

300-115 cisco

Number: 300-115
Passing Score: 925
Time Limit: 120 min



Exam A**QUESTION 1**

An EtherChannel bundle has been established between a Cisco switch and a corporate web server. The network administrator noticed that only one of the EtherChannel links is being utilized to reach the web server. What should be done on the Cisco switch to allow for better EtherChannel utilization to the corporate web server?

- A. Enable Cisco Express Forwarding to allow for more effective traffic sharing over the EtherChannel bundle.
- B. Adjust the EtherChannel load-balancing method based on destination IP addresses.
- C. Disable spanning tree on all interfaces that are participating in the EtherChannel bundle.
- D. Use link-state tracking to allow for improved load balancing of traffic upon link failure to the server.
- E. Adjust the EtherChannel load-balancing method based on source IP addresses.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

Interface FastEthernet0/1 is configured as a trunk interface that allows all VLANs. This command is configured globally:

```
monitor session 2 filter vlan 1 - 8, 39, 52
```

What is the result of the implemented command?

- A. All VLAN traffic is sent to the SPAN destination interface.
- B. Traffic from VLAN 4 is not sent to the SPAN destination interface.
- C. Filtering a trunked SPAN port effectively disables SPAN operations for all VLANs.
- D. The trunk's native VLAN must be changed to something other than VLAN 1.
- E. Traffic from VLANs 1 to 8, 39, and 52 is replicated to the SPAN destination port.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

After the recent upgrade of the switching infrastructure, the network engineer notices that the port roles that were once "blocking" are now defined as "alternate" and "backup." What is the reason for this change?

- A. The new switches are using RSTP instead of legacy IEEE 802.1D STP.
- B. IEEE 802.1D STP and PortFast have been configured by default on all newly implemented Cisco Catalyst switches.
- C. The administrator has defined the switch as the root in the STP domain.
- D. The port roles have been adjusted based on the interface bandwidth and timers of the new Cisco Catalyst switches.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

A DHCP configured router is connected directly to a switch that has been provisioned with DHCP snooping. IP Source Guard with the ip verify source port-security command is configured under the interfaces that connect to all DHCP clients on the switch. However, clients are not receiving an IP address via the DHCP server. Which option is the cause of this issue?

- A. The DHCP server does not support information option 82.
- B. The DHCP client interfaces have storm control configured.
- C. Static DHCP bindings are not configured on the switch.
- D. DHCP snooping must be enabled on all VLANs, even if they are not utilized for dynamic address allocation.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

A switch is added into the production network to increase port capacity. A network engineer is configuring the switch for DHCP snooping and IP Source Guard, but is unable to configure ip verify source under several of the interfaces. Which option is the cause of the problem?

- A. The local DHCP server is disabled prior to enabling IP Source Guard.
- B. The interfaces are configured as Layer 3 using the no switchport command.
- C. No VLANs exist on the switch and/or the switch is configured in VTP transparent mode.

- D. The switch is configured for sdm prefer routing as the switched database management template.
- E. The configured SVIs on the switch have been removed for the associated interfaces.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

The command storm-control broadcast level 75 65 is configured under the switch port connected to the corporate mail server. In which three ways does this command impact the traffic? (Choose three.)

- A. SNMP traps are sent by default when broadcast traffic reaches 65% of the lower-level threshold.
- B. The switchport is disabled when unicast traffic reaches 75% of the total interface bandwidth.
- C. The switch resumes forwarding broadcasts when they are below 65% of bandwidth.
- D. Only broadcast traffic is limited by this particular storm control configuration.
- E. Multicast traffic is dropped at 65% and broadcast traffic is dropped at 75% of the total interface bandwidth.
- F. The switch drops broadcasts when they reach 75% of bandwidth.

Correct Answer: CDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

After UDLD is implemented, a Network Administrator noticed that one port stops receiving UDLD packets. This port continues to reestablish until after eight failed retries. The port then transitions into the errdisable state. Which option describes what causes the port to go into the errdisable state?

- A. Normal UDLD operations that prevent traffic loops.
- B. UDLD port is configured in aggressive mode.
- C. UDLD is enabled globally.
- D. UDLD timers are inconsistent.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:**QUESTION 8**

After reviewing UDLD status on switch ports, an engineer notices that the current bidirectional state for an access port is "Unknown." Which statement describes what this indicates about the status of the port?

- A. The port is fully operational and no known issues are detected.
- B. The bidirectional status of "unknown" indicates that the port will go into the disabled state because it stopped receiving UDLD packets from its neighbor.
- C. UDLD moved into aggressive mode after inconsistent acknowledgements were detected.
- D. The UDLD port is placed in the "unknown" state for 5 seconds until the next UDLD packet is received on the interface.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 9**

Pilot testing of the new switching infrastructure finds that when the root port is lost, STP immediately replaces the root port with an alternative root port. Which spanning-tree technology is used to accomplish backup root port selection?

- A. PVST+
- B. PortFast
- C. BackboneFast
- D. UplinkFast
- E. Loop Guard
- F. UDLD

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:**QUESTION 10**

A network engineer must adjust the STP interface attributes to influence root port selection. Which two elements are used to accomplish this? (Choose

two.)

- A. port-priority
- B. cost
- C. forward-timers
- D. link type
- E. root guard

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

A network engineer must set the load balance method on an existing port channel. Which action must be done to apply a new load balancing method?

- A. Configure the new load balancing method using port-channel load-balance.
- B. Adjust the switch SDM back to "default".
- C. Ensure that IP CEF is enabled globally to support all load balancing methods.
- D. Upgrade the PFC to support the latest load balancing methods.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

Refer to the exhibit. A network engineer investigates a recent network failure and notices that one of the interfaces on the switch is still down. What is causing the line protocol on this interface to be shown as down?

```
Switch#sh int g0/12
GigabitEthernet0/23 is up, line protocol is down (monitoring)
  Hardware is C6k 1000Mb 802.3, address is 001c.f9d4.7500 (bia
  001c.f9d4.750)
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
    Reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 1000Mb/s
```

- A. There is a layer 1 physical issue.
- B. There is a speed mismatch on the interface.
- C. The interface is configured as the target of the SPAN session.
- D. The interface is configured as the source of the SPAN session.
- E. There is a duplex mismatch on the interface.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

While doing network discovery using Cisco Discovery Protocol, it is found that rapid error tracking is not currently enabled. Which option must be enabled to allow for enhanced reporting mechanisms using Cisco Discovery Protocol?

- A. Cisco Discovery Protocol version 2
- B. Cisco IOS Embedded Event Manager
- C. logging buffered
- D. Cisco Discovery Protocol source interface
- E. Cisco Discovery Protocol logging options

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 14**

After port security is deployed throughout an enterprise campus, the network team has been overwhelmed with port reset requests. They decide to configure the network to automate the process of re-enabling user ports. Which command accomplishes this task?

- A. switch(config)# errdisable recovery interval 180
- B. switch(config)# errdisable recovery cause psecure-violation
- C. switch(config)# switchport port-security protect
- D. switch(config)# switchport port-security aging type inactivity
- E. switch(config)# errdisable recovery cause security-violation

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:**QUESTION 15**

The network monitoring application alerts a network engineer of a client PC that is acting as a rogue DHCP server. Which two commands help trace this PC when the MAC address is known? (Choose two.)

- A. switch# show mac address-table
- B. switch# show port-security
- C. switch# show ip verify source
- D. switch# show ip arp inspection
- E. switch# show mac address-table address <mac address>

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:**QUESTION 16**

A network engineer has just deployed a non-Cisco device in the network and wants to get information about it from a connected device. Cisco Discovery Protocol is not supported, so the open standard protocol must be configured. Which protocol does the network engineer configure on both devices to accomplish this?

- A. IRDP
- B. LLDP
- C. NDP
- D. LLTD

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

A manager tells the network engineer to permit only certain VLANs across a specific trunk interface. Which option can be configured to accomplish this?

- A. allowed VLAN list
- B. VTP pruning
- C. VACL
- D. L2P tunneling

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

For client server failover purposes, the application server team has indicated that they must not have the standard 30 second delay before their switchport enters a forwarding state. For their disaster recovery feature to operate successfully, they require the switchport to enter a forwarding state immediately. Which spanning-tree feature satisfies this requirement?

- A. Rapid Spanning-Tree
- B. Spanning-Tree Timers
- C. Spanning-Tree FastPort
- D. Spanning-Tree PortFast
- E. Spanning-Tree Fast Forward

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

Which command does a network engineer use to verify the spanning-tree status for VLAN 10?

- A. switch# show spanning-tree vlan 10
- B. switch# show spanning-tree bridge
- C. switch# show spanning-tree brief
- D. switch# show spanning-tree summary
- E. switch# show spanning-tree vlan 10 brief

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

A new network that consists of several switches has been connected together via trunking interfaces. If all switches currently have the default VTP domain name "null", which statement describes what happens when a domain name is configured on one of the switches?

- A. The switch with the non-default domain name restores back to "null" upon reboot.
- B. Switches with higher revision numbers does not accept the new domain name.
- C. VTP summary advertisements are sent out of all ports with the new domain name.
- D. All other switches with the default domain name become VTP clients.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

While troubleshooting a network outage, a network engineer discovered an unusually high level of broadcast traffic coming from one of the switch interfaces. Which option decreases consumption of bandwidth used by broadcast traffic?

- A. storm control
- B. SDM routing
- C. Cisco IOS parser
- D. integrated routing and bridging
- E. Dynamic ARP Inspection

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

A network engineer is setting up a new switched network. The network is expected to grow and add many new VLANs in the future. Which Spanning Tree Protocol should be used to reduce switch resources and managerial burdens that are associated with multiple spanning-tree instances?

- A. RSTP
- B. PVST
- C. MST
- D. PVST+
- E. RPVST+

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

Which statement about the use of SDM templates in a Cisco switch is true?

- A. SDM templates are used to configure system resources in the switch to optimize support for specific features, depending on how the switch is used in the network.
- B. SDM templates are used to create Layer 3 interfaces (switch virtual interfaces) to permit hosts in one VLAN to communicate with hosts in another VLAN.
- C. SDM templates are used to configure ACLs that protect networks and specific hosts from unnecessary or unwanted traffic.
- D. SDM templates are used to configure a set of ACLs that allows the users to manage the flow of traffic handled by the route processor.

E. SDM templates are configured by accessing the switch using the web interface.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

Which SDM template disables routing and supports the maximum number of unicast MAC addresses?

- A. VLAN
- B. access
- C. default
- D. routing

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

Which SDM template is the most appropriate for a Layer 2 switch that provides connectivity to a large number of clients?

- A. VLAN
- B. default
- C. access
- D. routing

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

In a Cisco switch, what is the default period of time after which a MAC address ages out and is discarded?

- A. 100 seconds
- B. 180 seconds
- C. 300 seconds
- D. 600 seconds

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

If a network engineer applies the command mac-address-table notification mac-move on a Cisco switch port, when is a syslog message generated??

- A. A MAC address or host moves between different switch ports.
- B. A new MAC address is added to the content-addressable memory.
- C. A new MAC address is removed from the content-addressable memory.
- D. More than 64 MAC addresses are added to the content-addressable memory.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

Which option is a possible cause for an errdisabled interface?

- A. routing loop
- B. cable unplugged
- C. STP loop guard
- D. security violation

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

What is the default value for the errdisable recovery interval in a Cisco switch?

- A. 30 seconds
- B. 100 seconds
- C. 300 seconds
- D. 600 seconds

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

Which statement about LLDP-MED is true?

- A. LLDP-MED is an extension to LLDP that operates between endpoint devices and network devices.
- B. LLDP-MED is an extension to LLDP that operates only between network devices.
- C. LLDP-MED is an extension to LLDP that operates only between endpoint devices.
- D. LLDP-MED is an extension to LLDP that operates between routers that run BGP.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

Which statement about Cisco devices learning about each other through Cisco Discovery Protocol is true?

- A. Each device sends periodic advertisements to multicast address 01:00:0C:CC:CC:CC.
- B. Each device broadcasts periodic advertisements to all of its neighbors.
- C. Each device sends periodic advertisements to a central device that builds the network topology.
- D. Each device sends periodic advertisements to all IP addresses in its ARP table.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 32

Which option lists the information that is contained in a Cisco Discovery Protocol advertisement?

- A. native VLAN IDs, port-duplex, hardware platform
- B. native VLAN IDs, port-duplex, memory errors
- C. native VLAN IDs, memory errors, hardware platform
- D. port-duplex, hardware platform, memory errors

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

Which option describes a limitation of LLDP?

- A. LLDP cannot provide information about VTP.
- B. LLDP does not support TLVs.
- C. LLDP can discover only Windows servers.
- D. LLDP can discover up to two devices per port.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

Which statement about the UDLD protocol is true?

- A. UDLD is a Cisco-proprietary Layer 2 protocol that enables devices to monitor the physical status of links and detect unidirectional failures.
- B. UDLD is a Cisco-proprietary Layer 2 protocol that enables devices to advertise their identity, capabilities, and neighbors on a local area network.
- C. UDLD is a standardized Layer 2 protocol that enables devices to monitor the physical status of links and detect unidirectional failures.
- D. UDLD is a standardized Layer 2 protocol that enables devices to advertise their identity, capabilities, and neighbors on a local area network.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

Which option lists the modes that are available for configuring UDLD on a Cisco switch?

- A. normal and aggressive
- B. active and aggressive
- C. normal and active
- D. normal and passive
- E. normal and standby

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

What is the default interval at which Cisco devices send Cisco Discovery Protocol advertisements?

- A. 30 seconds
- B. 60 seconds
- C. 120 seconds
- D. 300 seconds

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:**QUESTION 37**

Which statement about Cisco Discovery Protocol configuration on a Cisco switch is true?

- A. CDP is enabled by default and can be disabled globally with the command no cdp run.
- B. CDP is disabled by default and can be enabled globally with the command cdp enable.
- C. CDP is enabled by default and can be disabled globally with the command no cdp enable.
- D. CDP is disabled by default and can be enabled globally with the command cdp run.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 38**

Which VTP mode is needed to configure an extended VLAN, when a switch is configured to use VTP versions 1 or 2?

- A. transparent
- B. client
- C. server
- D. Extended VLANs are only supported in version 3 and not in versions 1 or 2.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:**Explanation:**

VTP version 1 and version 2 support VLANs 1 to 1000 only. Extended-range VLANs are supported only in VTP version 3. If converting from VTP version 3 to VTP version 2, VLANs in the range 1006 to 4094 are removed from VTP control.
<http://www.cisco.com/en/US/docs/switches/lan/catalyst6500/ios/12.2SX/configuration/guide/vtp.html>

QUESTION 39

What is the size of the VLAN field inside an 802.1q frame?

- A. 8-bit
- B. 12-bit

- C. 16-bit
- D. 32-bit

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 40

Refer to the exhibit. How many bytes are added to each frame as a result of the configuration?

```
3512xl(config)#int fastEthernet 0/1
3512xl(config-if)#switchport mode trunk
3512xl(config-if)#switchport trunk encapsulation dot1q
```

- A. 4-bytes except the native VLAN
- B. 8-bytes except the native VLAN
- C. 4-bytes including native VLAN
- D. 8-bytes including native VLAN

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

A network engineer configured a fault-tolerance link on Gigabit Ethernet links G0/1, G0/2, G0/3, and G0/4 between two switches using Ethernet port-channel. Which action allows interface G0/1 to always actively forward traffic in the port-channel?

- A. Configure G0/1 as half duplex and G0/2 as full duplex.
- B. Configure LACP port-priority on G0/1 to 1.
- C. Configure LACP port-priority on G0/1 to 65535.
- D. LACP traffic goes through G0/4 because it is the highest interface ID.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

Which statement about the use of PAgP link aggregation on a Cisco switch that is running Cisco IOS Software is true?

- A. PAgP modes are off, auto, desirable, and on. Only the combinations auto-desirable, desirable- desirable, and on-on allow the formation of a channel.
- B. PAgP modes are active, desirable, and on. Only the combinations active-desirable, desirable- desirable, and on-on allow the formation of a channel.
- C. PAgP modes are active, desirable, and on. Only the combinations active-active, desirable- desirable, and on-on allow the formation of a channel.
- D. PAgP modes are off, active, desirable, and on. Only the combinations auto-auto, desirable- desirable, and on-on allow the formation of a channel.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Refer to the exhibit. Which EtherChannel negotiation protocol is configured on the interface f0/13 ?f0/15?

```
SW1#show etherchannel summary
Flags: D - down P - in port-channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate aggregator
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 3
Number of aggregators: 3
Group  Port-channel  Protocol    Ports
-----+-----+-----+-----
12      Po12 (SU)        -           Fa0/13(P) Fa0/14(P) Fa0/15(P)
13      Po13 (SU)        -           Fa0/16(P) Fa0/17(P) Fa0/18(P)
14      Po14 (SU)        -           Fa0/19(P) Fa0/20(P) Fa0/21(P)
```

```
SW1#show interface trunk
Port Mode Encapsulation Status Native vlan
Po12 desirable n-isl trunking 1
Po13 desirable n-isl trunking 1
Po14 desirable n-isl trunking 1
Port Vlans allowed on trunk
Po12 1-4094
Po13 1-4094
Po14 1-4094
```

- A. Link Combination Control Protocol
- B. Port Aggregation Protocol
- C. Port Combination Protocol
- D. Link Aggregation Control Protocol

Correct Answer: B

Section: (none)

Explanation

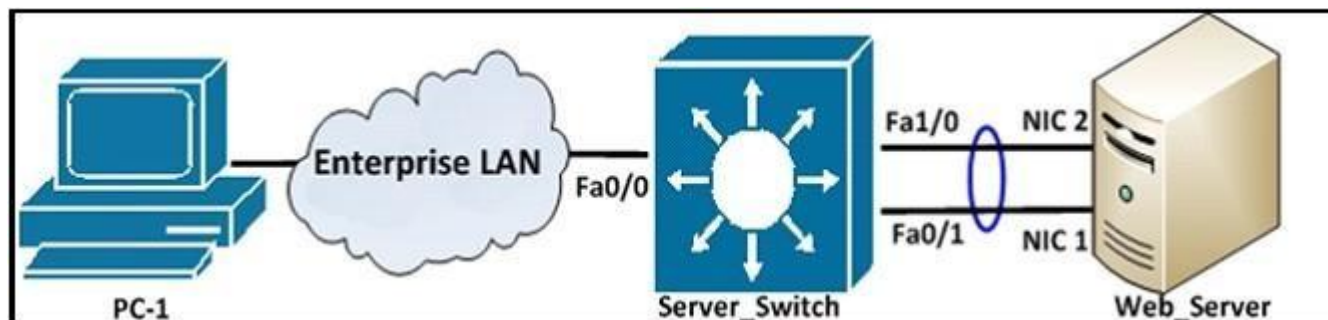
Explanation/Reference:

QUESTION 44

Refer to the exhibit. Users of PC-1 experience slow connection when a webpage is requested from the server. To increase bandwidth, the network engineer configured an EtherChannel on interfaces Fa1/0 and Fa0/1 of the server farm switch, as shown here:

```
Server_Switch#sh etherchannel load-balance
EtherChannel Load-Balancing Operational State (src-mac):
Non-IP: Source MAC address
IPv4: Source MAC address
IPv6: Source IP address
Server_Switch#
```

However, traffic is still slow. Which action can the engineer take to resolve this issue?



- A. Disable EtherChannel load balancing.
- B. Upgrade the switch IOS to IP services image.
- C. Change the load-balance method to dst-mac.
- D. Contact Cisco TAC to report a bug on the switch.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 45

A network engineer changed the port speed and duplex setting of an existing EtherChannel bundle that uses the PAgP protocol. Which statement describes what happens to all ports in the bundle?

- A. PAgP changes the port speed and duplex for all ports in the bundle.
- B. PAgP drops the ports that do not match the configuration.
- C. PAgP does not change the port speed and duplex for all ports in the bundle until the switch is rebooted.
- D. PAgP changes the port speed but not the duplex for all ports in the bundle.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 46

Which statement about using EtherChannel on Cisco IOS switches is true?

- A. A switch can support up to eight compatibly configured Ethernet interfaces in an EtherChannel.
The EtherChannel provides full-duplex bandwidth up to 800 Mbps only for Fast EtherChannel or 8 Gbps only for Gigabit EtherChannel.
- B. A switch can support up to 10 compatibly configured Ethernet interfaces in an EtherChannel.
The EtherChannel provides full-duplex bandwidth up to 1000 Mbps only for Fast EtherChannel or 8 Gbps only for Gigabit EtherChannel.
- C. A switch can support up to eight compatibly configured Ethernet interfaces in an EtherChannel.
The EtherChannel provides full-duplex bandwidth up to 800 Mbps only for Fast EtherChannel or 16 Gbps only for Gigabit EtherChannel.
- D. A switch can support up to 10 compatibly configured Ethernet interfaces in an EtherChannel.
The EtherChannel provides full-duplex bandwidth up to 1000 Mbps only for Fast EtherChannel or 10 Gbps only for Gigabit EtherChannel.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 47

Refer to the exhibit. Which statement about switch S1 is true?

```
S1# show etherchannel summary
Flags: D - down      P - bundled in port-channel
      I - stand-alone s - suspended
      H - Hot-standby (LACP only)
      R - Layer3      S - Layer2
      U - in use      f - failed to allocate aggregator
```

```

M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
```

```

Number of channel-groups in use: 1
Number of aggregators:          1
```

```

Group Port-channel Protocol Ports
-----+-----+-----+-----
1   Po1(SU)      LACP   Fa0/13(P) Fa0/14(P) Fa0/15(P)
```

- A. Physical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 2 port-channel interface using an open standard protocol.
- B. Logical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 2 physical port- channel interface using a Cisco proprietary protocol.
- C. Physical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 3 port-channel interface using a Cisco proprietary protocol.
- D. Logical port Fa0/13, Fa0/14, and Fa0/15 successfully formed a Layer 3 physical port- channel interface using an open standard protocol.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

What happens on a Cisco switch that runs Cisco IOS when an RSTP-configured switch receives 802.1d BPDU?

- A. 802.1d does not understand RSTP BPDUs because they are different versions, but when a RSTP switch receives an 802.1d BPDU, it responds with a 802.1d BPDU and eventually the two switches run 802.1d to communicate.
- B. 802.1d understands RSTP BPDUs because they are the same version, but when a RSTP switch receives a 802.1d BPDU, it responds with a 802.1d BPDU and eventually the two switches run 802.1d to communicate.
- C. 802.1d does not understand RSTP BPDUs because they are different versions, but when a RSTP switch receives a 802.1d BPDU, it does not respond with a 802.1d BPDU.
- D. 802.1d understands RSTP BPDUs because they are the same version, but when a RSTP switch receives a 802.1d BPDU, it does not respond with a 802.1d BPDU and eventually the two switches run 802.1d to communicate.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

When two MST instances (MST 1 and MST 2) are created on a switch, what is the total number of spanning-tree instances running on the switch?

