Iquen l marba Section:BSIT-3C
Date:9/15/2024

A

Each individual switch has how many physical interfaces?
Answer-26 physical interfaces

How many Fast Ethernet and Gigabit Ethernet interfaces does each switch have?
24 FI and 2 gigab

List the transmission speed of the Fast Ethernet and Gigabit Ethernet interfaces on each switch.
Answer--Fast Ethernet interfaces 10/100mb/s, and the Gigabit Ethernet 1000mb/s.

Are either of the two switches modular in design?
Answer-no becouse they are fix config switches

b. The interface of a 3560 switch can be configured as a Layer 3 interface by entering the no switchport command in interface configuration mode. This allows technicians to assign an IP address and subnet mask to the interface the same way it is configured on a router's interface.

What is the difference between a Layer 2 switch and a Layer 3 switch?
Answer-A Layer 2 switch makes forwarding decisions based on L2 (MAC) addresses. Interfaces on Layer 3 switches can be configured with IP addresses. The switches can also be configured with routing protocols just like a router.

What is the difference between a switch's physical interface and the VLAN interface?
Answer-A switch's physical interface is used to physically connect end devices to the network. A switched virtual interface (SVI or VLAN) is used to configure the switch with an IP address so that it can be managed remotely.

On which layers do 2960 and 3560 switches operate?
Answer-The 2960 operates on Layer 2, and the 3560 operates on Layers 2 and 3.

Issue the show run command to examine the configurations of the D1 and ASw-1 switches. Do you notice any differences between them?

Answer-no switchport command and show an IP address and mask configured on both Gigabit Ethernet interfaces. D1 has IP routing enabled.

Display the routing table on both switches using the show ip route command. Why do you think the command does not work on ASW-1, but works on D1?

Answer-It works on D1 because it operates on both Layers 2 and 3. This means it can

act like a normal switch but can also route packets using IP addresses, something regular switches can't do.

Part 2

a. Up until recently, switches and routers have been separate and distinct devices. The term switch was set aside for hardware devices that function at Layer 2. Routers, on the other hand, are devices that make forwarding decisions based on Layer 3 information. They use routing protocols to share routing information and to communicate with other routers. Layer 3 switches, such as the 3560, can be configured to forward Layer 3 packets. Entering the ip routing command in global configuration mode allows Layer 3 switches to be configured with routing protocols, thereby possessing some of the same capabilities as a router. Although similar in some forms, switches are different than in many other aspects.

Open the Physical tab on D1 and R1. Do you notice any similarities between the two? Do you notice any differences between the two?

Answer-R1 has a console port, modular design for adding different interfaces, and supports Serial, Asynchronous, and various connection types. It also has two Gigabit Ethernet interfaces. D1, on the other hand, has a fixed design with only Ethernet interfaces and can only use copper cables

Issue the show run command and examine the configurations of R1 and D1. What differences do you see between the two?

Answer-R1 and D1 have the same IP addresses but on different interfaces. To assign an IP address to a switch port, technicians need to use the no switchport command.

Which command allows D1 to configure an IP address on one of its physical interfaces?
no switchport command.

Use the show ip route command on both devices. Do you see any similarities or differences between the two tables?

Answer-The codes are the same except the router has an L code for local. This is a link that is configured on the physical interface of R1, while the switch does not have it. Both devices display the same networks in their routing tables.

Now, analyze the routing table of R2 and D2. What is evident now that was not in the configuration of R1 and D1?
Answer-They both have EIGRP configured and both are learning networks from one another.