# CCNA 640-802 Bible - Basic Operations On Cisco Switch

1. Which two values are used by Spanning Tree Protocol to elect a root bridge? (Choose two.) A:amount of RAM B:bridge priority C:IOS version D:IP address E:MAC address   F:speed of the links **Correct Answers: B, E** Explanation: Switch having lowest bridge ID will become the root bridge. The bridge ID is how STP keeps track of all the switches in the network. It is determined by a combination of the bridge priority (32,768 by default on all Cisco switches) and the base MAC address. The bridge with the lowest bridge ID becomes the root bridge in the network. 2. What will an Ethernet switch do if it receives a unicast frame with a destination MAC that is listed in the switch table? A: The switch will not forward unicast frames. B: The switch will forward the frame to a specific port. C: The switch will return a copy of the frame out the source port. D: The switch will remove the destination MAC from the switch table. E: The switch will forward the frame to all ports except the port on which it was received. **Correct Answers: B** Explanation: How Does the Switch Find Host MACs? Let's use the diagram below to help us understand how address learning process takes place.
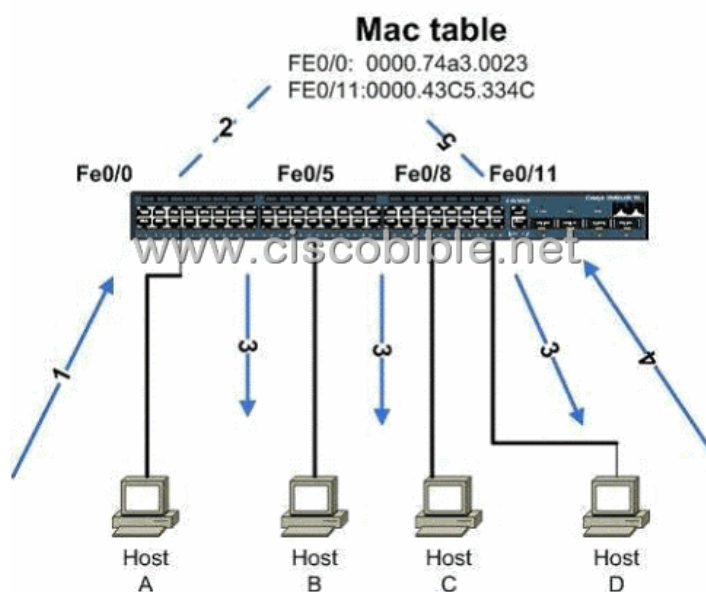
Let's assume that we have just powered on the switch. It has nothing in its MAC table. We connect the cables from the hosts on the switch interfaces as shown in the diagram. Host A initiates a connection towards Host D, and the following takes place: 1. Host A (interface fe0/0) sends a frame to Host D (MAC address:0000.43c5.334c). 2. The switch inspects the Source Address in the frame and notes in its table the MAC address of Host A along with the Interface number from which the frame originated. 3. The switch inspects the Destination Address in the frame. If the destination MAC address is already in the MAC address table, direct communication to the host will happen at this point. If it does not have Hosts D MAC address in its table, it constructs a broadcast frame and forwards out all interfaces except the interface from where the original frame arrived. 4. Host D identifies itself as the expected recipient and responds back to Host A. The switch receives the respond frame on interface fe0/11 and places the SA in its table along with the interface number where the frame came from. 5. From now on, further communication between the two hosts will be switched to the appropriate interfaces based on the MAC tables entries. This process takes place every time a new host is attached on the switch and initiates traffic. The switch tries to keep its MAC table up-to-date, therefore if some hosts do not initiate traffic for a certain amount of time, the switch removes them from its table and reinserts them when they begin sending traffic. 3. Why will a switch never learn a broadcast address? A: Broadcasts only use network layer addressing. B: A broadcast frame is never forwarded by a switch. C: A broadcast address will never be the source address of a frame. D: Broadcast addresses use an incorrect format for the switching table. E: Broadcast frames are never sent to switches. **Correct Answers: C** Explanation: There are three different address types: * Unicast : One source to One destination * Broadcast: One source to multiple destination * Multicast: One source to multiple destination joined to group On unicast or broadcast or multicast communication, the source address is always the unicast address but the destination address can be unicast, broadcast or multicast. 4. Drop

