

Certkiller.300-115.132Questions

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CERT KILLER

300-115

Implementing Cisco IP Switched Networks

- ✓ This dump is still valid for the most part. 300-115 different questions, but the dump gives you enough to pass this exam.
- ✓ Such a great and perfect study material in every aspect.
- ✓ Exactly valid. use this dump and you will pass for sure.
- ✓ I believe all that I have achieved is just because of this outstanding dump.

Sections

1. Layer 2 Technologies
2. Infrastructure Security
3. Infrastructure Services

Exam A

QUESTION 1

While working in the core network building, a technician accidentally bumps the fiber connection between two core switches and damages one of the pairs of fiber. As designed, the link was placed into a non-forwarding state due to a fault with UDLD. After the damaged cable was replaced, the link did not recover. What solution allows the network switch to automatically recover from such an issue?

- A. macros
- B. errdisable autorecovery
- C. IP Event Dampening
- D. command aliases
- E. Bidirectional Forwarding Detection

Correct Answer: B

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 2

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 3

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 4

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: Layer 2 Technologies

Explanation

Explanation/Reference:

elaborated.

QUESTION 5

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 6

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: Layer 2 Technologies

Explanation

Explanation/Reference:

proper answer.

QUESTION 7

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 8

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 9

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 10

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: Layer 2 Technologies

Explanation

Explanation/Reference:

answer is sophisticated.

QUESTION 11

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 12

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 13

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: Layer 2 Technologies

Explanation

Explanation/Reference:

authenticated answer.

QUESTION 14

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 15

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 16

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 17

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 18

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 19

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 20

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 21

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 22

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 23

What is the maximum number of VLANs that can be assigned to an access switchport without a voice VLAN?

- A. 0
- B. 1
- C. 2
- D. 1024

Correct Answer: B

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 24

Refer to the exhibit.

```

Interface GigabitEthernet1/0/1
switchport access vlan 10
switchport trunk encapsulation dot1q
switchport mode trunk
switchport voice vlan 11
spanning-tree portfast
!

```

Which option shows the expected result if a show vlan command is issued?

A.

```

Switch#sh vlan
VLAN Name                Status    Ports
-----
1    default                 active    Gi1/0/2, Gi1/0/3, Gi1/0/4
                                           Gi1/0/5, Gi1/0/6, Gi1/0/7
                                           Gi1/0/8, Gi1/0/9, Gi1/0/10
                                           Gi1/0/11, Gi1/0/12, Gi1/0/13
                                           Gi1/0/14, Gi1/0/15, Gi1/0/16
                                           Gi1/0/17, Gi1/0/18, Gi1/0/19
                                           Gi1/0/20, Gi1/0/21, Gi1/0/22
                                           Gi1/0/23, Gi1/0/24
10   Data                   active
11   voice                  active
1002 fddi-default          act/unsup
1003 token-ring-default    act/unsup
1004 fddinet-default       act/unsup
1005 trnet-default         act/unsup

```

B.

```

Switch#sh vlan
VLAN Name                Status    Ports
-----
1    default                 active    Gi1/0/2, Gi1/0/3, Gi1/0/4
                                           Gi1/0/5, Gi1/0/6, Gi1/0/7
                                           Gi1/0/8, Gi1/0/9, Gi1/0/10
                                           Gi1/0/11, Gi1/0/12, Gi1/0/13
                                           Gi1/0/14, Gi1/0/15, Gi1/0/16
                                           Gi1/0/17, Gi1/0/18, Gi1/0/19
                                           Gi1/0/20, Gi1/0/21, Gi1/0/22
                                           Gi1/0/23, Gi1/0/24
10   Data                   active    Gi1/0/1
11   voice                  active    Gi1/0/1
1002 fddi-default          act/unsup
1003 token-ring-default    act/unsup
1004 fddinet-default       act/unsup
1005 trnet-default         act/unsup

```

C. Switch#sh vlan

VLAN	Name	Status	Ports
1	default	active	Gi1/0/1, Gi1/0/2, Gi1/0/3 Gi1/0/4, Gi1/0/5, Gi1/0/6 Gi1/0/7, Gi1/0/8, Gi1/0/9 Gi1/0/10, Gi1/0/11, Gi1/0/12 Gi1/0/13, Gi1/0/14, Gi1/0/15 Gi1/0/16, Gi1/0/17, Gi1/0/18 Gi1/0/19, Gi1/0/20, Gi1/0/21 Gi1/0/22, Gi1/0/23, Gi1/0/24
10	Data	active	
11	voice	active	Gi1/0/1
1002	fddi-default	act/unsup	
1003	token-ring-default	act/unsup	
1004	fddinet-default	act/unsup	
1005	trnet-default		

D. Switch#sh vlan

VLAN	Name	Status	Ports
1	default	active	Gi1/0/2, Gi1/0/3, Gi1/0/4 Gi1/0/5, Gi1/0/6, Gi1/0/7 Gi1/0/8, Gi1/0/9, Gi1/0/10 Gi1/0/11, Gi1/0/12, Gi1/0/13 Gi1/0/14, Gi1/0/15, Gi1/0/16 Gi1/0/17, Gi1/0/18, Gi1/0/19 Gi1/0/20, Gi1/0/21, Gi1/0/22 Gi1/0/23, Gi1/0/24
10	Data	active	Gi1/0/1
11	voice	active	
1002	fddi-default	act/unsup	
1003	token-ring-default	act/unsup	
1004	fddinet-default	act/unsup	
1005	trnet-default	act/unsup	

- A. Exhibit A
- B. Exhibit B
- C. Exhibit C
- D. Exhibit D

Correct Answer: A
Section: Layer 2 Technologies
Explanation

Explanation/Reference:

QUESTION 25

Which feature is automatically enabled when a voice VLAN is configured, but not automatically disabled when a voice VLAN is removed?

- A. portfast

- B. port-security
- C. spanning tree
- D. storm control

Correct Answer: A

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 26

In which portion of the frame is the 802.1q header found?

- A. within the Ethernet header
- B. within the Ethernet payload
- C. within the Ethernet FCS
- D. within the Ethernet source MAC address

Correct Answer: A

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 27

Which VLAN range is eligible to be pruned when a network engineer enables VTP pruning on a switch?

- A. VLANs 1-1001
- B. VLANs 1-4094
- C. VLANs 2-1001
- D. VLANs 2-4094

Correct Answer: C

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 28

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 29

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 30

Refer to the exhibit.

```

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

```

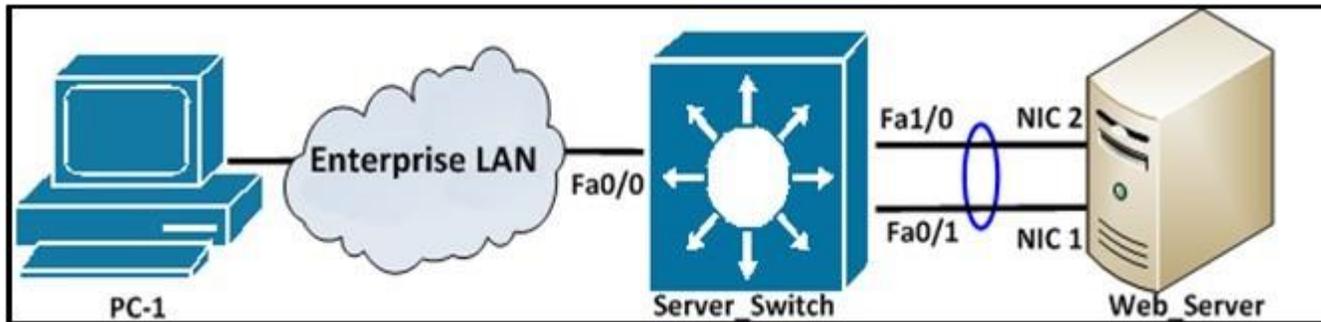
Which EtherChannel negotiation protocol is configured on the interface f0/13 f0/15?

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

Correct Answer: B
Section: Layer 2 Technologies
Explanation

Explanation/Reference:

QUESTION 31
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: Layer 2 Technologies
Explanation

Explanation/Reference:

QUESTION 32

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 33

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 34

Refer to the exhibit.

```

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)

```

Which statement about switch S1 is true?

- 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: Layer 2 Technologies
Explanation

Explanation/Reference:

QUESTION 35

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 an 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 36

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

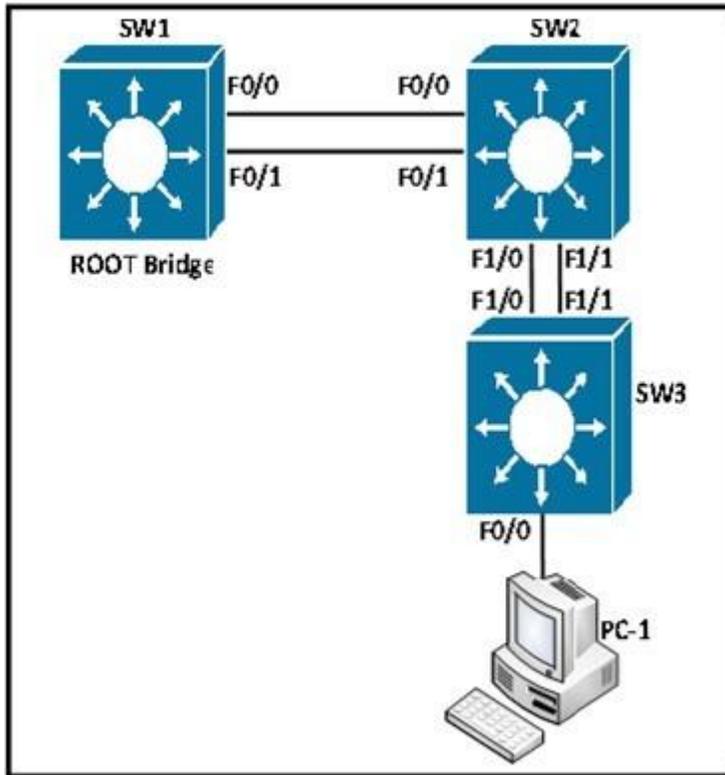
Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 37

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 38

Refer to the exhibit.

```
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
```

Why would the switch be considered as a root bridge?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 39

Refer to the exhibit.

```
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
```

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?

- A. interface f0/13
- B. interface f0/14
- C. interface f0/15
- D. interface f0/21

Correct Answer: D

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 40

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 41

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 42

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: Layer 2 Technologies

Explanation

Explanation/Reference:

answer is justified.