- A. 1
- B. 2
- C. 3
- D. 4

Correct Answer: C

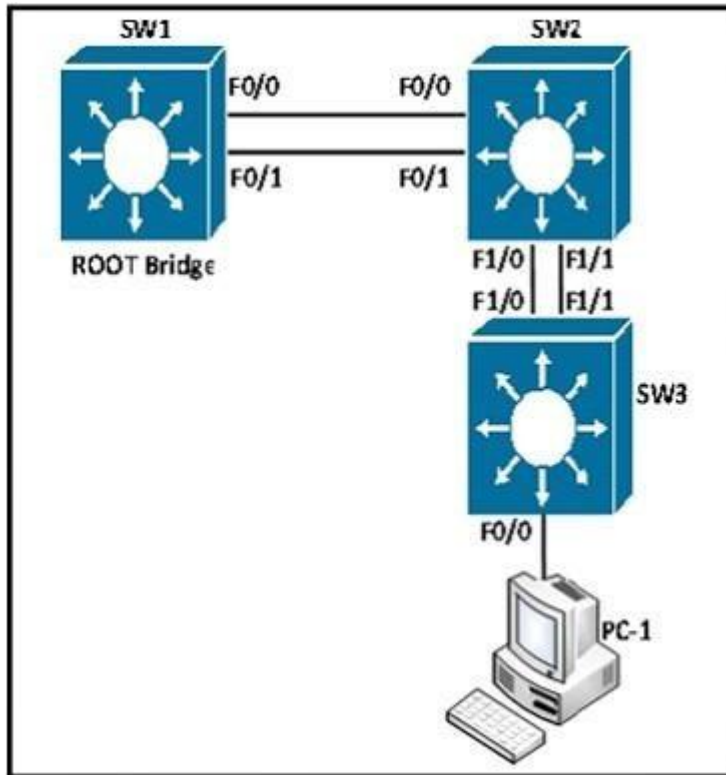
Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

Refer to the exhibit. f1/0 and f1/1 have the same end-to-end path cost to the designated bridge. Which action is needed to modify the Layer 2 spanning-tree network so that traffic for PC1 VLAN from switch SW3 uses switchport f1/1 as a primary port?



- A. Modify the spanning-tree port-priority on SW1 f1/1 to 0 and f1/0 to 16.
- B. Modify the spanning-tree port-priority on SW1 f1/1 to 16 and f1/0 to 0.
- C. Modify the spanning-tree port-priority on SW2 f1/1 to 0 and f1/0 to 16.
- D. Modify the spanning-tree port-priority on SW2 f1/1 to 16 and f1/0 to 0.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

Refer to the exhibit. Why would the switch be considered as a root bridge?

```
SW1#show spanning-tree vlan 1
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 1
Address 001b.bbbb.dddd
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Bridge ID Priority 1 (priority 0 sys-id-ext 1)
Address 001b.bbbb.dddd

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
```

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa0/1	Desg	FWD	19	128.15	P2p
Fa0/2	Desg	FWD	19	128.16	P2p
Fa0/3	Desg	FWD	19	128.17	P2p
Fa0/4	Desg	FWD	19	128.18	P2p
Fa0/5	Desg	FWD	19	128.19	P2p
Fa0/6	Desg	FWD	19	128.19	P2p

- A. The bridge priority is 1 and all ports are forwarding.
- B. The switch priority for VLAN 1 and the macro specifies "This Bridge is the root".
- C. The bridge priority is 128.19 and all ports are forwarding.
- D. The switch priority value is zero, it has the lowest priority value for VLAN 1.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

A network engineer is trying to deploy a PC on a network. The engineer observes that when the PC is connected to the network, it takes 30 to 60

seconds for the PC to see any activity on the network interface card. Which Layer 2 enhancement can be used to eliminate this delay?

- A. Configure port duplex and speed to auto negotiation.
- B. Configure port to duplex full and speed 1000.
- C. Configure spanning-tree portfast.
- D. Configure no switchport.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 53

Refer to the exhibit. All ports are members of VLAN 10. Considering the default cost of upstream bridges to the root bridge is equal, which option will be the new root port for VLAN 10?

```
Switch# Show run
interface FastEthernet0/13
spanning-tree cost 1000
!
interface FastEthernet0/14
spanning-tree cost 1000
!
interface FastEthernet0/15
spanning-tree cost 1000
!
interface FastEthernet0/20
spanning-tree cost 2
!
interface FastEthernet0/21
spanning-tree cost 1
```

- A. interface f0/13
- B. interface f0/14
- C. interface f0/15

D. interface f0/21

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

A network engineer configured an Ethernet switch using these commands.

```
Switchone(config) # Spanning-tree portfast bpdupfilter default
```

Which statement about the spanning-tree portfast feature on the switch is true?

- A. If an interface is enabled for portfast receives BPDU, the port goes through the spanning-tree listening, learning, and forwarding states.
- B. If an interface is enabled for portfast receives BPDU, the port does not go through the spanning- tree listening, learning, and forwarding states.
- C. If an interface is enabled for portfast receives BPDU, the port is shut down immediately.
- D. If an interface is enabled for portfast receives BPDU, the port goes into the spanning- tree inconsistent state.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

Which statement describes what happens when a port configured with root guard receives a superior BPDU?

- A. The port goes into errdisabled state and stops forwarding traffic.
- B. The port goes into BPDU-inconsistent state and stops forwarding traffic.
- C. The port goes into loop-inconsistent state and stops forwarding traffic.
- D. The port goes into root-inconsistent state and stops forwarding traffic.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

Which option is a benefit of using VSS?

- A. reduces cost
- B. simplifies configuration
- C. provides two independent supervisors with two different control planes
- D. removes the need for a First Hop Redundancy Protocol

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 57

Which statement about restrictions for multichassis LACP is true?

- A. It is available only on a Cisco Catalyst 6500 Series chassis.
- B. It does not support 1Gb links.
- C. Converting a port channel to mLACP can cause a service disruption.
- D. It is not available in VSS.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58

What is the maximum number of 10 Gigabit Ethernet connections that can be utilized in an EtherChannel for the virtual switch link?

- A. 4
- B. 6
- C. 8
- D. 12

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 59

Which statement describes what happens if all VSL connections between the virtual switch members are lost?

- A. Both virtual switch members cease to forward traffic.
- B. The VSS transitions to the dual active recovery mode, and both virtual switch members continue to forward traffic independently.
- C. The virtual switch members reload.
- D. The VSS transitions to the dual active recovery mode, and only the new active virtual switch continues to forward traffic.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 60

Which statement describes what happens when a switch enters dual active recovery mode?

- A. The switch shuts down and waits for the VSL link to be restored before sending traffic.
- B. All interfaces are shut down in the formerly active virtual switch member, but the new active virtual switch forwards traffic on all links.
- C. The switch continues to forward traffic out all links and enables spanning tree on VSL link and all other links to prevent loops.
- D. The VSS detects which system was last in active state and shuts down the other switch.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 61

Which command globally enables AAA on a device?

- A. aaa new-model

- B. aaa authentication
- C. aaa authorization
- D. aaa accounting

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 62

Which AAA Authorization type includes PPP, SLIP, and ARAP connections?

- A. network
- B. IP mobile
- C. EXEC
- D. auth-proxy

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 63

Which authentication service is needed to configure 802.1x?

- A. RADIUS with EAP Extension
- B. TACACS+
- C. RADIUS with CoA
- D. RADIUS using VSA

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

Refer to the exhibit. Which login credentials are required when connecting to the console port in this output?

```
username cisco password cisco
!
aaa new-model
radius-server host 10.1.1.50 auth-port 1812 key C1sc0123
aaa authentication login default group radius local line
aaa authentication logging NO_AUTH none
!
line vty 0 15
login authentication default
password linepass
line console 0
login authentication NO_AUTH
```

- A. none required
- B. username cisco with password cisco
- C. no username with password linepass
- D. login authentication default

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 65

Refer to the exhibit. When a network administrator is attempting an SSH connection to the device, in which order does the device check the login credentials?


```
username cisco password cisco
!
aaa new-model
radius-server host 10.1.1.50 auth-port 1812 key C1sc0123
aaa authentication login default group radius local line
aaa authentication logging NO_AUTH none
!
line vty 0 15
login authentication default
password linepass
line console 0
login authentication NO_AUTH
```

- A. RADIUS server, local username, line password
- B. RADIUS server, line password, local username
- C. Line password, local username, RADIUS server
- D. Line password, RADIUS server, local username

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 66

Which type of information does the DHCP snooping binding database contain?

- A. untrusted hosts with leased IP addresses
- B. trusted hosts with leased IP addresses
- C. untrusted hosts with available IP addresses
- D. trusted hosts with available IP addresses

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

Which switch feature determines validity based on IP-to-MAC address bindings that are stored in a trusted database?

- A. Dynamic ARP Inspection
- B. storm control
- C. VTP pruning
- D. DHCP snooping

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 68

Which command is needed to enable DHCP snooping if a switchport is connected to a DHCP server?

- A. ip dhcp snooping trust
- B. ip dhcp snooping
- C. ip dhcp trust
- D. ip dhcp snooping information

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 69

When you configure private VLANs on a switch, which port type connects the switch to the gateway router?

- A. promiscuous
- B. community
- C. isolated
- D. trunked

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

When you configure a private VLAN, which type of port must you configure the gateway router port as?

- A. promiscuous port
- B. isolated port
- C. community port
- D. access port

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

Which First Hop Redundancy Protocol is an IEEE Standard?

- A. GLBP
- B. HSRP
- C. VRRP
- D. OSPF

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

What is the default amount by which the hot standby priority for the router is decremented or incremented when the interface goes down or comes back up?

- A. 1
- B. 5
- C. 10
- D. 15

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 73

What is the maximum number of virtual MAC addresses that GLBP allows per group?

- A. 2
- B. 4
- C. 6
- D. 8

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 74

Which gateway role is responsible for answering ARP requests for the virtual IP address in GLBP?

- A. active virtual forwarder
- B. active virtual router
- C. active virtual gateway
- D. designated router

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 75

Which VRRP router is responsible for forwarding packets that are sent to the IP addresses of the virtual router?

- A. virtual router master
- B. virtual router backup
- C. virtual router active
- D. virtual router standby

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 76

Which command correctly configures standby tracking for group 1 using the default decrement priority value?

- A. standby 1 track 100
- B. standby 1 track 100 decrement 1
- C. standby 1 track 100 decrement 5
- D. standby 1 track 100 decrement 20

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

Which command configures an HSRP group to become a slave of another HSRP group?

- A. standby slave
- B. standby group track
- C. standby follow
- D. standby group backup

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 78

Refer to the exhibit. Which option describes the reason for this message in a GLBP configuration?

%GLBP-4-DUPADDR: Duplicate address

- A. Unavailable GLBP active forwarder
- B. Incorrect GLBP IP address
- C. HSRP configured on same interface as GLBP
- D. Layer 2 loop

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 79

Lab Simulation - LACP with STP Sim

You work for SWITCH.com. They have just added a new switch (SwitchB) to the existing network as shown in the topology diagram.

RouterA is currently configured correctly and is providing the routing function for devices on SwitchA and SwitchB. SwitchA is currently configured correctly, but will need to be modified to support the addition of SwitchB. SwitchB has a minimal configuration. You have been tasked with completing the needed configuration of SwitchA and SwitchB. SwitchA and SwitchB use Cisco as the enable password.

Configuration Requirements for SwitchA

The VTP and STP configuration modes on SwitchA should not be modified.

- SwitchA needs to be the root switch for vlans 11, 12, 13, 21, 22 and 23. All other vlans should be left are their default values.

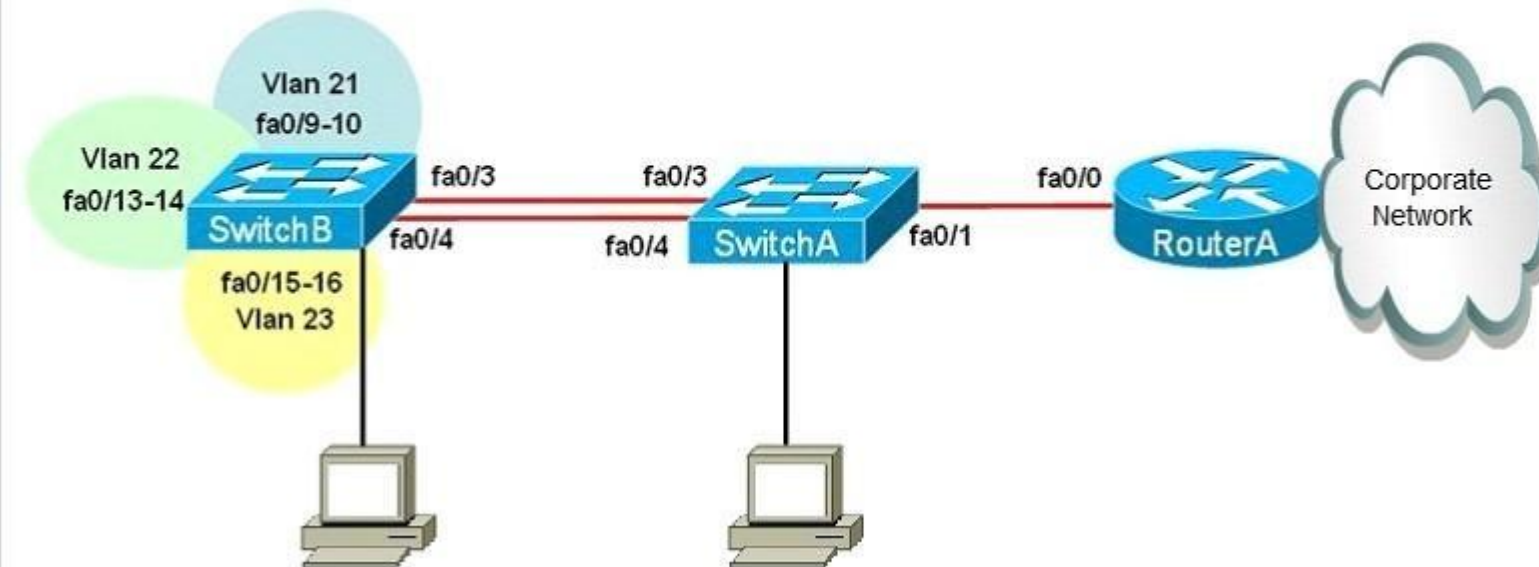
Configuration Requirements for SwitchB

- Vlan 21
Name: Marketing
will support two servers attached to fa0/9 and fa0/10
- Vlan 22
Name: Sales
will support two servers attached to fa0/13 and fa0/14
- Vlan 23
Name: Engineering
will support two servers attached to fa0/15 and fa0/16
- Access ports that connect to server should transition immediately to forwarding state upon detecting the connection of a device.
- SwitchB VTP mode needs to be the same as SwitchA.
- SwitchB must operate in the same spanning tree mode as SwitchA
- No routing is to be configured on SwitchB
- Only the SVI vlan 1 is to be configured and it is to use address 192.168.1.11/24

Inter-switch Connectivity Configuration Requirements

- For operational and security reasons trunking should be unconditional and Vlans 1, 21, 22 and 23 should tagged when traversing the trunk link.
- The two trunks between SwitchA and SwitchB need to be configured in a mode that allows for the maximum use of their bandwidth for all vlans. This mode should be done with a non-proprietary protocol, with SwitchA controlling activation.
- Propagation of unnecessary broadcasts should be limited using manual pruning on this trunk link.

Topology



A. See the explanation

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

SW-A (close to router)
SW-A#configure terminal

```
SW-A(config)#spanning-tree vlan 11-13,21-23 root primary
```

```
SW-A(config)#vlan 21  
SW-A(config-vlan)#name Marketing  
SW-A(config-vlan)#exit
```



```
SW-A(config)#vlan 22
SW-A(config-vlan)#name Sales
SW-A(config-vlan)#exit
```

```
SW-A(config)#vlan 23
SW-A(config-vlan)#name Engineering
SW-A(config-vlan)#exit
SW-A(config)#interface range Fa0/3 - 4
SW-A(config-if-range)#no switchport mode access
SW-A(config-if-range)#no switchport access vlan 98 (These two commands must be deleted to form a trunking link)
SW-A(config-if-range)#switchport trunk encapsulation dot1q (cannot issued this command on this switch, but don't worry coz I still got 100%)
SW-A(config-if-range)#switchport mode trunk
SW-A(config-if-range)#switchport trunk native vlan 99
SW-A(config-if-range)#switchport trunk allowed vlan 1,21-23
SW-A(config-if-range)#channel-group 1 mode active
SW-A(config-if-range)#channel-protocol lacp
SW-A(config-if-range)#no shutdown
SW-A(config-if-range)#end
```

```
SW-B (far from router)
SW-B#configure terminal
```

```
SW-B(config)#vlan 21
SW-B(config-vlan)#name Marketing
SW-B(config-vlan)#exit
```

```
SW-B(config)#vlan 22
SW-B(config-vlan)#name Sales
SW-B(config-vlan)#exit
```

```
SW-B(config)#vlan 23
SW-B(config-vlan)#name Engineering
SW-B(config-vlan)#exit
SW-B(config)#vlan 99
SW-B(config-vlan)#name TrunkNative // not necessary to name it but just name it same as SwitchA
SW-B(config-vlan)#exit
SW-B(config)#interface range Fa0/9 - 10
SW-B(config-if-range)#switchport mode access
SW-B(config-if-range)#switchport access vlan 21
SW-B(config-if-range)#spanning-tree portfast
SW-B(config-if-range)#no shutdown
SW-B(config-if-range)#exit
```

```
SW-B(config)#interface range Fa0/13 - 14
SW-B(config-if-range)#switchport mode access
SW-B(config-if-range)#switchport access vlan 22
SW-B(config-if-range)#spanning-tree portfast
SW-B(config-if-range)#no shutdown
SW-B(config-if-range)#exit
```

```
SW-B(config)#interface range Fa0/15 - 16
SW-B(config-if-range)#switchport mode access
SW-B(config-if-range)#switchport access vlan 23
SW-B(config-if-range)#spanning-tree portfast
SW-B(config-if-range)#no shutdown
SW-B(config-if-range)#exit
```

```
SW-B(config)#vtp mode transparent
```

```
SW-B(config)#spanning-tree mode rapid-pvst
```

```
SW-B(config)#ip default-gateway 192.168.1.1 (you can get this IP from SW-A with command show cdp neighbour detail) // not sure about this command because the question says "No routing is to be configured on SwitchB".
```

```
SW-B(config)#interface vlan 1
SW-B(config-if)#ip address 192.168.1.11 255.255.255.0
SW-B(config-if)#no shutdown
SW-B(config-if)#exit
```

```
SW-B(config)#interface range Fa0/3 - 4
SW-B(config-if-range)#switchport trunk encapsulation dot1q (yes I can issued this command on this switch)
SW-B(config-if-range)#switchport mode trunk
SW-B(config-if-range)#switchport trunk native vlan 99
SW-B(config-if-range)#switchport trunk allowed vlan 1,21-23
SW-B(config-if-range)#channel-group 1 mode passive //mode passive because "SwitchA controlling activation"
SW-B(config-if-range)#channel-protocol lacp
SW-B(config-if-range)#no shutdown
SW-B(config-if-range)#end
```

Configuration Requirements for SwitchA

<ul style="list-style-type: none"> - The VTP and STP configuration modes on SwitchA should not be modified. - SwitchA needs to be the root switch for vlans 11, 12, 13, 21, 22 and 23. All other vlans should be left are their default values 	SW-A(config)#spanning-tree vlan 11-13,21-23 root primary
--	--

Configuration Requirements for SwitchB

<ul style="list-style-type: none"> - Vlan 21, Name: Marketing, will support two servers attached to fa0/9 and fa0/10 - Vlan 22, Name: Sales, will support two servers attached to fa0/13 and fa0/14 - Vlan 23, Name: Engineering, will support two servers attached to fa0/15 and fa0/16 - Access ports that connect to server should transition immediately to forwarding state upon detecting the connection of a device. 	vlan ... name ... (VLANs must be created on both switches if not exist) interface range Fa0/x - x switchport mode access switchport access vlan spanning-tree portfast
- SwitchB VTP mode needs to be the same as SwitchA.	vtp mode transparent
- SwitchB must operate in the same spanning tree mode as SwitchA.	spanning-tree mode rapid-pvst
<ul style="list-style-type: none"> - No routing is to be configured on SwitchB. - Only the SVI vlan 1 is to be configured and it is to use address 192.168.1.11/24. 	interface vlan 1 ip address 192.168.1.11 255.255.255.0

Inter-switch Connectivity Configuration Requirements:

<p>- For operational and security reasons trunking should be unconditional and Vlans 1, 21, 22 and 23 should tagged when traversing the trunk link.</p>	<pre>SW-A(config)#interface range Fa0/3 - 4 SW-A(config-if)#no switchport mode access SW-A(config-if)#no switchport access vlan 98 //These two commands must be deleted to form a trunking link. SW-A(config-if)#switchport mode trunk SW-A(config-if)#switchport trunk native vlan 99 ----- SW-B(config)#interface range Fa0/3 - 4 SW-B(config-if)#switchport trunk encapsulation dot1q (yes I can issued this command on this switch) SW-B(config-if)#switchport mode trunk SW-B(config-if)#switchport trunk native vlan 99</pre>
<p>- The two trunks between SwitchA and SwitchB need to be configured in a mode that allows for the maximum use of their bandwidth for all vlans. This mode should be done with a non-proprietary protocol, with SwitchA controlling activation.</p>	<pre>SW-A(config)#interface range Fa0/3 - 4 SW-A(config-if)#channel-group 1 mode active SW-A(config-if)#channel-protocol lacp SW-A(config-if)#no shutdown ----- SW-B(config)#interface range Fa0/3 - 4 SW-B(config-if)#channel-group 1 mode passive SW-B(config-if)#channel-protocol lacp SW-B(config-if)#no shutdown ----- Maybe the interface Port-channel 1 was configured on both switches so we don't configure it here. If not we have to configure them with "interface port-channel 1" command. Also you have to turn them up.</pre>
<p>- Propagation of unnecessary broadcasts should be limited using manual pruning on this trunk link.</p>	<pre>SW-A(config)#interface range Fa0/3 - 4 SW-A(config-if)#switchport trunk allowed vlan 1,21-23 ----- SW-B(config)#interface range Fa0/3 - 4 SW-B(config-if)#switchport trunk allowed vlan 1,21-23</pre>

You may have to configure Interface Port-Channel on both switches. Check the configuration first, if it does not exist, use these commands:

```
interface port-channel1
```

```
switchport mode trunk
switchport trunk native vlan 99 //this command will prevent the "Native VLAN mismatched" error on both switches
switchport trunk allowed vlan 1,21-23,99
```

Some notes for this sim:

- + You should check the initial status of both switches with these commands: **show vtp status** (transparent mode on switchA and we have to set the same mode on switchB), **show spanning-tree [summary]** (rapid-pvst mode on switchA and we have to set the same mode on switchB), **show vlan** (check the native vlan and the existence of vlan99), **show etherchannel 1 port-channel** and **show ip int brief** (check if Port-channel 1 has been created and make sure it is up), **show run** (to check everything again).
- + When using "int range f0/x - y" command hit space bar before and after "-" otherwise the simulator does not accept it.
- + You must create vlan 99 for the switchB. SwitchA already have vlan 99 configured.
- + At the end, you can try to ping from SwitchB to RouterA (you can get the IP on RouterA via the show cdp neighbors detail on SwitchA), not sure if it can ping or not. If not, you can use the "ip default-gateway 192.168.1.1" on SwitchB.
- + The name of SwitchA and SwitchB can be swapped or changed so be careful to put your configuration into appropriate switch.

