

# SDM Questions

<https://www.certprepare.com/sdm-questions>

## Question 1

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.

**Answer: A**

## Question 2

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

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

**Answer: A**

## Question 3

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

**Answer: A**

#### Question 4

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.

**Answer: C**

#### Question 5

Which two statements about SDM templates are true? (Choose two)

- A. They are used to allocate system resources
- B. Changing the SDM template will not disturb switch operation.
- C. You can verify the SDM template that is in use with the **show sdm prefer** command
- D. SDM templates are defined by the switch model and cannot be changed
- E. SDM templates changes do not require switch to be rebooted

**Answer: A C**

#### Question 6

In a switch stack where is the the SDM template stored?

- A. All switches in stack
- B. Master switch
- C. Flash memory

**Answer: B**

#### Question 7

What types of SDM templates you can use in switch? (Choose four)

- A. Access
- B. Default
- C. Routing
- D. VLANs

- E. ?
- F. ?

**Answer:** A B C D

### **Question 8**

Which three features can be optimized by using SDM templates? (Choose three)

- A. port security
- B. trunk
- C. VLAN
- D. access
- E. DHCP snooping
- F. routing

**Answer:** C D F

### **Question 9**

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

**Answer:** A

### **Question 10**

Which statement about the default Switch Database Management Template is true?

- A. Template disables routing and supports the maximum number of unicast MAC addresses
- B. Template maximizes system resources for access control lists
- C. Template maximizes system resources for unicast routing
- D. Template gives balance to all functions

**Answer:** D

### **Question 11**

A question about a Layer 2 switch has been moved over to a Layer 2 and Layer 3 environment but high CPU spike during work hours.

- A. show sdm prefer vlan  
(config)# sdm prefer vlan
- B. show sdm prefer routing  
(config)# sdm prefer routing
- C. show sdm prefer  
(config)# sdm prefer routing
- D. show sdm prefer  
(config)# sdm prefer default

**Answer: D**

## SDM Questions 2

<https://www.certprepare.com/sdm-questions-2>

### Question 1

Which statement about the default Switch Database Management template is true?

- A. The default template disables routing and supports the maximum number of unicast MAC addresses.
- B. The default template gives balance to all functions.
- C. The default template maximizes system resources for unicast routing.
- D. The default template maximizes system resources for access control lists.

**Answer: B**

### Question 2

Which SDM command will provide maximum usage for IPv4 and IPv6 routing, including IPv4 policy-based routing on a switch?

- A. sdm prefer dual-ipv4-and-ipv6 routing
- B. sdm prefer dual-ipv4-and-ipv6 default
- C. sdm prefer dual-ipv4-and-ipv6 vlan
- D. sdm prefer dual-ipv4-and-ipv6 access

**Answer: A**

### Question 3

Which SDM command maximize routing on the switch?

- A. sdm prefer routing
- B. sdm prefer route-enabled
- C. sdm prefer route-on
- D. sdm prefer access-route

**Answer:** A

## Err-disabled Recovery Questions

<https://www.certprepare.com/err-disabled-recovery-questions>

### Question 1

Which errdisable recovery command option enables a device to recover from a potential loop condition?

- A. link-flap
- B. security-violation
- C. udld
- D. dtp-flap

**Answer:** C

### Question 2

A question about how to recover err-disable. (Choose two)

- A. UDLD reset
- B. Err-disable auto recovery
- C. Shut and restart
- D. UDLD recovery

**Answer:** A B

### Question 3

Refer to the exhibit

errdisable recovery cause udld udld port aggressive mode
---

```
current operational status : disabled port
message interval 7
time out interval 5

fa0/13 is down, line protocol is down (err-disabled)
mtu 1500 bw 1000, dly 1000
loopback not set
keepalive set 10 sec
```

Which two statements of the above result is true? (Choose two)

- A. As a result of STP, interface was err-disabled
- B. UDLD reset command recovers the disabled ports after the error is corrected
- C. UDLD negotiation failed when neighbor switch went offline
- D. UDLD mode changed from normal to aggressive when the error was detected
- E. UDLD aggressive mode put the interface into an error disabled state

**Answer: B E**

#### **Question 4**

A question about a fiber connected EtherChannel after the switches were powered on the ports went errdisable.

- A. Due to UDLD errdisable it.
- B. Due to EtherChannel misconfig.
- C. ?
- D. ?

**Answer: A**

#### **Question 5**

Which two port err-disabled recovery options are used to detect the reason? (Choose two)

- A. show errdisable detect
- B. show errdisable recovery
- C. error-disable notifications/traps are active by default.
- D. error-disable notifications/traps are disabled by default.
- E. error-disable notifications/traps is never possible.

**Answer: A B**

### Question 6

Which errdisable recovery command option enables a device to recover from an incorrect SFT state?

- A. link-monitor-failure
- B. sfp-config-mismatch
- C. gbic-invalid
- D. port-mode-failure

**Answer: C**

### Question 7

Which command is used to verify errdisable on any interface?

- A. show err-disable detect
- B. show interfaces err-disable status
- C. show interface status err-disabled

**Answer: C**

### Question 8

Which two statements about errdisable recovery are true? (Choose two)

- A. You can use the **show errdisable recovery** command to view the reason a port was error-disabled
- B. Errdisable detection is enabled by default on ports with port security enabled
- C. You can use the **show errdisable detect** command to view the reason a port was error-disabled
- D. Errdisabled autorecovery is enabled by default
- E. Errdisabled detection is disabled by default on ports with port security enabled

**Answer: A B**

### Question 9

Which two statements about error-disabled ports are true? (Choose two)

- A. When a port is error-disabled, it may continue to pass management traffic
- B. When a port is error-disabled, all traffic on the port stops.
- C. By default, error-disabled ports automatically recover once the issue is resolved

- D. When a port is error-disabled, the port LED changes to solid orange
- E. They can be recovered only by resetting the interface

**Answer: B D**

### **Question 10**

Which two circumstances can cause a port to errdisable? (Choose two)

- A. It is connected to a host with an NIC that is unable to recognize
- B. The switch incurred a port security violation
- C. It detected a collision
- D. It learned a new MAC address
- E. It detected a peer with a matching duplex

**Answer: B D**

## **CDP & LLDP Questions**

<https://www.certprepare.com/cdp-lldp-questions>

### **Question 1**

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

**Answer: B**

### **Question 2**

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**.



**Answer: A**

### **Question 3**

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.

**Answer: A**

### **Question 4**

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

**Answer: B**

### **Question 5**

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

**Answer: A**

### Question 6

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

**Answer: B**

### Question 7

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.

**Answer: A**

### Question 8

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

**Answer: A**

### Question 9

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.

**Answer: A**

### **Question 10**

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.

**Answer: A**

## **CDP & LLDP Questions 2**

<https://www.certprepare.com/cdp-lldp-questions-2>

### **Question 1**

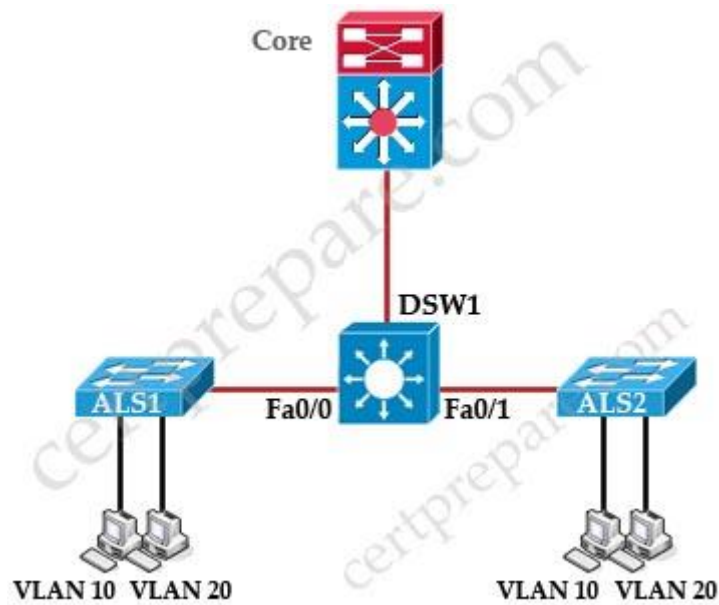
Which statement about using native VLANs to carry untagged frames is true?

- 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.

**Answer: A**

### **Question 2**

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

**Answer: C**

### Question 3

Which two statements apply to LLDP?

- A. It runs on the data link layer
- B. It runs on the network layer
- C. It is not enabled by default on Cisco devices
- D. Enabled on Cisco devices by default

**Answer: A C**

### Question 4

Which two statements about CDP are true? (Choose two)

- A. CDP uses a TLV to advertise the native VLAN
- B. CDP is not supported with SNMP

- C. CDP is supported on Frame Relay sub interfaces
- D. CDP runs on OSI layer 2
- E. CDP runs on OSI layer 1

**Answer:** A D

### **Question 5**

Which two statements about frame LLDP is true?

- A. Frame has destination multicast address
- B. ?
- C. Frame has CRC
- D. ?

**Answer:** A C

### **Question 6**

Which information does CDP supply from connected devices? (Choose three)

- A. Hardware Platform
- B. Interface ID
- C. Hostname
- D. Config Register

**Answer:** A B C

### **Question 7**

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

**Answer:** A

### **Question 8**

What feature carries information about the Voice VLAN to a Cisco Phone?

- A. SIP
- B. LLDP
- C. CDP
- D. Skinny Client Control Protocol (SCCP)

**Answer: C**

### **Question 9**

Which two pieces of information are carried in a Cisco Discovery Protocol advertisement? (Choose two)

- A. Processor Type
- B. VTP domain name
- C. Routing protocol
- D. Memory usage
- E. Spanning-Tree mode
- F. native VLAN-ID

**Answer: B F**

### **Question 10**

Which two settings are part of a default LLDP configuration? (Choose two)

- A. The LLDP hold time is 60 seconds
- B. The LLDP global state is disabled
- C. The LLDP reinitialisation delay is 5 seconds
- D. The LLDP interface state is disabled
- E. The LLDP timer is 60 seconds

**Answer: B D**

## **CDP & LLDP Questions 3**

<https://www.certprepare.com/cdp-lldp-questions-3>

### **Question 1**

Which two ways can you use to disable Cisco Discovery Protocol? (Choose two)

- A. Enter the no cdp enable command to disable it on a device.
- B. Enter the no cdp run command to disable it in the global configuration.
- C. Enter the no cdp run command to disable it on an individual interface.
- D. Enter the cdp disable command to disable it on an individual interface.
- E. Enter the no cdp enable command to disable it on an individual interface.

**Answer: B E**

### **Question 2**

Which two statements about CDP are true? (Choose two)

- A. It can be disabled only at the interface level.
- B. Devices with Cisco Discovery Protocol configured send advertisement messages to a multicast address on a periodic basis.
- C. It is disabled when switches have mismatched native VLANs.
- D. Devices with Cisco Discovery Protocol configured send advertisement messages to a broadcast address on a periodic basis.
- E. VTP relies on Cisco Discovery Protocol to carry VTP domain information.

**Answer: B E**

### **Question 3**

Which three pieces of information about the remote device are reported by Cisco Discovery Protocol? (Choose three)

- A. The routing protocols in use on the device
- B. Its spanning-tree state
- C. Its hostname
- D. Its port number
- E. Its configuration register value
- F. Its hardware platform

**Answer: C D F**

### **Question 4**

What TLV's are mandatory in LLDP message? (Choose two)

- A. Native VLAN TLV
- B. Platform TLV
- C. Network TLV
- D. Hostname TLV

- E. Port ID TLV
- F. Chassis ID

**Answer:** E F

### **Question 5**

Which six optional TLVs are valid? (Choose six)

- A. Port description TLV
- B. System name TLV
- C. System description TLV
- D. System capabilities TLV
- E. Management address TLV
- F. Specific TLVs
- G. Source ID TLV
- H. Native hostname TLV

**Answer:** A B C D E F

### **Question 6**

Which four mandatory TLVs are valid? (Choose four)

- A. End of LLDPDU
- B. Chassis ID
- C. Port ID
- D. Time To Live
- E. VLAN ID
- F. System name ID
- G. Description ID

**Answer:** A B C D

### **Question 7**

Which two mandatory TLV types does LLDP advertise? (Choose two)

- A. Native VLAN TLV
- B. Platform TLV
- C. Network TLV
- D. Hostname TLV
- E. Port ID TLV
- F. Chassis ID TLV



**Answer:** E F

### **Question 8**

Which two of the following organizationally specific LLDP TLVs are also advertised to support LLDP-MED? (Choose two)

- A. Port VLAN ID TLV (IEEE 802.1 organizationally specific TLVs)
- B. MAC/PHY configuration/status TLV (IEEE 802.3 organizationally specific TLVs)
- C. IP Address TLV (IEEE 802.9 organizationally specific TLVs)
- D. DSCP TLV (IEEE 802.3 organizationally specific TLVs)
- E. Descriptive TLV (IEEE 802.5 organizationally specific TLVs)

**Answer:** A B

### **Question 9**

Which of the following mandatory TLVs are valid for basic management? (Choose five)

- A. Port description TLV
- B. System name TLV
- C. System description
- D. System capabilities TLV
- E. Management address TLV
- F. Isolated address TLV
- G. Source and destination capabilities TLV

**Answer:** A B C D E

### **Question 10**

Which two advantages of LLDP are used over CDP? (Choose two)

- A. It supports topology change notification.
- B. It supports ATM.
- C. It supports checksum.
- D. It supports vendor-agnostic.
- E. It supports Frame Relay

**Answer:** A D

# CDP & LLDP Questions 4

<https://www.certprepare.com/cdp-lldp-questions-4>

## Question 1

Which two types of protocols use VLAN 1 as the default? (Choose two)

- A. CDP
- B. STP
- C. VTP
- D. ?
- E. ?

**Answer:** A C

## Question 2

Which two statements about LLDP frames are true? (Choose two)

- A. LLDP frame sends to multicast address.
- B. LLDP frame has its own CRC.
- C. LLDP frame contains unicast address within its fields.
- D. LLDP frame consists of sequence of TLVs.
- E. ?

**Answer:** A D

## Question 3

Which command on a switchport can cause LLDP to accept LLDP packets but not send them?

- A. lldp run
- B. lldp advertise
- C. lldp receive
- D. no lldp transmit

**Answer:** D

## Question 4

A question about which is true about CDP? (Choose two)

- A. disabled when native VLAN mismatched
- B. can be disabled on interface only
- C. send periodic broadcast
- D. send periodic multicast

**Answer: A D**

### **Question 5**

Which statement is true about CDP?

- A. CDP sends updates every 60 seconds
- B. CDP does not support SNMP
- C. ?
- D. ?

**Answer: A**

### **Question 6**

What command sets the interval for LLDP send updates to its neighbors?

- A. LLDP tlv-select
- B. LLDP timer
- C. LLDP transmit
- D. ?

**Answer: B**

### **Question 7**

Which two statements about LLDP are true? (Choose two)

- A. Switches can run LLDP and Cisco Discovery Protocol simultaneously
- B. When it is enabled on a switch, Cisco Discovery Protocol must be disabled
- C. When LLDP is enabled globally, it is enabled on all ports including tunnel ports
- D. Devices with LLDP configured send advertisement messages to a unicast address on a periodic basis
- E. Devices with LLDP configured send advertisement messages to a multicast address on a periodic basis

**Answer: A E**

### Question 8

Which two statements about frame LLDP is true?

- A. Frame has destination multicast address
- B. LLDP data unit has sequence of Type-length-Value (TLVs)
- C. Frame has CRC

**Answer:** A B

### Question 9

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

**Answer:** B

## UDLD Questions

<https://www.certprepare.com/udld-questions>

### Question 1

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.

**Answer:** A

### Question 2

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

**Answer: A**

### **Question 3**

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

**Answer: B**

### **Question 4**

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.

**Answer: B**

### **Question 5**

After reviewing UDLD status on switch ports, an engineer notices that the switch LEDs are green. 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.

**Answer: A**

### Question 6

A question about UDLD.

```
switch(config)#udld enable
switch(config)#udld ...
switch(config)#int f0/5
switch(config-if)#udld port aggressive
```

What happens if interface f0/5 has been damaged?

- A. Other interface will recover
- B. All links go down
- C. Link stays up

**Answer: A**

### Question 7

What is the benefit of UDLD?

- A. provides backup for fiber
- B. help in preventing loops
- C. removes loops
- D. determines switch path

**Answer: B**

### Question 8

Which two statements about UDLD aggressive mode are true? (Choose two)

- A. UDLD attempts to re-establish a downed link one time before declaring the link down.
- B. UDLD messages are sent every 15 seconds.
- C. If a unidirectional link is detected, the port state is determined by spanning tree.
- D. UDLD automatically chooses the messaging interval based on the configured timers.
- E. The UDLD detection timer is four times the message interval by default.
- F. If a unidirectional link is detected, the port state is changed to errdisable.

**Answer: B F**

### Question 9

A network engineer is considering implementing UDLD throughout the network. Which option must the network engineer consider?

- A. UDLD works at Layer 1 of the OSI model
- B. UDLD is already enabled by default on all ports on Cisco switches
- C. UDLD aggressively disables the port after eight failed retries to connect to neighbor
- D. UDLD is an IEEE standard that can be configured on non-Cisco devices

**Answer: C**

### Question 10a

Refer to exhibit.

```
errdisable recovery cause udd
errdisable recovery interval 15
interface Gi0/1
 udd port aggressive
```

One pair of fiber that is connected to Gi0/1 has been damaged. What is likely to happen?

- A. The interface is shut down until the fiber pair is replaced
- B. The interface is prevented from causing spanning-tree loops
- C. After the fiber pair is replaced, the interface recovers within 15 minutes
- D. The interfaces actively tries to fix the damaged fiber link

**Answer: B**

### Question 10b

A switch has a pair of fiber and it has been damaged. Which two statements is true about the configuration below? (Choose two)

```
errdisable recovery cause uddl
errdisable recovery internal 15
interface gig0/0
udld mode aggressive
```

- A. It would prevent loops.
- B. It would be in shutdown mode until fiber is replaced.
- C. It would be up for 15 minutes after fiber is fixed.
- D. The port would try to actively repair the damaged fiber after 15 seconds.

**Answer:** A D

## UDLD Questions 2

<https://www.certprepare.com/udld-questions-2>

### Question 1

Refer to the exhibit.

<exhibit missing>

A question about UDLD. It shows a picture of 7 times and UDLD is set to aggressive mode. The port is set to shutdown error-disabled.

- A. The port is set to shutdown because UDLD is set to aggressive mode.
- B. The port is set to shutdown because STP...
- C. ?
- D. ?

**Answer:** A

### Question 2

A question about UDLD port disable.

<exhibit missing>

- A. When a link is repaired, the administrator must enter **udld reset** command to recover disabled interfaces.
- B. When a link is repaired, the administrator must enter **err-disable recovery cause uddl**



command to recover disabled interfaces.  
C. UDLD puts the port in STP inconsistent port mode.  
D. ?

**Answer: C**

### **Question 3**

Which UDLD mode does not shutdown/error disable the port when UDLD is detected?

- A. Aggressive mode
- B. Normal mode
- C. Loose mode
- D. Strict mode

**Answer: B**

## **VLAN Questions**

<https://www.certprepare.com/vlan-questions-5>

### **Question 1**

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

**Answer: A**

### **Question 2**

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

**Answer: A**

**Question 3**

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

**Answer: B**

**Question 4**

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

**Answer: B**

**Question 5**

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

**Answer: B**

**Question 6**

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.

**Answer:** D (in fact no correct answer)

### **Question 7**

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.

**Answer:** B

### **Question 8**

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

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

**Answer:** B

### **Question 9**

Question about voice VLAN?

- A. Disable by default
- B. enter on
- C. CoS value of 5
- D. Need manually enable

**Answer:** A C

### **Question 10**

Behavior of an access port when a tagged packet is received other than the access VLAN value.

- A. ?
- B. tag is removed and packet is forwarded of the VLAN mentioned in the tag
- C. packet is dropped
- D. tag is removed and packet is forwarded on the VLAN of the access port

**Answer: C**

## VLAN Questions 2

<https://www.certprepare.com/vlan-questions-2-2>

### Question 1

Which two statements are true about best practices in VLAN design? (Choose two)

- A. Routing should occur at the access layer if voice VLANs are utilized. Otherwise, routing should occur at the distribution layer.
- B. Routing may be performed at all layers but is most commonly done at the core and distribution layers.
- C. Routing should not be performed between VLANs located on separate switches.
- D. VLANs should be local to a switch.
- E. VLANs should be localized to a single switch unless voice VLANs are being utilized.

**Answer: B D**

### Question 2

A dynamic access port is member of which VLAN by default?

- A. VLAN 1 is the default VLAN
- B. none until the port VLAN is determined

**Answer: B**

### Question 3

Which VLAN IDs are in the extended range? (Choose three)

- A. 1006
- B. 1001

- C. 999
- D. 4021
- E. 3003
- F. 99

**Answer:** A D E

#### **Question 4**

Which configuration do you apply to an interface so that a host can be placed into VLAN593?

A. interface GigabitEthernet0/0.593  
encapsulation dot1q 593  
switchport access vlan 593

B. interface GigabitEthernet0/0  
switchport trunk encapsulation dot1q  
switchport trunk native vlan 593  
switchport access vlan 593

C. interface GigabitEthernet0/0  
switchport mode trunk  
switchport trunk allowed vlan 593

D. interface GigabitEthernet0/0  
switchport mode access  
switchport access vlan 593  
switchport host

**Answer:** D

#### **Question 5**

Which two statements are true in regards to normal and extended range VLANs? (Choose two)

- A. Normal range VLANs from 1-1005 are stored in vlan.dat.
- B. Extended range VLANs from 1006-4096 are stored in the startup configuration.
- C. Normal range VLANs from 1-1005 are stored in the startup configuration.
- D. Extended range VLANs from 1006-4096 are stored in vlan.dat.
- E. Both normal and extended VLANs are stored in vlan.dat file.

**Answer:** A B

### Question 6

Question about the behavior of VLAN 1 BPDUs in a situation where the native VLAN configured as VLAN 99 and the native VLAN is tagged. (Choose two)

- A. Normal STP VLAN 1 BPDU travel across VLAN 99 untagged
- B. PVST+ VLAN 1 BPDU travel across VLAN 99 tagged
- C. Normal STP VLAN 1 BPDU travel across VLAN 1 untagged
- D. PVST+ VLAN 99 BPDU travel across VLAN 99 tagged

**Answer:** B D

### Question 7

Which two statements about VLAN database are true? (Choose two)

- A. It supports VLANs 1-1001.
- B. It supports extended VLAN.
- C. Information about VLANs are stored in the configuration.
- D. It can have different VLANs with the same VLAN ID, but must have the same name.
- E. It can be configured in VTP transparent, but must be in the VLAN database mode.

**Answer:** A E

### Question 8

Which two VLAN ranges can you add, modify or delete on a switch? (Choose two)

- A. VLANs 1-1001
- B. VLANs 1005-4094
- C. VLANs 1006-4094
- D. VLANs 2-1001
- E. VLANs 2-4094

**Answer:** C D

### Question 9

Where does the VLAN information get saved to?

- A. The information is saved to the vlan.dat file.
- B. The information is saved to the running configuration file.
- C. The information is saved to the vlan.txt file.
- D. The information is saved to the vlan.conf file.

**Answer: A**

### **Question 10**

Which normal VLAN range are valid and is stored in the vlan.dat configuration file?

- A. VLANs 1-1005
- B. VLANs 1005-2030
- C. VLANs 2094-4094
- D. VLANs 4094-8030

**Answer: A**

## **VLAN Questions 3**

<https://www.certprepare.com/vlan-questions-3-2>

### **Question 1**

Which extended VLAN range are valid and is stored in the startup configuration?

- A. VLANs 1006-4096
- B. VLANs 2006-6096
- C. VLANs 1-1005
- D. VLANs 1005-2060

**Answer: A**

### **Question 2**

Which two statements about native VLANs are true? (Choose two)

- A. VLAN 1 and VLAN 1001 are native VLANs by default.
- B. The native VLAN is untagged over trunks.
- C. The native VLAN can be changed on a per port basis.
- D. Only one VLAN can be the native VLAN on a device.
- E. Cisco Discovery Protocol versions 1 and 2 can carry native VLAN information.

**Answer: B C**

### **Question 3**

Which three of these VLANs are a valid extended VLAN? (Choose three)

- A. 4095
- B. 4096
- C. 4094
- D. 3000
- E. 1006
- F. 1005

**Answer:** C D E

#### **Question 4a**

In which place does all VLANs get stored?

(In which place all VLAN are stored?)

- A. NVRAM: vlan.xml
- B. FLASH: vlan.xml
- C. NVRAM: vlan.txt
- D. FLASH: vlan.txt
- E. NVRAM: vlan.dat
- F. FLASH: vlan.dat

**Answer:** F

#### **Question 4b**

Which file lists all of the configured VLANs on a switch?

- A. flash:vlan.dat
- B. nvram:vlans.xml
- C. flash:vlans.txt
- D. nvram:vlan.txt
- E. flash.config.txt
- F. flash:vlan.xml

**Answer:** A

#### **Question 5**

Which two commands or combination of commands make native VLAN 99 tagged? (Choose two)



- A. vlan dot1q tag native
- B. vlan dot1q tag native vlan 99
- C. interface fa0/1  
switchport trunk native vlan 99
- D. encapsulation dot1q tag native vlan 99
- E. encapsulation dot1q 99 native

**Answer:** A C

### **Question 6**

A question about native VLAN set to 539.  
(There was a question like if native VLAN is 539)

- A. STP frames untagged on VLAN 539
- B. STP frames tagged on VLAN 539
- C. STP frames tagged on VLAN 1
- D. STP frames untagged on VLAN 1

**Answer:** A

### **Question 7**

What does the interface subcommand "switchport voice vlan 222" indicate?

- A. The port is configured for data and voice traffic.
- B. The port is fully dedicated to forwarding voice traffic.
- C. The port operates as an FXS telephony port.
- D. Voice traffic is directed to VLAN 222.

**Answer:** A or D

### **Question 8**

What would happen if we delete VLAN that exist on switchport?

- A. Port down and use native VLAN.
- B. Port down and use default VLAN.
- C. Port up and use native VLAN.
- D. Port up and use default VLAN.
- E. Port will remain shutdown/inactive until it is assigned a new VLAN.

**Answer: E**

### **Question 9**

How to tag a native VLAN?

- A. Use the “vlan dot1q native tag” under interface configuration mode
- B. Use the “vlan dot1q native tag” under global configuration mode
- C. Use the “vlan dot1q tag native” under global configuration mode
- D. Use the “vlan dot1q tag native” under interface configuration mode

**Answer: C**

### **Question 10**

What are the control protocols make use of the native VLAN 1 by default? (Choose two)

- A. STP
- B. NTP
- C. LACP
- D. VTP
- E. CDP
- F. UDLD

**Answer: D E**

## **VLAN Questions 4**

<https://www.certprepare.com/vlan-questions-4-2>

### **Question 1**

A question about voice VLAN with the possibility of two answers. (Choose two)

- A. The voice VLAN must be on a different VLAN database.
- B. The voice VLAN must be configured on a trusted port.
- C. The voice VLAN must be configured on an untrusted port.
- D. The voice VLAN must be on the same VLAN database.

**Answer: A B**

### **Question 2**

How can you mitigate attacks in which the attacker attaches more than one VLAN tag to a packet?

- A. Disable EtherChannel.
- B. Enable transparent VTP on the switch.
- C. Explicitly identify each VLAN allowed across the trunk.
- D. Assign an access VLAN to every active port on the switch.

**Answer: C**

### **Question 3**

Which three VLANs are part of the extended range of available VLANs? (Choose three)

- A. 1006
- B. 4095
- C. 4195
- D. 3000
- E. 4094
- F. 1001

**Answer: A D E**

### **Question 4**

Which two commands enable you to determine the native VLAN that is configured on an interface? (Choose two)

- A. show interface status
- B. show interfaces
- C. show interface trunk
- D. show running-config
- E. show interface brief

**Answer: C D**

### **Question 5**

Which two commands do you enter to add VLAN 20 on a switch VLAN configuration file? (Choose two) (Or How to add VLAN 20 on switch VLAN configuration file?)

- A. switchport trunk native vlan 20
- B. switchport access vlan 20
- C. vlan 20

- D. switchport trunk allowed vlan 20
- E. encapsulation dot1q 20

**Answer: B C**

### **Question 6**

Refer to exhibit.

(exhibit missing)

```
conf t
vlan 3
```

Switches A, B, C and D are connected via access ports. What two actions will you do to cater future expansion of VLAN due to large number of users.

- A. Change the access link to trunk ports
- B. Configure access VLAN 3 in each switch
- C. Configure VTP transparent
- D. ?

**Answer: A**

### **Question 7**

How many VLANs can be assigned to a user access port configured for VoIP?

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

**Answer: B**

### **Question 8**

Which two statements about normal-range VLANs are true? (Choose two)

- A. You can delete VLANs 1002 through 1005 in transparent mode only.
- B. The vlan.dat file is stored in RAM and copied to the NVRAM when you save the configuration.
- C. Configurations are saved in the vlan.dat file.
- D. You can add, modify, and remove configurations in VTP server mode and VTP client

mode.

E. You can add VLANs in VTP server mode.

Answer: C E

#### Question 9

Which three statements about extended VLANs are true? (Choose three)

- A. The lowest extended VLAN number is 1006.
- B. The lowest extended VLAN number is 1002.
- C. Any VLAN ID can be used as an extended VLAN.
- D. They are recognized only by VTP version 3.
- E. They are propagated by VTP by default.
- F. They require the extended system ID to be enabled on the device.

Answer: A D F

#### Question 10

Which two statements about native VLANs are true? (Choose two)

- A. All outgoing traffic without a VLAN tag is tagged with the native VLAN.
- B. All untagged traffic that arrives on the device is placed into the native VLAN.
- C. The VLAN tag is stripped from all incoming traffic that matches the native VLAN.
- D. They are propagated through VTP.
- E. The default native VLAN is VLAN 11.
- F. All incoming traffic that matches the native VLAN is dropped at the switch.

Answer: B D

#### Question 11

Which protocol is used to propagate voice VLANs to a Cisco phone?

- A. DTMF
- B. SKINNY
- C. SIP
- D. LLDP
- E. Cisco Discovery Protocol

Answer: E

## Question 12

Which two control protocols use the native VLAN 1 by default? (Choose two)

- A. CDP
- B. VTP
- C. NTP
- D. LACP
- E. STP

Answer: A B

# VLAN Trunking

<https://www.certprepare.com/vlan-trunking>

## Question 1

Refer to the exhibit.

```
SW-1#sh logging
%SPANTREE-SP-2-RECV_PVID_ERR: Received BPDU with inconsistent peer
Vlan id 1 on GigabitEthernet1/2 VLAN2013.
%SPANTREE-SP-2-BLOCK_PVID_PEER: Blocking GigabitEthernet1/2 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.

Answer: C

## Question 2

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

**Answer: A**

### **Question 3**

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

**Answer: C**

### **Question 4**

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

**Answer: C**

### **Question 5**

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.

**Answer: A B**

### **Question 6**

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

**Answer: C F**

### **Question 7**

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.

**Answer: A**

### **Question 8**

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

**Answer: A**

### Question 9

Refer to the exhibit.

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

D.

```
Switch#sh vlan
VLAN Name                Status Ports
-----
1    default              active Gil/0/2, Gil/0/3, Gil/0/4
                                Gil/0/5, Gil/0/6, Gil/0/7
                                Gil/0/8, Gil/0/9, Gil/0/10
                                Gil/0/11, Gil/0/12, Gil/0/13
                                Gil/0/14, Gil/0/15, Gil/0/16
                                Gil/0/17, Gil/0/18, Gil/0/19
                                Gil/0/20, Gil/0/21, Gil/0/22
                                Gil/0/23, Gil/0/24
10   Data                 active Gil/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

**Answer: A**

### Question 10

Refer to the exhibit.

```
Switch#show run
Building configuration...

interface FastEthernet0/1
description Uplink to Core
switchport
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1-90,100-199,200-900,1000-4000
switchport mode trunk
```

A network engineer changes the default native VLAN to VLAN 999. After applying the settings on the uplinks to the core switches, the switch control traffic, such as CDP and VTP, is no longer working. The standard configuration is used for each uplink. What is wrong with the configuration?

- A. The interface is administratively down.
- B. The encapsulation type is incorrect.
- C. The switchport mode trunk command should be first in the output.
- D. The native VLAN is not present on the trunk.
- E. The control traffic must be manually enabled on the new native VLAN.

**Answer: D**

### Question 11

Which command is used to verify trunk native VLANs?

- A. show access ports
- B. show interfaces trunk
- C. show ip interface brief

**Answer: B**

## VLAN Trunking 2

<https://www.certprepare.com/vlan-trunking-2>

### Question 1

Which two statements about 802.1 q are true? (Choose two)

- A. It supports 8-byte VLAN identifiers.
- B. It adds a 32-bit field to the Ethernet frame between the source MAC address and length.
- C. When it is enabled, it forces a recalculation of the frame-check sequence field.
- D. It increases the maximum size of an Ethernet frame to 1594 bytes.
- E. It encapsulates the original Ethernet frame and adds a VLAN identifier.
- F. It is a Cisco proprietary protocol.

**Answer: B C**

### Question 2

Which option is the minimum frame size for an 802.1Q frame?

- A. 64 bytes
- B. 68 bytes
- C. 1518 bytes
- D. 1522 bytes

**Answer: B**

### Question 3

Which option is the maximum frame size for an 802.1Q frame?

- A. 64 bytes
- B. 68 bytes
- C. 1518 bytes
- D. 1522 bytes

**Answer: D**

### Question 4

EXHIBIT – switchport trunk allowed vlan 1,80,99-250

Which two commands will remove VLAN 100 from the allowed VLAN list? (Choose two)

- A. switchport trunk allowed vlan remove 100
- B. switchport trunk allowed vlan 1-80,99,101-250
- C. switchport trunk allowed vlan except vlan 100

**Answer:** A B

### **Question 5**

Which two configurations cause the frames to be tagged? (Choose two)

- A. interface gi0/1.116  
encapsulation dot1q
- B. vlan trunk allowed vlan 116
- C. interface with access and voice VLAN configured to 116

**Answer:** A B (?)

### **Question 6**

What is the value of the TPID/tag protocol identifier of QinQ?

- A. 0x88a8
- B. 0x8100
- C. 0x8b45
- D. 0x8200

**Answer:** A

### **Question 7**

What is the value of the TPID/tag protocol identifier in dot1Q?

- A. 0x8100
- B. 0x8a88
- C. 0x8b45
- D. 0x8200

**Answer:** A

### **Question 8**

Which two commands are used to remove VLAN 55 from the trunk port? (Choose two)

- A. switchport trunk allowed vlan add 3, remove 55
- B. switchport trunk allowed vlan remove 55
- C. switchport trunk allowed vlan except 55

**Answer: B C**

### Question 9

Refer to the exhibit.

```
!  
interface GigabitEthernet2/0/1  
switchport access vlan 700  
switchport trunk allowed vlan 200,300,700  
switchport mode trunk  
end  
!
```

Refer to the exhibit. Which statement about the current configuration on port GigabitEthernet2/0/1 is true?

- A. It is an access port configured for a phone and a PC
- B. It is a trunk port and the native VLAN is VLAN1
- C. It is a trunk port and the native VLAN is VLAN 700
- D. It is an access port in VLAN 700

**Answer: B**

## VLAN Trunking 3

<https://www.certprepare.com/vlan-trunking-3>

### Question 1

A switch has been configured with the **vlan dot1q tag native** command. Which statement describes what the switch does with untagged frames that it receive?

- A. Untagged frames are forwarded via the default VLAN
- B. It drops the untagged frames
- C. The trunked port is put in err-disable state
- D. Untagged frames are forwarded via the native VLAN

**Answer: B**

### Question 2

Refer to the exhibit. Which two commands about SW1 are true? (Choose two)

SW1#show int trunk				
Port	Mode	Encapsulation	Status	Native vlan
Gi5/1	on	802.1q	Trunking	1
Gi6/2	on	802.1q	Trunking	600
Port	Vlans allowed a trunk			
Gi5/1	113			
Gi6/2	1,3,10,36,600			
Port	Vlans allowed and active in management domain			
Gi5/1	113			
Gi6/2	1,3,10,36,600			
Port	Vlans in spanning tree forwarding state and not pruned			
Gi5/1	113			
Gi6/2	1,3,10,36,600			

- A. Interface Gi5/1 is using a Cisco proprietary trunking protocol
- B. On interface Gi5/1, all untagged traffic is tagged with VLAN 113
- C. The device is configured with the default MST region
- D. Interface Gi5/1 is using an industry standard trunking protocol
- E. Interface Gi6/2 is the root port for VLAN 36
- F. On interface Gi6/2, all untagged traffic is tagged with VLAN 600

**Answer:** C D

### Question 3

Question about trunk configuration

int faX/X

switchport trunk allowed vlan x,x,x,x

switchport mode trunk

exit

show vlan

VLAN Name Status Ports

---

1 default active Fa0/1, Fa0/3, Fa0/3, FaX/X

show interface trunk

(no output)

- A. link is shutdown
- B. interface needs no shutdown
- C. other side is configured as access port
- D. missing switchport command

**Answer:** ? (maybe A)

#### Question 4

Which two DTP negotiated interface mode combinations negotiate to form an access port?  
(Choose two)

- A. Dynamic desirable and Dynamic Auto
- B. Dynamic Desirable and access
- C. Dynamic auto and Dynamic auto
- D. Nonegotiate and trunk
- E. Dynamic auto and trunk

**Answer: B C**

#### Question 5

Which two configurations can you apply to a port so that it tags traffic with VLAN 915?  
(Choose two)

- A.  
interface GigabitEthernet0/0  
  switchport mode access  
  switchport access vlan 915
- B.  
interface GigabitEthernet0/0  
  switchport mode trunk  
  switchport trunk encapsulation dot1q  
  switchport trunk allowed vlan 915
- C.  
interface GigabitEthernet0/0  
  switchport mode access  
  switchport voice vlan 915  
  switchport access vlan 915
- D.  
interface GigabitEthernet0/0.915  
  encapsulation dot1q 915
- E.  
interface GigabitEthernet0/0.915  
  switchport mode access  
  switchport trunk encapsulation dot1q  
  switchport trunk allowed vlan 915

**Answer: B D**



### Question 6

Refer to the exhibit. Which statement about the interface is true?

```
interface GigabitEthernet0/10
switchport trunk allowed vlan 34,36,519
switchport mode trunk
end
Switch-2#show vlan
```

VLAN	Name	Status	Ports
1	default	active	Gi0/1, Gi0/2, Gi0/3, Gi0/4 Gi0/5, Gi0/6, Gi0/7, Gi0/8 Gi0/9, Gi0/10, Gi0/11, Gi0/12 Gi0/13, Gi0/14, Gi0/15, Gi0/16
34	VLAN0034	active	
36	VLAN0036	active	
519	VLAN0519	active	

```
Switch2#show interfaces trunk
```

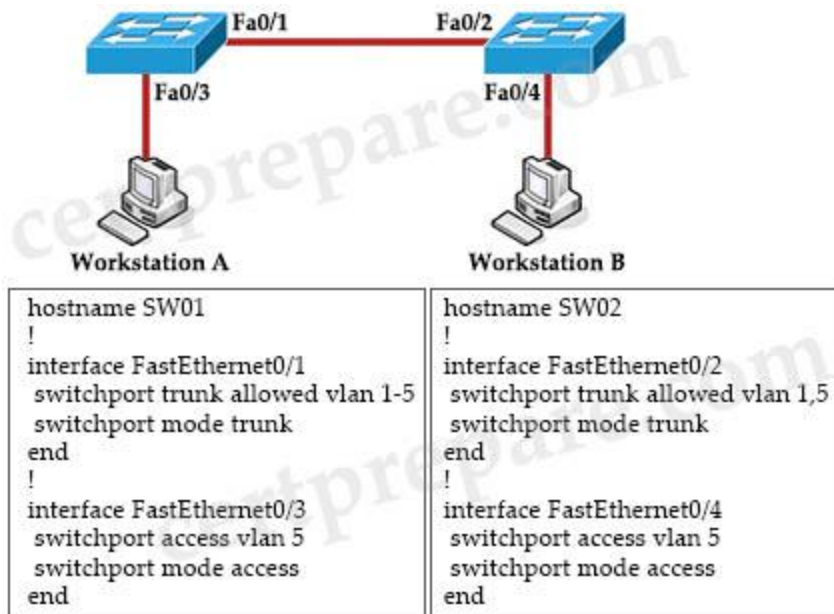
```
Switch2#
```

- A. The interface is down.
- B. The other side of the interface is set as access.
- C. The switchport command is missing from the configuration.
- D. The interface needs no shutdown configured.

**Answer: A**

### Question 7

Refer to the exhibit. Which description of the effect of entering the **switch port trunk allowed vlan 2,3,4** command on FastEthernet0/2 is true?



- A. The two workstations continue to communicate without a default gateway configured.
- B. The command is unsupported on a trunk where VLANs have already been pruned manually.
- C. The running configuration displays switch port trunk allowed vlan 1-5 for Fa0/2.
- D. The two workstation stop communicating because they are on VLAN 5.

**Answer: D**

### Question 8

How can you set VLAN 99 on a trunk to become a native VLAN?

- A. switchport trunk native vlan 99
- B. switchport trunk vlan 99 native
- C. switchport native vlan 99 trunk
- D. switchport native trunk vlan 99
- E. switchport vlan 99 native
- F. switchport vlan native trunk 99

**Answer: A**

### Question 9

If VLAN 99 is set to trunk, how can you set it to untagged from trunk VLAN 99?

- A. switchport access vlan 99
- B. switchport vlan 99 access

- C. switchport vlan 99 allow access
- D. switchport allow access vlan 99

**Answer: A**

### Question 10

Which command configures VLAN 99 as an untagged VLAN on a trunk?

- A. switchport access vlan 99
- B. switchport trunk pruning vlan except 99
- C. switchport trunk allowed vlan 99
- D. switchport trunk native vlan 99

**Answer: D**

## VLAN Trunking 4

<https://www.certprepare.com/vlan-trunking-4>

### Question 1

Exhibit that shows a trunk interface configuration with the following configuration:

```
switchport trunk allowed vlan 81-97,99-121
```

How can you remove vlan 100 from the allowed vlan list? (Choose two)

- A. switchport trunk allowed vlan 81-121 remove 98,100
- B. switchport trunk allowed vlan remove 100
- C. switchport trunk allowed vlan 81-97,99,101-121

**Answer: B C**

### Question 2

Refer to the output below. Which two effects of this configuration are true? (Choose two)

```
!
interface GigabitEthernet1/1
description to Accounting Floor A1460-516
switchport
```

```
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 2,4,6,8
switchport trunk native vlan 2
switchport mode trunk
end
!
```

- A. The device adds an 8-byte VLAN tag to data on VLAN 2.
- B. Data on VLAN 2 remains untagged.
- C. Data on VLANs 4,6, and 8 remains untagged.
- D. The device adds a 4-byte VLAN tag to data on VLAN 2 only.
- E. The switch adds a 4-byte VLAN tag to data on VLANs 4, 6 and 8.

**Answer:** B E

### Question 3

A question about a configuration with a dot1q enabled trunk port. (Choose two)

- A. Supports VLANs 1-4096
- B. Does not support tagging native VLAN
- C. Dot1q supports tagging 1000 VLANs including the native VLAN
- D. ?
- E. ?

**Answer:** A C

### Question 4

Which statement describes what a port that is configured as an access port does if it receives an 802.1Q tagged frame?

- A. It drops the frame
- B. It passes the frame on to the VLAN that the frame is tagged for.
- C. It err-disables the port.
- D. It removes the tag and forwards the frame in the VLAN assigned to the port

**Answer:** A

### Question 5

Which two requirements for dot1q trunking in IOS are true? (Choose two)

- A. the native VLAN must have the same number on each side of the link
- B. Spanning-tree PortFast must be enabled
- C. The encapsulation protocol must be the same on each end of the trunk
- D. MST must be running if extended VLANs are in use
- E. ISL must be enabled on the same link

**Answer:** A C

#### Question 6

Which two statements about 802.1Q are true? (Choose two)

- A. The header is found within the Ethernet trailer.
- B. Each frame contains a 12-byte VLAN identifier field.
- C. When it is enabled, the minimum Ethernet frame size is 68 bytes.
- D. It inserts a 4-bytes tag field to the Ethernet frame.
- E. Trunking devices add an 8-byte VLAN tag to all VLAN packets.

**Answer:** C D

## VTP Questions

<https://www.certprepare.com/vtp-questions-4>

#### Question 1

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.

**Answer:** D

#### Question 2

After implementing VTP, the extended VLANs are not being propagated to other VTP switches. What should be configured for extended VLANs?

- A. VTP does not support extended VLANs and should be manually added to all switches.
- B. Enable VTP version 3, which supports extended VLAN propagation.
- C. VTP authentication is required when using extended VLANs because of their ability to cause network instability.
- D. Ensure that all switches run the same Cisco IOS version. Extended VLANs will not propagate to different IOS versions when extended VLANs are in use.

**Answer: B**

### Question 3

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

**Answer: C**

### Question 4

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.

**Answer: A**

### Question 5

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.

**Answer: D**

### **Question 6**

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.

**Answer: B**

### **Question 7**

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.

**Answer: C**

### **Question 8**

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

**Answer: B**

### **Question 9**

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.

**Answer: C**

### **Question 10**

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.

**Answer: A**

## **VTP Questions 2**

<https://www.certprepare.com/vtp-questions-2-2>

### **Question 1**

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

**Answer: C**

### **Question 2**

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

**Answer: A**

### **Question 3**

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.

**Answer: C**

### **Question 4**

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        : Disabled
```

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.

**Answer: C**

### Question 5

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

**Answer: A**

### Question 6

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.

**Answer: C**

### Question 7

Refer to the exhibit.



Switch A, B, and C are trunked together and have been properly configured for VTP. Switch B has all VLANs, but Switch C is not receiving traffic from certain VLANs. What would cause this issue?

- A. A VTP authentication mismatch occurred between Switch A and Switch B.
- B. The VTP revision number of Switch B is higher than that of Switch A.
- C. VTP pruning is configured globally on all switches and it removed VLANs from the trunk interface that is connected to Switch C.
- D. The trunk between Switch A and Switch B is misconfigured.

**Answer: C**

### Question 8

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.

**Answer: B**

### Question 9

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.

**Answer: C**

### Question 10

Refer to the exhibit.

```
DSW1#show vtp status
VTP Version          : running VTP1 (VTP2 capable)
Configuration Revision : 2
Maximum VLANs supported locally : 1005
Number of existing VLANs : 7
VTP Operating Mode    : Client
VTP Domain Name       : SWITCH
VTP Pruning Mode      : Disabled
VTP V2 Mode           : Disabled
VTP Traps Generation  : Disabled
MD5 digest            : 0xCC 0x77 0x02 0x40 0x93 0xB5 0xC1 0xA2
Configuration last modified by 10.10.10.1 at 3-1-93 00:00:00
```

```
DSW2#show vtp status
VTP Version          : running VTP1 (VTP2 capable)
Configuration Revision : 3
Maximum VLANs supported locally : 1005
Number of existing VLANs : 7
VTP Operating Mode    : Server
VTP Domain Name       : SWITCH
VTP Pruning Mode      : Disabled
VTP V2 Mode           : Disabled
VTP Traps Generation  : Disabled
MD5 digest            : 0xCC 0x77 0x02 0x40 0x93 0xB5 0xC1 0xA2
Configuration last modified by 10.10.10.1 at 3-1-93 00:00:00
```

```
DSW2#show spanning-tree mst configuration
Name[SWITCH]
Revision 3  Instances configured 3
```

Instance	Vlans mapped
0	1-9,11-19,21-29,41-4094
1	10,20
2	30,40

DSW1 should share the same MST region with switch DSW2. Which statement is true?

- A. Configure DSW1 with the same version number, and VLAN-to-instance mapping as shown on DSW2.
- B. DSW2 uses the VTP server mode to automatically propagate the MST configuration to DSW1.
- C. DSW1 automatically inherits MST configuration from DSW2 because they have the same domain name.
- D. Configure DSW1 with the same region name, revision number, and VLAN-to-instance mapping as shown on DSW2.
- E. DSW1 is in VTP client mode with a lower configuration revision number, therefore, it automatically inherits MST configuration from DW2.

**Answer: D**

## VTP Questions 3

<https://www.certprepare.com/vtp-questions-3-2>

### Question 1

When a Cisco Catalyst switch that is configured in VTP server mode is first booted, which two VLAN ranges are loaded on the switch?

- A. All VLANs are in the VLAN database
- B. VLANs greater than 1005 in the startup-config file
- C. The first 1005 VLANs in the VLAN database file
- D. The first 1005 VLANs in the startup-config file
- E. VLANs greater than 1005 in the VLAN database file

**Answer: B C**

### Question 2

Which two options are advantages of deploying VTPv3? (Choose two)

- A. It stores the VTP domain password securely as a SHA-1 hash
- B. It adds an FCS field at the end of each VTP frame for consistency checking
- C. It supports the propagation of private VLANs
- D. It supports the use of AES to encrypt VTP messaging
- E. It can be configured to allow only one VTP server to make changes to the VTP domain

**Answer: C E**

### Question 3

To provide security, a service provider various private VLANs in its backbone network infrastructure to prevent certain VLANs communicating to each other. Which version of VTP supports the use of private VLANs?

- A. version 1
- B. version 3
- C. VTP does not support private VLANs
- D. version 2

**Answer: B**

### Question 4

What action should a network administrator take to enable VTP pruning on an entire management domain?

- A. Enable VTP pruning on any switch in the management domain.
- B. Enable VTP pruning on any client switch in the management domain.
- C. Enable VTP pruning on a VTP server in the management domain.
- D. Enable VTP pruning on every switch in the management domain.
- E. Disable VTP pruning on a VTP server in the management domain.

**Answer: C**

### Question 5

Refer to the exhibit.



If switch SW6 is operating VTP Server and the other devices have the same configuration as SW4, which statement about the VLANs network is true?

```
SW4# show run | include vtp
vtp mode client
vtp domain cisco
vtp domain ciscotest
vtp pruning
vtp version 3
```

- A. Traffic on VLANs 1 through 9 is flooded to all switches in the network
- B. VLANs 1 through 101 are operational on all switch trunks
- C. VLANs 1 through 9 are pruned on the link between SW1 and SW4
- D. VLANs 1 through 101 are pruned on the link between SW1 and SW2

**Answer: C**

### Question 6

Which statement about the VTPv2 is true?

- A. It supports the use of multiple instances
- B. It propagates VLANs 1-1005 only
- C. It can be enabled on a per-port basis
- D. It performs consistency checks only when a new VLAN information is obtained from a VTP message or when information is read from NVRAM
- E. It can be enabled on a per-interface basis

**Answer: B**

### Question 7

Which two statements about extended-range VLANs are true? (Choose two)

- A. Created in VTP server mode in VTP version 3.
- B. Created when switch is in VTP server mode.
- C. They support pruning.
- D. VTP version 3 stores extended-range VLAN in VLAN database.
- E. VTP version 1 and 2 stores extended-range VLAN in VLAN database.

**Answer: A D**

### Question 8

Which two statements about VTP modes are true? (Choose two)

- A. Private VLANs are supported on devices that run VTP version 2 in transparent mode
- B. Extended VLANs are supported only on devices that run VTP version 3 in server mode
- C. When VTP pruning is enabled on a VTP server, it is enabled for the entire management domain
- D. Extended VLANs are supported only on devices that run VTP version 3 in client mode
- E. Private VLANs are supported on devices that run any version of VTP in server mode

**Answer:** A C

### **Question 9**

Which two statements about VTP modes are true? (Choose two)

- A. Private VLANs are supported on devices that run VTP version 2 in transparent mode
- B. Extended VLANs are supported only on devices that run VTP version 3 in server mode
- C. When VTP pruning is enabled on a VTP server, it is enabled for the entire management domain
- D. Extended VLANs are supported only on devices that run VTP version 3 in client mode
- E. Private VLANs are supported on devices that run any version of VTP in server mode

**Answer:** A C

### **Question 10**

Which three new features of VTPv3 are true? (Choose three)

- A. It offers better administrative control over which device is allowed to update other devices view of VLAN topology.
- B. Unintended and disruptive changes are reduced and availability has increased.
- C. The functionality of the VLAN environment has been expanded.
- D. It supports up to VLAN range of 2094.
- E. The functionality of the VLAN environment has reduced for improvement.

**Answer:** A B C

## **VTP Questions 4**

<https://www.certprepare.com/vtp-questions-4-2>

### **Question 1**

Which two beneficial features are used for VTPv3? (Choose two)



- A. It supports the whole IEEE 802.1Q VLAN range up to 4095.
- B. It can transfer information based on PVLAN structure.
- C. It supports the whole IEEE 802.1Q VLAN range up to 1005.
- D. It can transfer information based on CDP structure.

**Answer: A B**

### **Question 2**

Which major feature is supported using VTPv3?

- A. It supports databases other than VLAN.
- B. It supports databases other than FDDI.
- C. It supports databases other than DSCP.
- D. It supports databases other than DLCI.

**Answer: A**

### **Question 3**

A question with recognition of VLANs 3050 and 3060.

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

**Answer: A**

### **Question 4**

Which two features are new in VTPv3? (Choose two)

- A. using multiple switches in the server role
- B. extended VLAN support
- C. private VLAN propagation
- D. transparent mode
- E. support for token ring VLANs

**Answer: B C**

Note: VTPv2 introduces support for Token Ring VLANs already

### Question 5

Which two statements about VTP are true? (Choose two)

- A. Advertisements are sent periodically from trunk port to a multicast address
- B. When you update from VTP version 1 to VTP version 2, the switch must be reloaded
- C. VTP pruning can be configured on extended-range VLANs only
- D. A configuration revision number is included in VTP packets
- E. VTP pruning can be configured on all VLANs

**Answer: A D**

### Question 6

Which VTPv2 mode does the switch operate without participating in VTP?

- A. client
- B. server
- C. transparent
- D. off

**Answer: C**

### Question 7

A question with a diagram with 6 switches configured with VTP pruning. Which statement is true?

- A. VLAN 1 to 101 allowed on trunks between SW1, SW2 and SW3.
- B. VLAN 10 to 101 allowed on trunks between SW3 and SW4.
- C. VLAN 1 to 101 allowed on trunks between SW4, SW5 and SW6.
- D. VLAN 1 to 9 will be pruned between SW3 and SW4.

**Answer: D**

### Question 8

In which VTP mode VLAN configured on the switch are propagated to other switch?

- A. Server
- B. Client
- C. Transparent
- D. On
- E. Off

**Answer: A**

### **Question 9**

What is the effect of VTP transparent?

- A. It will pass VTP information
- B. It will not pass VTP information

**Answer: A**

### **Question 10**

Which statement about vlan pruning on trunk ports is true?

- A. Broadcast traffic for a manually pruned vlan is allowed to cross the trunk port.
- B. Manually pruning VLANs reduces unnecessary forwarding of broadcast traffic.
- C. VLANs can be pruned only via VTP pruning
- D. Manually pruning extended VLANs increases switch security

**Answer: B**

### **Question 11**

Which VTP mode must you configure on a VTP domain so that the switch with the highest VTP configuration revision number in the domain propagates VLAN information to the other switches?

- A. server mode
- B. transparent mode
- C. off mode
- D. client mode

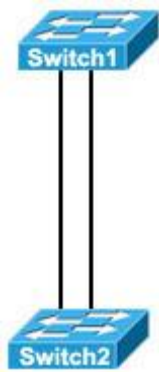
**Answer: A**

## **EtherChannel Questions**

<https://www.certprepare.com/etherchannel-questions-3>

### **Question 1**

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

**Answer: D**

## Question 2

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.

**Answer: A**

### **Question 3**

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.

**Answer: E**

### **Question 4**

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.

**Answer: C**

### **Question 5**

Refer to the exhibit.

<pre> hostname Switch1 &lt;output omitted&gt; ! 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 &lt;output omitted&gt; ! port-channel load-balance src-map ! 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.

**Answer: B**

### Question 6

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.

**Answer: D**

### Question 7

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.

**Answer: A**

### **Question 8**

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.

**Answer: B**

### **Question 9**

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.

**Answer: A**

### **Question 10**

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     Pol2(SU)          -     Fa0/13(P) Fa0/14(P) Fa0/15(P)
13     Pol3(SU)          -     Fa0/16(P) Fa0/17(P) Fa0/18(P)
14     Pol4(SU)          -     Fa0/19(P) Fa0/20(P) Fa0/21(P)

SW1#show interface trunk
Port Mode      Encapsulation Status      Native vlan
Pol2 desirable n-isl      trunking     1
Pol3 desirable n-isl      trunking     1
Pol4 desirable n-isl      trunking     1
Port Vlans allowed on trunk
Pol2 1-4094
Pol3 1-4094
Pol4 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

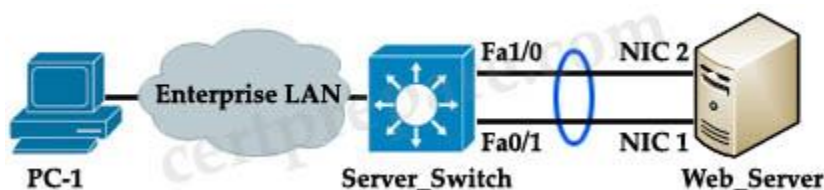
Answer: B

## EtherChannel Questions 2

<https://www.certprepare.com/etherchannel-questions-2>

### Question 1

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.

**Answer: C**

### Question 2

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.

**Answer: A**

### Question 3

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.

**Answer: A**

#### Question 4

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.

**Answer: A**

#### Question 5

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

**Answer: C**

### **Question 6**

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.

**Answer: C**

### **Question 7**

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

**Answer: A C E F**

### **Question 8**

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

**Answer: A E**

### **Question 9**

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.

**Answer: B**

### **Question 10**

Which option is valid for EtherChannel load balancing?

- A. source MAC address and source IP address
- B. destination MAC address and destination IP address
- C. source MAC address and destination IP address
- D. source MAC address and destination MAC address

**Answer: D**

### **Question 11**

When EtherChannel guard is enabled and a misconfiguration is detected on a port, how does the port respond?

- A. It enters the shutdown state
- B. The port state remains unchanged, but the EtherChannel stays down
- C. The port remains up, but it is unable to pass traffic
- D. It enters the channel-error state
- E. It enters the errdisable state

**Answer: E**

### **Question 12**

When using EtherChannel misconfiguration guard, which technology is used to prevent this type of misconfiguration from affecting the network?

- A. LACP
- B. PagP
- C. STP
- D. Port Security

**Answer: C**

### **Question 13**

What should match during EtherChannel configuration? (Choose two)

- A. spanning tree port priority
- B. spanning tree cost
- C. interface description
- D. trunk mode
- E. allowed VLANs on the trunk

**Answer: D E**

### **Question 14**

If all devices on an EtherChannel are sending traffic to a single MAC address, which two methods of load balancing on the EtherChannel are preferred? (Choose two)

- A. destination-MAC
- B. dest-source-MAC
- C. destination-IP
- D. source-MAC
- E. source-IP

**Answer: D E**

## **EtherChannel Questions 3**

<https://www.certprepare.com/etherchannel-questions-3-2>

### **Question 1**

Refer to the exhibit

```
Switch2#
02:30:45: %PM-4-Err_DISABLE: channel-misconfig error
detected on Fa0/23, putting Fa0/23 in err-disable state
02:30:45: %PM-4-Err_DISABLE: channel-misconfig error
detected on Fa0/23, putting Fa0/23 in err-disable state
```

```
Switch1#show etherchannel summary
```

Group	Port-channel	Protocol	Ports
1	Po2(SD)	LACP	Fa1/0/23(D)

```
Switch2#show etherchannel summary
```

Group	Port-channel	Protocol	Ports
1	Po1(SD)	-	Fa0/23(D) Fa0/24(D)

An engineer is configuring EtherChannel between two switches and notices the console message on Switch2. Based on the output, which option describes the reason for this error?

- A. Switch 1 does not have enough member ports configured.
- B. Switch 2 has too many member ports configured.
- C. The port channel interface numbers do not match.
- D. The EtherChannel protocols do not match.

**Answer: D**

### Question 2

There was an EtherChannel configured and one of the port was used as SPAN destination. What will be the result?

- A. the EtherChannel will not be operational because the port cannot be used as SPAN destination
- B. EtherChannel will discard the port used
- C. the EtherChannel will shutdown

**Answer: B**

### Question 3

Which two combinations of EtherChannel modes support the formation of an EtherChannel? (Choose two)

- A. desirable, passive
- B. desirable, desirable

- C. active, passive
- D. passive, passive
- E. active, desirable

**Answer: B C**

#### **Question 4**

EtherChannel guard. What happens to the port when it's misconfigured?

- A. channel gets disabled
- B. goes into err-disable
- C. shutdown
- D. works normal

**Answer: B**

#### **Question 5**

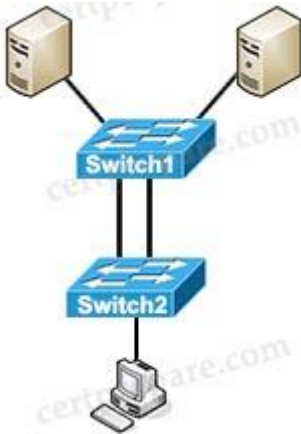
Which EtherChannel combination is possible to create a trunk link?

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

**Answer: D**

#### **Question 6**

Refer to the exhibit.



Which EtherChannel load balancing algorithm should be used to optimize the EtherChannel links between switches?

- A. Source MAC
- B. Source-dest MAC
- C. Destination IP
- D. Destination MAC

**Answer:** C or D

### Question 7

Which two operational attributes can be checked for EtherChannel ports that are in err-disabled state?

- A. Port mode
- B. Port cost
- C. Duplex
- D. DTP
- E. VLAN

**Answer:** C E

### Question 8

Question about LACP priority.

- A. LACP priority is used to determine which port is used to form the EtherChannel
- B. LACP priority is removed from EtherChannel...
- C. There was a command about LACP priority
- D. LACP priority is used to determine which port is put in standby mode



**Answer: D**

### Question 9

What is the default mode for LACP EtherChannel when configured?

- A. On
- B. Active
- C. Passive
- D. Desirable
- E. Off

**Answer: C**

### Question 10

Refer to the exhibit.

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

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

An engineer has run the show EtherChannel summary command and the output is displayed. Which statement about the status of the EtherChannel is true?

- A. The EtherChannel is operational and configured for PAgP
- B. The EtherChannel is down because of a mismatched EtherChannel protocol
- C. The EtherChannel is down and configured for LACP
- D. The EtherChannel is operational and is using no EtherChannel protocol

**Answer: D**

## EtherChannel Questions 4

<https://www.certprepare.com/etherchannel-questions-4>

### Question 1

An engineer is configuring an Etherchannel between two switches, he notices the error message on Switch 2 (error message channel misconfiguring error), based on the output what is the problem?

(Exhibit missing)

- A. the etherchannel on the switch 1 using incorrect member port
- B. the etherchannel interface of switch 1 is not configured
- C. the etherchannel protocol on switch 1 is not correct
- D. the etherchannel interface of switch 2 is not configured

**Answer: C**

### **Question 2**

What condition must match during Etherchannel configuration? (Choose two)

- A. Spanning tree port priority
- B. Spanning tree cost
- C. Interface Description
- D. Trunk mode
- E. Trunk allow vlan

**Answer: D E**

### **Question 3**

An engineer is configuring an EtherChannel between two switches using PAgP. If the EtherChannel mode on switch 1 is configured to auto, which modes on switch 2 establish an operational EtherChannel?

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

**Answer: C**

### **Question 4**

What are possible EtherChannel load balancing mechanisms based on layer 3? (Choose two)

- A. MAC source
- B. MAC source-destination
- C. IP Source
- D. IP Source-destination
- E. MAC Destination

**Answer: C D**

### **Question 5**

Which two command sequences must you enter on a pair switches so that they negotiate?  
(Choose two)

A. channel-protocol lacp  
channel-group 1 mode auto

B. channel-protocol lacp  
channel-group 1 mode passive

C. channel-protocol pagp  
channel-group 1 mode on

D. channel-protocol pagp  
channel-group 1 mode auto

E. channel-protocol lacp  
channel-group 1 mode active

**Answer: B E**

### **Question 6**

Which two commands can you enter to configure load-balancing at Layer 2? (Choose two)

- A. port-channel load-balance dst-ip
- B. port-channel load-balance src-dst-ip
- C. port-channel load-balance src-mac
- D. port-channel load-balance src-dest-mac
- E. port-channel load-balance src-ip

**Answer: C D**

### **Question 7**

Which two command sequences must you enter on a pair of switches so that they negotiate an EtherChannel using the Cisco proprietary port-aggregation protocol? (Choose two)

A. channel-protocol lacp  
channel-group 1 mode on

- B. channel-protocol pagp  
channel-group 1 mode auto
- C. channel-protocol lacp  
channel-group 1 mode active
- D. channel-protocol pagp  
channel-group 1 mode desirable
- E. channel-protocol pagp  
channel-group 1 mode on

**Answer:** B D

### **Question 8**

Which two conditions must be met to establish a Layer 2 EtherChannel? (Choose two)

- A. SPAN must be disabled on the ports.
- B. LAN ports in the EtherChannel must be contiguous.
- C. The trunking protocol must be the same for all links in the EtherChannel.
- D. All ports in the EtherChannel must be on the same module.
- E. All ports in the EtherChannel must operate in half duplex.

**Answer:** A C

### **Question 9**

Which option is valid for Etherchannel Load Balancing?

- A. source MAC and source IP addresses
- B. destination MAC and destination IP addresses
- C. source MAC and destination IP addresses
- D. source MAC and destination MAC addresses

**Answer:** D

### **Question 10**

A single server in company is connected via Etherchannel to a single upstream switch. Which Etherchannel load balancing method on the switch makes optimal use of the redundant links as traffic flows from the routers to the server?

- A. source and destination MAC address
- B. destination MAC address
- C. source IP address
- D. source MAC address

**Answer: C**

## EtherChannel Questions 5

<https://www.certprepare.com/etherchannel-questions-5>

### Question 1

A single server in company is connected via Etherchannel to a single upstream switch. Which Etherchannel load balancing method on the switch makes optimal use of the redundant links as traffic flows from the routers to the server?

- A. source and destination MAC address
- B. destination MAC address
- C. source IP address
- D. source MAC address

**Answer: C**

### Question 2

Which two attributes must match across the member ports, when a Layer 2 EtherChannel is configured? (Choose two)

- A. switchport mode
- B. spanning-tree cost
- C. spanning-tree priority
- D. VLAN membership

**Answer: A D**

### Question 3

Which two statements about manually-configured LACP EtherChannels are true? (Choose two)

- A. LACP negotiation must be disabled on both devices in the EtherChannel.
- B. They require Cisco Discovery Protocol.
- C. Each physical port in the EtherChannel must have the same speed and duplex settings.
- D. LACP negotiation must be disabled on one device in the EtherChannel.
- E. They use an MD5 hash for equal load balancing.
- F. If the physical port configurations on the two devices are different, the ports are placed into the errdisabled state.

**Answer: C F**

#### **Question 4**

When a Layer 2 trunking EtherChannel is configured, which two attributes must match across the member ports? (Choose two)

- A. interface description
- B. spanning-tree cost
- C. spanning-tree priority
- D. allowed VLANs
- E. trunking mode

**Answer: D E**

Note: This question is same as Q.15 above, but with different answers.

#### **Question 5**

Refer to the exhibit.

```
spanning-tree mode pvst
spanning-tree etherchannel guard misconfig
```

Which effect of this configuration is true?

- A. The switch port continues to negotiate an EtherChannel even when there are configuration discrepancies between the two ports.
- B. Spanning tree blocks EtherChannel formation on the device.
- C. The switch port error disables when a port attempts to form an EtherChannel with a port that has a different configuration.
- D. Spanning tree is disabled if the switch port establishes an EtherChannel.

**Answer: C**

### Question 6

Which two tasks must you perform on a device to ensure that an EtherChannel operates at Layer 3? (Choose two)

- A. Configure the channel-group 10 mode on command on the port channel.
- B. Configure EtherChannel directly on the interface.
- C. Configure the switchport mode access command on the device.
- D. Configure the no switchport command on the physical interface(s).
- E. Configure the switchport mode trunk command on the device.

**Answer: B D**

### Question 7

Which command do you use to configure EtherChannel guard feature?

(How you configure etherchannel guard feature?)

- A. SW(config)# spanning-tree etherchannel guard misconfig
- B. SW(config)# portchannel etherchannel guard misconfig
- C. SW(config-if)# portchannel etherchannel guard misconfig
- D. SW(config-if)# spanning-tree etherchannel guard misconfig

**Answer: A**

### Question 8

Which of the below options is valid for EtherChannel load-balancing?

- A. source MAC, destination IP
- B. source MAC, destination MAC
- C. source IP, source MAC
- D. destination IP, MAC IP

**Answer: B**

### Question 9

A Layer 2 EtherChannel is formed. Where do you assign an IP address?

- A. DHCP
- B. physical interface

- C. logical interface
- D. lowest physical interface

**Answer: C**

### Question 10

Refer to the exhibit. Why is there a mismatch?

```
Switch1# sh etherchannel summary
```

```
Number of channel-group in use: 1
Number of aggregators: 1
Group  Port-channel Protocol  Ports
1      Po1(SU)      LACP    Fa0/1(P), Fa0/2(P)
```

```
Switch2#sh etherchannel summary
```

```
Number of channel-groups in use: 1
Number of aggregators: 1
Group  Port-channel Protocol  Ports
1      Po1(SU)      -       Fa0/1(P)
```

- A. Port channel has not been configured properly
- B. Too few ports in Switch2
- C. Too many ports in Switch1
- D. Protocol mismatch

**Answer: D**

## EtherChannel Questions 6

<https://www.certprepare.com/etherchannel-questions-6>

### Question 1

Ether channel load balancing uses which of the following? (Choose three)

- A. VLAN ID
- B. IP priority
- C. IP address
- D. MAC address
- E. Port number



**Answer: C D E**

### **Question 2**

When you configure error disable recovery, which keyword will be used if it was due to EtherChannel misconfig?

- A. security violation
- B. channel-misconfig
- C. ?
- D. ?

**Answer: B**

### **Question 3**

PAgP mode that is receiving but will not initiate formation of Etherchannel?

- A. Auto
- B. Desirable
- C. On
- D. Off

**Answer: A**

### **Question 4**

Which two statements about configuring EtherChannel are true? (Choose two)

- A. They can be configured to passively negotiate a channel with a connected peer.
- B. They can be configured with the **no switchport** command to place them in Layer 3 mode.
- C. They can be configured to load-balancing traffic based on Layer 7 information.
- D. They can be configured to operate with up to 10 links in a single channel.
- E. They can be configured to send Layer 2 packets.

**Answer: A B**

### **Question 5**

In which EtherChannel mode does a port receive and respond to PAgP message without initiating EtherChannel communication?

- A. desirable
- B. active

- C. on
- D. auto

Answer: D

## Switch Questions

<https://www.certprepare.com/switch-questions>

### Question 1

What effect does the **mac address-table aging-time 180** command have on the MAC address-table?

- A. This is how long a dynamic MAC address will remain in the CAM table.
- B. The MAC address-table will be flushed every 3 minutes.
- C. The default timeout period will be 360 seconds.
- D. ARP requests will be processed less frequently by the switch.
- E. The MAC address-table will hold addresses 180 seconds longer than the default of 10 minutes.

Answer: A

### Question 2

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

Answer: C

### Question 3

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.

**Answer: A**

#### **Question 4**

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

**Answer: A E**

#### **Question 5**

Which two statements apply to topology-based switching?

- A. It is functionally equivalent to Cisco Express Forwarding
- B. It is the preferred switching mode in Cisco multilayer switches
- C. It uses Loop free protocol for switching
- D. disabled by default

**Answer: A B**

#### **Question 6**

What statement about MAC address table is true?

- A. Every entry in MAC address table has VLAN assigned.
- B. Extended VLANs doesn't have VLAN assigned in MAC address table.
- C. ?
- D. ?

**Answer: A**

#### **Question 7**

Refer to exhibit, which two statements correctly indicate when an SNMP trap is set to the switch? (Choose two)

```
Switch(config)# snmp-server enable traps mac-notification
Switch(config)# mac address-table notification threshold
Switch(config)# mac address-table notification threshold limit 60
Switch(config)# mac address-table notification mac-move
```

- A. When a new workstation connects to port F0/1
- B. When 61 MAC address are in the switch
- C. When 61 percent of the Address table capacity is used
- D. When the switch loses power and reboots
- E. When the phone previously on Fa0/2 is connected/Moved to Fa0/5

**Answer:** C E

#### Question 8

What is the behavior of an access port when a tagged packet is received?

- A. packet is dropped
- B. tag is removed and packet is forwarded on the VLAN of the access port
- C. tag is removed and packet is forwarded to the VLAN mentioned in the tag
- D. forward to the native vlan

**Answer:** A

#### Question 9

Which switchport feature will block the packet with unknown MAC address from sending it via port.

- A. switchport protect
- B. switchport block unicast
- C. switchport portfast
- D. packet with unknown MAC will be dropped

**Answer:** B

#### Question 10

Which two features can you configure on a access port? (Choose two)

- A. QinQ
- B. Portfast
- C. Voice VLAN
- D. STP mode
- E. 802.1q

**Answer: B C**

### Question 11

During the implementation of a voice solution, which two required items are configured at an access layer switch that will be connected to an IP phone to provide VoIP communication? (Choose two)

- A. allowed codecs
- B. untagged VLAN
- C. auxiliary VLAN
- D. Cisco Unified Communications Manager IP address
- E. RSTP

**Answer: B C**

### Question 12

A question based on MAC address table. (Choose two)

VLAN	MAC	Interface
10	aaa.aaa.aaa	Fa0/1
10	ccc.ccc.ccc	Fa0/3
20	aaa.aaa.aaa	Fa0/2

- A. Fa0/1, Fa0/2 cannot communicate in Layer 2 switch.
- B. Fa0/1, Fa0/3 cannot communicate in Layer 2 switch.
- C. Fa0/2, Fa0/3 can communicate Layer 2 switch.
- D. Two MAC address aaa.aaa.aaa.aaa must be in same VLAN.
- E. Two MAC address aaa.aaa.aaa.aaa must be in different VLAN.

**Answer: A E**

# Switch Questions 2

<https://www.certprepare.com/switch-questions-2>

## Question 1

Which type of MAC address can be dropped by a switch that is configured for MAC address filtering?

- A. unicast
- B. router
- C. multicast
- D. CPU-destined

**Answer: A**

## Question 2

Which statement about the default behavior of a Cisco switch MAC address table is true?

- A. MAC addresses are not learned on extended VLANs.
- B. MAC addresses are aged out of the MAC table after 600 seconds.
- C. MAC addresses are associated with a VLAN.
- D. MAC address filtering is enabled on trunk ports.

**Answer: C**

## Question 3

Which command can be used to block a frame with an unknown destination MAC address from being forwarded out of an interface?

- A. switchport protected
- B. It is not forwarded if the destination MAC address is unknown.
- C. switchport port-fast
- D. switchport block unicast

**Answer: D**

## Question 4

For which reason does an administrator disable MAC address learning within a VLAN?

- A. to configure a VLAN as an SVI
- B. to free up space in the MAC address table
- C. to implement port security
- D. to reduce flooding in the network

**Answer: B**

### **Question 5**

Which two statements about static MAC addresses are true? (Choose two)

- A. They are configured without an aging time.
- B. They have a default aging time of 300 seconds.
- C. They supersede dynamically learned MAC address.
- D. They can be configured on multiple interfaces in the same VLAN.
- E. They have a default aging time of 60 seconds.

**Answer: A D**

### **Question 6**

Which switch management feature can you configure to drop traffic from specific source or destination addresses?

- A. switchport port-security
- B. static address entries
- C. unicast MAC address filtering
- D. MAC threshold notification traps

**Answer: C**

### **Question 7**

If you want to enable the Layer 3 feature of an interface, which command will you configure?

- A. configure IP address
- B. configure switchport
- C. ?
- D. configure no switchport
- E. ?

**Answer: D**

### Question 8

A question about the effective way to handle unknown traffic?

- A. broadcast storm
- B. unicast storm
- C. multicast storm
- D. ARP

**Answer: B**

### Question 9

Which switch management feature can you configure to drop traffic from specific source or destination addresses?

- A. switchport port-security
- B. static address entries
- C. unicast MAC address filtering
- D. MAC threshold notification traps

**Answer: C**

## STP Questions

<https://www.certprepare.com/stp-questions-7>

### Question 1

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

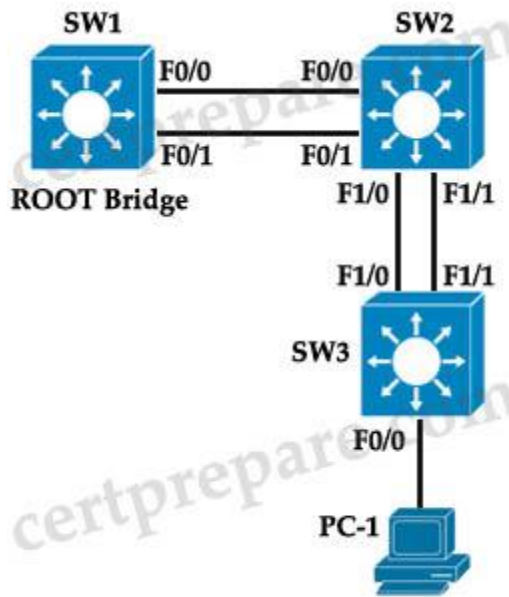
- A. switch# show spanning-tree vlan 10
- B. switch# show spanning-tree bridge
- C. switch# show spanning-tree brief
- D. switch# show spanning-tree summary
- E. switch# show spanning-tree vlan 10 brief

**Answer: A**

### Question 2

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.

**Answer: C**

### Question 3

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 svs-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.

**Answer: D**

#### Question 4

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

**Answer: D**

### **Question 5**

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.

**Answer: C**

### **Question 6**

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.

**Answer: C**

### **Question 7**

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

**Answer: D**

### **Question 8**

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

**Answer: A B**

### **Question 9**

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

**Answer: D**

### **Question 10**

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.

**Answer: A D**

### **Question 11**

An access switch at a remote location is connected to the spanning-tree root with 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.

**Answer: C**

### **Question 12**

A network engineer wants to make sure that an access switch will never become a Spanning Tree root for VLAN 5. What action will accomplish this task?

A. adjust STP priority to the maximum value

B. disable STP globally

C. apply root guard to all outgoing neighbor interfaces

D. enable MSTP and use a different revision number than all other switches

**Answer: A**

## **STP Questions 2**

<https://www.certprepare.com/stp-questions-2-2>

### **Question 1**

In which two ways are IEEE STP BPDUs forwarded if VLAN 99 is configured as native?  
(Choose two)

- A. VLAN 1 STP BPDUs are sent untagged on VLAN 99
- B. VLAN 1 STP BPDUs are sent untagged on VLAN 1
- C. VLAN 1 STP BPDUs are sent tagged on VLAN 99
- D. VLAN 1 STP BPDUs are sent tagged on VLAN 1
- E. VLAN 1 and VLAN 99 BPDUs are sent tagged on VLAN 1
- F. VLAN 1 and VLAN 99 BPDUs are sent untagged on VLAN 1

**Answer:** A D

### Question 2

About Spanning-Tree. (exhibit is missing)

```
spanning-tree extend system-id
spanning-tree mode PVST+
spanning-tree backbonefast
```

The question was something like what does the configuration do?

- A. It used extended VLAN
- B. It used to protect Root switch
- C. It enables the switch to set dynamic extended System IDs.

**Answer:** C

### Question 3

Refer to the exhibit.

(Picture was showing from CLI “show spanning-tree vlan xx” that running on mode rapid-pvst).

If you have a new switch (that runs spanning-tree mode pvst+) connect to the exist switch, which statement is true?

- A. It will not working between two switches
- B. It will work, the new switch will communicate exist switch with PVST+
- C. It will work, the new switch will communicate exist switch with Rapid-PVST

**Answer:** B

### Question 4

Refer to the exhibit. Which two statements about the spanning-tree operation of this switch are true? (Choose two)

```
DSW2#sh spanning-tree vlan 20

VLAN0020
  Spanning tree enabled protocol ieee
  Root ID    Priority 24596
    Address   0018.7363.4300
      Cost    2
      Port    13 (FastEthernet1/0/11)
    Hello Time 2 sec Max Age 20 sec
              Forward Delay 15 sec

  Bridge ID Priority 28692 (priority 28672 sys-id-ext 20)
    Address   001b.0d8e.e080
      Hello Time 2 sec Max Age 20 sec
              Forward Delay 15 sec
    Aging Time 300 sec |

Interface Role Sts Cost Prio.Nbr Type
-----
Fa1/0/7   Desg FWD 2    128.9   P2p
Fa1/0/10  Desg FWD 2    128.12  P2p
Fa1/0/11  Root FWD 2    128.13  P2p
Fa1/0/12  Altn BLK 2    128.14  P2p
```

- A. The switch is operating in the default Cisco spanning-tree mode
- B. The spanning-tree operation mode for this switch is PVST+
- C. The spanning-tree operation mode for this switch is PVST
- D. The spanning-tree mode stp ieee command was entered on this switch
- E. The spanning-tree operating mode for this switch is IEEE

Answer: A B

### Question 5

What would happen if you typed “spanning-tree portfast trunk” and the port received BPDU?

- A. port will be immediately forward
- B. trunk port can be portfast mode
- C. BPDU turn this port to err-disabled
- D. the port will disable the PortFast feature

**Answer:** Something like “the port will disable the PortFast feature (and the BPDUs are processed normally)”.

### Question 6

Question about configuring VLAN 10 root bridge with spanning-tree switch priority. (Choose two)

- A. spanning-tree vlan 10 root primary
- B. spanning-tree vlan 10 priority 4096
- C. ?
- D. ?
- E. ?
- F. ?

**Answer:** A B

## STP Questions 3

<https://www.certprepare.com/stp-questions-3-2>

### Question 1

Core switch is connected to 2 distribution switches which are connected to two access switches. PC1 is connected to DSW1 and DSW2 root bridge. Link connected from PC1 to DSW2 is 4Gbps and DSW1 is 10gbps. There is an EtherChannel trunk between DSW1 and DSW2. Default port priority is configured. Change in port priority so traffic goes through DSW1 to DSW2. (Choose two)

- A. DSW1: spanning-tree port priority 16
- B. DSW1: interface g1/0
- C. DSW2: spanning-tree port priority 16
- D. DSW2: interface g1/0
- E. DSW1: spanning-tree port priority 0

**Answer:** B E

### Question 2

What statement is true about PVST?

- A. PVST+ is the default STP mode on Cisco switches
- B. Rapid PVST+ is the default STP mode on Cisco switches
- C. Is the default mode on Cisco switches
- D. STP is the default mode on Cisco switches

**Answer:** A



### Question 3

Your manager asked you to make every port on your switch bypass the normal spanning-tree timers which includes your uplink to other switches. What two commands can you apply on the interfaces? (Choose two)

- A. spanning-tree portfast
- B. spanning-tree portfast default
- C. spanning-tree portfast access
- D. spanning-tree portfast trunk
- E. ?

**Answer:** A D

### Question 4

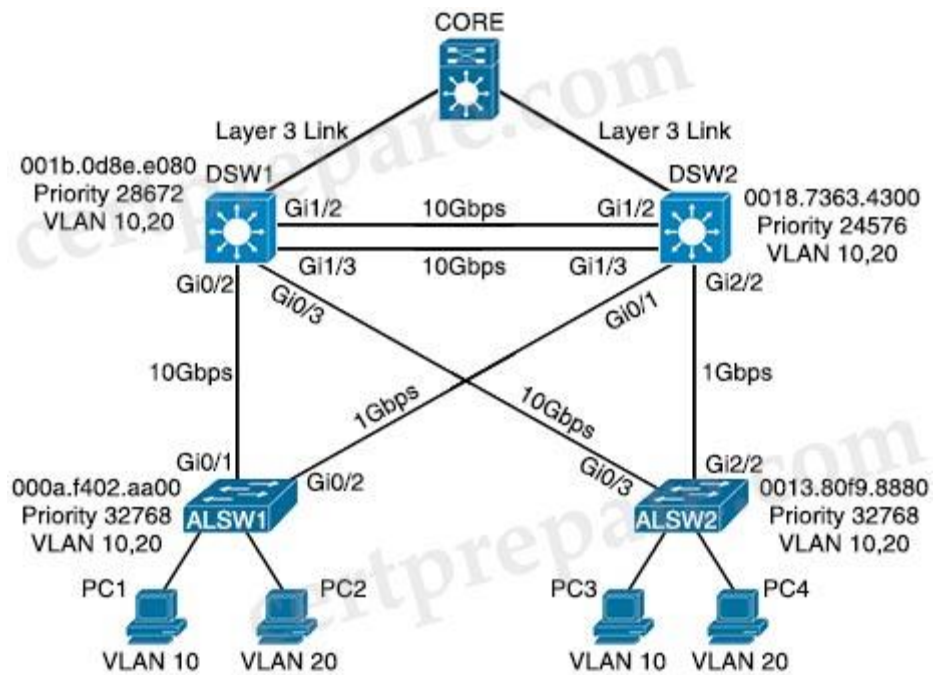
What keyword in macro command is used to configure a root bridge and automatically adjust STP timers?

- A. root primary
- B. diameter
- C. hello-time
- D. forward-time

**Answer:** A or B (we suppose A, maybe this question only has one requirement – “configure a root bridge” OR “automatically adjust STP timers”, not two)

### Question 5

Diagram is: with 1 core, 2 DSW connected with EtherChannel, 2 ALSW, 2 PCs per ALSW. Per diagram current root for VLAN 10 is DSW2. Question is how to make DSW1 the primary root for VLAN 10. (Choose two)



- A. DSW2: change bridge priority to 61440 (highest)
- B. DSW1: change bridge priority to 4096 (lowest)
- C. DSW1: change port priority but in global configuration mode
- D. DSW1: change bridge priority but value is 0
- E. DSW1: change bridge priority but command is priority root

**Answer:** B E

### Question 6

Refer to the exhibit. Which two commands ensure that DSW1 becomes root bridge for VLAN 10 and 20? (Choose two)

DSW1#show spanning-tree

MST1

Spanning tree enabled protocol mstp

Root ID      Priority    32769  
              Address    0018.7363.4300  
              Cost       2  
              Port       13 (FastEthernet1/0/11)  
              Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID    Priority 32769 (priority 32768 sys-id- ext 1)  
              Address    001b.0d8e.e080  
              Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa1/0/7	Desg FWD	2	128.1	P2p Bound (PVST)	
Fa1/0/10	Desg FWD	2	128.12	P2p Bound (PVST)	
Fa1/0/11	Root FWD	2	128.13	P2p	
Fa1/0/12	Altn BLK	2	128.14	P2p	

DSW1#show spanning-tree mst

##### MST1      vlans mapped: 10,20  
Bridge            address 001b.0d0e.e000 priority 32769 (32768 sysid 1)  
Root             address 0018.7363.4300 priority 32769 (32768 sysid 1)  
                  port Fa1/0/11      cost 2      (rem hops 19)

----- output omitted -----

- A. spanning-tree mstp 1 priority 0
- B. spanning-tree mst 1 root primary
- C. spanning-tree mst vlan 10,20 priority root
- D. spanning-tree mst 1 priority 4096
- E. spanning-tree mst 1 priority 1
- F. spanning-tree mstp vlan 10,20 root primary

**Answer: B D**

### Question 7

What statements about STP path cost are true? (Choose two)

- A. Long path cost is 64 bits
- B. Short path cost is 32 bits
- C. MST uses long path cost
- D. Default path cost is short

**Answer: C D**

### Question 8

Which two commands enable loop guard on a Cisco switch? (Choose two)

- A. Switch(config)# spanning-tree loopguard default
- B. Switch(config-if)# spanning-tree guard loop
- C. Switch(config-if)#spanning-tree loop guard default
- D. Switch(config)#spanning-tree loop guard default
- E. Switch(config-if)#spanning-tree loopguard

**Answer: A B**

### Question 9

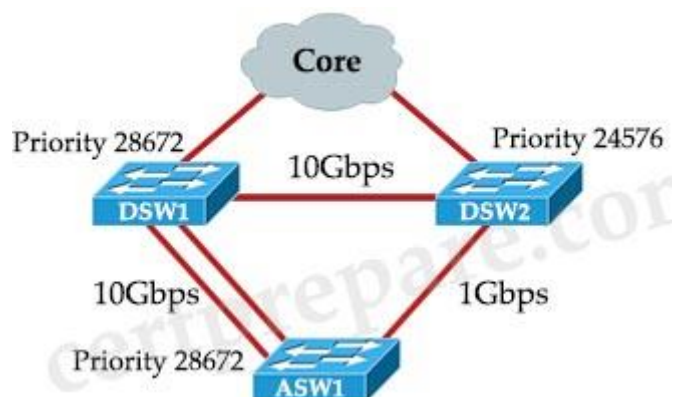
What is the default value for spanning-tree port-priority?

- A. 128
- B. 256
- C. 0
- D. 1024

**Answer: A**

### Question 10

Refer to the exhibit. DSW1 is connected to DSW2 with 10Gbps link and to ASW1 with 10Gbps link. DSW2 is connected to ASW1 with 1Gbps link. What is the path for traffic sourced from a PC connected to ASW1 to reach the Core?



- A. ASW1 to DWS1 to core
- B. ASW1 to DWS2 to core

- C. ASW1 to DSW2 to DSW1 to core
- D. ASW1 to DSW1 to DSW2 to core

**Answer: B**

### Question 11

Refer to the exhibit. Which statement describes the result if a switch that is running PVST+ is added to this network?

DSW2#sh spanning-tree vlan 10

```
VLAN0010
Spanning tree enabled protocol rstp
Root ID    Priority 4106
           Address 0018.7363.4300
           This bridge is the root
           Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID   Priority 4106 (priority 4096 sys-id-ext 20)
           Address 0018.7363.4300
           Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
           Aging Time 300 sec
```

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa1/0/7	Desg	FWD	2	128.9	P2p Peer(STP)
Fa1/0/10	Desg	FWD	4	128.12	P2p Peer(STP)
Fa1/0/11	Desg	FWD	2	128.13	P2p Peer(STP)
Fa1/0/12	Desg	FWD	2	128.14	P2p Peer(STP)

- A. Spanning tree is disabled automatically on the network
- B. Spanning tree continues to operate in Rapid PVST+ on DSW2 and the new switch operates in PVST+
- C. Both switches operate in the PVST+ mode
- D. Both switches operate in the Rapid PVST+ mode

**Answer: B**

### Question 12

Refer to the exhibit. What is the effect of the given configuration?

```
spanning-tree extend system-id
spanning-tree mode pvst
spanning-tree backbonefast
```

- A. It enables the switch to become the spanning-tree root bridge.
- B. It enables the reduced MAC address feature.

- C. It enables spanning-tree to create dynamic system IDs.
- D. It enables extended VLANs.

**Answer: C**

### **Question 13**

Which keyword can be applied to the spanning-tree priority command that allows the IT department to adjust the timers based on the number of switches between any two end stations?

- A. root primary
- B. priority
- C. cost
- D. diameter
- E. hello-time

**Answer: D**

## **STP Questions 4**

<https://www.certprepare.com/stp-questions-4-2>

### **Question 1**

If switch SW1 is connected in a mesh with four other switches and all switches retain the default configuration, which command do you enter on SW1 interface to make it the root bridge for all VLANs?

- A. SW1(config)#spanning-tree port-priority 129
- B. SW1(config)#spanning-tree port-priority 127
- C. SW1(config-if)#spanning-tree port-priority 129
- D. SW1(config-if)#spanning-tree port-priority 127

**Answer: D**

### **Question 2**

When a Layer 2 EtherChannel is configured, which statement about interaction with the Spanning Tree Protocol is true?

- A. Spanning Tree uses only the member ports for forwarding.
- B. Spanning Tree uses the port channel for forwarding.

- C. Spanning Tree uses the port channel and member ports for forwarding.
- D. Spanning Tree does not use port channels in loop prevention.

**Answer: B**

### **Question 3**

A question about root path election. Which is the parameter to elect the root port and root path?

- A. interface bandwidth
- B. load
- C. reliability
- D. interface usage

**Answer: A**

### **Question 4**

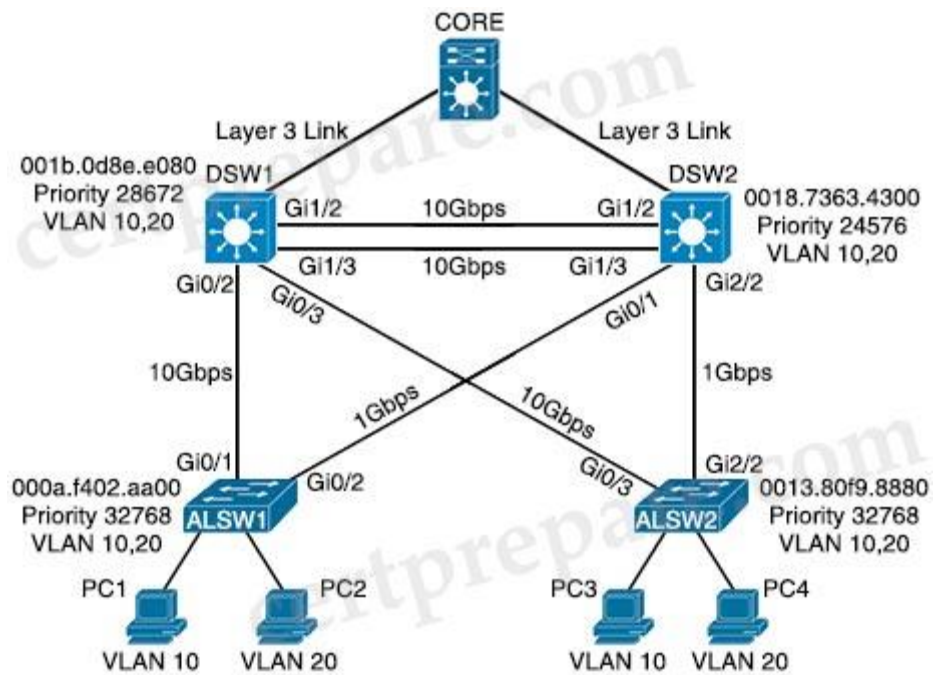
Two switches had two redundant links between them. An interface on the primary link has a problem and the admin wants to move the traffic to the other link. What action must he perform?

- A. Change priority for secondary connection to a lower value than the primary.
- B. Change STP mode to RSTP.
- C. Configure a point-to-point connection for the secondary link.
- D. Apply BPDUFilter on the primary connection.

**Answer: A**

### **Question 5**

Refer to the exhibit. Which two commands ensure that DSW1 becomes root bridge for VLAN 10? (Choose two)



- A. DSW2(config)#spanning-tree vlan 10 priority 61440
- B. DSW2(config)#spanning-tree vlan 10 priority 4066
- C. DSW2(config)#spanning-tree vlan 20 priority 0
- D. DSW1(config)#spanning-tree vlan 10 priority root
- E. DSW2(config)#spanning-tree vlan 10 port-priority 0

**Answer:** A and D

### Question 6

A question with an exhibit of 5 switches and they mention there are switch priorities for each switch. It is asking for new VLAN added onto the switches. Which switch will become the root bridge?

(There was a switch, switch B, with a priority of 8192. All other switch priorities were higher than 8192.)

- A. Switch A
- B. Switch B
- C. Switch C
- D. Switch D
- E. Switch E

**Answer:** B

### Question 7



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

- 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.

**Answer:** A D

### **Question 8**

Which command apply fast forwarding on all ports?

- A. spanning-tree portfast
- B. spanning-tree portfast default

**Answer:** B

### **Question 9**

Which command disables STP on multiple interfaces?

- A. no spanning-tree vlan 10
- B. no spanning-tree pvst
- C. no spanning-tree mst

**Answer:** A

## **RSTP Questions**

<https://www.certprepare.com/rstp-questions>

### **Question 1**

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.

**Answer: A**

### **Question 2**

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.

**Answer: A**

### **Question 3**

Which statement is true about RSTP topology changes?

- A. Only nonedge ports moving to the blocking state generate a TC BPDU.
- B. Any loss of connectivity generates a TC BPDU.
- C. Any change in the state of the port generates a TC BPDU.
- D. Only nonedge ports moving to the forwarding state generate a TC BPDU.
- E. If either an edge port or a nonedge port moves to a block state, then a TC BPDU is generated.

**Answer: D**

### **Question 4**

RSTP is running on a switch while PVST+ is running on another switch in a network. What will happen when they are connected?

- A. Both will run PVST+
- B. Both will run RSTP
- C. STP will stop operating
- D. Old switch will run RSTP and the new switch will run PVST+

**Answer: A**

### **Question 5**

Relationship between RSTP and spanning-tree?

- A. RSTP is compatible with STP
- B. RSTP is not backward compatible with STP
- C. It will create STP instance per vlan

**Answer: A**

### **Question 6**

Which feature is new in RPVST+?

- A. BackboneFast is implemented.
- B. UplinkFast is implemented.
- C. Only the root bridge sends configuration BPDUs.
- D. All ports can generate and send BPDUs.

Answer: D (it should be “All switches can generate and send BPDUs)

## **MST Questions**

<https://www.certprepare.com/mst-questions>

### **Question 1**

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+

**Answer: C**

### **Question 2**

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

**Answer: C**

### **Question 3**

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

**Answer: C**

### **Question 4**

Question about what does MST do? (Question looks incomplete)

- A. disable RSTP and uses BPDU type 4
- B. enable RSTP and uses BPDU type 4
- C. disable RSTP and uses BPDU type 2
- D. enable RSTP and uses BPDU type 2

**Answer: D**

### **Question 5**

Which two statements about MST are true? (Choose two)

- A. It can operate without a root bridge
- B. It supports one STP instance per VLAN
- C. It is vendor neutral
- D. All VLANs must reside in a single MST region
- E. It can map multiple VLANs to a single STP instance

**Answer: C E**

## **BPDUGuard & BPDUFilter**

<https://www.certprepare.com/bpduguard-bpdufilter>

### **Question 1**

Your company wants to connect an internal switch to the uplink provider switch. What method / feature / functions you need to enable to prevent initial / potential broadcast of internal information/topology?

- A. BPDU Filter
- B. BPDU Guard
- C. BPDU Loop
- D. BPDU bridge

**Answer: A**

### **Question 2**

When no spanning-tree BPDU guard enable is configured in f0/7, which is true?

(Exhibit missing. There's an exhibit that shows f0/7 receive BPDU)

- A. We have to configure shutdown and no shutdown.
- B. Have to use errdisable recovery
- C. UDLD reset
- D. Network administrator must disable spanning-tree protocol

**Answer: A**

### Question 3

Question about port which was put into error disabled state. It had BPDU guard configured and received BPDU. Now admin has entered “no spanning-tree bpduguard enable” command. How can the port be brought back to operational status?

- A. shutdown + no shutdown
- B. enabling errordisable autorecovery

**Answer: A**

### Question 4

What is the effect of configuring the following command on a switch?

```
Switch(config)# spanning-tree portfast bpdupfilter default
```

- A. If BPDUs are received by a port configured for PortFast, then PortFast is disabled and the BPDUs are processed normally.
- B. If BPDUs are received by a port configured for PortFast, they are ignored and none are sent.
- C. If BPDUs are received by a port configured for PortFast, the port will transition to forwarding state.
- D. The command will enable BPDU filtering on all ports regardless of whether they are configured for BPDU filtering at the interface level.

**Answer: A**

### Question 5

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

**Answer: E**

### Question 6

**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 bpdupfilter default
- B. spanning-tree portfast bpduguard enable
- C. no spanning-tree link-type shared
- D. spanning-tree bpduguard default

**Answer: A**

### Question 7

Which results happens when a nontrunking port that is configured with BPDU guard is connected to a device that is transmitting?

- A. The port is moved into the spanning-tree blocking state
- B. The port is error-disabled
- C. A routing loop can occur on the network
- D. The port transitions to the connected state

**Answer: B**

### Question 8

Which STP feature is used to monitor BPDU traffic and enable STP to transition between states?

- A. BPDU Filter
- B. BPDU Guard
- C. Root Guard
- D. Loop Guard

**Answer: A**

### Question 9

Which feature places a port in an err-disabled state when it receives an unanticipated BPDU?

- A. loop guard
- B. root guard
- C. BPDU guard
- D. BPDU filtering

**Answer: C**

## PortFast Questions

<https://www.certprepare.com/portfast-questions>

### Question 1

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

**Answer: D**

### Question 2

Which feature prevents from sending BPDUs on a Portfast enabled port?

- A. BPDU guard
- B. PortFast
- C. root guard
- D. BPDU filtering

**Answer: D**

### Question 3

Which two statements about PortFast are true? (Choose two)



- A. It will skip all spanning-tree states.
- B. Only when the port is active when it moves to the forwarding state.
- C. It is mostly used when connecting to workstations and servers.
- D. It skips the learning state.

**Answer: C D**

#### **Question 4**

How PortFast works in access and trunk ports? (Choose two)

- A. Skip STP (802.1D) timers.
- B. State immediately bypassing the listening and learning states.
- C. PortFast just can be connected to a workstation or server.
- D. The port is put in err-disable if connected in a trunk port.
- E. State does not immediately bypassing the listening and learning states.

**Answer: A B**

#### **Question 5**

Which two statements about PortFast are true? (Choose two)

- A. It forces the port to skip all spanning-tree states
- B. The port is error-disabled if it attempts to move into the listening or learning states
- C. It allows the port to skip the learning state only
- D. The port moves immediately to the forwarding state when a device is connected
- E. It is most appropriate for ports that provide connectivity to individual workstations or servers

**Answer: D E**

#### **Question 6**

Which command configures all access ports on a switch to immediately enter the forwarding state when the switch is reset?

- A. spanning-tree portfast bpduguard default
- B. spanning-tree portfast default
- C. spanning-tree portfast
- D. spanning-tree portfast bpdufilter default

Answer: B

#### Question 7

Which command prevents all access ports on a switch from sending or receiving BPDUs?

- A. spanning-tree portfast bpduguard default
- B. spanning-tree bpdufilter default
- C. spanning-tree bpdufilter enable
- D. spanning-tree portfast bpdufilter default

Answer: D

#### Question 8

Which statement describes the result of issuing the **spanning-tree portfast trunk** command under interface configuration mode?

- A. The port is allowed to go into the forwarding state immediately regardless of whether the interface is configured as an access or trunk port.
- B. The port enters the errdisable state if BPDUs are received.
- C. Trunk interfaces can be configured for PortFast.
- D. The portfast trunk port immediately replaces the lost root port with an alternate root port.

Answer: A

## Root Guard

<https://www.certprepare.com/root-guard>

#### Question 1

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.

Answer: D

#### Question 2

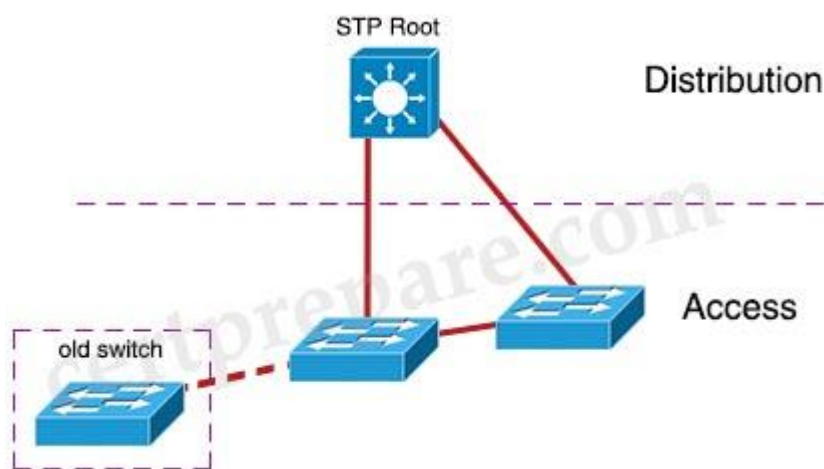
What happens when a port configured with root-inconsistent receives a superior BPDU?

- A. Loop Guard
- B. Root Guard
- C. BPDU Guard
- D. BPDU Filter

**Answer: B**

### Question 3

Refer to the exhibit.



A network engineer deployed an older switch with the same spanning-tree priority as the existing root, which caused a network outage. In which two locations should the Spanning Tree protocol root guard feature be implemented? (Choose two)

- A. On the designated root switch downlinks to the access layer.
- B. On all of non-root switch facing ports of the access layer
- C. On the access layers root facing ports
- D. On Layer 3 boundaries in the distribution layer
- E. Globally on all network switches.

**Answer: A B**

### Question 4

Where should the Root Guard be implemented in the network topology that Cisco recommends? (Choose two)

- A. All non-root ports of the Access Switches.
- B. Downstream links from Distribution to Access Switches

- C. Access Switches to uplink ports to Distribution Switches
- D. On Layer 3 Switches.

**Answer: A B**

### **Question 5**

Which command enables root guard on a Cisco switch?

- A. Switch(config)#spanning-tree guard root
- B. Switch(config)#spanning-tree root guard
- C. Switch(config-if)#spanning-tree guard-root
- D. Switch(config-if)#spanning-tree guard root
- E. Switch(config-if)#spanning-tree root guardn

**Answer: D**

### **Question 6**

Which feature do you implement so that an interface enters the root inconsistent state if it receives a superior BPDU?

- A. DPDU guard
- B. root guard
- C. BPDU guard
- D. loop guard

**Answer: B**

### **Question 7**

Which command is required for root guard for Cisco device to place ID:2071948x? (Where x is the last digit ID)

- A. (config if)# spanning-tree guard root
- B. (config)# spanning-tree guard root
- C. (config-if)# spanning-tree root guard
- D. (config)# spanning-tree root guard

**Answer: A**

### **Question 8**

Which two statements are true of root guard? (Choose two)

- A. Configure root guard to automatically change a designated port to a root port.
- B. Configure uplinkfast on an enabled root guard interface to protect the root status of a switch.
- C. Configure root guard to ensure that root guard enabled ports become designated ports.
- D. Configure root guard to prevent an unauthorized switch from becoming the root switch.
- E. Issue a no shutdown command to recover a port from the root-inconsistent state.

**Answer:** C D

## Loop Guard Questions

<https://www.certprepare.com/loop-guard-questions>

### Question 1

Which two commands enable loop guard on a Cisco switch? (Choose two)

- A. switch(config-if)#spanning-tree guard loop
- B. switch(config-if)#spanning-tree loop guard default
- C. switch(config)#spanning-tree loop guard default
- D. switch(config-if)#spanning-tree loopguard
- E. switch(config)#spanning-tree loopguard default

**Answer:** A E

### Question 2

Which feature do you implement so that a physical port enter the loop inconsistent state if it fails to receive BPDUs?

- A. loop guard
- B. loop disable
- C. root guard
- D. flex links
- E. BPDU ignore
- F. loop block

**Answer:** A

### Question 3

Which two statements are true of loop guard? (Choose two)

- A. Configure loop guard on root port to help detect and isolate unidirectional link failure.
- B. Configure loop guard when root guard is enabled for optimal loop prevention mechanism.
- C. Configure loop guard on a PortFast-enabled port to ensure optimal loop prevention mechanism.
- D. Configure loop guard on a point-to-point link for an effective loop prevention mechanism.
- E. Configure loop guard to prevent root port from becoming a designated port.

Answer: A E

## SPAN Questions

<https://www.certprepare.com/span-questions>

### Question 1

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
```

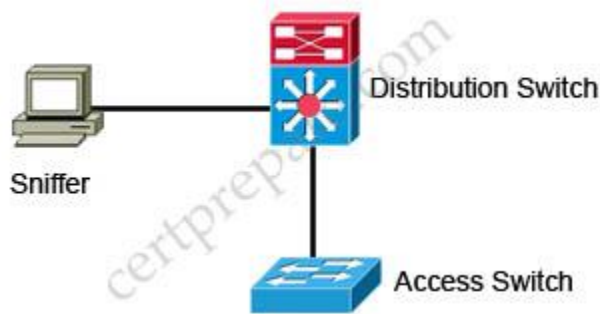
How can the traffic that is mirrored out the GigabitEthernet0/48 port be limited to only traffic that is received or transmitted in VLAN 10 on the GigabitEthernet0/1 port?

- 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.

Answer: C

### Question 2

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

**Answer:** B C D

### Question 3

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.

**Answer: E**

#### **Question 4**

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.

**Answer: C**

#### **Question 5**

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

**Answer: B**

#### **Question 6**

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



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

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

**Answer: A**

### **Question 7**

Which two statements about SPAN source and destination ports during an active session are true? (Choose two)

- A. The source port can be only an Ethernet physical port.
- B. The source port can be monitored in multiple SPAN sessions.
- C. The destination port can be destination in multiple SPAN sessions.
- D. The destination port does not participate in STP.
- E. You can mix individual source ports and source VLANs within a single session.

**Answer: B D**

### **Question 8**

Refer to the exhibit.

```
SW1# show monitor session all
Session 1
```

```
-----
Type                : Remote Destination Session
Source RSPAN VLAN   : 50
```

```
Session 2
```

```
-----
Type                : Local Session
Source Ports        :
  Both              : Fa0/14
Destination Ports   : Fa0/15
Encapsulation       : Native
Ingress             : Disables
```

Which statement about the SPAN and RSPAN configuration on SW1 is true?

- A. SPAN session 2 only monitors egress traffic exiting port FastEthernet 0/14.
- B. RSPAN session 1 monitors activity on VLAN 50 of a remote switch.
- C. RSPAN session 1 is incompletely configured for monitoring.
- D. SPAN session 2 monitors all traffic entering and exiting port FastEthernet 0/15.

**Answer: C**

**monitor session 1 source remote vlan 50**

-> It needs to specify the destination port

while SPAN session 2 is configured correctly with source and destination ports:

**monitor session 2 source interface fa0/14 (both)**

**monitor session 2 destination interface fa0/15**

### Question 9

What SPAN configuration is required to enable on a switch?

- A. A monitor VLAN is created for the SPAN traffic.
- B. Configure a source and destination port
- C. Disable VTP pruning on trunk links

**Answer: B**

### Question 10

Question about the difference between RSPAN and SPAN.

- A. Monitor port
- B. access port
- C. forwarding Port
- D. destination port

**Answer: A**

### **Question 11**

RSPAN what happen after configuration.

- A. destination port is unusable for normal use
- B. traffic in network is doubled

**Answer: A**

## **SPAN Questions 2**

<https://www.certprepare.com/span-questions-2>

### **Question 1**

Question about RSPAN

- A. RSPAN VLAN carries only RSPAN traffic
- B. On a switch there can be only one RSPAN VLAN
- C. RSPAN VLAN carries RSPAN traffic along multiple switches

**Answer: C**

### **Question 2**

Which statement about frame SPAN is true?

- A. Destination and source port SPAN works on L2 (Layer 2)
- B. Source ports SPAN work on L2 (Layer 2)
- C. Destination ports SPAN work on L2 (Layer 2)
- D. Destination and source port SPAN don't work on L2

**Answer: A**

### Question 3

A physical switch port is part of an EtherChannel group. What happens while the same port configured as a SPAN destination?

- A. The port forwards traffic in the EtherChannel group and acts as a SPAN source simultaneously.
- B. The port is removed from the EtherChannel group.
- C. The port is put in the errdisabled state and can only be reenabled manually.
- D. The operation is not allowed as an EtherChannel member cannot be a SPAN source port.

**Answer: B**

### Question 4

Which option is a Cisco recommended RSPAN configuration practice?

- A. Use a different RSPAN VLAN for each session it configuring RSPAN on multiple switches.
- B. Use only one destination port for each RSPAN session.
- C. Define an RSPAN VLAN before configuring an RSPAN source or destination session.
- D. Assign access ports to an RSPAN VLAN like any other campus VLAN

**Answer: C**

### Question 5

Which two limitations of LOCAL SPAN are true? (Choose two)

- A. The source and destination ports must reside in the same switch or switch stack
- B. It can monitor only traffic that ingresses or egresses on the source interface or VLAN
- C. A SPAN session can support multiple destination ports only if they are on the same VLAN
- D. Each SPAN session supports only one source VLAN or interface
- E. A switch can support only one local SPAN session at a time

**Answer: A B**

### Question 6

Which two statements about RSPAN VLAN are true? (Choose two.)

- A. RSPAN VLAN must be configured in VLAN configuration mode using the **remote-span** command.
- B. RSPAN VLAN trunks can handle Spanning-Tree protocol, except for SPAN destination

ports.

C. RSPAN VLAN access ports can handle Spanning-Tree protocol in conjunction with SPAN destination ports.

D. RSPAN VLAN does not support any protocols.

E. RSPAN VLAN traffic does not get flooded.

**Answer: A B**

### **Question 7**

Which statements about RSPAN are true? (Choose two)

A. It supports MAC address learning.

B. RSPAN VLANs can carry RSPAN traffic only.

C. Only one RSPAN VLAN can be configured per device.

D. RSPAN VLANs are exempt from VTP pruning.

E. MAC address learning is not supported.

F. RSPAN uses a GRE tunnel to transmit captured traffic.

**Answer: B E**

### **Question 8**

Which statement about Layer 2 protocol participation of ports involved in a SPAN session is true?

A. Neither a SPAN source nor SPAN destination participates in any Layer 2 protocols.

B. A SPAN source does not participate in any Layer 2 protocols.

C. A SPAN destination does not participate in any Layer 2 protocols.

D. Both SPAN source and SPAN destination participate in any Layer 2 protocols.

**Answer: C**

### **Question 9**

Which three statements about RSPAN VLAN are true? (Choose three)

A. RSPAN VLAN traffic only flows on trunk ports.

B. RSPAN VLAN prevents from carrying traffic.

C. RSPAN VLAN can not be a private primary VLAN or secondary VLAN.

D. All RSPAN VLAN traffic is flooded.

E. RSPAN VLAN traffic only flows on access ports.

F. RSPAN VLAN does not support Spanning-Tree Protocol.

**Answer:** A C D

### **Question 10**

Which statement about SPAN is true?

- A. It is an industry-standard protocol for mirroring traffic
- B. SPAN destinations participate in spanning-tree instances
- C. It uses a specific VLAN to transfer mirrored traffic
- D. It mirrors traffic from a source port to a destination port on the same switch only
- E. SPAN destinations also can be SPAN sources

**Answer:** D

## **SPAN Questions 3**

<https://www.certprepare.com/span-questions-3>

### **Question 1**

For which reason would you configure RSPAN instead of SPAN on your network?

- A. RSPAN provides more complete monitoring of the traffic on a single switch
- B. Only RSPAN devices can monitor traffic on other device
- C. Only RSPAN can log traffic on a VLAN that spans multiple switches
- D. Only RSPAN supports STP on multiple switches across a campus

**Answer:** B

### **Question 2**

Which two statements about Cisco StackWise are true? (Choose two)

- A. It supports multiple switches in a stack
- B. It supports both homogenous and mixed stacks
- C. The LAN base feature set is supported on mixed stacks
- D. Each stack identifies a stack master and a backup stack master
- E. Stacks running the LAN base feature set support layer 3 features

**Answer:** A B

### Question 3

Which statement is true about SPAN on a switch?

- A. It would double the source traffic.
- B. On every source port configured, there would be another port that can not be used normally.
- C. Hence source traffic....

**Answer: A**

### Question 4

Which statement about RSPAN session is true?

- A. Only the source switch in a session must support RSPAN.
- B. The same RSPAN VLAN is used for a RSPAN session on all switches.
- C. At least one access port must be configured in the RSPAN VLAN.
- D. RSPAN support by default monitors at Layer 2.

**Answer: B**

### Question 5

Which two statements in relation to RSPAN are true? (Choose two)

- A. RSPAN port will not learn MAC address.
- B. RSPAN should be a trunk.
- C. RSPAN port will learn MAC address.

**Answer: A B**

### Question 6

Which statement about the configuration of a trunk port as the source of a SPAN session is true?

- A. Only VLANs that are configured individually as SPAN sources are monitored.
- B. All VLANs in the trunk are monitored.
- C. The trunk is errdisabled automatically.
- D. All VLANs in the trunk are monitored, provided the SPAN destination port is a trunk.

**Answer: B**

**Question 7**

Which two statements about the monitored traffic in a SPAN session are true? (Choose two)

- A. You cannot configure two separate SPAN or RSPAN source sessions with separate or overlapping sets of SPAN source ports and VLANs
- B. By default, all monitored packets are captured without the IEEE 802.1Q tag
- C. Egress SPAN monitors packets sent by the source interface before any QoS modifications
- D. Sources can be ports or VLANs or any combination in the same session
- E. By default, all monitored packets include the IEEE 802.1Q tag that they had on the source port
- F. Ingress SPAN monitors packets received by the source interface before any QoS modifications

**Answer: B F**

**Question 8**

Which statement describes the result of configuring SPAN on a Cisco device?

- A. SPAN doubles traffic internally.
- B. SPAN halves the capacity of the source port.
- C. SPAN blocks for normal use on one additional port for each configured source port.
- D. If not carefully planned, SPAN can lead to loops between source and destination ports.

**Answer: A**

**Question 9**

There was exhibit for RSPAN with two sessions.

<exhibit missing>

- A. session one had destination port was missing
- B. session two was properly configured
- C. ?
- D. ?

**Answer: A**

**Question 10**



Which mechanism is specific for RSPAN and not for SPAN?

- A. source port
- B. monitor port
- C. reflector port
- D. redundant port
- E. destination port

**Answer:** C

## SPAN Questions 4

<https://www.certprepare.com/span-questions-4>

### Question 1

Which two statements about source port monitoring in a SPAN are true? (Choose two)

- A. Traffic through a destination port can be copied and included in the SPAN session
- B. The entire EtherChannel must be monitored
- C. It can monitor only FastEthernet and GigabitEthernet port types
- D. It can monitor individual interfaces within a port channel
- E. It can monitor ingress and egress traffic

**Answer:** D E

### Question 2

A question about RSPAN command replicate incoming and outgoing traffic in a single interface. (Choose two)

- A. monitor session 1 destination
- B. monitor session 1 destination interface remote vlan
- C. monitor session 1 source interface g0/1 tx
- D. monitor session 1 source interface g0/2 rx
- E. monitor session 1 source interface g0/1 both

**Answer:** B E

### Question 3

Which three statements about SPAN and RSPAN are true? (Choose three)

- A. The switch port monitor provides data on network switches by port in use, CPU load and memory used.
- B. It provides specific port data to obtain active and historical port utilization information.
- C. Accurate information on unused switch ports helps the administrator keep these ports closed for security risk best practices.
- D. Does not provide specific port data to obtain active and historical port utilization information.
- E. Accurate information on unused switch ports is not necessary.

**Answer:** A B C

#### **Question 4**

A question about RSPAN command replicate incoming and outgoing traffic in a single interface.

Which two commands are correct to replicate incoming and outgoing traffic in a single interface? (Choose two)

- A. monitor session 1 destination
- B. monitor session 1 destination interface remote vlan
- C. monitor session 1 source interface g0/1 tx
- D. monitor session 1 source interface g0/2 rx
- E. monitor session 1 source interface g0/1 both

**Answer:** B E

#### **Question 5**

Refer to exhibit

```
monitor session 1 source remote vlan 8 – 10
monitor session 1 destination interface fa0/1
```

Which of the following statement is correct?

- A. The packet is sent to VLAN 8 and 10 and will be received in fa0/1
- B. The packet is received from VLAN 8 and 10 and will be send to fa0/1
- C. The packet is sent to VLAN 8 to 10 and will be received in fa0/1
- D. The packet is received from VLAN 8 to 10 and will be sent to fa0/1

**Answer:** D

### Question 6

Which statement about VSPAN is true?

- A. It can monitor ingress and egress traffic on the source VLAN
- B. It sends all VLAN traffic to the destination port regardless of the VLAN's status
- C. It can monitor destination port traffic that belongs to a source VLAN
- D. It can monitor token ring VLANs

**Answer: A**

### Question 7

Which two commands configure RSPAN to capture incoming and outgoing traffic on a single interface? (Choose two)

- A. monitor session 1 source interface gigabitethernet1/0/1 rx
- B. monitor session 1 source interface gigabitethernet1/0/2 rx
- C. monitor session 1 destination interface gigabitethernet1/0/2 rx
- D. monitor session 1 destination remote vlan 910
- E. monitor session 1 source interface gigabitethernet1/0/2 both

**Answer: D E**

### Question 8

Which statement about SPAN functionality for an EtherChannel group is true?

