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Exam Name: Cisco Certified Network Associate (CCNA)



Exam A

QUESTION 1

What are two characteristics of the distribution layer in a three-tier network architecture? (Choose two.)

- A. serves as the network aggregation point
- B. provides a boundary between Layer 2 and Layer 3 communications
- C. designed to meet continuous, redundant uptime requirements
- D. is the backbone for the network topology
- E. physical connection point for a LAN printer

Correct Answer: B, C

Section:

QUESTION 2

What is the purpose of using First Hop Redundancy Protocol in a specific subnet?

- A. Filter traffic based on destination IP addressing
- B. Sends the default route to the hosts on a network
- C. ensures a loop-free physical topology
- D. forwards multicast hello messages between routers

Correct Answer: C

Section:

QUESTION 3

Which access layer threat-mitigation technique provides security based on identity?

- A. Dynamic ARP Inspection
- B. using a non-default native VLAN
- C. 802.1x
- D. DHCP snooping

Correct Answer: C

Section:

QUESTION 4

What must be considered when using 802.11a?

- A. It is compatible with 802.11b- and 802.11g-compliant wireless devices
- B. It is used in place of 802.11b/g when many nonoverlapping channels are required
- C. It is susceptible to interference from 2.4 GHz devices such as microwave ovens.
- D. It is chosen over 802.11b/g when a lower-cost solution is necessary

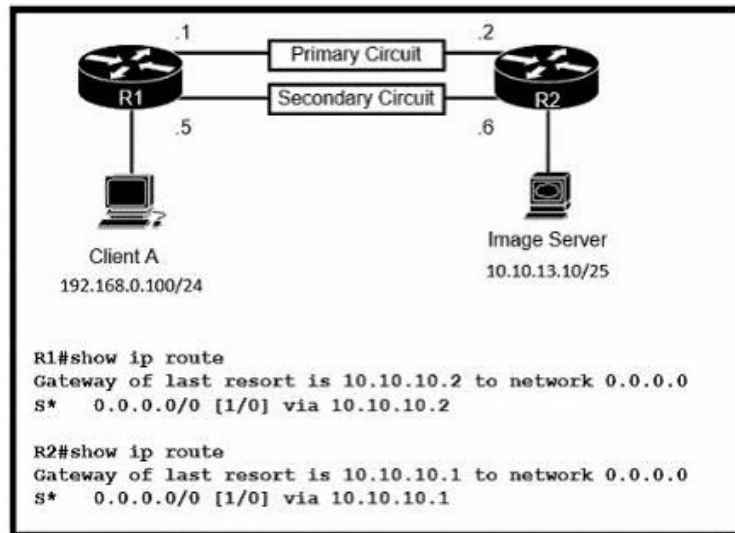


Correct Answer: B

Section:

QUESTION 5

Refer to the exhibit.



Refer to the exhibit Routers R1 and R2 have been configured with their respective LAN interfaces The two circuits are operational and reachable across WAN Which command set establishes failover redundancy if the primary circuit goes down?

- R1(config)#ip route 10.10.13.10 255.255.255.255 10.10.10.2
R2(config)#ip route 192.168.0.100 255.255.255.255 10.10.10.1
- R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.6 2
R2(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.5 2
- R1(config)#ip route 10.10.13.10 255.255.255.255 10.10.10.6
R2(config)#ip route 192.168.0.100 255.255.255.255 10.10.10.5
- R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.6
R2(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.5

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

Correct Answer: B

Section:

QUESTION 6

Refer to the exhibit. A multivendor network exists and the company is implementing VoIP over the network for the first time.

A.

```
SW1(config)#no cdp enable
SW1(config)#interface gigabitethernet1/0/1
SW1(config-if)#cdp run
```

B.



```
SW1(config)#lldp enable
SW1(config)#interface gigabitethernet1/0/1
SW1(config-if)#lldp run
```

C.

```
SW1(config)#lldp run
SW1(config)#interface gigabitethernet1/0/1
SW1(config-if)#lldp enable
```

D.

```
SW1(config)#no cdp run
SW1(config)#interface gigabitethernet1/0/1
SW1(config-if)#lldp transmit
SW1(config-if)#lldp receive
```

Correct Answer: B

Section:

QUESTION 7

Refer to the exhibit.



```
Switch2# show lldp
Global LLDP Information
Status: ACTIVE
LLDP advertisements are sent every 30 seconds
LLDP hold time advertised is 120 seconds
LLDP interface reinitialization delay is 2 seconds
```

A network engineer must update the configuring on switch2 so that it sends LLDP packets.

A.

```
Switch2(config)#lldp timer 1
Switch2(config)#lldp tlv-select 3
```

B.

```
Switch2(config)#lldp timer 1
Switch2(config)#lldp holdtime 3
```

C.

```
Switch2(config)#lldp timer 60
Switch2(config)#lldp holdtime 180
```

D.

```
Switch2(config)#lldp timer 60
Switch2(config)#lldp tlv-select 180
```

Correct Answer: C

Section:

QUESTION 8

Which IPv6 address range is suitable for anycast addresses for distributed services such as DHCP or DNS?

- A. FF00:1/12
- B. 2001:db8:0234:ca3e::1/128
- C. 2002:db84:3f37:ca98:be05:8/64
- D. FE80::1/10

Correct Answer: A

Section:

QUESTION 9

What differentiates device management enabled by Cisco DNA Center from traditional campus device management?

- A. CLI-oriented device
- B. device-by-device hands-on
- C. centralized
- D. per-device

Correct Answer: C

Section:

QUESTION 10

A WLC sends alarms about a rogue AP, and the network administrator verifies that the alarms are caused by a legitimate autonomous AP.

- A. Place the AP into manual containment.
- B. Remove the AP from WLC management.
- C. Manually remove the AP from Pending state.
- D. Set the AP Class Type to Friendly.

Correct Answer: B

Section:



QUESTION 11

What is the primary purpose of private address space?

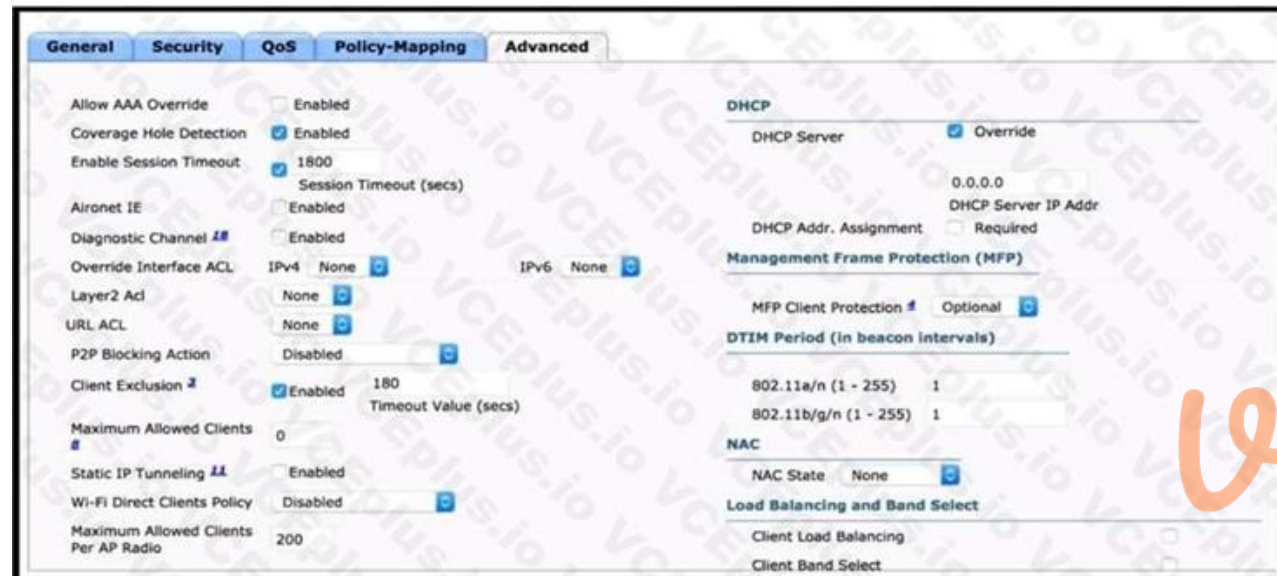
- A. conserve globally unique address space
- B. simplify the addressing in the network
- C. limit the number of nodes reachable via the Internet
- D. reduce network complexity

Correct Answer: A

Section:

QUESTION 12

Refer to the exhibit.



The P2P blocking action option is disabled on the WLC.

- A. Enable the Static IP Tunneling option.
- B. Disable the Coverage Hole Detection option.
- C. Check the DHCP Addr. Assignment check box.
- D. Set the P2P Blocking Action option to Forward-UpStream.

Correct Answer: A

Section:

QUESTION 13

What is a reason to configure a trunk port that connects to a WLC distribution port?

- A. Eliminate redundancy with a link failure in the data path.
- B. Allow multiple VLAN to be used in the data path.
- C. Provide redundancy if there is a link failure for out-of-band management.
- D. Permit multiple VLANs to provide out-of-band management.

Correct Answer: D

Section:

QUESTION 14

What is a purpose of traffic shaping?

- A. It enables dynamic flow identification.
- B. It enables policy-based routing.
- C. It provides best-effort service.
- D. It limits bandwidth usage.

Correct Answer: A

Section:

QUESTION 15

What is a characteristics of a collapsed-core network topology?

- A. It allows the core and distribution layers to run as a single combined layer.
- B. It enables the core and access layers to connect to one logical distribution device over an EtherChannel.
- C. It enables all workstations in a SOHO environment to connect on a single switch with internet access.
- D. It allows wireless devices to connect directly to the core layer, which enables faster data transmission.

Correct Answer: B

Section:

QUESTION 16

When a site-to-site VPN is configured, which IPsec mode provides encapsulation and encryption of the entire original P packet?

- A. IPsec tunnel mode with AH
- B. IPsec transport mode with AH
- C. IPsec tunnel mode with ESP
- D. IPsec transport mode with ESP

Correct Answer: C

Section:

QUESTION 17

What does physical access control regulate?

- A. access to specific networks based on business function
- B. access to servers to prevent malicious activity
- C. access to computer networks and file systems
- D. access to networking equipment and facilities

Correct Answer: D

Section:

QUESTION 18

On workstations running Microsoft Windows, which protocol provides the default gateway for the device?

- A. DHCP
- B. STP
- C. SNMP
- D. DNS

Correct Answer: A

Section:

QUESTION 19

How are VLAN hopping attacks mitigated?

- A. enable dynamic ARP inspection
- B. manually implement trunk ports and disable DTP
- C. activate all ports and place in the default VLAN
- D. configure extended VLANs

Correct Answer: B

Section:

QUESTION 20

What is the role of a firewall in an enterprise network?

- A. Forwards packets based on stateless packet inspection
- B. Processes unauthorized packets and allows passage to less secure segments of the network
- C. determines which packets are allowed to cross from unsecured to secured networks
- D. explicitly denies all packets from entering an administrative domain



Correct Answer: C

Section:

QUESTION 21

What is a function of an endpoint on a network?

- A. forwards traffic between VLANs on a network
- B. connects server and client devices to a network
- C. allows users to record data and transmit to a file server
- D. provides wireless services to users in a building

Correct Answer: C

Section:

Explanation:

An endpoint is a host that acts as the source or destination of data traffic flowing through a network. When you are at your PC, editing your CV and uploading it to a file server, you are sitting at an endpoint

QUESTION 22

Refer to the exhibit.


```
EIGRP 10.10.10.0/24[90/1441] via F0/10
EIGRP 10.10.10.0/24[90/144] via F0/11
EIGRP 10.10.10.0/24[90/1441] via F0/12
OSPF 10.10.10.0/24[110/20] via F0/13
OSPF 10.10.10.0/24[110/30] via F0/14
```

Packets received by the router from BGP enter via a serial interface at 209.165.201.10. Each route is present within the routing table. Which interface is used to forward traffic with a destination IP of 10.10.10.24?

- A. F0/10
- B. F0/11
- C. F0/12
- D. F0/13

Correct Answer: B

Section:

QUESTION 23

Which mode must be used to configure EtherChannel between two switches without using a negotiation protocol?

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

Correct Answer: A

Section:

Explanation:

The Static Persistence (or "on" mode) bundles the links unconditionally and no negotiation protocol is used. In this mode, neither PAgP nor LACP packets are sent or received.

QUESTION 24



Which IPv6 address block sends packets to a group address rather than a single address?

- A. 2000::/3
- B. FC00::/7
- C. FE80::/10
- D. FF00::/8

Correct Answer: D

Section:

Explanation:

FF00::/8 is used for IPv6 multicast and this is the IPv6 type of address the question wants to ask.

FE80::/10 range is used for link-local addresses. Link-local addresses only used for communications within the local subnetwork (automatic address configuration, neighbor discovery, router discovery, and by many routing protocols). It is only valid on the current subnet.

It is usually created dynamically using a link-local prefix of FE80::/10 and a 64-bit interface identifier (based on 48-bit MAC address).

QUESTION 25

Which two capacities of Cisco DNA Center make it more extensible as compared to traditional campus device management? (Choose two)

- A. adapters that support all families of Cisco IOS software
- B. SDKs that support interaction with third-party network equipment
- C. customized versions for small, medium, and large enterprises
- D. REST APIs that allow for external applications to interact natively with Cisco DNA Center
- E. modular design that is upgradable as needed

Correct Answer: B, D

Section:

Explanation:

Cisco DNA Center offers 360-degree extensibility through four distinct types of platform capabilities:

+ Intent-based APIs leverage the controller and enable business and IT applications to deliver intent to the network and to reap network analytics and insights for IT and business innovation.

+ Process adapters, built on integration APIs, allow integration with other IT and network systems to streamline IT operations and processes.

+ Domain adapters, built on integration APIs, allow integration with other infrastructure domains such as data center, WAN, and security to deliver a consistent intent-based infrastructure across the entire IT environment.

+ SDKs allow management to be extended to third-party vendor's network devices to offer support for diverse environments.

QUESTION 26

What is the primary effect of the spanning-tree portfast command?

- A. it enables BPDU messages
- B. It minimizes spanning-tree convergence time
- C. It immediately puts the port into the forwarding state when the switch is reloaded
- D. It immediately enables the port in the listening state

Correct Answer: B

Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3560/software/release/12-2_55_se/configuration/guide/3560_scg/swstpopt.html

QUESTION 27

Refer to the exhibit.



```

Router#
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone,
D - Remote, C - CVTA, M - Two-port Mac Relay

Device ID  Local Infrfce Holdtme  Capability Platform  Port ID
10.1.1.2  Gig 37/3   176          R I  CPT 600 Gig 36/41
10.1.1.2  Gig 37/1   174          R I  CPT 600 Gig 36/43
10.1.1.2  Gig 36/41  134          R I  CPT 600 Gig 37/3
10.1.1.2  Gig 36/43  134          R I  CPT 600 Gig 37/1
10.1.1.2  Ten 3/2   132          R I  CPT 600 Ten 4/2
10.1.1.2  Ten 4/2   174          R I  CPT 600 Ten 3/2

```

Which command provides this output?

- A. show ip route
- B. show ip interface
- C. show interface
- D. show cdp neighbor

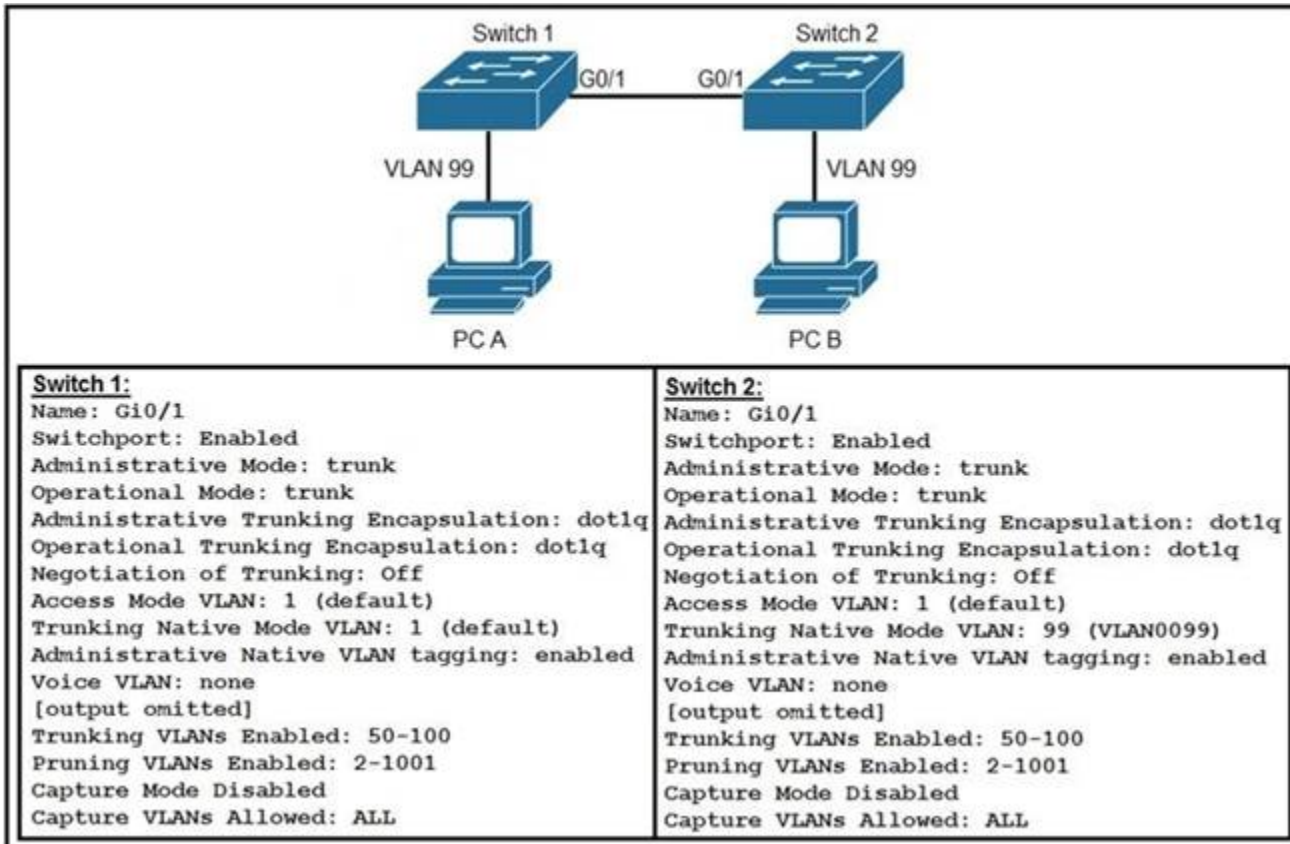
Correct Answer: D

Section:



QUESTION 28

Refer to the Exhibit.



After the switch configuration the ping test fails between PC A and PC B Based on the output for switch 1. which error must be corrected?

- A. There is a native VLAN mismatch
- B. Access mode is configured on the switch ports.
- C. The PCs are in the incorrect VLAN
- D. All VLANs are not enabled on the trunk

Correct Answer: A

Section:

Explanation:

From the output we see the native VLAN of Switch1 on Gi0/1 interface is VLAN 1 while that of Switch2 is VLAN 99 so there would be a native VLAN mismatch.

QUESTION 29

Which 802.11 frame type is association response?

- A. management
- B. protected frame
- C. control
- D. action

Correct Answer: A

Section:

Explanation:

Reference: https://en.wikipedia.org/wiki/802.11_Frame_Types



QUESTION 30

Which API is used in controller-based architectures to interact with edge devices?

- A. overlay
- B. northbound
- C. underlay
- D. southbound

Correct Answer: D

Section:

QUESTION 31

Which statement identifies the functionality of virtual machines?

- A. Virtualized servers run most efficiently when they are physically connected to a switch that is separate from the hypervisor
- B. The hypervisor can virtualize physical components including CPU, memory, and storage
- C. Each hypervisor can support a single virtual machine and a single software switch
- D. The hypervisor communicates on Layer 3 without the need for additional resources

Correct Answer: B

Section:

QUESTION 32

Which type of address is the public IP address of a NAT device?

- A. outside global
- B. outsdwde local
- C. inside global
- D. insride local
- E. outside public
- F. inside public

Correct Answer: C

Section:

Explanation:

NAT use four types of addresses:

- * Inside local address – The IP address assigned to a host on the inside network. The address is usually not an IP address assigned by the Internet Network Information Center (InterNIC) or service provider. This address is likely to be an RFC 1918 private address.
- * Inside global address – A legitimate IP address assigned by the InterNIC or service provider that represents one or more inside local IP addresses to the outside world.
- * Outside local address – The IP address of an outside host as it is known to the hosts on the inside network.
- * Outside global address – The IP address assigned to a host on the outside network. The owner of the host assigns this address.

QUESTION 33

Which option about JSON is true?

- A. uses predefined tags or angle brackets () to delimit markup text
- B. used to describe structured data that includes arrays
- C. used for storing information
- D. similar to HTML, it is more verbose than XML



Correct Answer: B

Section:

Explanation:

JSON data is written as name/value pairs.

A name/value pair consists of a field name (in double quotes), followed by a colon, followed by a value:

```
"name":"Mark"
```

JSON can use arrays. Array values must be of type string, number, object, array, boolean or null..

For example:

```
{  
  "name":"John",  
  "age":30,  
  "cars":["Ford", "BMW", "Fiat" ]  
}
```

QUESTION 34

How do TCP and UDP differ in the way they provide reliability for delivery of packets?

- A. TCP is a connectionless protocol that does not provide reliable delivery of data, UDP is a connection-oriented protocol that uses sequencing to provide reliable delivery.
- B. TCP does not guarantee delivery or error checking to ensure that there is no corruption of data UDP provides message acknowledgement and retransmits data if lost.
- C. TCP provides flow control to avoid overwhelming a receiver by sending too many packets at once, UDP sends packets to the receiver in a continuous stream without checking for sequencing

D. TCP uses windowing to deliver packets reliably; UDP provides reliable message transfer between hosts by establishing a three-way handshake

Correct Answer: C

Section:

QUESTION 35

Which two command sequences must you configure on switch to establish a Layer 3 EtherChannel with an open-standard protocol? (Choose two)

- A. interface GigabitEthernet0/0/1 channel-group 10 mode on
- B. interface GigabitEthernet0/0/1 channel-group 10 mode active
- C. interface GigabitEthernet0/0/1 channel-group 10 mode auto
- D. interface port-channel 10 switchport switchport mode trunk
- E. interface port-channel 10 no switchport ip address 172.16.0.1.255.255.255.0

Correct Answer: B, E

Section:

QUESTION 36

What is an advantage of Cisco DNA Center versus traditional campus device management?

- A. It supports numerous extensibility options including cross-domain adapters and third-party SDKs.
- B. It supports high availability for management functions when operating in cluster mode.
- C. It enables easy autodiscovery of network elements in a brownfield deployment.
- D. It is designed primarily to provide network assurance.

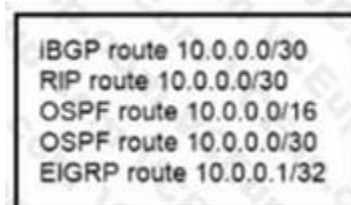


Correct Answer: A

Section:

QUESTION 37

Refer to the exhibit.



A router reserved these five routes from different routing information sources. Which two routes does the router install in its routing table? (Choose two)

- A. RIP route 10.0.0.0/30
- B. iBGP route 10.0.0.0/30
- C. OSPF route 10.0.0.0/30
- D. EIGRP route 10.0.0.1/32
- E. OSPF route 10.0.0.0/16

Correct Answer: C, D

Section:

QUESTION 38

By default, how Does EIGRP determine the metric of a route for the routing table?

- A. it uses the bandwidth and delay values of the path to calculate the route metric
- B. it uses a default metric of 10 for all routes that are learned by the router
- C. it uses a reference Bandwidth and the actual bandwidth of the connected link to calculate the route metric
- D. it counts the number of hops between the receiving and destination routers and uses that value as the metric

Correct Answer: A

Section:

QUESTION 39

What is a difference between local AP mode and FlexConnect AP mode?

- A. Local AP mode creates two CAPWAP tunnels per AP to the WLC
- B. FlexConnect AP mode fails to function if the AP loses connectivity with the WLC
- C. FlexConnect AP mode bridges the traffic from the AP to the WLC when local switching is configured
- D. Local AP mode causes the AP to behave as if it were an autonomous AP

Correct Answer: A

Section:

QUESTION 40

Router R1 must send all traffic without a matching routing-table entry to 192.168.1.1. Which configuration accomplishes this task?




```
R1#Config t
R1(config)#ip routing
R1(config)#ip route default-route 192.168.1.1

R1#Config t
R1(config)#ip routing
R1(config)#ip route 192.168.1.1 0.0.0.0 0.0.0.0

R1#Config t
R1(config)#ip routing
R1(config)#ip route 0.0.0.0 0.0.0.0 192.168.1.1

R1#Config t
R1(config)#ip routing
R1(config)#ip default-gateway 192.168.1.1
```

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

Correct Answer: C

Section:

QUESTION 41

Which function does the range of private IPv4 addresses perform?

- A. allows multiple companies to each use the same addresses without conflicts
- B. provides a direct connection for hosts from outside of the enterprise network
- C. ensures that NAT is not required to reach the internet with private range addressing
- D. enables secure communications to the internet for all external hosts

Correct Answer: A

Section:

QUESTION 42

What event has occurred if a router sends a notice level message to a syslog server?

- A. A TCP connection has been torn down
- B. An ICMP connection has been built
- C. An interface line has changed status
- D. A certificate has expired.

Correct Answer: C

Section:

QUESTION 43

Refer to the exhibit.



```
SW1#show spanning-tree vlan 30
VLAN0030
Spanning tree enabled protocol rstp
Root ID    Priority      32798
Address    0025.63e9.c800
Cost       19
Port       1 (FastEthernet 2/1)
Hello Time 2 sec
Max Age    30 sec
Forward Delay 20 sec
[Output suppressed]
```

What two conclusions should be made about this configuration? (Choose two)

- A. The designated port is FastEthernet 2/1
- B. This is a root bridge
- C. The spanning-tree mode is Rapid PVST+
- D. The spanning-tree mode is PVST+
- E. The root port is FastEthernet 2/1

Correct Answer: C, E

Section:

QUESTION 44

What are two fundamentals of virtualization? (choose two)

- A. The environment must be configured with one hypervisor that serves solely as a network manager to monitor SNMP traffic
- B. It allows logical network devices to move traffic between virtual machines and the rest of the physical network
- C. It allows multiple operating systems and applications to run independently on one physical server.
- D. It allows a physical router to directly connect NICs from each virtual machine into the network
- E. It requires that some servers, virtual machines and network gear reside on the Internet

Correct Answer: B, C

Section:

QUESTION 45

What is the difference regarding reliability and communication type between TCP and UDP?

- A. TCP is reliable and is a connection-oriented protocol UDP is not reliable and is a connectionless protocol
- B. TCP is not reliable and is a connection-oriented protocol; UDP is reliable and is a connectionless protocol
- C. TCP is not reliable and is a connectionless protocol; UDP is reliable and is a connection-oriented protocol
- D. TCP is reliable and is a connectionless protocol; UDP is not reliable and is a connection-oriented protocol

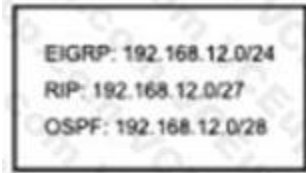
Correct Answer: A

Section:



QUESTION 46

Refer to the exhibit.



How does the router manage traffic to 192.168.12.16?

- A. It selects the RIP route because it has the longest prefix inclusive of the destination address.
- B. It chooses the OSPF route because it has the longest prefix inclusive of the destination address.
- C. it load-balances traffic between all three routes
- D. It chooses the EIGRP route because it has the lowest administrative distance

Correct Answer: A

Section:

QUESTION 47

How does Cisco DNA Center gather data from the network?

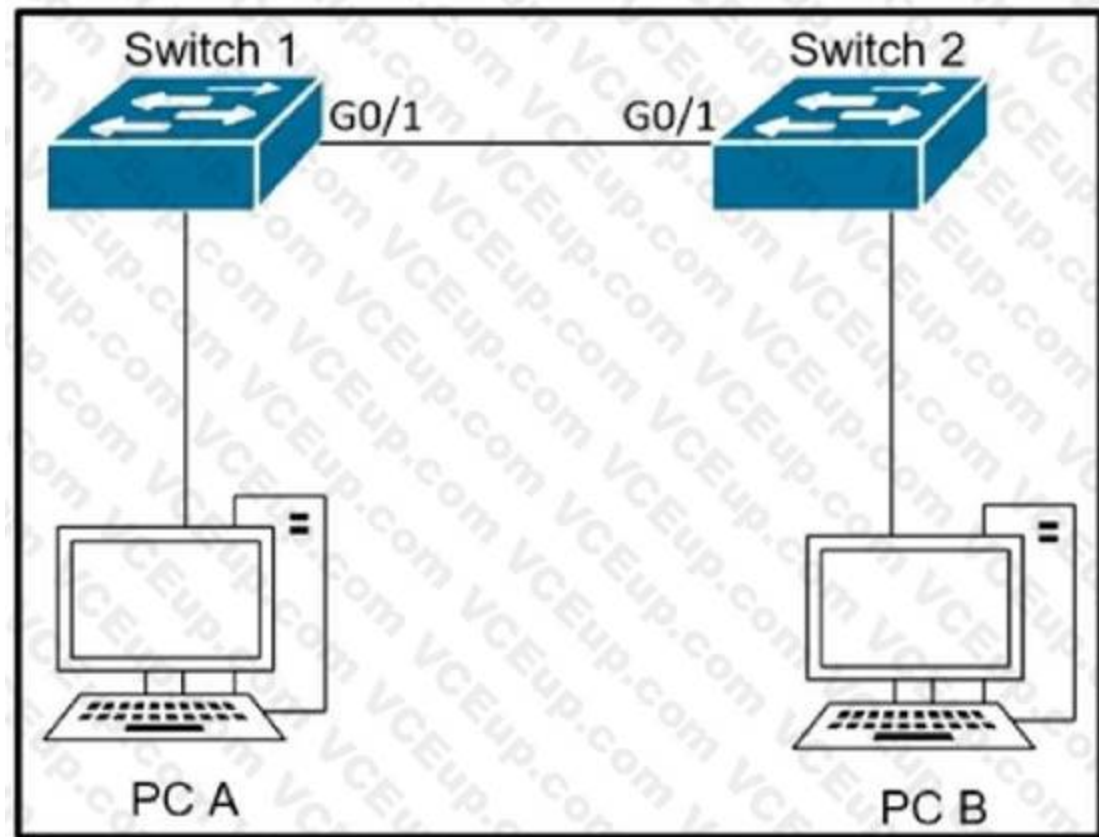
- A. Network devices use different services like SNMP, syslog, and streaming telemetry to send data to the controller
- B. Devices establish an iPsec tunnel to exchange data with the controller
- C. Devices use the call-home protocol to periodically send data to the controller.
- D. The Cisco CU Analyzer tool gathers data from each licensed network device and streams it to the controller.

Correct Answer: A

Section:

QUESTION 48

Refer to the exhibit.



The network administrator wants VLAN 67 traffic to be untagged between Switch 1 and Switch 2 while all other VLANs are to remain tagged. Which command accomplishes this task?

- A. switchport access vlan 67
- B. switchport trunk allowed vlan 67
- C. switchport private-vlan association host 67
- D. switchport trunk native vlan 67

Correct Answer: D

Section:

QUESTION 49

What are two roles of the Dynamic Host Configuration Protocol (DHCP)? (Choose two)

- A. The DHCP server offers the ability to exclude specific IP addresses from a pool of IP addresses
- B. The DHCP client can request up to four DNS server addresses
- C. The DHCP server assigns IP addresses without requiring the client to renew them
- D. The DHCP server leases client IP addresses dynamically.
- E. The DHCP client maintains a pool of IP addresses it can assign.

Correct Answer: A, D

Section:

QUESTION 50

Which two minimum parameters must be configured on an active interface to enable OSPFv2 to operate? (Choose two)

- A. OSPF area



- B. OSPF MD5 authentication key
- C. IPv6 address
- D. OSPF process ID
- E. OSPF stub flag

Correct Answer: A, D

Section:

QUESTION 51

Which two outcomes are predictable behaviors for HSRP? (Choose two)

- A. The two routers synchronize configurations to provide consistent packet forwarding
- B. The two routers negotiate one router as the active router and the other as the standby router
- C. Each router has a different IP address, both routers act as the default gateway on the LAN, and traffic is load-balanced between them
- D. The two routers share a virtual IP address that is used as the default gateway for devices on the LAN
- E. The two routers share the same interface IP address and default gateway traffic is load-balanced between them

Correct Answer: B, D

Section:

QUESTION 52

Several new coverage cells are required to improve the Wi-Fi network of an organization. Which two standard designs are recommended? (choose two.)