QUESTION 80

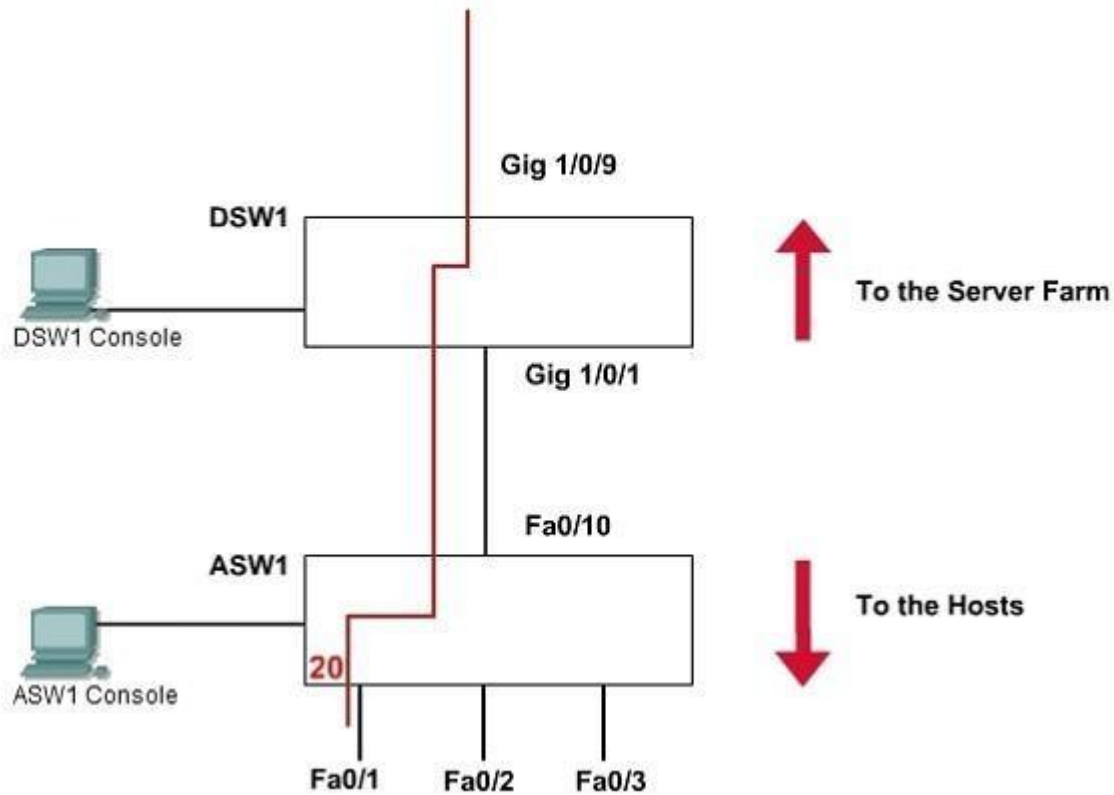
Lab Simulation - AAAdot1x

SWITCH.com is an IT company that has an existing enterprise network comprised of two layer 2 only switches; DSW1 and ASW1. The topology diagram indicates their layer 2 mapping. VLAN 20 is a new VLAN that will be used to provide the shipping personnel access to the server. Corporate policies do not allow layer 3 functionality to be enabled on the switches.

For security reasons, it is necessary to restrict access to VLAN 20 in the following manner:

- Users connecting to VLAN 20 via portf0/1 on ASW1 must be authenticated before they are given access to the network. Authentication is to be done via a Radius server:
- Radius server host: 172.120.40.46
- Radius key: rad123
- Authentication should be implemented as close to the host as possible.
- Devices on VLAN 20 are restricted to the subnet of 172.120.40.0/24.
- Packets from devices in the subnet of 172.120.40.0/24 should be allowed on VLAN 20.
- Packets from devices in any other address range should be dropped on VLAN 20.
- Filtering should be implemented as close to the serverfarm as possible.

The Radius server and application servers will be installed at a future date. You have been tasked with implementing the above access control as a pre-condition to installing the servers. You must use the available IOS switch features.



A. See the explanation

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

1. Verification of Pre-configuration:

- Check that the denoted vlan [vlan20] is created in both switches and ports [fa0/1 of ASW1] are assigned.
- Take down the radius-server ip [172.120.39.46] and the key [rad123].
- Take down the IP range [172.120.40.0/24] to be allowed the given vlan [vlan20]

2. Configure the Port based authentication on ASW1:

Enable AAA on the switch:

```
ASW1(config)# aaa new-model
```

The new-model keyword refers to the use of method lists, by which authentication methods and sources can be grouped or organized. Define the server along with its secret shared password:

```
ASW1(config)# radius-server host 172.120.39.46 key rad123
ASW1(config)# aaa authentication dot1x default group radius
```

This command causes the RADIUS server defined on the switch to be used for 802.1x authentication.
Enable 802.1x on the switch:

```
ASW1(config)# dot1x system-auth-control
```

Configure Fa0/1 to use 802.1x:

```
ASW1(config)# interface fastEthernet 0/1
ASW1(config-if)# switchport mode access
ASW1(config-if)# dot1x port-control auto
```

Notice that the word “auto” will force connected PC to authenticate through the 802.1x exchange.

```
ASW1(config-if)# exit
ASW1# copy running-config startup-config
```

3. Filter the traffic and create vlan access-map to restrict the traffic only for a range on DSW1

Define an access-list:

```
DSW1(config)# ip access-list standard 10 (syntax: ip access-list {standard | extended} acl-name)
DSW1(config-ext-nacl)# permit 172.120.40.0 0.0.0.255
DSW1(config-ext-nacl)# exit
```

Define an access-map which uses the access-list above:

```
DSW1(config)# vlan access-map MYACCMAP 10 (syntax: vlan access-map map_name [0-65535] )
DSW1(config-access-map)# match ip address 10 (syntax: match ip address {acl_number | acl_name})
DSW1(config-access-map)# action forward
DSW1(config-access-map)# exit
DSW1(config)# vlan access-map MYACCMAP 20
DSW1(config-access-map)# action drop (drop other networks)
```

```
DSW1(config-access-map)# exit
```

Apply a vlan-map into a vlan:

```
DSW1(config)# vlan filter MYACCMAP vlan-list 20 (syntax: vlan filter mapname vlan-list list)
DSW1# copy running-config startup-config
```

4. Note:

It is not possible to verify the configuration in this lab. All we have to do the correct configurations. Most of the exam takers report that “copy running-config startup-config” is not working. It does not matter.

Do not try unwanted/wrong commands in the consoles. They are not real switches.

QUESTION 81

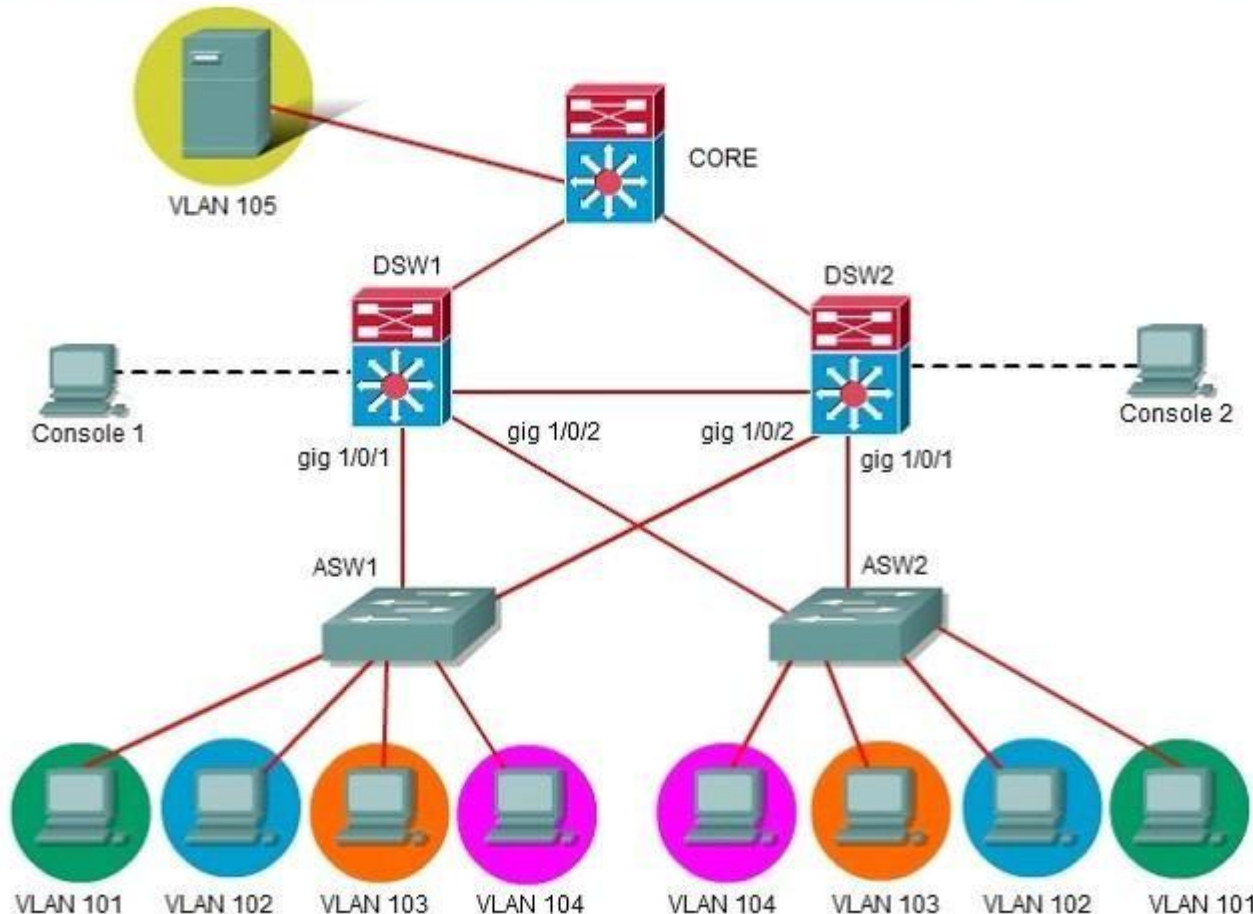
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRP to provide a high availability solution.

- DSW1 - primary device for VLAN 101 VLAN 102 and VLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthernet1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology



During routine maintenance, GigabitEthernet1/0/1 on DSW1 was shut down. All other interfaces were up. DSW2 became the active HSRP device for VLAN 101 as desired. However, after GigabitEthernet1/0/1 on DSW1 was reactivated, DSW1 did not become the active router for VLAN 101 as desired. What needs to be done to make the group for VLAN 101 function properly?

- A. Enable preempt in the VLAN 101 HSRP group on DSW1.
- B. Disable preempt in the VLAN 101 HSRP group on DSW2's.
- C. In the VLAN 101 HSRP group on DSW1, decrease the priority value to a value that is less than the priority value configured in the VLAN 101 HSRP group on DSW2.

- D. Decrease the decrement value in the track command for the VLAN 101 HSRP group on U DSWTs to a values less than the value in the track command for the VLAN 101 HSRP group on DSW2.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation:

<pre>interface Vlan101 ip address 192.168.101.1 255.255.255.0 standby 1 ip 192.168.101.254 standby 1 priority 200 standby 1 track GigabitEthernet1/0/1 55</pre>	<pre>interface Vlan101 ip address 192.168.101.2 255.255.255.0 standby 1 ip 192.168.101.254 standby 1 priority 150 standby 1 preempt standby 1 track GigabitEthernet1/0/1</pre>
---	--

A is correct. All other answers is incorrect. Because Vlan101 on DS1 (left) disable preempt. We need enable preempt to after it reactive, it will be active device. If not this command, it never become active device.

QUESTION 82

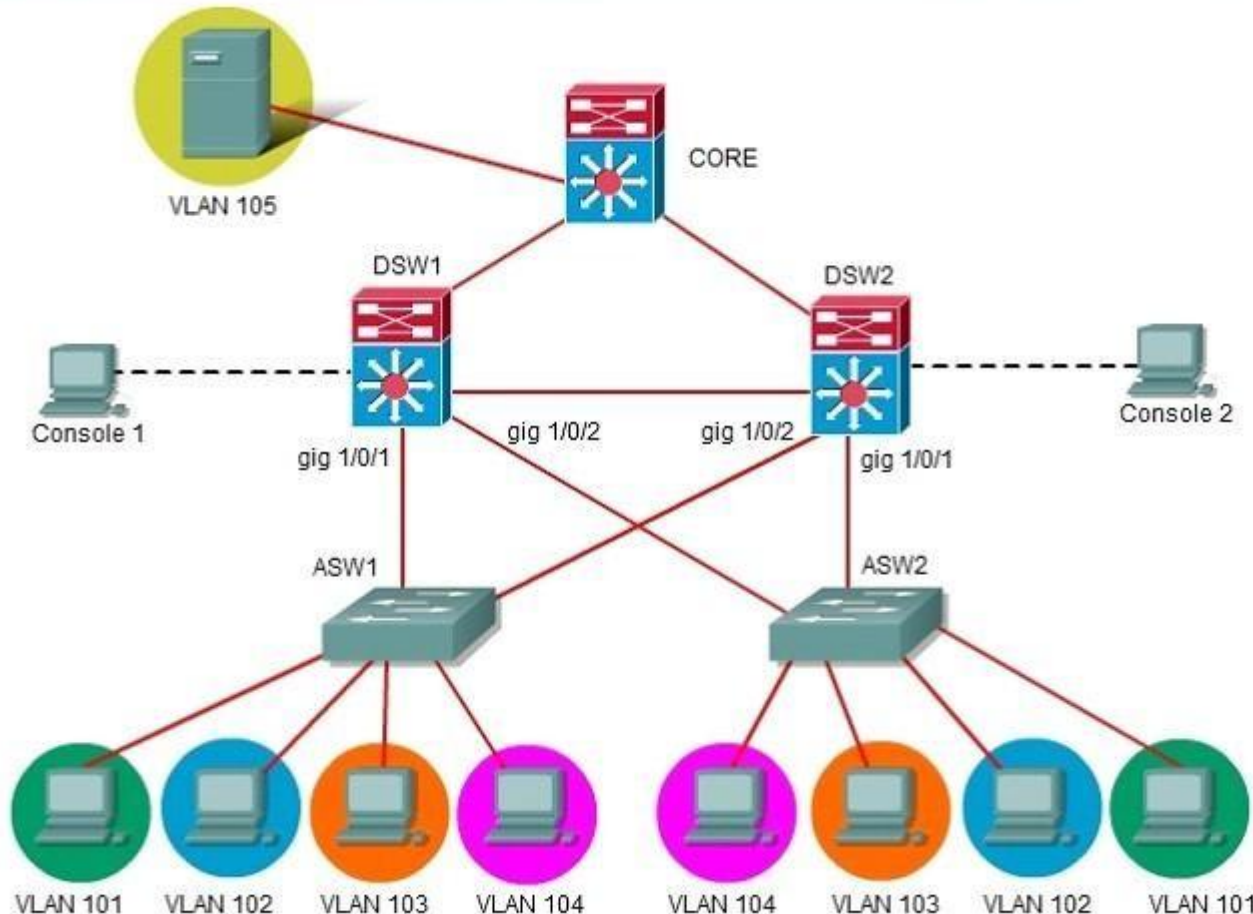
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRP to provide a high availability solution.

- DSW1 -primary device for VLAN 101 VLAN 102 andVLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthemet1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology



During routine maintenance, it became necessary to shut down the GigabitEthernet1/0/1 interface on DSW1. All other interfaces were up. During this time, DSW1 remained the active device for the VLAN 102 HSRP group. You have determined that there is an issue with the decrement value in the track command for the VLAN 102 HSRP group. What needs to be done to make the group function properly?

- The decrement value on DSW1 should be greaterthan 5 and less than 15. 0
- The decrement value on DSW1 should be greaterthan 9 and less than 15.
- The decrement value on DSW1 should be greaterthan 11 and less than 19.
- The decrement value on DSWS should be greaterthan 190 and less than 200.

E. The decrement value on DSWTs should be greater than 195 and less than 205.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

```
interface Vlan102
ip address 192.168.102.1 255.255.255.0
standby 2 ip 192.168.102.254
standby 2 priority 200
standby 2 preempt
standby 2 track GigabitEthernet1/0/1 5
!
interface Vlan102
ip address 192.168.102.2 255.255.255.0
standby 2 ip 192.168.102.254
standby 2 priority 190
standby 2 preempt
standby 2 track GigabitEthernet1/0/1
```

Use "show run" command to show. The left Vlan102 is console1 of DS1. Priority value is 200, we should decrement value in the track command from 11 to 18. Because $200 - 11 = 189 < 190$ (priority of Vlan102 on DS2).

QUESTION 83

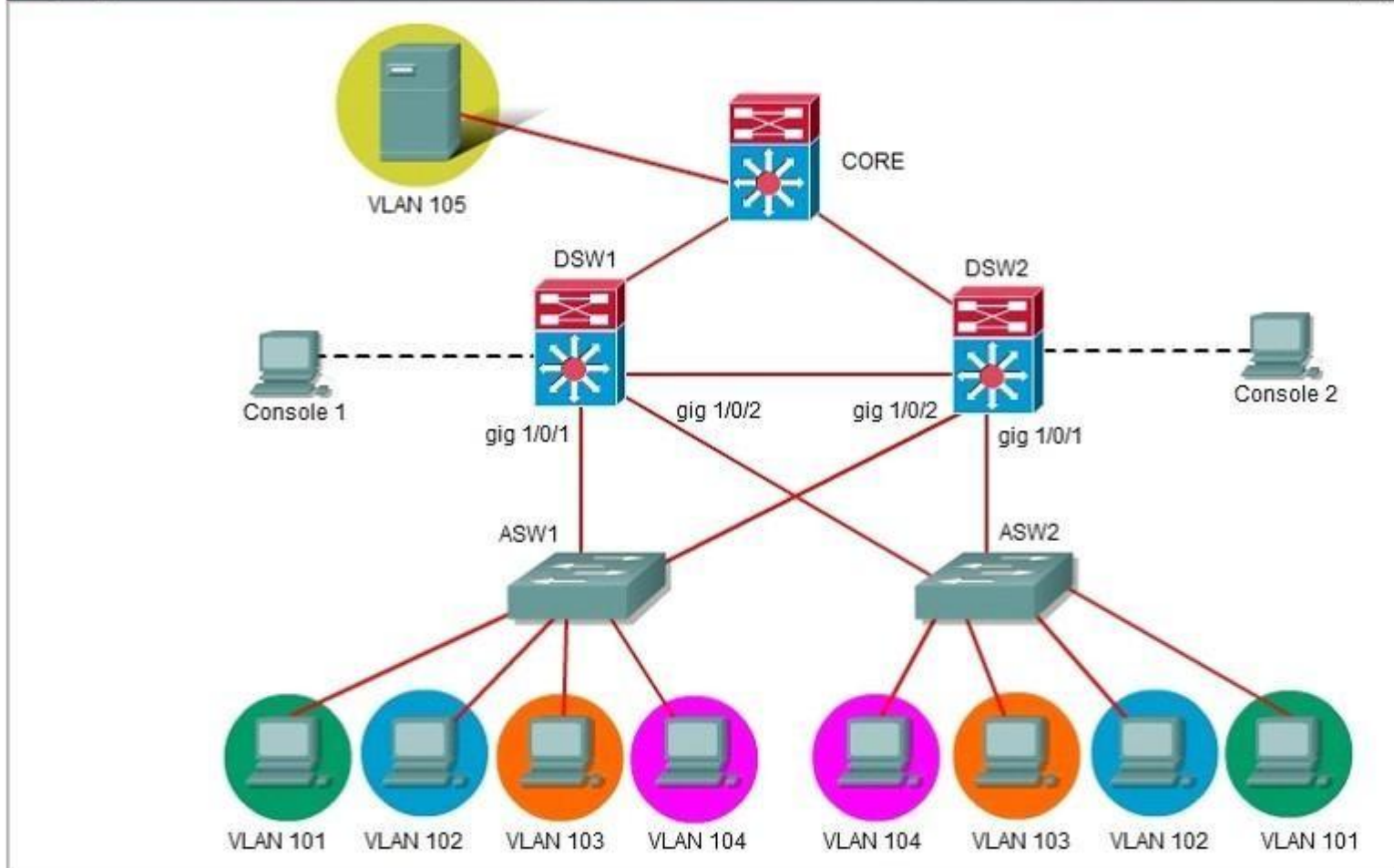
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRP to provide a high availability solution.

- DSW1 -primary device for VLAN 101 VLAN 102 and VLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthernet1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology



All interfaces are active. DSW2 has not become the active device for the VLAN 103 HSRP group. As related to the VLAN 103 HSRP group, what can be done to make the group function properly?

- A. On DSW1, disable preempt.
- B. On DSW1, decrease the priority value to a value less than 190 and greater than 150.
- C. On DSW2, increase the priority value to a value greater 200 and less than 250.
- D. On DSW2, increase the decrement value in the track command to a value greater than 10 and less than 50.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

From the output shown below of the HSRP status of DSW2, we see that the active router has a priority of 200, while the local priority is 190. We need to increase the priority of DSW2 to greater than 200, but it should be less than 250 so that if the gig 1/0/1 interface goes down, DSW1 will become active. DSW2 is configured to decrement the priority by 50 if this interface goes down, so the correct answer is to increase the priority to more than 200, but less than 250.

Console 2

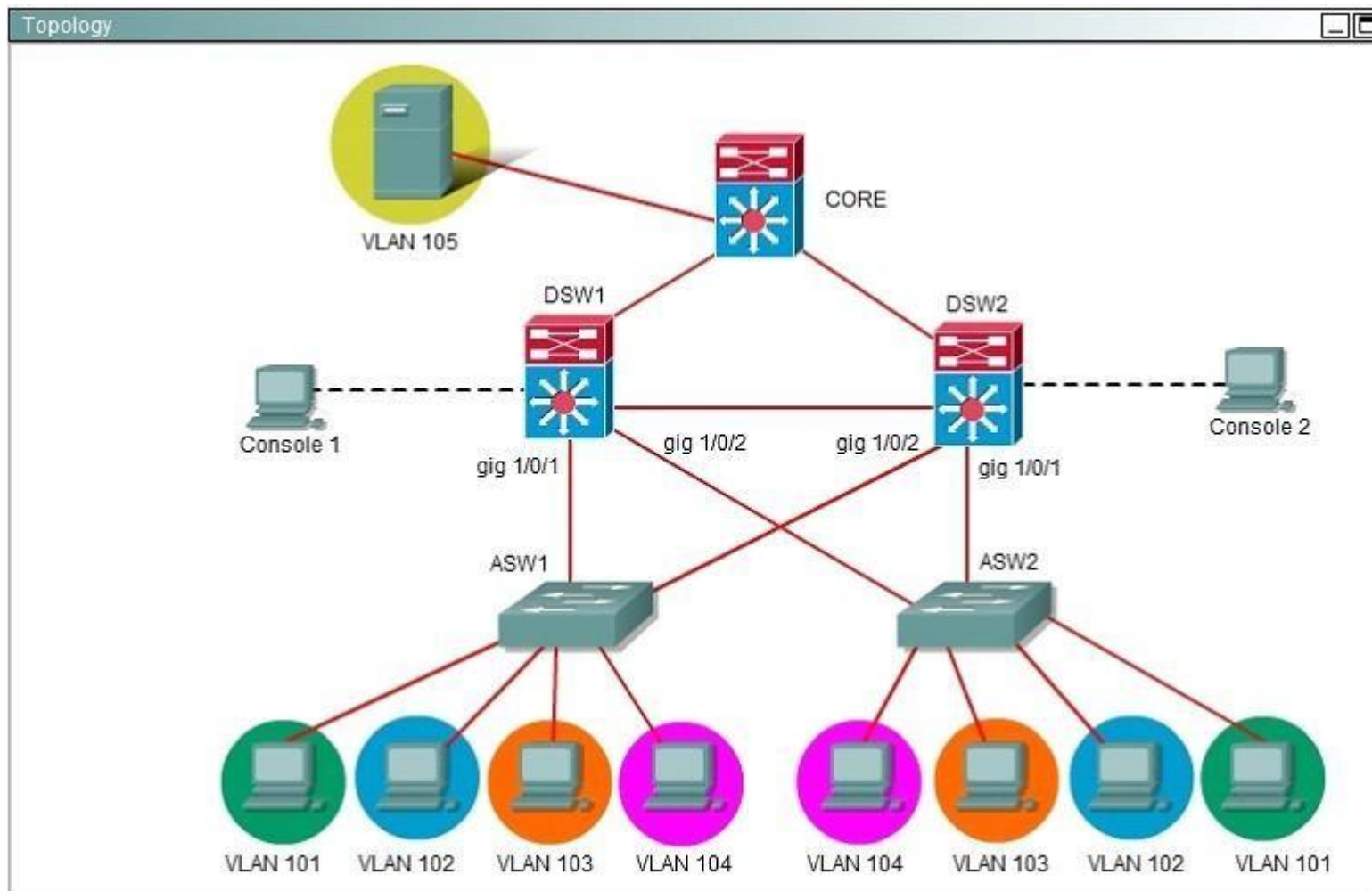
```
Standby router is local
Priority 190 (configured 190)
  Track interface GigabitEthernet1/0/1 state Up decrement 10
IP redundancy name is "hsrp-Vl102-2" (default)
Vlan103 - Group 3
State is Standby
  4 state changes, last state change 02:58:25
Virtual IP address is 192.168.103.254
Active virtual MAC address is 0000.0c07.ac03
  Local virtual MAC address is 0000.0c07.ac03 (v1 default)
Hello time 3 sec, hold time 10 sec
  Next hello sent in 0.315 secs
Preemption enabled
Active router is 192.168.103.1, priority 200 (expires in 9.454 sec)
Standby router is local
Priority 190 (configured 190)
  Track interface GigabitEthernet1/0/1 state Up decrement 50
IP redundancy name is "hsrp-Vl103-3" (default)
```

QUESTION 84 Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRP to provide a high availability solution.

- DSW1 -primary device for VLAN 101 VLAN 102 andVLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthemet1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.



During routine maintenance, it became necessary to shut down the GigabitEthernet1/0/1 interface on DSW1 and DSW2. All other interfaces were up.

During this time, DSW1 became the active router for the VLAN 104HSRP group. As related to the VLAN 104HSRP group, what can to be done to make the group function properly?

- A. On DSW1, disable preempt.
- B. On DSW2, decrease the priority value to a value less than 150.
- C. On DSW1, increase the decrement value in the track command to a value greater than 6.
- D. On DSW1, decrease the decrement value in the track command to a value less than 1.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

<pre>interface Vlan104 ip address 192.168.104.1 255.255.255.0 standby 4 ip 192.168.104.254 standby 4 priority 150 standby 4 preempt standby 4 track GigabitEthernet1/0/1 1</pre>	<pre>interface Vlan104 ip address 192.168.104.2 255.255.255.0 standby 4 ip 192.168.104.254 standby 4 priority 200 standby 4 preempt standby 4 track GigabitEthernet1/0/1 55</pre>
--	---

We should NOT disable preempt on DS1. By do that, you will make Vlan104's HSRP group fail function.

Example: if we are disable preempt on DS1. It can not become active device when G1/0/1 on DS2 fail. In this question, G0/1/0 on DS1 & DS2 is shutdown. Vlan104 (left) : $150 - 1 = 149$. Vlan104 (right) : $200 - 155 = 145$. Result is priority $149 > 145$ (Vlan104 on DS1 is active). If increase the decrement in the track value to a value greater than 6 ($>$ or $=$ 6). Vlan104 (left) : $150 - 6 = 144$. Result is priority $144 < 145$ (vlan104 on DS2 is active).

QUESTION 85

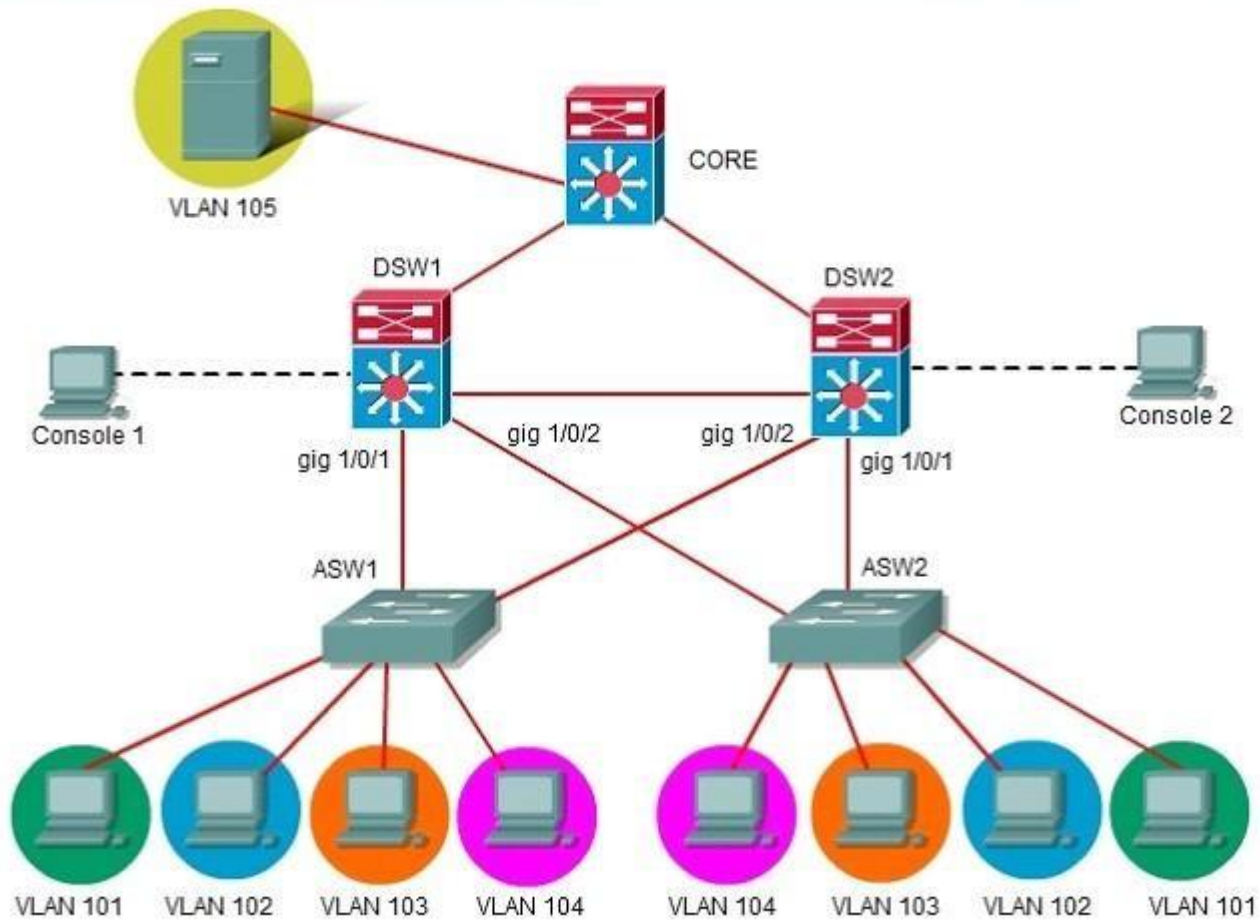
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRPto provide a high availability solution.

- DSW1 -primary device for VLAN 101 VLAN 102 andVLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthemet1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology



What is the priority value of the VLAN 105 HSRP group on DSW2?

- A. 50
- B. 100
- C. 150
- D. 200

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Use "show standby brief" command on console2. Very easy to see priority of Vlan105 is 100.

```
/!vlan105 - Group 5
  State is Standby
    10 state changes, last state change 02:54:51
  Virtual IP address is 192.168.105.254
  Active virtual MAC address is 0000.0c07.ac05
  Local virtual MAC address is 0000.0c07.ac05 (vl default)
  Hello time 3 sec, hold time 10 sec
  Next hello sent in 1.516 secs
  Preemption enabled
  Active router is 192.168.105.1, priority 150 (expires in 7.786 sec)
  Standby router is local
  Priority 100 (default 100)
  Track interface GigabitEthernet1/0/1 state Up decrement 10
  IP redundancy name is "hsrp-Vl105-5" (default)
SW2#
```

QUESTION 86

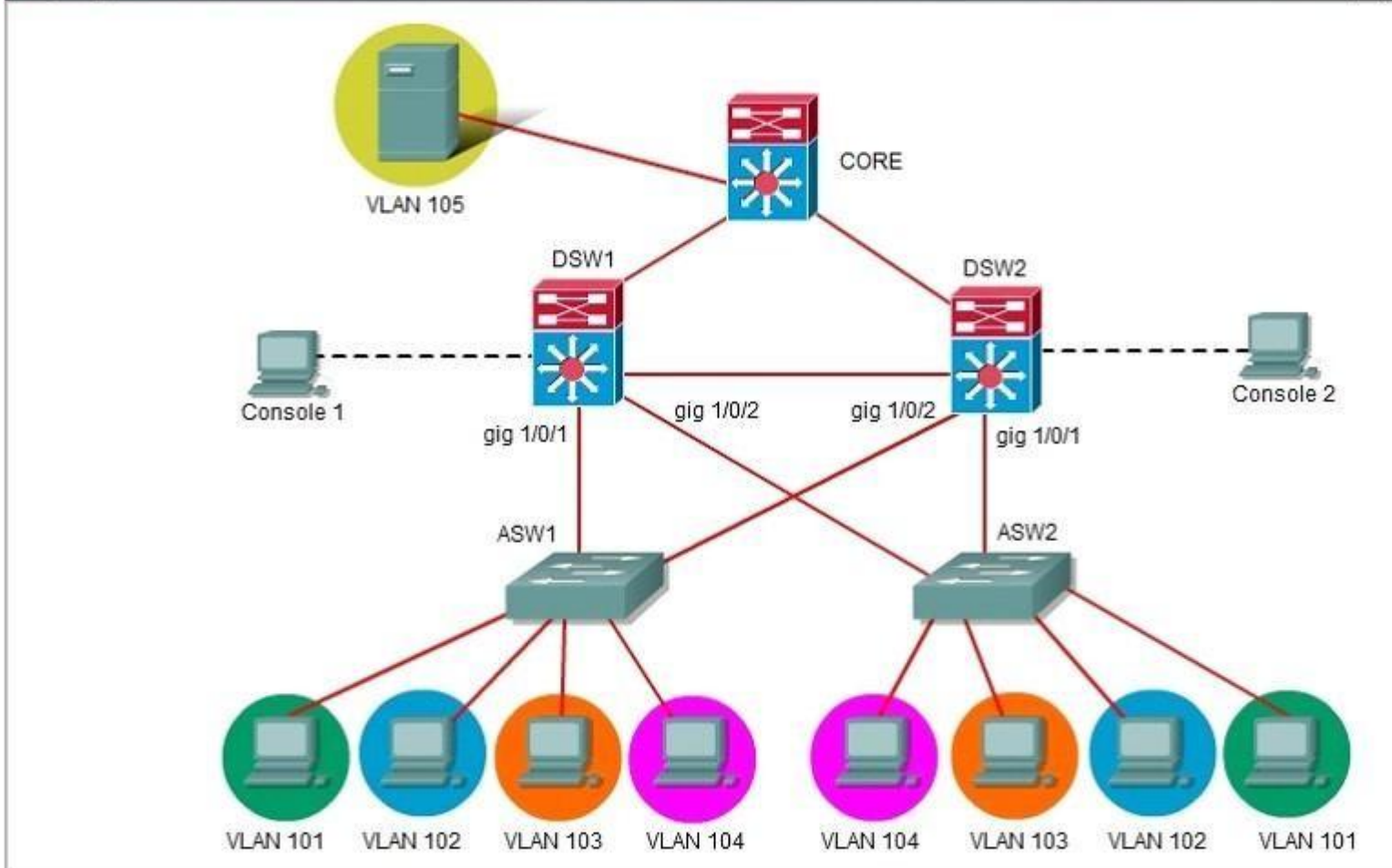
Hotspot - HSRP

Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRP to provide a high availability solution.

- DSW1 - primary device for VLAN 101 VLAN 102 and VLAN 105
- DSW2 - primary device for VLAN 103 and VLAN 104
- A failure of GigabitEthernet1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet1/0/1 on backup device has also failed.

Troubleshooting has identified several issues. Currently all interfaces are up. Using the running configurations and show commands, you have been asked to investigate and respond to the following question.

Topology



If GigabitEthernet1/0/1 on DSW2 is shutdown, what will be the resulting priority value of the VLAN 105 HSRP group on router DSW2?

- A. 90
- B. 100
- C. 150
- D. 200

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation:

As seen below, the current priority for VLAN 105 is 100, and the tracking feature for Gig 1/0/0 is enabled which will decrement the priority by 10 if this interface goes down for a priority value of 90.

```
Vlan105 - Group 5
  State is Standby
    10 state changes, last state change 02:54:51
  Virtual IP address is 192.168.105.254
  Active virtual MAC address is 0000.0c07.ac05
    Local virtual MAC address is 0000.0c07.ac05 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.516 secs
  Preemption enabled
  Active router is 192.168.105.1, priority 150 (expires in 7.786 sec)
  Standby router is local
  Priority 100 (default 100)
    Track interface GigabitEthernet1/0/1 state Up decrement 10
  IP redundancy name is "hsrp-Vl105-5" (default)
```

DSW2#

QUESTION 87

Lab Simulation - MLS and EIGRP

You have been tasked with configuring multilayer SwitchC, which has a partial configuration and has been attached to RouterC as shown in the topology diagram.

You need to configure SwitchC so that Hosts H1 and H2 can successfully ping the server S1. Also SwitchC needs to be able to ping server S1.

Due to administrative restrictions and requirements you should not add/delete vlans or create trunk links. Company policies forbid the use of static or default routing. All routes must be learned via EIGRP 65010 routing protocol.

You do not have access to RouterC. RouterC is correctly configured. No trunking has been configured on RouterC.

Routed interfaces should use the lowest host on a subnet when possible. The following subnets are available to implement this solution:

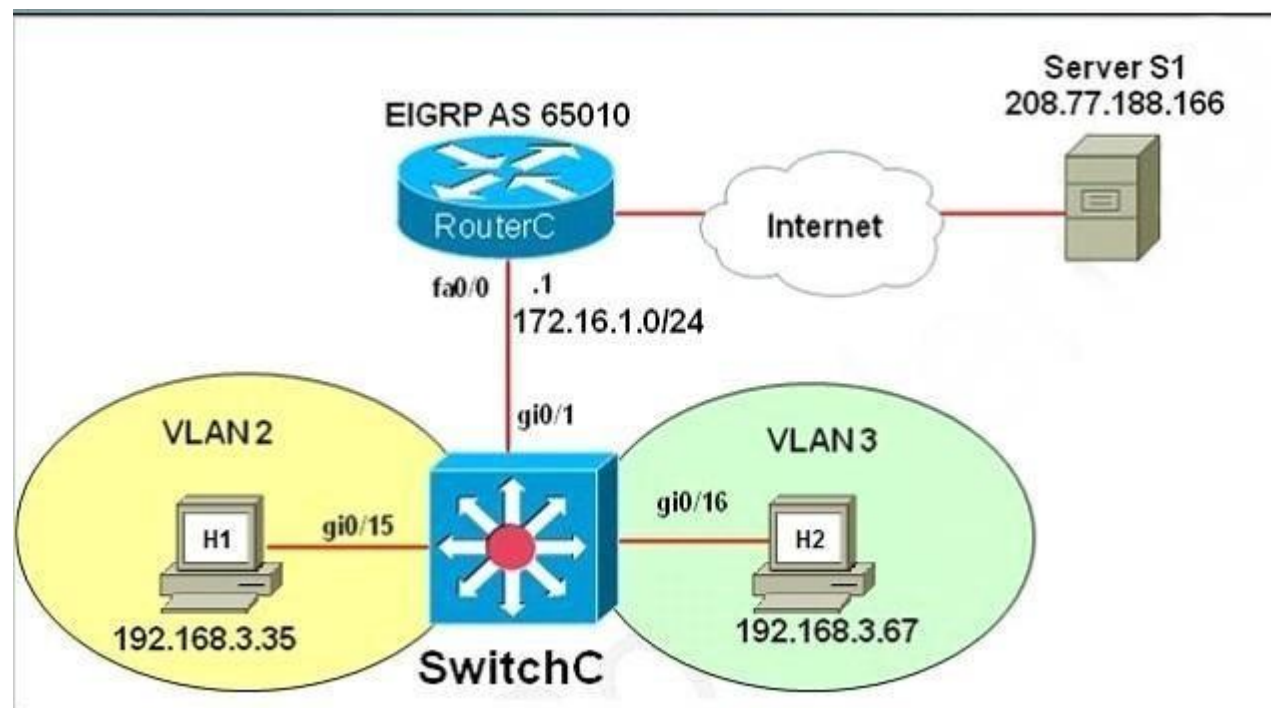
- 10.10.10.0/24
- 190.200.250.32/27
- 190.200.250.64/27

Hosts H1 and H2 are configured with the correct IP address and default gateway.

SwitchC uses Cisco as the enable password.

Routing must only be enabled for the specific subnets shown in the diagram.

Note: Due to administrative restrictions and requirements you should not add or delete VLANs, changes VLAN port assignments or create trunks. Company policies forbid the use of static or default routing. All routes must be learned via the EIGRP routing protocol.



A. See the explanation

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

In real life, there are two ways to configure interVLAN routing in this case:

- + Use RouterC as a “router on a stick” and SwitchC as a pure Layer2 switch. Trunking must be established between RouterC and SwitchC.
- + Only use SwitchC for interVLAN routing without using RouterC, SwitchC should be configured as a Layer 3 switch (which supports ip routing function as a router). No trunking requires.

The question clearly states “No trunking has been configured on RouterC” so RouterC does not contribute to interVLAN routing of hosts H1 & H2 -> SwitchC must be configured as a Layer 3 switch with SVIs for interVLAN routing.

We should check the default gateways on H1 & H2. Click on H1 and H2 and type the “ipconfig” command to get their default gateways.

```
C:\>ipconfig
```

We will get the default gateways as follows:

Host1:

- + Default gateway: 190.200.250.33

Host2:

- + Default gateway: 190.200.250.65

Now we have enough information to configure SwitchC (notice the EIGRP AS in this case is 650)

Note: VLAN2 and VLAN3 were created and gi0/10, gi0/11 interfaces were configured as access ports so we don't need to configure them in this sim.

```
SwitchC# configure terminal
SwitchC(config)# int gi0/1
SwitchC(config-if)#no switchport -> without using this command, the simulator does not let you assign IP address on Gi0/1 interface.
SwitchC(config-if)# ip address 10.10.10.2 255.255.255.0 ->RouterC has used IP 10.10.10.1 so this is the lowest usable IP address.
SwitchC(config-if)# no shutdown
SwitchC(config-if)# exit
SwitchC(config)# int vlan 2
SwitchC(config-if)# ip address 190.200.250.33 255.255.255.224
SwitchC(config-if)# no shutdown
SwitchC(config-if)# int vlan 3
SwitchC(config-if)# ip address 190.200.250.65 255.255.255.224
SwitchC(config-if)# no shutdown
SwitchC(config-if)#exit
```

```
SwitchC(config)# ip routing (Notice: MLS will not work without this command)
SwitchC(config)# router eigrp 650
SwitchC(config-router)# network 10.10.10.0 0.0.0.255
SwitchC(config-router)# network 190.200.250.32 0.0.0.31
SwitchC(config-router)# network 190.200.250.64 0.0.0.31
```

NOTE: THE ROUTER IS CORRECTLY CONFIGURED, so you will not miss within it in the exam , also don't modify/delete any port just do the above configuration. Also some reports said the "no auto-summary" command can't be used in the simulator, in fact it is not necessary because the network 190.200.0.0/16 is not used anywhere else in this topology.

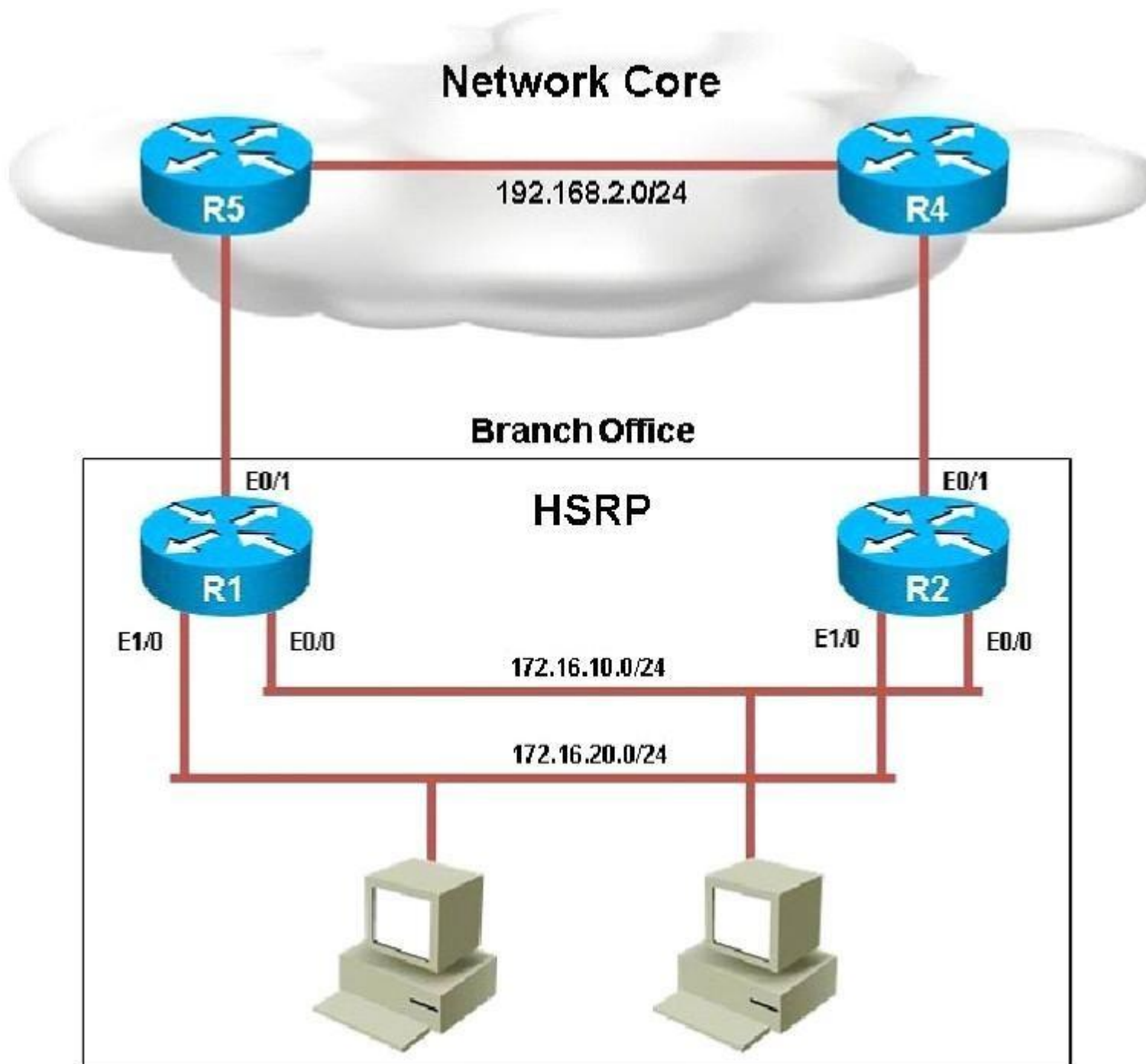
In order to complete the lab , you should expect the ping to SERVER to succeed from the MLS , and from the PCs as well.

Also make sure you use the correct EIGRP AS number (in the configuration above it is 650 but it will change when you take the exam) but we are not allowed to access RouterC so the only way to find out the EIGRP AS is to look at the exhibit above. If you use wrong AS number, no neighbor relationship is formed between RouterC and SwitchC.

In fact, we are pretty sure instead of using two commands "network 190.200.250.32 0.0.0.31" and "network 190.200.250.64 0.0.0.31" we can use one simple command "network 190.200.0.0" because it is the nature of distance vector routing protocol like EIGRP: only major networks need to be advertised; even without "no auto-summary" command the network still works correctly. But in the exam the sim is just a flash based simulator so we should use two above commands, just for sure. But after finishing the configuration, we can use "show run" command to verify, only the summarized network 190.200.0.0 is shown.

QUESTION 88

Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.



What percentage of the outgoing traffic from the 172.16.10.0/24 subnet is being forwarded through R1?

- A. R1-0%
- B. R1-50 %, R2-50%
- C. R2-100%
- D. R1-100%

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

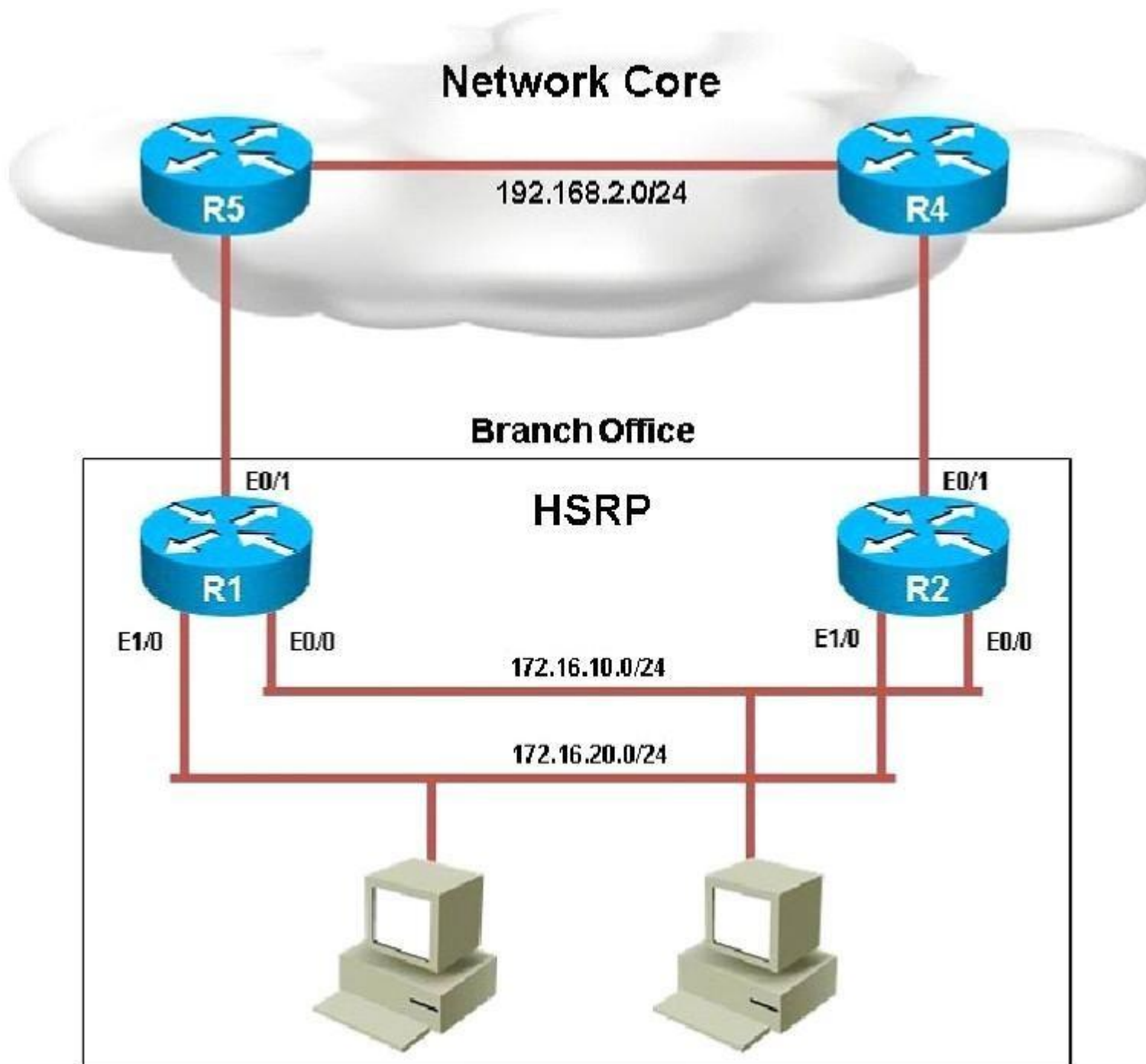
Based on the following output, we see that R1 is the active standby router for the Ethernet 0/0 link, so all outgoing traffic will be forwarded to R1.

R1

```
R1#show standby
Ethernet0/0 - Group 1
  State is Active
    2 state changes, last state change 00:05:01
  Virtual IP address is 172.16.10.254
  Active virtual MAC address is 4000.0000.0010 (MAC In Use)
    Local virtual MAC address is 4000.0000.0010 (cfgd)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.936 secs
  Authentication text, string "cisco123"
  Preemption enabled, delay reload 180 secs
  Active router is local
  Standby router is 172.16.10.1, priority 100 (expires in 10.464 sec)
  Priority 130 (configured 130)
    Track object 1 state Up decrement 40
  Group name is "hsrp-Et0/0-1" (default)
```

QUESTION 89

Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.



Refer to the exhibit. If router R1 interface Ethernet0/0 goes down and recovers, which of the statement regarding HSRP priority is true?

- A. The interface will have the priority decremented by 40 for HSRP group 1.
- B. The interface will have the priority decremented by 60 for HSRP group 1
- C. The interface will have its current priority incremented by 40 for HSRP group 1
- D. The interface will have its current priority incremented by 60 for HSRP group 1
- E. The interface will default to the a priority of 100 for HSRP group 1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

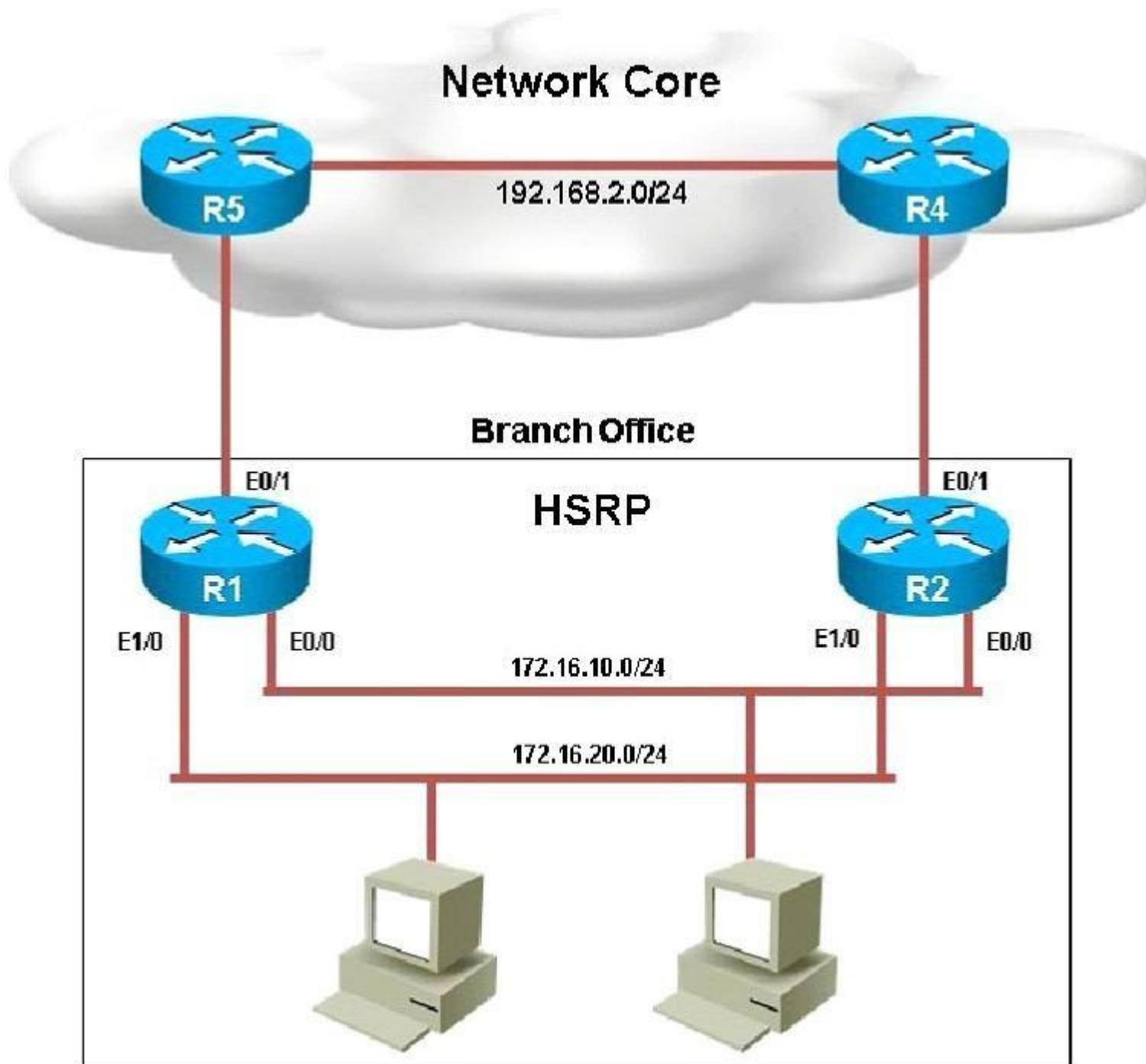
Here is the HSRP configuration seen on R1:

```
R1
!
interface Ethernet0/0
  description Link to R2
  ip address 172.16.10.2 255.255.255.0
  standby 1 ip 172.16.10.254
  standby 1 priority 130
  standby 1 preempt delay reload 180
  standby 1 authentication cisco123
  standby 1 mac-address 4000.0000.0010
  standby 1 track 1 decrement 40
!
interface Ethernet0/1
```

Here, when the Ethernet 0/0 interface goes down, the standby 1 track decrement command will lower the priority from 130 to 90. However, when it comes back up, it will then increment it by 40 back to 130 for HSRP group 1.

QUESTION 90

Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.



What issue is causing Router R1 and R2 to both be displayed as the HSRP active router for group 2?

- A. The HSRP group number mismatch
- B. The HSRP group authentication is misconfigured
- C. The HSRP Hello packets are blocked
- D. The HSRP timers mismatch
- E. The HSRP group priorities are different

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Based on the configuration output, we see that authentication is configured on R2, but not on R1:

R1

```
!  
interface Ethernet1/0  
  description Link to R2  
  ip address 172.16.20.2 255.255.255.0  
  standby 2 ip 172.16.20.254  
!
```


R2

```
!  
interface Ethernet1/0  
  description Link to R1  
  ip address 172.16.20.1 255.255.255.0  
  standby 2 ip 172.16.20.254  
  standby 2 priority 130  
  standby 2 preempt delay reload 180  
  standby 2 authentication cisco123  
  standby 2 track 1 decrement 40  
!
```

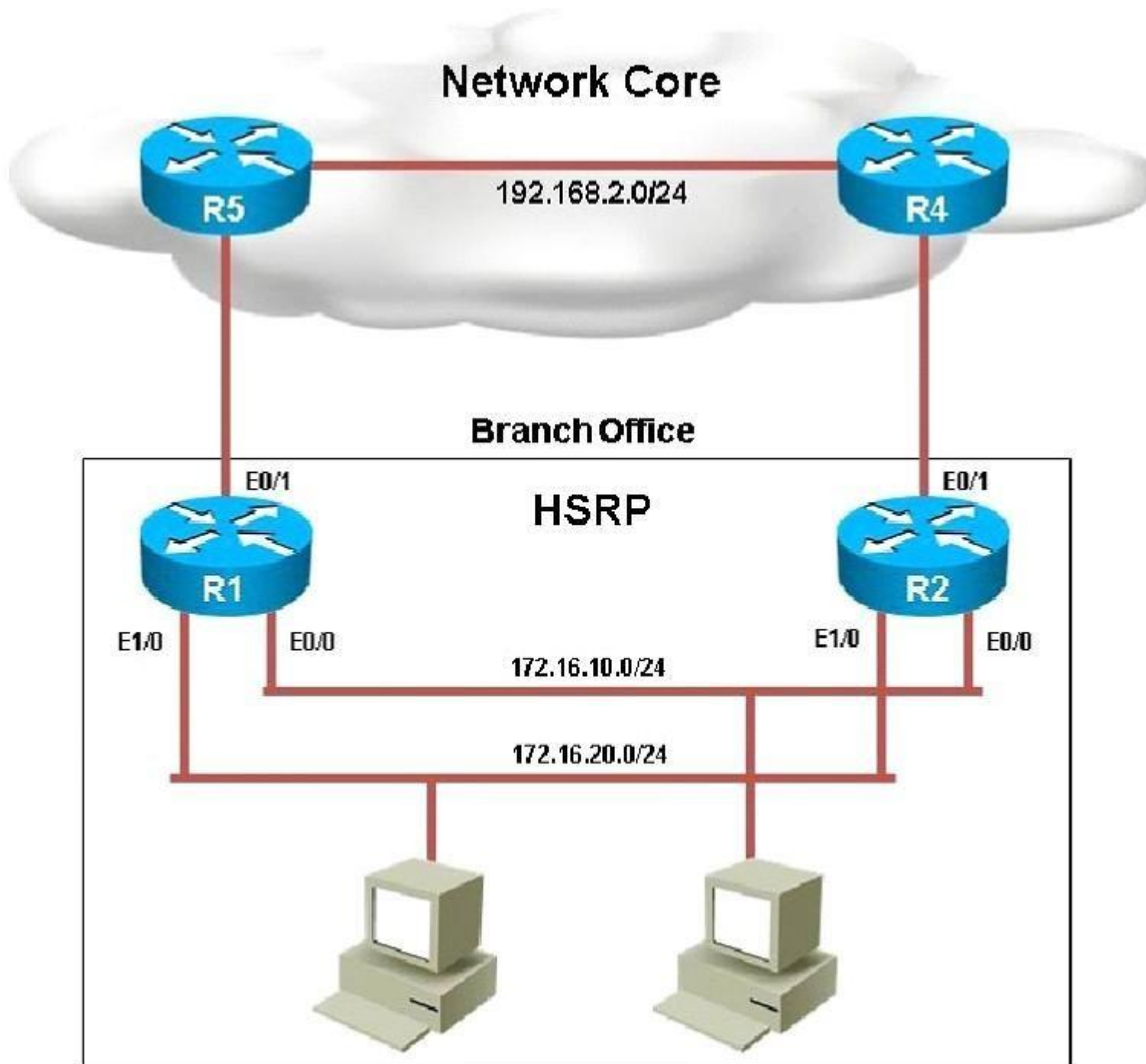
This can be further verified by issuing the "show standby" command on each router.

R1	R2
<pre> Ethernet1/0 - Group 2 State is Active 2 state changes, last state change 00:05:03 Virtual IP address is 172.16.20.254 Active virtual MAC address is 0000.0c07.ac02 (MAC In Use) Local virtual MAC address is 0000.0c07.ac02 (v1 default) Hello time 3 sec, hold time 10 sec Next hello sent in 0.656 secs Preemption disabled Active router is local Standby router is unknown Priority 100 (default 100) Group name is "hsrp-Et1/0-2" (default) R1# % Ambiguous command R1# </pre>	<pre> Ethernet1/0 - Group 2 State is Active 2 state changes, last state change 00:04:48 Virtual IP address is 172.16.20.254 Active virtual MAC address is 0000.0c07.ac02 (MAC In Use) Local virtual MAC address is 0000.0c07.ac02 (v1 default) Hello time 3 sec, hold time 10 sec Next hello sent in 2.400 secs Authentication text, string "cisco123" Preemption enabled, delay reload 180 secs Active router is local Standby router is unknown Priority 130 (configured 130) Track object 1 state Up decrement 40 Group name is "hsrp-Et1/0-2" (default) R2# </pre>

\\psf\Home\Trash\Screen Shot 2014-10-16 at 4.45.29 PM.png

QUESTION 91

Your customer has asked you to come in and verify the operation of routers R1 and R2 which are configured to use HSRP. They have questions about how these two devices will perform in the event of a device failure.



What is the virtual mac-address of HSRP group 1?

- A. 0000.0c07.ac02
- B. 4000.0000.0010
- C. 0000.0c07.ac01
- D. 4000.0000.ac01
- E. 4000.0000.ac02
- F. 0000.0c07.0010

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Issuing the "show standby" command on either router shows us that the virtual MAC used by HSRP group 1 is 4000.0000.0010.

R1

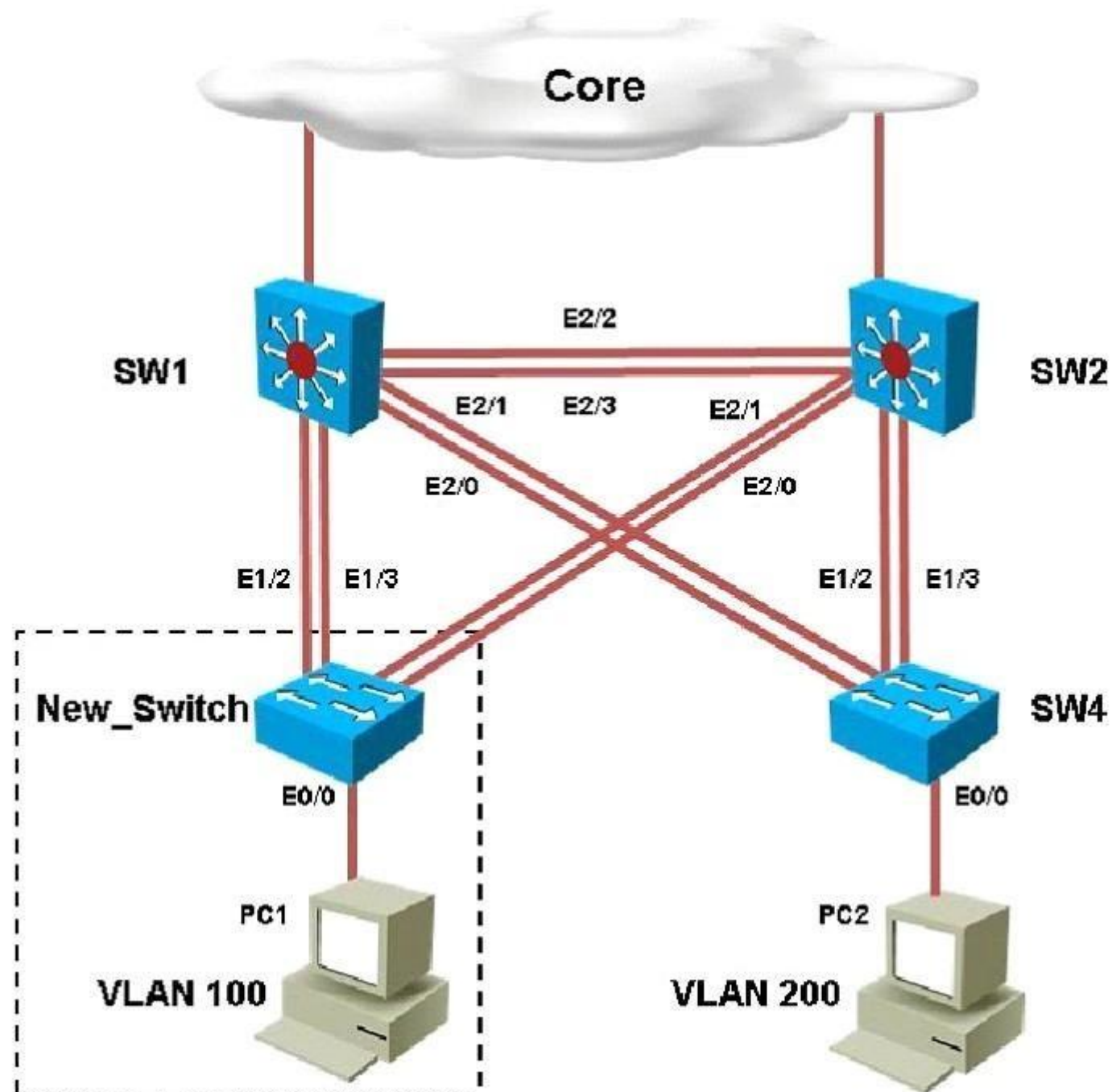
```
R1#show standby
Ethernet0/0 - Group 1
  State is Active
    2 state changes, last state change 00:05:01
  Virtual IP address is 172.16.10.254
  Active virtual MAC address is 4000.0000.0010 (MAC In Use)
    Local virtual MAC address is 4000.0000.0010 (cfgd)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.936 secs
  Authentication text, string "cisco123"
  Preemption enabled, delay reload 180 secs
  Active router is local
  Standby router is 172.16.10.1, priority 100 (expires in 10.464 sec)
  Priority 130 (configured 130)
    Track object 1 state Up decrement 40
  Group name is "hsrp-Et0/0-1" (default)
```

R2

```
R2#show standby
Ethernet0/0 - Group 1
  State is Standby
    1 state change, last state change 00:04:38
  Virtual IP address is 172.16.10.254
  Active virtual MAC address is 4000.0000.0010 (MAC Not In Use)
    Local virtual MAC address is 4000.0000.0010 (cfgd)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.128 secs
  Authentication text, string "cisco123"
  Preemption disabled
  Active router is 172.16.10.2, priority 130 (expires in 10.512 sec)
  Standby router is local
  Priority 100 (default 100)
  Group name is "hsrp-Et0/0-1" (default)
```

QUESTION 92

You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.



You are connecting the New_Switch to the LAN topology; the switch has been partially configured and you need to complete the rest of configuration to enable PC1 communication with PC2.
Which of the configuration is correct?

- ☐ vtp domain CCNP_TEST
vtp password cisco123
vtp version 3
vtp mode server
int e0/0
switchport mode access
switchport access vlan 100
- ☐ vtp domain CCNP_TEST
vtp password cisco123
vtp version 3
vtp mode client
int e0/0
switchport mode access
switchport access vlan 200
- ☐ vtp domain CCNP_TEST
vtp password cisco123
vtp version 2
vtp mode client
int e0/0
switchport mode access
switchport access vlan 100
- ☐ vtp domain CCNP
vtp password cisco
vtp version 3
vtp mode client
int e0/0
switchport mode access
switchport access vlan 100
- ☐ vtp domain CCNP
vtp password cisco
vtp version 2
vtp mode transparent
int e0/0
switchport mode access
switchport access vlan 200

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Within any VTP, the VTP domain name must match. So, step one is to find the correct VTP name on the other switches. Logging in to SW1 and using the "show vtp status" command we see this:

SW1

```
SW1#show vtp status
VTP Version capable      : 1 to 3
VTP version running      : 3
VTP Domain Name          : CCNP
VTP Pruning Mode          : Enabled
VTP Traps Generation     : Disabled
Device ID                 : aabb.cc00.2500
```

Feature VLAN:

```
VTP Operating Mode        : Server
Number of existing VLANs  : 8
Number of existing extended VLANs : 0
Maximum VLANs supported locally : 4096
Configuration Revision    : 11
Primary ID                 : aabb.cc00.2b00
Primary Description        : SW1
MD5 digest                 : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                           0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```

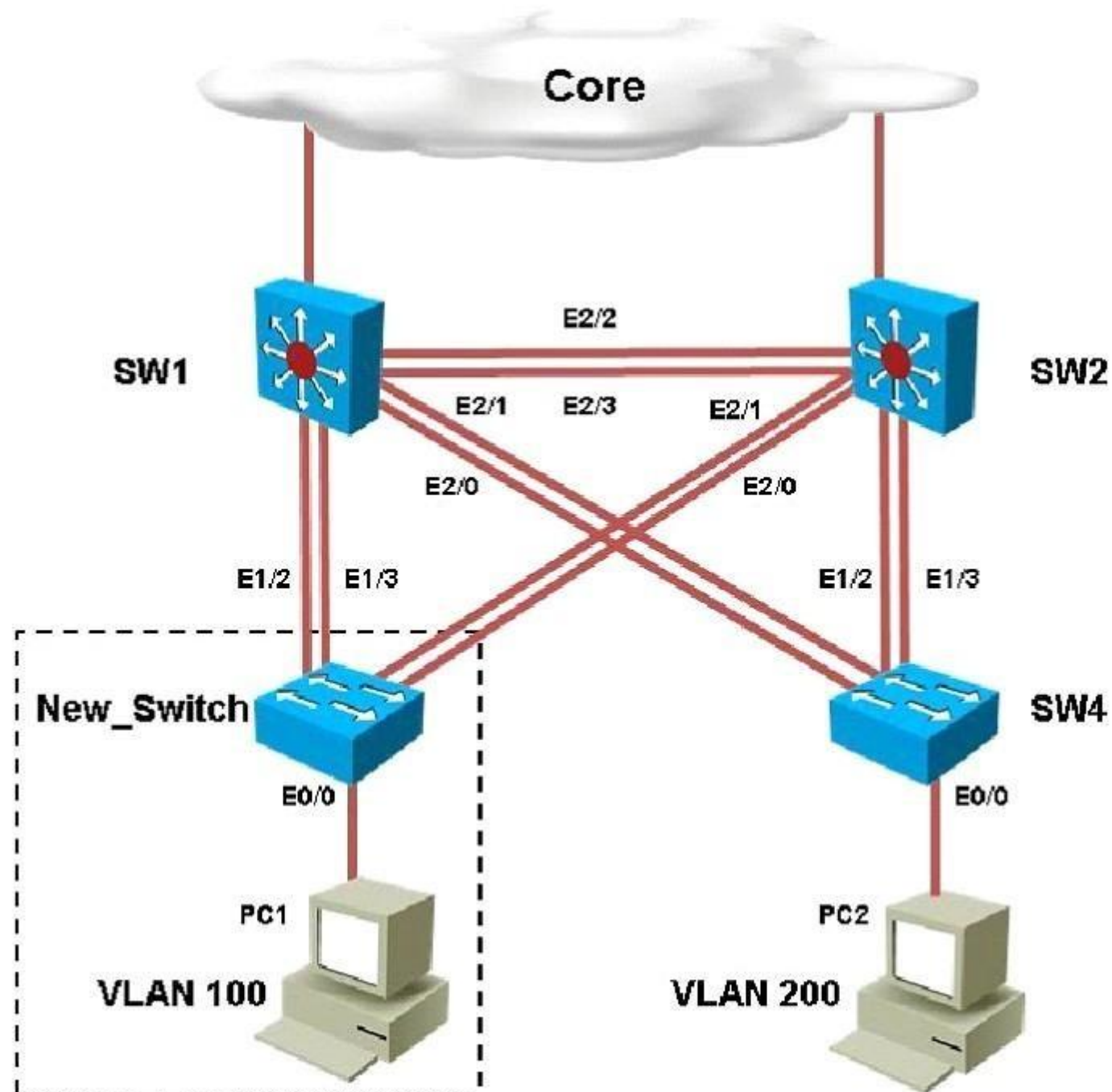
Feature MST:

So we know that the VTP domain must be CCNP. This leaves only choice D and E. We also see from the topology diagram that eth 0/0 of the new switch connects to a PC in VLAN 100, so we know that this port must be an access port in VLAN 100, leaving only choice D as correct. Note that the

VTP versions supported in this network are 1, 2, 3 so either VTP version 2 or 3 can be configured on the new switch.

QUESTION 93

You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.



Refer to the configuration. For which configured VLAN are untagged frames sent over trunk between SW1 and SW2?

- A. VLAN1
- B. VLAN 99
- C. VLAN 999
- D. VLAN 40
- E. VLAN 50
- F. VLAN 200
- G. VLAN 300

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation:

The native VLAN is used for untagged frames sent along a trunk. By issuing the "show interface trunk" command on SW1 and SW2 we see the native VLAN is 99.

SW1

```
SW1#show interfaces trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Et1/2	on	802.1q	trunking	99
Et1/3	on	802.1q	trunking	99
Et2/0	on	802.1q	trunking	99
Et2/1	on	802.1q	trunking	99
Et2/2	on	802.1q	trunking	99
Et2/3	on	802.1q	trunking	99

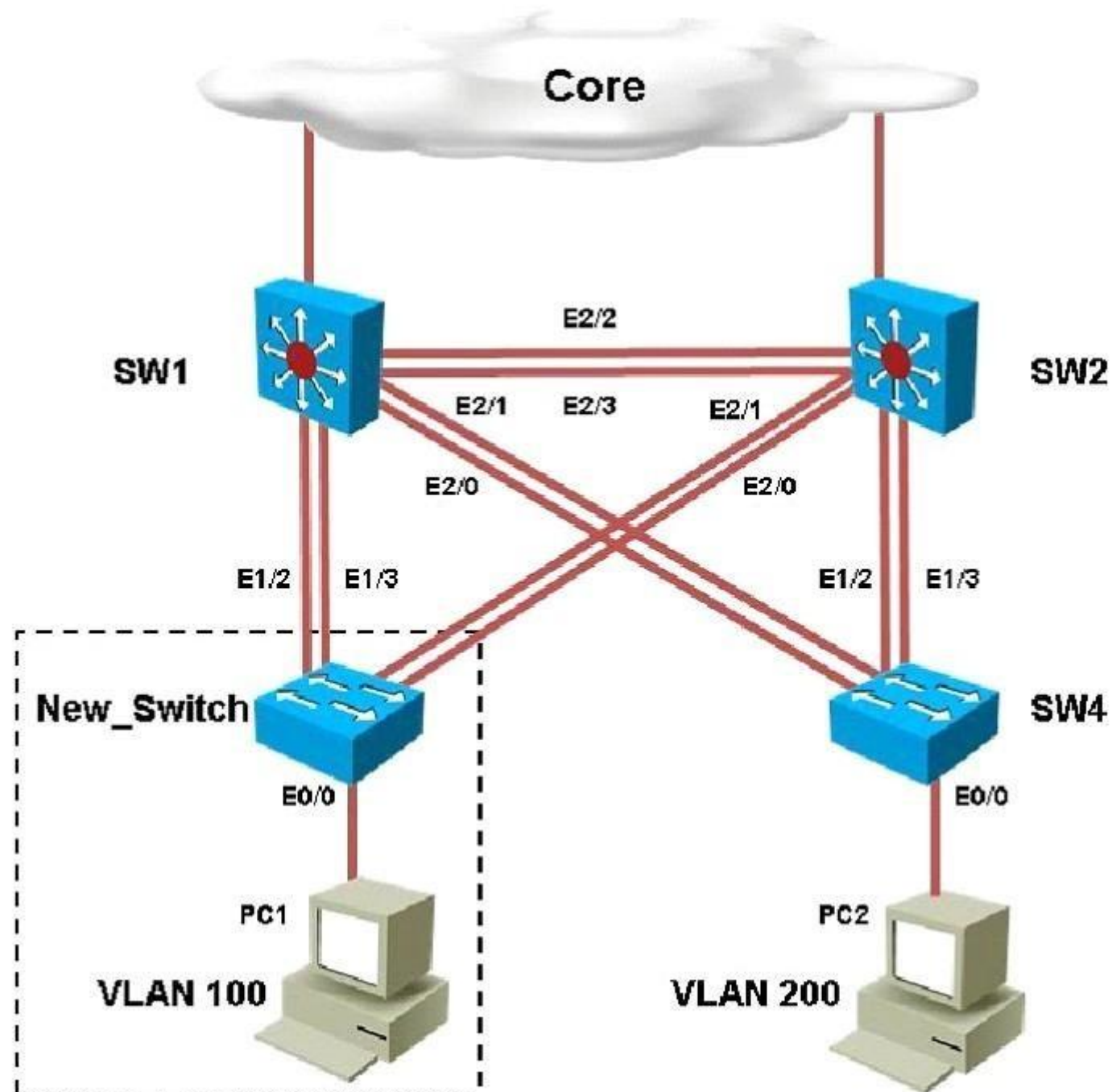
SW2

```
SW2#show interfaces trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Et1/2	on	802.1q	trunking	99
Et1/3	on	802.1q	trunking	99
Et2/0	on	802.1q	trunking	99
Et2/1	on	802.1q	trunking	99
Et2/2	on	802.1q	trunking	99
Et2/3	on	802.1q	trunking	99

QUESTION 94

You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.



You are adding new VLANs. VLAN500 and VLAN600 to the topology in such way that you need to configure SW1 as primary root for VLAN 500 and secondary for VLAN 600 and SW2 as primary root for VLAN 600 and secondary for VLAN 500. Which configuration step is valid?

- A. Configure VLAN 500 & VLAN 600 on both SW1 & SW2
- B. Configure VLAN 500 and VLAN 600 on SW1 only
- C. Configure VLAN 500 and VLAN 600 on SW2 only
- D. Configure VLAN 500 and VLAN 600 on SW1 ,SW2 and SW4
- E. On SW2; configure vtp mode as off and configure VLAN 500 and VLAN 600; configure back to vtp server mode.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation:

By issuing the "show vtp status command on SW2, SW2, and SW4 we see that both SW1 and SW2 are operating in VTP server mode, but SW4 is a client, so we will need to add both VLANs to SW1 and SW2.

SW1

```
SW1#show vtp status
VTP Version capable      : 1 to 3
VTP version running     : 3
VTP Domain Name         : CCNP
VTP Pruning Mode        : Enabled
VTP Traps Generation    : Disabled
Device ID               : aabb.cc00.2500
```

Feature VLAN:

```
VTP Operating Mode      : Server
Number of existing VLANs : 8
Number of existing extended VLANs : 0
Maximum VLANs supported locally : 4096
Configuration Revision  : 11
Primary ID              : aabb.cc00.2b00
Primary Description     : SW1
MD5 digest              : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                        : 0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```

SW2

```
SW2#show vtp status
VTP Version capable      : 1 to 3
VTP version running     : 3
VTP Domain Name         : CCNP
VTP Pruning Mode        : Enabled
VTP Traps Generation     : Disabled
Device ID               : aabb.cc00.2600
```

Feature VLAN:

```
VTP Operating Mode      : Server
Number of existing VLANs : 8
Number of existing extended VLANs : 0
Maximum VLANs supported locally : 4096
Configuration Revision  : 11
Primary ID              : aabb.cc00.2b00
Primary Description     : SW1
MD5 digest              : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                        : 0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```

SW4

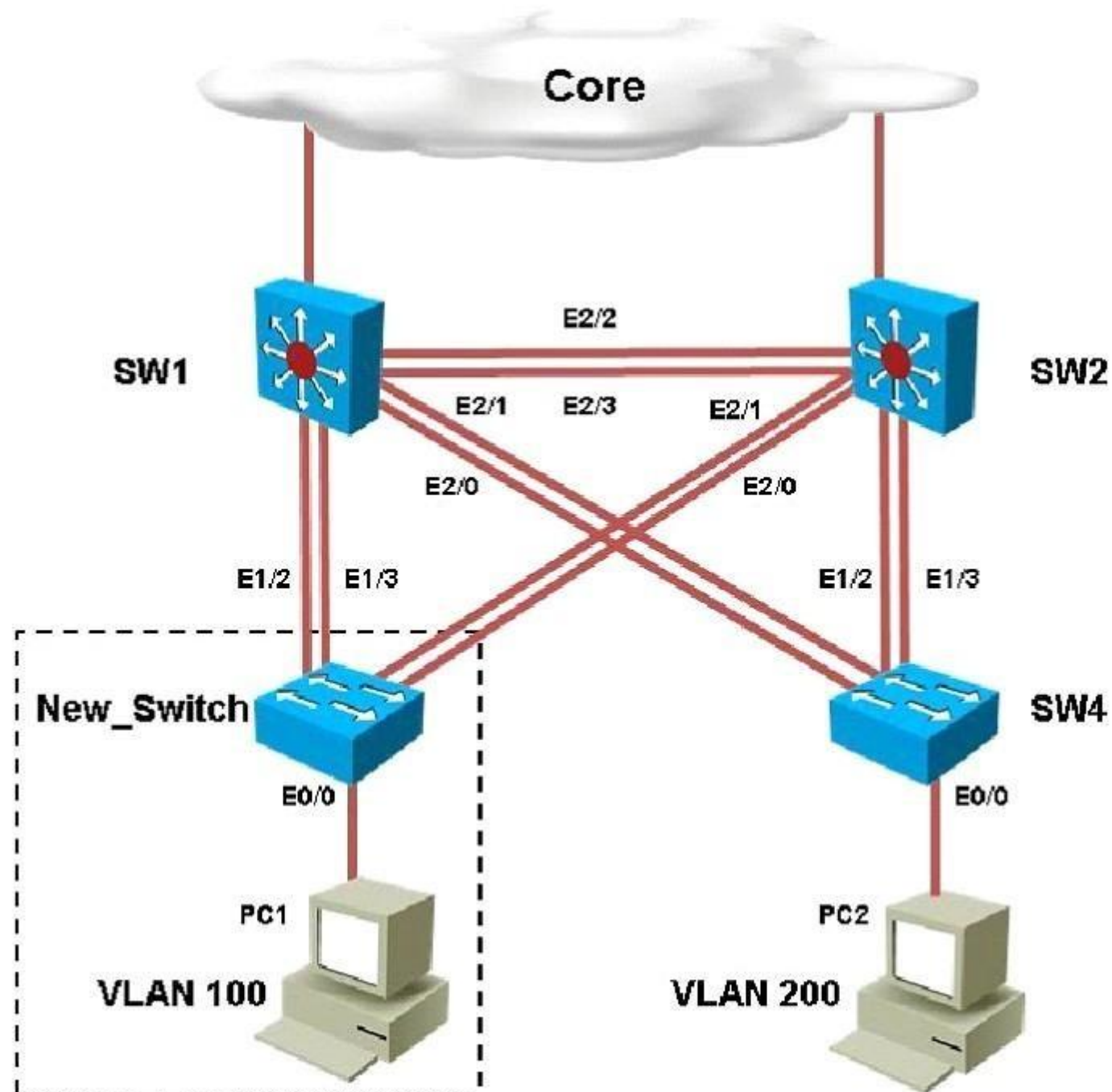
```
SW4#show vtp status
VTP Version capable      : 1 to 3
VTP version running      : 3
VTP Domain Name          : CCNP
VTP Pruning Mode         : Enabled
VTP Traps Generation     : Disabled
Device ID                : aabb.cc00.2800
```

Feature VLAN:

```
VTP Operating Mode       : Client
Number of existing VLANs : 8
Number of existing extended VLANs : 0
Maximum VLANs supported locally : 4096
Configuration Revision   : 11
Primary ID               : aabb.cc00.2b00
Primary Description      : SW1
MD5 digest               : 0xA2 0xFA 0x6E 0x8D 0xD0 0xDE 0x5A 0xEF
                        : 0xE3 0x65 0x9A 0xF7 0x03 0xBF 0xBA 0x10
```

QUESTION 95

You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.



Examine the VTP configuration. You are required to configure private VLANs for a new server deployment connecting to the SW4 switch. Which of the following configuration steps will allow creating private VLANs?

- A. Disable VTP pruning on SW1 only
- B. Disable VTP pruning on SW2 only
- C. Disable VTP pruning on SW4 only
- D. Disable VTP pruning on SW2, SW4 and New_Switch
- E. Disable VTP pruning on New_Switch and SW4 only.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

To create private VLANs, you will need to only disable pruning on the switch that contains the private VLANs. In this case, only SW4 will connect to servers in a private VLAN.

QUESTION 96

What is the maximum number of switches that can be stacked using Cisco StackWise?

- A. 4
- B. 5
- C. 8
- D. 9
- E. 10
- F. 13

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 97

A network engineer wants to add a new switch to an existing switch stack. Which configuration must be added to the new switch before it can be added to the switch stack?

- A. No configuration must be added.
- B. stack ID
- C. IP address
- D. VLAN information
- E. VTP information

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 98

What percentage of bandwidth is reduced when a stack cable is broken?

- A. 0
- B. 25
- C. 50
- D. 75
- E. 100

Correct Answer: C

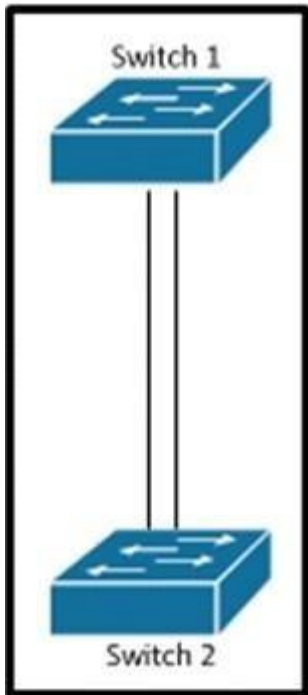
Section: (none)

Explanation

Explanation/Reference:

QUESTION 99

Refer to the exhibit. Which set of configurations will result in all ports on both switches successfully bundling into an EtherChannel?



- A. switch1
channel-group 1 mode active
switch2
channel-group 1 mode auto
- B. switch1
channel-group 1 mode desirable
switch2
channel-group 1 mode passive
- C. switch1
channel-group 1 mode on
switch2
channel-group 1 mode auto
- D. switch1
channel-group 1 mode desirable
switch2
channel-group 1 mode auto

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 100

Refer to the exhibit. How can the traffic that is mirrored out the GigabitEthernet0/48 port be limited to only traffic that is received or transmitted in VLAN 10 on the GigabitEthernet0/1 port?

```
interface GigabitEthernet0/1
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1-100
!
interface GigabitEthernet0/48
  switchport
  switchport mode access
!
monitor session 1 source interface GigabitEthernet0/1
monitor session 1 destination interface GigabitEthernet0/48
```

- A. Change the configuration for GigabitEthernet0/48 so that it is a member of VLAN 10.
- B. Add an access list to GigabitEthernet0/48 to filter out traffic that is not in VLAN 10.
- C. Apply the monitor session filter globally to allow only traffic from VLAN 10.
- D. Change the monitor session source to VLAN 10 instead of the physical interface.

Correct Answer: C

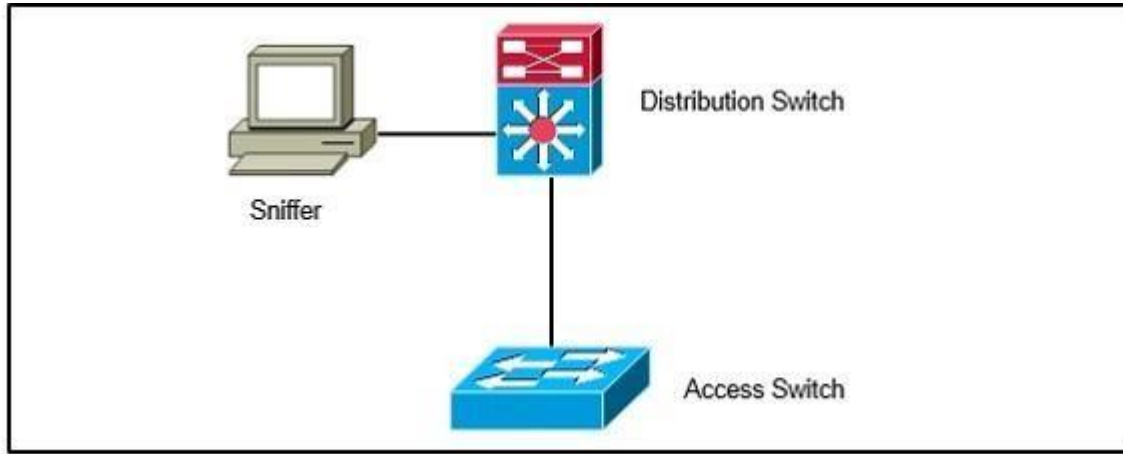
Section: (none)

Explanation

Explanation/Reference:

QUESTION 101

Refer to the exhibit. A network engineer wants to analyze all incoming and outgoing packets for an interface that is connected to an access switch. Which three items must be configured to mirror traffic to a packet sniffer that is connected to the distribution switch? (Choose three.)



- A. A monitor session on the distribution switch with a physical interface as the source and the remote SPAN VLAN as the destination
- B. A remote SPAN VLAN on the distribution and access layer switch
- C. A monitor session on the access switch with a physical interface source and the remote SPAN VLAN as the destination
- D. A monitor session on the distribution switch with a remote SPAN VLAN as the source and physical interface as the destination
- E. A monitor session on the access switch with a remote SPAN VLAN source and the physical interface as the destination
- F. A monitor session on the distribution switch with a physical interface as the source and a physical interface as the destination

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 102

After an EtherChannel is configured between two Cisco switches, interface port channel 1 is in the down/down state. Switch A is configured with channel-group 1 mode active, while Switch B is configured with channel-group 1 mode desirable. Why is the EtherChannel bundle not working?

- A. The switches are using mismatched EtherChannel negotiation modes.
- B. The switch ports are not configured in trunking mode.
- C. LACP priority must be configured on both switches.
- D. The channel group identifier must be different for Switch A and Switch B.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 103

Which feature must be enabled to eliminate the broadcasting of all unknown traffic to switches that are not participating in the specific VLAN?

- A. VTP pruning
- B. port-security
- C. storm control
- D. bpdguard

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 104

Refer to the exhibit. The users in an engineering department that connect to the same access switch cannot access the network. The network engineer found that the engineering VLAN is missing from the database. Which action resolves this problem?

```
Switch1 (config)#vlan 10
VTP vlan configuration not allowed when device is in CLIENT mode.
Switch1#show interfaces trunk
Switch1#
```

- A. Disable VTP pruning and disable 802.1q.
- B. Update the VTP revision number.
- C. Change VTP mode to server and enable 802.1q.
- D. Enable VTP pruning and disable 802.1q.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 105**

A network engineer wants to ensure Layer 2 isolation of customer traffic using a private VLAN. Which configuration must be made before the private VLAN is configured?

- A. Disable VTP and manually assign VLANs.
- B. Ensure all switches are configured as VTP server mode.
- C. Configure VTP Transparent Mode.
- D. Enable VTP version 3.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 106**

Refer to the exhibit. The network switches for two companies have been connected and manually configured for the required VLANs, but users in company A are not able to access network resources in company B when DTP is enabled. Which action resolves this problem?

Company A# show vtp status

VTP Version : 2
Configuration Revision : 0
Maximum VLANs supported locally: 1005
Number of existing VLANs : 9
VTP Operating Mode : Server
VTP Domain Name : company
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled
VTP Traps Generation : Disabled

Company B# show vtp status

VTP Version : 2
Configuration Revision : 2
Maximum VLANs supported locally: 1005
Number of existing VLANs : 42
VTP Operating Mode : Server
VTP Domain Name : company
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled
VTP Traps Generation : Disable

- A. Delete vlan.dat and ensure that the switch with lowest MAC address is the VTP server.
- B. Disable DTP and document the VTP domain mismatch.
- C. Manually force trunking with switchport mode trunk on both switches.
- D. Enable the company B switch with the vtp mode server command.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 107**

A network engineer must implement Ethernet links that are capable of transporting frames and IP traffic for different broadcast domains that are mutually isolated. Consider that this is a multivendor environment. Which Cisco IOS switching feature can be used to achieve the task?

- A. PPP encapsulation with a virtual template
- B. Link Aggregation Protocol at the access layer
- C. dot1q VLAN trunking
- D. Inter-Switch Link

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 108**

Which statement about using native VLANs to carry untagged frames is true?

- A. Cisco Discovery Protocol version 2 carries native VLAN information, but version 1 does not.
- B. Cisco Discovery Protocol version 1 carries native VLAN information, but version 2 does not.
- C. Cisco Discovery Protocol version 1 and version 2 carry native VLAN information.
- D. Cisco Discovery Protocol version 3 carries native VLAN information, but versions 1 and 2 do not.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 109**

Refer to the exhibit. A multilayer switch has been configured to send and receive encapsulated and tagged frames. VLAN 2013 on the multilayer switch is configured as the native VLAN. Which option is the cause of the spanning-tree error?

```
SW-1#sh logging
%SPANTREE-SP-2-RECV_PVID_ERR: Received BPDU with inconsistent peer
Vlan id 1 on GigabitEthernet11/2 VLAN2013.
%SPANTREE-SP-2-BLOCK_PVID_PEER: Blocking GigabitEthernet11/2 on
VLAN0001. Inconsistent peer vlan.
```

- A. VLAN spanning-tree in SW-2 is configured.
- B. spanning-tree bpdu-filter is enabled.
- C. 802.1q trunks are on both sides, both with native VLAN mismatch.
- D. VLAN ID 1 should not be used for management traffic because its unsafe.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 110

A network engineer must improve bandwidth and resource utilization on the switches by stopping the inefficient flooding of frames on trunk ports where the frames are not needed. Which Cisco IOS feature can be used to achieve this task?

- A. VTP pruning
- B. access list
- C. switchport trunk allowed VLAN
- D. VLAN access-map

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Cisco advocates the benefits of pruning VLANs in order to reduce unnecessary frame flooding.

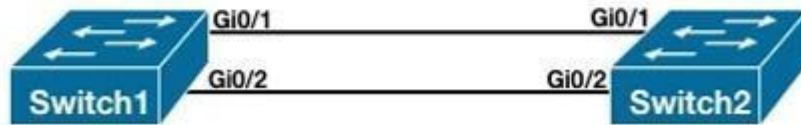
The "vtp pruning" command prunes VLANs automatically, which stops the inefficient flooding of frames where they are not needed.

<http://www.cisco.com/c/en/us/support/docs/switches/catalyst-6500-series-switches/24330-185.html>

QUESTION 111

Refer to the exhibit. What is the result of the configuration?

<pre>hostname Switch1 <output omitted> ! port-channel load-balance dst-ip ! interface GigabitEthernet0/1 channel-group 10 mode active ! interface GigabitEthernet0/2 channel-group 10 mode passive !</pre>	<pre>hostname Switch2 <output omitted> ! port-channel load-balance src-mac ! interface GigabitEthernet0/1 channel-group 10 mode passive ! interface GigabitEthernet0/2 channel-group 10 mode active !</pre>
--	---



- A. The EtherChannels would not form because the load-balancing method must match on the devices.
- B. The EtherChannels would form and function properly even though the load-balancing and EtherChannel modes do not match.
- C. The EtherChannels would form, but network loops would occur because the load-balancing methods do not match.
- D. The EtherChannels would form and both devices would use the dst-ip load-balancing method because Switch1 is configured with EtherChannel mode active.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 112

A network engineer tries to configure storm control on an EtherChannel bundle. What is the result of the configuration?

- A. The storm control settings will appear on the EtherChannel, but not on the associated physical ports.

- B. The configuration will be rejected because storm control is not supported for EtherChannel.
- C. The storm control configuration will be accepted, but will only be present on the physical interfaces.
- D. The settings will be applied to the EtherChannel bundle and all associated physical interfaces.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 113

A Cisco Catalyst switch that is prone to reboots continues to rebuild the DHCP snooping database. What is the solution to avoid the snooping database from being rebuilt after every device reboot?

- A. A DHCP snooping database agent should be configured.
- B. Enable DHCP snooping for all VLANs that are associated with the switch.
- C. Disable Option 82 for DHCP data insertion.
- D. Use IP Source Guard to protect the DHCP binding table entries from being lost upon rebooting.
- E. Apply ip dhcp snooping trust on all interfaces with dynamic addresses.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 114

Which portion of AAA looks at what a user has access to?

- A. authorization
- B. authentication
- C. accounting
- D. auditing

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 115**

Which command creates a login authentication method named "login" that will primarily use RADIUS and fail over to the local user database?

- A. (config)# aaa authentication login default radius local
- B. (config)# aaa authentication login login radius local
- C. (config)# aaa authentication login default local radius
- D. (config)# aaa authentication login radius local

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:**QUESTION 116**

What is the function of NSF?

- A. forward traffic simultaneously using both supervisors
- B. forward traffic based on Cisco Express Forwarding
- C. provide automatic failover to back up supervisor in VSS mode
- D. provide nonstop forwarding in the event of failure of one of the member supervisors

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:**QUESTION 117**

Which configuration command ties the router hot standby priority to the availability of its interfaces?

- A. standby group
- B. standby priority
- C. backup interface
- D. standby track

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 118

What is the default HSRP priority?

- A. 50
- B. 100
- C. 120
- D. 1024

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 119

A server with a statically assigned IP address is attached to a switch that is provisioned for DHCP snooping. For more protection against malicious attacks, the network team is considering enabling dynamic ARP inspection alongside DHCP snooping. Which solution ensures that the server maintains network reachability in the future?

- A. Disable DHCP snooping information option.
- B. Configure a static DHCP snooping binding entry on the switch.
- C. Trust the interface that is connected to the server with the ip dhcp snooping trust command.
- D. Verify the source MAC address of all untrusted interfaces with ip dhcp snooping verify mac- address command.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 120

DHCP snooping and IP Source Guard have been configured on a switch that connects to several client workstations. The IP address of one of the workstations does not match any entries found in the DHCP binding database. Which statement describes the outcome of this scenario?

- A. Packets from the workstation will be rate limited according to the default values set on the switch.
- B. The interface that is connected to the workstation in question will be put into the errdisabled state.
- C. Traffic will pass accordingly after the new IP address is populated into the binding database.
- D. The packets originating from the workstation are assumed to be spoofed and will be discarded.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 121

Which technique allows specific VLANs to be strictly permitted by the administrator?

- A. VTP pruning
- B. transparent bridging
- C. trunk-allowed VLANs
- D. VLAN access-list
- E. L2P tunneling

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 122

For security reasons, the IT manager has prohibited users from dynamically establishing trunks with their associated upstream switch. Which two actions can prevent interface trunking? (Choose two.)

- A. Configure trunk and access interfaces manually.
- B. Disable DTP on a per interface basis.
- C. Apply BPDU guard and BPDU filter.
- D. Enable switchport block on access ports.

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 123

Which two protocols can be automatically negotiated between switches for trunking? (Choose two.)

- A. PPP
- B. DTP
- C. ISL
- D. HDLC
- E. DLCI
- F. DOT1Q

Correct Answer: CF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 124

A network is running VTPv2. After verifying all VTP settings, the network engineer notices that the new switch is not receiving the list of VLANs from the server. Which action resolves this problem?

- A. Reload the new switch.
- B. Restart the VTP process on the new switch.
- C. Reload the VTP server.
- D. Verify connected trunk ports.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 125

After configuring new data VLANs 1020 through 1030 on the VTP server, a network engineer notices that none of the VTP clients are receiving the updates. What is the problem?

- A. The VTP server must be reloaded.
- B. The VTP version number must be set to version 3.
- C. After each update to the VTP server, it takes up to 4 hours propagate.
- D. VTP must be stopped and restarted on the server.
- E. Another switch in the domain has a higher revision number than the server.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 126

A network engineer is extending a LAN segment between two geographically separated data centers. Which enhancement to a spanning-tree design prevents unnecessary traffic from crossing the extended LAN segment?

- A. Modify the spanning-tree priorities to dictate the traffic flow.
- B. Create a Layer 3 transit VLAN to segment the traffic between the sites.
- C. Use VTP pruning on the trunk interfaces.
- D. Configure manual trunk pruning between the two locations.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Pruning unnecessary VLANs from the trunk can be performed with one of two methods:

- Manual pruning of the unnecessary VLAN on the trunk - This is the best method, and it avoids the use of the spanning tree. Instead, the method runs the pruned VLAN on trunks.
- VTP pruning - Avoid this method if the goal is to reduce the number of STP instances.

VTP-pruned VLANs on a trunk are still part of the spanning tree. Therefore, VTP-pruned VLANs do not reduce the number of spanning tree port instances.

Since the question asked for the choice that is an enhancement to the STP design, VTP pruning is the best choice.

http://www.cisco.com/en/US/tech/tk389/tk689/technologies_tech_note09186a0080890613.shtml

QUESTION 127

The network manager has requested that several new VLANs (VLAN 10, 20, and 30) are allowed to traverse the switch trunk interface. After the command `switchport trunk allowed vlan 10,20,30` is issued, all other existing VLANs no longer pass traffic over the trunk. What is the root cause of the problem?

- A. The command effectively removed all other working VLANs and replaced them with the new VLANs.
- B. VTP pruning removed all unused VLANs.
- C. ISL was unable to encapsulate more than the already permitted VLANs across the trunk.
- D. Allowing additional VLANs across the trunk introduced a loop in the network.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 128

When you design a switched network using VTPv2, how many VLANs can be used to carry user traffic?

- A. 1000
- B. 1001
- C. 1024
- D. 2048
- E. 4095
- F. 4096

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 129

What does the command `vlan dot1q tag native` accomplish when configured under global configuration?

- A. All frames within the native VLAN are tagged, except when the native VLAN is set to 1.
- B. It allows control traffic to pass using the non-default VLAN.
- C. It removes the 4-byte dot1q tag from every frame that traverses the trunk interface(s).

D. Control traffic is tagged.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 130

Which private VLAN access port belongs to the primary VLAN and can communicate with all interfaces, including the community and isolated host ports?

- A. promiscuous port
- B. isolated port
- C. community port
- D. trunk port

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 131

Which private VLAN can have only one VLAN and be a secondary VLAN that carries unidirectional traffic upstream from the hosts toward the promiscuous ports and the gateway?

- A. isolated VLAN
- B. primary VLAN
- C. community VLAN
- D. promiscuous VLAN

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 132

Which database is used to determine the validity of an ARP packet based on a valid IP-to- MAC address binding?

- A. DHCP snooping database
- B. dynamic ARP database
- C. dynamic routing database
- D. static ARP database

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 133

When IP Source Guard with source IP filtering is enabled on an interface, which feature must be enabled on the access VLAN for that interface?

- A. DHCP snooping
- B. storm control
- C. spanning-tree portfast
- D. private VLAN

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 134

Which switch feature prevents traffic on a LAN from being overwhelmed by continuous multicast or broadcast traffic?

- A. storm control
- B. port security
- C. VTP pruning
- D. VLAN trunking

Correct Answer: A

Section: (none)

Explanation**Explanation/Reference:****QUESTION 135**

Which command would a network engineer apply to error-disable a switchport when a packet- storm is detected?

- A. router(config-if)#storm-control action shutdown
- B. router(config-if)#storm-control action trap
- C. router(config-if)#storm-control action error
- D. router(config-if)#storm-control action enable

Correct Answer: A

Section: (none)

Explanation**Explanation/Reference:****QUESTION 136**

A network engineer configures port security and 802.1x on the same interface. Which option describes what this configuration allows?

- A. It allows port security to secure the MAC address that 802.1x authenticates.
- B. It allows port security to secure the IP address that 802.1x authenticates.
- C. It allows 802.1x to secure the MAC address that port security authenticates.
- D. It allows 802.1x to secure the IP address that port security authenticates.

Correct Answer: A

Section: (none)

Explanation**Explanation/Reference:****QUESTION 137**

Which feature describes MAC addresses that are dynamically learned or manually configured, stored in the address table, and added to the running configuration?

- A. sticky

- B. dynamic
- C. static
- D. secure

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 138

On which interface can port security be configured?

- A. static trunk ports
- B. destination port for SPAN
- C. EtherChannel port group
- D. dynamic access point

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 139

Based on the show spanning-tree vlan 200 output shown in the exhibit, which two statements about the STP process for VLAN 200 are true? (Choose two.)

```
Switch#show spanning-tree vlan 200
VLAN0200
Spanning tree enabled protocol ieee
Root ID    Priority      32968
           Address      000c.ce29.ef00
           Cost        19
           Port        2 (FastEthernet0/2)
           Hello Time   10 sec  Max Age 20 sec  Forward Delay 30 sec

Bridge ID   Priority      32968 (priority 32768 sys-id-ext 200)
           Address      000c.ce2a.4180
           Hello Time   2 sec   Max Age 20 sec  Forward Delay 15 sec
           Aging Time   300

Interface           Role Sts Cost           Prio.Nbr Type
-----
Fa0/2                Root FWD 19             128.2    P2p
Fa0/3                Altn BLK 19             128.3    P2p
```

- A. BPDUs will be sent out every two seconds.
- B. The time spent in the listening state will be 30 seconds.
- C. The time spent in the learning state will be 15 seconds.
- D. The maximum length of time that the BPDU information will be saved is 30 seconds.
- E. This switch is the root bridge for VLAN 200.
- F. BPDUs will be sent out every 10 seconds.

Correct Answer: BF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 140

Which three statements are correct with regard to the IEEE 802.1Q standard? (Choose three)

- A. The IEEE 802.1Q frame format adds a 4 byte field to a Ethernet frame
- B. The packet is encapsulated with a 26 byte header and a 4 byte FCS
- C. The protocol uses point-to-multipoint connectivity
- D. The protocol uses point-to-point connectivity

- E. The IEEE 802.1Q frame uses multicast destination of 0x01-00-0c-00-00
- F. The IEEE 802.1Q frame retains the original MAC destination address

Correct Answer: ADF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 141

Refer to the exhibit. Based upon the output of show vlan on switch CAT2, what can we conclude about interfaces Fa0/13 and Fa0/14?

```
CAT2#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 Fa0/15, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/21, Fa0/22 Fa0/23, Fa0/24, Gi0/1, Gi0/2
2 VLAN0002	active	
3 VLAN0003	active	
4 VLAN0004	active	
5 VLAN0005	active	
1002 fddi-default	act/unsup	
1003 trcrf-default	act/unsup	
1004 fddinet-default	act/unsup	
1005 trbrf-default	act/unsup	

- A. That interfaces Fa0/13 and Fa0/14 are in VLAN 1
- B. That interfaces Fa0/13 and Fa0/14 are down
- C. That interfaces Fa0/13 and Fa0/14 are trunk interfaces
- D. That interfaces Fa0/13 and Fa0/14 have a domain mismatch with another switch
- E. That interfaces Fa0/13 and Fa0/14 have a duplex mismatch with another switch

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 142

VLAN maps have been configured on switch R1. Which of the following actions are taken in a VLAN map that does not contain a match clause?

- A. Implicit deny feature at end of list.
- B. Implicit deny feature at start of list.
- C. Implicit forward feature at end of list
- D. Implicit forward feature at start of list.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 143

Given the configuration on a switch interface, what happens when a host with the MAC address of 0003.0003.0003 is directly connected to the switch port?

```
switchport mode access
switchport port-security
switchport port-security maximum 2
switchport port-security mac-address 0002.0002.0002
switchport port-security violation shutdown
```

- A. The host will be allowed to connect.
- B. The port will shut down.
- C. The host can only connect through a hub/switch where 0002.0002.0002 is already connected.
- D. The host will be refused access.

Correct Answer: A

Section: (none)

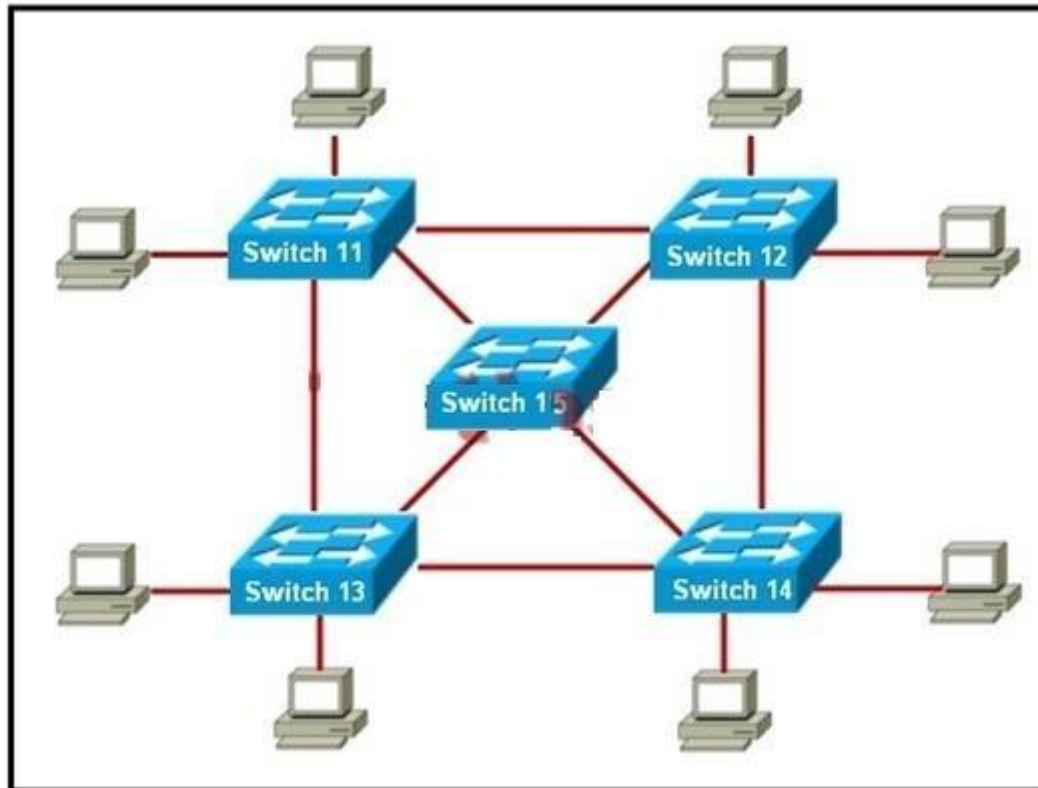
Explanation

Explanation/Reference:

QUESTION 144

Refer to the exhibit. Switch 15 is configured as the root switch for VLAN 10 but not for VLAN 20. If the STP configuration is correct, what will be true

about Switch 15?



- A. All ports will be in forwarding mode.
- B. All ports in VLAN 10 will be in forwarding mode.
- C. All ports in VLAN 10 will be in forwarding mode and all ports in VLAN 20 will be in blocking mode.
- D. All ports in VLAN 10 will be in forwarding mode and all ports in VLAN 20 will be in standby mode.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 145

Which of the following HSRP router states does an active router enter when it is preempted by a higher priority router? (Select the best answer.)

- A. active
- B. speak
- C. learn
- D. listen
- E. init
- F. standby

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 146

Refer to the exhibit. On the basis of the output of the show spanning-tree inconsistentports command, which statement about interfaces FastEthernet 0/1 and FastEthernet 0/2 is true?

```
SW1# show spanning-tree inconsistentports
```

Name	Interface	Inconsistency
VLAN0001	FastEthernet0/ 1	Root Inconsistent
VLAN0001	FastEthernet0/2	Root Inconsistent

Number of inconsistent ports (segments) in the system : 2

- A. They have been configured with the spanning-tree bpduguard disable command.
- B. They have been configured with the spanning-tree bpduguard enable command.
- C. They have been configured with the spanning-tree bpdufilter disable command.
- D. They have been configured with the spanning-tree bpdufilter enable command.
- E. They have been configured with the spanning-tree guard loop command.
- F. They have been configured with the spanning-tree guard root command.

Correct Answer: F

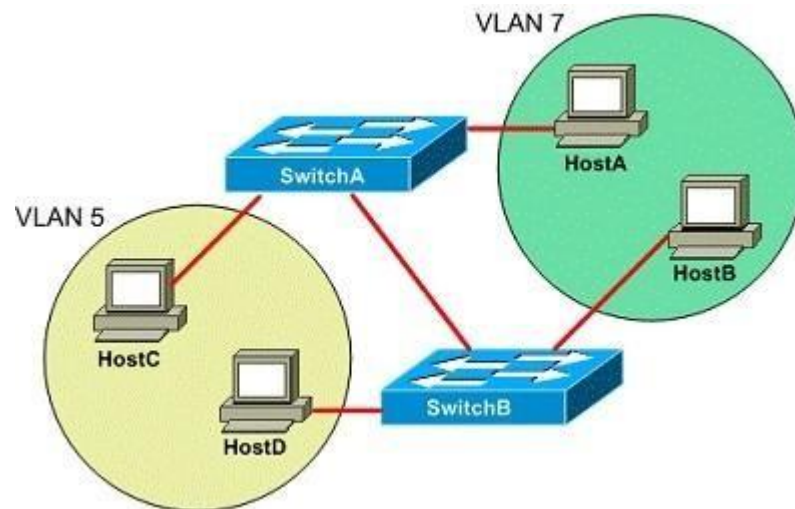
Section: (none)

Explanation

Explanation/Reference:

QUESTION 147

You want to configure a switched internetwork with multiple VLANs as shown above. Which of the following commands should you issue on SwitchA for the port connected to SwitchB? (Select the best answer.)



- A. switchport mode trunk
- B. switchport access vlan 5
- C. switchport mode access vlan 5
- D. switchport trunk native vlan 5

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 148

You administer a network that uses two routers, R1 and R2, configured as an HSRP group to provide redundancy for the gateway. Router R1 is the active router and has been configured as follows:

```
R1#configure terminal
R1(config)#interface fa0/0
R1(config-if)#ip address 10.10.0.5 255.255.255.0
R1(config-if)#standby 1 priority 150
R1(config-if)#standby preempt delay minimum 50
R1(config-if)#standby 1 track interface fa0/2 15
R1(config-if)#standby 1 ip 10.10.0.20
```

Which of the following describes the effect the "standby preempt delay minimum 50" command will have on router R1? (Select the best answer.)

- A. The HSRP priority for router R1 will increase to 200.
- B. Router R1 will become the standby router if the priority drops below 50.
- C. The HSRP priority for router R1 will decrease to 50 points when Fa0/2 goes down.
- D. Router R1 will wait 50 seconds before attempting to preempt the active router.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 149

Which statement is correct about 802.1Q trunking?

- A. Both switches must be in the same VTP domain.
- B. The encapsulation type of both ends of the trunk does not have to match.
- C. The native VLAN on both ends of the trunk must be VLAN 1.
- D. 802.1Q trunking can only be configured on a Layer 2 port.
- E. In 802.1Q trunking, all VLAN packets are tagged on the trunk link, except the native VLAN.

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 150

Which of the following commands can be issued without interfering with the operation of loop guard?

- A. Switch(config-if)#spanning-tree guard root
- B. Switch(config-if)#spanning-tree portfast
- C. Switch(config-if)#switchport mode trunk
- D. Switch(config-if)#switchport mode access

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 151

The following command was issued on a router that is being configured as the active HSRP router.

```
standby ip 10.2.1.1
```

Which statement is true about this command?

- A. This command will not work because the HSRP group information is missing
- B. The HSRP MAC address will be 0000 0c07 ac00
- C. The HSRP MAC address will be 0000 0c07 ac01.
- D. The HSRP MAC address will be 0000.070c ad01.
- E. This command will not work because the active parameter is missing

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 152

Routers R1 and R2 are configured for HSRP as shown below:

Router R1:

```
interface ethernet 0
```

```
ip address 20.6.2.1 255.255.255.0
standby 35 ip 20.6.2.21
standby 35 priority 100
interface ethernet 1
ip address 20.6.1.1.2 255.255.255.0
standby 34 ip 20.6.1.21
```

Router R2:

```
interface ethernet 0
ip address 20.6.2.2 255.255.255.0
standby 35 ip 20.6.2.21
interface ethernet 1
ip address 20.6.1.1.1 255.255.255.0
standby 34 ip 20.6.1.21
standby 34 priority 100
```

You have configured the routers R1 & R2 with HSRP. While debugging router R2 you notice very frequent HSRP group state transitions. What is the most likely cause of this?

- A. physical layer issues
- B. no spanning tree loops
- C. use of non-default HSRP timers
- D. failure to set the command standby 35 preempt

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 153

Drag and Drop Question

Select and Place:

You have been tasked with planning a VLAN solution that will connect a server in one building to several hosts in another building. The solution should be built using the local VLAN model and Layer 3 switching at the distribution layer. Drag the questions that you would ask the network administrator before you start the planning from the left to the right. Not all questions will be used.

Is there interswitch connectivity?

What version of VTP is being used?

What routing protocol will be used?

What VLANs are available on each switch?

What operating system is used on the server?

What switch ports are available in each building?

What IP addresses are available on each subnet?

What operating system is used on each host?

Questions Related to the VLAN Solution

Correct Answer:

You have been tasked with planning a VLAN solution that will connect a server in one building to several hosts in another building. The solution should be built using the local VLAN model and Layer 3 switching at the distribution layer. Drag the questions that you would ask the network administrator before you start the planning from the left to the right. Not all questions will be used.

What version of VTP is being used?
What operating system is used on the server?
What operating system is used on each host?

Questions Related to the VLAN Solution

Is there interswitch connectivity?
What routing protocol will be used?
What VLANs are available on each switch?
What switch ports are available in each building?
What IP addresses are available on each subnet?

Section: (none)

Explanation

Explanation/Reference:

QUESTION 154

Drag and Drop Question

Select and Place:

Drag the attributes on the left to the types of VLAN designs that they describe on the right.

Created with physical boundaries in mind rather than the departments or organizations of the users on the end devices.	End-to-End VLANs
VLANs on one switch are not advertised to all other switches in the network, nor do they need to be created in the VLAN database of any other switch.	
As a user moves through a campus, the VLAN membership of the user remains the same, regardless of the physical switch this user attaches to.	
Users are grouped into each VLAN regardless of physical location.	
	Local VLANs

Correct Answer:

Drag the attributes on the left to the types of VLAN designs that they describe on the right.

	End-to-End VLANs
	As a user moves through a campus, the VLAN membership of the user remains the same, regardless of the physical switch this user attaches to.
	Users are grouped into each VLAN regardless of physical location.
	Local VLANs
	Created with physical boundaries in mind rather than the departments or organizations of the users on the end devices.
	VLANs on one switch are not advertised to all other switches in the network, nor do they need to be created in the VLAN database of any other switch.

Section: (none)
Explanation

Explanation/Reference:

QUESTION 155

Drag and Drop Question

Select and Place:

Place the DTP mode with its correct description.

Trunk

specifies that DTP packets are not sent out this interface

Nonegotiate

sets the switch port to trunk mode and negotiates to become a trunk

Access

sets a switch port to permanent nontrunking mode

Dynamic Auto

sets the switch port to respond, but not actively send DTP frames

Dynamic Desirable

makes the interface actively attempt to convert the link to a trunk link

Correct Answer:

Place the DTP mode with its correct description.

Nonegotiate

Trunk

Access

Dynamic Auto

Dynamic Desirable

Section: (none)

Explanation

Explanation/Reference:

QUESTION 156

Drag and Drop Question

Select and Place:

Drag the port states to their correct description.

blocking
listening
learning
forwarding
disabled

sends and receives BPDUs to determine root, but does not update the MAC address table
does not participate in frame forwarding or in STP
does not participate in frame forwarding
sends and receives data frames
populates the MAC address table, but will not forward user data

Correct Answer:

Drag the port states to their correct description.

listening
disabled
blocking
forwarding
learning

Section: (none)
Explanation

Explanation/Reference:

QUESTION 157

Drag and Drop Question

Select and Place:

Capabilities of SNMP are dependent on the version implemented. Drag the feature descriptions on the left to the respective SNMP versions on the right.	
increased 64-bit counters for new data types	SNMPv1
security levels	
get next request	
informed request	SNMPv2
unsolicited agent alarm message	
usernames	
	SNMPv3

Correct Answer:

Capabilities of SNMP are dependent on the version implemented. Drag the feature descriptions on the left to the respective SNMP versions on the right.

SNMPv1

get next request

unsolicited agent alarm message

SNMPv2

increased 64-bit counters for new data types

informed request

SNMPv3

security levels

usernames

Section: (none)

Explanation

Explanation/Reference:

QUESTION 158

Drag and Drop Question

Select and Place:

You have a VLAN implementation that requires inter-VLAN routing using Layer 3 switches. Drag the steps from the left to the right that should be part of the verification plan. Not all choices will be used.

Verify that VTP is pruning the proper access ports.

Verify that there is inter-switch connectivity.

Verify that the data and voice VLANs are NOT assigned a trunk's native VLAN.

Verify that the needed switch virtual interfaces have been created.

Verify that the VLAN ports are in promiscuous mode.

Verify that the proper ports are assigned to the VLAN.

Correct Answer:

You have a VLAN implementation that requires inter-VLAN routing using Layer 3 switches. Drag the steps from the left to the right that should be part of the verification plan. Not all choices will be used.

Verify that VTP is pruning the proper access ports.

Verify that there is inter-switch connectivity.

Verify that the data and voice VLANs are NOT assigned a trunk's native VLAN.

Verify that the needed switch virtual interfaces have been created.

Verify that the proper ports are assigned to the VLAN.

Verify that the VLAN ports are in promiscuous mode.

Section: (none)

Explanation

Explanation/Reference:

QUESTION 159

Drag and Drop Question

Select and Place:

Prioritize the traffic types by dragging them from the left to the appropriate Cisco priority level on the right. Put the highest priority at the top and the lowest priority at the bottom.

network management	
video - interactive	
IP routing	
voice	
video - streaming	
call signaling	

Correct Answer:

Prioritize the traffic types by dragging them from the left to the appropriate Cisco priority level on the right. Put the highest priority at the top and the lowest priority at the bottom.

	voice
	video - interactive
	video - streaming
	call signaling
	IP routing
	network management

Section: (none)

Explanation

Explanation/Reference:

QUESTION 160

Drag and Drop Question

Match the HSRP states on the left with the correct definition on the right.

Select and Place:

Select from these

Learn

Listen

Speak

Standby

Active

Initial

Place here

State from which the routers begin the HSRP process

A candidate to become the next active router

The router is still waiting to hear from the active router

The router is currently forwarding packets

Listens for hello messages from the active and standby router

Participates in the election for the active or standby router

Correct Answer:

Select from these

Place here

Initial	State from which the routers begin the HSRP process
Standby	A candidate to become the next active router
Learn	The router is still waiting to hear from the active router
Active	The router is currently forwarding packets
Listen	Listens for hello messages from the active and standby router
Speak	Participates in the election for the active or standby router

Section: (none)

Explanation

Explanation/Reference:

QUESTION 161

Drag and Drop Question

Select and Place:

Categorize the high availability network resources or feature items on the left by dragging them to the appropriate resiliency or management level on the right.

dual power supplies

RSTP

IP SLA responder

NSF

NTP

SSO

Management Level

Network Level

System Level

Correct Answer:

Categorize the high availability network resources or feature items on the left by dragging them to the appropriate resiliency or management level on the right.

Management Level

IP SLA responder

NTP

Network Level

RSTP

NSF

System Level

dual power supplies

SSO

Section: (none)

Explanation

Explanation/Reference:

QUESTION 162

Refer to the exhibit.

Switch(config)#spanning-tree portfast default

%Warning: this command enables portfast by default on all interfaces. You should now disable portfast explicitly on switched ports leading to hubs, switches and bridges as they may create temporary bridging loops.

Switch(config)#

When troubleshooting a network problem, a network analyzer is connected to Port f0/1 of a LAN switch. Which command can prevent BPDU transmission on this port?

- A. spanning-tree portfast bpduguard enable
- B. spanning-tree bpduguard default
- C. spanning-tree portfast bpdufilter default
- D. no spanning-tree link-type shared

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 163

Which four LACP components are used to determine which hot-standby links become active after an interface failure within an EtherChannel bundle? (Choose four.)

- A. LACP system priority
- B. LACP port priority
- C. interface MAC address
- D. system ID
- E. port number
- F. hot-standby link identification number
- G. interface bandwidth

Correct Answer: ABDE

Section: (none)

Explanation

Explanation/Reference:**QUESTION 164**

RSPAN has been configured on a Cisco Catalyst switch; however, traffic is not being replicated to the remote switch. Which type of misconfiguration is a cause?

- A. The RSPAN designated VLAN is missing the remote span command.
- B. The local and remote RSPAN switches are configured using different session IDs.
- C. The local RSPAN switch is replicating only Rx traffic to the remote switch.
- D. The local switch is overloaded with the amount of sourced traffic that must be replicated to the remote switch.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:**QUESTION 165**

After UDLD is implemented, a Network Administrator noticed that one port stops receiving UDLD packets. This port continues to reestablish until after eight failed retries. The port then transitions into the errdisable state. Which option describes what causes the port to go into the errdisable state?

- A. Normal UDLD operations that prevent traffic loops.
- B. UDLD port is configured in aggressive mode.
- C. UDLD is enabled globally.
- D. UDLD timers are inconsistent.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:**QUESTION 166**

To follow the Layer 2 switching guidelines, a network engineer decides to create a separate spanning tree for every group of 10 VLANs. Which version of spanning tree is appropriate to meet the company policy?

- A. MST

- B. PVST+
- C. RSTP
- D. RPVST+
- E. STP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 167

A network engineer is installing a switch for temporary workers to connect to. The engineer does not want this switch participating in Spanning Tree with the rest of the network; however, end user connectivity is still required. Which spanning-tree feature accomplishes this?

- A. BPDUBlock
- B. BPDUFILTER
- C. BPDUIgnore
- D. BPDUGuard
- E. BPDUDisable

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 168

Refer to the exhibit.

```
monitor session 1 source interface g0/4 rx
monitor session 1 filter vlan 3
monitor session 1 destination interface g0/5
```

What is the result of the SPAN configuration on a Cisco switch?

- A. Configure a SPAN session to monitor the received traffic on interface g0/4 only for VLAN 3.
- B. Configure a SPAN session to monitor the received traffic on interface g0/4 for all VLANs except VLAN 3.
- C. Configure a SPAN session to monitor the received traffic on interface g0/5 only for VLAN 3.
- D. Configure a SPAN session to monitor the received traffic on interface g0/5 for all VLANs except VLAN 3.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 169

When SDM templates are configured, which action must be performed for the configuration to take effect?

- A. reload
- B. shutdown
- C. write memory
- D. backup config

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 170

Which statement about the MAC address sticky entries in the switch when the copy run start command is entered is true?

- A. A sticky MAC address is retained when the switch reboots.
- B. A sticky MAC address can be a unicast or multicast address.
- C. A sticky MAC address is lost when the switch reboots.
- D. A sticky MAC address ages out of the MAC address table after 600 seconds.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 171

Enablement of which feature puts the port into err-disabled state when the port has PortFast enabled and it receives BPDUs?

- A. BPDU filtering
- B. BackboneFast
- C. EtherChannel
- D. BPDU guard

Correct Answer: D

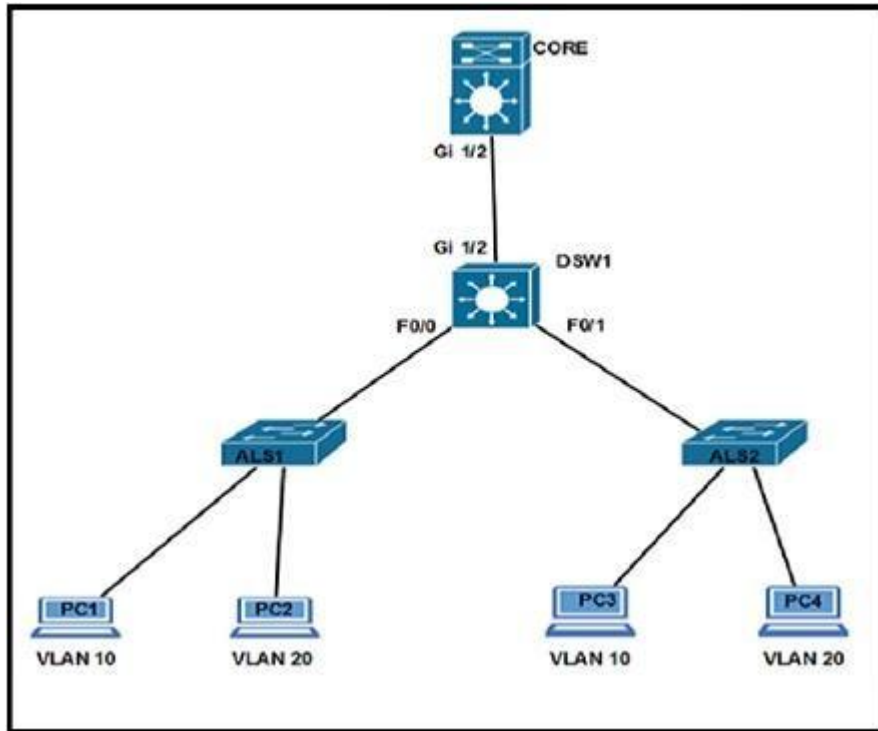
Section: (none)

Explanation

Explanation/Reference:

QUESTION 172

Refer to the exhibit. Which configuration ensures that the Cisco Discovery Protocol packet update frequency sent from DSW1 to ALS1 is half of the default value?



- A. DSW1(config)#cdp timer 90
- B. DSW1(config-if)#cdp holdtime 60
- C. DSW1(config)#cdp timer 30
- D. DSW1(config)#cdp holdtime 90
- E. DSW1(config-if)#cdp holdtime 30
- F. DSW1(config-if)#cdp timer 60

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 173

Interfaces are assigned to a VLAN, and then the VLAN is deleted. Which state are these interfaces in after the VLAN is deleted?

- A. They remain up, but they are reassigned to the default VLAN.
- B. They go down until they are reassigned to a VLAN.
- C. They go down, but they are reassigned to the default VLAN.
- D. They remain up, but they are reassigned to the native VLAN.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 174

Which feature is automatically configured when an administrator enables a voice VLAN?

- A. 802.1Q trunking
- B. PortFast
- C. QoS
- D. private VLANs

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 175

Which statement describes one major issue that VTP can cause in an enterprise network when a new switch is introduced in the network in VTP mode server?

- A. It can cause network access ports to go into err-disabled state.
- B. It can cause a network-wide VLAN configuration change if the revision number on the new switch is higher.
- C. It can cause a network-wide VLAN configuration change if the revision number on the new switch is lower.
- D. It can cause routing loops.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:**QUESTION 176**

A network administrator configures 10 extended VLANs ranging from VLANs 3051 to 3060 in an enterprise network. Which version of VTP supports these extended VLANs?

- A. version 1
- B. version 2
- C. version 3
- D. VTP does not recognize extended VLANs.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:**QUESTION 177**

An engineer is configuring an EtherChannel between two switches using LACP. If the EtherChannel mode on switch 1 is configured to active, which two modes on switch 2 establish an operational EtherChannel? (Choose two.)

- A. active
- B. auto
- C. desirable
- D. on
- E. passive

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:**QUESTION 178**

When a Layer 2 EtherChannel is configured, which statement about placement of the IP address is true?

- A. The IP address is placed on the highest numbered member port.

- B. The IP address is placed on the port-channel logical interface.
- C. The IP address is placed on the lowest numbered member port.
- D. The IP address is assigned via DHCP only.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 179

Which two options are two results of using the command spanning-tree vlan 50 root primary within a spanning-tree network under global configuration? (Choose two.)

- A. Spanning tree determines the priority of the current root for VLAN 50 and reduces the priority of the local switch to a lower value.
- B. The priority value for VLAN 50 is set to 4094 on the root while the local switch priority is set to 32768.
- C. The spanning-tree timers are reduced to improve the convergence time for VLAN 50.
- D. All ports that are configured on the current switch with VLAN 50 transition to designated ports.
- E. The switchport that is configured for VLAN 50 is the primary connection to the spanning-tree root switch.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 180

An access switch at a remote location is connected to the spanning-tree root with redundant uplinks. A network engineer notices that there are issues with the physical cabling of the current root port. The engineer decides to force the secondary link to be the desired forwarding root port. Which action accomplishes this task?

- A. Change the link-type to point-to-point.
- B. Enable Rapid Spanning Tree to converge using the secondary link.
- C. Adjust the secondary link to have a lower priority than the primary link.
- D. Apply a BPDU filter on the primary interface of the remote switches.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference: