Activity 3.5.2: Challenge VLAN Configuration

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	192.168.30.23	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

- Perform basic configuration tasks on a switch.
- Create VLANs.
- Assign switch ports to a VLAN.
- Add, move, and change ports.
- Verify VLAN configuration.
- Enable trunking on inter-switch connections.
- Verify trunk configuration.
- Save the VLAN configuration.

Task 1: Perform Basic Switch Configurations

Configure the switches according to the following guidelines.

- Configure the switch hostname.
- Disable DNS lookup.
- Configure an encrypted privileged EXEC mode password of **class**.
- Configure a password of **cisco** for console connections.
- Configure a password of **cisco** for vty connections.

Your completion percentage should be 24%. If not, troubleshoot any errors.

Task 2: Configure and Activate Ethernet Interfaces

Step 1. Configure the PCs.

From the **Desktop** tab, use **IP Configuration** to configure the Ethernet interfaces of the six PCs with the IP addresses and default gateways from the addressing table at the beginning of the activity. The IP address for PC1 will be graded as incorrect for now. You will change the PC1 address later in the activity.

Step 2. Enable the user ports for access on S2 and S3.

Your completion percentage should be 62%. If not, troubleshoot any errors.

Task 3: Configure VLANs on the Switch

Step 1. Create VLANs on switch S1.

The VLAN IDs and names are listed in the Port Assignments table at the beginning of this activity.

Step 2. Verify that the VLANs have been created on S1.

Step 3. Configure, name, and verify VLANs on switches S2 and S3.

Step 4. Assign switch ports to VLANs on S2 and S3.

Note: The S2 Fa0/11 port will be graded incorrect for now and Packet Tracer will only grade the first port assignment for each VLAN.

Step 5. Determine which ports have been added to VLAN 10 on S2.

Step 6. Configure management VLAN 56 on each of the switches.

Step 7. Configure trunking and the native VLAN for the trunking ports on all three switches. Verify that the trunks have been configured.

Step 8. Verify that S1, S2, and S3 can communicate.

Step 9. Ping several hosts from PC2. What is the result?

Step 10. Move PC1 into the same VLAN as PC2. Can PC1 successfully ping PC2?

Step 11. Change the IP address on PC1 to 192.168.20.21. Can PC1 successfully ping PC2?

Your completion percentage should be 100%. If not, click **Check Results** to see which required components are not yet completed.