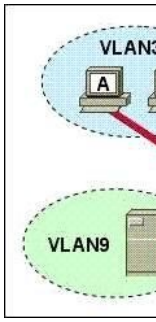
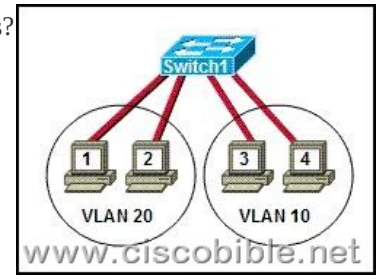
CCNA 640-802 Bible ? Configure?Verify and Troubleshoot VLANs

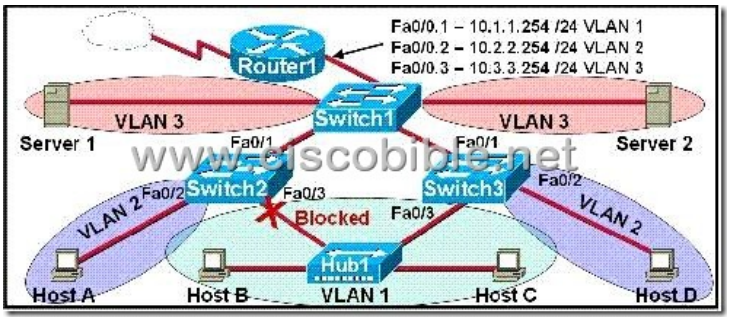
1. Refer to the exhibit. A technician is investigating a problem with the network that is shown. The router is a 2800 model and all switches are 2950 models. These symptoms have been observed: - All of the user hosts can access the Internet. - None of the user hosts can access the server located in VLAN 9. - All of the hosts can ping each other. What could cause these symptoms?



A: Switch2 is turned off. B: Interface S0/0 on the router is down. C: Interface Fa1/0 on the router is down. D: Interface Fa0/5 on Switch3 is down. E: Interface Fa0/4 on Switch3 is down. F: Trunking is not enabled on the link between Switch1 and Switch3. **Correct Answers: E** Explanation: According to the information provided in the question, we know that none of the user hosts can access the server located in VLAN 9. All of the hosts can ping each other and can access the Internet. Because the hosts and the server are in different VLANs, they must communicated with the help of router's routing functions.If the Switch3'Fa0/4 port is down, the hosts can communicate with the server in VLAN9. 2. Refer to the exhibit. Hosts on the same VLAN can communicate with each other but are unable to communicate with hosts on different VLANs. What is needed to allow communication between VLANs?

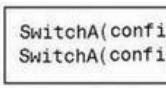


A: a switch with a trunk link that is configured between the switches B: a router with an IP address on the physical interface that is connected to the switch C: a switch with an access link that is configured between the switches D: a router with subinterfaces configured on the physical interface that is connected to the switch **Correct Answers: D** Explanation: By default, only hosts that are members of the same VLAN can communicate. To change this and allow inter-VLAN communication, you need a router or a layer 3 switch. Here is the example of configuring the router for inter-vlan communication RouterA(config)#int f0/0.1 RouterA(config-subif)#encapsulation ? dot1Q IEEE 802.1Q Virtual LAN RouterA(config-subif)#encapsulation dot1Q or isl VLAN ID RouterA(config-subif)# ip address x.x.x.x y.y.y.y 3. Which statement is correct about the internetwork shown in the diagram?



A: Switch 2 is the root bridge. B: Spanning Tree is not running. C: Host D and Server 1 are in the same network. D: No collisions can occur in traffic between Host B and Host C. E: If Fa0/0 is down on Router 1, Host A cannot access Server 1. F: If Fa0/1 is down on Switch 3, Host C cannot access Server 2. **Correct Answers: E** Explanation: A VLAN is a group of hosts with a common set of requirements that communicate as if they were attached to the same wire, regardless of their physical location. A VLAN has

the same attributes as a physical LAN, but it allows for end stations to be grouped together even if they are not located on the same LAN segment. The above diagram is configured with inter-VLAN communication so the router has a great role to make communication between different VLAN. When router's port configured with trunk goes down all host can't communicate with other host in different VLAN as it is the router that directs traffic between the separate VLANs. 4. Which two statements describe the Cisco implementation of VLANs? (Choose two.) A:VLAN 1 is the default Ethernet VLAN. B:CDP advertisements are only sent on VLAN 1002. C:By default, the switch IP address is in VLAN 1005. D:VLANs 1002 through 1005 are automatically created and cannot be deleted. **Correct Answers: A, D** Explanation: A VLAN can be defined as a virtual broadcast domain. Instead of segmenting the broadcast domain with routers at Layer 3, you segment using switches at Layer 2. Each VLAN should be associated with its own IP subnet. See the output of the "show vlan" command on a cisco switch: Switch1#show vlan VLAN Name Status Ports ---- -------------------------------- --------- ------------------------------- 1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/6, Fa0/7, Fa0/8 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/13, Fa0/14, Fa0/15, Fa0/16 Fa0/17, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24 1002 fddi-default active 1003 token-ring-default active 1004 fddinet-default active 1005 trnet-default active Normally Cisco switches supports VLAN upto 1005 but among them VLAN 1 Default Ethernet VLAN, 1002 fddi-default VLAN, 1003 token-ring-default VLAN, 1004 fddinet-default VLAN, 1005 trnet-default are created. You can't remove these VLANs. 5. Refer to the exhibit.



Which two statements about the configuration of the switch interface are correct? (Choose two) A: The switchport belongs only to VLAN 2 B: Interface fa0/0 will be in both VLAN 1 (by default) and VLAN 2 C: The exhibit shows interface fa0/0 to be dynamically mapped to VLAN 2 D: A network host can be connected to this interface. **Correct Answers: A, D** Explanation: On a Cisco switch, ports are assigned to a single VLAN. These ports are referred to as access ports and provide a connection for end users or node devices, such as a router or server. By default all devices are assigned to VLAN 1, known as the default VLAN. After creating a VLAN, you can manually assign a port to that VLAN and it will be able to communicate only with or through other devices in the VLAN. In this case, the port has been manually assigned to VLAN 2, not the default value of VLAN 1.