- A. It can be configured as a SPAN source or a SPAN destination port.
- B. It can be configured as a SPAN source but not as a SPAN destination port.
- C. It can be configured as a SPAN destination but not as a SPAN source port.
- D. It cannot be configured as a SPAN source or a SPAN destination port.

**Answer: B**

## StackWise Questions

<https://www.certprepare.com/stackwise-questions>

### Question 1

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

**Answer: D**

### **Question 2**

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

**Answer: A**

### **Question 3**

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

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

**Answer: C**

### **Question 4**

In a switch stack environment, what is the total bidirectional traffic flow between two logical counter-rotating paths?

- A. 16 Gbps
- B. 32 Gbps
- C. 64 Gbps
- D. 128 Gbps

**Answer: B**

**Question 5**

Which information does the subordinate switch in a switch stack keep for all the VLANs that are configured on it?

- A. VLAN database
- B. DHCP snooping database
- C. spanning trees
- D. routing information

**Answer: C**

**Question 6**

What VSS technology allows you to share downstream resources?

- A. LACP
- B. PAgP
- C. MEC
- D. EOA

**Answer: C**

**Question 7**

In regards to Cisco Virtual Switching System which technology is needed between two switches for them to act as one network element and share control information and data traffic?

- A. trunk
- B. virtual port channel
- C. EtherChannel
- D. virtual switch link

**Answer: D**

**Question 8**

What is needed for Virtual Switching System "VSS"?

- A. portchannel
- B. trunk
- C. Virtual Switching Link “or VSL”
- D. Virtual trunk

**Answer: C**

## StackWise Questions 2

<https://www.certprepare.com/stackwise-questions-2>

### Question 1

Which will identify the master switch in stack wise?

- A. lower priority
- B. higher priority
- C. lower ID
- D. higher ID

**Answer: B**

### Question 2

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.

**Answer: D**

### Question 3

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.

**Answer: B**

#### **Question 4**

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

**Answer: D**

#### **Question 5**

In regards to Cisco Virtual Switching System which technology is needed between two switches for them to act as one network element and share control information and data traffic?

- A. portchannel
- B. trunk
- C. Virtual Switching Link “or VSL”
- D. Virtual trunk

**Answer: C**

#### **Question 6**

When a switch is added to a stack, which switch automatically configures the new switch with the correct IOS?

- A. master
- B. peer
- C. adjacent
- D. slave

**Answer: A**

### **Question 7**

Which switch is chosen as the stack master during a stack master election?

- A. the switch with the highest stack member ID.
- B. the switch with the lowest stack member ID.
- C. the switch with the lowest stack member priority value.
- D. the switch with the highest stack member priority value.

**Answer: D**

### **Question 8**

Which two statements are true about StackWise? (Choose two)

- A. It groups multiple switch ports as a single EtherChannel.
- B. It can use one IP address to communicate with network.
- C. It monitors multiple switches from a central console.
- D. It enables multiple switch ports to share a single master configuration.
- E. It allows multiple switches to operate as a single switch.

**Answer: B E**

### **Question 9**

Which two statements are true about StackWise? (Choose two)

- A. It looks like one device.
- B. It can use one IP address.
- C. It can use multiple IP address.
- D. It looks like a multiple device.
- E. StackWise manages like a hybrid device.

**Answer: A B**

### **Question 10**

Which three feature advantages are supported in VSS? (Choose three)

- A. It supports single point of management, IP address and routing instance for virtual switches
- B. It supports Multichassis EtherChannel



- C. It supports flexible deployment options
- D. It support Singlechassis EtherChannel
- E. It supports multiple point of management, MAC address and routing instance for virtual switches

**Answer:** A B C

### **Question 11**

A question about the advantage of VSS.

- A. It only has one single point of management and IP address
- B. It only has one multiple point of management and IP address
- C. It only has one single point of management and MAC address
- D. It only has every single protocol as the point of management to be used

**Answer:** A

### **Question 12**

Which two statements about Cisco StackWise are true? (Choose two)

- A. It supports multiple switches in a stack
- B. It supports both homogenous and mixed stacks
- C. The LAN base feature set is supported on mixed stacks
- D. Each stack identifies a stack master and a backup stack master
- E. Stacks running the LAN base feature set support layer 3 features

**Answer:** A B

## **StackWise Questions 3**

<https://www.certprepare.com/stackwise-questions-3>

### **Question 1**

Which benefit of Stackwise is true?

- A. It allows multiple switches to operate independently while sharing a single management address
- B. It enables a Layer 2 switch to be converted to a Layer 3 switch when additional switches are added to the stack

- C. It allows multiple switches to be managed by a single management address
- D. It supports single-chassis EtherChannel mode option

**Answer: C**

### **Question 2**

Which two statements about stack is true? (Choose two)

- A. It is using one IP address to manage all switches.
- B. It shares one IP address in all switches, but they all work independently.
- C. It is using some IP address to manage all switches.
- D. It uses proprietary modules.

**Answer: A B**

### **Question 3**

Which two StackWise configuration setting types are applied at the system level? (Choose two)

- A. port-security settings
- B. VLAN settings
- C. speed/duplex settings
- D. SNMP settings
- E. 802.1k settings

**Answer: B D**

### **Question 4**

Where does a subordinate switch in a stack store the information about VLANs?

- A. vlan.dat
- B. vlan.txt
- C. flash.dat
- D. flash.txt
- E. nvram.dat

**Answer: A**

### **Question 5**

Under which two circumstances does a stack master lose its role? (Choose two)

- A. When the stack master is reset.
- B. When the priority value of a stack member is changed to a higher value.
- C. When a switch with a higher priority is added to the stack.
- D. When a stack member fails.
- E. When switch stack resets.

**Answer:** A E

### Question 6

Regarding type of VSL used to VSS connectivity (question may be different)

- A. All physical Links
- B. Down link
- C. Upstream Links

**Answer:** C (maybe this question wants to ask which type of link a VSS connects to). A VSS consists of Cisco Catalyst 4500 series so it is often used for Access layer or Distribution layer. So it is connected to Distribution layer or Core layer.

Note: The Cisco Virtual Switching System is a clustering technology that pools two Cisco Catalyst 4500-E Series Switches with Cisco Catalyst Supervisor Engine 7-E or 7-LE or two Catalyst 4500-X Series Switches into a single virtual switch.

### Question 7

Which type of failure has occurred, if a link fails and the MEC successfully redistributes the load among the remaining operational links?

- A. multiple MEC link failure
- B. standby switch failure
- C. active switch failure
- D. single MEC link failure

**Answer:** D

### Question 8

Which type of port can serve as StackWise Virtual link?

- A. downlink only
- B. uplink only

- C. switched port
- D. any physical port

**Answer: D**

### **Question 9**

Which StackWise Virtual components are in a common logical group?

- A. control, management, data plane
- B. control and data plane
- C. control and management plane
- D. ?
- E. ?

**Answer: C**

### **Question 10**

A question related to dual active detection for StackWise Virtual. (Choose two)

- A. fast-hello
- B. PAgP
- C. recovery
- D. ?
- E. ?

**Answer: A B**

## **StackWise Questions 4**

<https://www.certprepare.com/stackwise-questions-4>

### **Question 1**

A question related to Cisco StackWise Virtual. Which statement is correct about Cisco StackWise Virtual?

- A. single control and management plane
- B. distributed data plane
- C. ?
- D. ?

**Answer: A**

### **Question 2**

Which two of these StackWise virtualization components are in a logical stack? (Choose two)

- A. management plane
- B. data plane
- C. control plane
- D. ?
- E. ?

**Answer: A C**

### **Question 3**

Which VSS technology allows you to share downstream resources?

- A. MEC
- B. LACP
- C. PAgP
- D. EOA

**Answer: A**

### **Question 4**

Which two benefits of using VSS for chassis virtualization? (Choose two)

- A. Provide a single point of management for improved efficiency.
- B. Use a single database to manage configuration for multiple switches.
- C. Require only one gateway per VLAN.
- D. Support GLBP to balance VSS traffic.
- E. Provide multiple points of management for redundancy and improved support.

**Answer: A C**

### **Question 5**

Under which two conditions does Cisco StackWise Virtual transmit data over a virtual link? (Choose two)

- A. Packets are processed on the ingress interface on the active switch.
- B. A VLAN is flooded over Layer 2.
- C. Packets are processed on the ingress interface on the standby switch.
- D. Packets are processed on the egress interface on the active switch.
- E. Packets are processed on the egress interface on the standby switch.

**Answer:** B C

### **Question 6**

Question about stackwise virtual?

- A. Must have same software
- B. Different software are supported

**Answer:** A

### **Question 7**

In a Cisco StackWise Virtual environment, which planes on the component devices are virtually combined in the common logical switch?

- A. control and management only
- B. control and data only
- C. control, data, and management
- D. management and data only

**Answer:** A

### **Question 8**

Which technology provides a multichassis IP connection between VSS-enabled switches and downstream devices?

- A. LAG
- B. PAgP
- C. MEC
- D. ICCP
- E. LACP
- F. BFD

**Answer:** C

### Question 9

Which statement about Cisco StackWise is true?

- A. When a new switch is added, the master switch suspends traffic forwarding until the new switch is updated with the least running configuration.
- B. The stack elects a master switch and a standby switch to support rapid failover.
- C. The entire stack communicates using a single management IP address.
- D. If a single interconnect cable in the stack fails, the stack can continue to operate at full bandwidth.

Answer: C

### Question 10

Which will identify the master switch in stackwise?

- A. The switch that is currently the stack master
- B. The switch with the highest stack member priority value
- C. The switch that uses the non-default interface-level configuration
- D. The switch with the lower priority stack member priority value

Answer: A

## DHCP Snooping

<https://www.certprepare.com/dhcp-snooping>

### Question 1

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.

Answer: A

## Question 2

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.

**Answer: B**

## Question 3

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.

**Answer: D**

## 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.

**Answer: A**

### **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.

**Answer: B**

### **Question 6**

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

**Answer: A**

### **Question 7**

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

**Answer: A**

### Question 8

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

**Answer: A**

### Question 9

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

**Answer: A**

### Question 10

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

**Answer: A**

## DHCP Snooping 2

<https://www.certprepare.com/dhcp-snooping-2>

### Question 1

Which option is the minimum number of bindings that the DHCP snooping database can store?

- A. 1000 bindings
- B. 2000 bindings
- C. 5000 bindings
- D. 8000 bindings

**Answer: D**

### **Question 2**

If a switch with DHCP snooping and IP source guard enabled globally, what does the switch do when it receives a packet with option 82?

- A. Drop
- B. Remove 82 and forward
- C. Proxy arp

**Answer: B**

### **Question 3**

Option 82 question with two choices. (Choose two)

- A. Layer 2 ingress
- B. Layer 3 egress
- C. ?
- D. ?

**Answer: A B**

### **Question 4**

Which two functions of DHCP snooping are true? (Choose two)

- A. It rate-limits DHCP traffic from trusted and untrusted sources.
- B. It listens to multicast messages between senders and receiver.
- C. It helps build the route table.
- D. It filters invalid messages from untrusted sources.
- E. It correlates IP address to hostnames.

**Answer: A D**

### **Question 5**

Which of the following commands are valid to configure DHCP snooping with Dynamic ARP Inspection for a VLAN? (Choose four)

- A. (config)# ip dhcp snooping vlan arp trust
- B. (config)# ip dhcp snooping
- C. (config)# ip dhcp snooping vlan 10
- D. (config)# ip arp inspection vlan 10
- E. (config)# interface ethernet 0/0  
(config-if)# ip dhcp snooping trust
- F. (config)# interface ethernet 0/0  
(config-if)# ip dhcp arp inspect-snoop trust

**Answer: B C D E**

### **Question 6**

Which type of packet does DHCP snooping continuously check in a production network?

- A. DHCP Snooping
- B. DHCP Relay
- C. DHCP Request
- D. DHCP Acknowledge
- E. DHCP Reply
- F. DHCP Allow

**Answer: D**

### **Question 7**

Which feature rate-limits DHCP traffic?

- A. DHCP Snooping
- B. DHCP Acknowledge
- C. DHCP Request
- D. DHCP Spoofing

**Answer: A**

### **Question 8**

A question related to constant checking of DHCP messages and filtering.

- A. IGMP ...
- B. IGMP Snooping
- C. ARP Inspection
- D. DHCP Snooping
- E. DHCP Inspection

**Answer: D**

### **Question 9**

Which feature actively validates DHCP messages and drops invalid messages?

- A. CGMP binding
- B. IGMP Snooping
- C. ARP Inspection
- D. DHCP Snooping
- E. DHCP Inspection
- F. Dynamic ARP inspection

**Answer: D**

### **Question 10**

Which command do you enter to enable Dynamic ARP Inspection for VLAN 15?

- A. SW1(config-vlan)# ip arp inspection vlan 15
- B. SW1(config-vlan)# ip arp inspection trust
- C. SW1(config-if)# ip arp-inspection trust
- D. SW1(config)# ip arp inspection vlan 15

**Answer: D**

## **DHCP Snooping 3**

<https://www.certprepare.com/dhcp-snooping-3>

### **Question 1**

Which two methods are used to configure an untrusted port with option 82? (Choose two)

- A. (config)# ip dhcp snooping information option  
(config)# do show ip dhcp snooping | include 82  
(config)# ip dhcp snooping information option allow-untrusted
- B. (config-if)# ip dhcp snooping information option allow-untrusted
- C. (config)# ip dhcp untrusted-allow information
- D. (config-if)# ip dhcp snooping trust-allow information
- E. (config)# dhcp allow-untrusted option information

**Answer: A B**

## **Question 2**

Which of the following commands to configure a DHCP trust is valid?

- A. (config)# interface FastEthernet 0/1  
(config-if)# ip dhcp snooping trust  
(config-if)# do show ip dhcp snooping | begin pps
- B. (config)# interface FastEthernet 0/1  
(config-if) ip dhcp snooping granted  
(config-if)# do show ip dhcp snooping | enable pps
- C. (config)# interface FastEthernet 0/1  
(config-if) ip dhcp snooping allowed-enable  
(config-if)# do show ip dhcp snooping | start pps
- D. (config)# interface FastEthernet 0/1  
(config-if)# ip dhcp snooping enable  
(config-if)# ip dhcp show snoop | begin pps

**Answer: A**

## **Question 3**

What would happen if a switch gets a packet with Option 82 with the IP address of 192.168.1.254?

- A. Drop it
- B. Forward it
- C. Stop the Option 82 and replace the source MAC address, and forward it (with its own source MAC address).
- D. Stop the Option 82 and replace the source IP address to the switch management IP address and forward it.
- E. Stop the Option 82 and forward it.
- F. Stop the Option 82 and make an proxy ARP request for the IP address 192.168.1.254.

**Answer: B**

#### Question 4

Which command is used to configure DHCP snooping for Option 82?

- A. dhcp snooping trust
- B. dhcp snooping information option untrust
- C. ip dhcp snooping option replace
- D. ip dhcp snooping information option allow-untrusted

**Answer: D**

#### Question 5

Which three commands are valid to configure DHCP snooping for Option 82? (Choose three)

- A. On the interface configuration mode;  
(config-if)# ip dhcp snooping trust
- B. On the global configuration mode;  
(config)# ip dhcp snooping information option allow-untrusted
- C. On the interface configuration mode;  
(config-if)# ip dhcp snooping information option allow-untrusted
- D. On the interface configuration mode;  
(config-if)# ip dhcp snooping granted
- E. On the global configuration mode;  
(config)# ip dhcp snooping information option enable-untrusted
- F. On the interface configuration mode;  
(config-if)# ip dhcp snooping information option enable-untrusted

**Answer: A B C**

#### Question 6a

Which two ports are default or should set as untrusted ports (DHCP Snooping/IP Source Guard) in an ISP environment? (Choose two)

- A. Provider edge port
- B. Customer edge port
- C. ?
- D. ?
- E. Customer facing provider edge port

**Answer: B E**

Question 6b

Which two device types does DHCP snooping treat as untrusted in an ISP environment?  
(Choose two)

- A. end host devices
- B. customer edge services/devices
- C. user-facing provider edge devices
- D. provider edge devices
- E. provider devices

**Answer:** A B

## IP Source Guard Questions

<https://www.certprepare.com/ip-source-guard-questions>

### Question 1

On which layer does IP source guard provide filtering to prevent a malicious host from impersonating the IP address of a legitimate host?

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 7

**Answer:** B

### Question 2

A network engineer is trying to prevent users from connecting unauthorized equipment to a production network. Which option can be campus-wide to satisfy this requirement?

- A. IP Source Guard
- B. switch port block
- C. Uplink fast
- D. private VLANs
- E. BPDU Guard

**Answer:** A

### Question 3

Which feature to use against IP Spoofing at Layer 2?



- A. DHCP snooping
- B. port security
- C. IP source guard
- D. ?

**Answer: C**

#### **Question 4**

Which two statements are true when using IP Source Guard with DHCP snooping? (Choose two)

- A. It is allowed to use an IP address which is in DHCP snooping database.
- B. It is now (or not) allowed to use an IP address which is in DHCP snooping database.
- C. It should be enabled globally to all interfaces.
- D. ?
- E. ?

**Answer: A C**

#### **Question 5**

Which two commands should we use to check the ip source guard bindings? (Choose two)

- A. show dhcp snooping binding
- B. show dhcp snooping binding database
- C. show ip verify source
- D. show ip source binding

**Answer: C D**

#### **Question 6**

Which two statements about IP Source Guard are true? (Choose two)

- A. it is enabled automatically when DHCP snooping is enabled
- B. when it is first enabled, it blocks all IP packets except DHCP packets.
- C. It works together with DHCP snooping to verify source IP packets
- D. When it is configured on a Layer 2 port channel, it is applied only to the port channel interface
- E. It must be enabled globally for all ports
- F. When it is first enabled, it allows all IP packets except DHCP packets.

**Answer: B C**

# Dynamic ARP Inspection DAI

<https://www.certprepare.com/dynamic-arp-inspection-dai-2>

## Question 1

Which three functions does Dynamic ARP Inspection perform with invalid IP-to MAC address bindings? (Choose three)

- A. deletes
- B. logs
- C. accepts
- D. intercepts
- E. discards
- F. bypasses

**Answer: B D E**

## Question 2

How to configure dynamic ARP inspection on a VLAN?

- A. (config)# ip arp inspection vlan
- B. (config-if)# ip arp inspection vlan
- C. (config-router)# ip arp inspection vlan
- D. #ip arp inspection vlan

**Answer: A**

## Question 3

Which method is used to prevent from ARP poisoning?

- A. Dynamic ARP Inspection
- B. DHCP Snooping
- C. ?
- D. ?

**Answer: A**

## Question 4a

Which command do you enter to enable Dynamic ARP Inspection for VLAN 15?

- A. SW1(config-vlan)# ip arp inspection vlan 15
- B. SW1(config-vlan)# ip arp inspection trust
- C. SW1(config-if)# ip arp-inspection trust
- D. SW1(config)# ip arp inspection vlan 15

**Answer: D**

#### **Question 4b**

Which commands do you enter to enable Dynamic ARP Inspection for VLAN 15? (Choose two)

- A. SW1(config-vlan)# ip arp inspection vlan 15
- B. SW1(config-vlan)# ip arp inspection trust
- C. SW1(config-if)# ip arp inspection trust
- D. SW1(config)# ip arp inspection vlan 15

**Answer: C D**

#### **Question 5**

Which type of attack does dynamic ARP mitigates?

- A. Man-in-the-middle
- B. DDoS attack
- C. Virus
- D. ?
- E. ?

**Answer: A**

#### **Question 6**

Which command makes ARP inspection validate an IP in IP-MAC bindings database?

- A. ip arp inspection vlan
- B. ip arp inspection trust
- C. ip verify source
- D. ip arp inspection validate ip

**Answer: D**

### **Question 7**

A question about something related to validation.

- A. arp inspection validate ip
- B. ip verify source
- C. ?
- D. ?

**Answer: A**

### **Question 8**

Which security feature inspects ARP packets based on valid IP-to-MAC address bindings?

- A. BPDU guard
- B. port security
- C. DAI
- D. IP source Guard

**Answer: C**

### **Question 9**

You are configured dynamic ARP inspection. Which command must you configure on the device to detect unexpected IP addresses in the ARP packet?

- A. ip arp inspection validate ip
- B. ip verify source
- C. ip are inspection trust
- D. ip are inspection vlan

**Answer: A**

## **Port Security**

<https://www.certprepare.com/port-security>

### **Question 1**

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

**Answer: A**

### **Question 2**

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

**Answer: A**

### **Question 3**

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

**Answer: B**

### **Question 4**

Which option is a possible cause for an errdisabled interface?

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

**Answer: D**

**Question 5**

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

**Answer: C**

**Question 6**

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.

**Answer: A**

**Question 7**

By default, what is the state of port security on a switch?

- A. disabled
- B. on
- C. off
- D. learning

**Answer: A**

**Question 8**

In which two ways can a port respond to a port-security violation? (Choose two)

- A. The port enters the err-disabled state.
- B. The Security Violation counter is incremented and the port sends an SNMP trap.

- C. The Security Violation counter is incremented and the port sends a critical syslog message to the console.
- D. The port triggers an EEM script to notify support staff and continues to forward traffic normally.
- E. The port immediately begins to drop all traffic.
- F. The port enters the shutdown state.

**Answer:** A B

### **Question 9**

What are the possible results of port-security? (Choose two)

- A. error disable (shut down)
- B. send a trap
- C. port disabled
- D. loop inconsistent

**Answer:** A B

### **Question 10**

A workstation technician moves a PC from one office desk to another. Before the move the PC has network connectivity. After the move as the PC plugged into the new network port, it loses network connectivity and the network switch port becomes err-disabled. Which option can cause the issue?

- A. wrong VLAN
- B. wrong switch port mode
- C. port security
- D. speed issue

**Answer:** C

## **Port Security 2**

<https://www.certprepare.com/port-security-2>

### **Question 1**

After you connected a host to switch port G0/1, the port is error disabled. Which command can you enter to determine the reason?

- A. show interfaces g0/1 status
- B. show log
- C. show run interface g0/1
- D. show ip interface brief

**Answer: B**

### **Question 2**

An enterprise network has port security sticky enabled on all access ports. A network administrator moves a PC from one office desk to another. After the PC is moved, the network administrator clears the port security on the new network switch port connecting to the PC, but the port keeps going back into err-disabled mode. Which two factors are possible causes of this issue? (Choose two)

- A. Port security sticky exists on the new network switch port
- B. Port security sticky is disabled on the new network switch port
- C. Port security must be disabled on all access ports
- D. Port security is still enabled on the older network switch port
- E. Port security sticky is still enabled on the older network switch port

**Answer: A E**

### **Question 3**

When port security is configured on a switch, which violation mode is the default?

- A. logging
- B. shutdown
- C. no change
- D. error-disable

**Answer: B**

### **Question 4**

Which configuration do you apply to an interface so that it uses port security to learn and commit the first MAC address?

- A. Configure the switchport switch-port security violation restrict 1 command.
- B. Enable the sticky MAC addresses feature.
- C. Enable the static secure MAC addresses feature.
- D. Configure the switch for port-security aging type inactivity command.



- E. Configure the switchport port-security maximum 1 command.
- F. Disable the sticky MAC addresses feature.

**Answer:** E

#### **Question 5a**

Which two restrictions of the port security feature are true? (Choose two)

- A. Static port MAC address assignments are not supported.
- B. It is not supported on PVLAN ports.
- C. It is not supported on EtherChannel port-channel interfaces.
- D. A single device can learn a maximum of three sticky MAC addresses.
- E. It is supported on destination SPAN ports.

**Answer:** A C

#### **Question 5b**

Which three restrictions of port security features are true? (Choose three)

- A. It is not supported on EtherChannel port-channel interfaces.
- B. Static MAC address assignments are not supported.
- C. It is not supported on destination SPAN ports.
- D. It is not supported on PVLAN ports.
- E. A single device supports up to two sticky MAC addresses.

**Answer:** A B C

#### **Question 6**

A question about port security violation occur in which two circumstances? (Choose two)

- A. When a port with secure MAC address attempt to use a different port in same VLAN
- B. When the same MAC addresses enters a port more than once
- C. When the CAM table overflows with dynamically learned MAC address
- D. When the port has received more MAC address than allowed
- E. When sticky MAC address learning is enabled and the port has a link down condition

**Answer:** A D

#### **Question 7**

A question related to security violation mode which drop unknown packets and then sends trap?

- A. inhibit
- B. drop
- C. restrict
- D. shutdown
- E. protect

**Answer: C**

### **Question 8**

Which two circumstances can cause a port to errdisable? (Choose two)

- A. It is connected to a host with an NIC that is unable to recognize
- B. The switch incurred a port security violation
- C. It detected a collision
- D. It learned a new MAC address
- E. It detected a peer with a matching duplex

**Answer: B D**

## **Port Security 3**

<https://www.certprepare.com/port-security-3>

### **Question 1**

Which state by default for port security is set in a switch?

- A. enable
- B. disable
- C. on
- D. off

**Answer: B**

### **Question 2**

What happens to the sticky address after copy run start and reboot?

- A. Sticky address are still in configuration.
- B. Sticky address are not in configuration.
- C. Sticky address can be unicast or multicast address.
- D. ?

**Answer: A**

### **Question 3**

Which two statements are true about port security? (Choose two)

- A. It is used on EtherChannel bundle.
- B. It must be used on the switch interface.
- C. It can be configured for SPAN.
- D. It is configured on an access port.
- E. ?

**Answer: B D**

### **Question 4**

Which two actions are possible when you are configuring port-security? (Choose two)

- A. Port will be error disabled
- B. Port will be shutdown
- C. Port will drop traffic
- D. Port will send logs

**Answer: A B**

**Question 5** (same as Q.2 of <https://www.certprepare.com/port-security> but answers are different)

On which interface can port security be configured?

- A. static trunk port
- B. dynamic trunk port
- C. dynamic access port

**Answer: A**

Question 6

Which command enables you to determine whether any interface on a device was shutdown as a result of a port security violation?

- A. show port-security
- B. show errdisable detect
- C. show interface err-disabled status
- D. show port-security address

Answer: C (in fact the correct command is “show interface status err-disabled)

## Private VLAN

<https://www.certprepare.com/private-vlan>

### Question 1

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.

Answer: C

### Question 2

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

Answer: A

### Question 3

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

**Answer: A**

#### **Question 4**

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

**Answer: A**

#### **Question 5**

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

**Answer: A**

#### **Question 6**

Which layer private VLAN partition the broadcast domain?

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

**Answer: B**

### Question 7

Which IOS configuration command is required to configure a VLAN as a private VLAN?

- A. switch(config-vlan)# private-vlan common
- B. switch(config-vlan)# private-vlan private
- C. switch(config-vlan)# private-vlan primary
- D. switch(config-vlan)# private-vlan transparent

**Answer: C**

### Question 8

When a private VLAN is configured, which mode must be configured as a router facing port?

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

**Answer: B**

### Question 9

On which PVLAN type can host ports communicate with promiscuous ports?

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

**Answer: A**

### Question 10

A question about isolated port private VLAN.

- A. It can communicate only on isolated port.
- B. It can configure more than one on the same port VLAN.
- C. ?
- D. ?

**Answer: A**

## Private VLAN Questions 2

<https://www.certprepare.com/private-vlan-2>

### Question 1

Which two statements about isolated private VLAN ports are true? (Choose two)

- A. They can communicate only with promiscuous ports.
- B. They can be configured on the EtherChannel ports.
- C. They can be configured on only port on a device.
- D. They can be configured on more than one port in the same VLAN.
- E. They can be communicate only with other ports in the private VLAN.

**Answer: A D**

### Question 2

Which two types of VLANs using PVLANS are valid? (Choose two)

- A. secondary
- B. community
- C. isolated
- D. promiscuous
- E. backup

**Answer: B C**

## Storm Control

<https://www.certprepare.com/storm-control>

### Question 1

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.

**Answer:** C D F

### **Question 2**

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

**Answer:** A

### **Question 3**

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`

**Answer:** A

### **Question 4**

Which two actions can be configured for storm control violation?

- A. Shutdown
- B. Trap
- C. Notify admin
- D. Discard Port



**Answer: A B**

### **Question 5**

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

**Answer: A**

### **Question 6**

If StormControl is enabled on a port and the traffic reaches the configured level, which two action can be configured to occur? (Choose two)

- A. trap
- B. notify admin
- C. redirect traffic
- D. log
- E. shut down

**Answer: A E**

### **Question 7**

Three reasons for err-disable. (Choose three)

- A. storm control
- B. security violation
- C. configuration ports into EtherChannel
- D. BPDUguard

**Answer: A B D**

### **Question 8**

A question about storm control based on optimal storm-control configuring.

- A. storm-control broadcast level 10bps
- B. storm-control broadcast level 10pps
- C. storm-control broadcast level 20 10
- D. storm-control broadcast enable

**Answer: C**

### **Question 9**

Which tool can error-disable an interface if the storm control threshold is exceeded?

- A. storm-control action shutdown
- B. storm-control action default
- C. storm-control enable
- D. storm-control action trap

**Answer: A**

### **Question 10**

Which technique will control broadcast, multicast and unicast problem?

- A. port security
- B. STP
- C. storm control
- D. SPAN

**Answer: C**

### **Question 11**

Which feature can you enable on your network to most effectively limit unknown traffic?

- A. DHCP packet rate limiting
- B. Unicast storm control
- C. Multicast storm control
- D. Broadcast storm control
- E. ARP packet rate limiting

**Answer: D**

# AAA Questions

<https://www.certprepare.com/aaa-questions>

## Question 1

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

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

**Answer: A**

## Question 2

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

**Answer: B**

## Question 3

Which command globally enables AAA on a device?

- A. aaa new-model
- B. aaa authentication
- C. aaa authorization
- D. aaa accounting

**Answer: A**

## Question 4

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

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

**Answer: A**

### **Question 5**

Which authentication service is needed to configure 802.1x?

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

**Answer: A**

### **Question 6**

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 login 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

**Answer: A**

### Question 7

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
```

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

- 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

**Answer: A**

### Question 8

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.

**Answer: A**

### Question 9

AAA question about the command used to login a user and set immediate access to privilege mode.

- A. aaa authorization exec default group radius
- B. aaa authorization default group radius
- C. aaa authorization radius default group

**Answer: A**

### **Question 10**

What are three types of RADIUS server responses? (Choose three)

- A. Accept
- B. Reject
- C. Challenge
- D. Get Password
- E. Cancel

**Answer: A B C**

### **Question 11**

Which are features of TACACS+? (Choose three)

- A. Supports backwards compatible with TACACS
- B. Encrypts the header
- C. Encrypts the whole payload
- D. Uses TCP
- E. Uses UDP
- F. Separates Authentication & Authorization

**Answer: C D F**

### **Question 12**

Which command do you enter so that the default authentication group on a device falls back to the case-sensitive local user database when the initial authentication fails?

- A. aaa authentication login default group tacacs+ radius local
- B. aaa authentication exec default group tacacs+ local if-authenticated
- C. aaa authentication login default group tacacs+ local-case if-authenticated
- D. aaa authentication exec default group tacacs+ if-authenticated local

**Answer: C**

# AAA Questions 2

<https://www.certprepare.com/aaa-questions-2>

## Question 1

Which command is used to configure vendor-specific attributes with RADIUS?

- A. radius-server vsa send
- B. vendor-specific attribute

**Answer: A**

## Question 2

Which two types of packets do TACACS+ work with? (Choose two)

- A. reply
- B. request
- C. response
- D. record

**Answer: B C**

## Question 3

Which two encryption features are used for TACACS+ and RADIUS? (Choose two)

- A. It uses the entire packet.
- B. It uses username and password.
- C. It uses only password.
- D. ?
- E. ?

**Answer: A C**

## Question 4

Which three features about TACACS+ are true? (Choose three)

- A. It supports TCP port 49
- B. It supports packet encryption
- C. It supports client-server architecture

- D. It supports client-private cloud architecture
- E. ?

**Answer:** A B C

### **Question 5**

Which two packet types for authentication and authorization are used in TACACS+?  
(Choose two)

- A. request
- B. continue
- C. response
- D. start
- E. stop

**Answer:** A C

### **Question 6**

Which statement is true about TACACS+?

- A. It is a Cisco proprietary technology
- B. Support several less common protections in address to IP
- C. More reliable than RADIUS because it communicate with UDP packets
- D. Backwards compatible with TACACS

**Answer:** A

### **Question 7**

Which effect of the line keyword entered at the end of an AAA method list is true?

- A. It sets last resort fallback authentication method.
- B. It override the enable authentication method.
- C. It override the radius authentication method.
- D. It override the tacacs+ authentication method.

**Answer:** A

### **Question 8**



Which command is used when TACACS+ is unreachable while the device will use the local database?

- A. aaa authentication login default group TACACS+ local
- B. aaa authentication login default group local TACACS+
- C. ?
- D. ?

**Answer: A**

### **Question 9**

A question about the steps to configure a device to use remote security database. (Choose two)

- A. Configure device query remote security database
- B. Configure user profile in remote security database
- C. ?
- D. ?
- E. ?

**Answer: A B**

### **Question 10**

Which centralized database separates between AAA attributes?

- A. TACACS+
- B. RADIUS
- C. Local database

**Answer: A**

## **AAA Questions 3**

<https://www.certprepare.com/aaa-questions-3>

### **Question 1**

Which industry standard AAA mechanism uses the industry neutral mechanism for user authentication and authorization?

- A. RADIUS
- B. TACACS+
- C. LDAP
- D. Kerberos

**Answer: A**

### **Question 2**

Question about configuring AAA TACACS+ authentication with fall back to local user database and commands were given?

- A. aaa authentication default login tacacs+ local
- B. aaa authentication tacacs+ local default login
- C. aaa authentication default tacacs+ local login
- D. aaa authentication login default tacacs+ local

**Answer: D**

### **Question 3**

Which two differences between RADIUS and TACACS+ are true? (Choose two)

- A. Only TACACS+ can combine authentication and authorization function.
- B. Only RADIUS uses UDP.
- C. Only RADIUS provide granular control over the CLI commands that a user can execute.
- D. Only TACACS+ use user privilege levels to determine which commands the user can execute.
- E. Only TACACS+ uses UDP.

**Answer: B D**

### **Question 4**

Which two statements about the local user database are true? (Choose two)

- A. For console connections, it can be used only as a backup authentication method
- B. It can be configured to grant a user-specific privilege level
- C. It can store passwords in clear text only
- D. For VTY connections, it can be used only as a backup authentication method
- E. It can be used as the only method of authentication or as a backup for other methods

**Answer: B E**

### **Question 5**

Which two features does TACACS+ support? (Choose two)

- A. Combining authorization and authentication to streamline AAA services
- B. Decentralizing network access management, reducing the potential impact of a security breach to a central device.
- C. UDP communication between the network access server and the security server
- D. Encrypting the entire TCP Packet containing TACACS+ information
- E. PAP and CHAP authentication

**Answer: D E**

### **Question 6**

Which three characteristics of AAA with TACACS+ are true? (Choose three)

- A. It is a Cisco-proprietary implementation
- B. It is a standard-based implementation
- C. It runs on UDP port 49
- D. It uses a client-private cloud architecture
- E. It uses a client-server architecture
- F. It runs on TCP port 49

**Answer: A E F**

### **Question 7**

Which AAA authorization method uses a vendor-neutral directory information protocol?

- A. LDAP
- B. RADIUS
- C. TACACS+
- D. Kerberos

**Answer: A**

### **Question 8**

Which command enables a RADIUS server configuration to use vendor-proprietary attributes?

- A. radius-server configure-nas
- B. radius-server attribute nas-port extended
- C. radius-server host non-standard
- D. radius-server vsa send authentication

**Answer: D**

#### Question 9

Which three feature of AAA with RADIUS are true? (Choose three)

- A. It encrypts the password for transmission.
- B. It integrates authorization and authentication functions.
- C. It separates authorization and authentication functions.
- D. It encrypts the entire transmission.
- E. It secures access to endpoint devices.
- F. It secures access to network devices.

**Answer: A B F**

#### Question 10

Which two statements about TACACS+ are true? (Choose two)

- A. It is a Cisco-proprietary technology.
- B. It support several less-common protocol in addition to IP.
- C. It encrypts only the packet header.
- D. It is more reliable than RADIUS because it communicates with UDP packets.
- E. It is backwards-compatible with TACACS.
- F. It combines accounting and authorization functions.

**Answer: A B**

#### Question 11

Which form of centralized device authentication allows each AAA feature to function separately?

- A. local database
- B. RADIUS
- C. TACACS+
- D. kerberos

Answer: C

#### Question 12

Which two tasks must you perform to enable AAA operations with a remote security database? (Choose two)

- A. Configure Cisco Discovery Protocol on all interface used for authentication.
- B. Configure user profiles on the remote security database.
- C. Configure a user profile in the local database of each device to which the user will have access.
- D. Configure network equipment to query the remote security database.
- E. Configure SSH to provide remote access to network equipment.

Answer: B D

## HSRP Questions

<https://www.certprepare.com/hsrp-questions-6>

#### Question 1

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

Answer: D

#### Question 2

What is the default HSRP priority?

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

Answer: B

### Question 3

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

**Answer: A**

### Question 4

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

**Answer: C**

### Question 5

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

**Answer: C**

### Question 6

Which two statements about HSRP, GLBP, and VRRP are true? (Choose two)

- A. HSRP is the preferred protocol to be used on multivendor environments.
- B. VRRP has one master router, one standby router, and many listening routers.
- C. GLBP allows for a maximum of four MAC addresses per group.
- D. HSRP supports up to 255 groups on the same switch or router.
- E. VRRP is a Cisco proprietary protocol.

**Answer: C D**

### Question 7

Refer to the exhibit.

```
R2#show standby
FastEthernet1/0 - Group 50
  State is Active
    2 state changes, last state change 00:00:58
  Virtual IP address is 10.10.1.1
  Active virtual MAC address is 0000.0c07.ac32 (MAC In Use)
  Local virtual MAC address is 0000.0c07.ac32 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.704 secs
  Preemption enabled
  Active router is local
  Standby router is unknown
  Priority 200 (configured 200)
    Track interface FastEthernet0/0 state Up decrement 20
  Group name is "hsrp-Fa1/0-50" (default)

R2#
%IP-4-DUPADDR: Duplicate address 10.10.1.1 on FastEthernet1/0,
sourced by 0000.0c07.ac28
```

Which option is the most likely explanation of the duplicate address message logged?

- A. spanning-tree loop
- B. HSRP misconfiguration
- C. a PC with IP of 10.10.1.1
- D. a hardware problem

**Answer: B**

### Question 8

Which of the two uses multicast address and port number for HSRP? (Choose two)

- A. HSRP uses multicast address 224.0.0.2
- B. HSRP uses multicast address 192.168.1.1
- C. HSRP uses UDP port 1985
- D. HSRP uses UDP port 8080
- E. HSRP uses multicast address 224.0.0.102
- F. HSRP uses TCP port 22

**Answer: A C**

### Question 9

Refer to the exhibit. Based on the debug output shown in the exhibit, which three statements about HSRP are true? (Choose three.)

```
*Mar 1 00 16:43.095: %LINK-3-UPDOWN: Interface Vlan11, changed state to up
*Mar 1 00 16:43.099: SB: V111 Interface up
*Mar 1 00 16:43.099: SB11: V111 Init: a/HSRP enabled
*Mar 1 00 16:43.099: SB11: V111 Init -> Listen
*Mar 1 00 16:43.295: SB11: V111 Hello in 172.16.11.112 Active pri 50 ip 172.16.11.115
*Mar 1 00 16:43.295: SB11: V111 Active router is 172.16.11.112
*Mar 1 00 16:43.295: SB11: V111 Listen: h/Hello rcvd from lower pri Active router
(50/172.16.11.112)
*Mar 1 00 16:43.295: SB11: V111 Active router is local, was 172.16.11.112
*Mar 1 00 16:43.299: %STANDBY-6-STATECHANGE: Vlan11 Group 11 state Listen ->
Active
*Mar 1 00 16:43.299: SB11: V111 Hello out 172.16.11.111 Active pri 100 ip 172.16.11.115
*Mar 1 00 16:43.303: SB11: V111 Hello in 172.16.11.112 Speak pri 50 ip 172.16.11.115
*Mar 1 00 16:46.207: SB11: V111 Hello out 172.16.11.111 Active pri 100 ip 172.16.11.115
*Mar 1 00 16:49.095: SB11: V111 Hello in 172.16.11.112 Speak pri 50 ip 172.16.11.115
```

- A. The router with IP address 172.16.11.111 has preempt configured.
- B. The final active router is the router with IP address 172.16.11.111.
- C. The router with IP address 172.16.11.112 has nonpreempt configured.
- D. The priority of the router with IP address 172.16.11.112 is preferred over the router with IP address 172.16.11.111.
- E. The router with IP address 172.16.11.112 is using default HSRP priority.
- F. The IP address 172.16.11.115 is the virtual HSRP IP address.

**Answer: A B F**

## HSRP Questions 2

<https://www.certprepare.com/hsrp-questions-2-2>

### Question 1

Which two statements about HSRP are true? (Choose two)

- A. You must manually configure ICMP redirect messages on HSRP interfaces
- B. It is supported on switch virtual interfaces and routed ports
- C. Primary and secondary HSRP switches forward traffic in a round-robin style



- D. The interfaces in a HSRP group share a virtual MAC address
- E. An HSRP group can support a maximum of eight switches

**Answer:** B D

### Question 2

Refer to the exhibit. Which two statements about the network environment of the device that generated this output are true? (Choose two)

```
FastEthernet2/0/47 - Group 1
State is Active
  7 state changes, last state change 00:00:02
Virtual IP address is 10.1.1.1
Active virtual MAC address is 0000.0c07.ac01
  Local virtual MAC address is 0000.0c07.ac01 (v1 default)
Hello time 3 sec, hold time 10 sec
  Next hello sent in 1.616 secs
Authentication MD5, key-string "cisco"
Preemption enabled
Active router is local
Standby router is 10.1.1.3 Priority 100 (expires in 9.455 sec)
Priority 255 (configured 255)
IP redundancy name is hsrp-Fa2/0/47-1" (default)
```

- A. The exhibit hello and hold timer values are in use
- B. The standby router can take the active HSRP if it fails to receive a hello packet from the active router within 1.616 seconds
- C. The priority value of the HSRP group is 1
- D. HSRP version 2 is in use
- E. The standby router can take the active HSRP role if it fails to receive a hello packet from the active router within 10 seconds

**Answer:** A E

### Question 3

Which two prerequisites for HSRP to become active on an interface are true? (Choose two)

- A. Cisco Express Forwarding must be disabled globally.
- B. The VIP must be in the same subnet as the primary IP address.
- C. A Virtual-MAC address must be configured on the interface.
- D. An IP address must be configured on the interface.
- E. PIM routing must be disabled on the interface.

**Answer: B D**

#### **Question 4**

Which two statements about HSRP timers are true? (Choose two)

- A. the default hold timer is 15 seconds
- B. the default hello timer is 3 seconds
- C. the default hello timer is 5 seconds
- D. the default hold timer is 10 seconds
- E. the default hello timer is 30 seconds
- F. the default hold timer is 30 seconds

**Answer: B D**

#### **Question 5**

Which two tasks can be accomplished to configure multiple HSRP client groups? (Choose two)

- A. Use the **standby priority** command to configure an HSRP group to become a backup of another HSRP group
- B. Use the **standby follow** command to configure an HSRP group to become a slave of another HSRP group
- C. Use the **standby track** command to configure an HSRP group to become a primary HSRP group
- D. Use the **standby mac-refresh <seconds>** command to change the refresh interval of the HSRP client group
- E. Use the **standby mac-resurrect <seconds>** command to change the refresh interval of the HSRP client group

**Answer: B D**

#### **Question 6**

Which three HSRP exchange states are used in multicast messages? (Choose three)

- A. err-disabled
- B. coup
- C. inherit
- D. hold
- E. hello
- F. resign

**Answer: B E F**

**Question 7**

Which two authentication methods does HSRP use? (Choose two)

- A. WPA2 authentication
- B. SHA-128 authentication
- C. MD5 authentication
- D. Plain text authentication
- E. Teredo
- F. No authentication methods do exist

**Answer: C D**

**Question 8**

Which two types of threshold can you configure for tracking objects? (Choose two)

- A. percentage
- B. MTU
- C. bandwidth
- D. weight
- E. delay
- F. administrative distance

**Answer: A D**

**Question 9**

Which HSRP extension allows groups to share traffic loads?

- A. GLBP
- B. CHSRP
- C. MHSRP
- D. CGMP
- E. FHRP

**Answer: C**

**Question 10**

Refer to the exhibit. Which two statements can be derived from the output of the show standby command? (Choose two)

```
R2#show standby
FastEthernet1/0 - Group 40
  State is Standby
    4 state changes, last state change 00:01:30
  Active virtual MAC address 0000.0c07.ac28 (MAC Not In Use)
    Local virtual MAC address is 0000.0c07.ac28 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.845 secs
  Preemption disabled
  Active router is 10.10.1.3, priority 85 (expires in 8.63 sec)
  Standby router is local
  Priority 90 (configured 90)
    Track interface FastEthernet0/0 state Up decrement 10
  Group name is "hsrp-Fa1/0-40" (default)
```

- A. R2 Fa1/0 regains mastership when the link comes back up.
- B. If Fa0/0 is shut down, the HSRP priority on R2 becomes 80.
- C. R2 becomes the active router after the hold time expires.
- D. R2 is using the default HSRP hello and hold timers.
- E. Router with IP 10.10.1.3 is active because it has a higher IP address.

**Answer: B D**

### Question 11

Which protocol specified by RFC 2281 provides network redundancy for IP networks, ensuring that user traffic immediately and transparently recovers from first-hop failures in network edge devices or access circuits?

- A. ICMP
- B. IRDP
- C. HSRP
- D. STP

**Answer: C**

### Question 12

Refer to the exhibit. Which configuration on the HSRP neighboring device ensures that it becomes the active HSRP device in the event that port fa1/1 on Switch\_A goes down?

```
Switch_A(config-if)# ip address 10.10.10.1 255.255.255.0
Switch_A(config-if)# standby 1 priority 200
Switch_A(config-if)# standby 1 preempt
```

```
Switch_A(config-if)# standby 1 track interface fa 1/1
Switch_A(config-if)# standby 1 ip 10.10.10.10
```

A.

```
Switch_B(config-if)#ip address 10.10.10.2 255.255.255.0
Switch_B(config-if)#standby 1 priority 200
Switch_B(config-if)#standby 1 preempt
Switch_B(config-if)#standby 1 ip 10.10.10.10
Switch_B(config-if)#standby 1 track interface fa 1/1
```

B.

```
Switch_B(config-if)#ip address 10.10.10.2 255.255.255.0
Switch_B(config-if)#standby 1 priority 200
Switch_B(config-if)#standby 1 ip 10.10.10.10
```

C.

```
Switch_B(config-if)#ip address 10.10.10.2 255.255.255.0
Switch_B(config-if)#standby 1 priority 195
Switch_B(config-if)#standby 1 preempt
Switch_B(config-if)#standby 1 ip 10.10.10.10
```

D.

```
Switch_B(config-if)#ip address 10.10.10.2 255.255.255.0
Switch_B(config-if)#standby 1 priority 190
Switch_B(config-if)#standby 1 ip 10.10.10.10
Switch_B(config-if)#standby 1 track interface fa 1/1
```

**Answer: C**

## HSRP Questions 3

<https://www.certprepare.com/hsrp-questions-3-2>

### Question 1

Regarding high availability, with the MAC address 0000.0c07.ac03, what does the “03” represent?

- A. The GLBP group number
- B. The type of encapsulation
- C. The HSRP router number
- D. The VRRP group number
- E. The HSRP group number
- F. The active router number

**Answer: E**

### **Question 2**

HSRP has been configured between two Company devices. Which of the following describe reasons for deploying HSRP? (Choose three)

- A. HSRP provides redundancy and fault tolerance
- B. HSRP allows one router to automatically assume the function of the second router if the second router fails
- C. HSRP allows one router to automatically assume the function of the second router if the second router starts
- D. HSRP provides redundancy and load balancing

**Answer: A B D**

### **Question 3**

Which two prerequisites are required for an HSRP interface to come up? (Choose two)

- A. The virtual IP address must be in the same subnet as the interface IP address.
- B. Configure an physical IP address for the interface and enable that interface before HSRP becomes active.
- C. It requires to configure more than one first-hop redundancy protocol on the same interface.
- D. Configure HSRP version 2 to interoperate with HSRP version 1.
- E. The virtual IP address is prohibited to be in the same subnet as the interface IP address under IPv4.

**Answer: A B**

### **Question 4**

A question about HSRP that have these options.

```
R1# show int fa0/1:  
standby 2 track 20 decrement 30
```

```
R1# show run | match "track 20"  
track 20 ip route x.x.x.x reachability
```

- A. R1 has x.x.x.x in routing table.
- B. R1 does not have x.x.x.x in routing table.
- C. ?
- D. ?

**Answer: A**

**Question 5**

In which state does the standby virtual gateway take election?

- A. Learn
- B. Listen
- C. Init
- D. Reply

**Answer: B**

**Question 6**

Which three design types of capable Ethernet LANs does HSRP support? (Choose three)

- A. Multiaccess
- B. Multicast
- C. Broadcast
- D. Unicast
- E. Token ring
- F. FDDI

**Answer: A B C**

**Question 7**

Which hot standby groups numbers are used in a HSRP token ring?

- A. 0, 1 and 2
- B. 3, 5, and 7
- C. 0 and 1
- D. 2 and 4

**Answer: A**

**Question 8**

Refer to the exhibit. Which two statements about the network environment of the device that generated this output are true? (Choose two)

FastEthernet1/0/47 Group 1 (version 2)  
State is Standby  
7 state changes, last state change 00:00:02  
virtual IP address is 10.1.1.1  
Active virtual MAC address is 0000.0c9f.f001  
Local virtual MAC address is 0000.0c9f.f001 (v2 default)  
Hello time 3 sec, hold time 10 sec Next hello sent in 0.375 secs  
Authentication MD5, key-string "cisco"  
Preemption enabled, delay min 5 secs  
Active router is 10.1.1.2, priority 255 (expires in 9.396 sec)  
Standby router is local Priority 100 (default 100)  
IP redundancy name is hsrp-Fa1/0/47-1" (default)

- A. The hello and hold timers are set to custom values.
- B. If the local device fails to receive a hello from the active router for more than 5 seconds, it can become the active router.
- C. The virtual IP address of the HSRP group is 10.1.1.1.
- D. If the router with a higher IP address and same HSRP priority as the active router becomes available, that router becomes the new active router 5 seconds later.
- E. The local device has higher priority setting than the active router.

**Answer: C D**

### Question 9

Which two prerequisites are required for an HSRP interface to come up? (Choose two)

- A. The virtual IP address must be in the same subnet as the interface IP address.
- B. Configure an physical IP address for the interface and enable that interface before HSRP becomes active.
- C. It requires to configure more than one first-hop redundancy protocol on the same interface.
- D. Configure HSRP version 2 to interoperate with HSRP version 1.
- E. The virtual IP address is prohibited to be in the same subnet as the interface IP address under IPv4.

**Answer: A B**

### Question 10

What will happen if R1 or R2 reboot which will take the priority?

- A. R1 will become active when reboot.
- B. R2 will become active when reboot.
- C. Both R1 and R2 will still become active and does not require a reboot.
- D. It is not possible for either R1 or R2 to take the priority when both rebooted.



**Answer: A**

## HSRP Questions 4

<https://www.certprepare.com/hsrp-questions-4-2>

### Question 1

Which two statements about HSRP is true? (Choose two)

- A. It required all the groups to have the same routing protocols.
- B. It must have an IP address that is active.
- C. It must have the same virtual MAC address for all groups.
- D. It must have the same VIP address in all groups.

**Answer: B D**

### Question 2

Which virtual MAC address does HSRP group 37 use with default configuration?

- A. c0:00:00:255:00:00
- B. 00:00:0c:07:ac:25
- C. c0:00:00:37:00:00
- D. 00:00:00c:07:ac:37

**Answer: B**

### Question 3

Which four multicast addresses for HSRP, GLBP and VRRP are valid? (Choose four)

- A. HSRP version 1 uses the multicast IP address of 224.0.0.2.
- B. HSRP version 2 uses the multicast IP address of 224.0.0.102.
- C. GLBP uses the multicast IP address of 224.0.0.102.
- D. VRRP uses the multicast IP address of 224.0.0.18 with IP protocol 112.
- E. HSRP versions 1 and 2 both use the multicast IP address of 224.0.0.102.
- F. GLBP uses the multicast IP address using the loopback IP address of 127.0.0.1.

**Answer: A B C D**

#### Question 4

An exhibit of HSRP with problem with secondary (error is duplicate IP address on 1 of switch port that duplicate with virtual IP address)

- A. misconfigure
- B. PC's IP address
- C. STP loop
- D. ?

**Answer: C**

#### Question 5

Which feature is enabled automatically when configuring HSRP?

- A. preempt
- B. IGMP
- C. ICMP redirect
- D. STP

**Answer: C**

#### Question 6

You have configured switches A and B in a network. The gigabitethernet0/1 interface of switch A has HSRP enabled on it for VLAN 30. Switch A has a priority of 240 and switch B has a priority of 200 for the HSRP group. You want to ensure that if the gigabitethernet0/1 interface of switch A goes down, then switch B becomes the active HSRP switch for the VLANs. You have executed the standby preempt command on switch B.

Which of the following commands should be used on switch A to achieve the desired results?

- A. standby 30 track gigabitethernet0/1
- B. standby 30 track gigabitethernet0/1 10
- C. standby 30 track gigabitethernet0/1 30
- D. standby 30 track gigabitethernet0/1 45

**Answer: D**

#### Question 7

Refer to the exhibit. Which two effects of this configuration are true? (Choose two)

<b>R1</b>	<b>R2</b>
<pre>interface GigabitEthernet0/0 ip address 192.168.250.2 255.255.255.0 standby 20 ip 192.168.250.1 standby 20 priority 120</pre>	<pre>interface GigabitEthernet0/0 ip address 192.166.250.3 255.255.255.0 standby 20 ip 192.168.250.1 standby 20 priority 110</pre>

- A. R1 becomes the active router.
- B. If R2 goes down, R1 becomes active but reverts to standby when R2 comes back online.
- C. Hello messages are sent to multicast address 224.0.0.5.
- D. If R1 goes down, R2 becomes active but reverts to standby when R1 comes back online.
- E. If R1 goes down, R2 becomes active and remains the active device when R1 comes back online.
- F. R1 becomes the standby router.

**Answer:** A E

### Question 8

- A question about the difference between HSRP and GLBP.
- A. HSRP can share multiple IP for gateway redundancy in a single standby group.
  - B. HSRP can share multiple MAC for gateway load balancing.
  - C. ?
  - D. ?

**Answer:** B

### Question 9

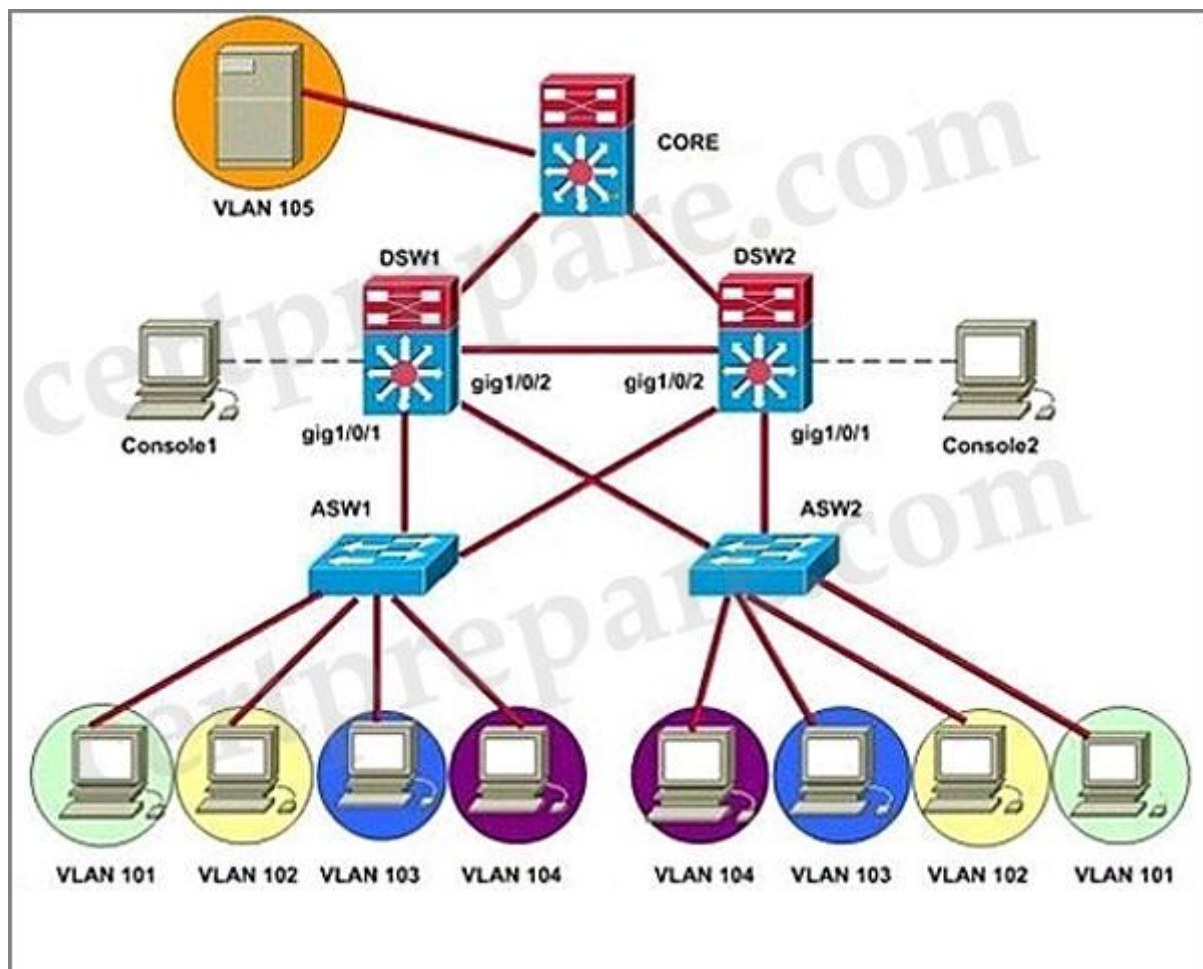
Which option is a primary difference between HSRP and GLBP?

- A. Only GLBP uses a router BIA to provide gateway redundancy
- B. Only HSRP uses multiple virtual IP address to provide gateway redundancy in a single standby group
- C. Only HSRP can use multiple MAC address to provide gateway load balancing over multiple routers
- D. Only GLBP supports gateway load balancing over multiple routers

**Answer:** D

## HSRP Hotspot

## Question



- DSW1( Distribute switch 1) is the primary device for Vlan 101, 102, 105
- DSW2 ( Distribute switch 2) is the primary device for Vlan 103 and 104
- A failure on gig1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet 1/0/1 on backup device has also failed.

For your information, the “show running-config” commands are posted below for your reference but please notice in the exam you have to issue this command to get the output:

### DSW1#show running-config

```
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
```

### DSW2#show running-config

```
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
interface Vlan102	!
ip address 192.168.102.1 255.255.255.0	interface Vlan102
standby 2 ip 192.168.102.254	ip address 192.168.102.2 255.255.255.0
standby 2 priority 200	standby 2 ip 192.168.102.254
standby 2 preempt	standby 2 priority 190
standby 2 track GigabitEthernet1/0/1 5	standby 2 preempt
!	standby 2 track GigabitEthernet1/0/1
interface Vlan103	!
ip address 192.168.103.1 255.255.255.0	interface Vlan103
standby 3 ip 192.168.103.254	ip address 192.168.103.2 255.255.255.0
standby 3 priority 200	standby 3 ip 192.168.103.254
standby 3 preempt	standby 3 priority 190
standby 3 track GigabitEthernet1/0/1	standby 3 preempt
!	standby 3 track GigabitEthernet1/0/1 50
interface Vlan104	!
ip address 192.168.104.1 255.255.255.0	interface Vlan104
standby 4 ip 192.168.104.254	ip address 192.168.104.2 255.255.255.0
standby 4 priority 150	standby 4 ip 192.168.104.254
standby 4 preempt	standby 4 priority 200
standby 4 track GigabitEthernet1/0/1 1	standby 4 preempt
!	standby 4 track GigabitEthernet1/0/1 55
interface Vlan105	!
ip address 192.168.105.1 255.255.255.0	interface Vlan105
standby 5 ip 192.168.105.254	ip address 192.168.105.2 255.255.255.0
standby 5 priority 150	standby 5 ip 192.168.105.254
standby 5 preempt	standby 5 preempt
standby 5 track GigabitEthernet1/0/1 55	standby 5 track GigabitEthernet1/0/1

### Question 1

During routine maintenance, it became necessary to shutdown G1/0/1 on DSW1. All other interface were up. During this time, DSW1 remained the active device for Vlan 102's HSRP group. You have determined that there is an issue with the decrement value in the track command in Vlan 102's HSRP group. What need to be done to make the group function properly?

- A. The DSW1's decrement value should be configured with a value from 5 to 15
- B. The DSW1's decrement value should be configured with a value from 9 to 15
- C. The DSW1's decrement value should be configured with a value from 11 to 18
- D. The DSW1's decrement value should be configured with a value from 195 to less than 205
- E. The DSW1's decrement value should be configured with a value from 200 to less than 205
- F. The DSW1's decrement value should be greater than 190 and less 200

**Answer: C**

Explanation

The question clearly stated that there was an issue with the decrement value in VLAN 102 so we should check VLAN 102 on both DSW1 and DSW2 switches first. Click on the PC Console1 and PC Console2 to access these switches then use the “show running-config” command on both switches

DSW1>enable

DSW1#show running-config

DSW2>enable

DSW2#show running-config

```
DSW1#show running-config
<output omitted>

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
!
```

```
DSW2#show running-config
<output omitted>

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
!
```

As shown in the outputs, the DSW1's priority is 200 and is higher than that of DSW2 so DSW1 becomes active switch for the group. Notice that the interface Gig1/0/1 on DSW1 is being tracked so when this interface goes down, HSRP automatically reduces the router's priority by a configurable amount, in this case 5. Therefore the priority of DSW1 goes down from 200 to 195. But this value is still higher than that of DSW2 (190) so DSW1 remains the

active switch for the group. To make DSW2 takes over this role, we have to configure DSW1's decrement value with a value equal or greater than 11 so that its result is smaller than that of DSW2 ( $200 - 11 < 190$ ). Therefore C is the correct answer.

## Question 2

During routine maintenance, G1/0/1 on DSW1 was shutdown. All other interface were up. DSW2 became the active HSRP device for Vlan101 as desired. However, after G1/0/1 on DSW1 was reactivated. DSW1 did not become the active HSRP device as desired. What need to be done to make the group for Vlan101 function properly?

- A. Enable preempt on DSW1's Vlan101 HSRP group
- B. Disable preempt on DSW1's Vlan101 HSRP group
- C. Decrease DSW1's priority value for Vlan101 HSRP group to a value that is less than priority value configured on DSW2's HSRP group for Vlan101
- D. Decrease the decrement in the track command for DSW1's Vlan 101 HSRP group to a value less than the value in the track command for DSW2's Vlan 101 HSRP group.

**Answer: A**

Explanation

Continue to check VLAN 101 on both switches...

```
DSW1#show running-config
<output omitted>

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
!
```

```
DSW2#show running-config
<output omitted>

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
!
```

We learned that DSW1 doesn't have the "standby 1 preempt" command so it can't take over the active role again even if its priority is the highest. So we need to enable this command on VLAN 101 of DSW1.

### Question 3

DSW2 has not become the active device for Vlan103's HSRP group even though all interfaces are active. As related to Vlan103's 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.



**Answer: C**

Explanation:

```
DSW1#show running-config
<output omitted>

interface Vlan103
  ip address 192.168.103.1 255.255.255.0
  standby 3 ip 192.168.103.254
  standby 3 priority 200
  standby 3 preempt
  standby 3 track GigabitEthernet1/0/1
!
```

```
DSW2#show running-config
<output omitted>

interface Vlan103
  ip address 192.168.103.2 255.255.255.0
  standby 3 ip 192.168.103.254
  standby 3 priority 190
  standby 3 preempt
  standby 3 track GigabitEthernet1/0/1 50
!
```

The reason DSW2 has not become the active switch for Vlan103 is because the priority value of DSW1 is higher than that of DSW2. In order to make DSW2 become the active switch, we need to increase DSW2's priority (to higher than 200) or decrease DSW1's priority (to lower than 190) -> B and C are correct.

But there is another requirement from this question that "A failure on gig1/0/1 on primary device should cause the primary device to release its status as the primary device, unless GigabitEthernet 1/0/1 on backup device has also failed". This requirement makes answer B incorrect. For example, we choose to decrease the priority value on DSW1 to 160 (according to answer B) then DSW2 will become active switch (that is good). When Gi1/0/1 on DSW2 goes down, the priority of DSW2 will be  $190 - 50 = 140 < 160$  -> DSW1 will become new active switch (it is good, too). But when Gi1/0/1 on DSW1 also goes down, the priority of

DSW1 will be  $160 - 10 = 150$  and it is still greater than 140 of DSW2 -> DSW2 cannot retake the active role as the requirement of this question.

#### Question 4

If G1/0/1 on DSW1 is shutdown, what will be the current priority value of the Vlan105's group on DSW1?

- A. 95
- B. 100
- C. 150
- D. 200

**Answer: A**

Explanation

Below is the output of VLAN 105:

```
DSW1#show running-config
<output omitted>

interface Vlan105
  ip address 192.168.105.1 255.255.255.0
  standby 5 ip 192.168.105.254
  standby 5 priority 150
  standby 5 preempt
  standby 5 track GigabitEthernet1/0/1 55
!
```

If G1/0/1 on DSW1 is shutdown, its priority will decrease 55 so, its value will be  $150 - 55 = 95$

#### Question 5

What is the configured priority value of the Vlan105's group on DSW2 ?

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

**Answer: B**

Explanation

Below is the output of VLAN 105 of DSW2:

```
DSW2#show running-config
<output omitted>

interface Vlan105
  ip address 192.168.105.2 255.255.255.0
  standby 5 ip 192.168.105.254
  standby 5 preempt
  standby 5 track GigabitEthernet1/0/1
!
```

We don't see the priority of DSW2 so it is using the default value (100).

### Question 6

During routine maintenance, it became necessary to shutdown G1/0/1 on DSW1 and DSW2. All other interface were up. During this time, DSW1 became the active device for Vlan104's HSRP group. As related to Vlan104's HSRP group, what can 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, disable track command.

**Answer: C**

## VRRP Questions

<https://www.certprepare.com/vrrp-questions-2>

### Question 1

Which First Hop Redundancy Protocol is an IEEE Standard?

- A. GLBP
- B. HSRP

- C. VRRP
- D. OSPF

**Answer: C**

### **Question 2**

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

**Answer: A**

### **Question 3**

About VRRP configuration. Which statement is true?

- A.  
Switch-A(config)# interface vlan 1  
Switch-A(config-if)# ip address 192.168.1.10 255.255.255.0  
Switch-A(config-if)# vrrp 1 ip 192.168.1.1  
Switch-A(config-if)# vrrp 1 priority 200
- B.  
Switch-A(config)# interface vlan 1  
Switch-A(config-if)# ip address 192.168.1.11 255.255.255.0  
Switch-A(config-if)# vrrp 2 ip 192.168.1.1  
Switch-A(config-if)# vrrp 2 priority 100
- C.  
Switch-A(config)# interface vlan 2  
Switch-A(config-if)# ip address 192.168.1.10 255.255.255.0  
Switch-A(config-if)# vrrp 1 ip 192.168.1.10  
Switch-A(config-if)# vrrp 1 priority 100

**Answer: A**

### **Question 4**

Which of the two uses multicast address and protocol identifier for VRRP? (Choose two)

- A. VRRP uses multicast address 224.0.0.18
- B. VRRP uses multicast address 224.0.0.198
- C. VRRP uses protocol identifier 112
- D. VRRP uses protocol identifier 80
- E. VRRP uses multicast address 224.1.1.18
- F. VRRP uses protocol identifier 172

**Answer:** A C

### Question 5

Refer to the exhibit. You have configured routers R1 and R2 with VRRP for load sharing as shown. Which two effects of this configuration are true? (Choose two)

<pre> R1(config)# interface Ge 1/0/1 R1(config-if)# ip address 10.1.0.2 255.255.255.0 R1(config-if)# vrrp 1 priority 150 R1(config-if)# vrrp 1 ip 10.1.0.1 R1(config-if)# vrrp 2 priority 120 R1(config-if)# vrrp 2 ip 10.1.0.10 R1(config-if)# no shutdown </pre>	<pre> R2(config)# interface Ge 1/0/1 R2(config-if)# ip address 10.1.0.3 255.255.255.0 R2(config-if)# vrrp 1 priority 120 R2(config-if)# vrrp 1 ip 10.1.0.1 R2(config-if)# vrrp 2 priority 150 R2(config-if)# vrrp 2 ip 10.1.0.10 R2(config-if)# no shutdown </pre>
--	--

- A. Router R2 is the primary gateway for 10.1.0.1 and Router R1 is the primary gate for 10.1.0.10
- B. PC2 and PC4 use router R1 as the primary gateway.
- C. The Four PCs send all request to router R1, which forward traffic to router R2 as necessary
- D. Router R1 is the primary gateway for 10.1.0.1 and router R2 is the primary gateway for 10.1.0.10
- E. PC1 and PC3 use router R1 as the primary gateway
- F. The four PCs send packets round-robin between routers R1 and R2

**Answer:** D E

### Question 6

Which two authentication types does VRRP support? (Choose two)

- A. Plain-text
- B. CHAP
- C. PAP
- D. 802.1X
- E. MD5

**Answer:** A E

### Question 7

Refer to the exhibit. Which two statements about the network environment of the interface that generated the exhibit are true? (Choose three)

```
R2#show vrrp
FastEthernet2/0/47 - Group 1
  State is Master
  Virtual IP address is 10.1.1.1
  Virtual MAC address is 0000.0c07.ac01
  Advertisement interval is 1.000 sec
  Preemption is enabled
    min delay is 0.000 sec
  Priority is 105
    Track object 1 state Down decrement 15
  Master Router is 10.1.1.2 (local), priority is 105
  Master Advertisement interval is 1.000 sec
  Master Down interval is 3.531 sec
```

- A. The configured VRRP priority of the interface is 120
- B. The device on which the interface resides is acting as a standby router
- C. The Skew time .531 seconds
- D. The Configured VRRP Priority of the interface is 105
- E. If the priority of another router is higher than the priority of the master router, it becomes the master router

**Answer:** A C E

### Question 8

Which three authentication methods does VRRP use? (Choose three)

- A. 802.1 x authentication
- B. Cipher authentication
- C. SHA-256 authentication
- D. No authentication
- E. Plain text authentication
- F. MD5 authentication

**Answer:** D E F

### Question 9

Which two statements about VRRP are true? (Choose two)

- A. Authentication commands must be entered under the interface.
- B. It sends advertisements to multicast address 224.0.0.9.
- C. It supports MD5 and IP sec authentication.
- D. It can use an interface IP address as the virtual IP address.
- E. It sends advertisements to multicast address 224.0.0.18.
- F. It is a Cisco proprietary protocol.

**Answer:** D E (in fact A is correct too)

### Question 10

A question with two VRRP routers and there is an IP reachability.

- A. When R1 loses route to 10.x.x.x then R2 will take mastership because it will be decrement of 20 the priority of R1 is 110 -minus 20 = 90 and the R2 is on default priority (100).
- B. When R2 loses route to 10.x.x.x then R1 will take mastership because it will be increment of 20 the priority of R2 is 120.
- C. When both R1 and R2 lose route to 10.x.x.x then either R1 or R2 will take mastership because it will be decrement of 10 the priority of R1 is 110.
- D. When R2 loses route to 10.x.x.x then R1 will take mastership because it will be increment of 20 the priority of R1 is 130 — minus 20 = 110 and the R1 is on default priority (90).

**Answer:** A

### Question 11

R1 is the VRRP master virtual router, which statement is true about R1 and R2?

- A. R2 becomes master if R1 reboots or track in R1 does not fail.
- B. Communication between VRRP members is encrypted using MD5.
- C. R2 does not have a route to 10.10.1.1/32 in routing table.
- D. R1 has a route to 10.10.1.1/32 in routing table.

**Answer:** D

### Question 12

Which two statements about VRRP advertisements are true? (Choose two)

- A. They are sent from the master router and standby routers.
- B. They include VRRP timer information.
- C. They are sent only from the master router.
- D. They include priority information.
- E. They are sent every three seconds by default.

**Answer:** C D

### **Question 13**

Which configuration do you apply to a device to place interface GigabitEthernet0/0 into VRRP group 10?

A. interface GigabitEthernet0/0  
ip address 172.16.13.2 255.255.255.0  
standby 10 ip 172.16.13.254 255.255.255.0  
standby 10 priority 120  
standby 10 preempt

B. interface GigabitEthernet0/0  
description to Executive Offices A 08-38338  
ip address 172.16.13.2 255.255.255.0  
vrrp 10 ip 172.16.13.254 255.255.255.0  
vrrp 10 active

C. interface GigabitEthernet0/0  
description to Executive Offices A 08-38338  
ip address 172.16.13.2 255.255.250.0  
vrrp group 10 ip 172.16.13.254 255.256.255.0  
vrrp group 10 priority 120

D. interface GigabitEthernet0/0  
ip address 172.16.13.2 255.255.255.0  
vrrp 10 ip 172.16.13.254  
vrrp 10 priority 120  
vrrp 10 preempt

E. interface GigabitEthernet0/0  
ip address 172.16.13.2 255.255.255.0  
vrrp 10 ip 172.16.13.254 256.255.255.0  
vrrp 10 priority 120  
vrrp 10 preempt

F. interface GigabitEthernet0/0  
ip address 172.16.13.2 255.255.255.0  
standby 10 ip 172.16.13.254



**Answer: D**

## VRRP Questions 2

<https://www.certprepare.com/vrrp-questions-2-2>

### Question 1

Which two statements about VRRP are true? (Choose two)

- A. It is assigned multicast address 224.0.0.8.
- B. The TTL for VRRP packets must be 255.
- C. It is assigned multicast address 224.0.0.9.
- D. Its IP address number is 115.
- E. Three versions of the VRRP protocol have been defined.
- F. It supports both MD5 and SHA1 authentication.

**Answer: B E**

### Question 2

Which kind of tracking can do in VRRP? (Choose two)

- A. route
- B. interface state
- C. MAC address
- D. IP address

**Answer: A B**

### Question 3

Which two options are correct about HSRP and VRRP? (Choose two)

- A. VRRP topology contains a master router, a standby router and multiple listeners.
- B. The maximum number of virtual MAC addresses that GLBP allows per group is 4.
- C. VRRP is a Cisco proprietary redundancy protocol.
- D. Multivendor devices prefer to use HSRP protocol for redundancy.
- E. Maximum group for HSRP is 255.

**Answer: B E**

### Question 4

Which two statements about VRRP advertisements are true? (Choose two)

- A. They are sent from the master router and standby routers.
- B. They include VRRP timer information.
- C. They are sent only from the master router.
- D. They include priority information.
- E. They are sent every 3 seconds by default.

**Answer: C D**

### Question 5

A question with a VRRP output form of two switches. Which two answers are true? (Choose two)

- A. The hold timer was 10 seconds.
- B. If the standby didn't get hello before 10 seconds, it will become active.
- C. The hold timer was 15 seconds.
- D. ?
- E. ?

**Answer: A B**

### Question 6

A question about VRRP with an exhibit. Which switch becomes the master?

A. interface .....  
ip address x.x.x.2  
vrrp 1 priority 100

B. interface .....  
ip address x.x.x.3  
vrrp 1 priority 110

C. interface .....  
ip address x.x.x.2  
vrrp 1 priority 120

D. interface .....  
ip address x.x.x.1  
vrrp 1 priority 95

**Answer: C**

# GLBP Questions

<https://www.certprepare.com/glbp-questions-3>

## Question 1

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

**Answer: D**

## Question 2

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

**Answer: C**

## Question 3

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

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

**Answer: B**

#### Question 4

Which of the two uses multicast address and port number for GLBP? (Choose two)

- A. GLBP uses multicast address 224.0.0.110
- B. GLBP uses multicast address 224.0.1.102
- C. GLBP uses multicast address 224.0.0.102
- D. GLBP uses UDP port 3222
- E. GLBP uses UDP port 3128
- F. GLBP uses UDP port 3225

**Answer:** C D

#### Question 5

A question about the number of Active Virtual Gateways (AVG) that can be used.

- A. only one can be elected on a switch
- B. two can be elected on a switch
- C. three can be elected on a switch
- D. four can be elected on a switch

**Answer:** A

#### Question 6

Which two statements about default FHRP behavior are true? (Choose two)

- A. A backup GLBP active virtual gateway can become active only if the current active virtual gateway fails
- B. Preemption is enabled by default
- C. Unless specifically configured, the priority of an HSRP router is 200
- D. A standby HSRP router becomes active if it has a higher priority than the priority of the current active router
- E. A VRRP backup virtual router becomes the master router if its priority is higher than the priority of the current master router

**Answer:** A E

#### Question 7

Which statement about HSRP, GLBP and VRRP is true?

- A. VRRP group members communicate using multicast address 224.0.0.102
- B. MAC address 0000 0c07.ac0c indicates that default gateway redundancy is provided through GLBP
- C. HSRP group members communicate using multicast address 224.0.0.18
- D. GLBP uses UDP port 3222 (source and destination) for hello messages

**Answer: D**

### **Question 8**

Which two statements about GLBP are true? (Choose two)

- A. The AVF responds to ARP request for the virtual IP address
- B. LAN client traffic is handled by the active AVF only
- C. The AVG assigns virtual MAC addresses to GLBP group members
- D. The AVF assigns virtual MAC addresses to GLBP group members
- E. The AVG responds to ARP requests for the Virtual IP address

**Answer: C E**

### **Question 9**

Which three authentication methods does GLBP use? (Choose three)

- A. Single Sign On authentication
- B. MD5 authentication
- C. No authentication
- D. Plain text authentication
- E. DCSP authentication
- F. 6-to-4 authentication

**Answer: B C D**

### **Question 10**

Which statement about GLBP is true?

- A. Unused bandwidth is never utilized.
- B. They communicate under TCP port 3222 for both source and destination.
- C. They become active if any of the existing forwarding switches fail.
- D. They become restricted if any of the existing forwarding switches fail.

**Answer: C**

### **Question 11**

Which statement is true when one of its virtual gateway redundancy with an AVF has failed?

- A. If an AVF has failed, one of the primary virtual forwarders in the listen state assumes responsibility for the virtual MAC address.
- B. If an AVF has failed, one of the secondary virtual forwarders in the listen state assumes responsibility for the virtual MAC address.
- C. If an AVF has failed, one of the secondary virtual forwarders in the listen state will also fail.
- D. If an AVF has failed, one of the primary virtual forwarders in the listen state will also fail.

**Answer: B**

### **Question 12**

Which component does the GLBP client cache stores for each host of a particular GLBP group?

- A. IP address
- B. MAC address
- C. VLAN
- D. Token ring
- E. DCSP

**Answer: B**

### **Question 13**

Which two statements about GLBP is true? (Choose two)

- A. Can have 128 AVFs on an interface
- B. Maximum 4 AVFs allowed in a group
- C. Can work with dual active AVGs
- D. Can have 6 AVFs in a group
- E. GLBP supports up to 1024 virtual routers per group.

**Answer: B E**

## **GLBP Questions 2**

### Question 1

Which two statements correctly describe the benefits of GLBP? (Choose two)

- A. It can load-share LAN traffic across up to four AVFs in a GLBP group.
- B. It uses dual active AVGs for redundancy.
- C. LAN traffic can be distributed to up to six routers in a GLBP group.
- D. It supports up to 128 virtual routers per physical interface.
- E. It can automatically adjust group weighting when an interface goes down.

**Answer:** A E

### Question 2

Which two statements about GLBP are true? (Choose two)

- A. Member devices send hello messages to multicast address 224.0.0.39.
- B. Member devices must elect exactly one AVG.
- C. Member device can elect one more AVGs.
- D. The AVG assigns virtual MAC addresses to all group members.
- E. It supports up to 32 groups on a single interface.

**Answer:** B D

### Question 3

A question related to FHRP defaults.

- A. Preemption is enabled
- B. Only GLBP use load-balancing for multiple router
- C. Only GLBP use MAC address router BIA (Burned In Address)
- D. Only if the AVG fail, standby become the new active router
- E. If standby router has higher priority it becomes the new active router
- F. If standby AVG has higher priority it becomes the new active router
- G. Something on or about VRRP

**Answer:** F

### Question 4

How many AVFs can be elected by GLBP member?

- A. 1
- B. 2
- C. 4
- D. 6

Answer: C

## Drag and Drop

<https://www.certprepare.com/drag-and-drop>

### Question 1

Drag the items on the right to the proper locations on the left.

Advertiese the Layer 2 and Layer 3 configuration of the port	LLDP-MED capabilities
Indicates whether the device supports specific features	Network Policy
Shares caller ELIN	Inventory Management
Shares the endpoint hardware profile	location

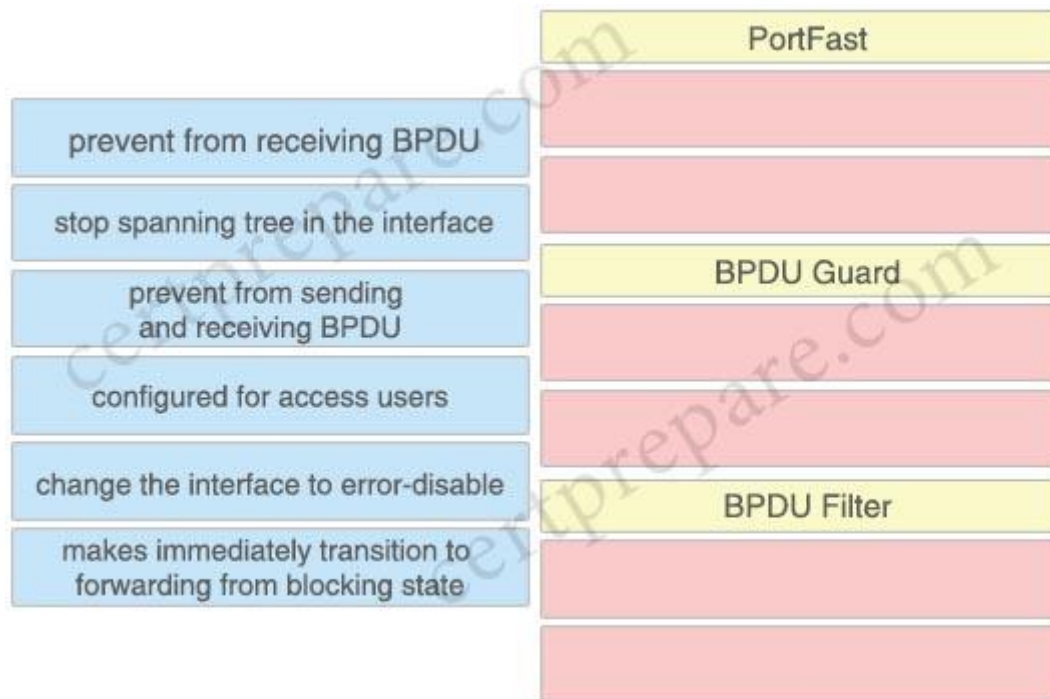
Answer:

- + **LLDP-MED capabilities:** Indicates whether the device supports specific features
- + **Network Policy:** Advertiese the Layer 2 and Layer 3 configuration of the port
- + **Inventory Management:** Shares the endpoint hardware profile
- + **Location:** Shares caller ELIN

### Question 2

Drag the items on the left to the proper locations on the right.





**Answer:**

**PortFast**

- + configured for access users
- + makes immediately transition to forwarding from blocking state

**BPDU Guard**

- + change the interface to error-disable
- + prevent from receiving BPDU

**BPDU Filter**

- + prevent from sending and receiving BPDU
- + stop spanning tree in the interface

**Question 3**

Drag the items on the left to the proper locations on the right.

	PVST
has Discarding port state	
default STP	
group VLANs into instance	RapidPVST
802.1s standard	
802.1w standard	
802.1d standard	MST

**Answer:**

**PVST**

- + 802.1d standard
- + default STP

**RapidPVST**

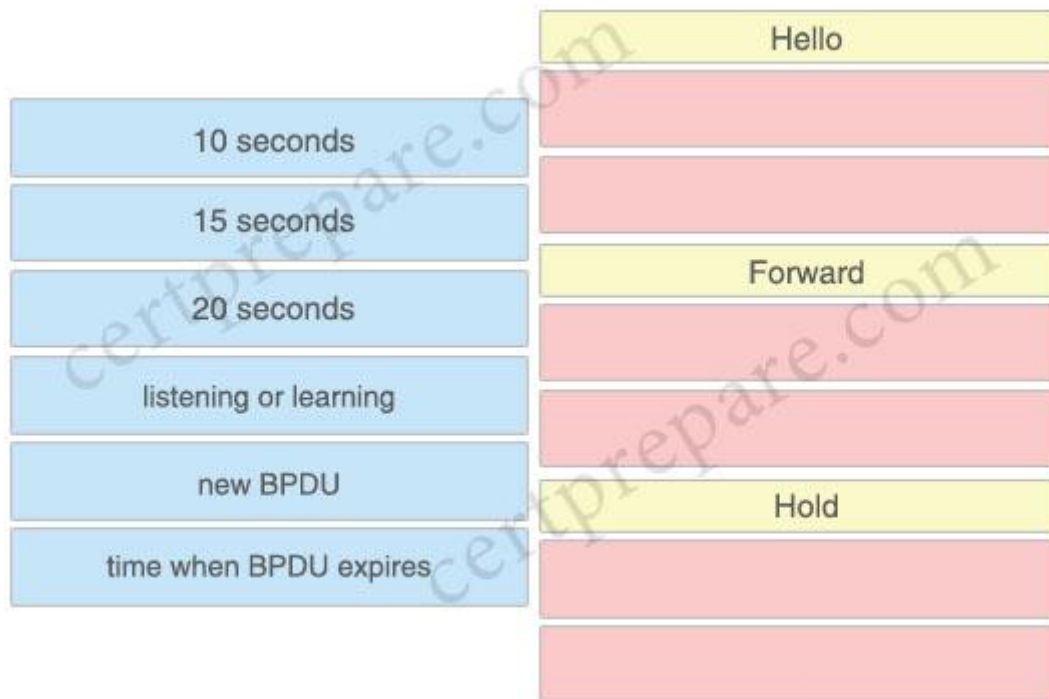
- + 802.1w standard
- + has Discarding port state

**MST**

- + 802.1s standard
- + group vlan int instance

**Question 4**

Drag the correct options on the left about STP timers to the appropriate places on the right.



**Answer:**

**Hello:**

- + 10 seconds
- + new BPDUs

**Forward:**

- + 15 seconds
- + listening or learning

**Hold (Max Age):**

- + 20 seconds
- + time when BPDU expires

### Question 5

As our candidates' reports, there is one Drag and Drop about Port Priority/Switch Priority/Path Cost

	Port Cost
multiple of 4096	
8 default is being the interface value	
lower the better	Switch Port Priority
multiple of 16	
range is from 1 - 200,000	
default value is 128	Switch Priority

**Answer:**

**Port Cost:**

- + 8 default is being the interface value
- + range is from 1 – 200,000

**Switch Port Priority:**

- + Multiple of 16
- + default value is 128

**Switch Priority:**

- + Lower the better
- + Multiple of 4069

**Question 6**

Drag drop about STP Delay timer.

directs all traffic	
Measure of the time between the receipt and transmission of a frame	Medium Access Delay
Measure of the time required for a frame to begin leaving the bridge after the CPU has decided to send it	Bridge Transit Delay
Measure of the time required for a port to be blocked after a blocking trigger	Transmit Halt Delay
	Root Bridge

**Answer:**

- + **Medium Access Delay:** Measure of the time required for a frame to begin leaving the bridge after the CPU has decided to send it
- + **Bridge Transit Delay:** Measure of the time between the receipt and transmission of a frame
- + **Transmit Halt Delay:** Measure of the time required for a port to be blocked after a blocking trigger
- + **Root Bridge:** directs all traffic

### Question 7

Drag and drop the characteristic from the left to the matching Layer 2 protocol on the right

send topology change notification	CDP
default time between protocol frames is 60 seconds	
use multicast address 01-80-C2-00-00-0E	
default time between protocol frames is 30 seconds	
use multicast address 0100.0ccc.cccc	LLDP
support IEEE 802.2 and 802.3 encapsulation	

**Answer:**

**CDP:**

- + default time between protocol frames is 60 seconds
- + use multicast address 0100.0ccc.cccc
- + support IEEE 802.2 and 802.3 encapsulation

**LLDP:**

- + send topology change notification
- + use multicast address 01-80-C2-00-00-0E
- + default time between protocol frames is 30 seconds

**Question 8**

Drag drop about Guard Root and Guard Loop

	Guard Root
port self recovery	
protect designated port from receiving superior BPDU	
a better BPDU disables the port as err-disabled	Guard Loop
detecting unidirectional switching links	

**Answer:****Guard Root:**

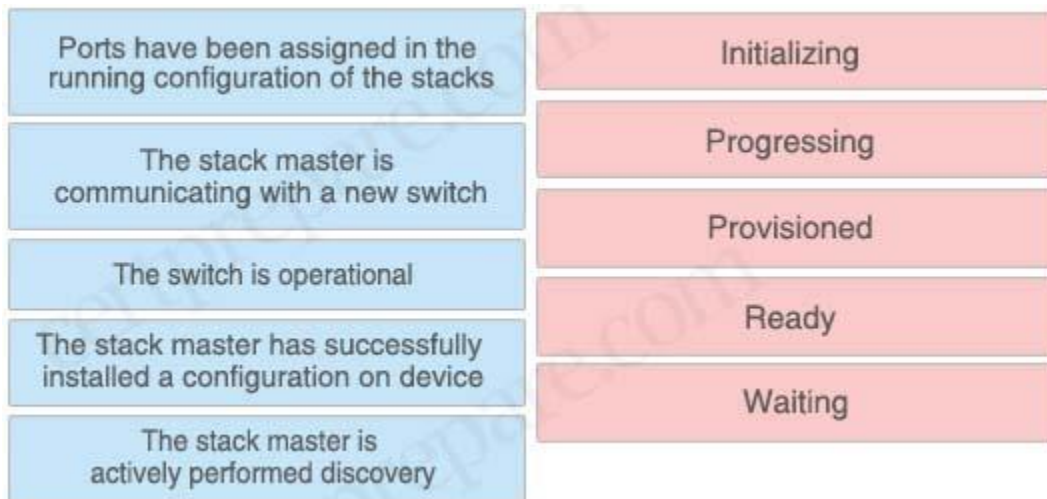
- + protect designated port from receiving superior BPDU
- + a better BPDU disables the port as err-disabled

**Guard Loop:**

- + port self recovery
- + detecting unidirectional switching links

**Question 9**

Drag drop about Switch Stack process

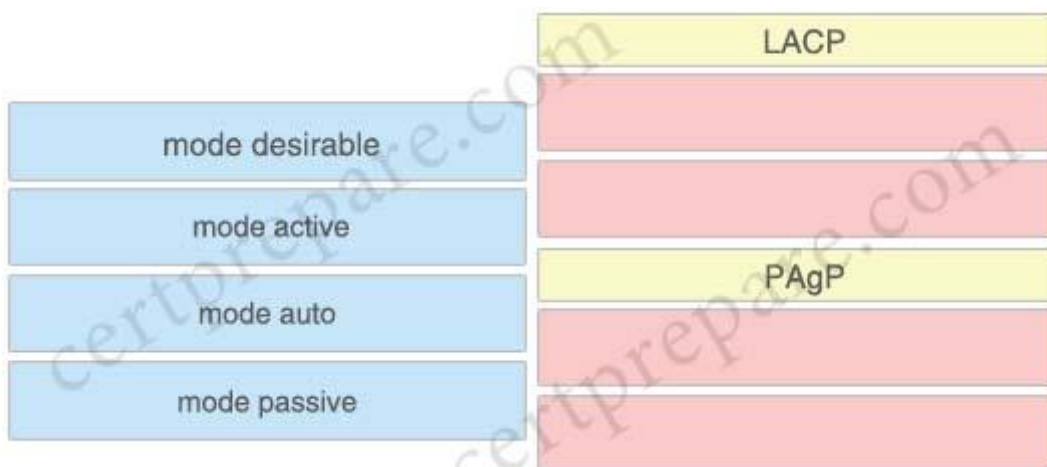


**Answer:**

- + **Initializing:** The stack master has successfully installed a configuration on device
- + **Progressing:** The stack master is communicating with a new switch
- + **Provisioned:** Ports have been assigned in the running configuration of the stacks
- + **Ready:** The switch is operational
- + **Waiting:** The stack master is actively performed discovery

### Question 10

Drag drop about LACP & PAgP



**Answer:**

**LACP:**

- + mode active
- + mode passive

**PAgP:**

- + mode desirable
- + mode auto

### Question 11

Drag and drop about VSS and Stack

uses proprietary cable for connection	VSS
can be connected in up to 9 devices	
can be used even in geographically distributed equipment	
is supported only on line 3750 and (2960/3650/3850/3750+)	
is supported only on line 4500 and 6500	Stack
uses 10Gbps interfaces	

**Answer:**

#### VSS:

- + can be used even in geographically distributed equipment
- + is supported only on line 4500 and 6500
- + uses 10Gbps interfaces

#### Stack:

- + can be connected in up to 9 devices
- + is supported only on line 3750 and (2960/3650/3850/3750+)
- + uses proprietary cable for connection

### Question 12

Drag drop about SPAN Source & Destination ports.



Its original configuration is overwritten by the SPAN configuration	Source Port
It can be monitored as a bundled logical port or as individual physical ports	
It can be trunk or an access port	
It acts as the monitoring port	
It is not supported as part of a VLAN	Destination Port
Multiple VLANs can be included in a single session	

**Answer:**

**Source port:**

1. It can be trunk or an access port
2. It can be monitored as a bundled logical port or as individual physical ports
3. Multiple VLANs can be included in a single session

**Destination switch:**

1. It acts as the monitoring port
2. It is not supported as part of a VLAN
3. Its original configuration is overwritten by the SPAN configuration

## Drag and Drop 2

<https://www.certprepare.com/drag-and-drop-2>

### Question 1

Drag drop about RSPAN true or false.

RSPAN was Layer 3 (L3) traffic to carry the traffic	True
Only supports STP	
Range 1 – 1005 is allowed	
The source can only be an access port	
Source can only be trunk	
Range 1 – 2045 is allowed	False
Supports only VTP	

**Answer:**

**True:**

- + Only supports STP
- + Range 1 – 1005 is allowed
- + Source can only be trunk
- + Supports only VTP

**False:**

- + RSPAN was Layer 3 (L3) traffic to carry the traffic
- + The source can only be an access port
- + Range 1 – 2045 is allowed

**Question 2**

Drag drop about HSRPv1 and HSRPv2

Group numbers are restricted to the range from 0 to 255	HSRPv1
Advertises and learns millisecond timer values	
The multicast address 224.0.0.2	
Millisecond timer values are not advertised or learned	
Is the default version of HSRP	
Provides improved management and troubleshooting	HSRPv2
Expands the group number range from 0 to 4095	
Uses the new IP multicast address 224.0.0.102	

**Answer:**

#### **HSRPv1:**

- + Group numbers are restricted to the range from 0 to 255
- + The multicast address 224.0.0.2
- + Millisecond timer values are not advertised or learned
- + Is the default version of HSRP

#### **HSRPv2:**

- + Advertises and learns millisecond timer values
- + Provides improved management and troubleshooting
- + Expands the group number range from 0 to 4095
- + Uses the new IP multicast address 224.0.0.102

**Note:** Maybe there is another option about Cisco Group Management Protocol (CGMP) so remember HSRPv1 cannot be used with CGMP while HSRPv2 can. This is because CGMP uses the multicast address 224.0.0.2 which conflicts with HSRPv1 multicast address.

### **Question 3**

Drag drop about RSPAN with source & destination switch.

Create VLAN for RSPAN session (destination)	Source switch
monitor session 1 destination (interface or vlan)	
Create VLAN for RSPAN session (source)	
monitor session 1 source (interface or vlan) direction rx or tx or both	
monitor session 1 source remote vlan	Destination switch
monitor session 1 destination remote vlan	

**Answer:**

**Source switch:**

- + Create VLAN for RSPAN session (source)
- + monitor session 1 source (interface or vlan) direction rx or tx or both
- + monitor session 1 destination remote vlan

**Destination switch:**

- + Create VLAN for RSPAN session (destination)
- + monitor session 1 destination (interface or vlan)
- + monitor session 1 source remote vlan

**Question 4**

Drag drop about VRRPv2 & VRRPv3

Multicast 224.0.0.18	VRRPv2
Multicast 224.0.0.18 for IPv4 (FF02::12 for IPv6)	
Timers in seconds	
Timers in milliseconds	
Support IPv4 and IPv6	
Same priority but high IP cause preemption	
Support IPv4 only	
Only high priority cause preemption	VRRPv3
VRRP needs to be enabled globally	
VRRP enables per interface	
RID MAC: 0000.5E00.01xx	

**Answer:**

**VRRPv2:**

- + Multicast 224.0.0.18
- + Timers in seconds
- + Same priority but high IP cause preemption
- + Support IPv4 only
- + VRRP enables per interface
- + RID MAC: 0000.5E00.01xx

**VRRPv3:**

- + Multicast 224.0.0.18 for IPv4 (FF02::12 for IPv6)
- + Support IPv4 and IPv6
- + Timers in milliseconds
- + Only high priority cause preemption
- + VRRP needs to be enabled globally

**Question 5**

Drag drop question about VRRPv2 and VRRPv3 vs VRRPv3

Supports IPv6	VRRPv2 and VRRPv3
Send hello messages to multicast address 224.0.0.18	
Timers in millisecond	
Something about IGMP	
Supports VTP	
Assign IP address in the Layer 3 Ethernet	VRRPv3

**Answer:**

**VRRPv2 and VRRPv3:**

- + Send hello messages to multicast address 224.0.0.18
- + Something about IGMP
- + Supports VTP
- + Assign IP address in the Layer 3 Ethernet

**VRRPv3:**

- + Supports IPv6
- + Timers in millisecond

**Question 6**

Drag drop about GLBP. Drag the correct items from the right to the corresponding terms on the left.

Assign MAC for client in subnet	AVG
forward traffic sent to MAC	AVF
this protocol to learn MAC when know IP	ARP
use to elect virtual active gateway	Gateway priority

**Answer:**

AVG – Assign MAC for client in subnet  
 AVF – forward traffic sent to MAC  
 ARP – this protocol to learn MAC when know IP  
 Gateway priority – use to elect active virtual gateway

### Question 7

Drag drop about RADIUS & TACACS+

Multi-vendors	RADIUS
Proprietary	
Separate AAA	
Encrypts the entire body	
Encrypts only the password	
Combines authentication and authorization	TACACS+
UDP	
TCP	

**Answer:**

#### **RADIUS:**

- + Multi-vendors
- + Encrypts only the password
- + Combines authentication and authorization
- + UDP

#### **TACACS+:**

- + Proprietary
- + Separate AAA
- + Encrypts the entire body
- + TCP

## Miscellaneous Questions

<https://www.certprepare.com/miscellaneous-questions>

### Question 1

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

**Answer: D**

### Question 2

A question on local database for consoling to network devices. (Choose two)

- A. Console is a backup authentication method
- B. Console is the only backup authentication method
- C. You can set user privileged levels
- D. ?

**Answer: A C**

### Question 3

A question on local user database for login to network devices. (Choose two)

- A. Local user database can be main and also backup authentication method
- B. Local user database is the only backup authentication method
- C. You can set user privileged levels
- D. Local user database is used after 3 unsuccessful logins via RADIUS server

**Answer: A C**

### Question 4

What will extend a trust boundary? (there is a switch interface configuration with separate voice VLAN and data VLAN to, also showing endpoint (host), IP Phone, Access Switch, Distribution Switch, Core Switch and Data Center Aggregation switch)

- A. Multiple Layers PC
- B. IP Phone
- C. Access Switch
- D. Distribution Switch
- E. Core Switch



**Answer: B**

**Question 5**

Which protocol offers data integrity, encryption, authentication, and antireplay functions for IPsec VPN?

- A. AH protocol
- B. ESP protocol
- C. IKEv2 protocol
- D. IKEv1 protocol

**Answer: B**

**Question 6**

Which two types of firewalls work at Layer 4 and above? (Choose two)

- A. application-level firewall
- B. static packet filter
- C. stateful inspection
- D. Network Address Translation
- E. circuit-level gateway

**Answer: A C**

**Question 7**

Which Firepower Management Center feature detects and blocks exploits and hack attempts?

- A. intrusion prevention
- B. advanced malware protection (AMP)
- C. contentxsat blocker
- D. file control

**Answer: A**

**Question 8**

A question about security policy on a per-user basis.

- A. network
- B. exec
- C. auto-proxy
- D. command

**Answer: C**

### **Question 9**

Which command is used to override the priority of frames arriving on the Cisco IP phone port?

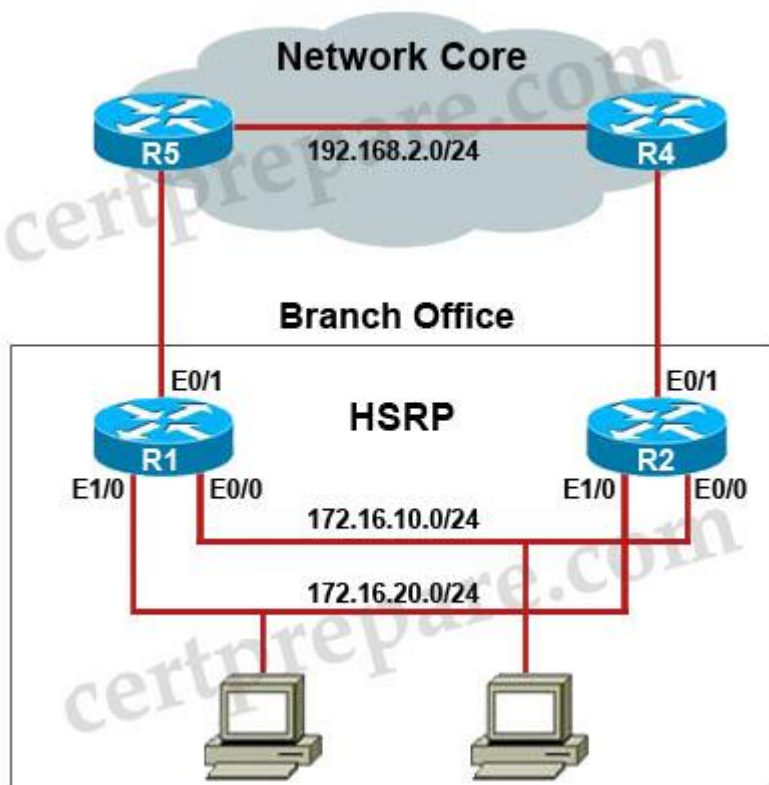
- A. mls qos dscp
- B. mls qos cos
- C. switchport priority extend trust
- D. ?
- E. ?

**Answer: C**

## **HSRP Sim**

<http://www.certprepare.com/hsrp-sim>

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.



### Question 1

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%

**Answer: D**

### Question 2

Refer to the exhibit. If router R1 interface Ethernet0/0 goes down and recovers, which of the statements 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

**Answer: C**

### **Question 3**

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

**Answer: B**

### **Question 4**

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

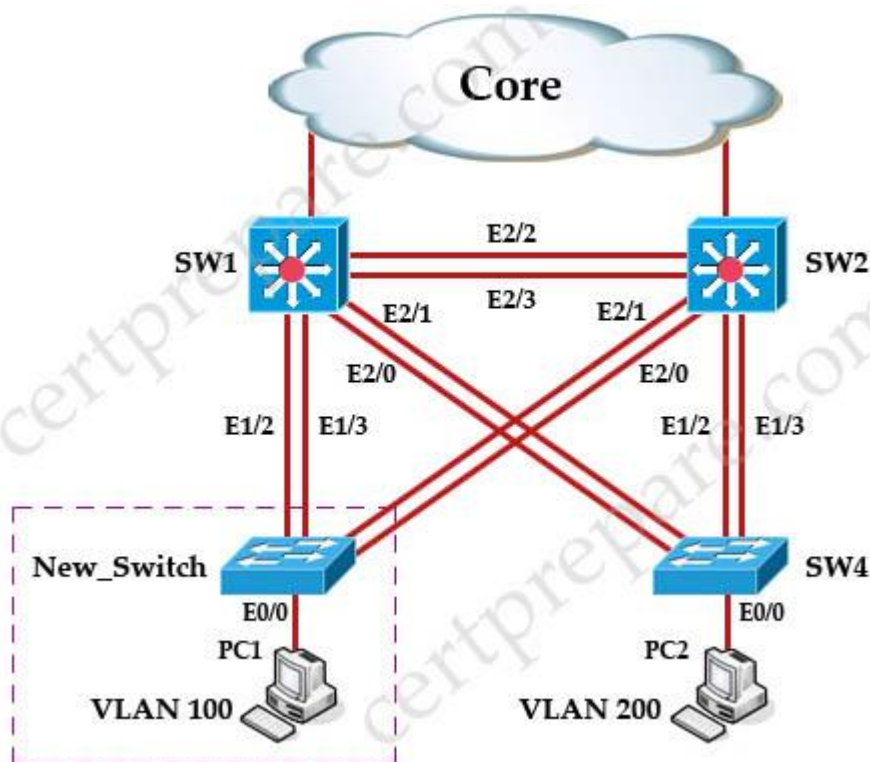
- A. 0000.0c07.ac02
- B. 4000.0000.0010
- C. 0000.0c07.ac01
- D. 4000.0000.ac01
- E. 4000.0000.ac02
- F. 0000.0c07.0010

**Answer: B**

## **VTPv3 Sim**

<http://www.certprepare.com/vtpv3-sim>

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.



### Question 1

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?

A. vtp domain CCNP\_TEST  
vtp password cisco123  
vtp version 3  
vtp mode server  
interface e0/0  
switchport mode access  
switch port access vlan 100

B. vtp domain CCNP\_TEST  
vtp password cisco123  
vtp version 3  
vtp mode client  
interface e0/0  
switchport mode access  
switchport access vlan 200

C. vtp domain CCNP\_TEST  
vtp password cisco123  
vtp version 2  
vtp mode client  
interface e0/0

```
switchport mode access
switchport access vlan 100
```

```
D. vtp domain CCNP
vtp password cisco
vtp version 3
vtp mode client
interface e0/0
switchport mode access
switchport access vlan 100
```

```
E. vtp domain CCNP
vtp password cisco
vtp version 2
vtp mode transparent
interface e0/0
switchport mode access
switchport access vlan 200
```

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

**Answer: D**

### **Question 2**

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

**Answer: B**

### **Question 3**

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.

**Answer: B**

#### Question 4

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.

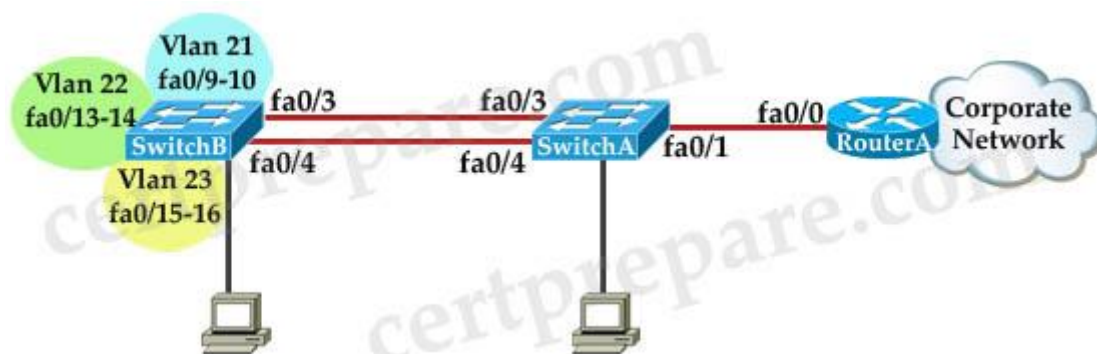
**Answer: C**

## LACP with STP Sim

<http://www.certprepare.com/lacp-with-stp-sim>

#### Question

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 configuring 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 at 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 be 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.

## **MLS and EIGRP Sim**

<http://www.certprepare.com/mls-and-eigrp-sim>

### **Question**

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, change VLAN port assignments or create trunk links. Company policies forbid the use of static or default routing. All routes must be learned via EIGRP 650 routing protocol.



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

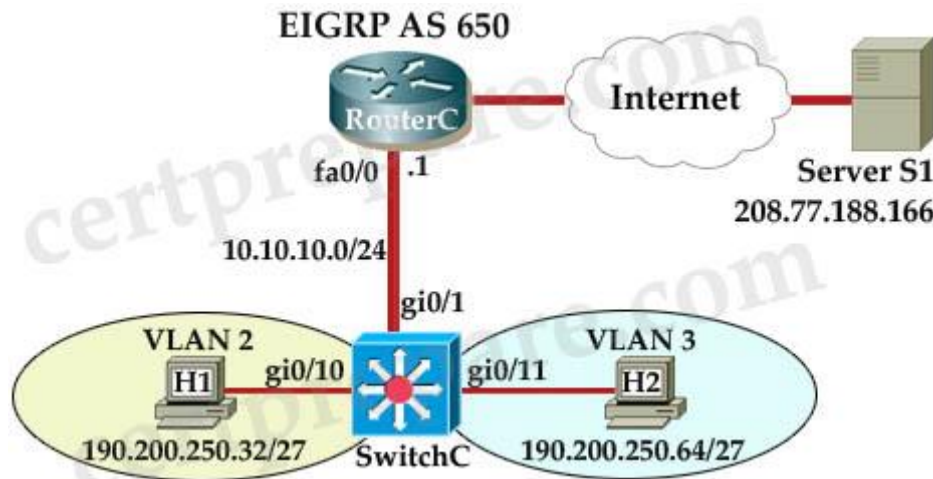
Routed interfaces should use the lowest host on a subnet when possible. The following subnets are available to implement this solution:

- 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.



## VTP Lab 2

<http://www.certprepare.com/vtp-lab-2>

### Question

Acme is a small export company that has an existing enterprise network comprised of 5 switches;

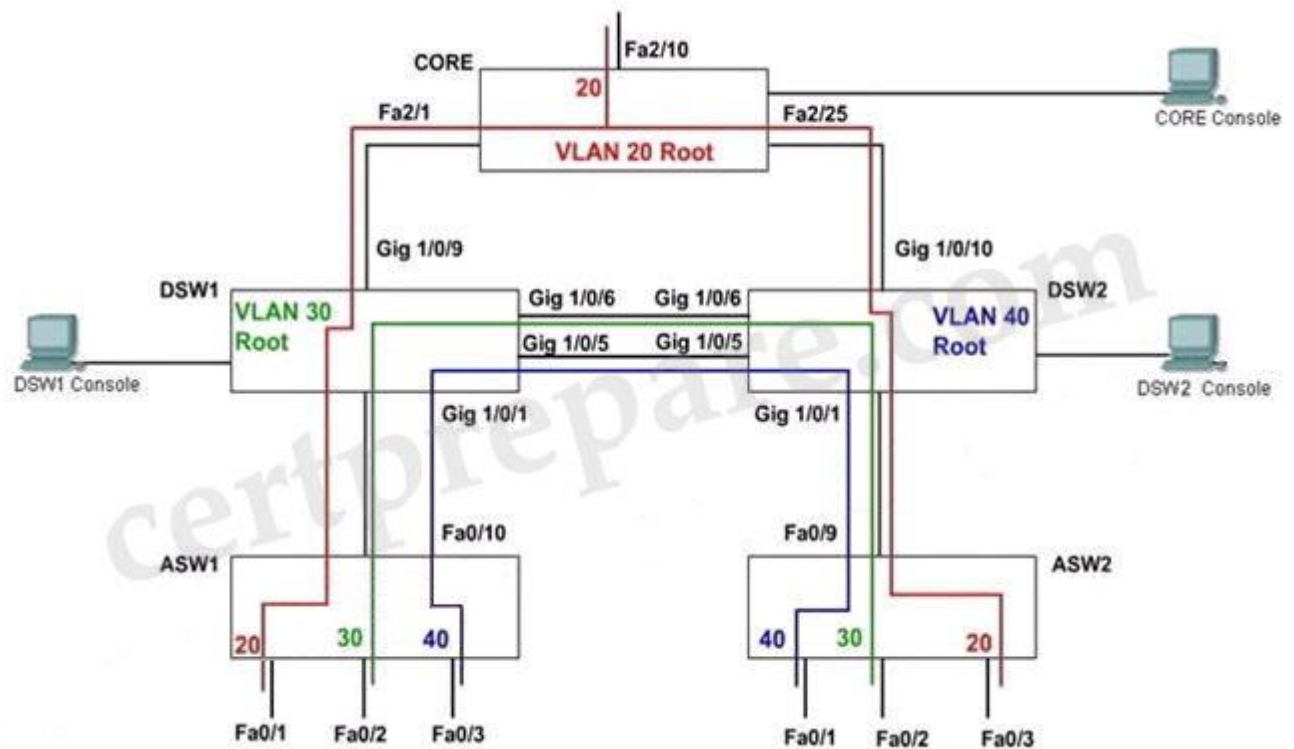
CORE,DSW1,DSW2,ASW1 and ASW2. The topology diagram indicates their desired pre-VLAN spanning tree mapping.

Previous configuration attempts have resulted in the following issues:

- CORE should be the root bridge for VLAN 20; however, DSW1 is currently the root bridge for VLAN 20.
- Traffic for VLAN 30 should be forwarding over the gig 1/0/6 trunk port between DSW1 and DSW2. However VLAN 30 is currently using gig 1/0/5.
- Traffic for VLAN 40 should be forwarding over the gig 1/0/5 trunk port between DSW1 and DSW2. However VLAN 40 is currently using gig 1/0/6.

You have been tasked with isolating the cause of these issues and implementing the appropriate solutions. Your task is complicated by the fact that you only have full access to DSW1, with isolating the cause of these issues and implementing the appropriate solutions. Your task is complicated by the fact that you only have full access to DSW1, with the enable secret password cisco. Only limited show command access is provided on CORE, and DSW2

using the enable 2 level with a password of acme. No configuration changes will be possible on these routers. No access is provided to ASW1 or ASW2.

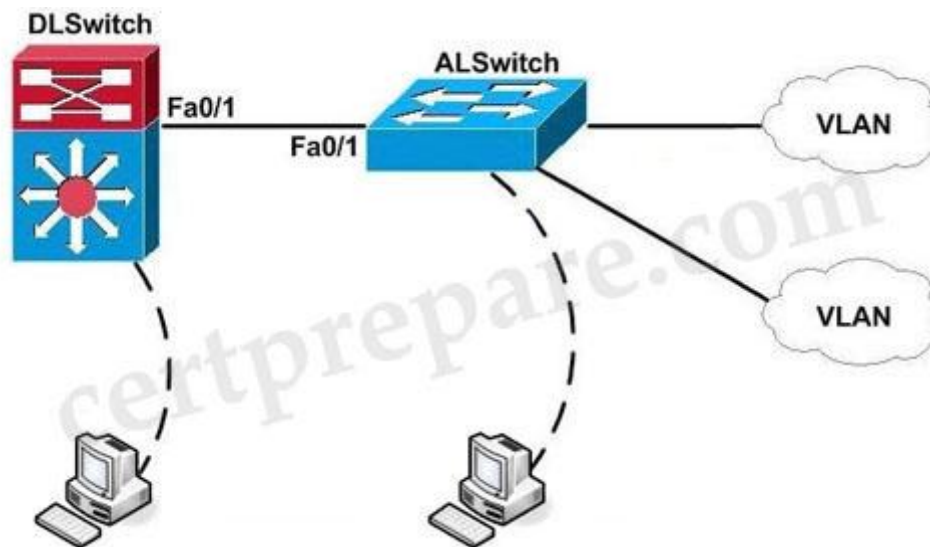


## VTP Lab

<http://www.certprepare.com/vtp-lab>

### Question

The headquarter offices for a book retailer are enhancing their wiring closets with Layer3 switches. The new distribution-layer switch has been installed and a new access-layer switch cabled to it. Your task is to configure VTP to share VLAN information from the distribution-layer switch to the access-layer devices. Then, it is necessary to configure interVLAN routing on the distribution layer switch to route traffic between the different VLANs that are configured on the access-layer switches; however, it is not necessary for you to make the specific VLAN port assignments on the access-layer switches. Also, because VLAN database mode is being deprecated by Cisco, all VLAN and VTP configurations are to be completed in the global configuration mode. Please reference the following table for the VTP and VLAN information to be configured:



### Requirements:

VTP Domain name	cisco	
VLAN Ids	20	21
IP Addresses	172.16.71.1/24	172.16.132.1/24

These are your specific tasks:

1. Configure the VTP information with the distribution layer switch as the VTP server
2. Configure the VTP information with the access layer switch as a VTP client
3. Configure VLANs on the distribution layer switch
4. Configure inter-VLAN routing on the distribution layer switch
5. Specific VLAN port assignments will be made as users are added to the access layer switches in the future.
6. All VLANs and VTP configurations are to be completed in the global configuration. To configure the switch click on the host icon that is connected to the switch by way of a serial console cable.

## Spanning Tree Lab Sim

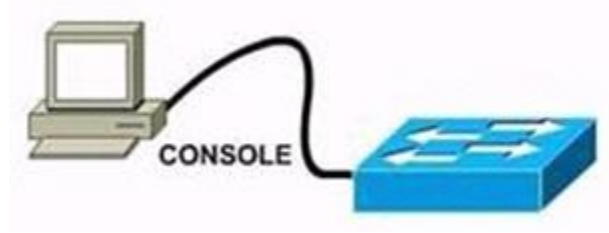
<http://www.certprepare.com/spanning-tree-lab-sim>

### Question

The headquarter office for a cement manufacturer is installing a temporary Catalyst 3550 in an IDF to connect 24 additional users. To prevent network corruption, it is important to have the correct configuration prior to connecting to the production network. It will be necessary to ensure that the switch does not participate in VTP but forwards VTP advertisements that are received on trunk ports.

Because of errors that have been experienced on office computers, all nontrunking interfaces

should transition immediately to the forwarding state of Spanning tree. Also, configure the user ports (all FastEthernet ports) so that the ports are permanently nontrunking.



### **Requirements:**

You will configure FastEthernet ports 0/12 through 0/24 for users who belong to VLAN 20. Also, all VLAN and VTP configurations are to be completed in global configuration mode as VLAN database mode is being deprecated by Cisco. You are required to accomplish the following tasks:

1. Ensure the switch does not participate in VTP but forwards VTP advertisements received on trunk ports.
2. Ensure all non-trunking interfaces (Fa0/1 to Fa0/24) transition immediately to the forwarding state of Spanning-Tree.
3. Ensure all FastEthernet interfaces are in a permanent non-trunking mode.
4. Place FastEthernet interfaces 0/12 through 0/24 in VLAN 20.

## **AAAdot1x Lab Sim**

<http://www.certprepare.com/aaadot1x-lab-sim>

### **Question**

Acme is a small shipping company that has an existing enterprise network comprised of 2 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. For security reasons, it is necessary to restrict access to VLAN 20 in the following manner:

- Users connecting to ASW1's port must be authenticate before they are given access to the network. Authentication is to be done via a Radius server:
- Radius server host: 172.120.39.46
- Radius key: rad123
- Authentication should be implemented as close to the host device possible.
- Devices on VLAN 20 are restricted to in the address range of 172.120.40.0/24.
- Packets from devices in the address range of 172.120.40.0/24 should be passed 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 server farm 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.

