255.255.255.0
S2: Vlan56: no shutdown

S3: Vlan56: name Management&Native
S3: Vlan56: ip address 192.168.56.13 255.255.255.0
S3: Vlan56: no shutdown
S3: Fa0/6 – 0/10 -> Vlan30
S3: Fa0/11 – 0/17 -> Vlan10
S3: Fa0/18 – 0/24 -> Vlan20