QUESTION 43

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 44

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 45

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 46

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

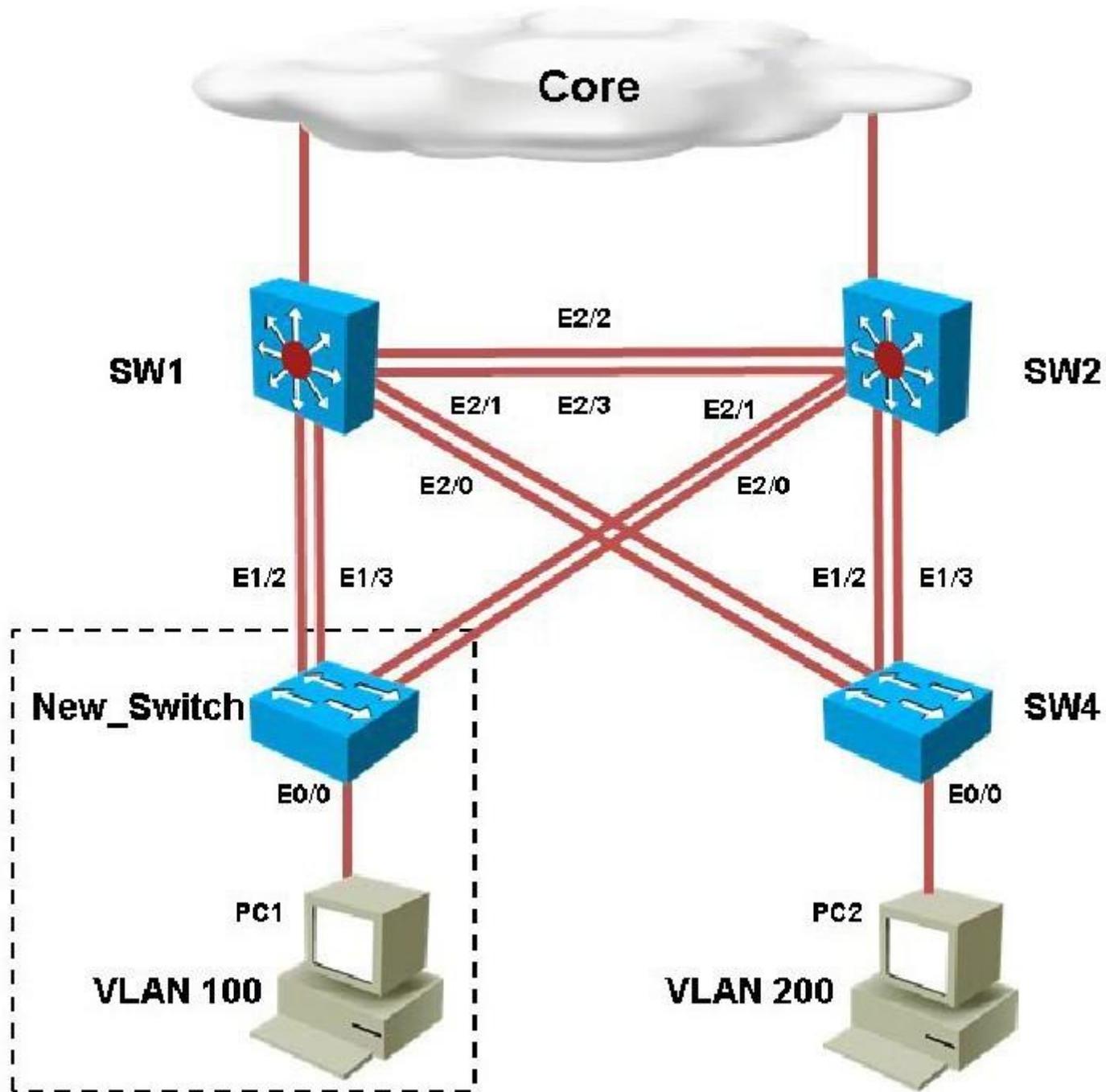
Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 47

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.



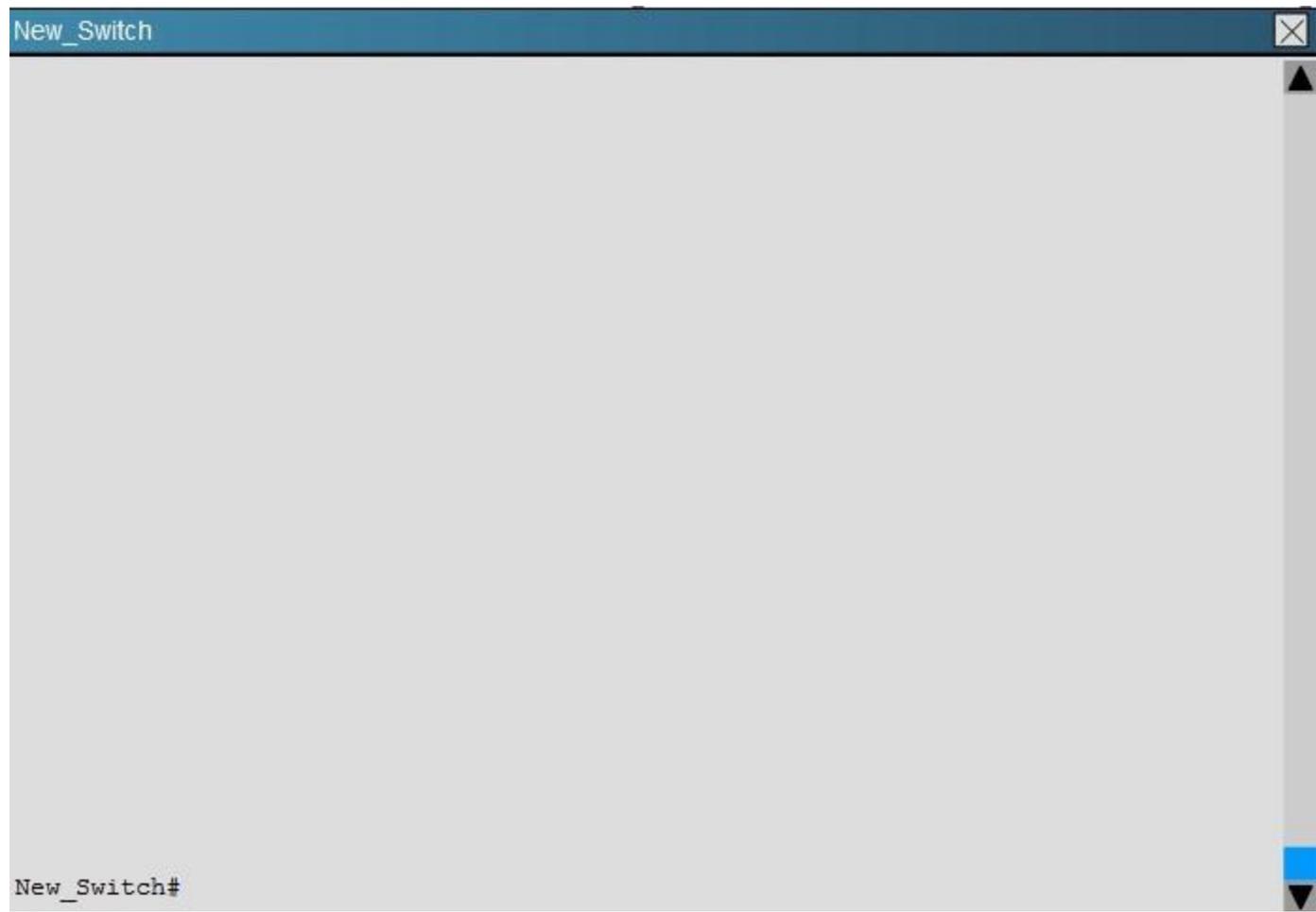


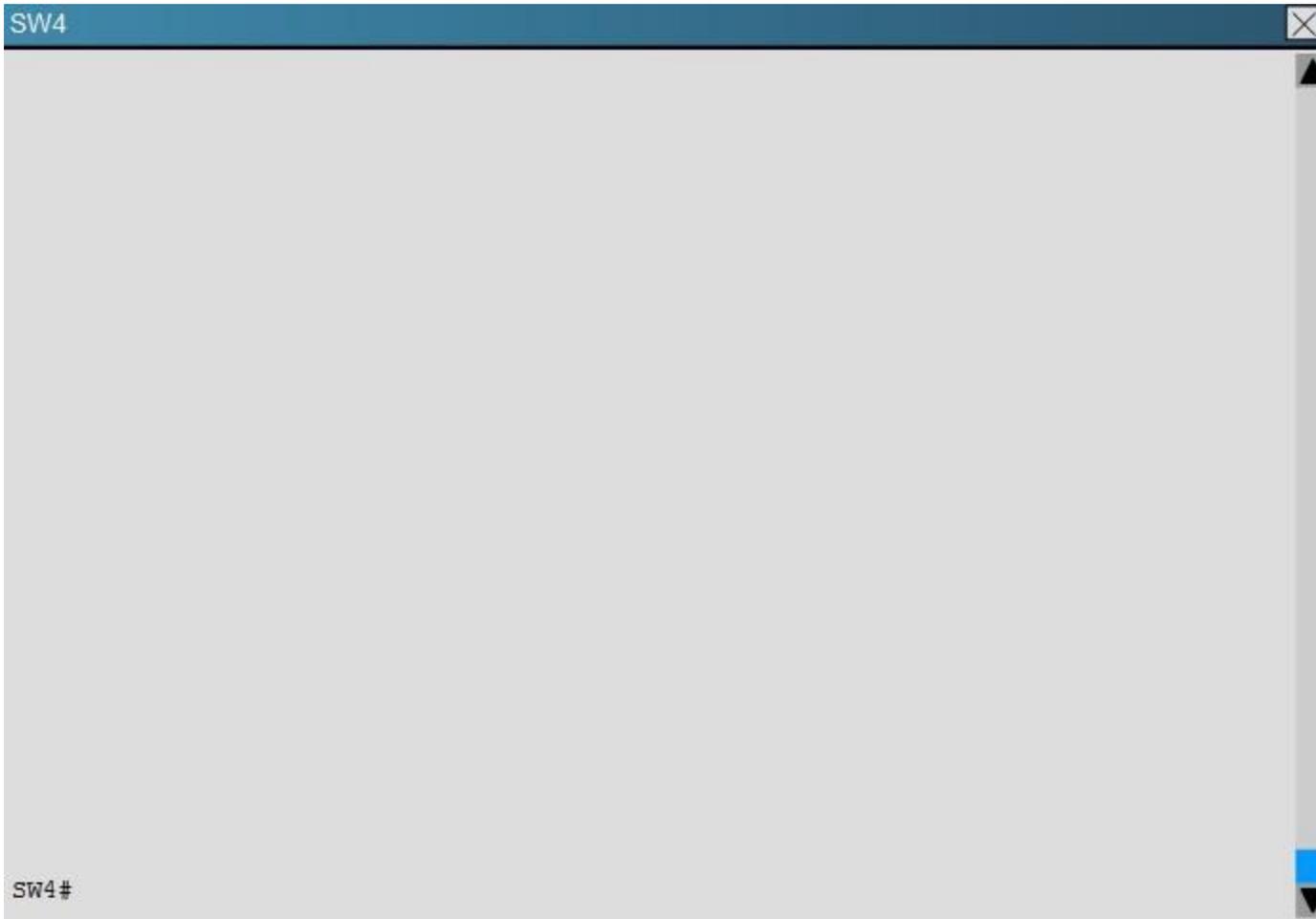
SW2



SW2#







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

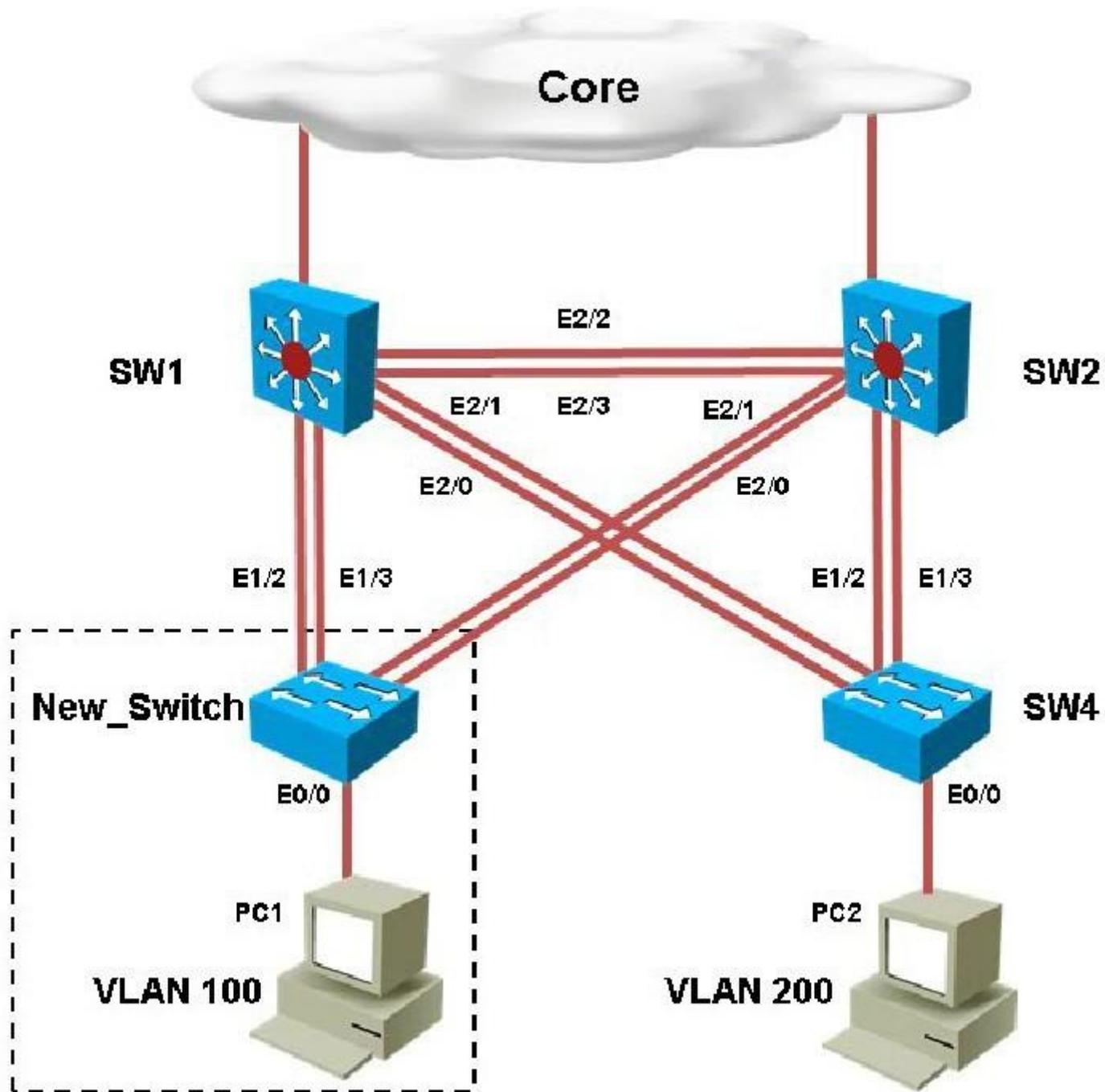