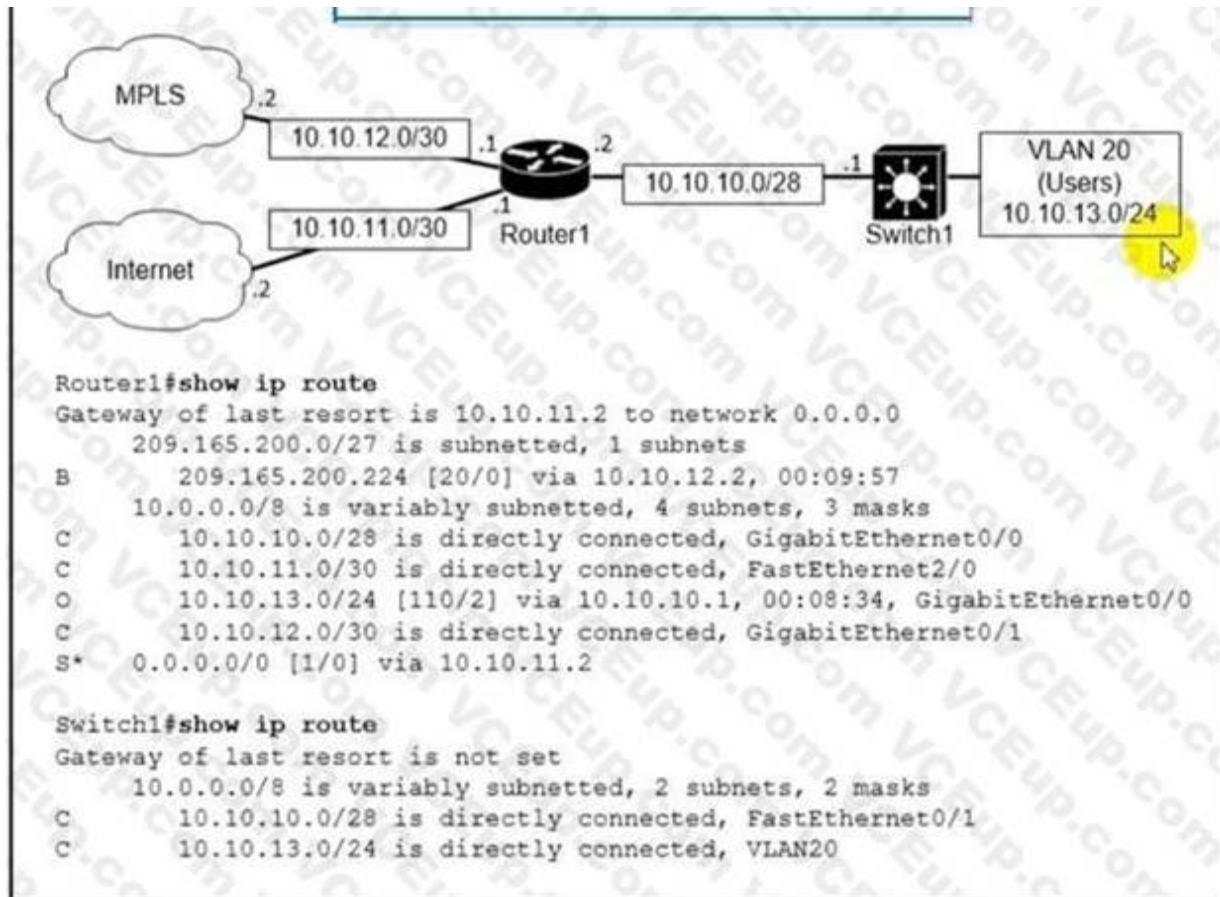
- A. 5GHz provides increased network capacity with up to 23 nonoverlapping channels.
- B. For maximum throughput, the WLC is configured to dynamically set adjacent access points to the same channel.
- C. 5GHz channel selection requires an autonomous access point.
- D. Adjacent cells with overlapping channels use a repeater access point.
- E. Cells that overlap one another are configured to use nonoverlapping channels.

Correct Answer: B, E

Section:

QUESTION 53

Refer to the exhibit.



Which path is used by the router for internet traffic ?

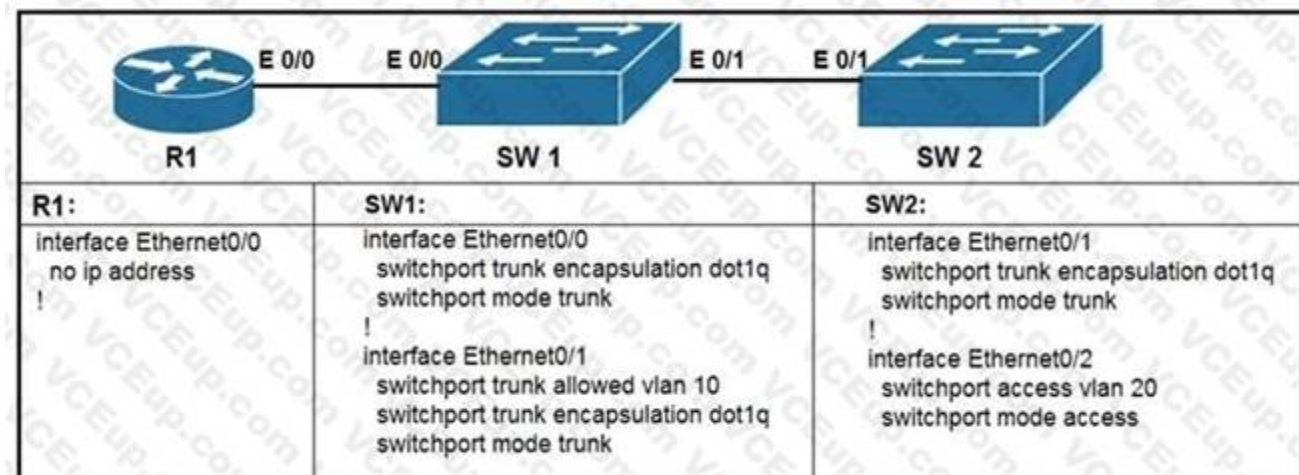
- A. 209.165.200.0/27
- B. 10.10.10.0/28
- C. 0.0.0.0/0
- D. 10.10.13.0/24

Correct Answer: C

Section:

QUESTION 54

Refer to the exhibit.



What commands are needed to add a subinterface to Ethernet0/0 on R1 to allow for VLAN 20, with IP address 10.20.20.1/24?



- A. R1(config)#interface ethernet0/0
R1(config)#encapsulation dot1q 20
R1(config)#ip address 10.20.20.1 255.255.255.0
- B. R1(config)#interface ethernet0/0.20
R1(config)#encapsulation dot1q 20
R1(config)#ip address 10.20.20.1 255.255.255.0
- C. R1(config)#interface ethernet0/0.20
R1(config)#ip address 10.20.20.1 255.255.255.0
- D. R1(config)#interface ethernet0/0
R1(config)#ip address 10.20.20.1 255.255.255.0

Correct Answer: B

Section:

QUESTION 55

Which purpose does a northbound API serve in a controller-based networking architecture?

- A. communicates between the controller and the physical network hardware
- B. reports device errors to a controller
- C. generates statistics for network hardware and traffic
- D. facilitates communication between the controller and the applications

Correct Answer: D

Section:

QUESTION 56

Refer to the exhibit.



```
ip arp inspection vlan 2-10
interface fastethernet 0/1
 ip arp inspection trust
```

If the network environment is operating normally, which type of device must be connected to interface FastEthernet 0/1?

- A. DHCP client
- B. access point
- C. router
- D. PC

Correct Answer: C

Section:

QUESTION 57

What is the primary purpose of a First Hop Redundancy Protocol?

- A. It allows directly connected neighbors to share configuration information.
- B. It allows a router to use bridge priorities to create multiple loop-free paths to a single destination.

- C. It reduces routing failures by allowing Layer 3 load balancing between OSPF neighbors that have the same link metric.
- D. It reduces routing failures by allowing more than one router to represent itself, as the default gateway of a network.

Correct Answer: D

Section:

QUESTION 58

What occurs to frames during the process of frame flooding?

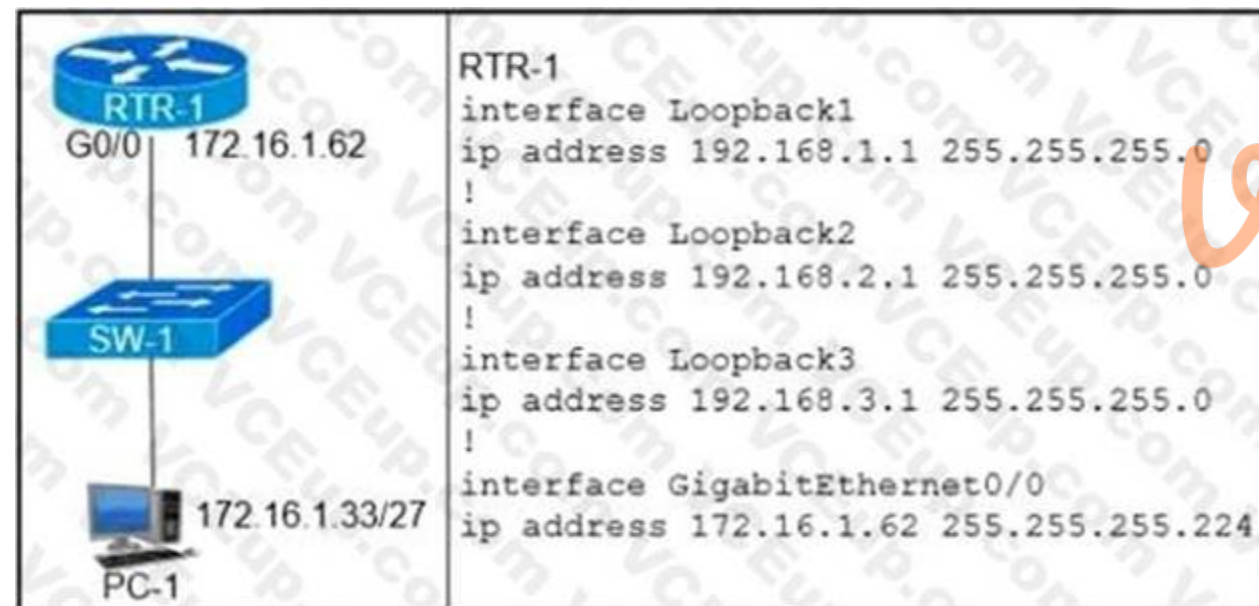
- A. Frames are sent to every port on the switch in the same VLAN except from the originating port
- B. Frames are sent to every port on the switch that has a matching entry in the MAC address table.
- C. Frames are sent to all ports, including those that are assigned to other VLANs.
- D. Frames are sent to every port on the switch in the same VLAN.

Correct Answer: A

Section:

QUESTION 59

Refer to the exhibit.



Which configuration on RTR-1 denies SSH access from PC-1 to any RTR-1 interface and allows all other traffic?

- A. access-list 100 deny tcp host 172.16.1.33 any eq 22 access-list 100 permit ip any any interface GigabitEthernet0/0 ip access-group 100 in
- B. access-list 100 deny tcp host 172.16.1.33 any eq 22 access-list 100 permit ip any any line vty 0 15 ip access-group 100 in
- C. access-list 100 deny tcp host 172.16.1.33 any eq 23 access-list 100 permit ip any any interface GigabitEthernet0/0 ip access-group 100 in
- D. access-list 100 deny tcp host 172.16.1.33 any eq 23 access-list 100 permit ip any any line vty 0 15 ip access-group 100 in

Correct Answer: B

Section:

QUESTION 60

In which two ways does a password manager reduce the chance of a hacker stealing a users password? (Choose two.)

- A. It automatically provides a second authentication factor that is unknown to the original user.

- B. It uses an internal firewall to protect the password repository from unauthorized access.
- C. It protects against keystroke logging on a compromised device or web site.
- D. It stores the password repository on the local workstation with built-in antivirus and anti-malware functionality
- E. It encourages users to create stronger passwords.

Correct Answer: C, E

Section:

QUESTION 61

Which technology is used to improve web traffic performance by proxy caching?

- A. WSA
- B. Firepower
- C. ASA
- D. FireSIGHT

Correct Answer: A

Section:

QUESTION 62

Which type of attack can be mitigated by dynamic ARP inspection?

- A. worm
- B. malware
- C. DDoS
- D. man-in-the-middle

Correct Answer: D

Section:

QUESTION 63

What are two roles of Domain Name Services (DNS)? (Choose Two)

- A. builds a flat structure of DNS names for more efficient IP operations
- B. encrypts network Traffic as it travels across a WAN by default
- C. improves security by protecting IP addresses under Fully Qualified Domain Names (FQDNs)
- D. enables applications to identify resources by name instead of IP address
- E. allows a single host name to be shared across more than one IP address

Correct Answer: D, E

Section:

QUESTION 64

How do TCP and UDP differ in the way they guarantee packet delivery?

- A. TCP uses checksum, acknowledgement, and retransmissions, and UDP uses checksums only.
- B. TCP uses two-dimensional parity checks, checksums, and cyclic redundancy checks and UDP uses retransmissions only.



- C. TCP uses checksum, parity checks, and retransmissions, and UDP uses acknowledgements only.
- D. TCP uses retransmissions, acknowledgement and parity checks and UDP uses cyclic redundancy checks only.

Correct Answer: A

Section:

QUESTION 65

Refer to the exhibit.

```
R1# show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default
       U - per-user static route, o - ODR
Gateway of last resort is not set
C      1.0.0.0/8 is directly connected, Loopback0
O      10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
O      10.0.1.3/32 [110/100] via 10.0.1.3, 00:39:08, Serial0
C      10.0.1.0/24 is directly connected, Serial0
O      10.0.1.5/32 [110/5] via 10.0.1.50, 00:39:08, Serial0
O      10.0.1.4/32 [110/10] via 10.0.1.4, 00:39:08, Serial0
```

What is the next hop address for traffic that is destined to host 10.0.1.5?

- A. 10.0.1.3
- B. 10.0.1.50
- C. 10.0.1.4
- D. Loopback D

Correct Answer: B

Section:



QUESTION 66

What are two benefits of controller-based networking compared to traditional networking?

- A. controller-based increases network bandwidth usage, while traditional lightens the load on the network.
- B. controller-based inflates software costs, while traditional decreases individual licensing costs
- C. Controller-based reduces network configuration complexity, while traditional increases the potential for errors
- D. Controller-based provides centralization of key IT functions. While traditional requires distributes management function
- E. controller-based allows for fewer network failure, while traditional increases failure rates.

Correct Answer: C, D

Section:

Explanation:

Cisco DNA Center Device Management

3. Monitor the cloud for software update

5. Uses CLI templates to apply a consistent configuration to multiple devices at an individual location 6. Uses NetFlow to analyse potential security threats throughout the network and take appropriate action on that traffic

Traditional device management 2. Manages device configuration on a per-device basis 4. Security is managed near the perimeter of the network with firewalls, VPNs, and IPS Implements changes via an SSH terminal

QUESTION 67

What mechanism carries multicast traffic between remote sites and supports encryption?

- A. ISATAP

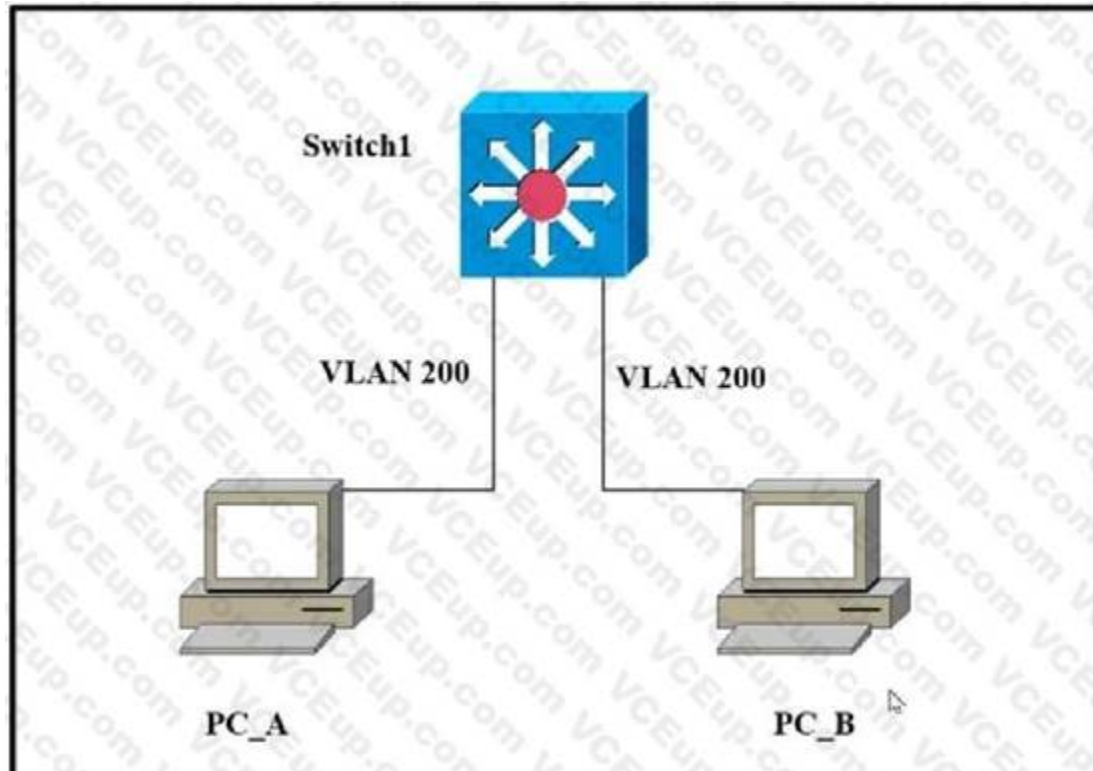
- B. GRE over iPsec
- C. iPsec over ISATAP
- D. GRE

Correct Answer: B

Section:

QUESTION 68

Refer to the exhibit.



Which outcome is expected when PC_A sends data to PC_B?

- A. The switch rewrites the source and destination MAC addresses with its own.
- B. The source MAC address is changed.
- C. The source and destination MAC addresses remain the same.
- D. The destination MAC address is replaced with ffff.ffff.ffff.

Correct Answer: C

Section:

QUESTION 69

How will Link Aggregation be Implemented on a Cisco Wireless LAN Controller?

- A. One functional physical port is needed to pass client traffic.
- B. The EthernetChannel must be configured in "mode active".
- C. When enabled, the WLC bandwidth drops to 500 Mbps.
- D. To pass client traffic, two or more ports must be configured.

Correct Answer: A



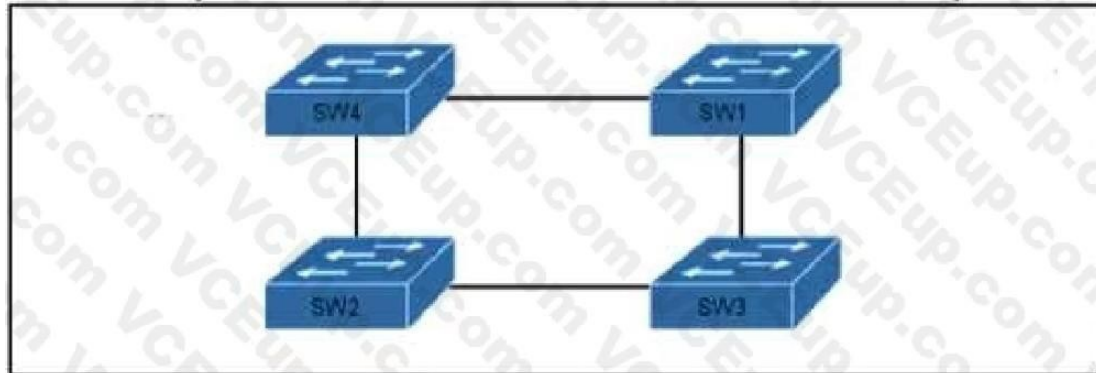
Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-5/configurationguide/b_cg75/b_cg75_chapter_0100010.html

QUESTION 70

Refer to the exhibit.



Which switch in this configuration will be elected as the root bridge?

SW1: 0C:E0:38:00:94:04
SW2: 0C:0E:15:22:05:97
SW3: 0C:0E:15:1A:3C:9D
SW4: 0C:E0:18:A1:B3:19

- A. SW1
- B. SW2
- C. SW3
- D. SW4

Correct Answer: C

Section:

QUESTION 71

Which device performs stateful inspection of traffic?

- A. firewall
- B. switch
- C. access point
- D. wireless controller

Correct Answer: A

Section:

QUESTION 72

Which configuration ensures that the switch is always the root for VLAN 750?

- A. Switch(config)#spanning-tree vlan 750 priority 38003685
- B. Switch(config)#spanning-tree vlan 750 root primary
- C. Switch(config)#spanning-tree vlan 750 priority 614440



D. Switch(config)#spanning-tree vlan 750 priority 0

Correct Answer: D

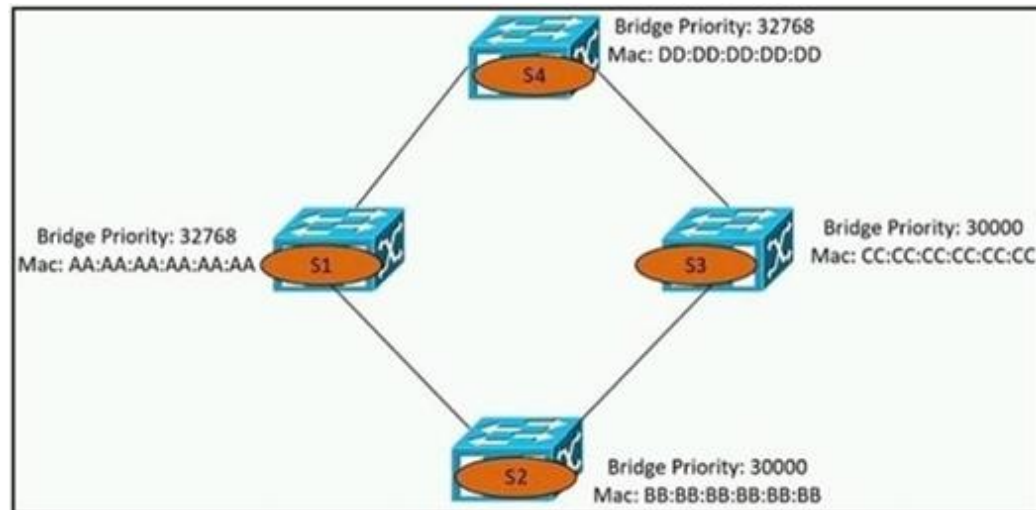
Section:

Explanation:

Although the spanning-tree vlan 10 root primary command will ensure a switch will have a bridge priority value lower than other bridges introduced to the network, the spanning-tree vlan 10 priority 0 command ensures the bridge priority takes precedence over all other priorities.

QUESTION 73

Refer to the exhibit.



Which switch becomes the root bridge?

- A. S1
- B. S2
- C. S3
- D. S4

Correct Answer: B

Section:

QUESTION 74

What protocol allows an engineer to back up 20 network router configurations globally while using the copy function?

- A. SMTP
- B. SNMP
- C. TCP
- D. FTP

Correct Answer: B

Section:

QUESTION 75

What software defined architecture plane assists network devices with making packet-forwarding decisions by providing Layer 2 reachability and Layer 3 routing information?

- A. data plane



- B. control plane
- C. policy plane
- D. management plane

Correct Answer: B

Section:

QUESTION 76

Which WAN access technology is preferred for a small office / home office architecture?

- A. broadband cable access
- B. frame-relay packet switching
- C. dedicated point-to-point leased line
- D. Integrated Services Digital Network switching.

Correct Answer: A

Section:

QUESTION 77

Which WAN topology provides a combination of simplicity quality, and availability?

- A. partial mesh
- B. full mesh
- C. point-to-point
- D. hub-and-spoke

Correct Answer: C

Section:

QUESTION 78

Which command on a port enters the forwarding state immediately when a PC is connected to it?

- A. switch(config)#spanning-tree portfast default
- B. switch(config)#spanning-tree portfast bpduguard default
- C. switch(config-if)#spanning-tree portfast trunk
- D. switch(config-if)#no spanning-tree portfast

Correct Answer: C

Section:

QUESTION 79

What are two functions of an SDN controller? (Choose two)

- A. Layer 2 forwarding
- B. coordinating VTNs
- C. tracking hosts
- D. managing the topology



E. protecting against DDoS attacks

Correct Answer: B, D

Section:

QUESTION 80

What is a network appliance that checks the state of a packet to determine whether the packet is legitimate?

- A. Layer 2 switch
- B. load balancer
- C. firewall
- D. LAN controller

Correct Answer: C

Section:

QUESTION 81

When DHCP is configured on a router, which command must be entered so the default gateway is automatically distributed?

- A. default-router
- B. default-gateway
- C. ip helper-address
- D. dns-server

Correct Answer: A

Section:

QUESTION 82

What is an appropriate use for private IPv4 addressing?

- A. on the public-facing interface of a firewall
- B. to allow hosts inside to communicate in both directions with hosts outside the organization
- C. on internal hosts that stream data solely to external resources
- D. on hosts that communicates only with other internal hosts

Correct Answer: D

Section:

QUESTION 83

How is the native VLAN secured in a network?

- A. separate from other VLANs within the administrative domain
- B. give it a value in the private VLAN range
- C. assign it as VLAN 1
- D. configure it as a different VLAN ID on each end of the link

Correct Answer: A



Section:

QUESTION 84

What is the purpose of a southbound API in a control based networking architecture?

- A. Facilitates communication between the controller and the applications
- B. Facilitates communication between the controller and the networking hardware
- C. allows application developers to interact with the network
- D. integrates a controller with other automation and orchestration tools.

Correct Answer: B

Section:

Explanation:

<https://www.ciscopress.com/articles/article.asp?p=2995354&seqNum=2#:~:text=The%20Southbound%20Interface,communicate%20to%20the%20networking%20devices.&text=The%20overall%20goal%20is%20network,from%20being%20only%20a%20protocol.>

The Southbound Interface

In a controller-based network architecture, the controller needs to communicate to the networking devices.

QUESTION 85

What causes a port to be placed in the err-disabled state?

- A. latency
- B. port security violation
- C. shutdown command issued on the port
- D. nothing plugged into the port



Correct Answer: B

Section:

Explanation:

This mode is the default violation mode; when in this mode, the switch will automatically force the switchport into an error disabled (err-disable) state when a violation occurs. While in this state, the switchport forwards no traffic. The switchport can be brought out of this error disabled state by issuing the errdisable recovery cause CLI command or by disabling and reenabling the switchport.

QUESTION 86

Which switch technology establishes a network connection immediately when it is plugged in?

- A. PortFast
- B. BPDU guard
- C. UplinkFast
- D. BackboneFast

Correct Answer: A

Section:

Explanation:

PortFast is useful to connect hosts and switches to a switch. Access layer switches are more frequently “plugged in” and “plugged out” than distribution or core layer switches. Also, this feature’s target is just to minimize STP convergence time.

QUESTION 87

Which technology is appropriate for communication between an SDN controller and applications running over the network?

- A. OpenFlow
- B. REST API
- C. NETCONF
- D. Southbound API

Correct Answer: B

Section:

QUESTION 88

Which security program element involves installing badge readers on data-center doors to allow workers to enter and exit based on their job roles?

- A. role-based access control
- B. biometrics
- C. multifactor authentication
- D. physical access control

Correct Answer: D

Section:

QUESTION 89

Which network action occurs within the data plane?

- A. compare the destination IP address to the IP routing table.
- B. run routing protocols (OSPF, EIGRP, RIP, BGP)
- C. make a configuration change from an incoming NETCONF RPC
- D. reply to an incoming ICMP echo request

Correct Answer: A

Section:

QUESTION 90

What is a DHCP client?

- A. a host that is configured to request an IP address automatically
- B. a server that dynamically assigns IP addresses to hosts
- C. a workstation that requests a domain name associated with its IP address
- D. a router that statically assigns IP addresses to hosts

Correct Answer: A

Section:

QUESTION 91

An engineer needs to add an old switch back into a network. To prevent the switch from corrupting the VLAN database which action must be taken?

- A. Add the switch in the VTP domain with a lower revision number
- B. Add the switch with DTP set to dynamic desirable



- C. Add the switch in the VTP domain with a higher revision number
- D. Add the switch with DTP set to desirable

Correct Answer: A

Section:

QUESTION 92

What is a similarity between OM3 and OM4 fiber optic cable?

- A. Both have a 50 micron core diameter
- B. Both have a 9 micron core diameter
- C. Both have a 62.5 micron core diameter
- D. Both have a 100 micron core diameter

Correct Answer: A

Section:

QUESTION 93

What is the benefit of using FHRP?

- A. reduced management overhead on network routers
- B. balancing traffic across multiple gateways in proportion to their loads
- C. higher degree of availability
- D. reduced ARP traffic on the network

Correct Answer: C

Section:

QUESTION 94

Which technology allows for multiple operating systems to be run on a single host computer?

- A. virtual routing and forwarding
- B. network port ID visualization
- C. virtual device contexts
- D. server visualization

Correct Answer: D

Section:

QUESTION 95

What occurs when overlapping Wi-Fi channels are implemented?

- A. The wireless network becomes vulnerable to unauthorized access.
- B. Wireless devices are unable to distinguish between different SSIDs
- C. Users experience poor wireless network performance.
- D. Network communications are open to eavesdropping.

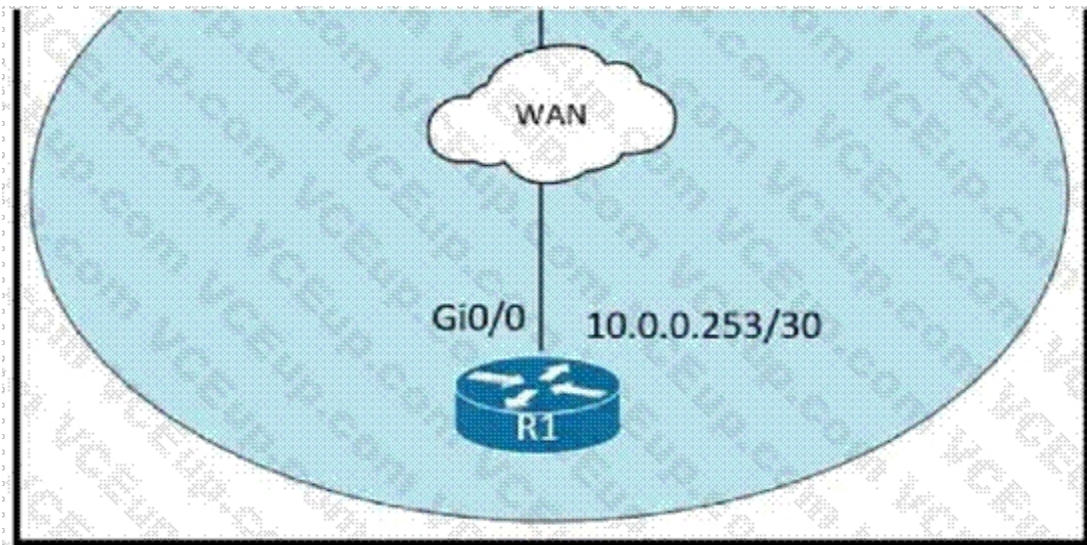


Correct Answer: C

Section:

QUESTION 96

Refer to the exhibit.



An administrator must turn off the Cisco Discovery Protocol on the port configured with address last usable address in the 10.0.0.0/30 subnet. Which command set meets the requirement?

- A. interface gi0/1 no cdp enable
- B. interface gi0/1 clear cdp table
- C. interface gi0/0 no cdp advertise-v2
- D. interface gi0/0 no cdp run

Correct Answer: D

Section:

QUESTION 97

Which 802.11 management frame type is sent when a client roams between access points on the same SSID?

- A. Reassociation Request
- B. Probe Request
- C. Authentication Request
- D. Association Request

Correct Answer: A

Section:

QUESTION 98

What are two improvements provided by automation for network management in an SDN environment? (Choose two)

- A. Data collection and analysis tools establish a baseline for the network
- B. Artificial intelligence identifies and prevents potential design failures.
- C. Machine learning minimizes the overall error rate when automating troubleshooting processes
- D. New devices are onboarded with minimal effort
- E. Proprietary Cisco APIs leverage multiple network management tools.



Correct Answer: B, E

Section:

QUESTION 99

An engineer must configure the IPv6 address 2001:0db8:0000:0000:0700:0003:400F:572B on the serial0/0 interface of the HQ router and wants to compress it for easier configuration. Which command must be issued on the router interface?

- A. ipv6 address 2001:db8::700:3:400F:572B
- B. ipv6 address 2001:db8:0::700:3:4F:572B
- C. ipv6 address 2001:Odb8::7:3:4F:572B
- D. ipv6 address 2001::db8:0000::700:3:400F:572B

Correct Answer: A

Section:

QUESTION 100

What describes the operation of virtual machines?

- A. Virtual machines are responsible for managing and allocating host hardware resources
- B. In a virtual machine environment, physical servers must run one operating system at a time.
- C. Virtual machines are the physical hardware that support a virtual environment.
- D. Virtual machines are operating system instances that are decoupled from server hardware

Correct Answer: B

Section:



QUESTION 101

Which WLC port connects to a switch to pass normal access-point traffic?

- A. redundancy
- B. console
- C. distribution system
- D. service

Correct Answer: C

Section:

QUESTION 102

An engineering team asks an implementer to configure syslog for warning conditions and error conditions. Which command does the implementer configure to achieve the desired result?

- A. logging trap 5
- B. logging trap 2
- C. logging trap 4
- D. logging trap 3

Correct Answer: C

Section:

QUESTION 103

Which two protocols are supported on service-port interfaces? (Choose two.)

- A. RADIUS
- B. TACACS+
- C. SCP
- D. Telnet
- E. SSH

Correct Answer: D, E

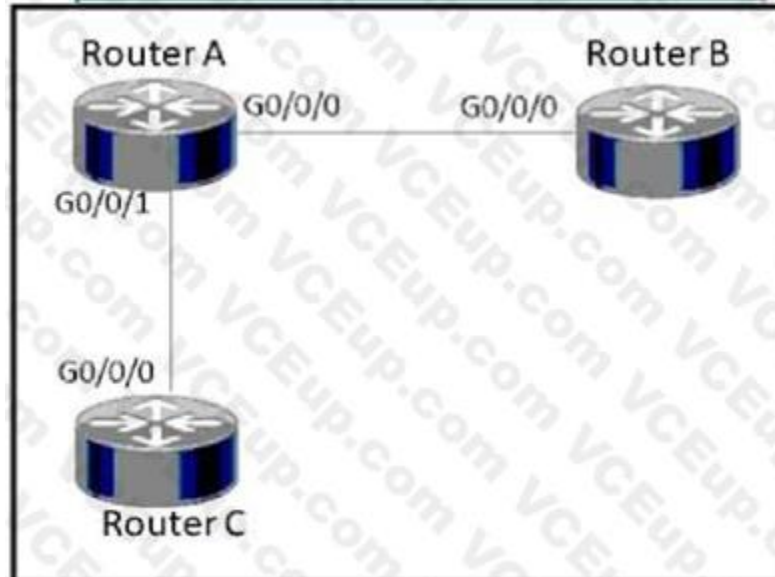
Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-5/configurationguide/b_cg75/b_cg75_chapter_011110.html

QUESTION 104

Refer to the exhibit.



 **vdumps**

How must router A be configured so that it only sends Cisco Discovery Protocol Information to router C?

```
#config t
Router A (config)#cdp run
Router A (config)#interface gi0/0/0
Router A (config-if)#no cdp enable

#config t
Router A (config)#cdp run
Router A (config)#interface gi0/0/0
Router A (config-if)#cdp enable

#config t
Router A (config)#cdp run
Router A (config)#interface gi0/0/1
Router A (config-if)#cdp enable

#config t
Router A (config)#no cdp run
Router A (config)#interface gi0/0/1
Router A (config-if)#cdp enable
```

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

Correct Answer: D

Section:

QUESTION 105

Which global command encrypt all passwords in the running configuration?

- A. password-encrypt
- B. enable password-encryption
- C. enable secret
- D. service password-encryption

Correct Answer: B

Section:

QUESTION 106

What is the function of a hub-and-spoke WAN topology?

- A. allows access restrictions to be implemented between subscriber sites.
- B. provides direct connections between subscribers
- C. supports Layer 2 VPNs
- D. supports application optimization

Correct Answer: B



Section:

QUESTION 107

What uses HTTP messages to transfer data to applications residing on different hosts?

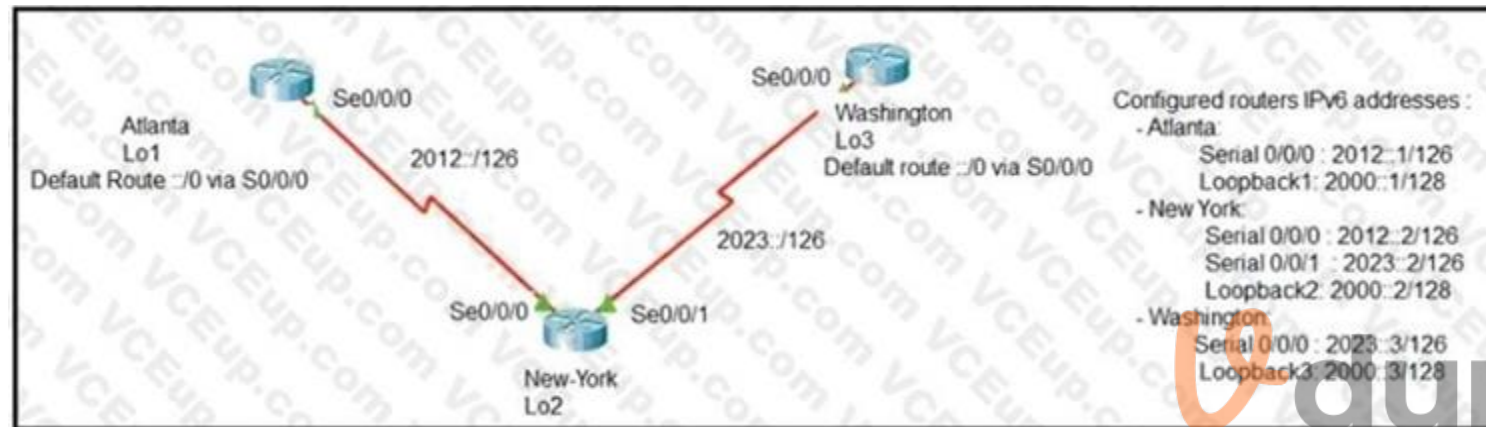
- A. OpenFlow
- B. OpenStack
- C. OpFlex
- D. REST

Correct Answer: D

Section:

QUESTION 108

Refer to Exhibit.



The loopback1 interface of the Atlanta router must reach the loopback3 interface of the Washington router. Which two static host routes must be configured on the NEW York router? (Choose two)

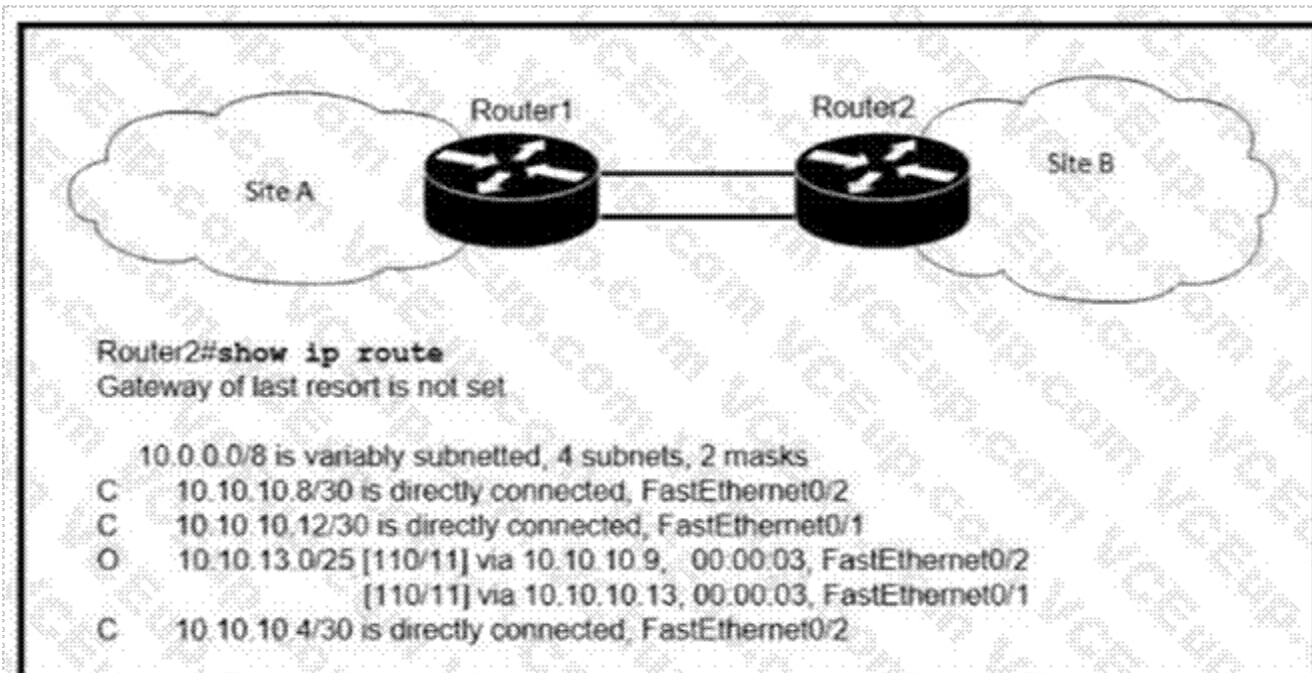
- A. ipv6 route 2000::1/128 2012::1
- B. ipv6 route 2000::3/128 2023::3
- C. ipv6 route 2000::3/128 s0/0/0
- D. ipv6 route 2000::1/128 2012::2
- E. ipv6 route 2000::1/128 s0/0/1

Correct Answer: A, B

Section:

QUESTION 109

Refer to the exhibit.



If OSPF is running on this network, how does Router 2 handle traffic from Site B to 10.10.13/25 at Site A?

- A. It sends packets out of interface Fa0/2 only.
- B. It sends packets out of interface Fa0/1 only.
- C. It cannot send packets to 10.10.13.128/25
- D. It load-balances traffic out of Fa0/1 and Fa0/2

Correct Answer: C

Section:

Explanation:

Router2 does not have an entry for the subnet 10.10.13.128/25. It only has an entry for 10.10.13.0/25, which ranges from 10.10.13.0 to 10.10.13.127.
<https://study-cna.com/administrative-distance-metric/>

QUESTION 110

How does HSRP provide first hop redundancy?

- A. It load-balances traffic by assigning the same metric value to more than one route to the same destination in the IP routing table.
- B. It load-balances Layer 2 traffic along the path by flooding traffic out all interfaces configured with the same VLAN.
- C. It forwards multiple packets to the same destination over different routed links in the data path
- D. It uses a shared virtual MAC and a virtual IP address to a group of routers that serve as the default gateway for hosts on a LAN

Correct Answer: D

Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp_fhrp/configuration/xr-16/fhrp-xr-16-book/fhrp-hsrp-mgo.html

QUESTION 111

Refer to the exhibit.





An engineer has started to configure replacement switch SW1. To verify part of the configuration, the engineer issued the commands as shown and noticed that the entry for PC2 is missing. Which change must be applied to SW1 so that PC1 and PC2 communicate normally?

A.

```

SW1(config)#interface fa0/2
SW1(config-if)#no switchport mode trunk
SW1(config-if)#no switchport trunk allowed vlan 3
SW1(config-if)#switchport mode access

```

B.

```

SW1(config)#interface fa0/1
SW1(config-if)#no switchport access vlan 2
SW1(config-if)#switchport trunk native vlan 2
SW1(config-if)#switchport trunk allowed vlan 3

```

C.

```

SW1(config)#interface fa0/1
SW1(config-if)#no switchport access vlan 2
SW1(config-if)#switchport access vlan 3
SW1(config-if)#switchport trunk allowed vlan 2

```

D.

```

SW1(config)#interface fa0/2
SW1(config-if)#no switchport access vlan 2
SW1(config-if)#no switchport trunk allowed vlan 3
SW1(config-if)#switchport trunk allowed vlan 2

```

Correct Answer: A

Section:

QUESTION 112

What is a zero-day exploit?

- A. It is when a new network vulnerability is discovered before a fix is available
- B. It is when the perpetrator inserts itself in a conversation between two parties and captures or alters data.
- C. It is when the network is saturated with malicious traffic that overloads resources and bandwidth
- D. It is when an attacker inserts malicious code into a SQL server.

Correct Answer: A

Section:

Explanation:

<https://www.kaspersky.com/resource-center/definitions/zero-day-exploit>

QUESTION 113

A network engineer is replacing the switches that belong to a managed-services client with new Cisco Catalyst switches. The new switches will be configured for updated security standards, including replacing Telnet services with encrypted connections and doubling the modulus size from 1024. Which two commands must the engineer configure on the new switches? (Choose two.)

- A. crypto key generate rsa general-keys modulus 1024
- B. transport input all
- C. crypto key generate rsa usage-keys
- D. crypto key generate rsa modulus 2048
- E. transport Input ssh

Correct Answer: A, E

Section:

QUESTION 114

Which QoS queuing method discards or marks packets that exceed the desired bit rate of traffic flow?

- A. shaping
- B. policing
- C. CBWFQ
- D. LLQ

Correct Answer: B

Section:

QUESTION 115

What is the role of disaggregation in controller-based networking?

- A. It divides the control-plane and data-plane functions.
- B. It summarizes the routes between the core and distribution layers of the network topology.
- C. It enables a network topology to quickly adjust from a ring network to a star network
- D. It streamlines traffic handling by assigning individual devices to perform either Layer 2 or Layer 3 functions.

Correct Answer: A

Section:

QUESTION 116

Refer to the exhibit.



```
R1# show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
I - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set
10.0.0.0/24 is subnetted, 5 subnets
D 10.1.2.0/24 [90/2170112] via 10.165.20.226, 00:01:30, Serial0/0
D 10.1.3.0/24 [90/2170112] via 10.165.20.226, 00:01:30, Serial0/0
D 10.1.2.0/25 [90/2170112] via 10.165.20.126, 00:01:30, Serial0/0
D 10.1.3.0/25 [90/2170112] via 10.165.20.146, 00:01:30, Serial0/0
D 10.1.4.0/25 [90/2170112] via 10.165.20.156, 00:01:30, Serial0/0
192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.18.10.0/24 is directly connected, GigabitEthernet0/0
192.168.21.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.11.0/24 is directly connected, GigabitEthernet0/1
10.165.20.0/24 is variably subnetted, 2 subnets, 2 masks
C 10.165.20.224/24 is directly connected, Serial0/0
S 10.1.2.112/28 [1/0] via 10.165.20.166
```

What is the next hop for traffic entering R1 with a destination of 10.1.2.126?

- A. 10.165.20.126
- B. 10.165.20.146
- C. 10.165.20.166
- D. 10.165.20.226

Correct Answer: D

Section:

QUESTION 117

Refer to the exhibit.



```
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix  : 
Description . . . . . : Realtek PCIe GBE Family
Controller
Physical Address. . . . . : 3C-52-82-33-F3-8F
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . : Yes

Wireless LAN adapter Wi-Fi:
Connection-specific DNS Suffix  : arcep.se
Description . . . . . : Intel(R) Dual Band
Wireless-AC 7265
Physical Address. . . . . : C8-21-58-B4-F3-EF
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . : Yes
Link-local IPv6 Address . . . . : fe80::45a1:b3fa:2f37:bf37%2(Preferred)
IPv4 Address. . . . . : 192.168.1.226(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : October 3, 2019 12:28:08 PM
Lease Expires . . . . . : October 3, 2019 7:18:37 PM
Default Gateway . . . . . : 192.168.1.100
DHCP Server . . . . . : 192.168.1.254
DHCPv6 IAID . . . . . : 46670168
DHCPv6 Client DUID. . . . . : 00-01-00-01-20-FF-05-55-3C-52-82-33-D3-84
DNS Servers . . . . . : 192.168.1.253
NetBIOS over Tcpip. . . . . : Enabled
Connection-specific DNS Suffix Search List :
    arcep.se
```

The given Windows PC is requesting the IP address of the host at www.cisco.com. To which IP address is the request sent?

- A. 192.168.1.226
- B. 192.168.1.100
- C. 192.168.1.254
- D. 192.168.1.253

Correct Answer: D
Section:

QUESTION 118

Why would VRRP be implemented when configuring a new subnet in a multivendor environment?

- A. when a gateway protocol is required that support more than two Cisco devices for redundancy
- B. to enable normal operations to continue after a member failure without requiring a change in a host ARP cache
- C. to ensure that the spanning-tree forwarding path to the gateway is loop-free
- D. to interoperate normally with all vendors and provide additional security features for Cisco devices

Correct Answer: A
Section:

QUESTION 119

An engineer has configured the domain name, user name, and password on the local router. What is the next step to complete the configuration for a Secure Shell access RSA key?

- A. crypto key Import rsa pem
- B. crypto key pubkey-chain rsa
- C. crypto key generate rsa
- D. crypto key zeroize rsa



Correct Answer: C

Section:

QUESTION 120

An engineer is configuring SSH version 2 exclusively on the R1 router. What is the minimum configuration required to permit remote management using the cryptographic protocol?



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

Correct Answer: C

Section:

QUESTION 121

After a recent security breach and a RADIUS failure, an engineer must secure the console port of each enterprise router with a local username and password. Which configuration must the engineer apply to accomplish this task?

```

aaa new-model
line con 0
password plaintextpassword
privilege level 15

username localuser secret plaintextpassword
line con 0
login authentication default
privilege level 15

username localuser secret plaintextpassword
line con 0
no login local
privilege level 15

aaa new-model
aaa authorization exec default local
aaa authentication login default radius
username localuser privilege 15 secret plaintextpassword

```

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

Correct Answer: B

Section:

QUESTION 122

Which REST method updates an object in the Cisco DNA Center Intent API?

- A. CHANGE
- B. UPDATE
- C. POST
- D. PUT

Correct Answer: D

Section:

Explanation:

PUT is most-often utilized for ****update**** capabilities, PUT-ing to a known resource URI with the request body containing the newly-updated representation of the original resource. However, PUT can also be used to create a resource in the case where the resource ID is chosen by the client instead of by the server. In other words, if the PUT is to a URI that contains the value of a non-existent resource ID. Again, the request body contains a resource representation. Many feel this is convoluted and confusing. Consequently, this method of creation should be used sparingly, if at all. Alternatively, use POST to create new resources and provide the client-defined ID in the body representation—presumably to a URI that doesn't include the ID of the resource (see POST below). On successful update, return 200 (or 204 if not returning any content in the body) from a PUT. If using PUT for create, return HTTP status 201 on successful creation. A body in the response is optional—providing one consumes more bandwidth. It is not necessary to return a link via a Location header in the creation case since the client already set the resource ID. PUT is not a safe operation, in that it modifies (or creates) state on the server, but it is idempotent. In other words, if you create or update a resource using PUT and then make that same call again, the resource is still there and still has the same state as it did with the first call. If, for instance, calling PUT on a resource increments a counter within the resource, the call is no longer idempotent. Sometimes that happens and it may be enough to document that the call is not idempotent. However, it's recommended to keep PUT requests idempotent. It is strongly recommended to use POST for non-idempotent requests.

Examples:

<https://www.restapitutorial.com/lessons/httpmethods.html>

QUESTION 123

Which two practices are recommended for an acceptable security posture in a network? (Choose two)



- A. Backup device configurations to encrypted USB drives for secure retrieval
- B. maintain network equipment in a secure location
- C. Use a cryptographic keychain to authenticate to network devices
- D. Place internal email and file servers in a designated DMZ
- E. Disable unused or unnecessary ports, interfaces and services

Correct Answer: C, E

Section:

QUESTION 124

An administrator must use the password complexity not manufacturer-name command to prevent users from adding "cisco" as a password. Which command must be issued before this command?

- A. Password complexity enable
- B. confreg 0x2142
- C. Login authentication my-auth-list
- D. service password-encryption

Correct Answer: A

Section:

QUESTION 125

An engineer is configuring router R1 with an IPv6 static route for prefix 2019:C15C:0CAF:E001::/64.

The next hop must be 2019:C15C:0CAF:E002::1 The route must be reachable via the R1 Gigabit 0/0 interface. Which command configures the designated route?

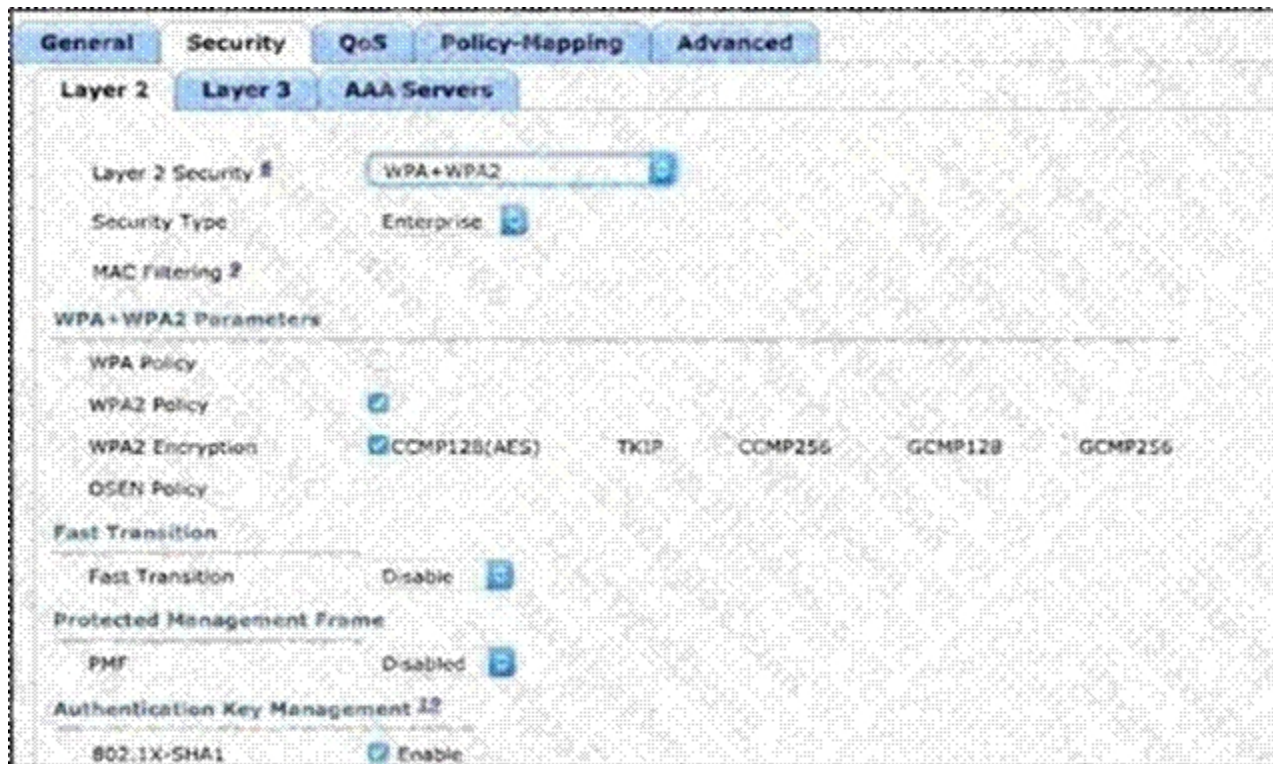
- A. R1(config)#ipv6 route 2019:C15C:0CAF:E001::/64 2019:C15C:0CAF:E002::1
- B. R1(config-if)#ipv6 route 2019:C15C:0CAF:E001::/64 2019:C15C:0CAF:E002::1
- C. R1(config-if)#ip route 2019:C15C:0CAF:E001::/64 GigabitEthernet0/0
- D. R1(config)#ip route 2019:C15C:0CAF:E001::/64 GigabitEthernet0/0

Correct Answer: C

Section:

QUESTION 126

Refer to the exhibit.



What must be configured to enable 802.11w on the WLAN?

- A. Set PMF to Required.
- B. Enable MAC Filtering.
- C. Enable WPA Policy.
- D. Set Fast Transition to Enabled

Correct Answer: A

Section:

QUESTION 127

Refer to the exhibit.



A network engineer configures the Cisco WLC to authenticate local wireless clients against a RADIUS server. Which task must be performed to complete the process?

- A. Change the Server Status to Disabled



- B. Select Enable next to Management
- C. Select Enable next to Network User
- D. Change the Support for CoA to Enabled.

Correct Answer: C

Section:

QUESTION 128

What is a function of Cisco Advanced Malware Protection for a Next-Generation IPS?

- A. authorizing potentially compromised wireless traffic
- B. inspecting specific files and file types for malware
- C. authenticating end users
- D. URL filtering

Correct Answer: B

Section:

Explanation:

AMP gives you real-time blocking of malware and advanced sandboxing, that is backed up by world class global threat intelligence, to provide rapid detection, containment and removal of advanced malware <https://www.cisco.com/c/en/us/products/security/amp-appliances/index.html>

QUESTION 129

Refer to the exhibit.

```
{
  "SW1" : ["Ten-GigabitEthernet0/0", "Ten-GigabitEthernet0/1"],
  "SW2" : ["Ten-GigabitEthernet0/0", "Ten-GigabitEthernet0/1"],
  "SW3" : ["Ten-GigabitEthernet0/0", "Ten-GigabitEthernet0/1"],
  "SW4" : ["Ten-GigabitEthernet0/0", "Ten-GigabitEthernet0/1"]
}
```



How many JSON objects are represented?

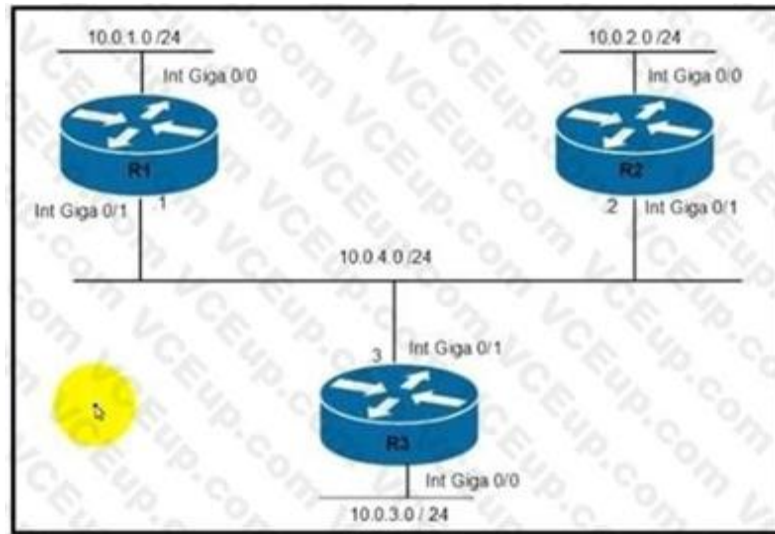
- A. 1
- B. 2
- C. 3
- D. 4

Correct Answer: D

Section:

QUESTION 130

Refer to the exhibit.



Router R1 must be configured to reach the 10.0.3.0/24 network from the 10.0.1.0/24 segment. Which command must be used to configure the route?

- A. ip route 10.0.3.0 0.255255.255 10.0.4.2
- B. route add 10.0.3.0 mask 255.255.255.0 10.0.4.3
- C. Ip route 10.0.3.0 255.255.255.0 10.0.4.3
- D. route add 10.0.3.0 0.255.255.255 10.0.4.2

Correct Answer: C
Section:



QUESTION 131

Refer to the exhibit.

```
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP
EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination
NDR - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1
OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
la - LISP alt, lr - LISP site-registrations, ld - LISP dyn-eid
lA - LISP away, le - LISP extranet-policy, lp - LISP publications

ND ::/0 [2/0]
  via FE80::A8BB:CCFF:FE00:200, Ethernet0/0
NDp 2001:DB8:1234:1::/64 [2/0]
  via Ethernet0/0, directly connected
L 2001:DB8:1234:1:A8BB:CCFF:FE00:100/128 [0/0]
  via Ethernet0/0, receive
C 2001:DB8:1234:2::/64 [0/0]
  via Ethernet0/1, directly connected
L 2001:DB8:1234:2:A8BB:CCFF:FE00:110/128 [0/0]
  via Ethernet0/1, receive
L FF00::/8 [0/0]
  via Null0, receive
```

The administrator must configure a floating static default route that points to 2001:db8:1234:2::1 and replaces the current default route only if it fails. Which command must the engineer configure on the CPE?

- A. ipv6 route ::/0 2001:db8:1234:2::1 3
- B. ipv6 route ::/128 2001 :db8:1234:2::1 3

- C. ipv6 route ::/0 2001:db8:1234:2::1 1
- D. ipv6 route ::/0 2001:db8:1234:2::1 2

Correct Answer: B

Section:

QUESTION 132

What is the function of "off-the-shell" switches in a controller-based network?

- A. providing a central view of the deployed network
- B. forwarding packets
- C. making routing decisions
- D. setting packet-handling policies

Correct Answer: D

Section:

QUESTION 133

Which command do you enter so that a switch configured with Rapid PVST + listens and learns for a specific time period?

- A. switch(config)#spanning-tree vlan 1 max-age 6
- B. switch(config)#spanning-tree vlan 1 hello-time 10
- C. switch(config)#spanning-tree vlan 1 priority 4096
- D. switch(config)#spanning-tree vlan 1 forward-time 20

Correct Answer: D

Section:

Explanation:

Forward time : Determines how long each of the listening and learning states last before the port begins forwarding.

Switch(config)# [no] spanning-tree vlan vlan_ID forward-time forward_time Configures the forward time of a VLAN. The forward_time value can be from 4 to 30 seconds.

<https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/15-02SG/configuration/guide/config/spantree.html#56177>



QUESTION 134

Refer to the exhibit.

```
R1# show ip route
Codes: C - connected, S - static, I - ISDP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - BGP
       * - candidate default
       U - per-neighbor static route, o - OER
Gateway of last resort is not set
C    172.16.0.0/16 is directly connected, Loopback0
O    172.16.0.0/16 is variably subnetted, 4 subnets, 2 masks
O    172.16.1.0/24 [110/100] via 192.168.7.40, 00:39:08, Serial0
C    172.16.1.0/24 is directly connected, Serial0
O    172.16.1.184/29 [110/5] via 192.168.7.35, 00:39:08, Serial0
O    172.16.3.0/24 [110/10] via 192.168.7.4, 00:39:08, Gigabit Ethernet 0/0
O    172.16.1.0/24 [90/10] via 192.168.7.7, 00:39:06, Gigabit Ethernet 0/0
```

Load-balanced traffic is coming in from the WAN destined to a host at 172.16.1.190. Which next-hop is used by the router to forward the request?

- A. 192.168.7.4
- B. 192.168.7.7
- C. 192.168.7.35
- D. 192.168.7.40

Correct Answer: D

Section:

QUESTION 135

An engineer is configuring data and voice services to pass through the same port. The designated switch interface fastethernet0/1 must transmit packets using the same priority for data when they are received from the access port of the IP phone. Which configuration must be used?

A)

```
interface fastethernet0/1
switchport voice vlan untagged
```

B)

```
interface fastethernet0/1
switchport voice vlan untagged
```

C)

```
interface fastethernet0/1
switchport voice vlan dot1p
```

D)

```
interface fastethernet0/1
switchport priority extend trust
```

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

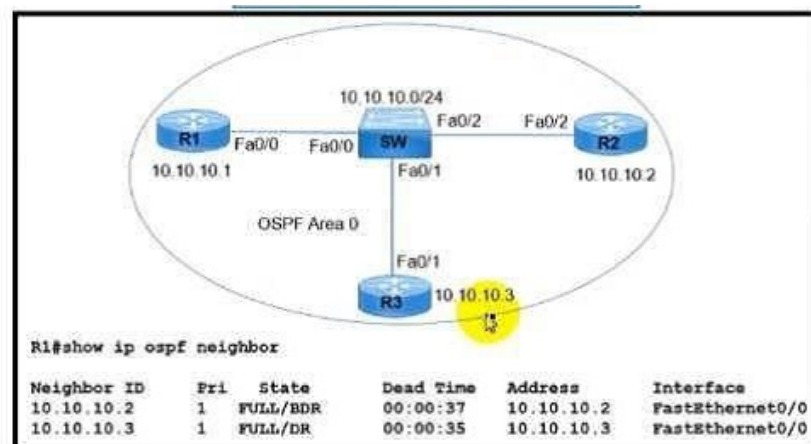
Correct Answer: A

Section:

QUESTION 136

Refer to the exhibit.





R1 has taken the DROTHER role in the OSPF DR/BDR election process. Which configuration must an engineer implement so that R1 is elected as the DR?

- R1(config)#interface FastEthernet 0/0
R1(config-if)#ip ospf priority 1
R1#clear ip ospf process
- R1(config)#interface FastEthernet 0/0
R1(config-if)#ip ospf priority 200
R1#clear ip ospf process
- R3(config)#interface FastEthernet 0/1
R3(config-if)#ip ospf priority 200
R3#clear ip ospf process
- R2(config)#interface FastEthernet 0/2
R2(config-if)#ip ospf priority 1
R2#clear ip ospf process



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

Correct Answer: B

Section:

QUESTION 137

What is a feature of WPA?

- A. 802.1x authentication
- B. preshared key
- C. TKIP/MIC encryption
- D. small Wi-Fi application

Correct Answer: A

Section:

QUESTION 138

Refer to the exhibit.

```
Cat9K-1# show lldp entry Cat9K-2

Local Intf: G1/0/21
Chassis id: 308b.b2b3.2880
Port id: G1/0/21
Port Description: GigabitEthernet1/0/21
System Name: Cat9K-2

Management Addresses:
  IP: 10.5.110.2
```

The network administrator must prevent the switch Cat9K-2 IP address from being visible in LLDP without disabling the protocol. Which action must be taken to complete the task?

- A. Configure the no lldp tlv-select-management-address command globally on Cat9K-2
- B. Configure the no lldp transmit command on interface G1/0/21 in Cat9K-1
- C. Configure the no lldp receive command on interface G1/0/21 on Cat9K-1
- D. Configure the no lldp mac-phy-cfg command globally on Cat9K-2

Correct Answer: A

Section:

QUESTION 139

Which WAN topology has the highest degree of reliability?

- A. full mesh
- B. Point-to-point
- C. hub-and-spoke
- D. router-on-a-stick

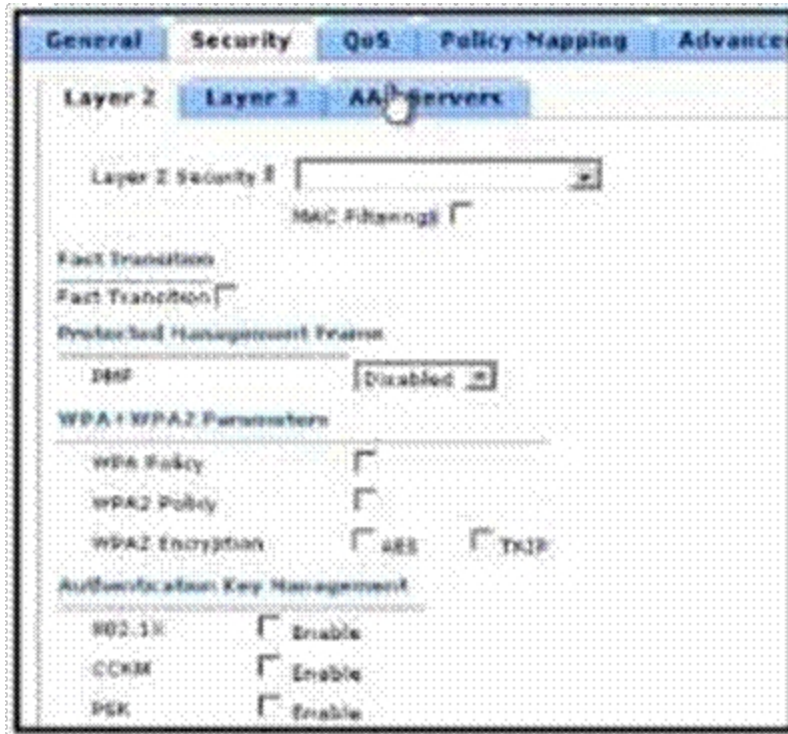
Correct Answer: A

Section:

QUESTION 140

What are the two steps an engineer must take to provide the highest encryption and authentication using domain credentials from LDAP?





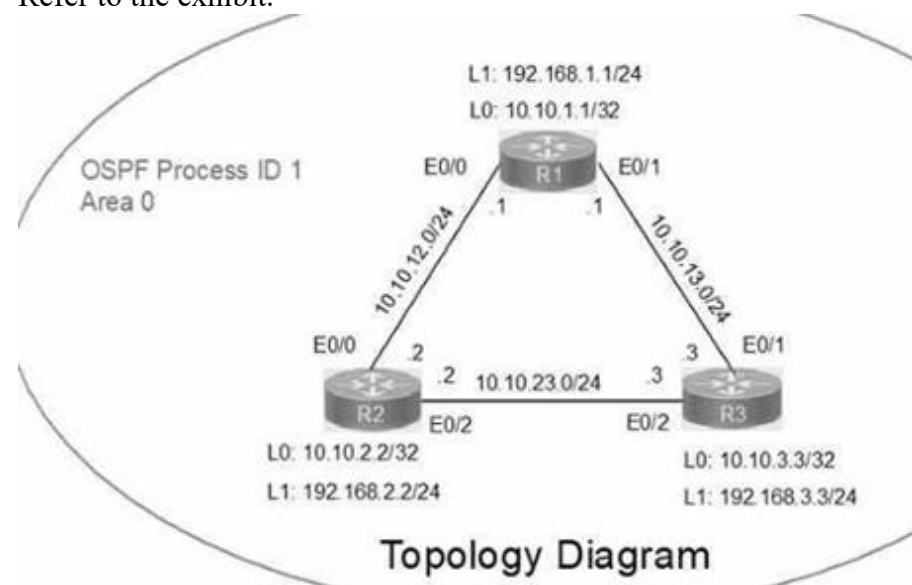
- A. Select PSK under Authentication Key Management
- B. Select WPA+WPA2 on Layer 2 Security
- C. Select Static-WEP + 802.1X on Layer 2 Security
- D. Select WPA Policy with TKIP Encryption
- E. Select 802.1X from under Authentication Key Management

Correct Answer: B, E

Section:

QUESTION 141

Refer to the exhibit.



Guidelines

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.

IP connectivity between the three routers is configured. OSPF adjacencies must be established.

- Configure R1 and R2 Router IDs using the interface IP addresses from the link that is shared between them.
- Configure the R2 links with a max value facing R1 and R3. R2 must become the DR. R1 and R3 links facing R2 must remain with the default OSPF configuration for DR election. Verify the configuration after clearing the OSPF process.
- Using a host wildcard mask, configure all three routers to advertise their respective Loopback1 networks.
- Configure the link between R1 and R3 to disable their ability to add other OSPF routers.
-

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

Answer as below configuration:

```
on R1
conf terminal
interface Loopback0
ip address 10.10.1.1 255.255.255.255
!
interface Loopback1
ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/0
no shut
ip address 10.10.12.1 255.255.255.0
ip ospf 1 area 0
duplex auto
!
interface Ethernet0/1
no shut
ip address 10.10.13.1 255.255.255.0
ip ospf 1 area 0
duplex auto
!
router ospf 1
router-id 10.10.12.1
network 10.10.1.1 0.0.0.0 area 0
network 192.168.1.0 0.0.0.255 area 0
!
copy run star
-----
```




```
On R2
conf terminal
interface Loopback0
ip address 10.10.2.2 255.255.255.255
!
interface Loopback1
ip address 192.168.2.2 255.255.255.0
!
interface Ethernet0/0
no shut
ip address 10.10.12.2 255.255.255.0
ip ospf priority 255
ip ospf 1 area 0
duplex auto
!
interface Ethernet0/2
no shut
ip address 10.10.23.2 255.255.255.0
ip ospf priority 255
ip ospf 1 area 0
duplex auto
!
router ospf 1
network 10.10.2.2 0.0.0.0 area 0
network 192.168.2.0 0.0.0.255 area 0
!
copy runs start
```

```
-----
On R3
conf ter
interface Loopback0
ip address 10.10.3.3 255.255.255.255
!
interface Loopback1
ip address 192.168.3.3 255.255.255.0
!
interface Ethernet0/1
no shut
ip address 10.10.13.3 255.255.255.0
ip ospf 1 area 0
duplex auto
!
interface Ethernet0/2
no shut
ip address 10.10.23.3 255.255.255.0
ip ospf 1 area 0
duplex auto
!
router ospf 1
network 10.10.3.3 0.0.0.0 area 0
network 192.168.3.0 0.0.0.255 area 0
!
copy run start
!
```



QUESTION 142

Physical connectivity is implemented between the two Layer 2 switches, and the network connectivity between them must be configured

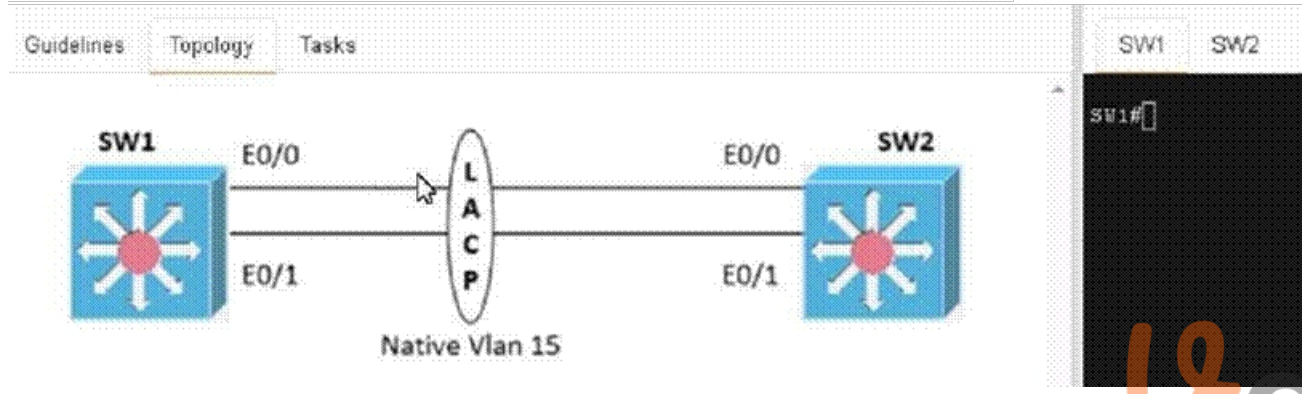
- A. Configure an LACP EtherChannel and number it as 1; configure it between switches SW1 and SVV2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides. The LACP mode must match on both ends
2 Configure the EtherChannel as a trunk link.

- B. Configure the trunk link with 802.1 q tags.
- C. Configure the native VLAN of the EtherChannel as VLAN 15.

Guidelines

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.



D.

Correct Answer: A

Section:

Explanation:

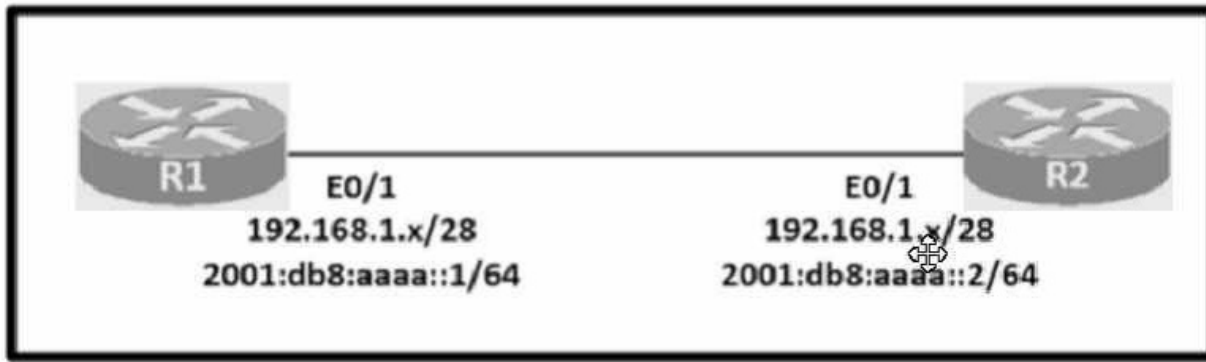
Answer: A
 Explanation:
 Answer as below configuration:
 On SW1:

```
conf terminal vlan 15 exit interface range eth0/0 - 1 channel-group 1 mode active exit interface port-channel 1 switchport trunk encapsulation dot1q switchport mode trunk switchport trunk native vlan 15 end copy run start on SW2:
conf terminal vlan 15 exit interface range eth0/0 - 1 channel-group 1 mode active exit interface port-channel 1 switchport trunk encapsulation dot1q switchport mode trunk switchport trunk native vlan 15 end copy run start
```

QUESTION 143

Configure IPv4 and IPv6 connectivity between two routers. For IPv4, use a /28 network from the 192.168.1.0/24 private range. For IPv6, use the first /64 subnet from the 2001:0db8:aaaa::/48 subnet.

- A. Using Ethernet0/1 on routers R1 and R2, configure the next usable/28 from the 192.168.1.0/24 range. The network 192.168.1.0/28 is unavailable.
- B. For the IPv4 /28 subnet, router R1 must be configured with the first usable host address.
- C. For the IPv4 /28 subnet, router R2 must be configured with the last usable host address.
- D. For the IPv6 /64 subnet, configure the routers with the IP addressing provided from the topology.
- E. A ping must work between the routers on the IPv4 and IPv6 address ranges.



Guidelines Topology Tasks

Guidelines

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
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- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.

R1 R2

R1#

F.

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

Answer as below configuration:

```

on R1
config terminal
ipv6 unicast-routing
inter eth0/1
ip address 192.168.1.1 255.255.255.240
ipv6 address 2001:db8:aaaa::1/64
not shut
end
copy running start
on R2
config terminal
ipv6 unicast-routing
inter eth0/1
ip address 192.168.1.14 255.255.255.240
ipv6 address 2001:db8:aaaa::2/64
not shut
end
copy running start
-----for
test from R1
ping ipv6 2001:db8:aaaa::1
for test from R2
ping ipv6 2001:db8:aaaa::2

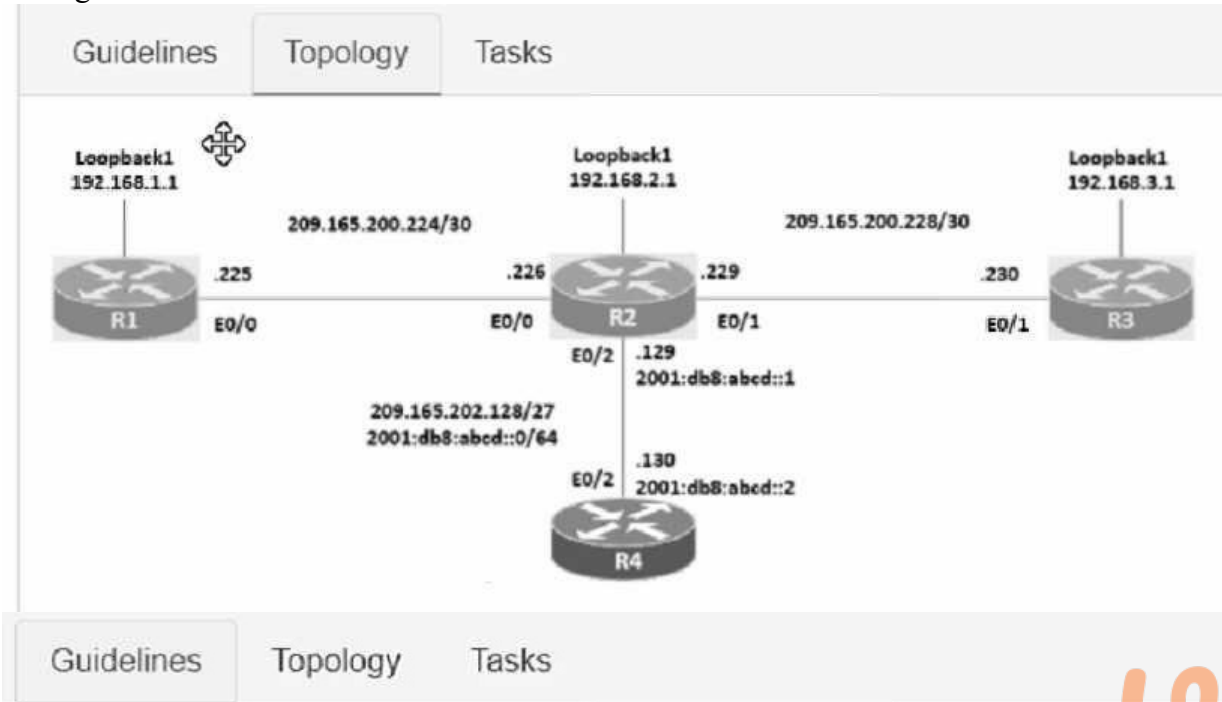
```

 Vdumps

QUESTION 144

Connectivity between four routers has been established. IP connectivity must be configured in the order presented to complete the implementation. No dynamic routing protocols are included.

- A. Configure static routing using host routes to establish connectivity from router R3 to the router R1 Loopback address using the source IP of 209.165.200.230.
- B. Configure an IPv4 default route on router R2 destined for router R4.
- C. Configure an IPv6 default router on router R2 destined for router R4.



Guidelines

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- Do not change the enable password or hostname for any device.
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- When **Next** is clicked, the lab closes and cannot be reopened.

D.

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

1.- on R3

config terminal

```
ip route 192.168.1.1 255.255.255.255 209.165.200.229
```

end

copy running start

2.- on R2

config terminal

```
ip route 0.0.0.0 0.0.0.0 209.165.202.130
```

end

copy running start

3.- on R2

config terminal

```
ipv6 route ::/0 2001:db8:abcd::2
```

end

copy running start

QUESTION 145

Guidelines

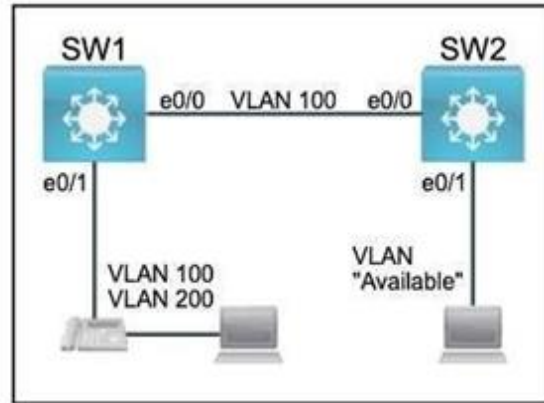
This is a lab item in which tasks will be performed on virtual devices.

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- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
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All physical cabling between the two switches is installed. Configure the network connectivity between the switches using the designated VLANs and interfaces.

- A. Configure VLAN 100 named Compute and VLAN 200 named Telephony where required for each task.
- B. Configure Ethernet0/1 on SW2 to use the existing VLAN named Available.
- C. Configure the connection between the switches using access ports.
- D. Configure Ethernet0/1 on SW1 using data and voice VLANs.
- E. Configure Ethernet0/1 on SW2 so that the Cisco proprietary neighbor discovery protocol is turned off for the designated interface only.



F.

Correct Answer: A

Section:

Explanation:

Answer: A
Explanation:
on sw1
enable
conf t
vlan 100
name Compute
vlan 200
name Telephony
int e0/1
switchport voice vlan 200
switchport access vlan 100
int e0/0
switchport mode access
do wr
on sw2
Vlan 99
Name Available
Int e0/1
Switchport access vlan 99
do wr

QUESTION 146

Refer to the exhibit.

The logo for Vdumps.com, featuring a stylized orange 'V' followed by the word 'dumps' in a grey, sans-serif font.

Guidelines

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
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- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.

Three switches must be configured for Layer 2 connectivity. The company requires only the designated VLANs to be configured on their respective switches and permitted across any links between switches for security purposes. Do not modify or delete VTP configurations.

The network needs two user-defined VLANs configured:

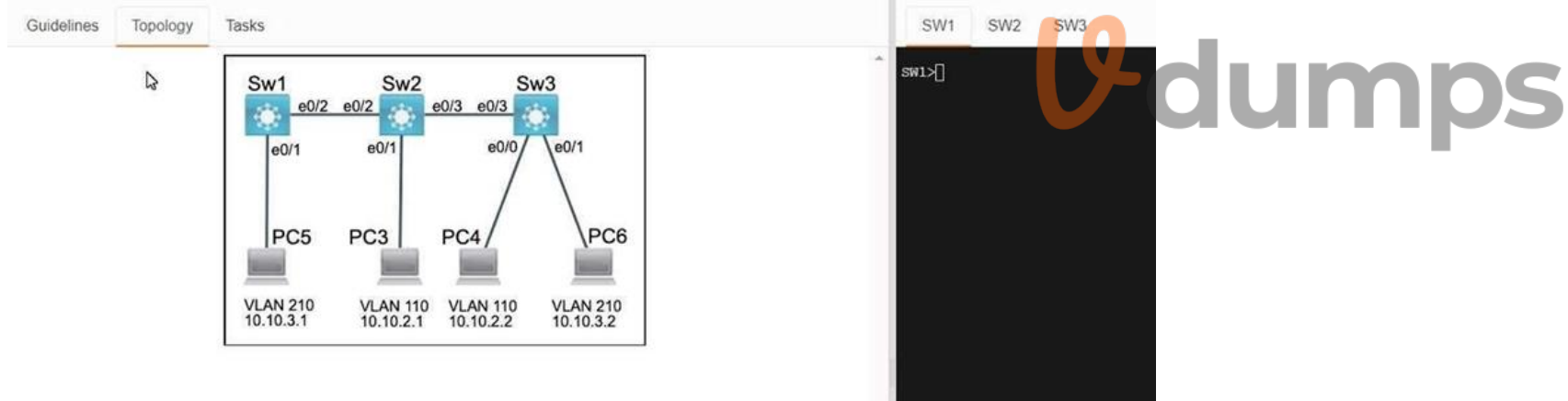
VLAN 110: MARKETING

VLAN 210: FINANCE

A. Configure the VLANs on the designated switches and assign them as access ports to the interfaces connected to the PCs.

B. Configure the e0/2 interfaces on Sw1 and Sw2 as 802.1q trunks with only the required VLANs permitted.

C. Configure the e0/3 interfaces on Sw2 and Sw3 as 802.1q trunks with only the required VLANs permitted.



D.

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

Sw1 enable config t

Vlan 210

Name FINANCE

Inter e0/1

Switchport access vlan 210 do wr

Sw2

Enable config t

Vlan 110

Name MARKETING

```

Int e0/1
Switchport access vlan 110 do wr
Sw3
Enable config t
Vlan 110
Name MARKETING
Vlan 210
Name FINANCE
Int e0/0
Switchport access vlan 110
Int e0/1
Switchport access vlan 210
Sw1
Int e0/1
Switchport allowed vlan 210
Sw2
Int e0/2
Switchport trunk allowed vlan 210
Sw3
Int e0/3
Switchport trunk allowed vlan 210
Switchport trunk allowed vlan 210,110

```

QUESTION 147

Guidelines
Topology
Tasks

R1
R2
R3

R1#

Guidelines
Topology
Tasks

Guidelines

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
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- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.



Connectivity between three routers has been established, and IP services must be configured in the order presented to complete the implementation. Tasks assigned include configuration of NAT, NTP, DHCP, and SSH services.



1. All traffic sent from R3 to the R1 Loopback address must be configured for NAT on R2. All source addresses must be translated from R3 to the IP address of Ethernet0/0 on R2, while using only a standard access list named NAT To verify, a ping must be successful to the R1 Loopback address sourced from R3. Do not use NVI NAT configuration.



2. Configure R1 as an NTP server and R2 as a client, not as a peer, using the IP address of the R1 Ethernet0/2 interface. Set the clock on the NTP server for midnight on January 1, 2019.



3. Configure R1 as a DHCP server for the network 10.1.3.0/24 in a pool named TEST. Using a single command, exclude addresses 1-10 from the range. Interface Ethernet0/2 on R3 must be issued the IP address of 10.1.3.11 via DHCP.



4. Configure SSH connectivity from R1 to R3, while excluding access via other remote connection protocols. Access for user root and password Cisco must be set on router R3 using RSA and 1024 bits.



Verify connectivity using an SSH session from router R1 using a destination address of 10.1.3.11. Do NOT modify console access or line numbers to accomplish this task.

A. See the Explanation below.

Correct Answer: A

Section:

Explanation:

Answer as below configuration:

NAT:

```
R2(config)# ip access list standard PUBNET
R2(config-std-nacl)# permit 10.2.3.3
R2(config-std-nacl)# permit 10.1.3.11
R2(config-std-nacl)# permit 192.168.3.1
R2(config-std-nacl)# exit
R2(config)# interface e0/1
R2(config-if)# ip nat inside
R2(config)# interface e0/0
R2(config-if)# ip nat outside
R2(config)# ip nat inside source list PUBNET interface e0/0 overload
```

Verification

```
R3#ping 192.168.1.1
```

NTP:

```
R1#clock set 00:00:00 January 1 2019 //Midnight means 00:00:00
R1(config)# ntp master 1
R2(config)# ntp server 10.1.3.1
```

DHCP:

```
R1(config)# ip dhcp pool NETPOOL
R1(dhcp-config)# network 10.1.3.0 255.255.255.0
R1(config)# exit
R1(config)# ip dhcp excluded-address 10.1. 3.1 10.1.3.10
R3(config)# interface e0/2
R3(config-if)# ip address dhcp
```

SSH:

```
R3(config)# username netadmin password N3t4ccess
R3(config)# line vty 0 4
R3(config-line)# login local
R3(config-line)# exit
R3(config)# ip domain-name cisco.com
R3(config)# crypto key generate rsa modulus 1024
```

Verification

```
R1# ssh -l root -p cisco 10.1.3.11
```

As the guidelines clearly stated that we have to save the configuration to NVRAM so please save all your configurations on R1, R2 and R3:

```
R1#, R2#, R3#copy running-config startup-config
```

QUESTION 148

Refer to the exhibit.



Guidelines Topology Tasks

Guidelines

This is a lab item in which tasks will be performed on virtual devices:

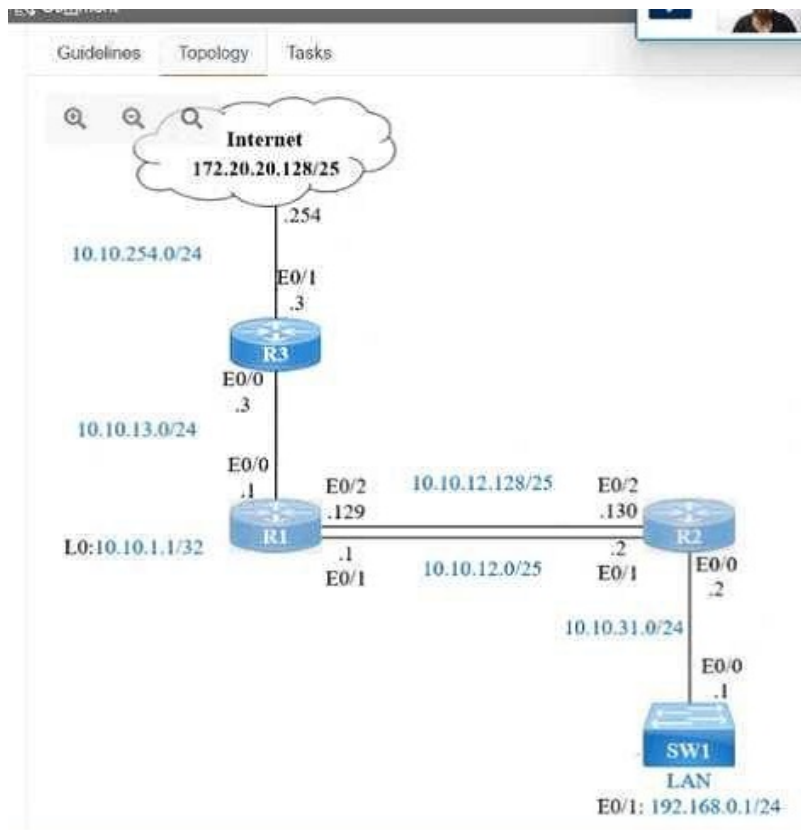
- Refer to the **Tasks** tab to view the tasks for this lab item.
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- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.

Network topology diagram showing R1, R2, and SW1. R1 is connected to R2 via E0/2. R1 has a loopback address 10.10.1.1/32. R2 is connected to SW1 via E0/0. SW1 is connected to a LAN with address 10.10.31.0/24. The link between R1 and R2 is highlighted in yellow.

Guidelines Topology Tasks

Network topology diagram showing R1, R2, R3, and SW1. R1 is connected to R2 via E0/2. R1 is connected to R3 via E0/0. R3 is connected to the Internet via E0/1. SW1 is connected to R2 via E0/0. The Internet cloud has address 172.20.20.128/25. R1 has a loopback address 10.10.1.1/32. R2 is connected to SW1 via E0/0. SW1 is connected to a LAN with address 10.10.31.0/24.

 **vdumps**



IP connectivity and OSPF are preconfigured on all devices where necessary. Do not make any changes to the IP addressing or OSPF. The company policy uses connected interfaces and next hops when configuring static routes except for load balancing or redundancy without floating static. Connectivity must be established between subnet 172.20.20.128/25 on the Internet and the LAN at 192.168.0.0/24 connected to SW1:

1. Configure reachability to the switch SW1 LAN subnet in router R2.
2. Configure default reachability to the Internet subnet in router R1.
3. Configure a single static route in router R2 to reach to the Internet subnet considering both redundant links between routers R1 and R2. A default route is NOT allowed in router R2.
4. Configure a static route in router R1 toward the switch SW1 LAN subnet where the primary link must be through Ethernet0/1. and the backup link must be through Ethernet0/2 using a floating route. Use the minimal administrative distance value when required.

A. See the Explanation below.

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

On R2:

Enable

Conf t

Ip route 192.168.1.0 255.255.255.0 10.10.31.1

On R1:

Enable

Conf t

Ip route 0.0.0.0 0.0.0.0 10.10.13.3

On R2

Ip route 172.20.20.128 255.255.255.128 e0/2

Ip route 172.20.20.128 255.255.255.128 e0/1

On R1

Ip route 192.168.0.0 255.255.255.0 e0/1

Ip route 192.168.0.0 255.255.255.0 10.10.12.2 3

Save all configurations after every router from anyone of these command

Do wr

Or

Copy run start

QUESTION 149



An engineer must configure neighbor discovery between the company router and an ISP



```
interface gigabitethernet0/0
description Circuit-ATT4203-21099
duplex full
speed 1000
media-type gbic
negotiation auto
lldp transmit
lldp receive
```



What is the next step to complete the configuration if the ISP uses a third-party router?

- A. Enable LLDP globally.
- B. Disable CDP on gi0/0.
- C. Enable LLDP TLVs on the ISP router.
- D. Disable auto-negotiation.

Correct Answer: A

Section:

QUESTION 150

Refer to the exhibit.

```
SW1#show spanning-tree vlan 30
VLAN0030
Spanning tree enabled protocol rstp
Root ID    Priority      32798
           Address     0025.63e9.c800
           Cost        19
           Port        1 (FastEthernet 2/1)
           Hello Time   2 sec
           Max Age     30 sec
           Forward Delay 20 sec
[Output suppressed]
```

What are two conclusions about this configuration? {Choose two.}

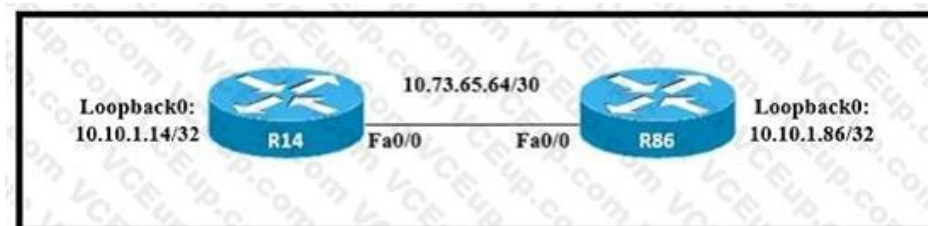
- A. The spanning-tree mode is Rapid PVST+.
- B. This is a root bridge.
- C. The root port is FastEthernet 2/1.
- D. The designated port is FastEthernet 2/1.
- E. The spanning-tree mode is PVST+.

Correct Answer: A

Section:

QUESTION 151

Refer to the exhibit.



All interfaces are configured with duplex auto and ip ospf network broadcast. Which configuration allows routers R14 and R86 to form an OSPFv2 adjacency and act as a central point for exchanging OSPF information between routers?



```
R14#  
interface FastEthernet0/0  
ip address 10.73.65.65 255.255.255.252  
ip ospf priority 0  
ip mtu 1500  
  
router ospf 10  
router-id 10.10.1.14  
network 10.10.1.14 0.0.0.0 area 0  
network 10.73.65.64 0.0.0.3 area 0  
R86#  
interface FastEthernet0/0  
ip address 10.73.65.66 255.255.255.252  
ip mtu 1500  
  
router ospf 10  
router-id 10.10.1.86  
network 10.10.1.86 0.0.0.0 area 0  
network 10.73.65.64 0.0.0.3 area 0
```

```
R14#  
interface Loopback0  
ip ospf 10 area 0  
  
interface FastEthernet0/0  
ip address 10.73.65.65 255.255.255.252  
ip ospf priority 255  
ip ospf 10 area 0  
ip mtu 1500  
  
router ospf 10  
router-id 10.10.1.14  
  
R86#  
interface Loopback0  
ip ospf 10 area 0  
  
interface FastEthernet0/0  
ip address 10.73.65.66 255.255.255.252  
ip ospf 10 area 0  
ip mtu 1500  
  
router ospf 10  
router-id 10.10.1.86
```



```
R14#
interface FastEthernet0/0
ip address 10.73.65.65 255.255.255.252
ip ospf priority 255
ip mtu 1500

router ospf 10
router-id 10.10.1.14
network 10.10.1.14 0.0.0.0 area 0
network 10.73.65.64 0.0.0.3 area 0
R86#
interface FastEthernet0/0
ip address 10.73.65.66 255.255.255.252
ip mtu 1400

router ospf 10
router-id 10.10.1.86
network 10.10.1.86 0.0.0.0 area 0
network 10.73.65.64 0.0.0.3 area 0
R14#
interface Loopback0
ip ospf 10 area 0

interface FastEthernet0/0
ip address 10.73.65.65 255.255.255.252
ip ospf 10 area 0
ip mtu 1500

router ospf 10
ip ospf priority 255
router-id 10.10.1.14
R86#
interface Loopback0
ip ospf 10 area 0

interface FastEthernet0/0
ip address 10.73.65.66 255.255.255.252
ip ospf 10 area 0
ip mtu 1500

router ospf 10
router-id 10.10.1.86
```

- A. Option A
- B. Option B
- C. Option C
- D. option D

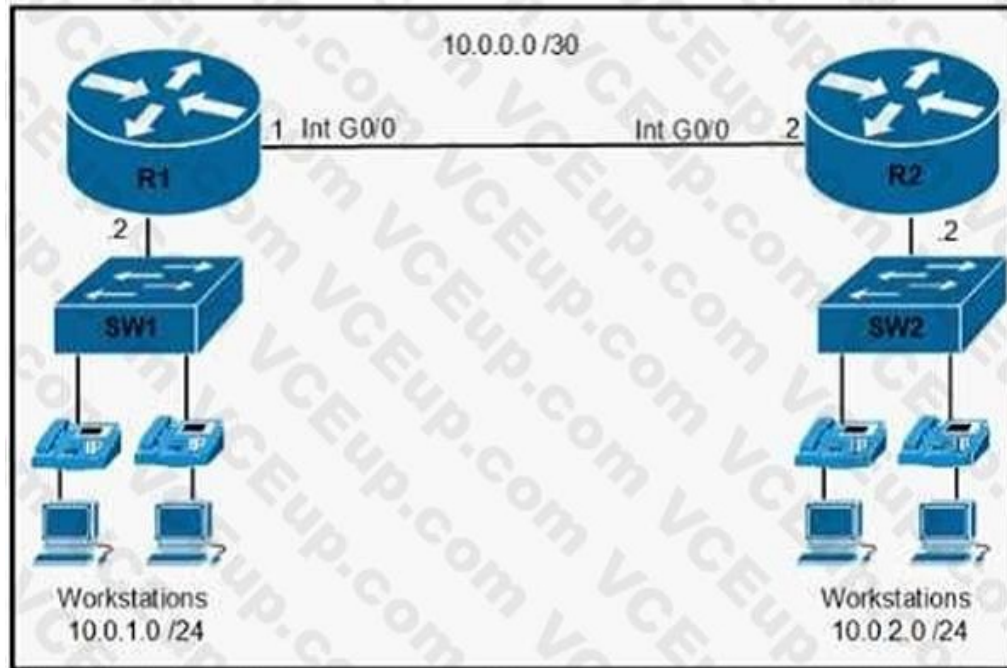
Correct Answer: B

Section:

QUESTION 152

Refer to the exhibit.





An engineer is asked to configure router R1 so that it forms an OSPF single-area neighbor relationship with R2. Which command sequence must be implemented to configure the router?

- router ospf 10
network 10.0.0.0 0.0.0.3 area 0
network 10.0.2.0 0.0.0.255 area 0
- router ospf 10
network 10.0.0.0 0.0.0.3 area 0
network 10.0.1.0 0.0.0.255 area 0
- router ospf 100
network 10.0.0.0 0.0.0.3 area 0
network 10.0.2.0 255.255.255.0 area 0
- router ospf 100
network 10.0.0.0 0.0.0.252 area 0
network 10.0.1.0 0.0.0.255 area 0

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

Correct Answer: B

Section:

QUESTION 153

What is a function performed by a web server?

- A. provide an application that is transmitted over HTTP
- B. send and retrieve email from client devices
- C. authenticate and authorize a user's identity
- D. securely store files for FTP access



Correct Answer: A

Section:

QUESTION 154

What is the collapsed layer in collapsed core architectures?

- A. core and WAN
- B. access and WAN
- C. distribution and access
- D. core and distribution

Correct Answer: D

Section:

QUESTION 155

Which set of 2.4 GHz nonoverlapping wireless channels is standard in the United States?

- A. channels 2, 7, 9, and 11
- B. channels 1, 6, 11, and 14
- C. channels 2, 7, and 11
- D. channels 1, 6, and 11

Correct Answer: D

Section:

Explanation:

In the United States, while channels 1-13 can be used for 2.4 GHz WiFi, only three channels are considered non-overlapping (channels 12 and 13 are allowed under low powered conditions, but for most cases are not used). For best results, it is highly recommended to keep the 2.4 GHz channels to 1, 6, and 11, as these channel settings will allow for virtually no overlap in the WiFi signal. Shown below is a channel graph from WiFi Scanner showing three access points configured for channels 1, 6, and 11. As you can see, the center of each signal is at 1, 6, and 11 with the actual signal extending over several channels to the left and right.



QUESTION 156

An engineer is installing a new wireless printer with a static IP address on the Wi-Fi network. Which feature must be enabled and configured to prevent connection issues with the printer?

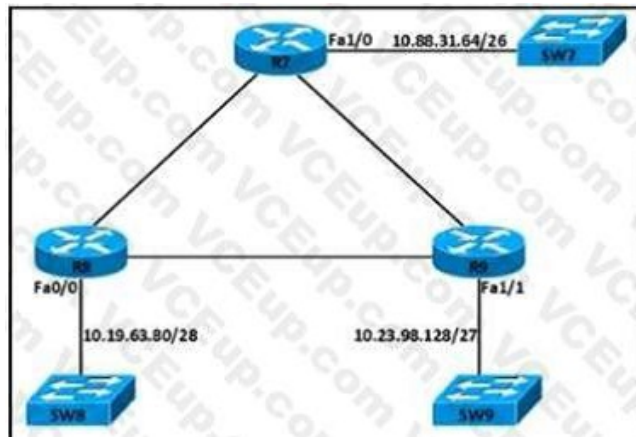
- A. client exclusion
- B. passive client
- C. DHCP address assignment
- D. static IP tunneling

Correct Answer: C

Section:

QUESTION 157

Refer to the exhibit.



Each router must be configured with the last usable IP address in the subnet. Which configuration fulfills this requirement?

```

R7#
interface FastEthernet1/0
ip address 10.88.31.126 255.255.255.240

R8#
interface FastEthernet0/0
ip address 10.19.63.94 255.255.255.192

R9#
interface FastEthernet1/1
ip address 10.23.98.158 255.255.255.248

R7#
interface FastEthernet1/0
ip address 10.88.31.127 255.255.255.240

R8#
interface FastEthernet0/0
ip address 10.19.63.95 255.255.255.192

R9#
interface FastEthernet1/1
ip address 10.23.98.159 255.255.255.248

R7#
interface FastEthernet1/0
ip address 10.88.31.126 255.255.255.192

R8#
interface FastEthernet0/0
ip address 10.19.63.94 255.255.255.240

R9#
interface FastEthernet1/1
ip address 10.23.98.158 255.255.255.224

R7#
interface FastEthernet1/0
ip address 10.88.31.127 255.255.255.192

R8#
interface FastEthernet0/0
ip address 10.19.63.95 255.255.255.240

R9#
interface FastEthernet1/1
ip address 10.23.98.159 255.255.255.224
  
```



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

Correct Answer: C

Section:

QUESTION 158

What is a specification for SSIDS?

- A. They are a Cisco proprietary security feature.
- B. They must include one number and one letter.
- C. They define the VLAN on a switch.
- D. They are case sensitive.

Correct Answer: B

Section:

QUESTION 159

How does router R1 handle traffic to the 172.16.1.4/30 subnet?

- A. It sends all traffic over the path via 172.16.9.5 using 172.16.4.4 as a backup.
- B. It sends all traffic over the path via 10.0.1.100.
- C. It load-balances traffic over 172.16.9.5 and 172.16.4.4.
- D. It sends all traffic over the path via 172.16.4.4.



Correct Answer: C

Section:

QUESTION 160

Which type of address is shared by routers in a HSRP implementation and used by hosts on the subnet as their default gateway address?

- A. multicast address
- B. loopback IP address
- C. virtual IP address
- D. broadcast address

Correct Answer: C

Section:

QUESTION 161

Which device segregates a network into separate zones that have their own security policies?

- A. IPS
- B. firewall

- C. access point
- D. switch

Correct Answer: C

Section:

QUESTION 162

Refer to the exhibit.

```
Gateway of last resort is 172.16.2.2 to network 0.0.0.0

 10.0.0.0/8 is variably subnetted, 3 subnets, 3 masks
   10.10.100.0/26 is directly connected, GigabitEthernet0/0/6
   10.10.10.0/24 is directly connected, GigabitEthernet0/0/0
   10.10.10.3/32 is directly connected, GigabitEthernet0/0/0
 172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
   172.16.1.33/32 is directly connected, GigabitEthernet0/0/1
   172.16.2.0/23 is directly connected, GigabitEthernet0/0/1
   172.16.2.1/32 is directly connected, GigabitEthernet0/0/1
S* 0.0.0.0/0 [1/0] via 172.16.2.2
```

A packet sourced from 10.10.10.32 is destined for the internet.

- A. 0
- B. 1
- C. 2
- D. 32

Correct Answer: B

Section:

QUESTION 163

DRAG DROP

An engineer is tasked to configure a switch with port security to ensure devices that forward unicasts, multicasts, and broadcasts are unable to flood the port. The port must be configured to permit only two random MAC addresses at a time.

Drag and drop the required configuration commands from the left onto the sequence on the right. Not all commands are used.

Select and Place:



switchport mode access

switchport port-security

switchport port-security mac-address 0060.3EED.77AB

switchport port-security mac-address 00D0.D3ED.622A

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation shutdown

1

2

3

4

Correct Answer:

 **vdumps**

switchport mode access

switchport port-security mac-address 0060.3EED.77AB

switchport port-security mac-address 00D0.D3ED.622A

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation shutdown



Section:

Explanation:

https://www.cisco.com/en/US/docs/switches/lan/catalyst3850/software/release/3se/consolidated_guide/b_consolidated_3850_3se_cg_chapter_01000000.html

QUESTION 164

DRAG DROP

Drag and drop the TCP or UDP details from the left onto their corresponding protocols on the right.

Select and Place:

Answer Area

used to reliably share files between devices

appropriate for streaming operations with minimal latency

provides best-effort service

supports reliable data transmission

TCP

UDP

Correct Answer:

Answer Area

TCP

supports reliable data transmission

used to reliably share files between devices

UDP

appropriate for streaming operations with minimal latency

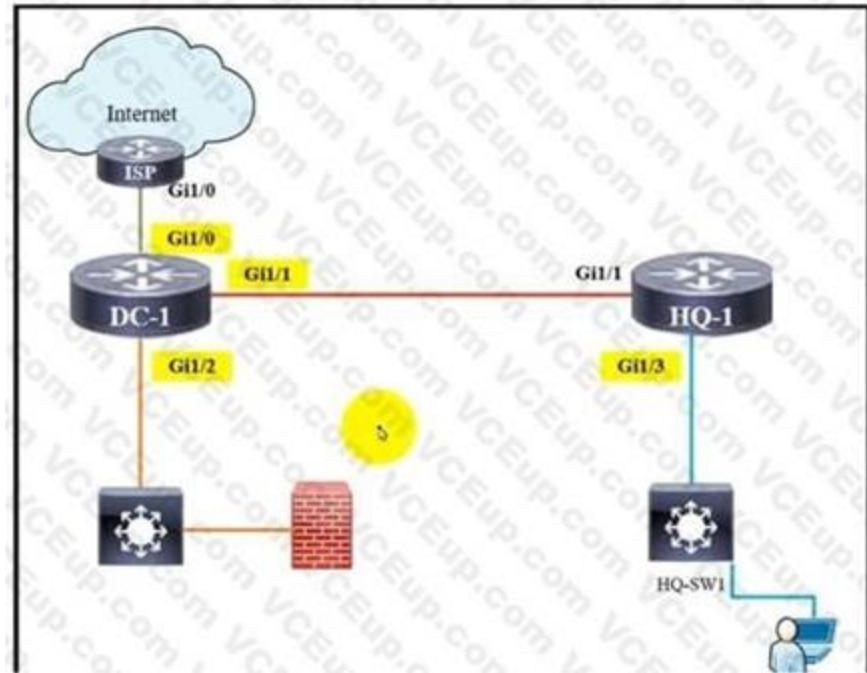
provides best-effort service



Section:

Explanation:

QUESTION 165
DRAG DROP
Refer to Exhibit.



Refer to the exhibit. The IP address configurations must be completed on the DC-1 and HQ-1 routers based on these requirements:

DC-1 Gi1/0 must be the last usable address on a /30

DC-1 Gi1/1 must be the first usable address on a /29

DC-1 Gi1/2 must be the last usable address on a /28

HQ-1 Gi1/3 must be the last usable address on a /29

Drag and drop the commands from the left onto the destination interfaces on the right. Not all commands are used

Select and Place:



ip address 192.168.4.9 255.255.255.248

ip address 192.168.3.14 255.255.255.240

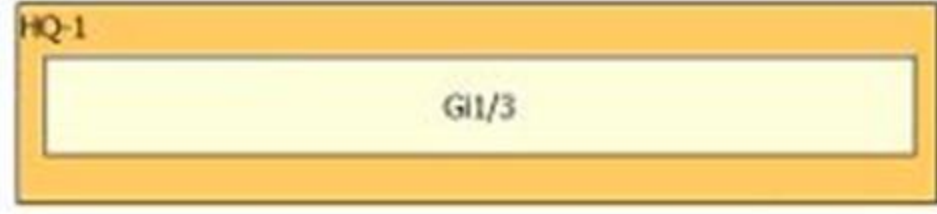
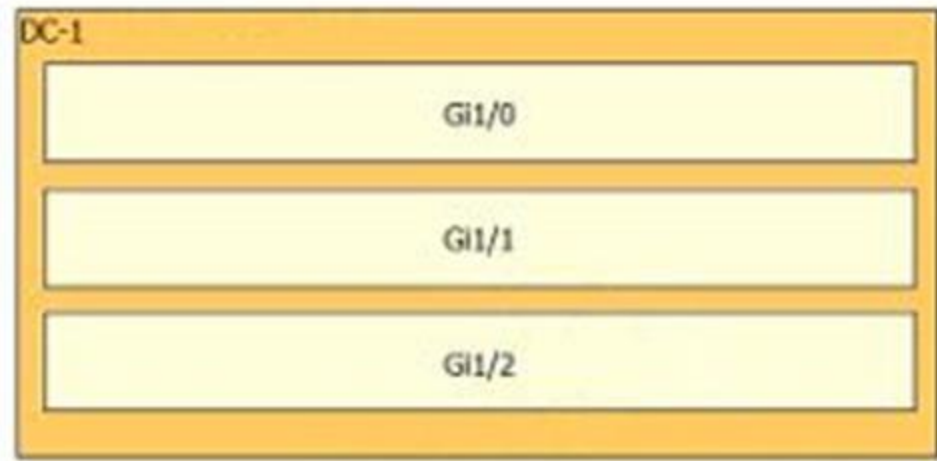
ip address 209.165.202.129 255.255.255.252

ip address 192.168.4.13 255.255.255.240

ip address 209.165.202.130 255.255.255.252

ip address 209.165.202.131 255.255.255.252

ip address 192.168.3.14 255.255.255.248



Correct Answer:

ip address 209.165.202.129 255.255.255.252

ip address 192.168.4.13 255.255.255.240

ip address 209.165.202.131 255.255.255.252

DC-1

ip address 209.165.202.130 255.255.255.252

ip address 192.168.4.9 255.255.255.248

ip address 192.168.3.14 255.255.255.240

HQ-1

ip address 192.168.3.14 255.255.255.248

Vdumps

Section:

Explanation:

QUESTION 166

DRAG DROP

Drag and drop the IPv6 address description from the left onto the IPv6 address types on the right.

Not all options are used.

Select and Place:

- IPv6 addresses in the format FF02::5
- IPv6 addresses that begin with FD
- may be used by multiple organizations at the same time
- private IPv6 addresses
- serve as next-hop addresses
- unable to serve as destination addresses

Unique Local Addresses

-
-
-

Link-Local Addresses

-
-

Correct Answer:

- IPv6 addresses in the format FF02::5
-
-
-
-

Unique Local Addresses

- private IPv6 addresses
- IPv6 addresses that begin with FD
- may be used by multiple organizations at the same time

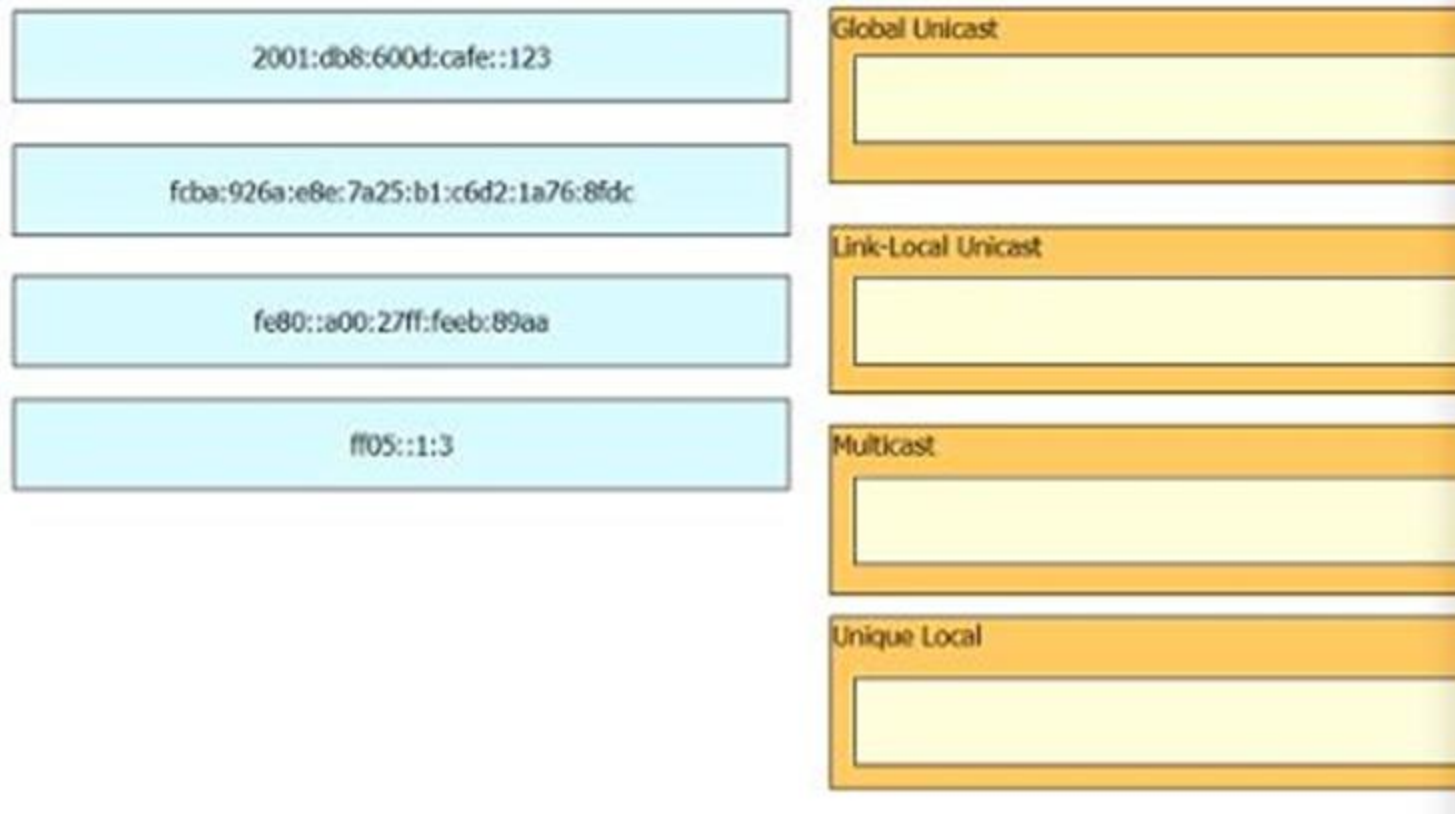
Link-Local Addresses

- serve as next-hop addresses
- unable to serve as destination addresses

Section:
Explanation:

QUESTION 167
DRAG DROP

Select and Place:



Correct Answer:



Section:

Explanation:

QUESTION 168

A network analyst is tasked with configuring the date and time on a router using EXEC mode. The date must be set to January 1, 2020 and the time must be set to 12:00 am. Which command should be used?

- A. clock summer-time recurring
- B. clock timezone
- C. clock summer-time date
- D. clock set

Correct Answer: D

Section:

QUESTION 169

Which type of IPv4 address type helps to conserve the globally unique address classes?

- A. multicast
- B. private
- C. loopback
- D. public

Correct Answer: B

Section:

Explanation:

Topic 5, Simulations / Lab

QUESTION 170

Which functionality is provided by the console connection on a Cisco WLC?

- A. out-of-band management
- B. secure in-band connectivity for device administration
- C. unencrypted in-band connectivity for file transfers
- D. HTTP-based GUI connectivity

Correct Answer: B

Section:

QUESTION 171

What determines the sequence in which materials are planned during the material requirements planning (MRP) run?

- A. The control parameters of the MRP run
- B. The creation date of the materials
- C. The low-level code of the materials
- D. The replenishment lead time of the materials

Correct Answer: C

Section:

QUESTION 172

Which advantage does the network assurance capability of Cisco DNA Center provide over traditional campus management?

- A. Cisco DNA Center correlates information from different management protocols to obtain insights, and traditional campus management requires manual analysis.



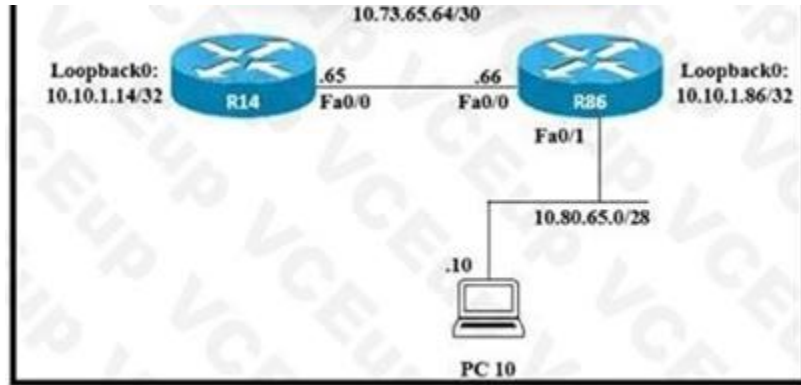
- B. Cisco DNA Center handles management tasks at the controller to reduce the load on infrastructure devices, and traditional campus management uses the data backbone.
- C. Cisco DNA Center leverages YANG and NETCONF to assess the status of fabric and nonfabric devices, and traditional campus management uses CLI exclusively.
- D. Cisco DNA Center automatically compares security postures among network devices, and traditional campus management needs manual comparisons.

Correct Answer: C

Section:

QUESTION 173

Refer to the exhibit.



Router R14 is in the process of being configured. Which configuration must be used to establish a host route to PC 10?

- A. ip route 10.80.65.10 255.255.255.254 10.80.65.1
- B. ip route 10.8065.10 255.255.255.255 10.73.65.66
- C. ip route 1073.65.65 255.0.0.0 10.80.65.10
- D. ip route 10.73.65.66 0.0.0.255 10.80.65.10



Correct Answer: B

Section:

QUESTION 174

What is the put method within HTTP?

- A. It is a read-only operation.
- B. It is a nonidempotent operation.
- C. It replaces data at the destination.
- D. It displays a web site.

Correct Answer: D

Section:

QUESTION 175

How do TCP and UDP fit into a query-response model?

- A. TCP establishes a connection prior to sending data, and UDP sends immediately.
- B. TCP uses error detection for packets, and UDP uses error recovery.
- C. TCP avoids using sequencing, and UDP avoids using acknowledgments.
- D. TCP encourages out-of-order packet delivery, and UDP prevents re-ordering.

Correct Answer: A

Section:

QUESTION 176

DRAG DROP

Drag and drop the QoS terms from the left onto the descriptions on the right.

Select and Place:

cloud-based weighted fair queueing	categorizes packets based on the value of a traffic descriptor
classification	guarantees minimum bandwidth to specific traffic classes when an interface is congested
congestion	prevents congestion by reducing the flow of outbound traffic
policing	outcome of overutilization
shaping	uses defined criteria to limit the transmission of one or more classes of traffic



Correct Answer:

	classification
	cloud-based weighted fair queueing
	shaping
	congestion
	policing

Section:

Explanation:

QUESTION 177

DRAG DROP

Drag and drop the functions of AAA supporting protocols from the left onto the protocols on the right.

Select and Place:

encrypts only the password when it sends an access request

encrypts the entire body of the access-request packet

separates all three AAA operations

combines authentication and authorization

uses TCP

uses UDP

RADIUS

TACACS+

Correct Answer:

	RADIUS
	encrypts only the password when it sends an access request
	uses UDP
	combines authentication and authorization
	TACACS+
	encrypts the entire body of the access-request packet
	separates all three AAA operations
	uses TCP

Section:
Explanation:

	RADIUS
	encrypts only the password when it sends an access request
	uses UDP
	combines authentication and authorization
	TACACS+
	encrypts the entire body of the access-request packet
	separates all three AAA operations
	uses TCP

QUESTION 178
DRAG DROP

Drag and drop the HTTP methods used with REST-Based APIs from the left onto the descriptions on the right.

Select and Place:

DELETE	creates a resource and returns its URI in the response header
GET	creates or replaces a previously modified resource using information in the request body
POST	removes a resource
PATCH	retrieves a list of a resource's URIs
PUT	updates a resource using instructions included in the request body

Correct Answer:

	POST
	DELETE
	PATCH
	PUT
	GET

Section:

Explanation:



	POST
	DELETE
	PATCH
	PUT
	GET

QUESTION 179

DRAG DROP

Drag and drop the Wi-Fi terms from the left onto the descriptions on the right.

Select and Place:

distribution system	Wi-Fi option in which cells from different access points are linked together
extended service set	Wi-Fi option that enables two or more clients to communicate directly without a central access point
independent basic service set	Wi-Fi option based around one or more access points
infrastructure mode	alphanumeric text string that identifies a wireless network
SSID	entire wireless cell of an access point and the linkage to the wired network

Correct Answer:

	distribution system
	independent basic service set
	extended service set
	SSID
	infrastructure mode

Section:

Explanation:

QUESTION 180

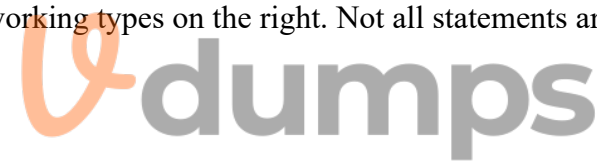
DRAG DROP

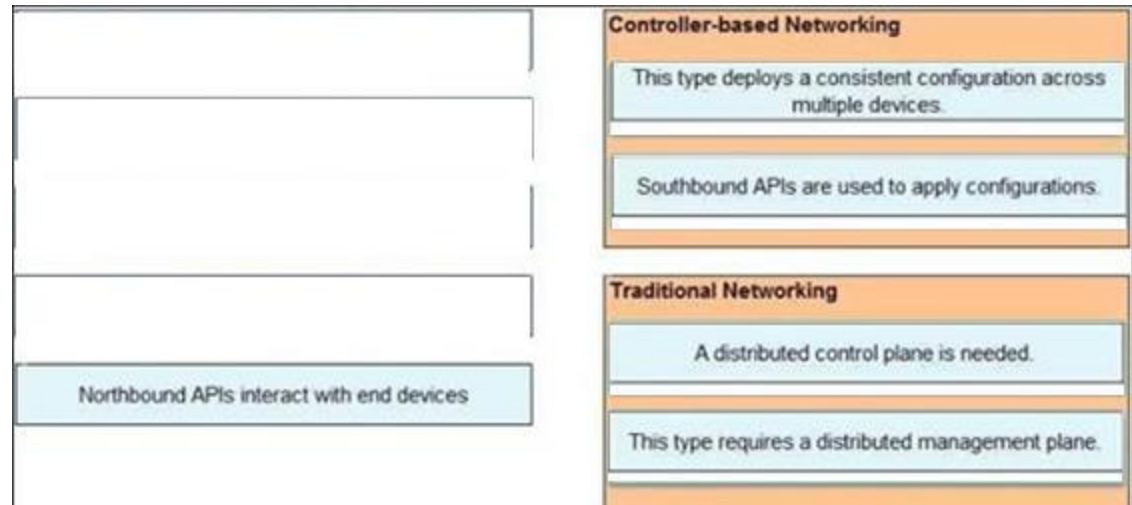
Drag and drop the statements about networking from the left onto the corresponding networking types on the right. Not all statements are used.

Select and Place:

This type deploys a consistent configuration across multiple devices.	Controller-based Networking
A distributed control plane is needed.	
This type requires a distributed management plane.	Traditional Networking
Southbound APIs are used to apply configurations.	
Northbound APIs interact with end devices	

Correct Answer:





Section:

Explanation:

Controller-based Networking :

- This type deploys a consistent configuration across multiple devices.
- Southbound APIs are used to apply configurations.

Traditional Networking :

- A distributed control plane is needed.
- This type requires a distributed management plane.

On a SND network the control plane is centralized on the the SND controller not distributed on the networking devices.

Northbound APIs do not interact with end devices. They allow the SND controller to interact with applications on the application plane

QUESTION 181

DRAG DROP

Drag and drop the steps in a standard DNS lookup operation from the left into the order on the right.



Select and Place:

An endpoint submits a request for the IP address of a domain name.	1
The DNS receives a reply from the domain DNS server.	2
The DNS responds to the endpoint.	3
The DNS submits a request to a root DNS server.	4
The DNS submits a request to the domain DNS server.	5

Correct Answer:

	An endpoint submits a request for the IP address of a domain name.
	The DNS receives a reply from the domain DNS server.
	The DNS submits a request to a root DNS server.
	The DNS submits a request to the domain DNS server.
	The DNS responds to the endpoint.

Section:
Explanation:

	An endpoint submits a request for the IP address of a domain name.
	The DNS submits a request to the domain DNS server.
	The DNS submits a request to a root DNS server.
	The DNS receives a reply from the domain DNS server.
	The DNS responds to the endpoint.

QUESTION 182

DRAG DROP

Drag and drop the IPv6 address types from the left onto their description on the right.

Select and Place:

2001:DB8::bced:1234:456d:aacc	multicast address used only locally within the site
FD00:0000:0000:1a2d:a153:3992:a19d:ccca	address that is automatically created on a link when IPv6 is enabled on an interface
FE80::abcf:ffff:12de:3992	address that is prohibited from routing to the Internet
FF05::23:befc:22:1111	address that is unique and reserved for documentation purposes

Correct Answer:

	FF05::23:befc:22:1111
	FE80::abcf:ffff:12de:3992
	FD00:0000:0000:1a2d:a153:3992:a19d:ccca
	2001:DB8::bced:1234:456d:aacc

Section:

Explanation:

	FF05::23:befc:22:1111
	FE80::abcf:ffff:12de:3992
	FD00:0000:0000:1a2d:a153:3992:a19d:ccca
	2001:DB8::bced:1234:456d:aacc

QUESTION 183

What is the MAC address used with VRRP as a virtual address?

- A. 00-00-0C-07-AD-89
- B. 00-00-5E-00-01-0a
- C. 00-07-C0-70-AB-01

D. 00-C6-41-93-90-91

Correct Answer: B

Section:

QUESTION 184

Which command entered on a switch configured with Rapid PVST* listens and learns for a specific time period?

- A. switch(config)#spanning-tree vlan 1 max-age 6
- B. switch(config)#spanning-tree vlan 1 hello-time 10
- C. switch(config)#spanning-tree vlan 1 priority 4096
- D. switch(config)#spanning-tree vlan 1 forward-time 20

Correct Answer: D

Section:

Explanation:

Forward time : Determines how long each of the listening and learning states last before the port begins forwarding.

Switch(config)# [no] spanning-tree vlan vlan_ID forward-time forward_time

Configures the forward time of a VLAN. The forward_time value can be from 4 to 30 seconds.

<https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/1502SG/configuration/guide/config/spantree.html#56177>

QUESTION 185

What does the implementation of a first-hop redundancy protocol protect against on a network?

- A. root-bridge loss
- B. spanning-tree loops
- C. default gateway failure
- D. BGP neighbor flapping



Correct Answer: C

Section:

QUESTION 186

Which benefit does Cisco ONA Center provide over traditional campus management?

- A. Cisco DNA Center leverages SNMPv3 for encrypted management, and traditional campus management uses SNMPv2.
- B. Cisco DNA Center automates HTTPS for secure web access, and traditional campus management uses HTTP.
- C. Cisco DNA Center leverages APIs, and traditional campus management requires manual data gathering.
- D. Cisco DNA Center automates SSH access for encrypted entry, and SSH is absent from traditional campus management.

Correct Answer: B

Section:

QUESTION 187

Refer to the exhibit.


```
Last clearing of "show interface" counters never
Input queue: 1/75/1/0 (size/max/drops/flushes): Total output drops: 0
Queueing strategy: random early detection (RED)
Output queue : 0/40 (size/max)
5 minute input rate 1000 bits/sec, 2 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
7558065 packets input, 783768942 bytes, 1 no buffer
Received 8280963 broadcasts, 0 runts, 0 giants, 1 throttles
15 input errors, 14278 CRC, 0 frame, 0 overrun, 3 ignored
0 input packets with dribble condition detected
798052 packets output, 50280266 bytes, 0 underruns
0 output errors, 15000 collisions, 0 interface resets
0 babbles, 0 late collision, 179 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
```

An administrator received a call from a branch office regarding poor application performance hosted at the headquarters. Ethernet 1 is connected between Router1 and the LAN switch. What identifies the issue?

- A. The QoS policy is dropping traffic.
- B. There is a duplex mismatch.
- C. The link is over utilized.
- D. The MTU is not set to the default value.

Correct Answer: C

Section:

QUESTION 188

Refer to the exhibit.

```
1 |
2 | {"switch": "3750", "port": "e2"},
3 | {"router": "2951", "port": "e20"},
4 | {"switch": "3750", "port": "e23"}
5 |
```



What is represented by the word "switch" in line 2 of the JSON schema?

- A. array
- B. key
- C. value
- D. object

Correct Answer: C

Section:

QUESTION 189

The clients and DHCP server reside on different subnets. Which command must be used to forward requests and replies between clients on the 10.10.0.1/24 subnet and the DHCP server at 192.168.10.1?

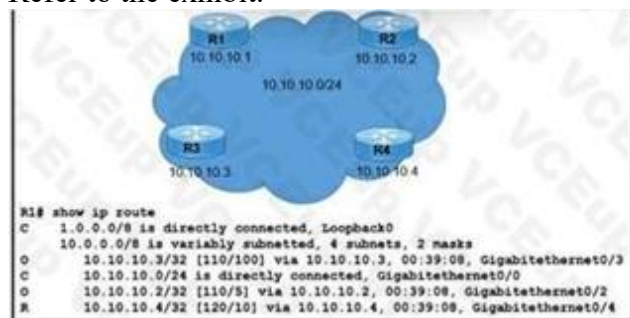
- A. ip route 192.168.10.1
- B. ip default-gateway 192.168.10.1
- C. ip helper-address 192.168.10.1
- D. ip dhcp address 192.168.10.1

Correct Answer: C

Section:

QUESTION 190

Refer to the exhibit.



Which next-hop IP address has the least desirable metric when sourced from R1?

- A. 10.10.10.5
- B. 10.10.10.3
- C. 10.10.10.4
- D. 10.10.10.2

Correct Answer: C

Section:

QUESTION 191

Refer to the exhibit.



Rapid PVST+ mode is on the same VLAN on each switch. Which switch becomes the root bridge and why?

- A. SW2, because its MAC address is the highest
- B. SW3, because its priority is the highest
- C. SW4, because its priority is highest and its MAC address is lower
- D. SW1, because its priority is the lowest and its MAC address is higher

Correct Answer: B

Section:

QUESTION 192

PC1 tries to send traffic to newly installed PC2. The PC2 MAC address is not listed in the MAC address table of the switch, so the switch sends the packet to all ports in the same VLAN Which switching concept does this describe?

- A. MAC address aging
- B. MAC address table
- C. frame flooding
- D. spanning-tree protocol

Correct Answer: A

Section:

QUESTION 193

A network engineer is upgrading a small data center to host several new applications, including server backups that are expected to account for up to 90% of the bandwidth during peak times. The data center connects to the MPLS network provider via a primary circuit and a secondary circuit. How does the engineer inexpensively update the data center to avoid saturation of the primary circuit by traffic associated with the backups?

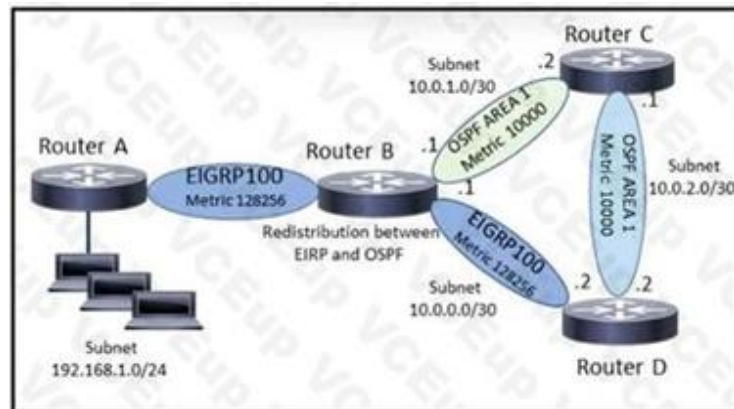
- A. Assign traffic from the backup servers to a dedicated switch.
- B. Configure a dedicated circuit for the backup traffic.
- C. Place the backup servers in a dedicated VLAN.
- D. Advertise a more specific route for the backup traffic via the secondary circuit.

Correct Answer: A

Section:

QUESTION 194

Refer to the exhibit.



A network engineer executes the show ip route command on router D. What is the next hop to network 192.168.1.0/24 and why?

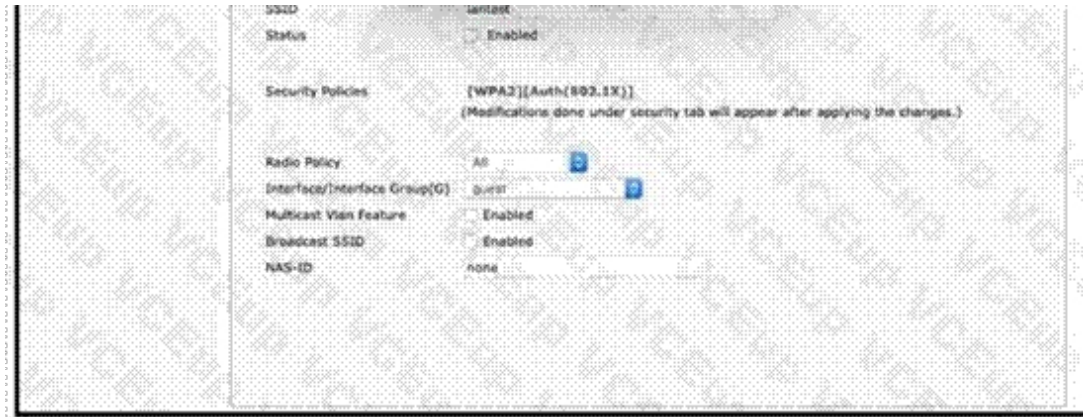
- A. The next hop is 10.0.2.1 because it uses distance vector routing
- B. The next hop is 10.0.2.1 because it is a link-state routing protocol
- C. The next hop is 10.0.0.1 because it has a better administrative distance
- D. The next hop is 10.0.0.1 because it has a higher metric.

Correct Answer: B

Section:

QUESTION 195

Refer to the exhibit.



A Cisco engineer creates a new WLAN called lantest. Which two actions must be performed so that only high-speed 2.4-Ghz clients connect? (Choose two.)

- A. Enable the Broadcast SSID option
- B. Enable the Status option.
- C. Set the Radio Policy option to 802.11g Only.
- D. Set the Radio Policy option to 802.11a Only.
- E. Set the Interface/Interface Group(G) to an interface other than guest

Correct Answer: A, B

Section:

QUESTION 196

What is the role of nonoverlapping channels in a wireless environment?

- A. to reduce interference
- B. to allow for channel bonding
- C. to stabilize the RF environment
- D. to increase bandwidth

Correct Answer: A

Section:

QUESTION 197

A router has two static routes to the same destination network under the same OSPF process. How does the router forward packets to the destination if the next-hop devices are different?

- A. The router chooses the route with the oldest age.
- B. The router load-balances traffic over all routes to the destination.
- C. The router chooses the next hop with the lowest MAC address.
- D. The router chooses the next hop with the lowest IP address.

Correct Answer: B

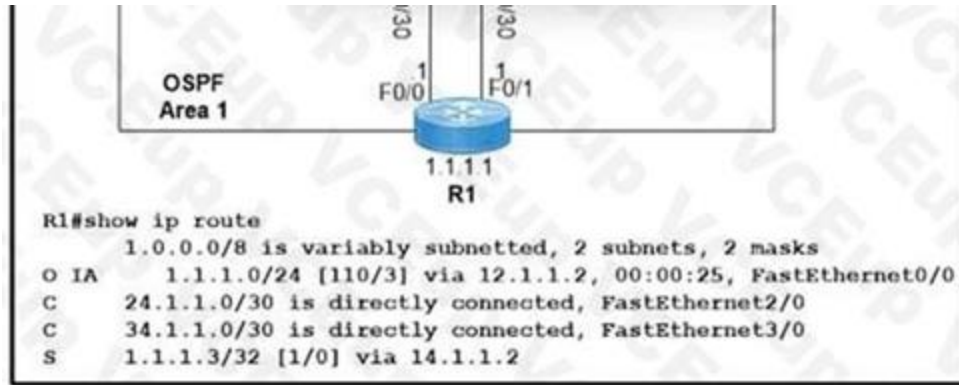
Section:

QUESTION 198



Refer to the exhibit.





 **vdumps**

Which two values does router R1 use to determine the best path to reach destinations in network 1,0.0.0/8? (Choose two.)

- A. longest prefix match
- B. highest administrative distance
- C. highest metric
- D. lowest metric
- E. lowest cost to reach the next hop

Correct Answer: A, D

Section:

QUESTION 199

Refer to the exhibit.



Host A switch interface is configured in VLAN 2. Host D sends a unicast packet destined for the IP address of host A.

```
Sw1#show mac-address table
Mac Address Table
-----
Vlan  Mac Address      Type      Ports
----  -
2      000c.859c.bb7b    DYNAMIC  e0/1
3      000c.859c.bb7b    DYNAMIC  e0/1
2      0010.11dc.3e91    DYNAMIC  e0/2
3      0010.11dc.3e91    DYNAMIC  e0/2
2      0043.49d4.c383    DYNAMIC  e0/3
Sw1#
```

What does the switch do when it receives the frame from host D?

- A. It creates a broadcast storm.
- B. It drops the frame from the MAC table of the switch.
- C. It shuts down the source port and places It In err-disable mode.
- D. It floods the frame out of every port except the source port.

Correct Answer: C

Section:

QUESTION 200

Which properly is shared by 10GBase-SR and 10GBase-LR interfaces?

- A. Both require fiber cable media for transmission.
- B. Both require UTP cable media for transmission.
- C. Both use the single-mode fiber type.
- D. Both use the multimode fiber type.

Correct Answer: A

Section:

QUESTION 201

What is used as a solution for protecting an individual network endpoint from attack?



- A. Router
- B. Wireless controller
- C. Anti software
- D. Cisco DNA Center

Correct Answer: C

Section:

QUESTION 202

What is the advantage of separating the control plane from the data plane within an SDN network?

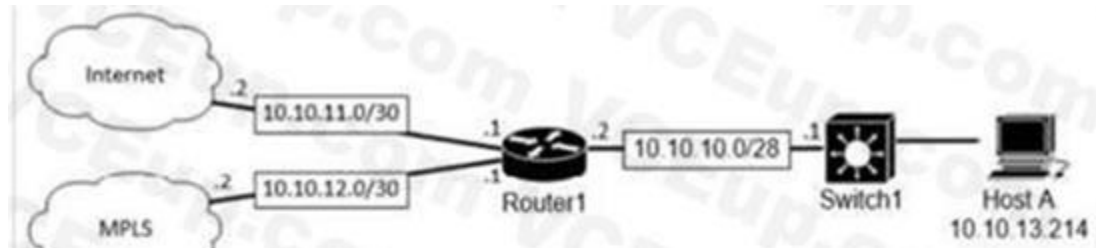
- A. decreases overall network complexity
- B. limits data queries to the control plane
- C. reduces cost
- D. offloads the creation of virtual machines to the data plane

Correct Answer: A

Section:

QUESTION 203

Refer to the exhibit.



```

Router1#show ip route
Gateway of last resort is 10.10.11.2 to network 0.0.0.0

  209.165.200.0/27 is subnetted, 1 subnets
B    209.165.200.224 [20/0] via 10.10.12.2, 03:22:14
  209.165.201.0/27 is subnetted, 1 subnets
B    209.165.201.0 [20/0] via 10.10.12.2, 02:26:33
  209.165.202.0/27 is subnetted, 1 subnets
B    209.165.202.128 [20/0] via 10.10.12.2, 02:26:03
 10.0.0.0/8 is variably subnetted, 8 subnets, 4 masks
C    10.10.10.0/28 is directly connected, GigabitEthernet0/0
C    10.10.11.0/30 is directly connected, FastEthernet2/0
C    10.10.12.0/30 is directly connected, GigabitEthernet0/1
O    10.10.13.0/25 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O    10.10.13.128/28 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O    10.10.13.144/28 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O    10.10.13.160/29 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O    10.10.13.208/29 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
S*  0.0.0.0/0 [1/0] via 10.10.11.2

```

What is the prefix length for the route that router1 will use to reach host A?

- A. /25
- B. /27



- C. /28
- D. /29

Correct Answer: D

Section:

QUESTION 204

Refer to the exhibit.

```
Device# configure terminal
Device(config)# netconf ssh acl 1
Device(config)# netconf lock-time 100
Device(config)# netconf max-sessions 1
Device(config)# netconf ma-message 10
```

A network engineer must configure NETCONF. After creating the configuration, the engineer gets output from the command show line but not from show running- config. Which command completes the configuration?

- A. Device(config)# netconf lock-time 500
- B. Device(config)# netconf max-message 1000
- C. Device(config)# no netconf ssh acl 1
- D. Device(config)# netconf max-sessions 100

Correct Answer: B

Section:

QUESTION 205

Refer to Exhibit.

```
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode active

SW1#show run interface fastEthernet 0/2
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200
channel-group 1 mode active

SW2#show run interface fastEthernet 0/1
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode active

SW2#show run interface fastEthernet 0/2
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode active
```

Refer to the exhibit. An engineer is building a new Layer 2 LACP EtherChannel between SW1 and SW2. and they executed the given show commands to verify the work Which additional task must be performed so that the switches successfully bundle the second member in the LACP port-channel?



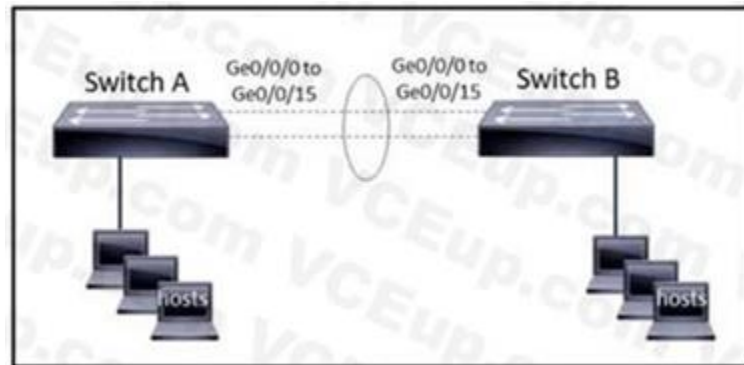
- A. Configure the switchport trunk allowed vlan 300 command on SW1 port-channel 1
- B. Configure the switchport trunk allowed vlan 300 command on interface Fa0/2 on SW1.
- C. Configure the switchport trunk allowtd vlan add 300 command on interface FaO 2 on SW2.
- D. Configure the switchport trunk allowtd vlan add 300 command on SW1 port-channel 1

Correct Answer: B

Section:

QUESTION 206

Refer to the exhibit.



The EtherChannel is configured with a speed of 1000 and duplex as full on both ends of channel group 1. What is the next step to configure the channel on switch A to respond to but not initiate LACP communication?

- A. interface range gigabitethernet0/0/0-15 channel-group 1 mode on
- B. interface range gigabitethernet0/0/0-15 channel-group 1 mode desirable
- C. interface port-channel 1 channel-group 1 mode auto
- D. interface port-channel 1 channel-group 1 mode passive



Correct Answer: D

Section:

QUESTION 207

Refer to the exhibit.

```
Gateway of last resort is not set

 10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C   10.1.1.0/30 is directly connected, GigabitEthernet0/0
L   10.1.1.2/32 is directly connected, GigabitEthernet0/0
S   192.168.0.0/20 [1/0] via 10.1.1.1
S   192.168.1.0/30 is subnetted, 1 subnets
    S   192.168.1.0/30 [1/0] via 10.1.1.1
S   192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
    S   192.168.2.0/28 [1/0] via 10.1.1.1
    S   192.168.2.0/29 [1/0] via 10.1.1.1
```

An engineer is checking the routing table in the main router to identify the path to a server on the network. Which route does the router use to reach the server at 192.168.2.2?

- A. S 192.168.0.0/20 [1/0] via 10.1.1.1
- B. S 192.168.2.0/29 [1/0] via 10.1.1.1
- C. S 192.168.2.0/28 [1/0] via 10.1.1.1
- D. S 192.168.1.0/30 [1/0] via 10.1.1.1

Correct Answer: B

Section:

QUESTION 208

Why would a network administrator choose to implement automation in a network environment?

- A. To simplify the process of maintaining a consistent configuration state across all devices
- B. To centralize device information storage
- C. To implement centralized user account management
- D. To deploy the management plane separately from the rest of the network

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

QUESTION 209

Refer to the exhibit.

```
Gateway of last resort is 172.16.2.2 to network 0.0.0.0

  10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C   10.10.8.0/28 is directly connected, GigabitEthernet0/0/2
C   10.10.10.0/24 is directly connected, GigabitEthernet0/0/0
L   10.10.10.3.32 is directly connected, GigabitEthernet0/0/0

 172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
S   172.16.1.33/32 is directly connected, GigabitEthernet0/0/1
C   172.16.2.0/23 is directly connected, GigabitEthernet0/0/1
L   172.16.2.1/32 is directly connected, GigabitEthernet0/0/1
S*  0.0.0.0/0 [1/0] via 172.16.2.2
```



A packet sourced from 10.10.10.1 is destined for 10.10.8.14. What is the subnet mask of the destination route?

- A. 255.255.254.0
- B. 255.255.255.240
- C. 255.255.255.248
- D. 255.255.255.252

Correct Answer: B

Section:

QUESTION 210

Which two VPN technologies are recommended by Cisco for multiple branch offices and large-scale deployments? (Choose two.)

- A. site-to-site VPN
- B. IDMPVPN
- C. IGETVPN
- D. IPsec remote access
- E. clientless VPN

Correct Answer: B, E

Section:

QUESTION 211

Two switches have been implemented and all interfaces are at the default configuration level. A trunk link must be implemented between two switches with these requirements:

- using an industry-standard trunking protocol
- permitting VLANs 1 -10 and denying other VLANs

How must the interconnecting ports be configured?

A.

```
switchport mode dynamic
channel-protocol lacp
switchport trunk allowed vlans 1-10
```

B.

```
switchport mode trunk
switchport trunk encapsulation dot1q
switchport trunk allowed vlans 1-10
```

C.

```
switchport mode trunk
switchport trunk allowed vlans 1-10
switchport trunk native vlan 11
```

D.

```
switchport mode dynamic desirable
channel-group 1 mode desirable
switchport trunk encapsulation isl
switchport trunk allowed vlan except 11-4094
```

Correct Answer: D

Section:

QUESTION 212

Why is a first-hop redundancy protocol implemented?

- A. to protect against default gateway failures
- B. to prevent loops in a network



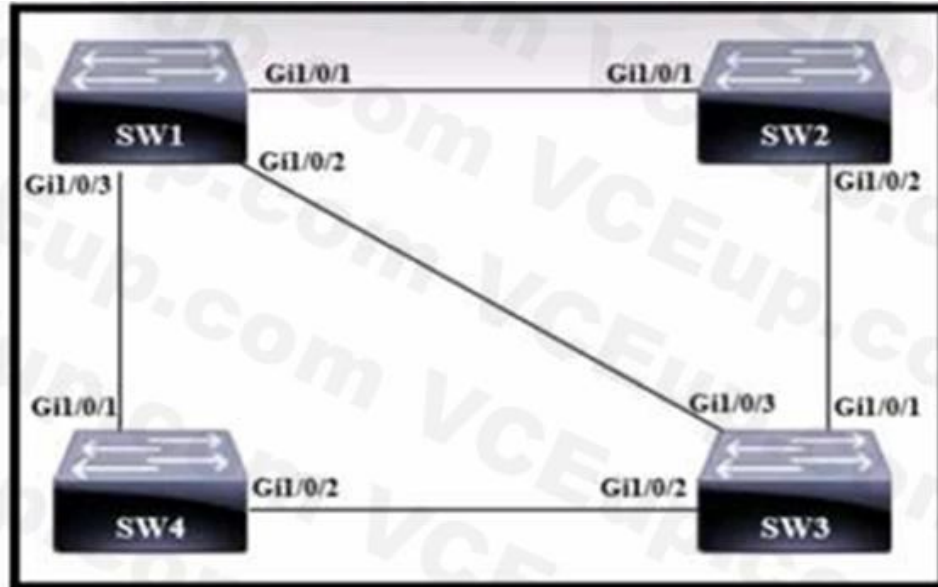
- C. to enable multiple switches to operate as a single unit
- D. to provide load-sharing for a multilink segment

Correct Answer: A

Section:

QUESTION 213

Refer to Exhibit.



- A.


```
SW 4
Bridge Priority - 40960
mac-address 07:24:86:84:82:18
```
- B.


```
SW 3
Bridge Priority - 40960
mac-address 08:71:50:67:61:38
```
- C.


```
SW 2
Bridge Priority - 32768
mac-address 08:fd:b1:d7:78:39
```
- D.


```
SW 1
Bridge Priority - 32768
mac-address 05:48:19:51:3e:49
```

Correct Answer: D

Section:

QUESTION 214



What are two disadvantages of a full-mesh topology? (Choose two.)

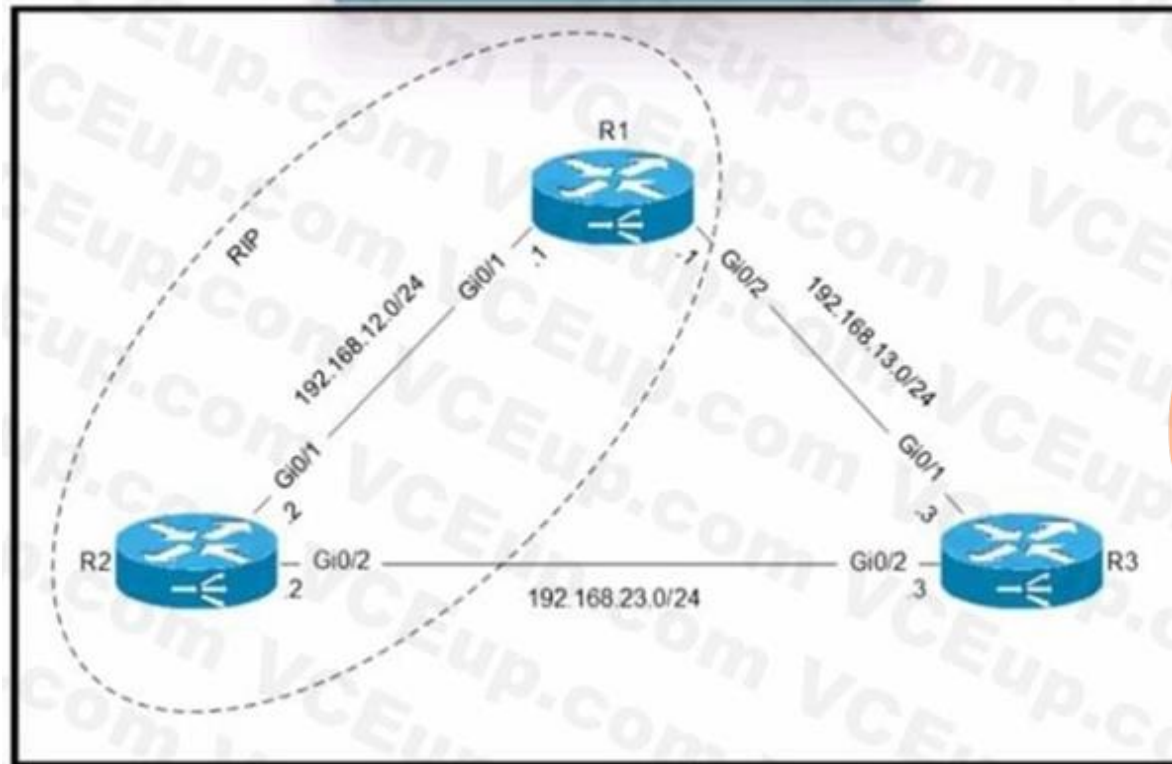
- A. It needs a high MTU between sites.
- B. It has a high implementation cost.
- C. It must have point-to-point communication.
- D. It requires complex configuration.
- E. It works only with BGP between sites.

Correct Answer: B, D

Section:

QUESTION 215

Refer to the exhibit.



Routers R1 and R2 are configured with RIP as the dynamic routing protocol. A network engineer must configure R1 with a floating static route to serve as a backup route to network 192.168.23. Which command must the engineer configure on R1?

- A. ip route 192.168.23.0 255.255.255.0 192.168.13.3 100
- B. ip route 192.168.23.0 255.255.255.0 192.168.13.3 121
- C. ip route 192.168.23.0 255.255.255.255 192.168.13.3 121
- D. ip route 192.168.23.0 255.255.255.0 192.168.13.3

Correct Answer: B

Section:

QUESTION 216

Which remote access protocol provides unsecured remote CLI access?

- A. console

- B. Telnet
- C. Bash
- D. SSH

Correct Answer: B

Section:

QUESTION 217

A Cisco engineer notices that two OSPF neighbors are connected using a crossover Ethernet cable.

The neighbors are taking too long to become fully adjacent. Which command must be issued under the interface configuration on each router to reduce the time required for the adjacency to reach the FULL state?

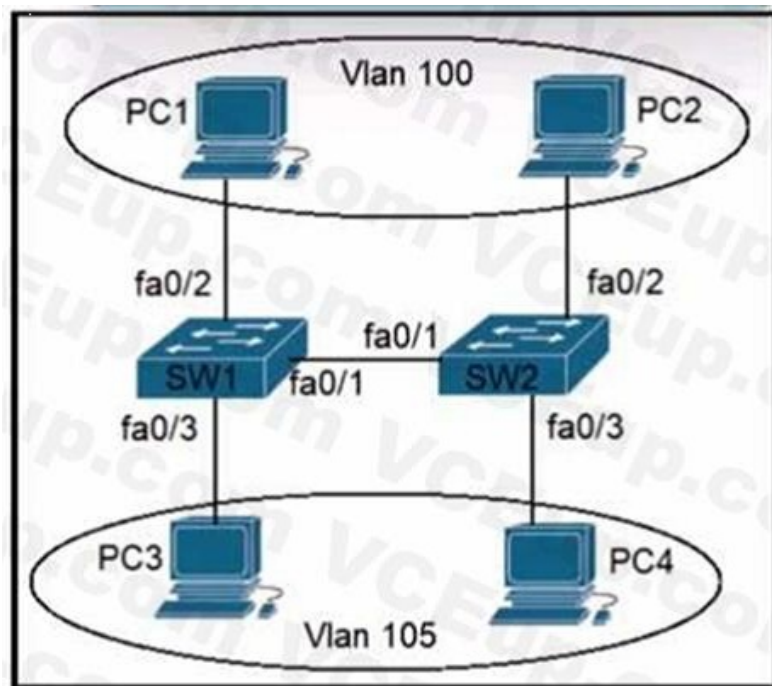
- A. ip ospf network broadcast
- B. ip ospf dead-interval 40
- C. ip ospf network point-to-point
- D. ip ospf priority 0

Correct Answer: C

Section:

QUESTION 218

Refer to Exhibit.



A.

```
Switch(config-if)#switchport mode dynamic
Switch(config-if)#switchport access vlan 100,105
Switch(config-if)#switchport trunk native vlan 1
```

B.

```
Switch(config-if)#switchport mode access
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport access vlan 100,105
Switch(config-if)#switchport trunk native vlan 3
```

C.

```
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk encapsulation lsl
Switch(config-if)#switchport trunk allowed vlan 100,105
Switch(config-if)#switchport trunk native vlan 1
```

D.

```
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport trunk allowed vlan 100,105
Switch(config-if)#switchport trunk native vlan 3
```

Correct Answer: B

Section:

QUESTION 219

How does frame switching function on a switch?

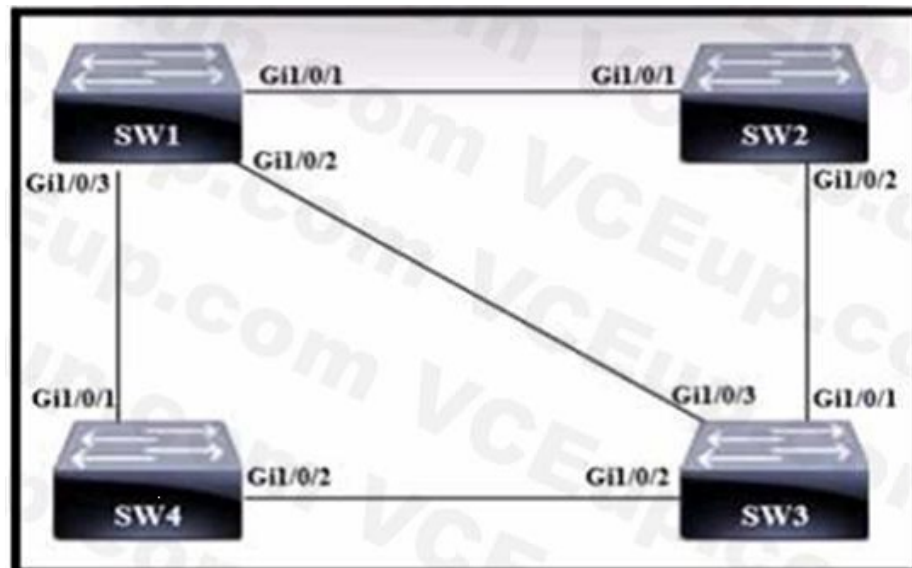
- A. forwards frames to a neighbor port using CDP
- B. modifies frames that contain a known source VLAN
- C. inspects and drops frames from unknown destinations
- D. forwards known destinations to the destination port

Correct Answer: D

Section:

QUESTION 220

Refer to Exhibit.



 **vdumps**

A.

```
SW 1  
Bridge Priority - 32768  
mac-address 0d:ca:8e:7f:a0:24
```

B.

```
SW 2  
Bridge Priority - 53248  
mac-address 02:3e:ee:61:5b:21
```

C.

```
SW 4  
Bridge Priority - 32768  
mac-address 07:c1:b7:27:dd:73
```

D.

```
SW 3  
Bridge Priority - 53248  
mac-address 02:aa:03:d3:05:87
```

Correct Answer: D

Section:

QUESTION 221

Refer to the exhibit.



```
GigabitEthernet1 is up, line protocol is up  
Hardware is CSR vNIC, address is 5000.0004.0000 (bia 5000.0004.0000)  
Internet address is 192.168.1.1/24  
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation ARPA, loopback not set  
Keepalive set (10 sec)  
Full Duplex, 1000Mbps, link type is auto, media type is RJ45
```

Which format matches the Modified EUI-64 IPv6 interface address for the network 2001:db8::/64?

- A. 2001 :db8::5000:0004:5678:0090/64
- B. 2001 :db8:4425:5400:77ft:fe07:/64
- C. 2001 :db8::5000:00ff:fe04 0000/64
- D. 2001 :db8::5200:00ff:fe04:0000/64

Correct Answer: C

Section:

QUESTION 222

Which WLC interface provides out-of-band management in the Cisco Unified Wireless Network Architecture?

- A. service port
- B. virtual
- C. AP-Manager

D. dynamic

Correct Answer: A

Section:

QUESTION 223

How do UTP and STP cables compare?

- A. STP cables are cheaper to procure and easier to install and UTP cables are more expensive and harder to install.
- B. UTP cables are less prone to crosstalk and interference and STP cables are more prone to crosstalk and interference.
- C. UTP cables provide faster and more reliable data transfer rates and STP cables are slower and less reliable.
- D. STP cables are shielded and protect against electromagnetic interference and UTP lacks the same protection against electromagnetic interference.

Correct Answer: D

Section:

QUESTION 224

How does MAC learning function on a switch?

- A. broadcasts frames to all ports without queuing
- B. adds unknown source MAC addresses to the address table
- C. sends a retransmission request when a new frame is received
- D. sends frames with unknown destinations to a multicast group

Correct Answer: B

Section:

QUESTION 225

What are two advantages of implementing a controller-based architecture instead of a traditional network architecture? (Choose two.)

- A. It allows for seamless connectivity to virtual machines.
- B. It supports complex and high-scale IP addressing schemes.
- C. It enables configuration task automation.
- D. It provides increased scalability and management options.
- E. It increases security against denial-of-service attacks.

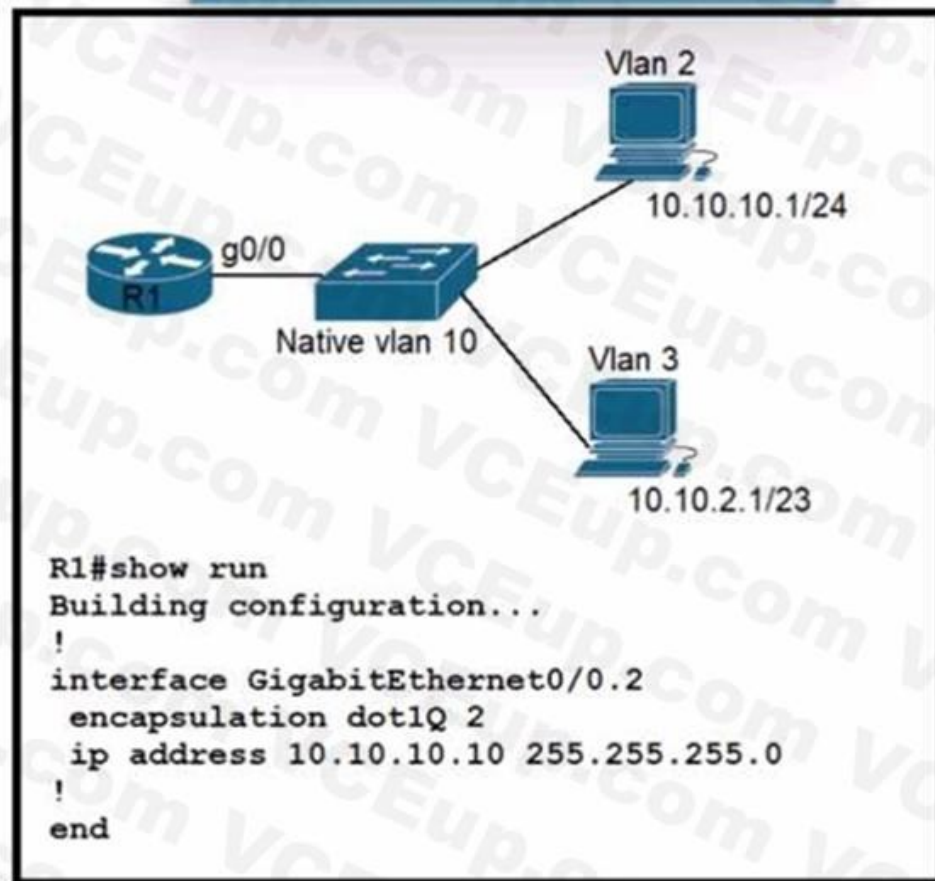
Correct Answer: C, D

Section:

QUESTION 226

Refer to Exhibit.





A.

```
interface GigabitEthernet0/0
 ip address 10.10.2.10 255.255.252.0
```

B.

```
interface GigabitEthernet0/0.3
 encapsulation dot1Q 10
 ip address 10.10.2.10 255.255.255.252
```

C.

```
interface GigabitEthernet0/0.10
 encapsulation dot1Q 3
 ip address 10.10.2.10 255.255.254.0
```

D.

 **vdumps**

```
interface GigabitEthernet0/0.3
 encapsulation dot1Q 3 native
 ip address 10.10.2.10 255.255.252.0
```

Correct Answer: C

Section:

QUESTION 227

What is an enhancement implemented in WPA3?

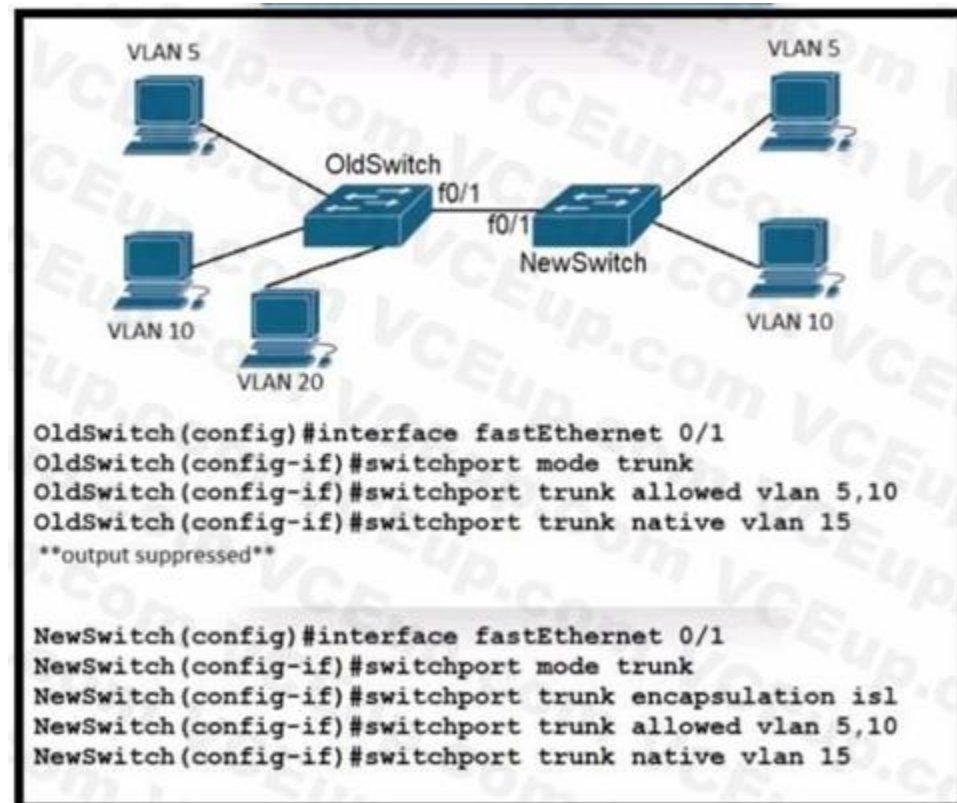
- A. employs PKI and RADIUS to identify access points
- B. applies 802.1x authentication and AES-128 encryption
- C. uses TKIP and per-packet keying
- D. defends against deauthentication and disassociation attacks

Correct Answer: D

Section:

QUESTION 228

Refer to the exhibit.



A new VLAN and switch are added to the network. A remote engineer configures OldSwitch and must ensure that the configuration meets these requirements:

- accommodates current configured VLANs
- expands the range to include VLAN 20
- allows for IEEE standard support for virtual LANs

Which configuration on the NewSwitch side of the link meets these requirements?



A.

```
no switchport trunk encapsulation isl  
switchport trunk encapsulation dot1q  
switchport trunk allowed vlan add 20
```

B.

```
switchport nonegotiate  
no switchport trunk allowed vlan 5,10  
switchport trunk allowed vlan 5,10,15,20
```

C.

```
no switchport mode trunk  
switchport trunk encapsulation isl  
switchport mode access vlan 20
```

D.

```
switchport mode dynamic  
channel-group 1 mode active  
switchport trunk allowed vlan 5,10,15, 20
```

Correct Answer: C

Section:

QUESTION 229

A client experiences slow throughput from a server that is directly connected to the core switch in a data center. A network engineer finds minimal latency on connections to the server, but data transfers are unreliable, and the output of the show Interfaces counters errors command shows a high FCS-Err count on the interface that is connected to the server. What is the cause of the throughput issue?

- A. high bandwidth usage
- B. a physical cable fault
- C. a speed mismatch
- D. a cable that is too long

Correct Answer: B

Section:

QUESTION 230

What is the purpose of classifying network traffic in QoS?

- A. services traffic according to its class
- B. identifies the type of traffic that will receive a particular treatment
- C. writes the class identifier of a packet to a dedicated field in the packet header
- D. configures traffic-matching rules on network devices

Correct Answer: B

Section:

QUESTION 231

Which two HTTP methods are suitable for actions performed by REST-based APIs? (Choose two.)

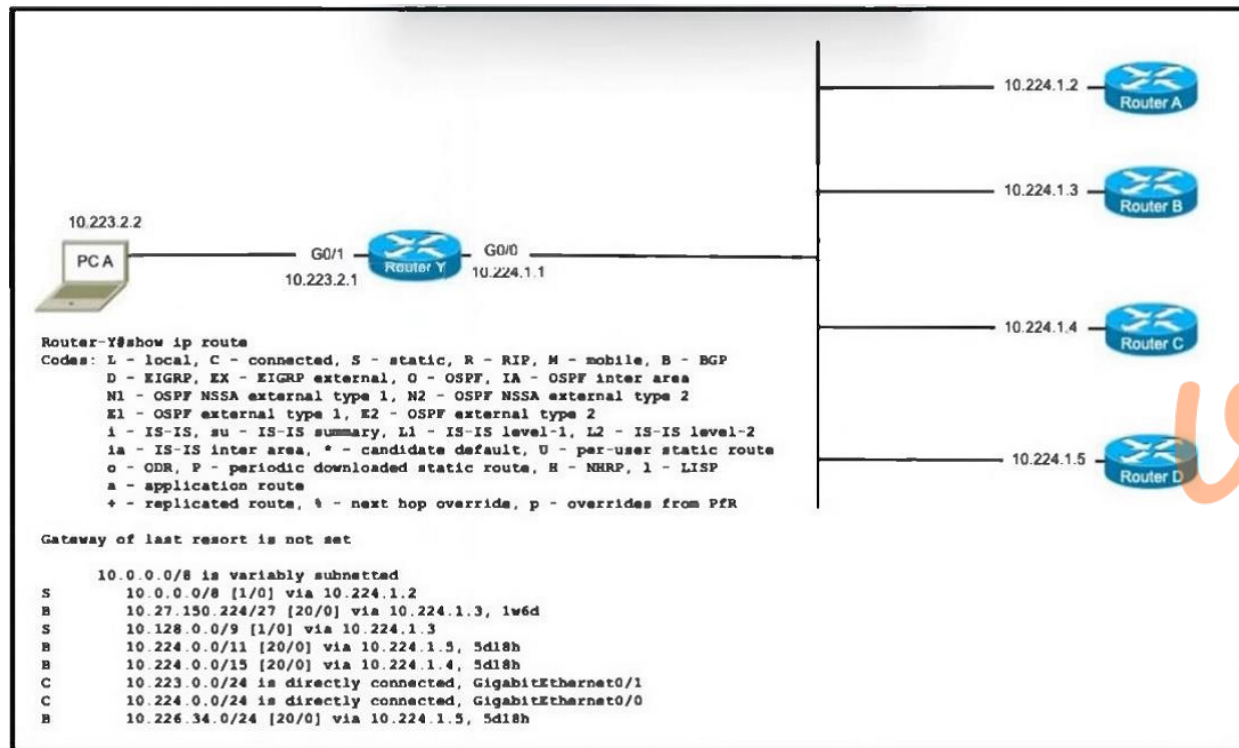
- A. REMOVE
- B. REDIRECT
- C. OPOST
- D. GET
- E. UPOP

Correct Answer: C, D

Section:

QUESTION 232

Refer to the exhibit.



PC A is communicating with another device at IP address 10.227.225.255. Through which router does router Y route the traffic?

- A. router A
- B. router B
- C. router C
- D. router D

Correct Answer: D

Section:

QUESTION 233

Which component controls and distributes physical resources for each virtual machine?

- A. OS
- B. hypervisor
- C. CPU

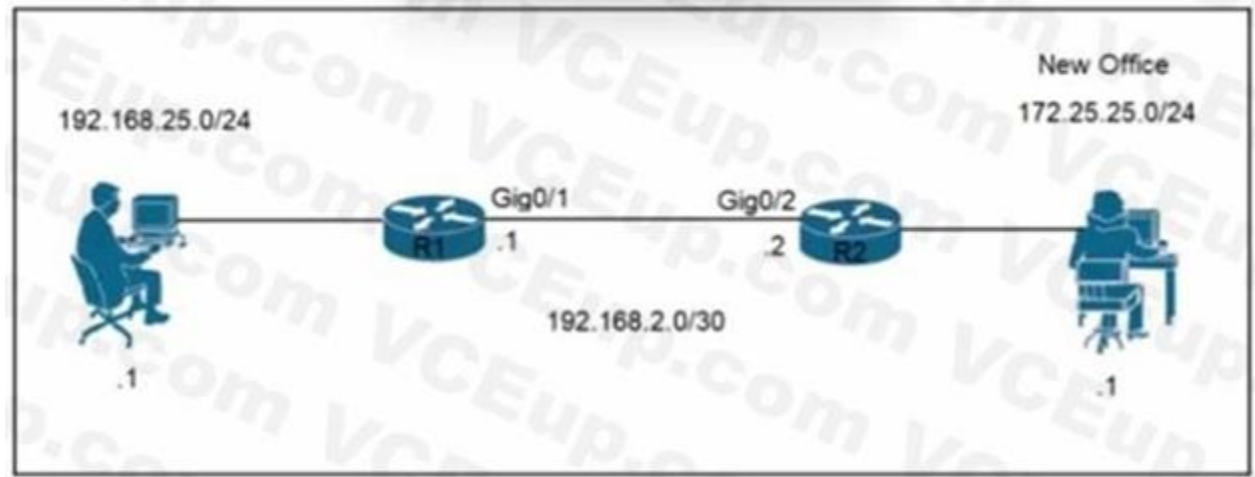
D. physical enclosure

Correct Answer: B

Section:

QUESTION 234

Refer to the exhibit.



A network engineer is updating the configuration on router R1 to connect a new branch office to the company network. R2 has been configured correctly. Which command must the engineer configure so that devices at the new site communicate with the main office?

- A. `ip route 172.25.25 0 255 255 255.0 192.168.2.1`
- B. `ip route 172.25.25 1 255 255 255 255 g0/1`
- C. `ip route 172.25.25.0.255.255.255.0.192.168.2.2`

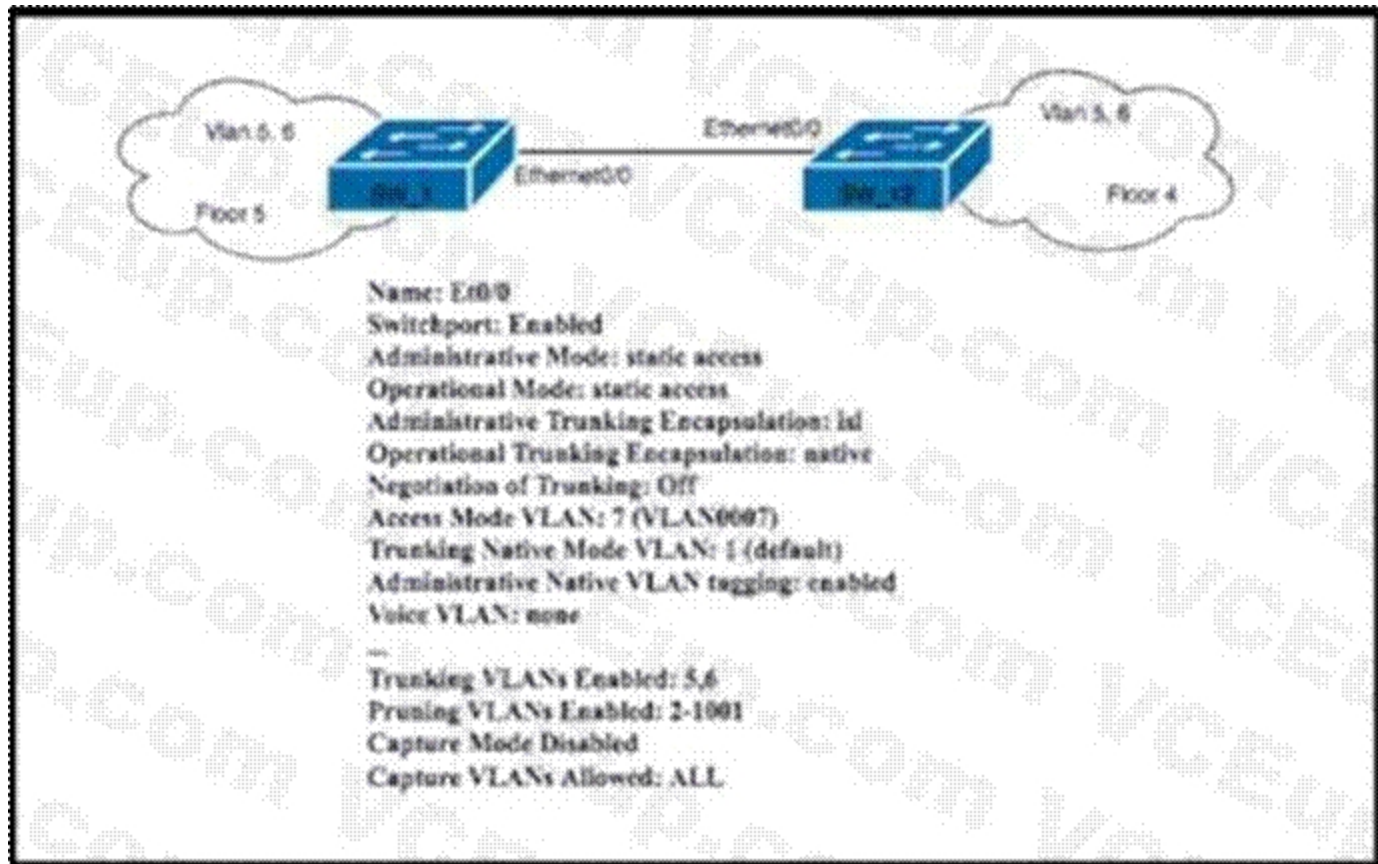
Correct Answer: C

Section:

QUESTION 235

Refer to the exhibit.





SW_1 and SW_12 represent two companies that are merging. They use separate network vendors.

The VLANs on both Sides have been migrated to share IP subnets. Which command sequence must be issued on both sides to join the two companies and pass all VLANs between the companies?

- A. switchport mode trunk switchport trunk encapsulation dot1q
- B. switchport mode trunk switchport trunk allowed vlan all switchport dot1q ethertype 0800
- C. switchport mode dynamic desirable switchport trunk allowed vlan all switchport trunk native vlan 7
- D. switchport dynamic auto switchport nonegotiate

Correct Answer: A

Section:

QUESTION 236

Refer to the exhibit.

```

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2
I - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
ia - IS-IS inter area, * - candidate default, U - per-user static route
o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
a - application route
+ - replicated route, ! - next hop override, p - overrides from FIR
Gateway of last resort is 0.0.0.0 to network 0.0.0.0
S* 0.0.0.0/0 is directly connected, Null0
10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks
C 10.0.12.0/24 is directly connected, GigabitEthernet0/1
L 10.0.12.1/32 is directly connected, GigabitEthernet0/1
C 10.0.13.0/24 is directly connected, GigabitEthernet0/2
L 10.0.13.1/32 is directly connected, GigabitEthernet0/2
C 10.0.14.0/24 is directly connected, GigabitEthernet0/3
L 10.0.14.1/32 is directly connected, GigabitEthernet0/3
D 192.168.0.0/16 [90/130816] via 10.0.13.3, 00:10:09, GigabitEthernet0/2
O 192.168.0.0/23 [110/2] via 10.0.14.4, 00:00:46, GigabitEthernet0/3
S 192.168.0.0/24 [100/0] via 10.0.12.2

```


Which interface is chosen to forward traffic to the host at 192.168.0.55?

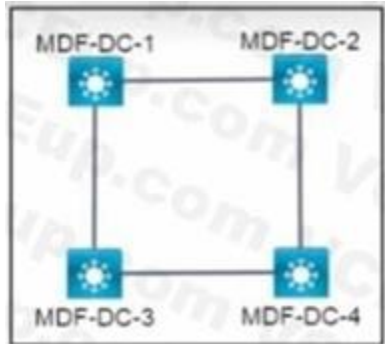
- A. GigabitEthernet0
- B. GigabitEthernet0/1
- C. Null0
- D. GigabitEthernet0/3

Correct Answer: B

Section:

QUESTION 237

Refer to the exhibit.



All interfaces are in the same VLAN. All switches are configured with the default STP priorities. During the STP election, which switch becomes the root bridge?

- A. MDF-DC-4:08:E0:19: 08:B3:19
- B. MDF-DC-3:08:0E:18::1A:3C:9D
- C. MDF-DC-08:0E:18:22:05:97
- D. MDF-DC-1:DB:E:44:02:54:79

Correct Answer: C

Section:

QUESTION 238

Which command enables HTTP access to the Cisco WLC?

- A. config network secureweb enable
- B. config certificate generate web admin
- C. config network webmode enable
- D. config network telnet enable

Correct Answer: C

Section:

QUESTION 239

What is the function of a controller in a software-defined network?

- A. multicast replication at the hardware level
- B. forwarding packets



- C. fragmenting and reassembling packets
- D. setting packet-handling policies

Correct Answer: B

Section:

QUESTION 240

A network engineer is implementing a corporate SSID for WPA3-Personal security with a PSK. Which encryption cipher must be configured?

- A. GCMP256
- B. GCMP128
- C. CCMP256
- D. CCMP128

Correct Answer: D

Section:

QUESTION 241

When is the PUT method used within HTTP?

- A. when a nonidempotent operation is needed
- B. to update a DNS server
- C. to display a web site
- D. when a read-only operation it required

Correct Answer: B

Section:

QUESTION 242

Refer to the exhibit.

```
{
  "Test_Questions" : [
    "Automation",
    "Configuration",
  ],
  "Test_Exam_Level" : [
    "CCNA",
    "CCNP",
  ],
  "Test_Response" : [
    "Correct",
    "Incorrect",
  ],
}
```

How many objects, Keys and JSON list values are present?



- A. three objects, two Keys, and three JSON list values
- B. three objects, three keys and two JSON MI values
- C. one object, three keys, and three JSON list values
- D. one object, three keys and two JSON list values

Correct Answer: C

Section:

QUESTION 243

A network engineer must migrate a router loopback interface to the IPv6 address space. If the current IPv4 address of the interface is 10.54.73.1/32, and the engineer configures IPv6 address 0.0.0.0::ffff:a36:4901, which prefix length must be used?

- A. /64
- B. /96
- C. /124
- D. /128

Correct Answer: D

Section:

QUESTION 244

Refer to the exhibit.



```

Connection-specific DNS Suffix . . . :
Description . . . . . : Intel(R) Ethernet Connection (2) I218-V
Physical Address. . . . . : D0-50-99-47-A9-7F
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::8809:9772:c583:6b18%15 (Preferred)
IPv4 Address. . . . . : 192.168.69.132 (Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Thursday, January 21, 2021 11:10:46 PM
Lease Expires . . . . . : Wednesday, February 3, 2021 11:27:29 AM
Default Gateway . . . . . : 192.168.69.1
DHCP Server . . . . . : 192.168.69.1
DHCPv6 IAID . . . . . : 231755929
DHCPv6 Client DUID. . . . . : 00-01-00-01-26-D7-BB-3F-D0-50-99-47-A9-7F
DNS Servers . . . . . : 192.168.69.1
NetBIOS over Tcpi. . . . . : Enabled
  
```

What does the host do when using the IPv4 Preferred function?

- A. It continues to use a statically assigned IPv4 address
- B. It forces the DNS server to provide the same IPv4 address at each renewal.
- C. It requests the same IPv4 address when it renews its lease with the DHCP server.
- D. It prefers a pool of addresses when renewing the IPv4 host IP address

Correct Answer: C

Section:

QUESTION 245

Which type of encryption does WPA1 use for data protection?

- A. AES
- B. TKIP
- C. PEAP
- D. EAP

Correct Answer: B

Section:

QUESTION 246

Which two capabilities of Cisco DNA Center make it more extensible as compared to traditional campus device management? (Choose two.)

- A. REST APIs that allow for external applications to interact natively
- B. adapters that support all families of Cisco IOS software
- C. SDKs that support interaction with third-party network equipment
- D. customized versions for small, medium, and large enterprises
- E. modular design that is upgradable as needed

Correct Answer: A, C

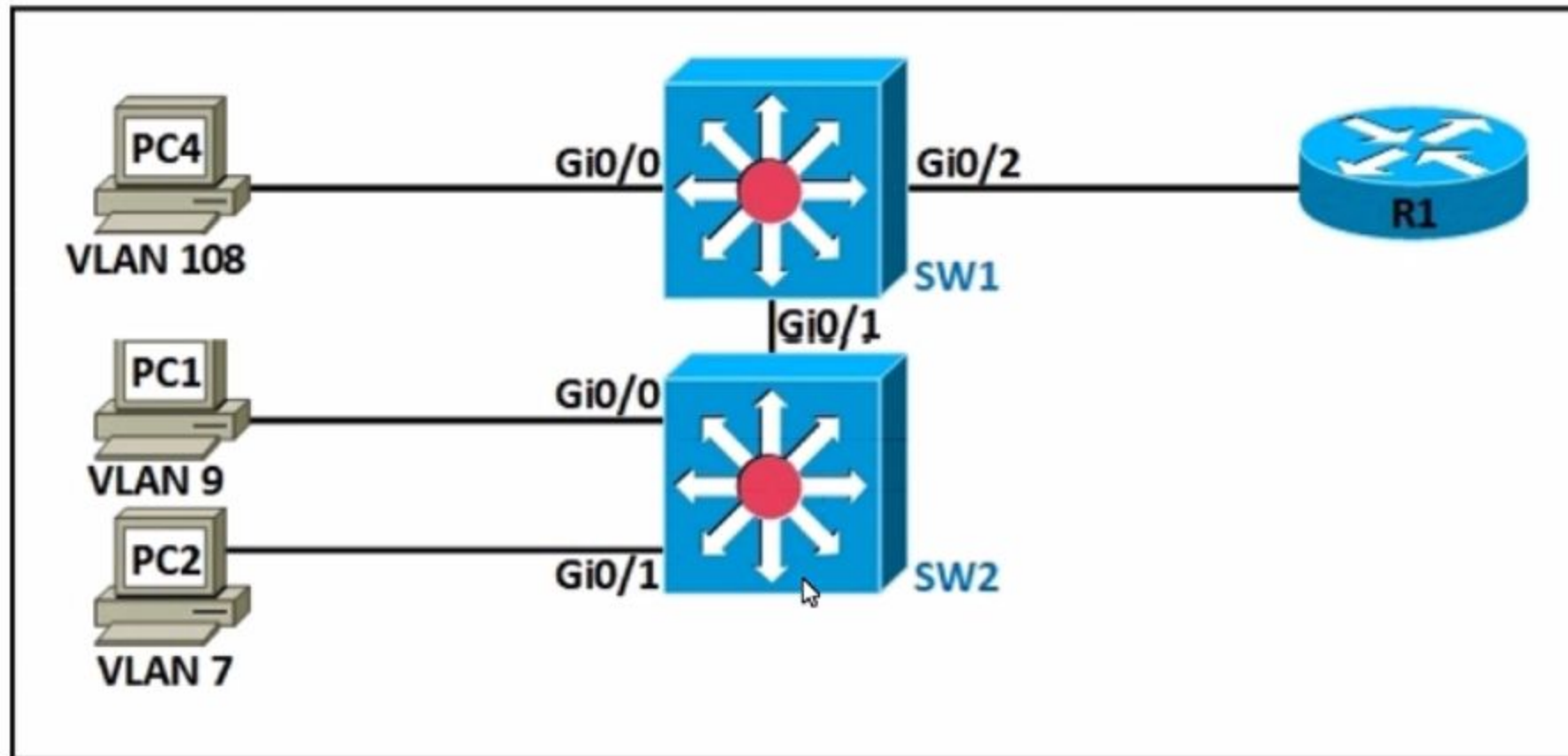
Section:

Explanation:

QUESTION 247

Refer to the exhibit.





The SW1 and SW2 Gi0/0 ports have been preconfigured. An engineer is given these requirements:

- * Allow all PCs to communicate with each other at Layer 3.
- * Configure untagged traffic to use VLAN 5.
- * Disable VLAN 1 from being used.

Which configuration set meets these requirements?



- A. SW1# interface Gi0/1 switchport mode trunk switchport trunk allowed vlan 5,7,9,108 switchport trunk native vlan 5 interface Gi0/2 switchport mode trunk switchport trunk allowed vlan 5,7,9,108 SW2# interface Gi0/1 switchport mode access switchport access vlan 7 interface Gi0/7 switchport mode trunk switchport trunk allowed vlan 7,9,108
- B. SW1# interface Gi0/1 switchport mode trunk switchport trunk allowed vlan 5,7,9,108 switchport trunk native vlan 5 interface Gi0/2 switchport mode access switchport trunk allowed vlan 7,9,108 SW2# interface Gi0/1 switchport mode access no switchport access vlan 1 switchport access vlan 7 interface Gi0/7 switchport mode trunk switchport trunk allowed vlan 7,9,108 switchport trunk native vlan 5
- C. SW1# - interface Gi0/1 switchport mode trunk switchport trunk allowed vlan 5,7,9,108 switchport trunk native vlan 5 interface Gi0/2 switchport mode trunk switchport trunk allowed vlan 5,7,9,108 SW2# interface Gi0/1 switchport mode access switchport access vlan 7 interface Gi0/7 switchport mode trunk switchport trunk allowed vlan 5,7,9,108 switchport trunk native vlan 5
- D. SW1# interface Gi0/1 switchport mode trunk switchport trunk allowed via 5,7,9,108 interface Gi0/2 switchport mode trunk switchport trunk allowed vlan 7,9,108 SW2# interface Gi0/1 switchport mode trunk switchport trunk allowed vlan 7 interface Gi0/7 switchport mode trunk switchport trunk allowed vlan 5,7,9,108

Correct Answer: C

Section:

QUESTION 248

What should a network administrator consider when deciding to implement automation?

- A. Automated systems may have difficulty expanding network changes at scale.
- B. Network automation typically is limited to the configuration and management of virtual devices within a network.
- C. Network automation typically increases enterprise management operating costs.
- D. Manual changes frequently lead to configuration errors and inconsistencies.

Correct Answer: D

Section:

Explanation:

When deciding to implement automation, a network administrator should consider the benefits and challenges associated with automation. Option D highlights one of the key reasons for implementing automation---manual changes often result in configuration errors and inconsistencies. Automating repetitive and error-prone tasks can help improve the accuracy and reliability of network configurations.

QUESTION 249

Which capability does TFTP provide?

- A. loads configuration files on systems without data storage devices
- B. provides authentication for data communications over a private data network
- C. provides encryption mechanisms for file transfer across a WAN
- D. provides secure file access within the LAN

Correct Answer: A

Section:

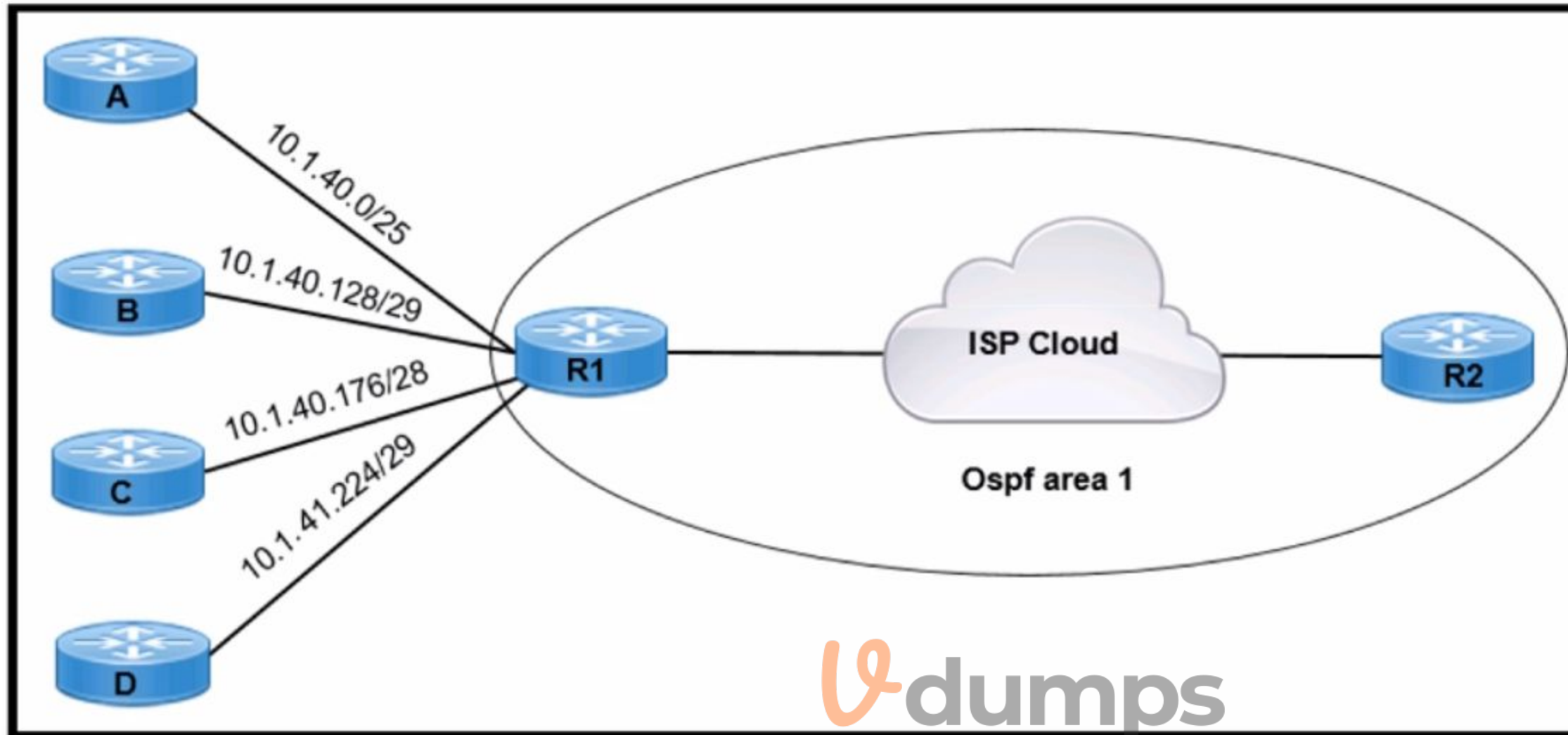
Explanation:

TFTP (Trivial File Transfer Protocol) is a simple file transfer protocol that is often used to transfer configuration files or firmware to network devices, such as routers or switches, during the boot process. TFTP is lightweight and lacks advanced features like authentication or encryption, making it suitable for basic file transfer operations in situations where security is not a primary concern. Therefore, option A accurately describes one of the primary capabilities of TFTP. It is commonly used to load configuration files onto systems, particularly those without extensive data storage devices, during the initialization or configuration process.

QUESTION 250

Refer to the exhibit.





Router R1 receives static routing updates from routers

A, B, C, and D The network engineer wants R1 to advertise static routes in OSPF area 1. Which nary address must be advertised in OSPF?

- A. 10.1.40.0/25
- B. 10.1.40.0/24
- C. 10.1.40.0/23
- D. 10.1.41.0/25

Correct Answer: C

Section:

QUESTION 251

A network architect is deciding whether to implement Cisco autonomous access points or lightweight access points. Which fact about firmware updates must the architect consider? Unlike lightweight access points, which require

- A. Unlike lightweight access points, which require redundant WLCs to support firmware upgrades, autonomous access points require only one WLC.
- B. Unlike autonomous access points, lightweight access points store a complete copy of the current firmware for backup.
- C. Unlike lightweight access points, autonomous access points can recover automatically from a corrupt firmware update.
- D. Unlike autonomous access points, lightweight access points require a WLC to implement remote firmware updates.

Correct Answer: D

Section:

QUESTION 252

DRAG DROP

Drag and drop the networking parameters from the left on to the correct values on the right.

Select and Place:

SMTP	Connection Oriented
SNMP	
TFTP	
VoIP	Connectionless
SSH	
FTP	

Correct Answer:

	Connection Oriented
	Connectionless

Section:

Explanation:

SSH uses TCP port 22 while SNMP uses UDP port 161 and 162.

QUESTION 253

DRAG DROP

Drag and drop the TCP or UDP details from the left onto their corresponding protocols on the right.

Select and Place:

transmitted based on data contained in the packet without the need for a data channel

provides best-effort service

TCP

requires the client and the server to establish a connection before sending the packet

supports reliable data transmission

UDP

Correct Answer:

TCP

requires the client and the server to establish a connection before sending the packet

supports reliable data transmission

UDP

transmitted based on data contained in the packet without the need for a data channel

provides best-effort service

Section:

Explanation:

QUESTION 254

DRAG DROP

Drag and drop the IPv6 addresses from the left onto the corresponding address types on the right.

Select and Place:

Answer Area

- 2001:db8:600d:cafe::123
- fcba:926a:e8e:7a25:b1:c6d2:1a76:8fdc
- fd6d:c83b:5cef:b6b2::1
- 3ffe:e54d:620:a87a::f00d

Global Unicast

[Empty box]

[Empty box]

Unique Local

[Empty box]

[Empty box]

Correct Answer:

Answer Area

- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]

Global Unicast

- 2001:db8:600d:cafe::123
- 3ffe:e54d:620:a87a::f00d

Unique Local

- fcba:926a:e8e:7a25:b1:c6d2:1a76:8fdc
- fd6d:c83b:5cef:b6b2::1

Section:
Explanation:

QUESTION 255
DRAG DROP
Drag and drop the WLAN components from the left onto the correct descriptions on the right.

Select and Place:

Answer Area

- access point
- virtual interface
- dynamic interface
- service port
- wireless LAN controller

- device that manages access points
- device that provides Wi-Fi devices with a connection to a wired network
- used for out of band management of a WLC
- used to support mobility management of the WLC
- applied to the WLAN for wireless client communication

Correct Answer:

Answer Area

Empty input fields for the correct answer.

- wireless LAN controller
- access point
- service port
- virtual interface
- dynamic interface

Section:

Explanation:

QUESTION 256

DRAG DROP



```

C:\>ipconfig/all

Windows IP Configuration

Host Name . . . . . : Inspiron15
Primary Dns Suffix . . . . . :
Mode Type . . . . . : Mixed
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Wireless LAN adapter Local Area Connection* 12:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . . . . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : 18-76-3F-7C-57-DF
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . . . . . :
Description . . . . . : Dell Wireless 1703 802.11b/g/n (2.4GHz)
Physical Address. . . . . : B8-76-3F-7C-57-DF
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::e09f:9839:6e86:f755%12(Preferred)
IPv4 Address. . . . . : 192.168.1.20(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
DHCPv6 IAID . . . . . : 263747135
DHCPv6 Client DUID. . . . . : 00-01-00-01-18-E6-32-43-B8-76-3F-7C-57-DF
. . . . . : 192.168.1.15
. . . . . : 192.168.1.16
NetBIOS over Tcpip. . . . . : Enabled

```

Refer to the exhibit. An engineer is tasked with verifying network configuration parameters on a client workstation to report back to the team lead. Drag and drop the node identifiers from the left onto the network parameters on the right.



Select and Place:

192.168.1.1	broadcast address
192.168.1.20	default gateway
192.168.1.254	host IP address
192.168.1.255	last assignable IP address in the subnet
B8-76-3F-7C-57-DF	MAC address

Correct Answer:

	192.168.1.255
	192.168.1.1
	192.168.1.20
	192.168.1.254
	B8-76-3F-7C-57-DF

Section:

Explanation:

QUESTION 257

DRAG DROP

Drag and drop the benefits of a Cisco Wireless Lan Controller from the left onto the correct examples on the right.

Select and Place:

Dynamic RF Feature	Controller provides centralized management of users and VLANs
Easy Deployment Process	Access points auto adjust signal strength
Optimized user performance	Controller image auto deployed to access Points
Easy upgrade process	Controller uses loadbalancing to maximize throughput

Correct Answer:

	Easy Deployment Process
	Dynamic RF Feature
	Easy upgrade process
	Optimized user performance

Section:

Explanation:

QUESTION 258

DRAG DROP

Drag and drop the functions of AAA supporting protocols from the left onto the protocols on the right.

Select and Place:

- encrypts only the password when it sends an access request
- encrypts the entire body of the access-request packet
- separates all three AAA operations
- combines authentication and authorization
- uses TCP
- uses UDP

RADIUS

[Empty box]

[Empty box]

[Empty box]

TACACS+

[Empty box]

[Empty box]

[Empty box]

Correct Answer:

- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]

RADIUS

- encrypts only the password when it sends an access request
- uses UDP
- combines authentication and authorization

TACACS+

- encrypts the entire body of the access-request packet
- separates all three AAA operations
- uses TCP



Section:

Explanation:

QUESTION 259

DRAG DROP

Drag and drop the Rapid PVST+ forwarding state actions from the left to the right. Not all actions are used.

Select and Place:

BPDUs received are forwarded to the system module	action
BPDUs received from the system module are processed and transmitted	action
Frames received from the attached segment are discarded	action
Frames received from the attached segment are processed	action
Switched frames received from other ports are advanced	
The port in the forwarding state responds to network management messages	



Correct Answer:

	BPDUs received are forwarded to the system module
	BPDUs received from the system module are processed and transmitted
	Frames received from the attached segment are discarded
Frames received from the attached segment are processed	
Switched frames received from other ports are advanced	
	The port in the forwarding state responds to network management messages

Section:

Explanation:

QUESTION 260

DRAG DROP

Drag and drop the facts about wireless architectures from the left onto the types of access point on the right. Not all options are used.

Select and Place:

Answer Area

configured and managed by a WLC	Autonomous Access Point
managed from a web-based dashboard	
accessible for management via Telnet, SSH, or a web GUI	
requires a management IP address	Cloud-Based Access Point
supports automatic deployment	

Correct Answer:

Answer Area

configured and managed by a WLC	Autonomous Access Point
	accessible for management via Telnet, SSH, or a web GUI
	requires a management IP address
	Cloud-Based Access Point
	managed from a web-based dashboard
	supports automatic deployment



Section:

Explanation:

QUESTION 261

DRAG DROP

A network engineer is configuring an OSPFv2 neighbor adjacency. Drag and drop the parameters from the left onto their required categories on the right. Not all parameters are used.

Select and Place:

Answer Area



- area ID
- IP address
- netmask
- OSPF process ID
- router ID
- timers

must match

-
-
-

must be unique

-
-

Correct Answer:

Answer Area



-
-
-
- OSPF process ID
-
-

must match

- area ID
- netmask
- timers

must be unique

- IP address
- router ID

Vdumps

Section:

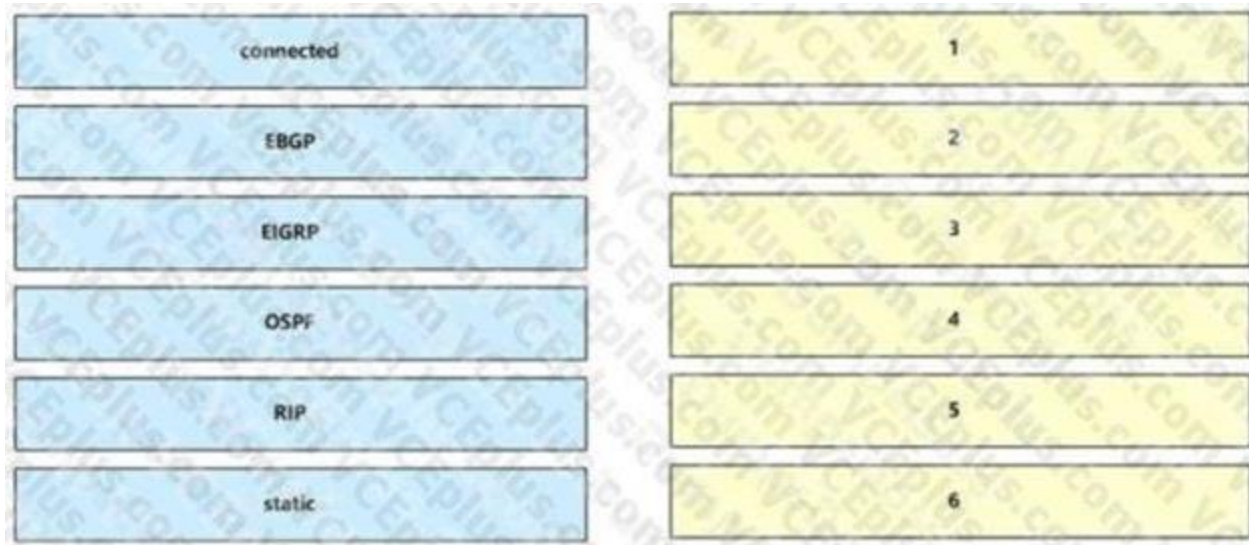
Explanation:

QUESTION 262

DRAG DROP

Drag each route source from the left to the numbers on the right. Beginning with the lowest and ending with the highest administrative distance.

Select and Place:



Correct Answer:



Section:

Explanation:

QUESTION 263

DRAG DROP

Drag and drop the functions from the left onto the correct network components on the right.

Select and Place:



Answer Area

- resolves web URLs to IP addresses
- assigns a default gateway to a client
- holds the TCP/IP settings to be distributed to the clients
- stores a list of IP addresses mapped to names
- assigns IP addresses to enabled clients

DHCP Server

-
-
-

DNS Server

-
-

Correct Answer:

Answer Area

-
-
-
-
-

DHCP Server

- assigns a default gateway to a client
- holds the TCP/IP settings to be distributed to the clients
- assigns IP addresses to enabled clients

DNS Server

- resolves web URLs to IP addresses
- stores a list of IP addresses mapped to names

Section:

Explanation:

QUESTION 264

DRAG DROP

Drag and drop the network protocols from the left onto the correct transport services on the right.

Select and Place:

Answer Area



- FTP
- SMTP
- SNMP
- SSH
- TFTP
- VoIP

Connection Oriented

Connectionless

Correct Answer:

Answer Area



Connection Oriented

- FTP
- SMTP
- SSH

Connectionless

- SNMP
- TFTP
- VoIP



Section:
Explanation:

QUESTION 265

DRAG DROP

Drag and drop the SNMP components from the left onto the descriptions on the right.

Select and Place:

Answer Area

- MIB
- SNMP agent
- SNMP manager
- SNMP trap

- collection of variables that can be monitored
- unsolicited message
- responds to status requests and requests for information about a device
- resides on an NMS

Correct Answer:

Answer Area

-
-
-
-

- MIB
- SNMP trap
- SNMP agent
- SNMP manager

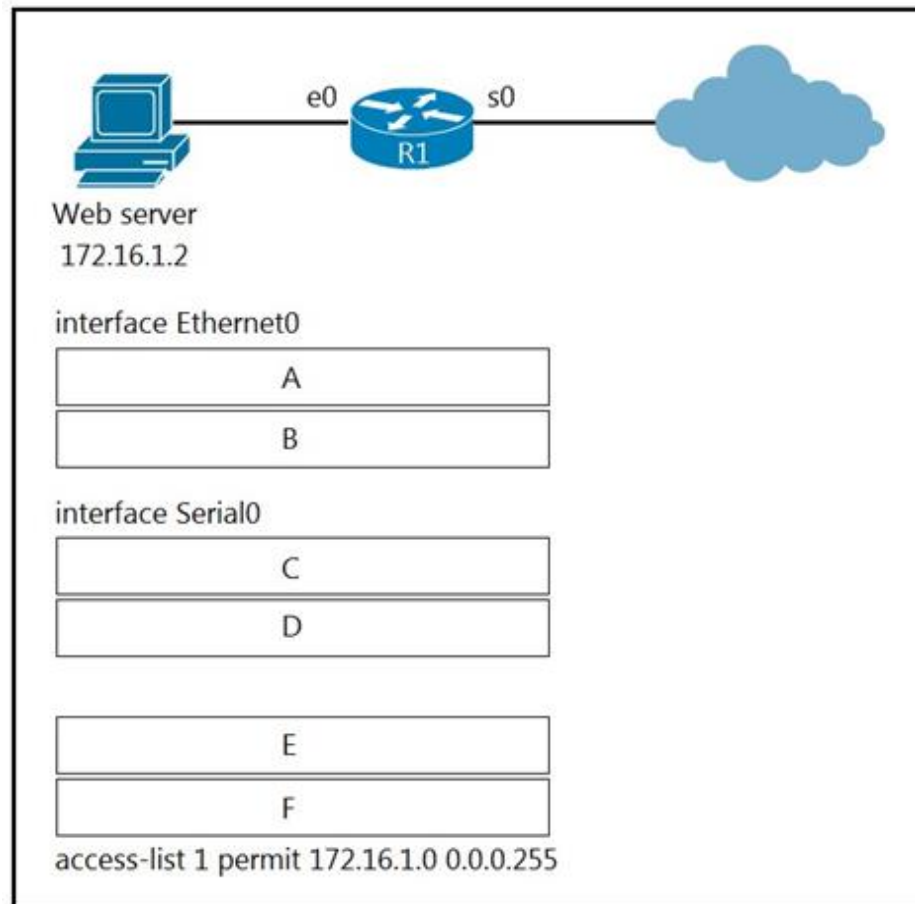
Section:

Explanation:

QUESTION 266

DRAG DROP





Refer to the exhibit. An engineer is configuring the router to provide static NAT for the webserver. Drag and drop the configuration commands from the left onto the letters that correspond to its position in the configuration on the exhibit.



Select and Place:

ip address 172.16.1.1 255.255.255.0	position A
ip address 45.83.2.214 255.255.255.240	position B
ip nat inside	position C
ip nat inside source list 1 interface s0 overload	position D
ip nat inside source static tcp 172.16.1.2 80 45.83.2.214 80 extendable	position E
ip nat outside	position F

Correct Answer:

	ip address 172.16.1.1 255.255.255.0
	ip nat inside
	ip address 45.83.2.214 255.255.255.240
	ip nat outside
	ip nat inside source static tcp 172.16.1.2 80 45.83.2.214 80 extendable
	ip nat inside source list 1 interface s0 overload

Section:

Explanation:

QUESTION 267

DRAG DROP

Drag and drop the threat-mitigation techniques from the left onto the types of threat or attack they mitigate on the right.

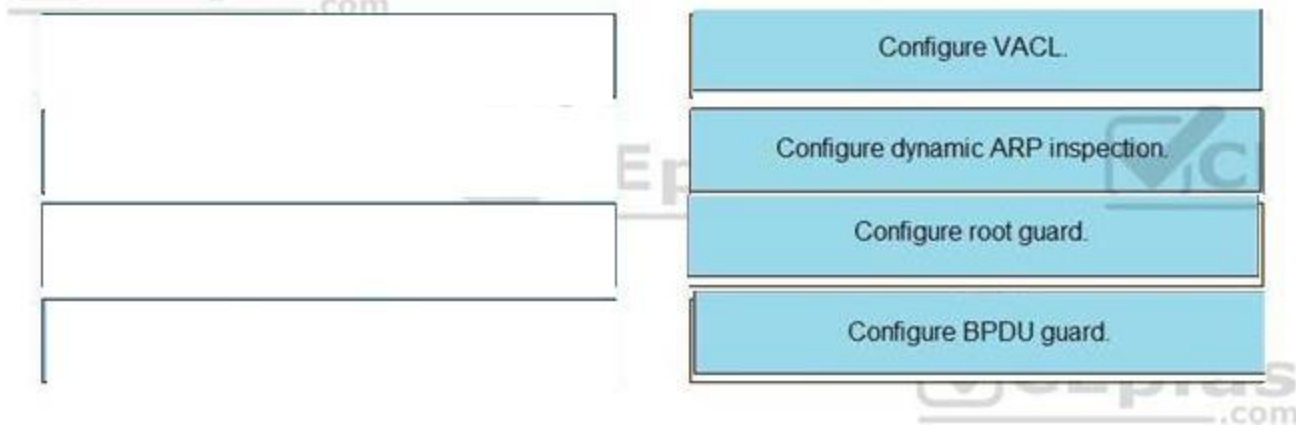
Select and Place:



Answer Area

Configure BPDU guard.	802.1q double tagging
Configure dynamic ARP inspection.	ARP spoofing
Configure root guard.	unwanted superior BPDUs
Configure VACL.	unwanted BPDUs on PortFast-enabled interfaces

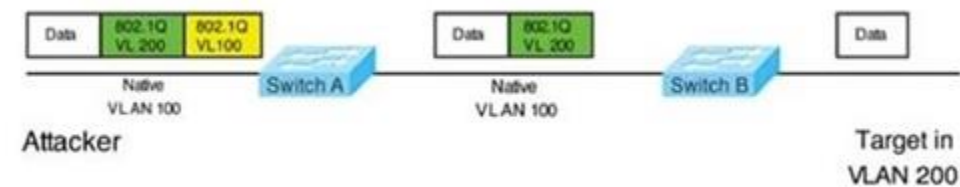
Correct Answer:



Section:

Explanation:

Double-Tagging attack:



In this attack, the attacking computer generates frames with two 802.1Q tags. The first tag matches the native VLAN of the trunk port (VLAN 10 in this case), and the second matches the VLAN of a host it wants to attack (VLAN 20).

When the packet from the attacker reaches Switch A, Switch A only sees the first VLAN 10 and it matches with its native VLAN 10 so this VLAN tag is removed. Switch A forwards the frame out all links with the same native VLAN 10.

Switch B receives the frame with an tag of VLAN 20 so it removes this tag and forwards out to the Victim computer.

Note: This attack only works if the trunk (between two switches) has the same native VLAN as the attacker.

To mitigate this type of attack, you can use VLAN access control lists (VACLs, which applies to all traffic within a VLAN. We can use VACL to drop attacker traffic to specific victims/servers) or implement Private VLANs.

ARP attack (like ARP poisoning/spoofing) is a type of attack in which a malicious actor sends falsified ARP messages over a local area network as ARP allows a gratuitous reply from a host even if an ARP request was not received. This results in the linking of an attacker's MAC address with the IP address of a legitimate computer or server on the network. This is an attack based on ARP which is at Layer 2. Dynamic ARP inspection (DAI) is a security feature that validates ARP packets in a network which can be used to mitigate this type of attack.

QUESTION 268

DRAG DROP

Drag and drop the AAA functions from the left onto the correct AAA services on the right.

Select and Place:

Answer Area



- controls the actions that a user can perform
- provides analytical information for the network administrator
- records user activities
- restricts the services that are available to a user
- verifies the password associated with a user
- identifies the user

Authentication

[Empty box]

[Empty box]

Authorization

[Empty box]

[Empty box]

Accounting

[Empty box]

[Empty box]

Correct Answer:

Answer Area



- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]
- [Empty box]

Authentication

verifies the password associated with a user

identifies the user

Authorization

controls the actions that a user can perform

restricts the services that are available to a user

Accounting

provides analytical information for the network administrator

records user activities



Section:
Explanation:

QUESTION 269

DRAG DROP

Drag and drop the Cisco Wireless LAN Controller security settings from the left onto the correct security mechanism categories on the right.

Select and Place:

Answer Area

web policy

Passthrough

WPA+WPA2

802.1X

Layer 2 Security Mechanisms

Layer 3 Security Mechanisms (for WLAN)

Correct Answer:

Answer Area

WPA+WPA2

802.1X

web policy

Passthrough

Section:

Explanation:

QUESTION 270

Refer to the exhibit.



```
R1# show ip route
....
D    172.16.32.0/27 [90/2888597172] via 20.1.1.1
O    172.16.32.0/19 [110/292094]   via 20.1.1.10
R    172.16.32.0/24 [120/2]   via 20.1.1.3
```



An engineer executed the script and added commands that were not necessary for SSH and now must remove the commands.

- A. metric
- B. cost
- C. longest prefix
- D. administrative distance

Correct Answer: D

Section:

QUESTION 271

Which cipher is supported for wireless encryption only with the WPA2 standard?

- A. AES256
- B. AES
- C. RC4
- D. SHA

Correct Answer: B

Section:

QUESTION 272

DRAG DROP

Drag and drop the Ansible features from the left to the right Not all features are used.



Select and Place:

executes modules via SSH by default	feature
uses the YAML language	feature
uses agents to manage hosts	feature
pushes configurations to the client	feature
requires clients to pull configurations from the server	
operates without agents	

Correct Answer:

	operates without agents
uses the YAML language	executes modules via SSH by default
	uses agents to manage hosts
	pushes configurations to the client
requires clients to pull configurations from the server	

Section:

Explanation:

QUESTION 273

DRAG DROP

Refer to the exhibit.



```

R1# show ip route | begin gateway
Gateway of last resort is not set
O 172.16.0.0/16 is variably subnetted, 5 subnets, 5 masks
O 172.16.2.128/25 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O 172.16.3.64/27 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O 172.16.3.128/28 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O 172.16.3.192/29 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O 172.16.4.0/23 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
207.165.200.0/24 is variably subnetted, 4 subnets, 2 masks
C 207.165.200.248/30 is directly connected, Serial0/0/0
L 207.165.200.249/32 is directly connected, Serial0/0/0
C 207.165.200.252/30 is directly connected, Serial0/0/1
L 207.165.200.253/32 is directly connected, Serial0/0/1

```

Drag and drop the learned prefixes from the left onto the subnet masks on the right

Select and Place:

172.16.3.128	255.255.254.0
172.16.3.64	255.255.255.128
172.16.2.128	255.255.255.224
172.16.3.192	255.255.255.240
172.16.4.0	255.255.255.248

Correct Answer:

	172.16.4.0
	172.16.3.128
	172.16.3.64
	172.16.2.128
	172.16.3.192

Section:

Explanation:

QUESTION 274

DRAG DROP

Drag and drop the SNMP components from the left onto the description on the right.

Select and Place:

Answer Area



MIB	collection of variables that can be monitored
SNMP agent	unsolicited message
SNMP manager	responds to status requests and requests for information about a device
SNMP trap	resides on an NMS

Correct Answer:

Answer Area

	MIB
	SNMP trap
	SNMP agent
	SNMP manager

Section:
Explanation:

QUESTION 275
DRAG DROP

Drag and drop the use cases for device-management technologies from the left onto the corresponding.



Select and Place:

overlay and underlay configuration	Cisco DNA Center
routed access deployment	
STP deployment	
VLAN and HSRP configuration	Traditional
VXLAN and LISP configuration	
configuration via console	

Correct Answer:

	Cisco DNA Center
	overlay and underlay configuration
	routed access deployment
	STP deployment
	Traditional
	VLAN and HSRP configuration
	VXLAN and LISP configuration
	configuration via console

Section:
Explanation:



QUESTION 276
DRAG DROP

Drag and drop the characteristics of transport layer protocols from the left onto the corresponding protocols on the right.

Select and Place:

guarantees packet delivery	TCP
uses a 32-bit sequence number	
ideal for voice traffic	
provides support for retransmission of lost packets	
offers minimal overhead within a packet	UDP
requires less computer resources	

Correct Answer:

	TCP
	provides support for retransmission of lost packets
	guarantees packet delivery
	uses a 32-bit sequence number
	UDP
	ideal for voice traffic
	requires less computer resources
	offers minimal overhead within a packet

Section:

Explanation:

QUESTION 277

DRAG DROP

Drag and drop the configuration management terms from the left onto the descriptions on the right.
Not all terms are used.

Select and Place:

agent	daemon that determines when the central authority has updates available
agentless	model in which the central server sends updates to nodes on an as-needed basis
provision	easy-to-manage deployment option that may lack scalability
pull	device hardware that runs without embedded management features
push	to automatically install or deploy a configuration or update
post	

Correct Answer:



	pull
	push
	agent
	agentless
	provision
post	

Section:

Explanation:

QUESTION 278

DRAG DROP

Drag and drop the attack-mitigation techniques from the left onto the types of attack that they mitigate on the right.



Select and Place:

Answer Area

configure 802.1x authenticate	802.1q double-tagging VLAN-hopping attack
configure DHCP snooping	MAC flooding attack
configure the native VLAN with a nondefault VLAN ID	man-in-the-middle spoofing attack
disable DTP	switch-spoofing VLAN-hopping attack

Correct Answer:

Answer Area



	configure the native VLAN with a nondefault VLAN ID
	configure DHCP snooping
	configure 802.1x authenticate
	disable DTP

Section:

Explanation:

QUESTION 279

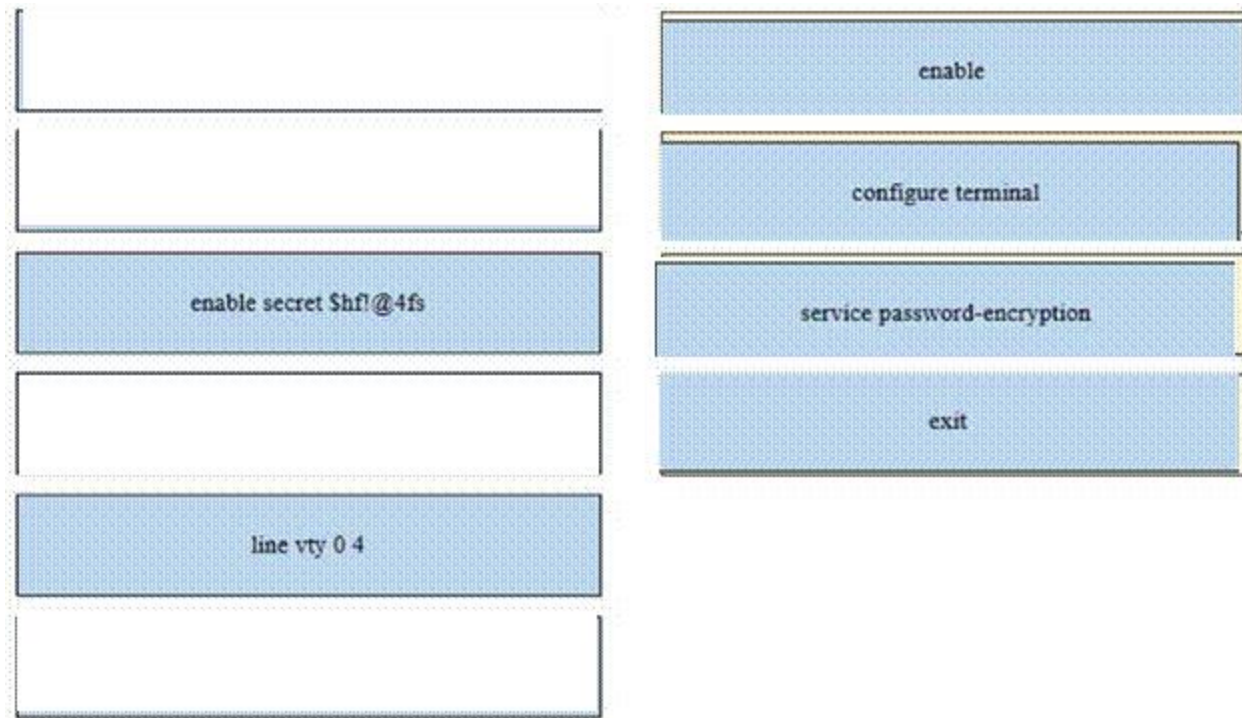
DRAG DROP

An engineer is configuring an encrypted password for the enable command on a router where the local user database has already been configured. Drag and drop the configuration commands from the left into the correct sequence on the right. Not all commands are used.

Select and Place:

configure terminal	first
enable	second
enable secret \$hfl@4fs	third
exit	fourth
line vty 0 4	
service password-encryption	

Correct Answer:

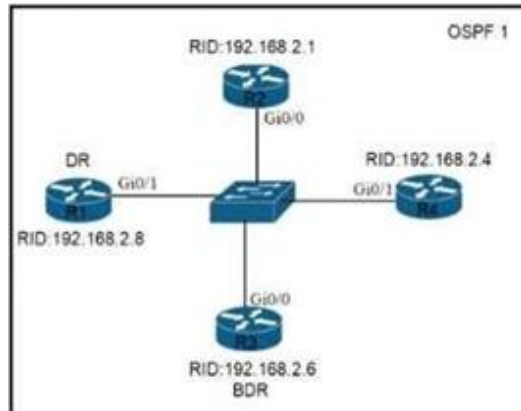


Section:

Explanation:

QUESTION 280

Refer to the exhibit.



Refer to the exhibit. All routers in the network are configured R2 must be the DR. After the engineer connected the devices, R1 was elected as the DR. Which command sequence must be configure on R2 to Be elected as the DR in the network?

- R2(config)#interface gi0/0
R2(config-if)#ip ospf priority 1
- R2(config)#interface gi0/0
R2(config-if)#ip ospf priority 100
- R2(config)#router ospf 1
R2(config-router)#router-id 10.100.100.100
- R2(config)#router ospf 1
R2(config-router)#router-id 192.168.2.7

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

Correct Answer: B

Section:

QUESTION 281

To improve corporate security, an organization is planning to implement badge authentication to limit access to the data center. Which element of a security program is being deployed?

- A. user training
- B. user awareness
- C. vulnerability verification
- D. physical access control

Correct Answer: D

Section:

QUESTION 282

When a WPA2-PSK WLAN is configured in the Wireless LAN Controller, what is the minimum number of characters that is required in ASCII format?

- A. 6
- B. 8
- C. 12
- D. 18

Correct Answer: B

Section:

QUESTION 283

DRAG DROP

Drag and drop the device behaviors from the left onto the matching HSRP slate on the right.



Select and Place:

has heard from the neighbor device and is receiving hello packets	Active
is forwarding packets	Learn
is ready to forward packets if the device that is currently forwarding packets fails	Listen
is transmitting and receiving hello packets	Speak
is waiting to hear from the neighbor device	Standby

Correct Answer:

	is forwarding packets
	has heard from the neighbor device and is receiving hello packets
	is waiting to hear from the neighbor device
	is transmitting and receiving hello packets
	is ready to forward packets if the device that is currently forwarding packets fails

Section:

Explanation:

QUESTION 284

DRAG DROP

Drag and drop the characteristic from the left onto the IPv6 address type on the right.

Select and Place:

- confined to a single link
- provides one-to-many communications
- serves as the next-hop addresses
- cannot be used as a source address

Multicast

Link-Local Address

Correct Answer:

Multicast
confined to a single link
provides one-to-many communications
Link-Local Address
serves as the next-hop addresses
cannot be used as a source address

Section:
Explanation:

QUESTION 285

DRAG DROP

Drag and drop the characteristic from the left onto the IPv6 address type on the right.

Select and Place:

enables aggregation of routing prefixes
provides one-to-many communications
is routable and reachable via the Internet
has a unicast source sent to a group

Global Unicast Address
Multicast

Correct Answer:

Global Unicast Address

- enables aggregation of routing prefixes
- is routable and reachable via the Internet

Multicast

- provides one-to-many communications
- has a unicast source sent to a group

Section:
Explanation:

QUESTION 286
DRAG DROP
Drag and drop the characteristic from the left onto the IPv6 address type on the right.

Select and Place:

- allows sites to be combined without address conflicts
- provides for one-to-one communication
- is a counterpart of private IPv4 addresses
- is publicly routable in the same way as IPv4 addresses

Global Unicast Address

-
-

Unique Local

-
-

Correct Answer:

Global Unicast Address

is publicly routable in the same way as IPv4 addresses

allows sites to be combined without address conflicts

Unique Local

provides for one-to-one communication

is a counterpart of private IPv4 addresses

Section:
Explanation:

QUESTION 287
DRAG DROP
Drag and drop the characteristic from the left onto the IPv6 address type on the right.

Select and Place:

provides for one-to-one communication

confined to a single link

serves as the next-hop addresses

is routable and reachable via the Internet

Global Unicast Address

Link-Local Address

Correct Answer:



Section:
Explanation:

