Activity 3.2.3: Investigating VLAN Trunks

NOTE TO USER: Although you can complete this activity without printed instructions, a PDF version is available on the text side of the same page from which you launched this activity.

Learning Objectives

- Activate interface VLAN 99.
- View the switch configuration.
- Investigate the VLAN tag in the frame header.

Introduction

Trunks carry the traffic of multiple VLANs through a single link, making them a vital part of communicating between switches with VLANs. This activity opens with completion at 100% and focuses on viewing switch configuration, trunk configuration, and VLAN tagging information.

Task 1: View the Switch Configuration

On S1, enter user EXEC mode with the password **cisco**. Then enter privileged EXEC mode with the password **class**. At the privileged EXEC prompt, issue the s**how running-config** command.

S1#**show running-config**

Viewing the running configuration, note which interfaces are set to trunk. You will see the command **switchport mode trunk** under those interfaces.

Which interfaces are currently set to trunk?

The **switchport trunk native vlan 99** command is also listed under a number of interfaces. This command is used for setting the native VLAN for the trunk link. In this case, VLAN 99 is the native VLAN.

Task 2: Investigate the VLAN Tag in the Frame Header

Step 1. Ping from PC1 to PC4.

If link lights are still amber, switch back and forth between **Realtime** and **Simulation** mode until link lights turn green.

From **Simulation** mode, use the **Add Simple PDU** tool. Click PC1 and then PC4.

Step 2. Click Capture/Forward to observe the ping.

Because PC1 and PC4 are on the same VLAN and Layer 3 network, PC4 sends back an ARP reply to PC1. PC1 then sends a ping to PC4. Finally, PC4 replies to the ping. When the **Buffer Full** window appears, click the **View Previous Events** button.

Step 3. Investigate the PDU details at one of the switches.

Scroll to the top of the event list. Under the **Info** column, click the colored box for the event from S2 to S1. Then click the **Inbound PDU Details** tab. Notice the two fields that follow the source MAC address. What are the purposes of these two fields?