Section: Layer 2 Technologies

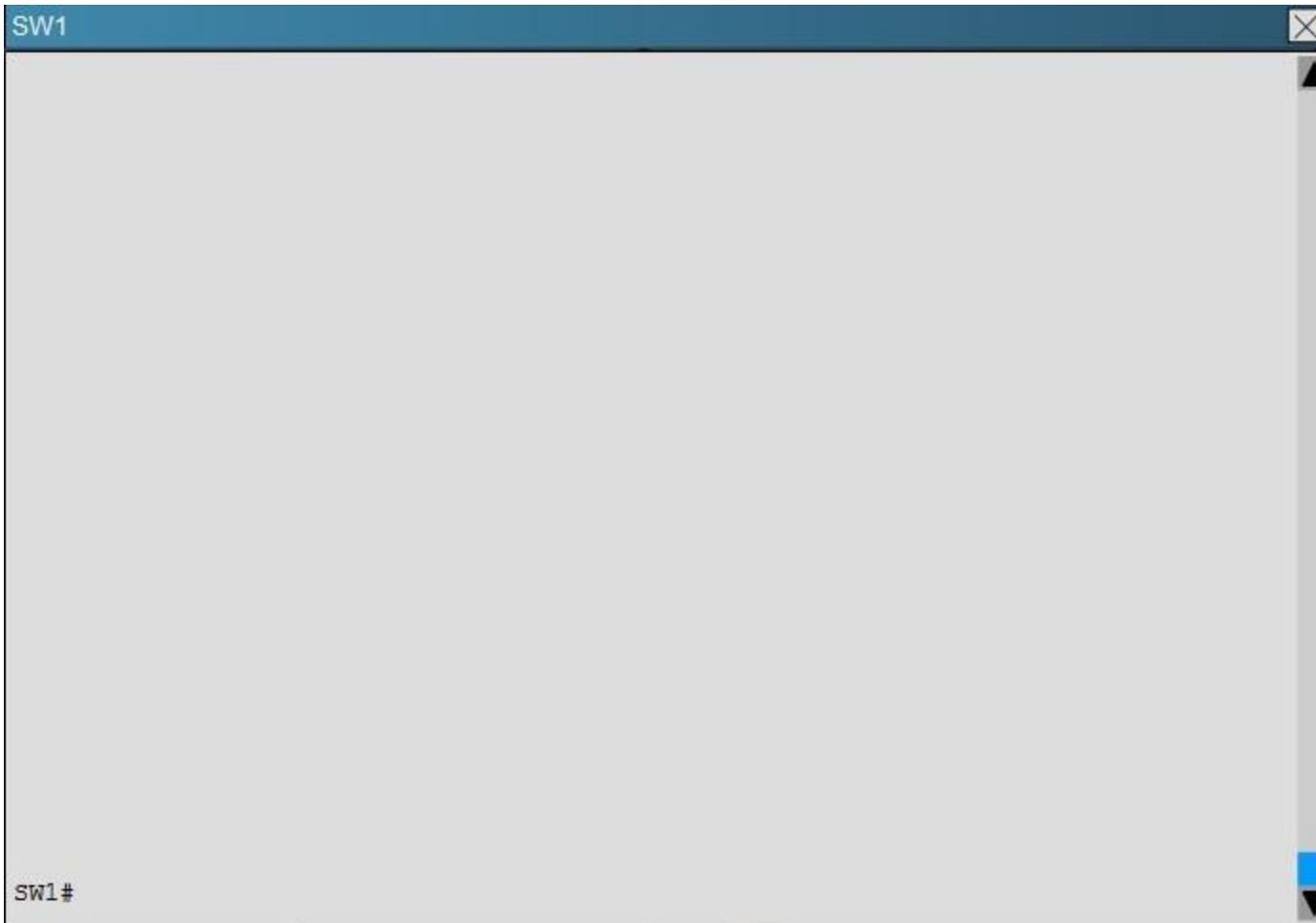
Explanation

Explanation/Reference:

QUESTION 48

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.



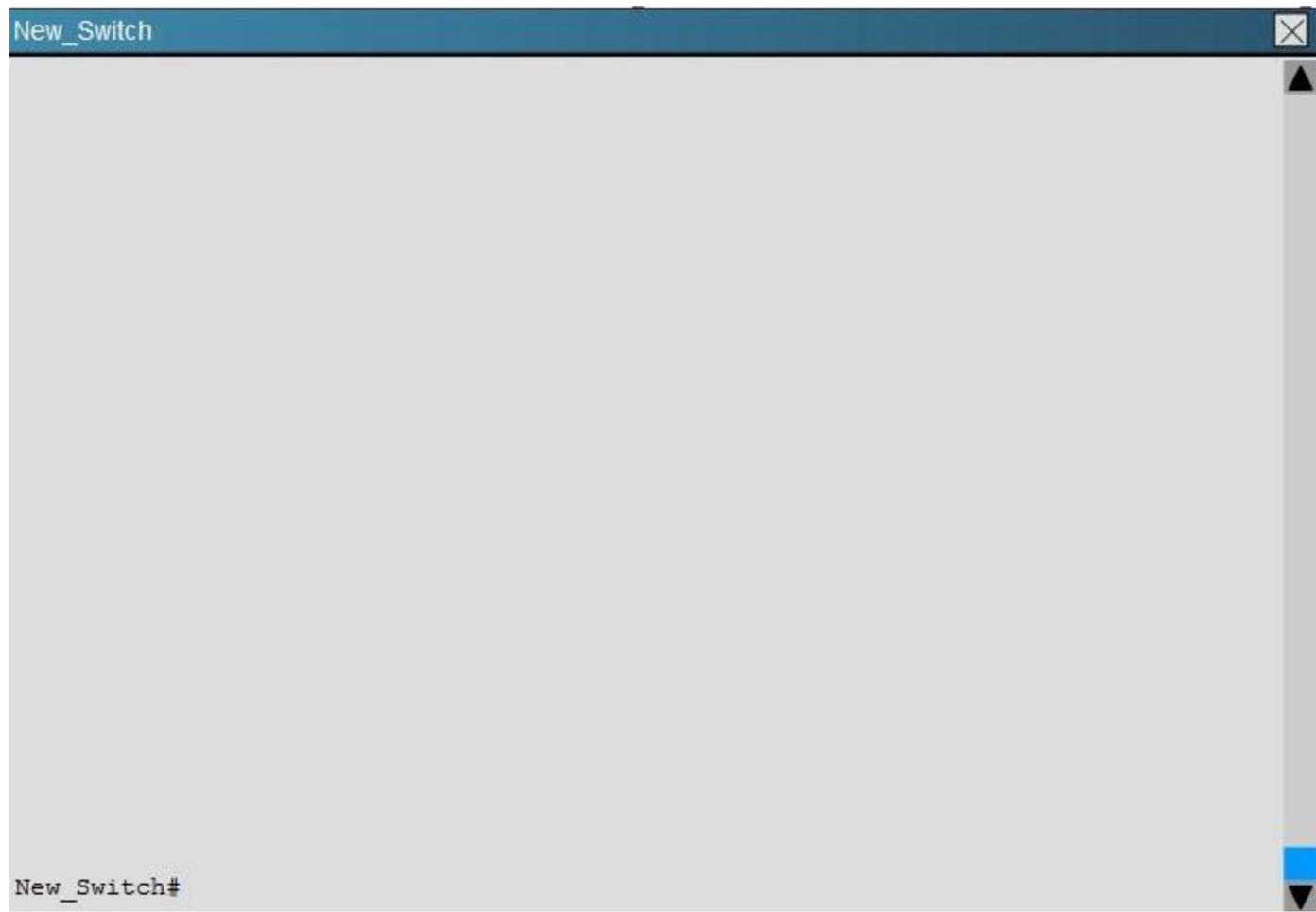


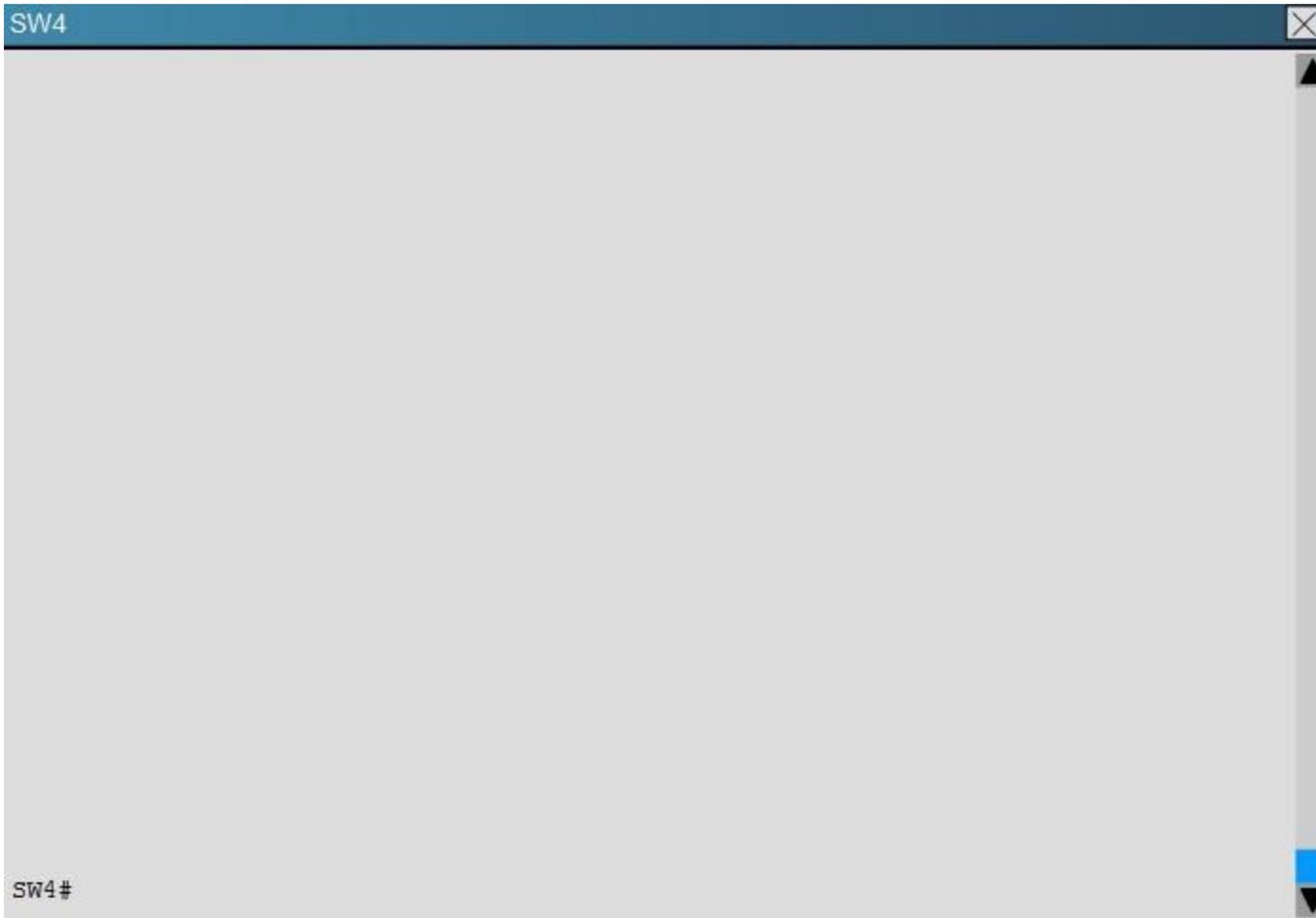
SW2



SW2#







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

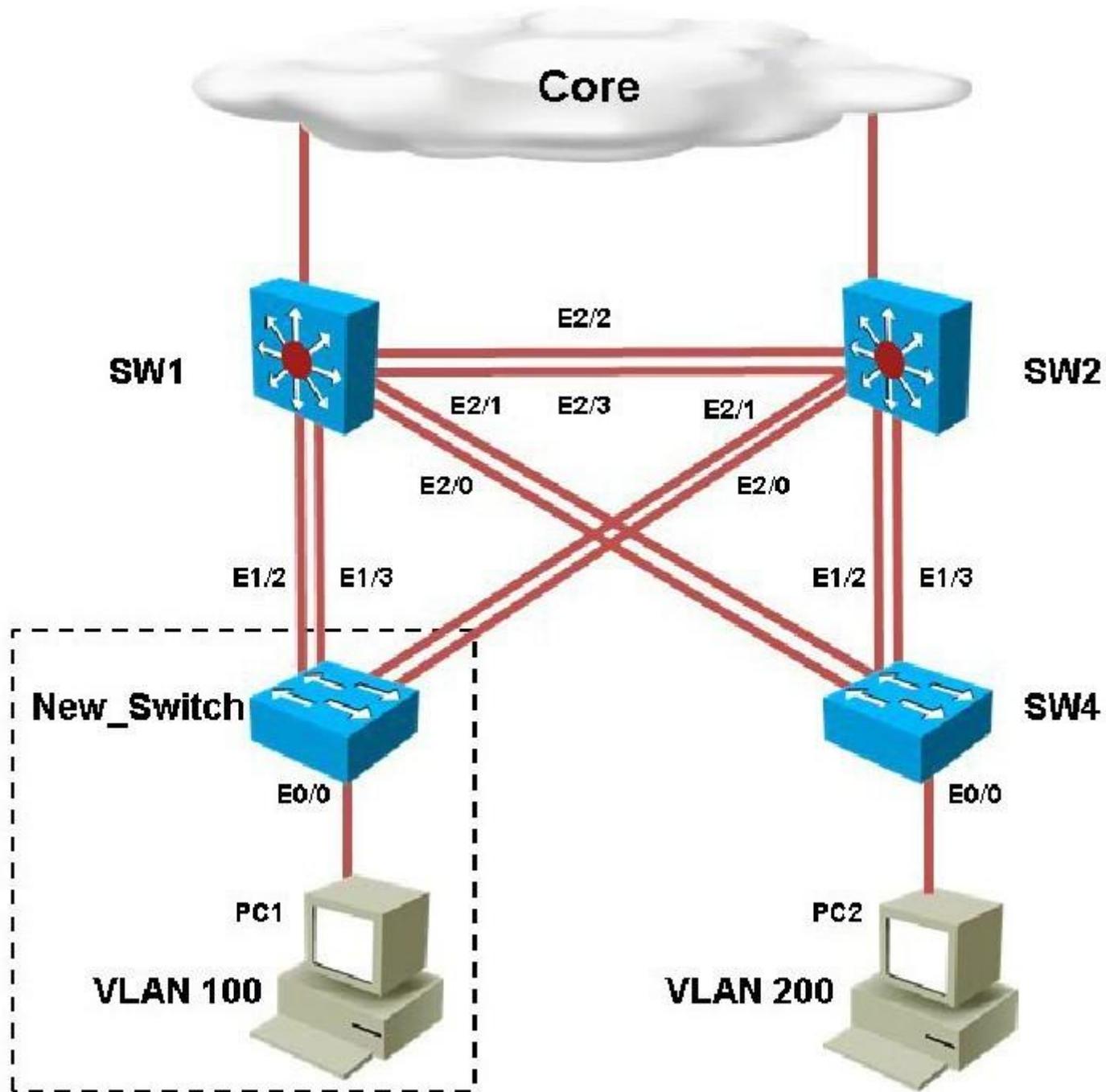
Section: Layer 2 Technologies

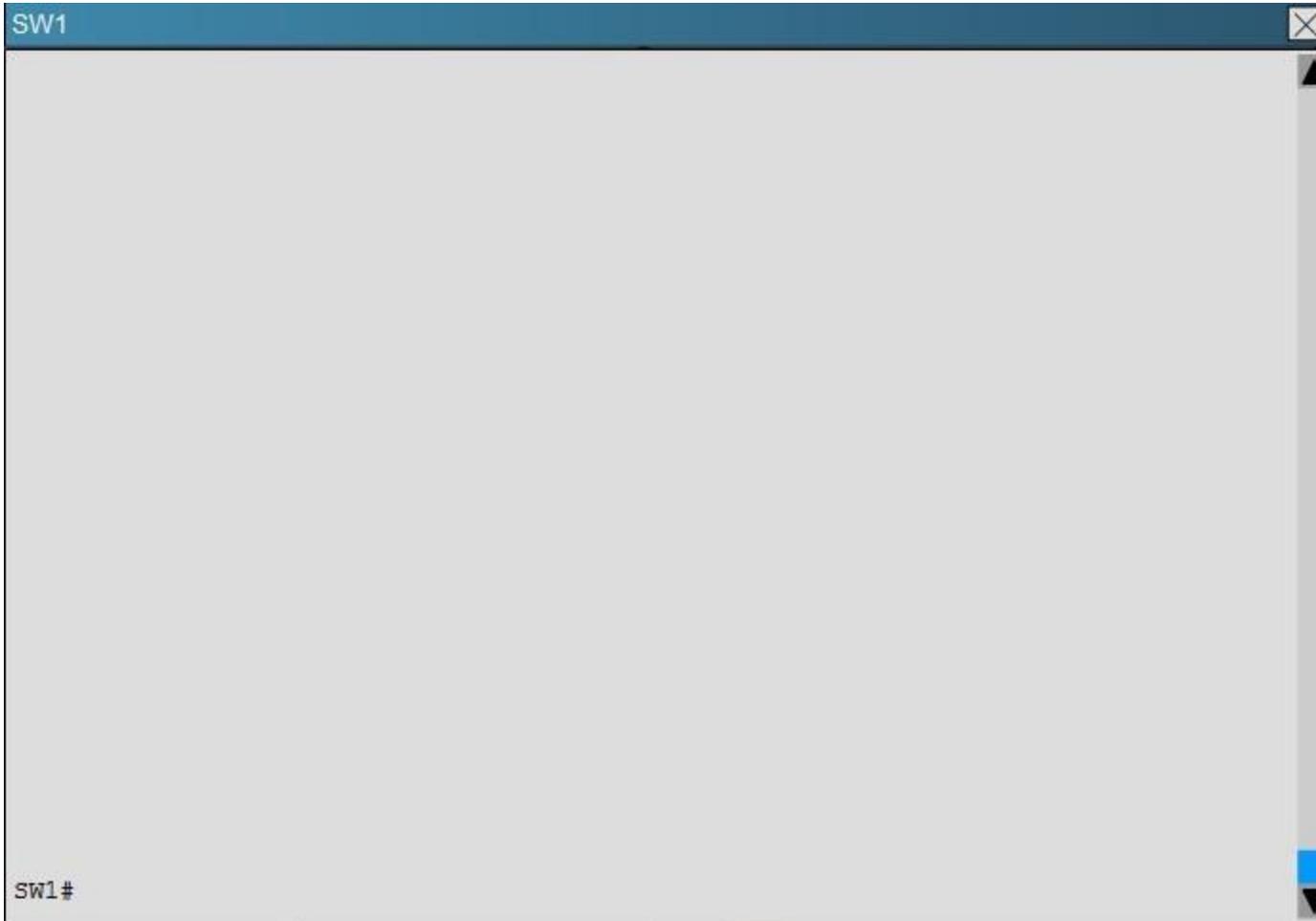
Explanation

Explanation/Reference:

QUESTION 49

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.



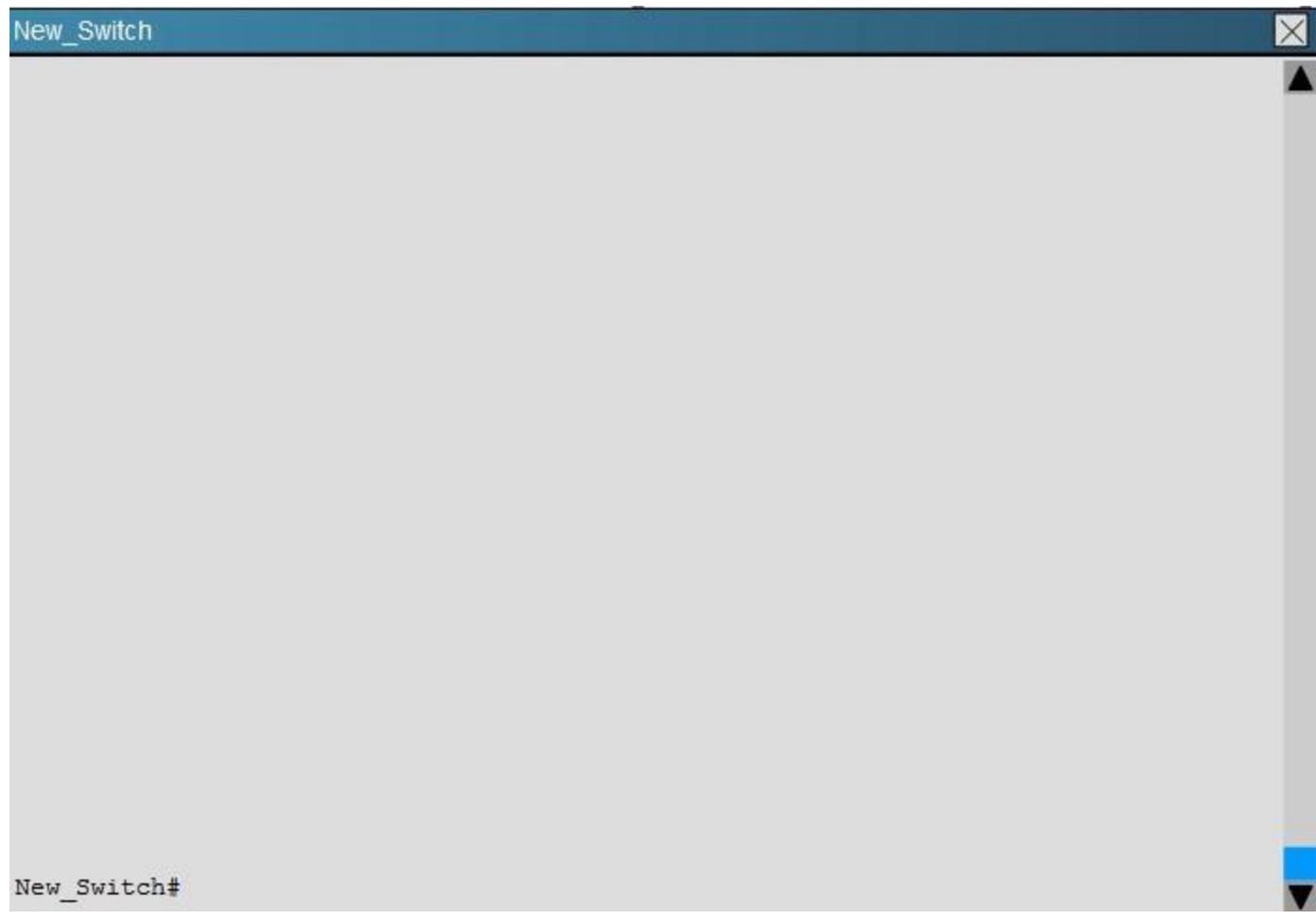


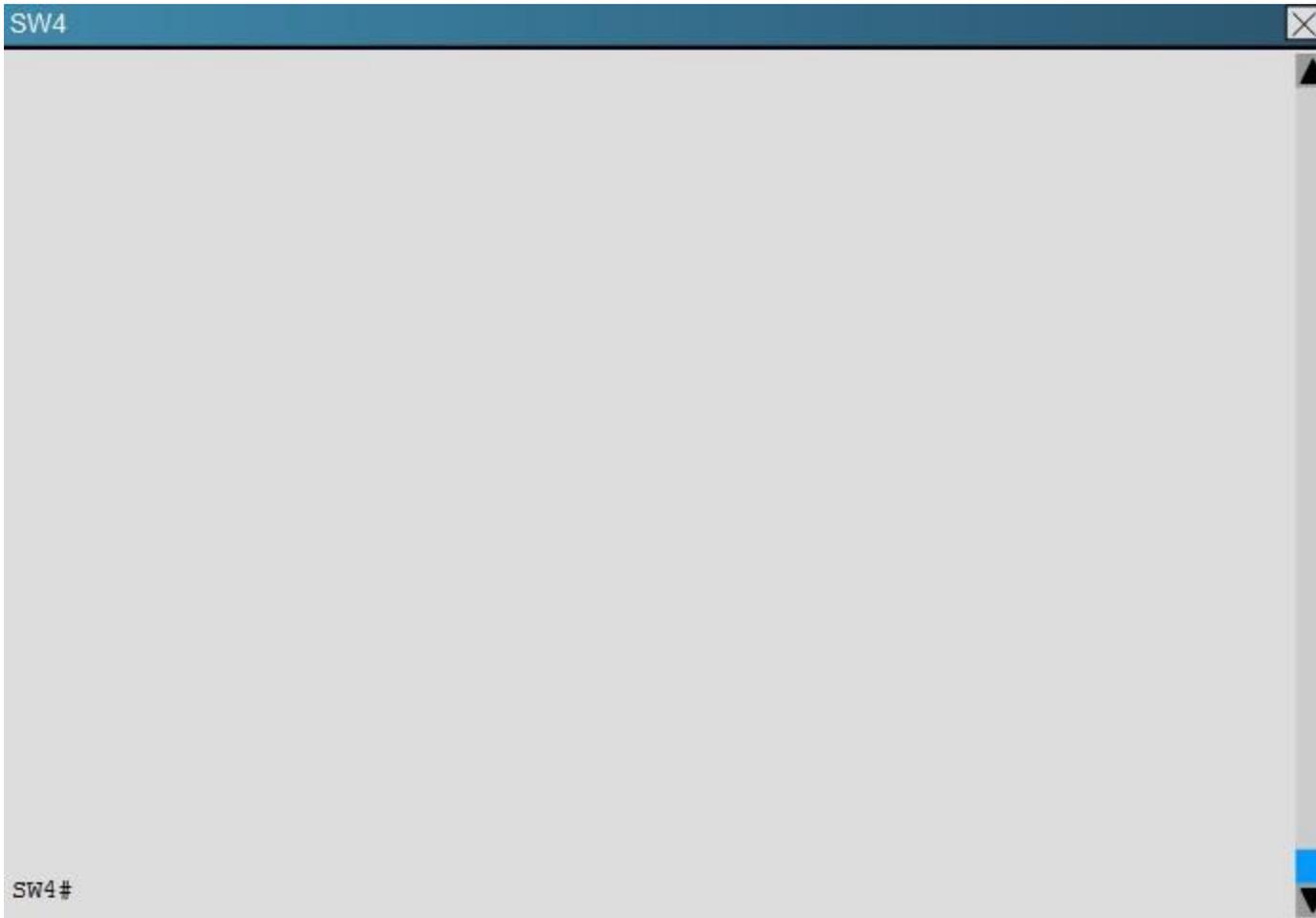
SW2



SW2#







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: Layer 2 Technologies

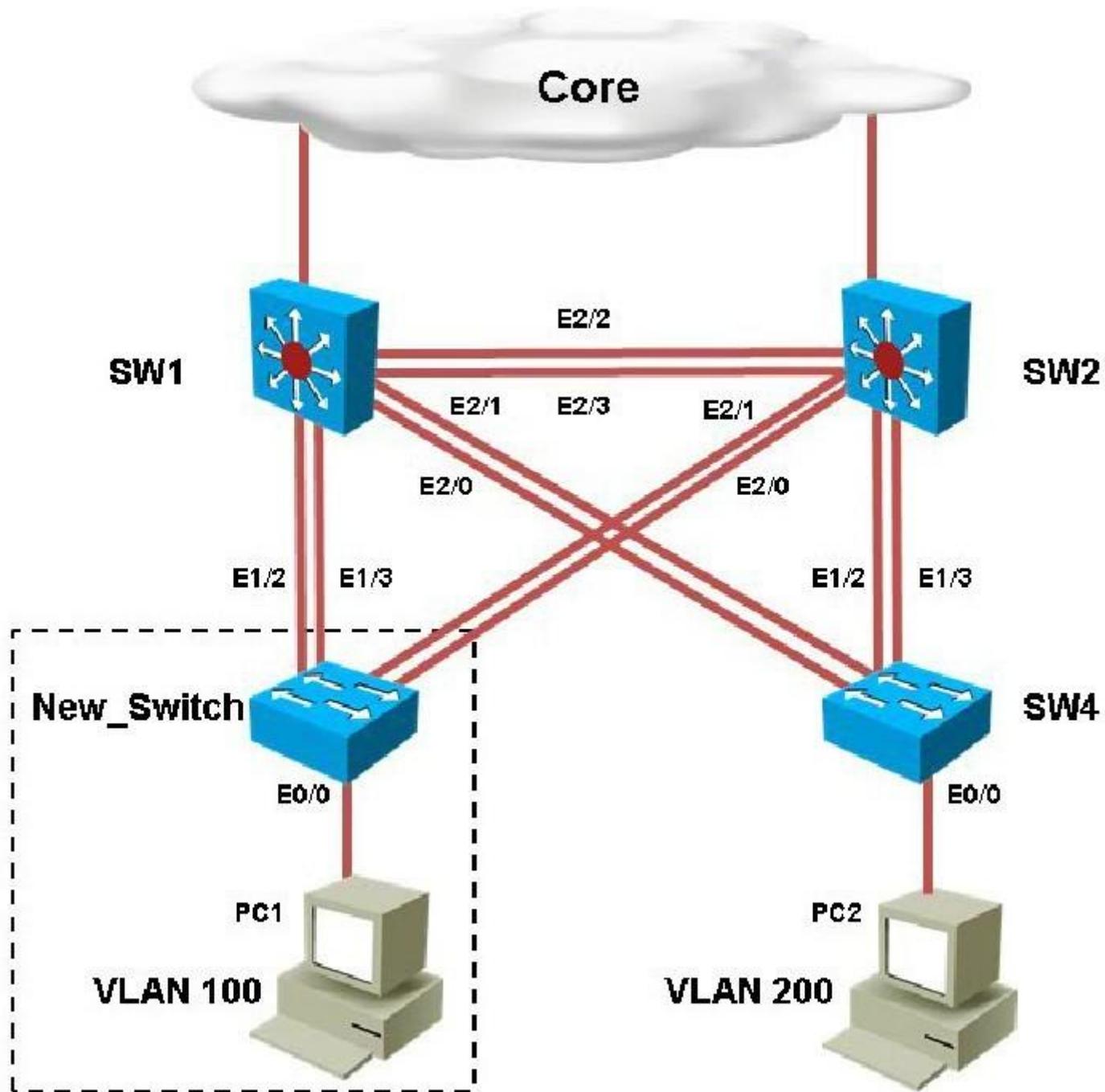
Explanation

Explanation/Reference:

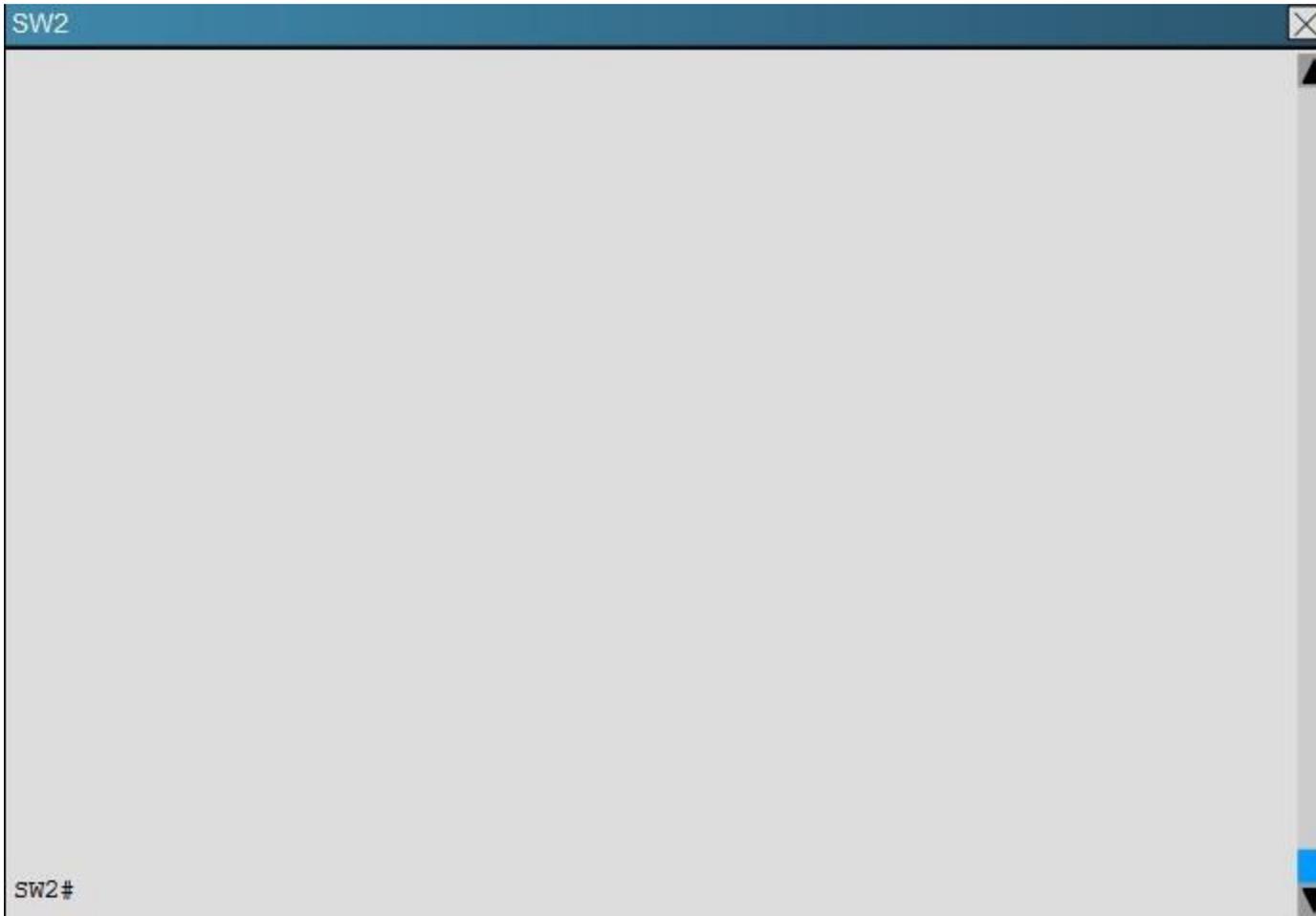
answer is exact.

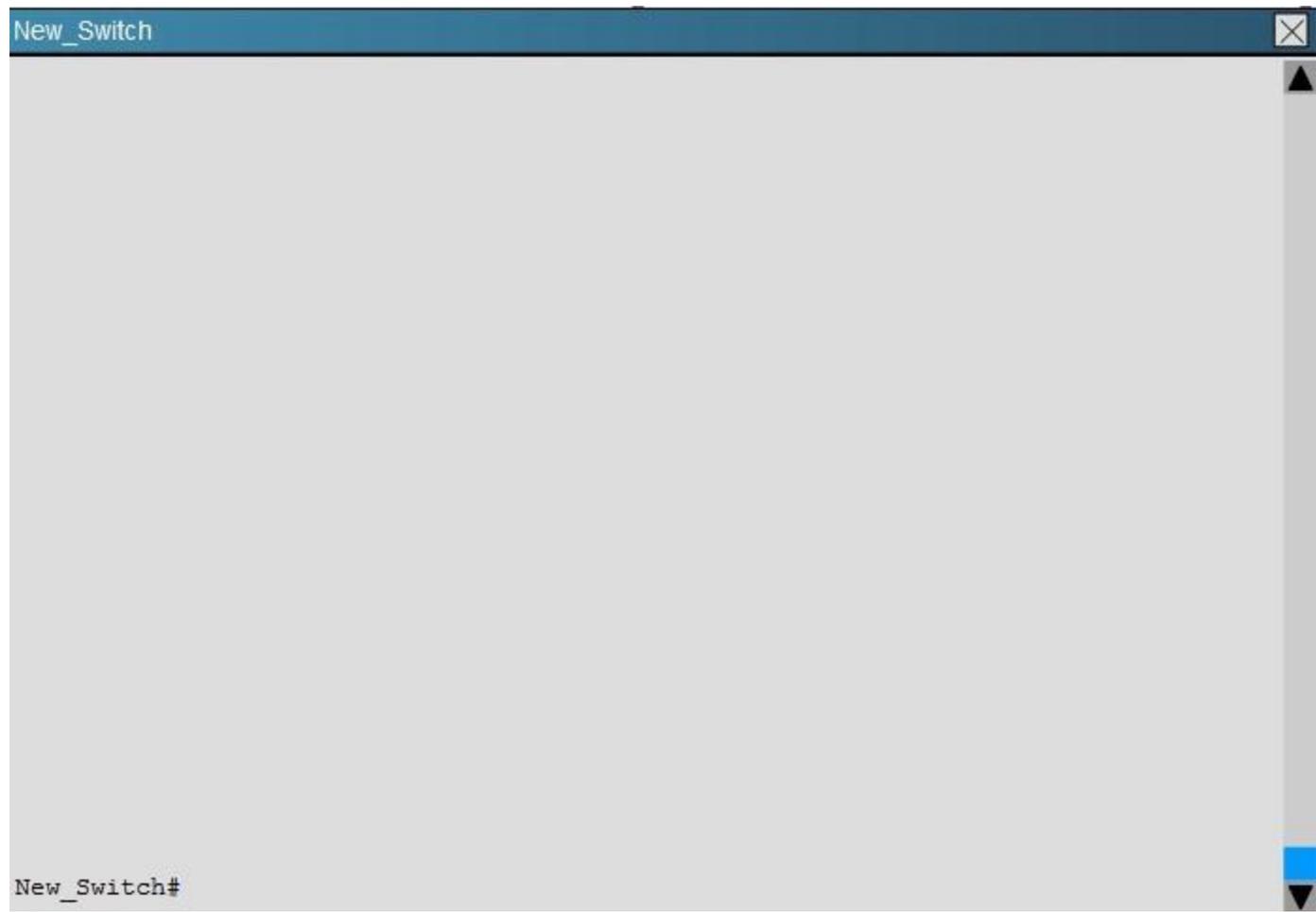
QUESTION 50

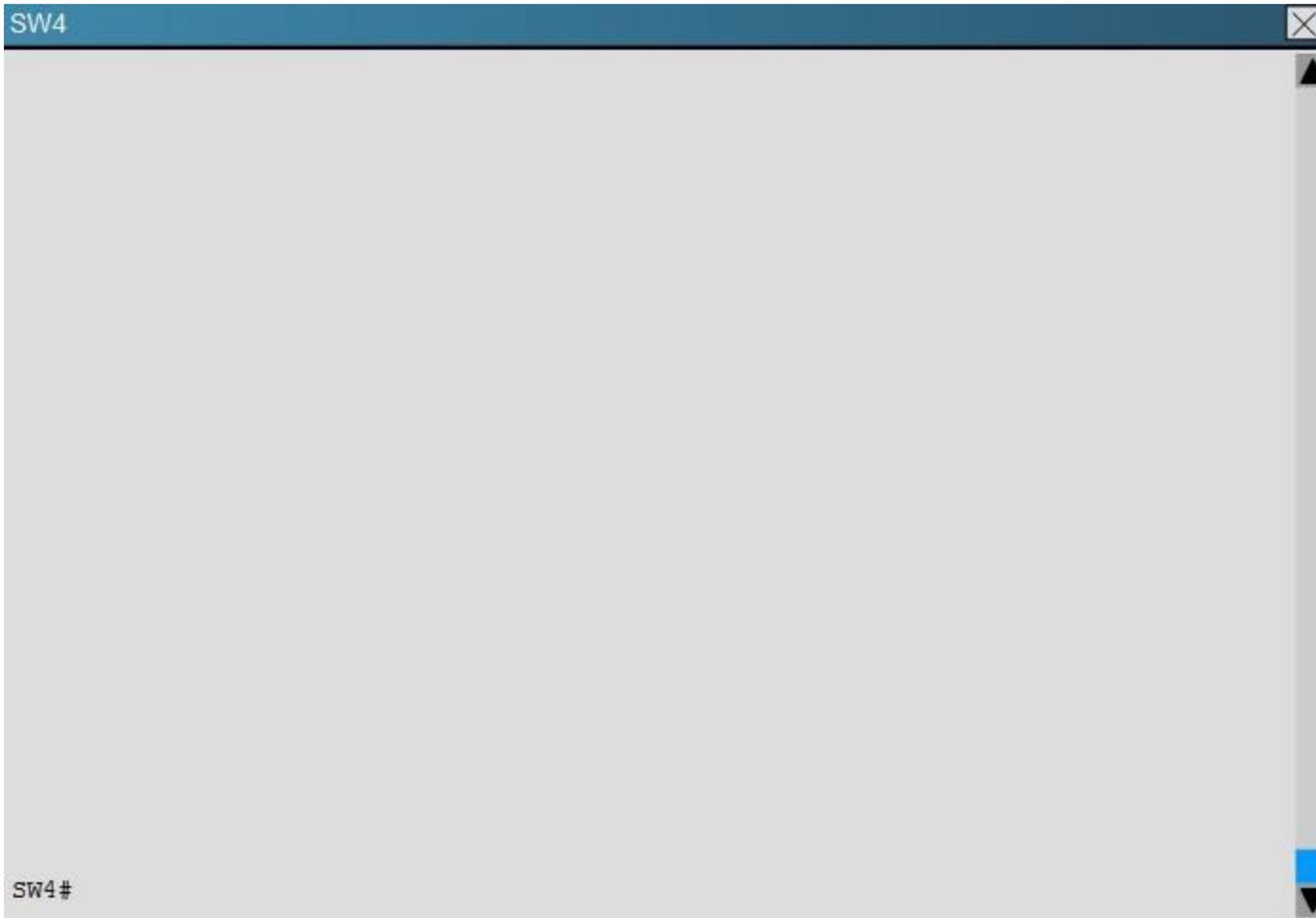
You have been asked to install and configure a new switch in a customer network. Use the console access to the existing and new switches to configure and verify correct device configuration.











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: Layer 2 Technologies

Explanation

Explanation/Reference:

Topic 2, Infrastructure Security

QUESTION 51

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 52

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

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

Correct Answer: A

Section: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 53

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 54

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 55

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 56

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 57

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 58

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 59

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: CDF

Section: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 60

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 61

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 62

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: Infrastructure Security

Explanation

Explanation/Reference:

answer is reliable.

QUESTION 63

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 64

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

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

Correct Answer: A

Section: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 65

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 66

Refer to the exhibit.

```
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
```

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

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

Correct Answer: A

Section: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 67

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: Infrastructure Security

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 69

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 70

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 71

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: Infrastructure Security

Explanation

Explanation/Reference:

exact answer.

QUESTION 72

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 73

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 74

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: Infrastructure Security

Explanation

Explanation/Reference:

proper answer.

QUESTION 75

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: Infrastructure Security

Explanation

Explanation/Reference:

QUESTION 76

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: Infrastructure Security

Explanation

Explanation/Reference:

real answer.

QUESTION 77

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: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 78

What is the default HSRP priority?

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

Correct Answer: B

Section: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 79

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: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 80

Which First Hop Redundancy Protocol is an IEEE Standard?

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

Correct Answer: C

Section: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 81

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: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 82

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: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 83

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

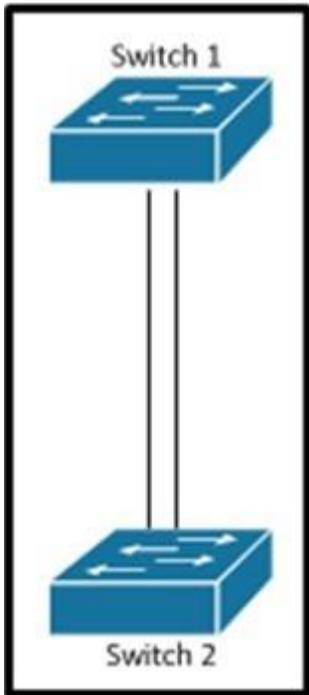
Section: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 84

Refer to the exhibit.



Which set of configurations will result in all ports on both switches successfully bundling into an EtherChannel?

- A. switch1channel-group 1 mode activeswitch2channel-group 1 mode auto
- B. switch1channel-group 1 mode desirableswitch2channel-group 1 mode passive
- C. switch1channel-group 1 mode onswitch2channel-group 1 mode auto
- D. switch1channel-group 1 mode desirableswitch2channel-group 1 mode auto

Correct Answer: D

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 85

Refer to the exhibit.

```
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
```

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?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 86

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 87

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 88

A network engineer deployed a switch that operates the LAN base feature set and decides to use the SDM VLAN template. The SDM template is causing the CPU of the switch to spike during peak working hours. What is the root cause of this issue?

- A. The VLAN receives additional frames from neighboring switches.
- B. The SDM VLAN template causes the MAC address-table to overflow.
- C. The VLAN template disables routing in hardware.
- D. The switch needs to be rebooted before the SDM template takes effect.

Correct Answer: C

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 89

An access switch has been configured with an EtherChannel port. After configuring SPAN to monitor this port, the network administrator notices that not all traffic is being replicated to the management server. What is a cause for this issue?

- A. VLAN filters are required to ensure traffic mirrors effectively.
- B. SPAN encapsulation replication must be enabled to capture EtherChannel destination traffic.
- C. The port channel can be used as a SPAN source, but not a destination.
- D. RSPAN must be used to capture EtherChannel bidirectional traffic.

Correct Answer: C

Section: Layer 2 Technologies

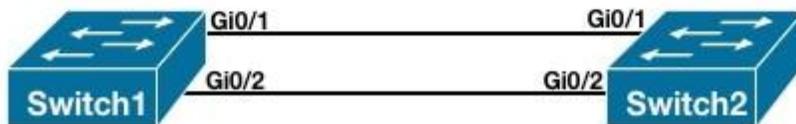
Explanation

Explanation/Reference:

QUESTION 90

Refer to the exhibit.

<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>
--	---



What is the result of the configuration?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 91

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 92

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: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 93

A network engineer notices inconsistent Cisco Discovery Protocol neighbors according to the diagram that is provided. The engineer notices only a single neighbor that uses Cisco Discovery Protocol, but it has several routing neighbor relationships. What would cause the output to show only the single neighbor?

- A. The routers are connected via a Layer 2 switch.
- B. IP routing is disabled on neighboring devices.
- C. Cisco Express Forwarding is enabled locally.
- D. Cisco Discovery Protocol advertisements are inconsistent between the local and remote devices.

Correct Answer: A

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 94

After the implementation of several different types of switches from different vendors, a network engineer notices that directly connected devices that use Cisco Discovery Protocol are not visible. Which vendor-neutral protocol could be used to resolve this issue?

- A. Local Area Mobility
- B. Link Layer Discovery Protocol
- C. NetFlow
- D. Directed Response Protocol

Correct Answer: B

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 95

Several new switches have been added to the existing network as VTP clients. All of the new switches have been configured with the same VTP domain, password, and version. However, VLANs are not passing from the VTP server (existing network) to the VTP clients. What must be done to fix this?

- A. Remove the VTP domain name from all switches with "null" and then replace it with the new domain name.
- B. Configure a different native VLAN on all new switches that are configured as VTP clients.
- C. Provision one of the new switches to be the VTP server and duplicate information from the existing network.
- D. Ensure that all switch interconnects are configured as trunks to allow VTP information to be transferred.

Correct Answer: D

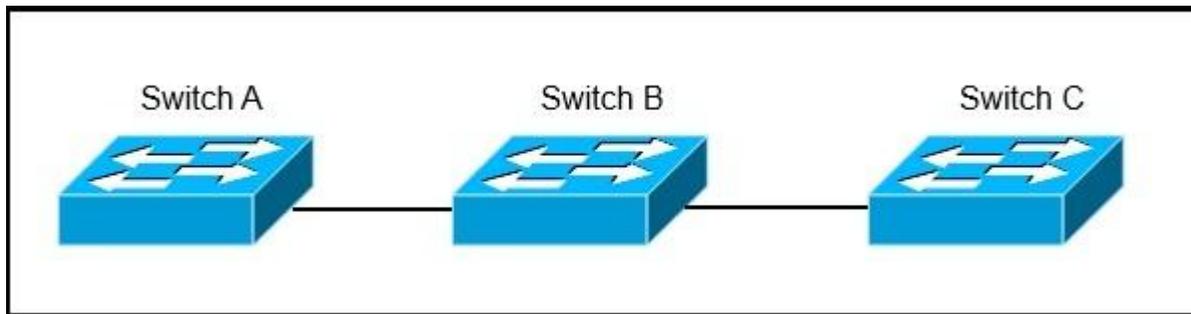
Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 96

Refer to the exhibit.



Switch A, B, and C are trunked together and have been properly configured for VTP. Switch C receives VLAN information from the VTP server Switch A, but Switch B does not receive any VLAN information. What is the most probable cause of this behavior?

- A. Switch B is configured in transparent mode.
- B. Switch B is configured with an access port to Switch A, while Switch C is configured with a trunk port to Switch B.
- C. The VTP revision number of the Switch B is higher than that of Switch A.
- D. The trunk between Switch A and Switch B is misconfigured.

Correct Answer: A

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 97

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 98

An administrator recently configured all ports for rapid transition using PortFast. After testing, it has been determined that several ports are not transitioning as they should. What is the reason for this?

- A. RSTP has been enabled per interface and not globally.
- B. The STP root bridge selection is forcing key ports to remain in non-rapid transitioning mode.
- C. STP is unable to achieve rapid transition for trunk links.
- D. The switch does not have the processing power to ensure rapid transition for all ports.

Correct Answer: C

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 99

Which technique automatically limits VLAN traffic to only the switches that require it?

- A. access lists
- B. DTP in nonegotiate
- C. VTP pruning

D. PBR

Correct Answer: C

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 100

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: Infrastructure Services

Explanation

Explanation/Reference:

real answer.

QUESTION 101

Refer to the exhibit.

%GLBP-4-DUPADDR: Duplicate address

Which option describes the reason for this message in a GLBP configuration?

- 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: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 102

Refer to the exhibit.

```
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 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?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 103

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 104

Which action allows a network engineer to limit a default VLAN from being propagated across all trunks?

- A. Upgrade to VTP version 3 for advanced feature set support.
- B. Enable VTP pruning on the VTP server.
- C. Manually prune default VLAN with switchport trunk allowed vlans remove.
- D. Use trunk pruning vlan 1.

Correct Answer: C

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 105

What is required for a LAN switch to support 802.1q Q-in-Q encapsulation?

- A. Support less than 1500 MTU
- B. Support 1504 MTU or higher
- C. Support 1522 layer 3 IP and IPX packet
- D. Support 1547 MTU only

Correct Answer: B

Section: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 106

Refer to the exhibit.

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

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

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 107

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: Layer 2 Technologies

Explanation

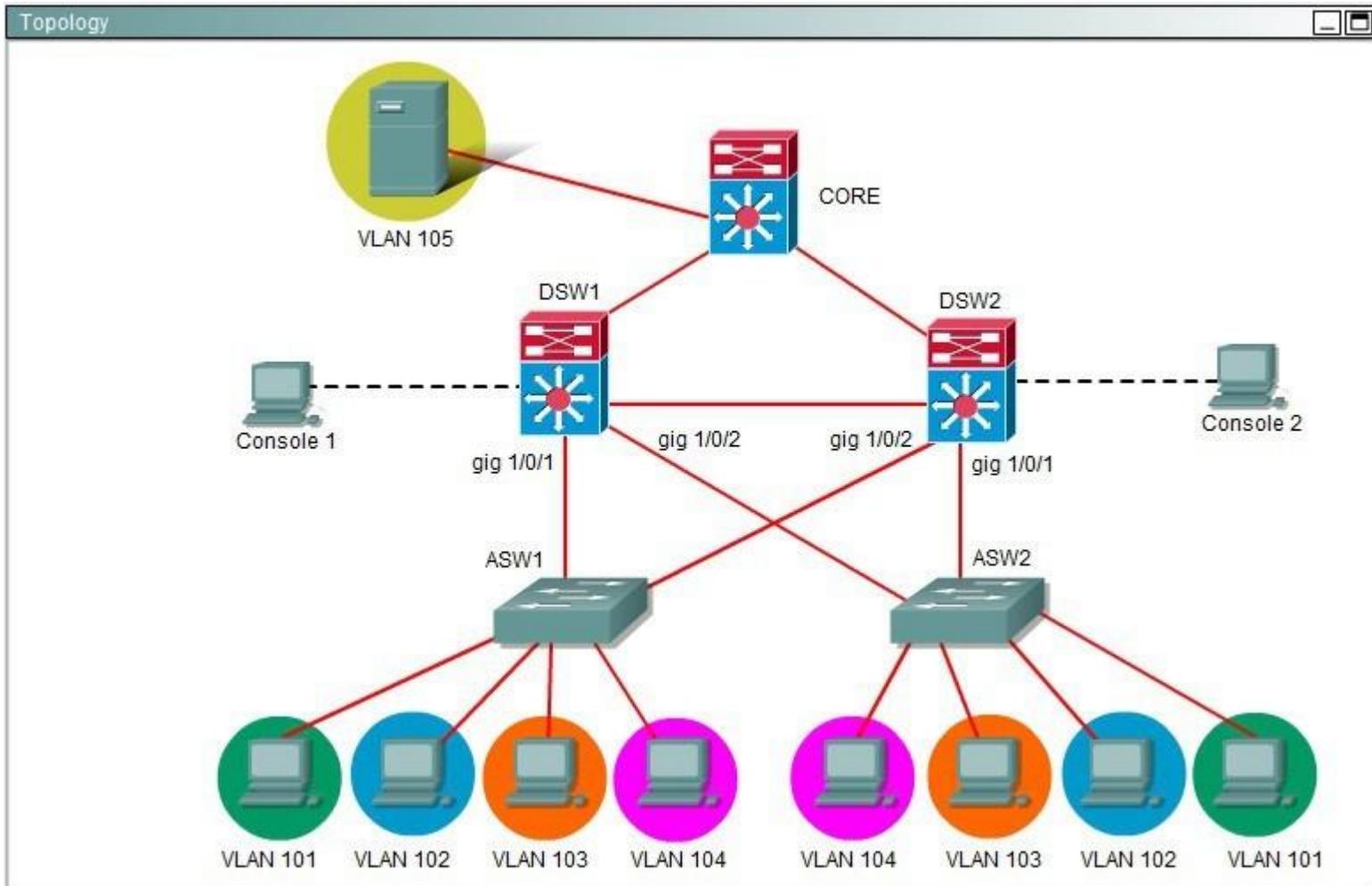
Explanation/Reference:

QUESTION 108

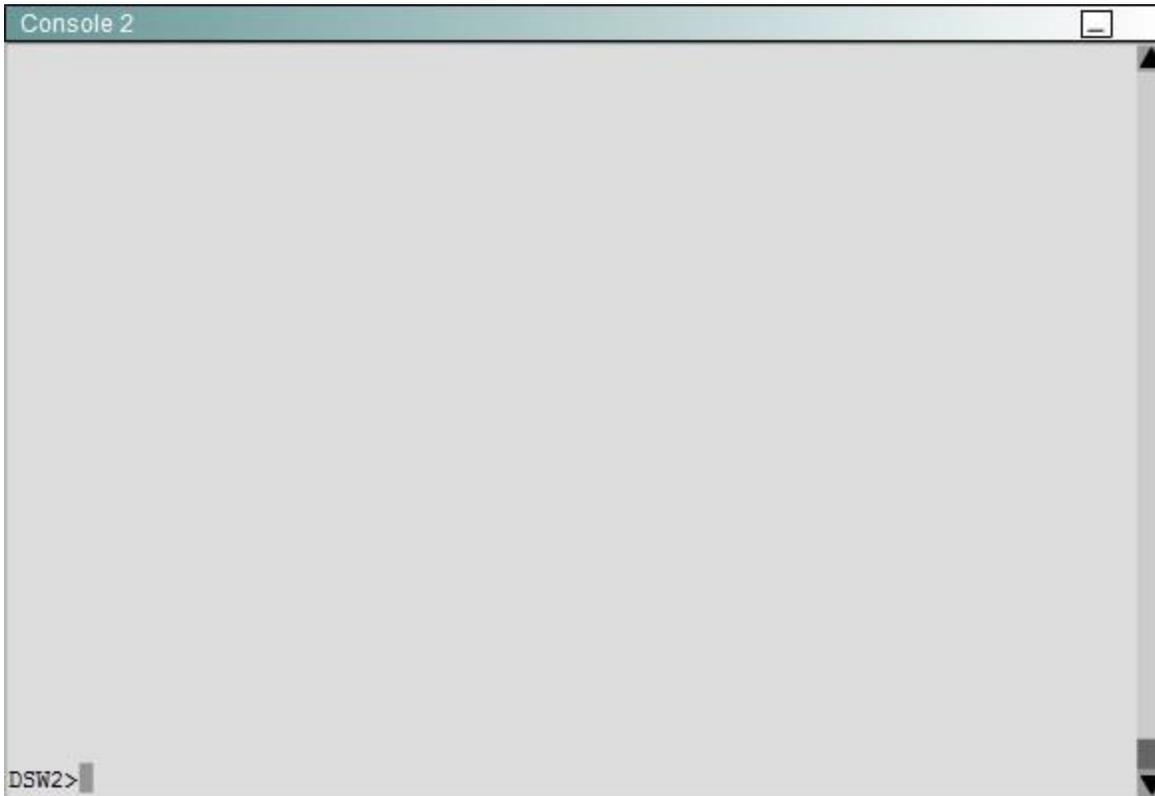
Ferris Plastics, Inc. is a medium sized company, with an enterprise network (access, distribution and core switches) that provides LAN connectivity from user PCs to corporate servers. The distribution switches are configured to use HSRP to provide a high availability solution. · DSW1 -primary device 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.







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?

- A. The decrement value on DSW1 should be greater than 5 and less than 15.
- B. The decrement value on DSW1 should be greater than 9 and less than 15.
- C. The decrement value on DSW1 should be greater than 11 and less than 19.
- D. The decrement value on DSW1 should be greater than 190 and less than 200.
- E. The decrement value on DSW1 should be greater than 195 and less than 205.

Correct Answer: C

Section: Infrastructure Services

Explanation

Explanation/Reference:

QUESTION 109

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 110

Refer to the exhibit.

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

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?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 111

Refer to the exhibit.

```
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
```

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?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 112

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 113

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 114

After reviewing UDLD status on switch ports, an engineer notices that the." 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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 115

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 116

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: Layer 2 Technologies

Explanation

Explanation/Reference:

definite answer.

QUESTION 117

Refer to the exhibit.

```
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 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?

- 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: Layer 2 Technologies

Explanation

Explanation/Reference:

proper answer.

QUESTION 118

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 119

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 120

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 121

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 122

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: Layer 2 Technologies

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: Layer 2 Technologies

Explanation

Explanation/Reference:

to the point answer.

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: Layer 2 Technologies

Explanation

Explanation/Reference:

accurate answer.

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: Layer 2 Technologies

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: Layer 2 Technologies

Explanation

Explanation/Reference:

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: Layer 2 Technologies

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: Layer 2 Technologies

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: Layer 2 Technologies

Explanation

Explanation/Reference:

answer is real.

QUESTION 130

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: Layer 2 Technologies

Explanation

Explanation/Reference:

answer is great.

QUESTION 131

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: Layer 2 Technologies

Explanation

Explanation/Reference:

QUESTION 132

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: Layer 2 Technologies

Explanation

Explanation/Reference: