Part 1: Build the Network and Configure Basic Device Settings

Step 4: Connectivity scenarios

Would PC-A ping PC-B? Yes

Would PC-A ping PC-C? No

Would PC-A ping S3? No

Would PC-B ping PC-C? No

Would PC-B ping S4? No

Would PC-C ping S4? No

Can S3 ping S4?

No

On-campus tests (Step 5)

Can PC-A ping PC-B? Yes

Can PC-A ping S3? Yes

Can PC-B ping S4? Yes

Are the results consistent with your answers to the questions in Step 4? Yes

Part 2: Create VLANs and Assign Switch Ports

Step 1: Create VLANs on the switches

What is the default VLAN? VLAN 1

What ports are assigned to the default VLAN? All ports except those specifically assigned to other VLANs

Step 2: Assign VLANs to the correct switch interfaces

Would PC-A be able to ping PC-B? Yes

Is S3 able to ping S4? No

On-campus tests (Step 3)

Can PC-A ping PC-B? Yes

Can S3 ping S4? No

Are the ping results consistent with your answers to the questions in Step 2? Yes

Part 3: Maintain VLAN Port Assignments and the VLAN Database

Step 1: Assign a VLAN to multiple interfaces

Which VLAN is Gi1/0/24 now associated with? VLAN 30

What is the default name of VLAN 30? VLAN0030

Step 2: Remove a VLAN assignment from an interface

Which VLAN is Gi1/0/24 assigned to after deleting VLAN 30? Default VLAN (VLAN 1)

Part 4: Configure an 802.1Q Trunk Between the Switches

Step 1: Use DTP to initiate trunking on Gi1/0/5

Why might you want to manually configure an interface to trunk mode instead of using DTP? To have explicit control over trunking and to avoid potential security risks associated with dynamic negotiation.

Part 5: Delete the VLAN Database

Step 1: Determine if the VLAN database exists

To initialize a switch back to its default settings, what other commands are needed? Deleting the startup configuration (erase startup-config) and reloading the switch.

Reflection

What is needed to allow hosts on VLAN 10 to communicate to hosts on VLAN 20? A router or layer 3 switch to perform inter-VLAN routing.

What are some primary benefits that an organization can receive through effective use of VLANs? Improved network performance, enhanced security, simplified network management, and increased flexibility in network design.