6.6.7 Find STP Info

This question includes a lab to help you answer the question. View Lab

You have four switches connected in your network. Spanning tree has prevented bridging loops between the four switches for VLAN 1. All the links are using 100 Mbps connections. Use the necessary commands to answer the following questions:

Which switch is the root bridge?

SwitchA — SwitchB

What is the root bridge's priority and MAC address?

32769:00b0.64fa.c265 — 32769:000e.8411.68c0

What is the state of port FastEthernet 0/1 on SwitchA?

Disabled — Forwarding

What is the state of port FastEthernet 0/1 on SwitchD?

Learning — Blocking

What is the role of port FastEthernet 0/2 on SwitchC?

Root ✓

Explanation

By using the **show spanning-tree vlan 1** command on each switch, you should have discovered the following:

- **SwitchB** is the root bridge. To find the root bridge, look for the following line in the Root ID section:

Spanning tree enabled protocol ieee
Root ID Priority 32769
Address 000e.8411.68c0
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

- The priority and MAC address of the root bridge (SwitchB) is **32769** and **000e.8411.68c0**. This information is displayed on each switch.
- The state of FastEthernet 0/1 on SwitchA is in **Forwarding** or **FWD**. The port on the designated switch with the lowest port cost back to the root bridge is identified as the root port. FastEthernet 0/1 on SwitchA is directly connected to the root switch, SwitchB. Root ports are always in the forwarding state.
- The state of FastEthernet 0/1 on SwitchD is in **Blocking** or **BLK**. SwitchD is connected to SwitchC and SwitchA through its Fa 0/3 and Fa 0/1 interfaces, respectively. The path with the switch with the lowest bridge ID becomes the path back to the root. SwitchC has a lower bridge ID (32768:00b0.64fa.c265) than SwitchA (32768:00c0.1940.8b80). So SwitchD uses Fa 0/3 as its root port and blocks its Fa 0/1 port, which is connected to SwitchA.
- The role of FastEthernet 0/2 on SwitchC is **Root** port. The port on the designated switch with the lowest port cost back to the root bridge is identified as the root port. FastEthernet 0/2 on SwitchC is directly connected to the root switch, SwitchB.

References

LabSim for Routing and Switching Pro, Section 12.2.
[find_stp_np5.exm FIND_STP]

Reset