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

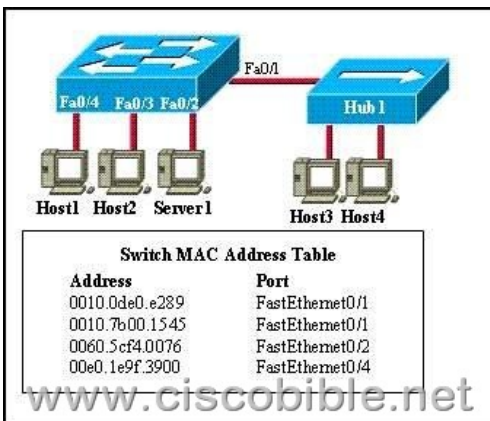|	
ip default-gateway	allows access to high-level testing commands, such as **debug**
interface vlan 1	allows access to configuration commands that affect the system as a whole
hostname	sets the system name
ip address	activates the interface configuration mode for VLAN 1
enable	enables the switch management interface
no shutdown	sets the switch management IP address
configure terminal	allows the switch to be managed from remote networks

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Drag and drop question. Drag the items to the proper locations. **Correct Answers:**

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpos

ip default-gateway	enable
interface vlan 1	configure terminal
hostname	hostname
ip address	interface vlan 1
enable	no shutdown
no shutdown	ip address
configure terminal	ip default-gateway

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enable : This command is used to enter into User Privileges Mode **configure terminal**: This command is used to enter into global configuration mode **hostname** : This command is used to set the hostname of switch **ip default-gateway** : This command should enter should enter on global configuration mode to set default gateway of switch. **Interface vlan 1** : Enters into the vlan 1 SVI (Switched Virtual Interface) configuration mode, where you can enter vlan 1 SVI interface specific configuration **ip add x.x.x.x y.y.y.y** : Use to assign the ip address on interface no shutdown: Brings the interface on up state from administratively down state 5. Refer to the exhibit. Why does the switch have two MAC addresses assigned to the FastEthernet 0/1 port in the switch address table?

Fa0/1
Fa0/4 Fa0/3 Fa0/2
Hub 1
Host1 Host2 Server1
Host3 Host4

Switch MAC Address Table

Address	Port
0010.0de0.e289	FastEthernet0/1
0010.7b00.1545	FastEthernet0/1
0060.5cf4.0076	FastEthernet0/2
00e0.1e9f.3900	FastEthernet0/4

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A: Data from two of the devices connected to the switch has been sent to Host3. B: Data from Host3 and Host4 has been received by switch port FastEthernet 0/1. C: Either Host3 or Host4 has just had the NIC replaced. D: Host3 and Host4 are on two different VLANs. **Correct Answers: B** Explanation: Switches learn the MAC addresses of PCs or workstations that are connected to their switch ports by examining the source address of frames that are received on that port. When more than one device is attached to a switch port, such as via the use of a hub as shown in this example, the switch will retain the MAC address of each of the known devices on that port. 6. The system LED is amber on a Cisco Catalyst 2950 series switch. What does this indicate? A: The system is malfunctioning. B: The system is not powered up. C: The system is powered up and operational. D: The system is forwarding

traffic. E: The system is sensing excessive collisions. **Correct Answers: A** Explanation: While the switch powers on, it begins POST, a series of tests. POST runs automatically to verify that the switch functions properly. When the switch begins POST, the system LED is off. If POST completes successfully, the LED turns green. If POST fails, the LED turns amber. **Note:** POST failures are usually fatal. Call Cisco Systems if your switch does not pass POST.