

Cisco

Exam Questions 200-301

Cisco Certified Network Associate



NEW QUESTION 1

- (Topic 3)

What is a requirement when configuring or removing LAG on a WLC?

- A. The Incoming and outgoing ports for traffic flow must be specified If LAG Is enabled.
- B. The controller must be rebooted after enabling or reconfiguring LAG.
- C. The management interface must be reassigned if LAG disabled.
- D. Multiple untagged interfaces on the same port must be supported.

Answer: C

NEW QUESTION 2

- (Topic 3)

An engineer is configuring remote access to a router from IP subnet 10.139.58.0/28. The domain name, crypto keys, and SSH have been configured. Which configuration enables the traffic on the destination router?

A)

```
interface FastEthernet0/0
 ip address 10.122.49.1 255.255.255.240
 access-group 120 in

ip access-list extended 120
 permit tcp 10.139.58.0 255.255.255.248 any eq 22
```

B)

```
interface FastEthernet0/0
 ip address 10.122.49.1 255.255.255.252
 ip access-group 110 in

ip access-list extended 110
 permit tcp 10.139.58.0 0.0.0.15 host 10.122.49.1 eq 22
```

C)

```
interface FastEthernet0/0
 ip address 10.122.49.1 255.255.255.248
 ip access-group 10 in

ip access-list standard 10
 permit udp 10.139.58.0 0.0.0.7 host 10.122.49.1 eq 22
```

D)

```
interface FastEthernet0/0
 ip address 10.122.49.1 255.255.255.252
 ip access-group 105 in

ip access-list standard 105
 permit tcp 10.139.58.0 0.0.0.7 eq 22 host 10.122.49.1
```

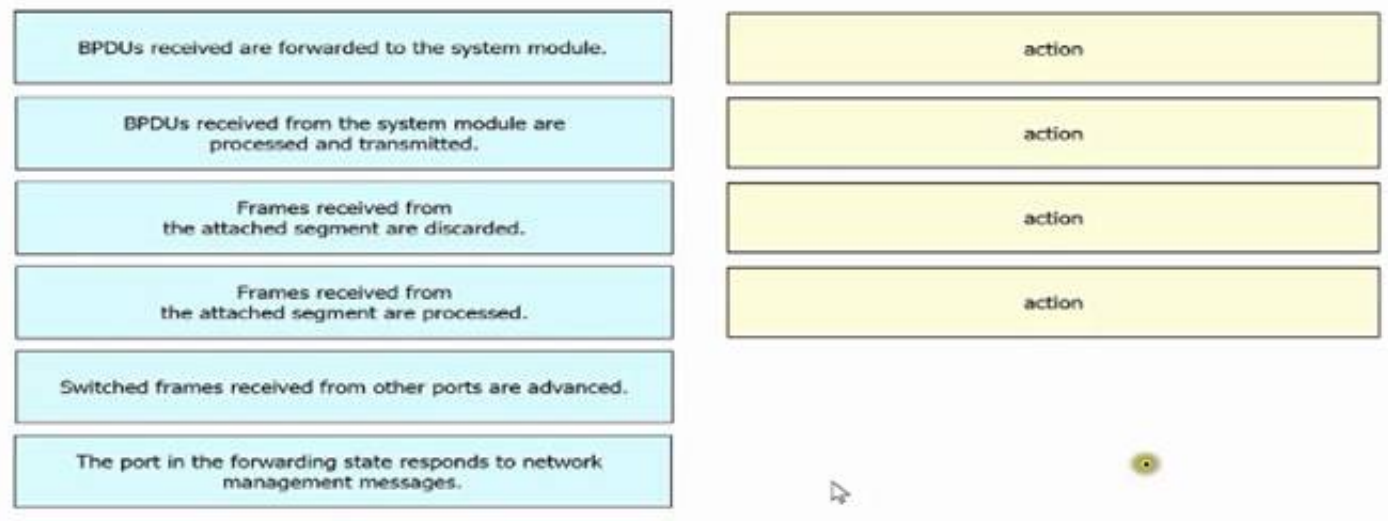
- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: B

NEW QUESTION 3

DRAG DROP - (Topic 3)

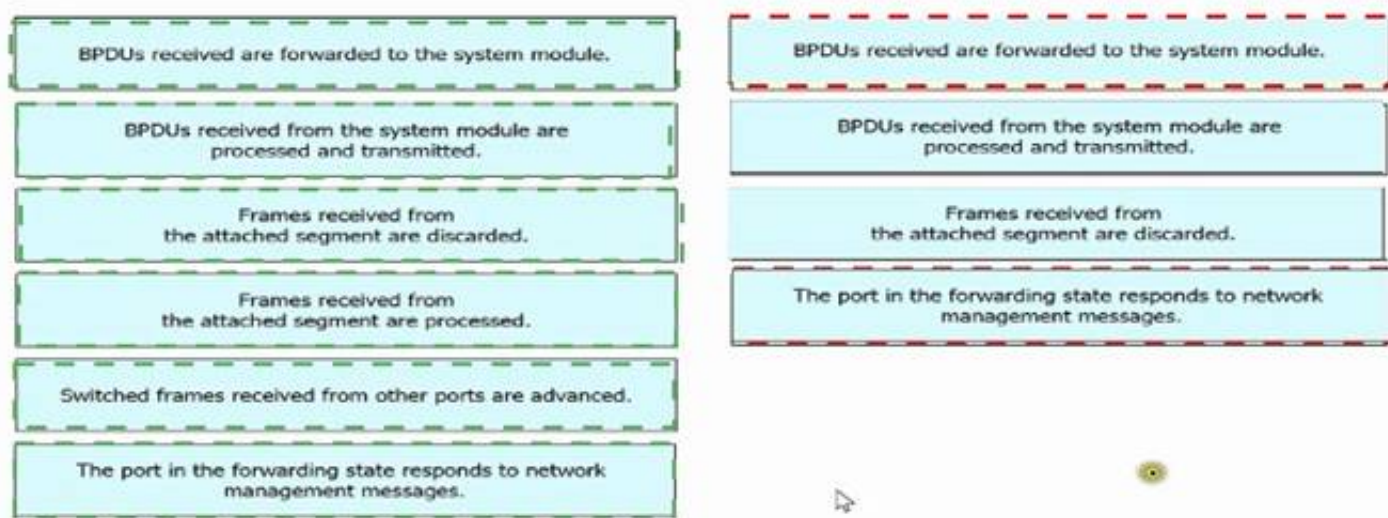
Drag and drop the Rapid PVST+ forwarding slate actions from the left to the right. Not all actions are used.



- A. Mastered
 B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 4

- (Topic 3)

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

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

Answer: B

NEW QUESTION 5

- (Topic 3)

What is a function of Opportunistic Wireless Encryption in an environment?

- A. offer compression
 B. increase security by using a WEP connection
 C. provide authentication
 D. protect traffic on open networks

Answer: D

NEW QUESTION 6

- (Topic 3)

Which Layer 2 switch function encapsulates packets for different VLANs so that the packets traverse the same port and maintain traffic separation between the VLANs?

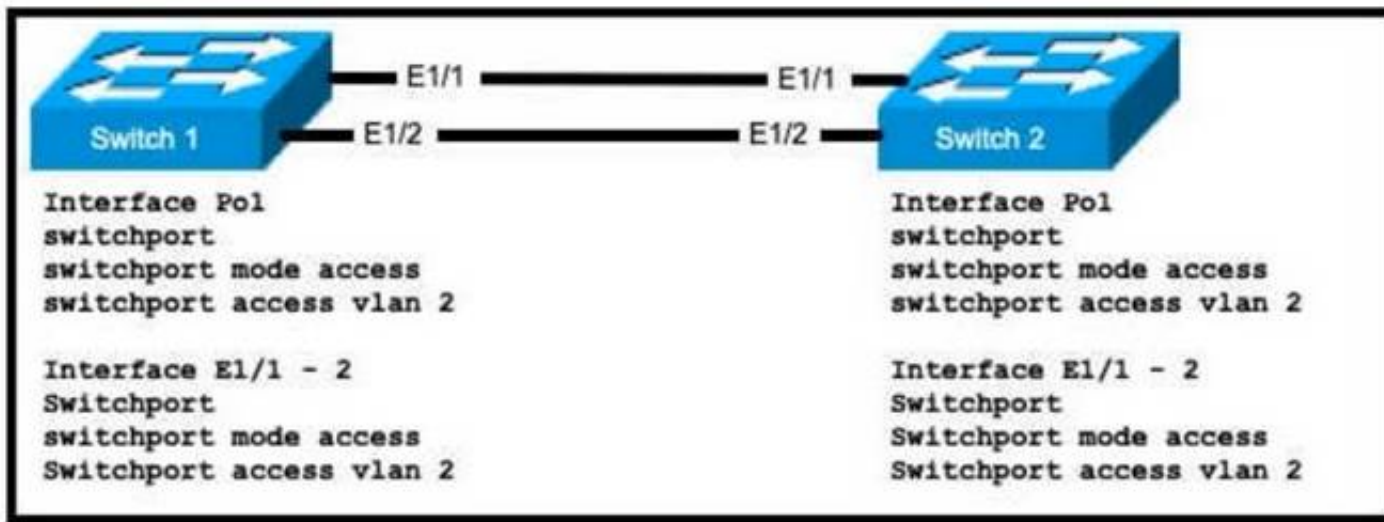
- A. VLAN numbering
 B. VLAN DSCP
 C. VLAN tagging
 D. VLAN marking

Answer: C

NEW QUESTION 7

- (Topic 3)

Refer to the exhibit.



An engineer is configuring an EtherChannel using LACP between Switches 1 and 2 Which configuration must be applied so that only Switch 1 sends LACP initiation packets?

- A. Switch 1 (config-if)#channel-group 1 mode on Swrtch2(config-if)#channel-group 1 mode passive
- B. Switch1(config-if)#channel-group 1 mode passive Switch2(config-if)#channel-group 1 mode active
- C. Switch1(config-if)#channel-group 1 mode active Switch2(config-if)#channel-group 1 mode passive
- D. Switch1(config-if)#channel-group 1 mode on Switch2(config-if)#channel-group 1 mode active

Answer: C

NEW QUESTION 8

- (Topic 3)

R1 as an NTP server must have:

- NTP authentication enabled
- NTP packets sourced from Interface loopback 0
- NTP stratum 2
- NTP packets only permitted to client IP 209.165.200.225

How should R1 be configured?

A)

```
ntp authenticate
ntp authentication-key 2 md5 CISCO123
ntp source Loopback0
nntp access-group server-only 10
ntp master 2
!
access-list 10 permit 209.165.200.225
```

B)

```
ntp authenticate
ntp authentication-key 2 md5 CISCO123
ntp source Loopback0
ntp access-group server-only 10
ntp stratum 2
!
access-list 10 permit udp host 209.165.200.225 any eq 123
```

C)

```
ntp authenticate
ntp authentication-key 2 sha1 CISCO123
ntp source Loopback0
ntp access-group server-only 10
ntp master 2
!
access-list 10 permit udp host 209.165.200.225 any eq 123
```

D)

```
ntp authenticate
ntp authentication-key 2 md5 CISCO123
ntp interface Loopback0
ntp access-group server-only 10
```

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

Answer: B

NEW QUESTION 9

- (Topic 3)

Which type of network attack overwhelms the target server by sending multiple packets to a port until the half-open TCP resources of the target are exhausted?

- A. SYIM flood
- B. reflection
- C. teardrop
- D. amplification

Answer: A

NEW QUESTION 10

- (Topic 3)

Which interface mode must be configured to connect the lightweight APs in a centralized architecture?

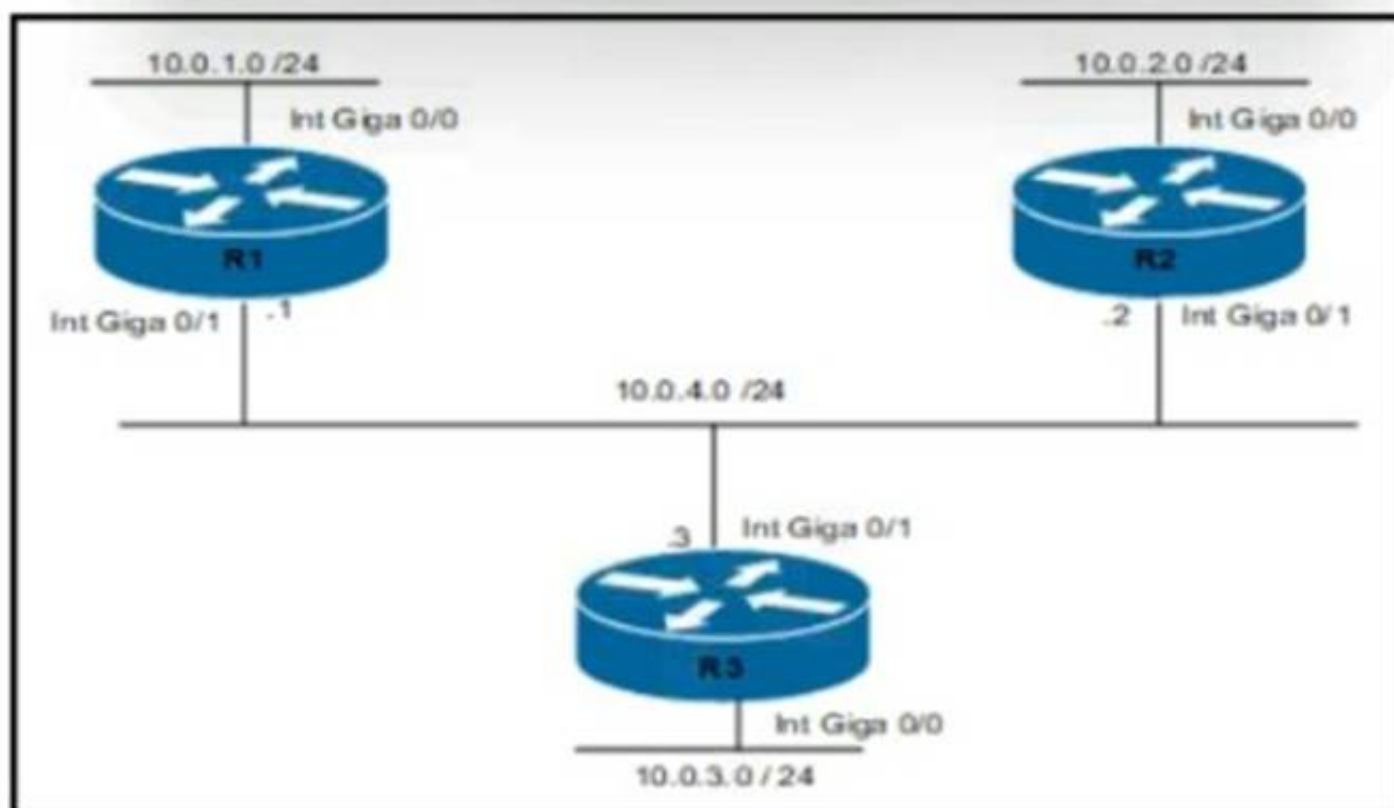
- A. WLAN dynamic
- B. management
- C. trunk
- D. access

Answer: D

NEW QUESTION 10

- (Topic 3)

Refer to the exhibit.



Routers R1 and R3 have the default configuration The router R2 priority is set to 99 Which commands on R3 configure it as the DR in the 10.0 4.0/24 network?

- A. R3(config)#interface Gig0/1 R3(config-if)#ip ospf priority 100
- B. R3(config)#interface Gig0/0 R3(config-if)#ip ospf priority 100
- C. R3(config)#interface Gig0/0 R3(config-if)#ip ospf priority 1
- D. R3(config)#interface Gig0/1 R3(config-if)#ip ospf priority 0

Answer: B

NEW QUESTION 13

DRAG DROP - (Topic 3)

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

configure the BPDU guard feature	802.1q double tagging
configure the dynamic ARP inspection feature	ARP spoofing
configure the root guard feature	unwanted superior BPDUs
configure a VLAN access control list	unwanted BPDUs on PortFast-enabled interfaces

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

configure the BPDU guard feature	configure a VLAN access control list
configure the dynamic ARP inspection feature	configure the dynamic ARP inspection feature
configure the root guard feature	configure the root guard feature
configure a VLAN access control list	configure the BPDU guard feature

NEW QUESTION 15

- (Topic 3)

A network engineer must configure two new subnets using the address block 10.70.128.0/19 to meet these requirements:

- The first subnet must support 24 hosts
- The second subnet must support 472 hosts
- Both subnets must use the longest subnet mask possible from the address block Which two configurations must be used to configure the new subnets and meet a requirement to use the first available address in each subnet for the router interfaces? (Choose two)

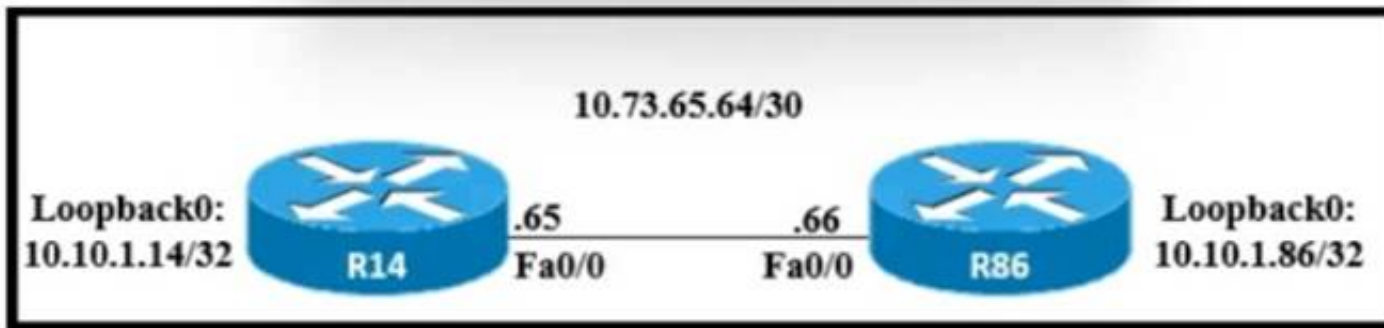
- A. interface vlan 1234 ip address 10.70.159.1 255.255.254.0
- B. interface vlan 1148 ip address 10.70.148.1 255.255.254.0
- C. interface vlan 4722 ip address 10.70.133.17 255.255.255.192
- D. interface vlan 3002 ip address 10.70.147.17 255.255.255.224
- E. interface vlan 155 ip address 10.70.155.65 255.255.255.224

Answer: BD

NEW QUESTION 19

- (Topic 3)

Refer to the exhibit.



A static route must be configured on R14 to forward traffic for the 172.21.34.0/25 network that resides on R86 Which command must be used to fulfill the request?

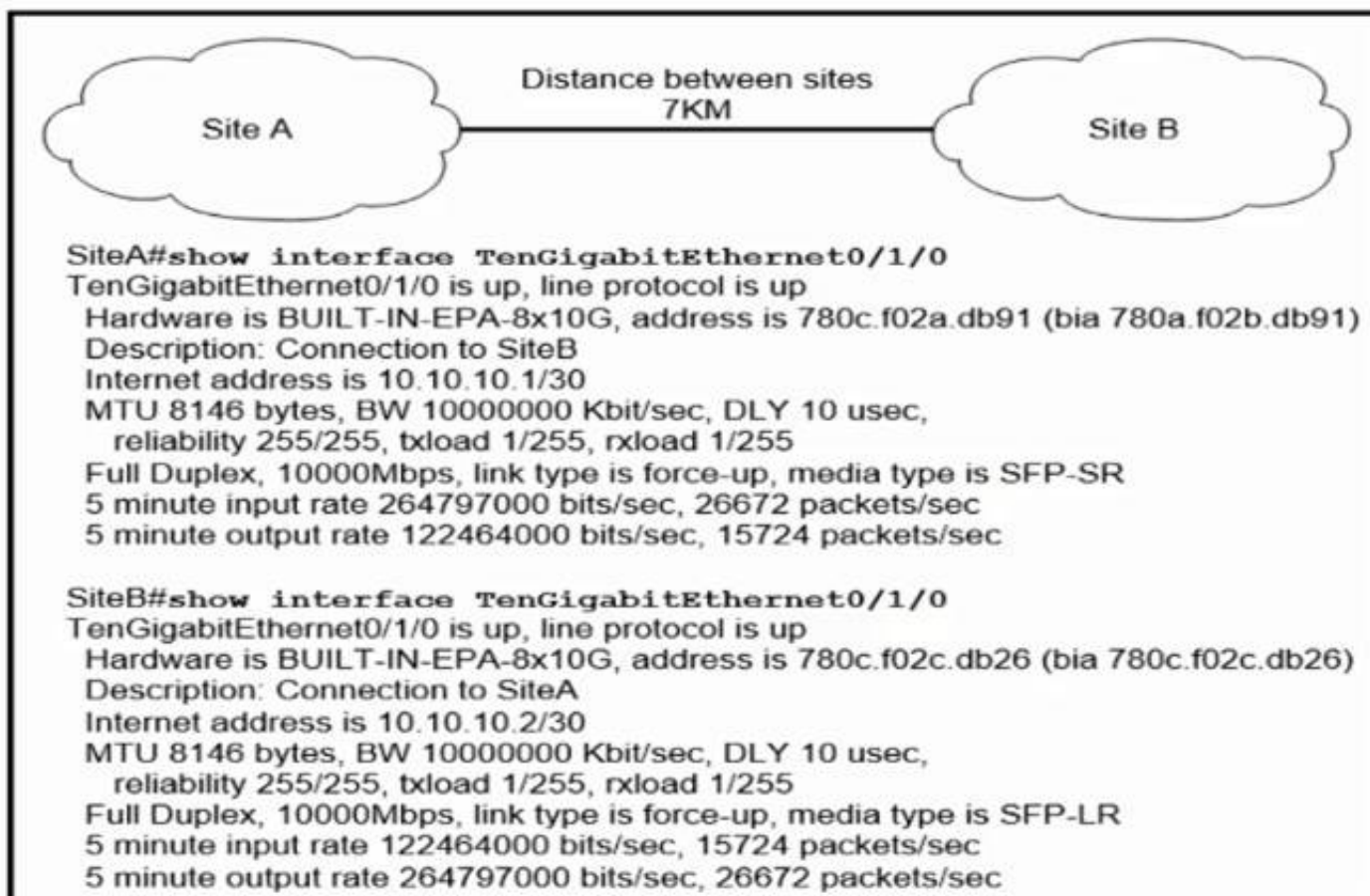
- A. ip route 172.21.34.0 255.255.255.192 10.73.65.65
- B. ip route 172.21.34.0 255.255.255.0 10.73.65.65
- C. ip route 172.21.34.0 255.255.128.0 10.73.65.64
- D. ip route 172.21.34.0 255.255.255.128 10.73.65.66

Answer: D

NEW QUESTION 22

- (Topic 3)

Refer to the exhibit.



Site A was recently connected to site B over a new single-mode fiber path. Users at site A report Intermittent connectivity Issues with applications hosted at site B. What is the reason for the problem?

- A. Heavy usage is causing high latency.
- B. An incorrect type of transceiver has been inserted into a device on the link.
- C. physical network errors are being transmitted between the two sites.
- D. The wrong cable type was used to make the connection.

Answer: B

NEW QUESTION 25

- (Topic 3)

A Cisco engineer is configuring a factory-default router with these three passwords:

- The user EXEC password for console access is p4ssw0rd1
- The user EXEC password for Telnet access is s3cr3t2
- The password for privileged EXEC mode is prn4t3p4ss

Which command sequence must the engineer configured

A)

```
enable secret priv4t3p4ss
!
line con 0
password login p4ssw0rd1
!
line vty 0 15
password login s3cr3t2
login
```

B)

```
enable secret privilege 15 priv4t3p4ss
!
line con 0
password p4ssw0rd1
login
!
line vty 0 15
password s3cr3t2
login
```

C)

```
enable secret priv4t3p4ss
!
line con 0
password p4ssw0rd1
login
!
line vty 0 15
password s3cr3t2
login
```

D)

```
enable secret priv4t3p4ss
!
line con 0
```

A. Option A

B. Option B

C. Option C

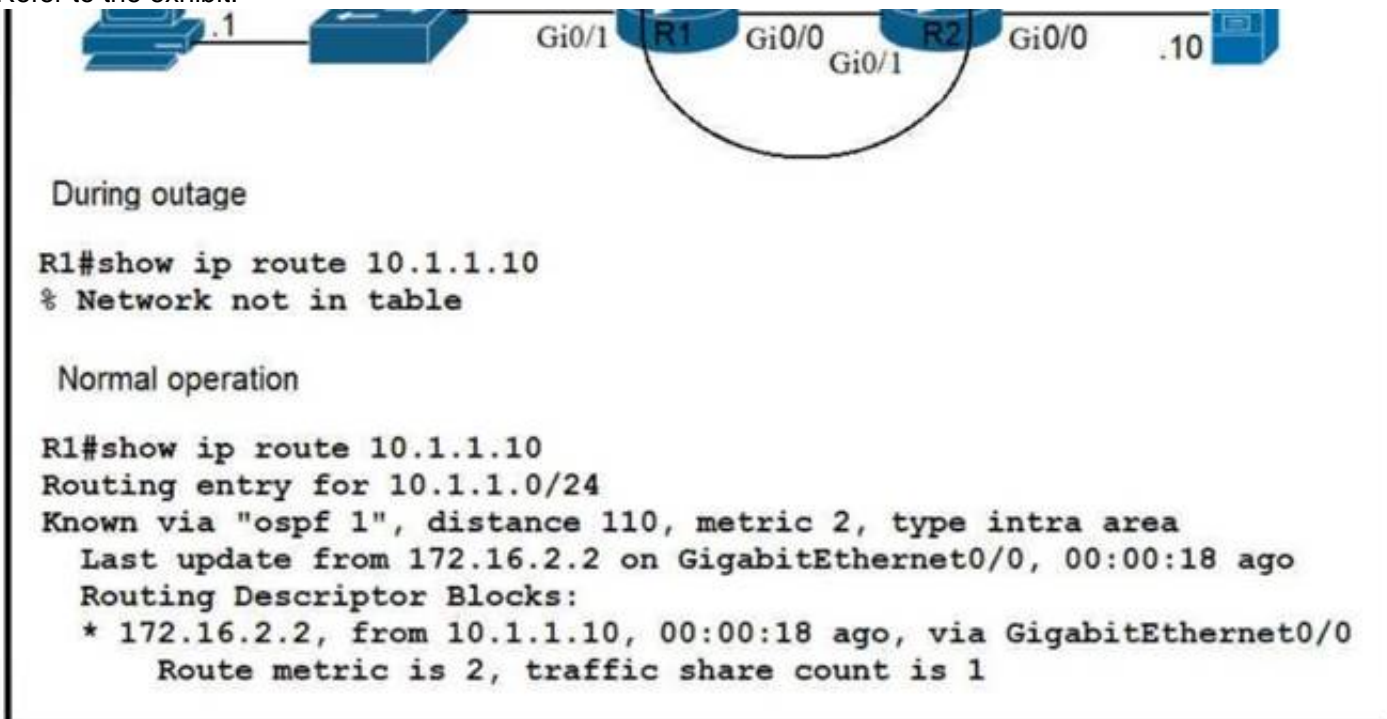
D. Option D

Answer: B

NEW QUESTION 27

- (Topic 3)

Refer to the exhibit.



Which route must be configured on R1 so that OSPF routing is used when OSPF is up. but the server is still reachable when OSPF goes down?

A. ip route 10.1.1.10 255.255.255.255 172.16.2.2 100

B. ip route 10.1.1.0 255.255.255.0 gi0/1 125

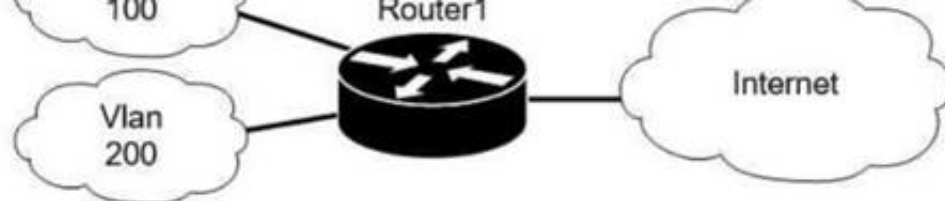
- C. ip route 10.1.1.0 255.255.255.0 172.16.2.2 100
- D. ip route 10.1.1.10 255.255.255.255 gi0/0 125

Answer: D

NEW QUESTION 30

- (Topic 3)

Refer to the exhibit.



```
Router1(config)#interface GigabitEthernet0/0
Router1(config-if)#ip address 209.165.200.225 255.255.255.224
Router1(config-if)#ip nat outside
Router1(config)#interface GigabitEthernet0/1
Router1(config-if)#ip nat inside
Router1(config)#interface GigabitEthernet0/1.100
Router1(config-if)#encapsulation dot1Q 100
Router1(config-if)#ip address 10.10.10.1 255.255.255.0
Router1(config)#interface GigabitEthernet0/1.200
Router1(config-if)#encapsulation dot1Q 200
Router1(config-if)#ip address 10.10.20.1 255.255.255.0
Router1(config)#ip access-list standard NAT_INSIDE_RANGES
Router1(config-std-nacl)#permit 10.10.10.0 0.0.0.255
Router1(config)#ip nat inside source list NAT_INSIDE_RANGES interface GigabitEthernet0/0 overload
```

Users on existing VLAN 100 can reach sites on the Internet. Which action must the administrator take to establish connectivity to the Internet for users in VLAN 200?

- A. Define a NAT pool on the router.
- B. Configure static NAT translations for VLAN 200.
- C. Configure the ip nat outside command on another interface for VLAN 200.
- D. Update the NAT INSIDF RANGFS ACL

Answer: B

NEW QUESTION 31

- (Topic 3)

Refer to the exhibit.

```
Switch#show etherchannel summary
[output omitted]
```

Group	Port-channel	Protocol	Ports
10	Po10 (SU)	LACP	Gi0/0 (P) Gi0/1 (P)
20	Po20 (SU)	LACP	Gi0/2 (P) Gi0/3 (P)

Which two commands when used together create port channel 10? (Choose two.)

- A. int range g0/0-1channel-group 10 mode active
- B. int range g0/0-1 chanm.l-group 10 mode desirable
- C. int range g0/0-1channel-group 10 mode passive
- D. int range g0/0-1 channel-group 10 mode auto
- E. int range g0/0-1 channel-group 10 mode on

Answer: AC

NEW QUESTION 35

- (Topic 3)

Refer to the exhibit.


```
TenGigabitEthernet0/0/0 is up, line protocol is up
Hardware is BUILT-IN-2T+6X1GE, address is 74a0.2f7a.0123 (bia 74a0.2f7a.0123)
Description: Uplink
Internet address is 10.1.1.1/24
MTU 1500 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 10000Mbps, link type is force-up, media type is unknown media type
output flow-control is on, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:00, output 00:05:40, output hang never
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 6160000 bits/sec, 1113 packets/sec
5 minute output rate 11213000 bits/sec, 1553 packets/sec
  12662416065 packets input, 12607032232894 bytes, 0 no buffer
    Received 14117163 broadcasts (0 IP multicasts)
      0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 26271385 multicast, 0 pause input
  7907779058 packets output, 5073750426832 bytes, 0 underruns
    0 output errors, 8662416065 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
  1 carrier transitions
```

Traffic that is flowing over interface TenGigabitEthernet0/0 experiences slow transfer speeds. What is the reason for the issue?

- A. heavy traffic congestion
- B. a duplex incompatibility
- C. a speed conflict
- D. queuing drops

Answer: C

NEW QUESTION 40

- (Topic 3)

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

Answer: B

NEW QUESTION 41

- (Topic 3)

Refer to the exhibit.

RIP	10.1.1.16/28[120/5]	via	F0/0
OSPF	10.1.1.0/24[110/30]	via	F0/1
OSPF	10.1.1.0/24[110/40]	via	F0/2
EIGRP	10.1.0.0/26[90/20]	via	F0/3
EIGRP	10.0.0.0/8 [90/133]	via	F0/4

Packets received by the router from BGP enter via a serial interface at 209.165.201.1. Each route is present within the routing table. Which interface is used to forward traffic with a destination IP of 10.1.1.19?

- A. F0/4
- B. F0/0
- C. F0/1
- D. F0/3

Answer: B

NEW QUESTION 43

- (Topic 3)

Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.254 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.254, Serial0/0/1
    is directly connected, Serial0/0/1
C    172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
C    172.16.1.0/24 is directly connected, FastEthernet0/0
L    172.16.1.1/32 is directly connected, FastEthernet0/0
R    172.16.2.0/24 [120/2] via 207.165.200.250, 00:00:25, Serial0/0/0
O    192.168.1.0/24 [110/4437] via 207.165.200.254, 00:00:17, Serial0/0/1
D    192.168.2.0/24 [90/84437] via 207.165.200.254, 00:00:15, Serial0/0/1
    207.165.200.0/24 is variably subnetted, 5 subnets, 2 masks
S    207.165.200.244/30 [1/1] via 207.165.200.254, Serial0/0/1
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
```

Which network prefix was learned via EIGRP?

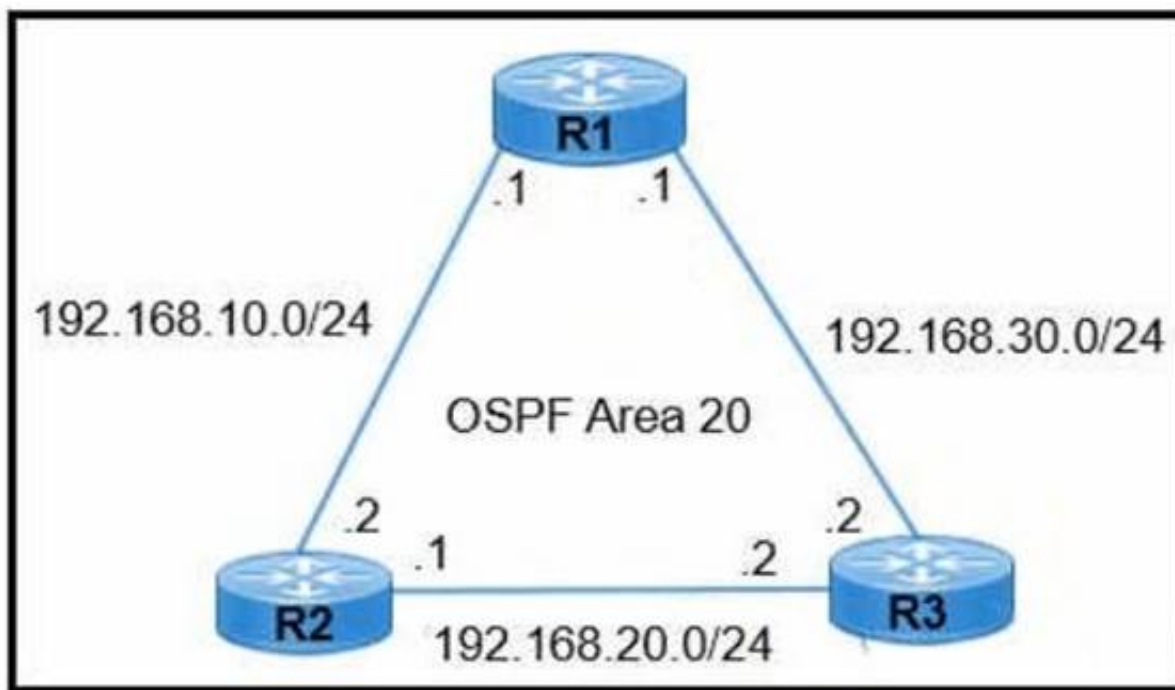
- A. 172.16.0.0/16
- B. 192.168.2.0/24
- C. 207.165.200.0/24
- D. 192.168.1.0/24

Answer: B

NEW QUESTION 44

- (Topic 3)

Refer to the exhibit.



R1 learns all routes via OSPF Which command configures a backup static route on R1 to reach the 192.168.20.0/24 network via R3?

- A. R1(config)#ip route 192.168.20.0 255.255.0.0 192.168.30.2
- B. R1(config)#ip route 192.168.20.0 255.255.255.0 192.168.30.2 90
- C. R1(config)#ip route 192.168.20.0 255.255.255.0 192.168.30.2 111
- D. R1(config)#ip route 192.168.20.0 255.255.255.0 192.168.30.2

Answer: C

NEW QUESTION 49

- (Topic 3)

What is the difference between IPv6 unicast and anycast addressing?

- A. IPv6 anycast nodes must be explicitly configured to recognize the anycast address, but IPv6 unicast nodes require no special configuration
- B. IPv6 unicast nodes must be explicitly configured to recognize the unicast address, but IPv6 anycast nodes require no special configuration
- C. An individual IPv6 unicast address is supported on a single interface on one node but an IPv6 anycast address is assigned to a group of interfaces on multiple nodes.
- D. Unlike an IPv6 anycast address, an IPv6 unicast address is assigned to a group of interfaces on multiple nodes

Answer: C

NEW QUESTION 53

- (Topic 3)

Which two network actions occur within the data plane? (Choose two.)

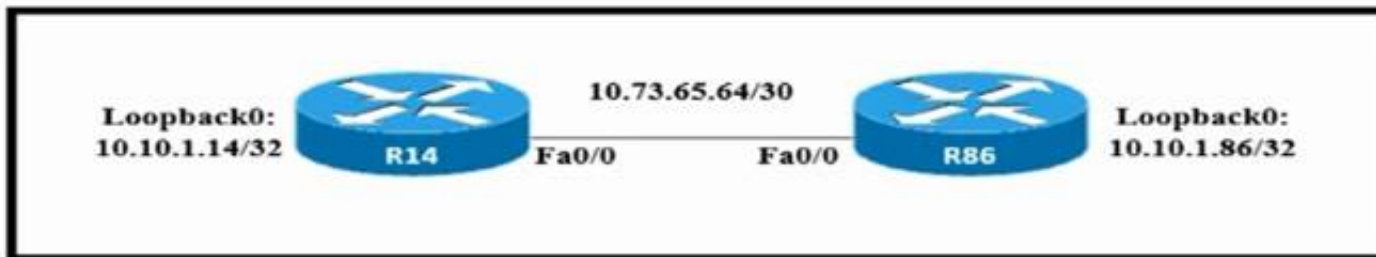
- A. Add or remove an 802.1Q trunking header.
- B. Make a configuration change from an incoming NETCONF RPC.
- C. Run routing protocols.
- D. Match the destination MAC address to the MAC address table.
- E. Reply to an incoming ICMP echo request.

Answer: BD

NEW QUESTION 55

- (Topic 3)

Refer to the exhibit.



Which configuration allows routers R14 and R86 to form an OSPFv2 adjacency while acting as a central point for exchanging OSPF information between routers?

A)

```

R14#
interface Loopback0
ip ospf 10 area 0

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

B)

```

R14#
interface FastEthernet0/0
ip address 10.73.65.65 255.255.255.252
ip ospf network broadcast
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 ospf network broadcast
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
  
```

C)


```
R14#
interface FastEthernet0/0
ip address 10.73.65.65 255.255.255.252
ip ospf network broadcast
ip ospf priority 0
ip mtu 1400

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 Loopback0
ip address 10.10.1.86 255.255.255.255
```

D)

```
R14#
interface FastEthernet0/0
ip address 10.73.65.65 255.255.255.252
ip ospf network broadcast
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 ospf network broadcast
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
```

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

Answer: D

NEW QUESTION 60

- (Topic 3)

An engineer must configure R1 for a new user account. The account must meet these requirements:

- * It must be configured in the local database.
- * The username is engineer.
- * It must use the strongest password configurable. Which command must the engineer configure on the router?

- A. R1 (config)# username engineer2 algorithm-type scrypt secret test2021
- B. R1(config)# username engineer2 secret 5 .password S1\$b1Ju\$kZbBS1Pyh4QzwXyZ
- C. R1(config)# username engineer2 privilege 1 password 7 test2021
- D. R1(config)# username englneer2 secret 4 S1Sb1Ju\$kZbBS1Pyh4QzwXyZ

Answer: B

NEW QUESTION 62

- (Topic 3)

Which QoS traffic handling technique retains excess packets in a queue and reschedules these packets for later transmission when the configured maximum bandwidth has been surpassed?

- A. weighted random early detection
- B. traffic policing
- C. traffic shaping
- D. traffic prioritization

Answer: C

NEW QUESTION 63

- (Topic 3)

What is one reason to implement LAG on a Cisco WLC?

- A. to increase security and encrypt management frames
- B. to provide link redundancy and load balancing
- C. to allow for stateful and link-state failover
- D. to enable connected switch ports to failover and use different VLANs

Answer: B

NEW QUESTION 64

- (Topic 3)

What is a requirement for nonoverlapping Wi-Fi channels?

- A. different security settings
- B. discontinuous frequency ranges
- C. different transmission speeds
- D. unique SSIDs

Answer: B

NEW QUESTION 68

DRAG DROP - (Topic 3)

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.

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

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

NEW QUESTION 69

- (Topic 3)

Which two spanning-tree states are bypassed on an interface running PortFast? (Choose two.)

- A. disabled
- B. listening
- C. forwarding
- D. learning
- E. blocking

Answer: BD

NEW QUESTION 74

- (Topic 3)

Which type of IPv6 address is similar to a unicast address but is assigned to multiple devices on the same network at the same time?

- A. global unicast address
- B. anycast address
- C. multicast address

D. link-local address

Answer: B

NEW QUESTION 79

- (Topic 3)

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

Answer: C

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.

NEW QUESTION 82

FILL IN THE BLANK - (Topic 3)

Drag and drop the functions of SNMP fault-management from the left onto the definitions on the right.

- A. Mastered
- B. Not Mastered

Answer: A

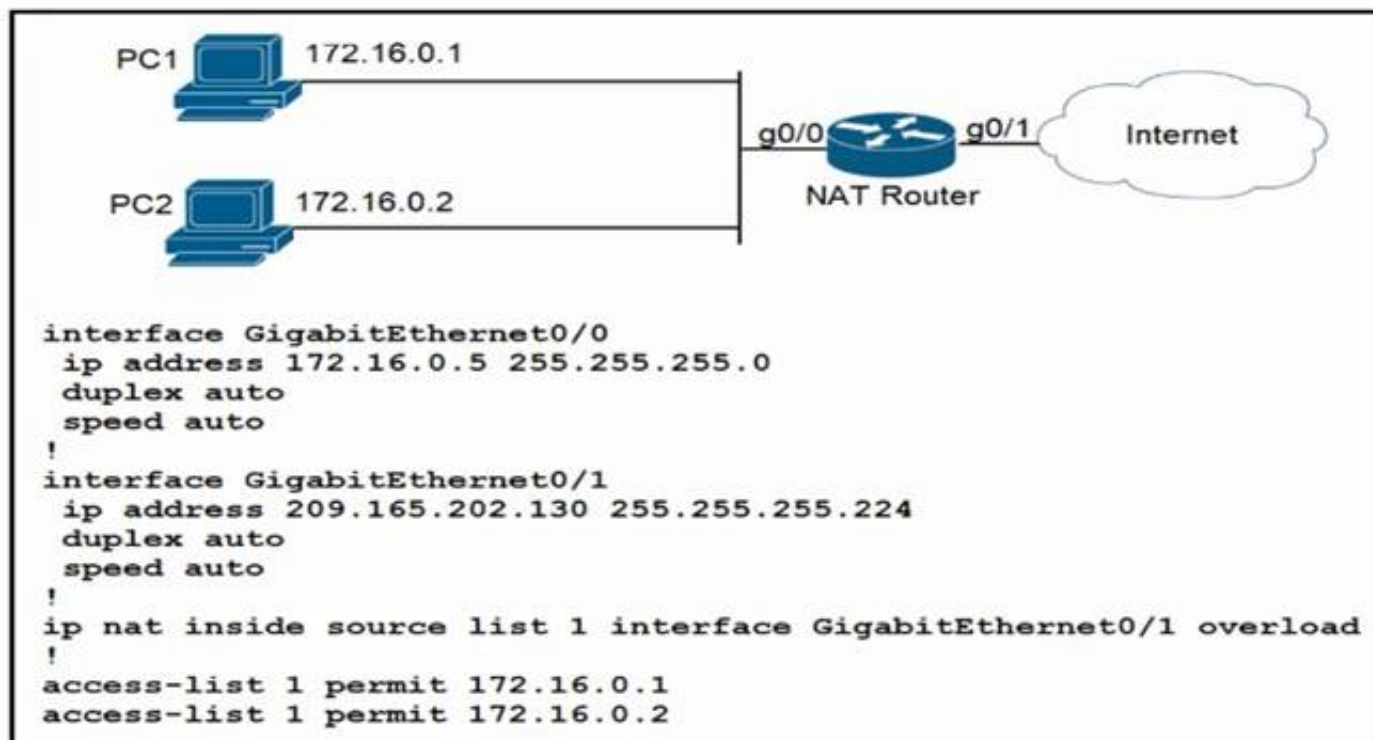
Explanation:

Table Description automatically generated

NEW QUESTION 84

- (Topic 3)

Refer to the exhibit.



How should the configuration be updated to allow PC1 and PC2 access to the Internet?

- A. Modify the configured number of the second access list.
- B. Add either the ip nat {inside|outside} command under both interfaces.
- C. Remove the overload keyword from the ip nat inside source command.
- D. Change the ip nat inside source command to use interface GigabitEthernet0/0.

Answer: B

NEW QUESTION 88

- (Topic 3)

Which PoE mode enables powered-device detection and guarantees power when the device is detected?

- A. dynamic
- B. static
- C. active
- D. auto

Answer: B

NEW QUESTION 89

- (Topic 3)
Refer to the exhibit.

```
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname R4
!
boot-start-marker
boot-end-marker
!
ip cef
!
interface FastEthernet0/0
description WAN_INTERFACE
ip address 10.0.1.2 255.255.255.252
ip access-group 100 in
!
interface FastEthernet0/1
description LAN_INTERFACE
ip address 10.148.2.1 255.255.255.0
duplex auto
speed auto
!
ip forward-protocol nd
!
access-list 100 permit eigrp any any
access-list 100 permit icmp any any
access-list 100 permit tcp 10.149.3.0 0.0.0.255 host 10.0.1.2 eq 22
access-list 100 permit tcp any any eq 80
access-list 100 permit tcp any any eq 443
access-list 100 deny ip any any log
```

Which configuration enables DHCP addressing for hosts connected to interface FastEthernetO/1 on router R4?

- A. interface FastEthernet0/0 ip helper-address 10.0.1.1access-list 100 permit udp host 10.0.1.1 eq bootps host 10.148.2.1
- B. interface FastEthernet0/1 ip helper-address 10.0.1.1!access-list 100 permit tcp host 10.0.1.1 eq 67 host 10.148.2.1
- C. interface FastEthernetO/0 ip helper-address 10.0.1.1!access-list 100 permit host 10.0.1.1 host 10.148.2.1 eq bootps
- D. interface FastEthernet0/1 ip helper-address 10.0.1.1!access-list 100 permit udp host 10.0.1.1 eq bootps host 10.148.2.1

Answer: B

NEW QUESTION 90

- (Topic 2)
Which type of IPv6 address is publicly routable in the same way as IPv4 public address?

- A. global unicast
- B. link-local
- C. unique local
- D. multicast

Answer: A

NEW QUESTION 92

- (Topic 2)
What is the primary different between AAA authentication and authorization?

- A. Authentication verifies a username and password, and authorization handles the communication between the authentication agent and the user database.
- B. Authentication identifies a user who is attempting to access a system, and authorization validates the users password
- C. Authentication identifies and verifies a user who is attempting to access a system, and authorization controls the tasks the user can perform.
- D. Authentication controls the system processes a user can access and authorization logs the activities the user initiates

Answer: C

Explanation:

AAA stands for Authentication, Authorization and Accounting.+ Authentication: Specify who you are (usually via login username & password)+ Authorization: Specify what actions you can do, what resource you can access+ Accounting: Monitor what you do, how long you do it (can be used for billing and auditing)An example of AAA is shown below:+ Authentication: "I am a normal user. My username/password is user_tom/learnforever"+ Authorization: "user_tom can access LearnCCNA server via HTTP and FTP"+ Accounting: "user_tom accessed LearnCCNA server for 2 hours". This user only uses "show" commands.

NEW QUESTION 96

- (Topic 2)
What are two differences between optical-fiber cabling and copper cabling? (Choose two)

- A. Light is transmitted through the core of the fiber
- B. A BNC connector is used for fiber connections
- C. The glass core component is encased in a cladding
- D. Fiber connects to physical interfaces using Rj-45 connections
- E. The data can pass through the cladding

Answer: AC

NEW QUESTION 100

- (Topic 2)
What is a capability of FTP in network management operations?

- A. encrypts data before sending between data resources
- B. devices are directly connected and use UDP to pass file information
- C. uses separate control and data connections to move files between server and client
- D. offers proprietary support at the session layer when transferring data

Answer: C

Explanation:

The File Transfer Protocol (FTP) is a standard communication protocol used for the transfer of computer files from a server to a client on a computer network. FTP is built on a client–server model architecture using separate control and data connections between the client and the server.

NEW QUESTION 105

DRAG DROP - (Topic 2)
Drag the descriptions of IP protocol transmissions from the left onto the IP traffic types on the right.

sends transmissions in sequence

transmissions include an 8-byte header

transmits packets as a stream

transmits packets individually

uses a higher transmission rate to support latency-sensitive applications

uses a lower transmission rate to ensure reliability

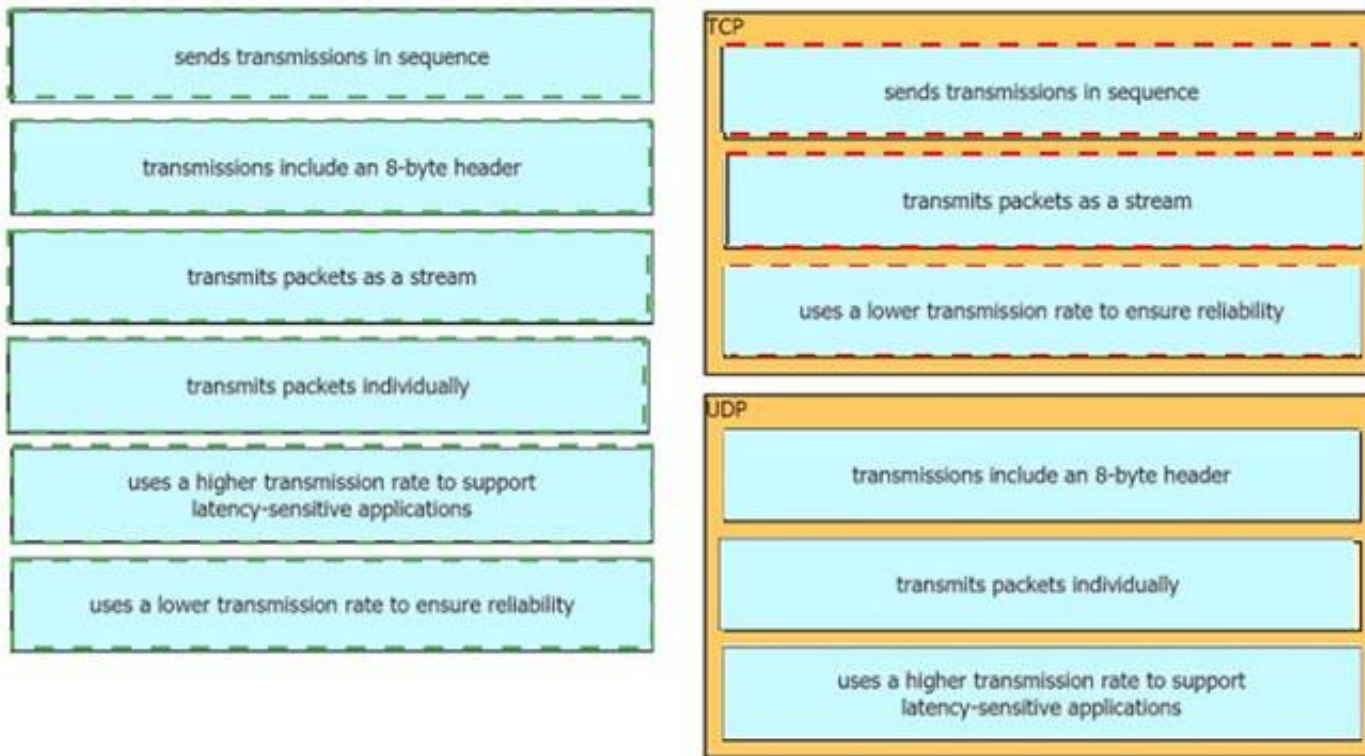
TCP

UDP

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 107

- (Topic 2)

Which two protocols must be disabled to increase security for management connections to a Wireless LAN Controller? (Choose two)

- A. Telnet
- B. SSH
- C. HTTP
- D. HTTPS
- E. TFTP

Answer: AC

NEW QUESTION 112

- (Topic 2)

What is the same for both copper and fiber interfaces when using SFP modules?

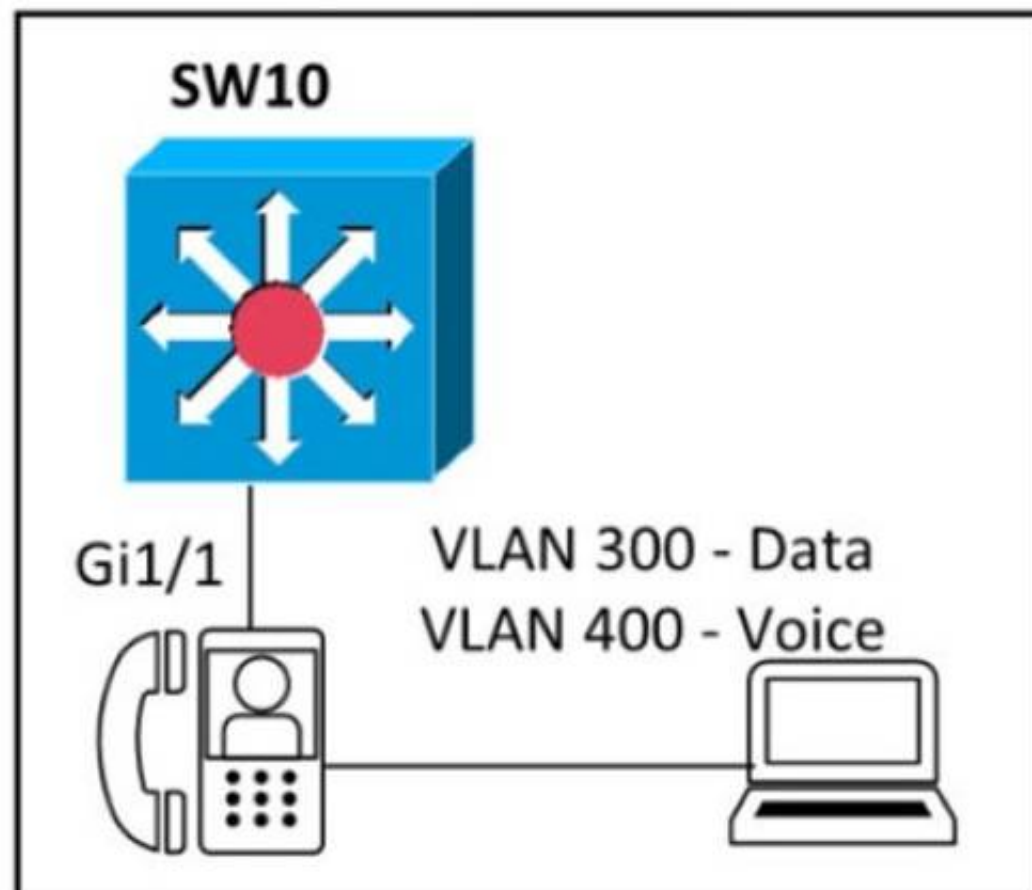
- A. They support an inline optical attenuator to enhance signal strength
- B. They provide minimal interruption to services by being hot-swappable
- C. They offer reliable bandwidth up to 100 Mbps in half duplex mode
- D. They accommodate single-mode and multi-mode in a single module

Answer: B

NEW QUESTION 117

- (Topic 2)

Refer to the exhibit.



An engineer must configure GigabitEthernet1/1 to accommodate voice and data traffic Which configuration accomplishes this task?


```
interface gigabitethernet1/1
switchport mode access
switchport access vlan 300
switchport voice vlan 400
```

```
interface gigabitethernet1/1
switchport mode trunk
switchport trunk vlan 300
switchport voice vlan 400
```

```
interface gigabitethernet1/1
switchport mode trunk
switchport trunk vlan 300
switchport trunk vlan 400
```

```
interface gigabitethernet1/1
switchport mode access
switchport voice vlan 300
switchport access vlan 400
```

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

Answer: A

NEW QUESTION 118

- (Topic 2)

What is a similarity between 1000BASE-LX and 1000BASE-T standards?

- A. Both use the same data-link header and trailer formats
- B. Both cable types support LP connectors
- C. Both cable types support RJ-45 connectors
- D. Both support up to 550 meters between nodes

Answer: A

Explanation:

"In computer networking, Gigabit Ethernet (GbE or 1 GigE) is the term applied to transmitting Ethernet frames at a rate of a gigabit per second." Both standards use Ethernet framing (same headers and trailers)

NEW QUESTION 121

DRAG DROP - (Topic 2)

Refer to the exhibit.

```
C:\>ipconfig/all

Windows IP Configuration

Host Name . . . . . : Inspiron15
Primary Dns Suffix . . . . . :
Node 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. . . . . : 1A-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>
. . . . . : 192.168.1.20<Preferred>
. . . . . : 255.255.255.0
. . . . . : 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
```

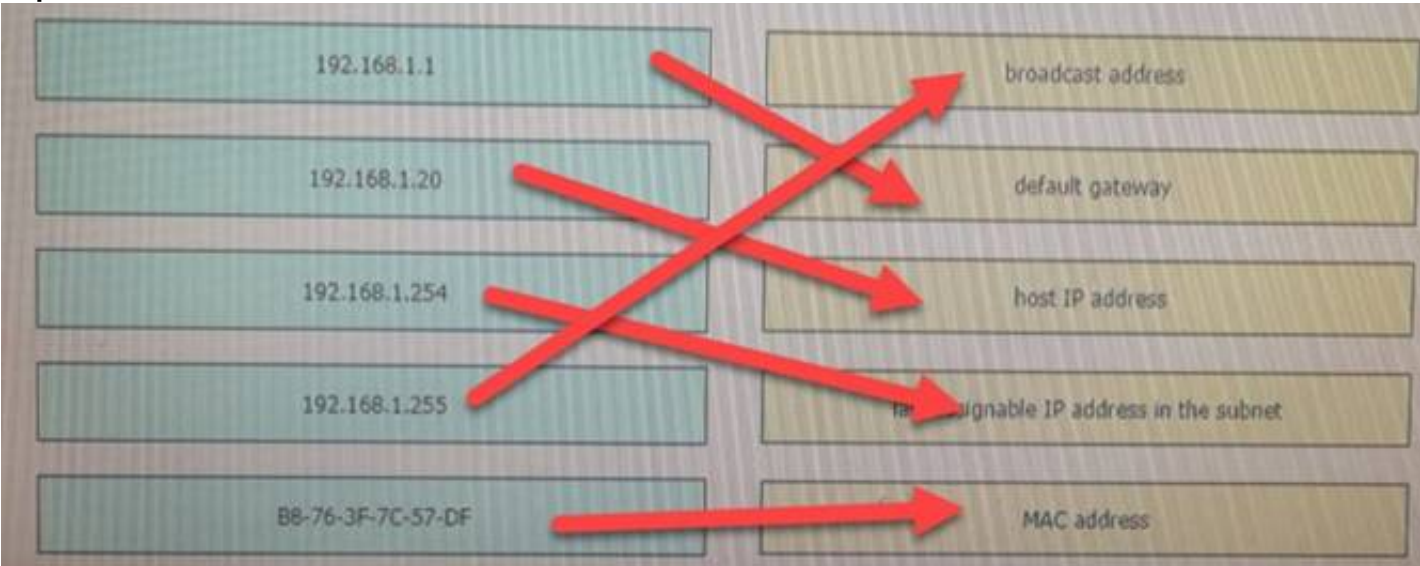
An engineer is tasked with verifying network configuration parameters on a client workstation to report back to the team lead. Drag and drop the node identifiers from the left onto the network parameters on the right.

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 122

DRAG DROP - (Topic 2)

Drag the descriptions of device management from the left onto the types of device management on the right.

implements changes via an SSH terminal

manages device configurations on a per-device basis

monitors the cloud for software updates

security is managed near the perimeter of the network with firewalls, VPNs, and IPS

uses CLI templates to apply a consistent configuration to multiple devices at an individual location

uses NetFlow to analyze potential security threats throughout the network and take appropriate action on that traffic

Cisco DNA Center Device Management

Traditional Device Management

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

implements changes via an SSH terminal

manages device configurations on a per-device basis

monitors the cloud for software updates

security is managed near the perimeter of the network with firewalls, VPNs, and IPS

uses CLI templates to apply a consistent configuration to multiple devices at an individual location

uses NetFlow to analyze potential security threats throughout the network and take appropriate action on that traffic

Cisco DNA Center Device Management

monitors the cloud for software updates

uses CLI templates to apply a consistent configuration to multiple devices at an individual location

uses NetFlow to analyze potential security threats throughout the network and take appropriate action on that traffic

Traditional Device Management

manages device configurations on a per-device basis

security is managed near the perimeter of the network with firewalls, VPNs, and IPS

implements changes via an SSH terminal

NEW QUESTION 123

- (Topic 2)
A network administrator needs to aggregate 4 ports into a single logical link which must negotiate layer 2 connectivity to ports on another switch. What must be configured when using active mode on both sides of the connection?

- A. 802.1q trunks
- B. Cisco vPC
- C. LLDP
- D. LACP

Answer: D

NEW QUESTION 125

- (Topic 2)
Refer to the exhibit.


```
SW1#sh lacp neighbor
Flags:  S - Device is requesting Slow LACPDUs
        F - Device is requesting Fast LACPDUs
        A - Device is in Active mode           P - Device is in Passive mode

Channel group 35 neighbors

Partner's information:

Port      Flags    LACP port  Dev ID      Age    Admin  Oper  Port  Port
Et1/0     SP      32768     aabb.cc80.7000  8s    0x0    0x23  0x101 0x3C
Et1/1     SP      32768     aabb.cc80.7000  8s    0x0    0x23  0x102 0x3C
```

Based on the LACP neighbor status, in which mode is the SW1 port channel configured?

- A. passive
- B. mode on
- C. auto
- D. active

Answer: D

Explanation:

From the neighbor status, we notice the “Flags” are SP. “P” here means the neighbor is in Passive mode. In order to create an Etherchannel interface, the (local) SW1 ports should be in Active mode. Moreover, the “Port State” in the exhibit is “0x3c” (which equals to “00111100 in binary format). Bit 3 is “1” which means the ports are synchronizing -
> the ports are working so the local ports should be in Active mode.

NEW QUESTION 127

- (Topic 2)

A packet is destined for 10.10.1.22. Which static route does the router choose to forward the packet?

- A. ip route 10.10.1.0 255.255.255.240 10.10.255.1
- B. ip route 10.10.1.16 255.255.255.252 10.10.255.1
- C. ip route 10.10.1.20 255.255.255.252 10.10.255.1
- D. ip route 10.10.1.20 255.255.255.254 10.10.255.1

Answer: C

NEW QUESTION 129

DRAG DROP - (Topic 2)

Drag and drop the application protocols from the left onto the transport protocols that it uses on the right

DHCP

FTP

SMTP

SSH

SNMP

TFTP

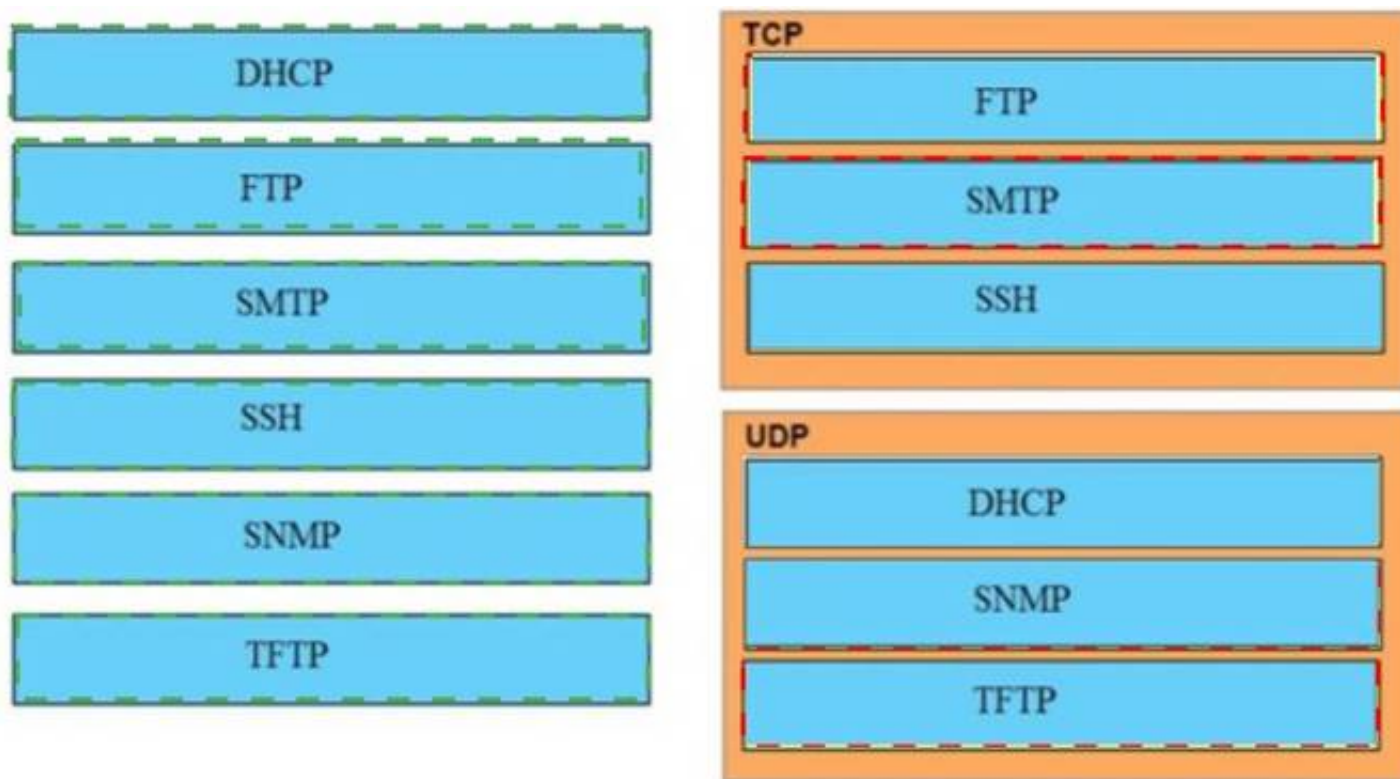
TCP

UDP

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 131

- (Topic 2)

Which action does the router take as it forwards a packet through the network?

- A. The router replaces the source and destination labels with the sending router interface label as a source and the next hop router label as a destination
- B. The router encapsulates the source and destination IP addresses with the sending router IP address as the source and the neighbor IP address as the destination
- C. The router replaces the original source and destination MAC addresses with the sending router MAC address as the source and neighbor MAC address as the destination
- D. The router encapsulates the original packet and then includes a tag that identifies the source router MAC address and transmit transparently to the destination

Answer: C

NEW QUESTION 133

- (Topic 2)

A corporate office uses four floors in a building

- Floor 1 has 24 users
- Floor 2 has 29 users
- Floor 3 has 28 users
- Floor 4 has 22 users

Which subnet summarizes and gives the most efficient distribution of IP addresses for the router configuration?

- A. 192.168.0.0/26 as summary and 192.168.0.0/29 for each floor
- B. 192.168.0.0/24 as summary and 192.168.0.0/28 for each floor
- C. 192.168.0.0/23 as summary and 192.168.0.0/25 for each floor
- D. 192.168.0.0/25 as summary and 192.168.0.0/27 for each floor

Answer: D

NEW QUESTION 138

- (Topic 2)

An engineer configured an OSPF neighbor as a designated router. Which state verifies the designated router is in the proper mode?

- A. Exchange
- B. 2-way
- C. Full
- D. Init

Answer: C

NEW QUESTION 143

- (Topic 2)

If a switch port receives a new frame while it is actively transmitting a previous frame, how does it process the frames?

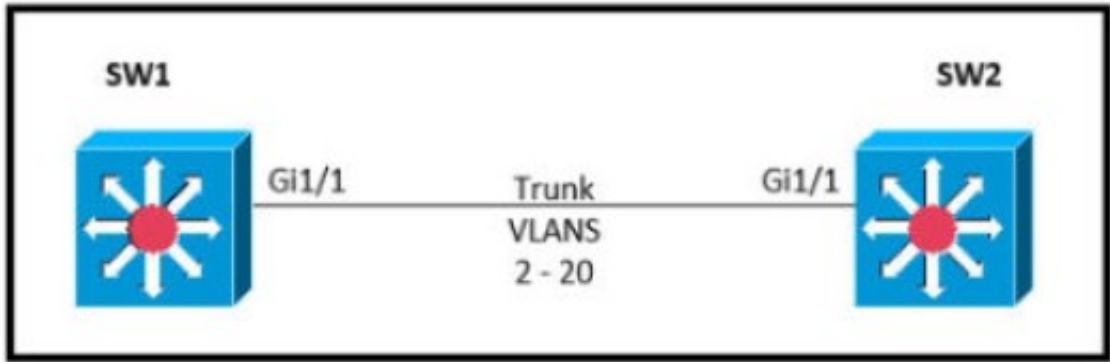
- A. The new frame is delivered first, the previous frame is dropped, and a retransmission request is sent.
- B. The previous frame is delivered, the new frame is dropped, and a retransmission request is sent.
- C. The new frame is placed in a queue for transmission after the previous frame.
- D. The two frames are processed and delivered at the same time.

Answer: B

NEW QUESTION 148

- (Topic 2)

Refer to the exhibit.



Which command must be executed for Gi1.1 on SW1 to become a trunk port if Gi1/1 on SW2 is configured in desirable or trunk mode?

- A. switchport mode trunk
- B. switchport mode dot1-tunnel
- C. switchport mode dynamic auto
- D. switchport mode dynamic desirable

Answer: C

NEW QUESTION 151

DRAG DROP - (Topic 2)

Drag and drop the TCP/IP protocols from the left onto the transmission protocols on the right

DNS

SMTP

SNMP

HTTP

RTP

Telnet

TCP

UDP

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

DNS

SMTP

SNMP

HTTP

RTP

Telnet

TCP

- SMTP
- HTTP
- Telnet

UDP

- DNS
- SNMP
- RTP

NEW QUESTION 156

- (Topic 2)

What is a role of access points in an enterprise network?

- A. connect wireless devices to a wired network
- B. support secure user logins to devices or the network
- C. integrate with SNMP in preventing DDoS attacks
- D. serve as a first line of defense in an enterprise network

Answer: A

NEW QUESTION 157

- (Topic 2)

Refer to the exhibit.

```
interface GigabitEthernet3/1/4
switchport voice vlan 50
!
```

An administrator is tasked with configuring a voice VLAN. What is the expected outcome when a Cisco phone is connected to the GigabitEthernet3/1/4 port on a switch?

- A. The phone and a workstation that is connected to the phone do not have VLAN connectivity
- B. The phone and a workstation that is connected to the phone send and receive data in VLAN 50.
- C. The phone sends and receives data in VLAN 50, but a workstation connected to the phone has no VLAN connectivity
- D. The phone sends and receives data in VLAN 50, but a workstation connected to the phone sends and receives data in VLAN 1

Answer: D

NEW QUESTION 158

- (Topic 2)

An engineer must configure an OSPF neighbor relationship between router R1 and R3. The authentication configuration has been configured and the connecting interfaces are in the same 192.168.1.0/30 subnet. What are the next two steps to complete the configuration? (Choose two.)

- A. configure the hello and dead timers to match on both sides
- B. configure the same process ID for the router OSPF process
- C. configure the same router ID on both routing processes
- D. Configure the interfaces as OSPF active on both sides.
- E. configure both interfaces with the same area ID

Answer: AE

NEW QUESTION 161

- (Topic 2)

Refer to the exhibit.

```
Router1#show ip route
Gateway of last resort is not set
 209.165.200.0/27 is subnetted, 1 subnets
B    209.165.200.224 [20/0] via 10.10.12.2, 00:09:57
 10.0.0.0/8 is variably subnetted, 4 subnets, 3 masks
C    10.10.10.0/28 is directly connected, GigabitEthernet0/0
C    10.10.11.0/30 is directly connected, FastEthernet2/0
O    10.10.13.0/24 [110/2] via 10.10.10.1, 00:08:34, GigabitEthernet0/0
C    10.10.12.0/30 is directly connected, GigabitEthernet0/1
```

Which action is taken by the router when a packet is sourced from 10.10.10.2 and destined for 10.10.10.16?

- A. It uses a route that is similar to the destination address
- B. It discards the packets.
- C. It floods packets to all learned next hops.
- D. It Queues the packets waiting for the route to be learned.

Answer: A

NEW QUESTION 163

- (Topic 2)

When OSPF learns multiple paths to a network, how does it select a route?

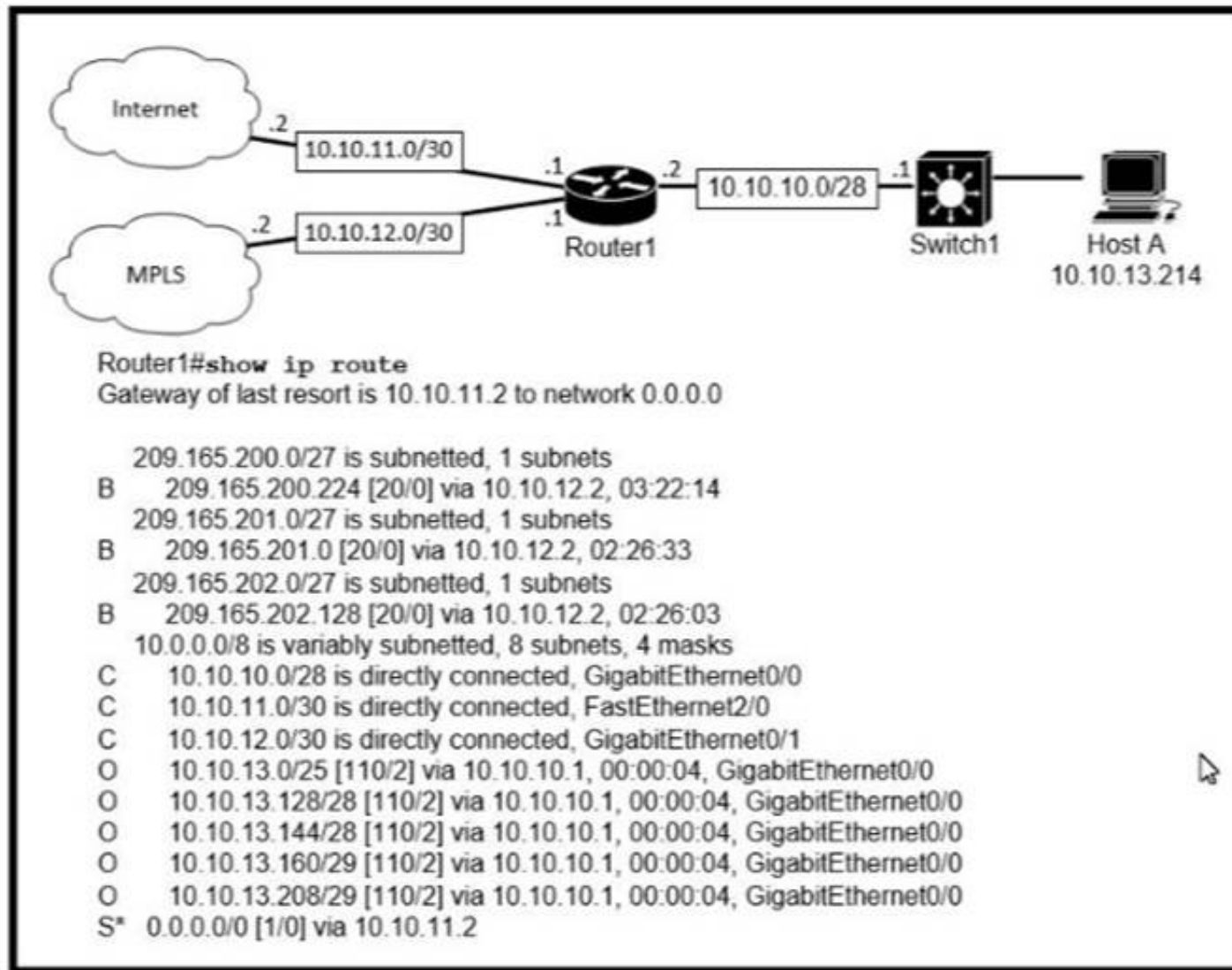
- A. It multiplies the advertised K value by 256 to calculate the route with the lowest metric.
- B. For each existing interface, it adds the metric from the source router to the destination to calculate the route with the lowest bandwidth.
- C. It divides a reference bandwidth of 100 Mbps by the actual bandwidth of the existing interface to calculate the router with the lowest cost.
- D. It counts the number of hops between the source router and the destination to determine the router with the lowest metric

Answer: C

NEW QUESTION 164

- (Topic 2)

Refer to the exhibit.



Which prefix does Router 1 use for traffic to Host A?

- A. 10.10.10.0/28
- B. 10.10.13.0/25
- C. 10.10.13.144/28
- D. 10.10.13.208/29

Answer: D

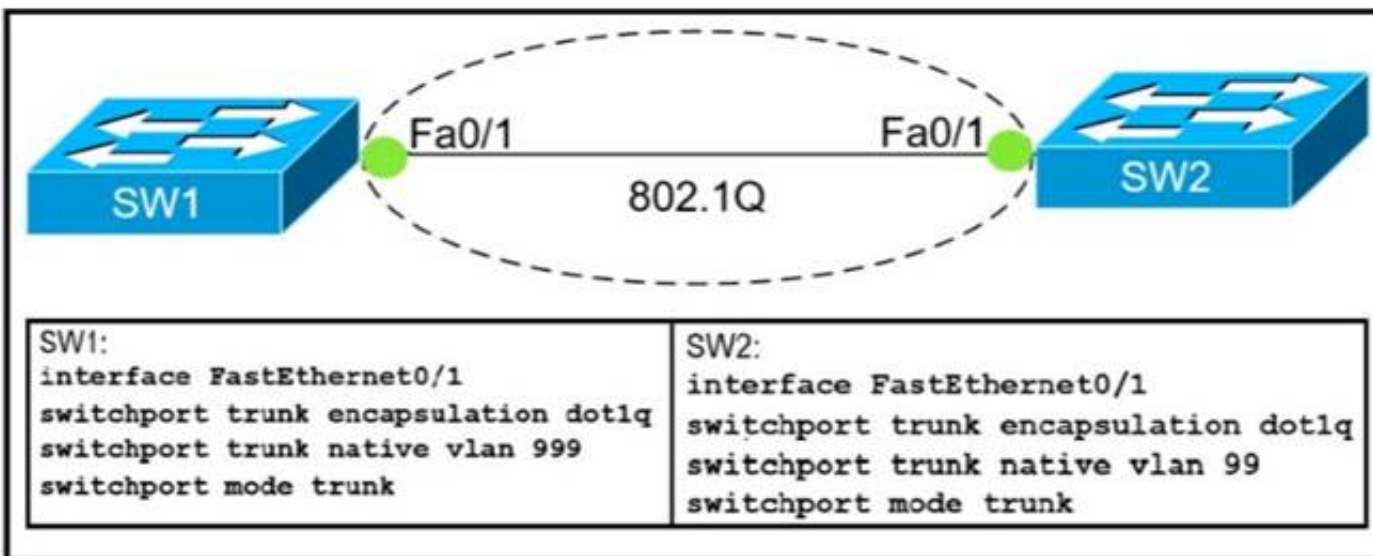
Explanation:

Host A address fall within the address range. However, if more than one route to the same subnet exist (router will use the longest stick match, which match more specific route to the subnet). If there are route 10.10.13.192/26 and 10.10.13.208/29, the router will forward the packet to /29 rather than /28.

NEW QUESTION 167

- (Topic 2)

Refer to Exhibit.



Which action do the switches take on the trunk link?

- A. The trunk does not form and the ports go into an err-disabled status.
- B. The trunk forms but the mismatched native VLANs are merged into a single broadcast domain.
- C. The trunk does not form, but VLAN 99 and VLAN 999 are allowed to traverse the link.
- D. The trunk forms but VLAN 99 and VLAN 999 are in a shutdown state.

Answer: B

Explanation:

The trunk still forms with mismatched native VLANs and the traffic can actually flow between mismatched switches. But it is absolutely necessary that the native VLANs on both ends of a trunk link match; otherwise a native VLAN mismatch occurs, causing the two VLANs to effectively merge. For example with the above configuration, SW1 would send untagged frames for VLAN 999. SW2 receives them but would think they are for VLAN 99 so we can say these two VLANs are merged.

NEW QUESTION 168

- (Topic 2)

What is the primary function of a Layer 3 device?

- A. to analyze traffic and drop unauthorized traffic from the Internet
- B. to transmit wireless traffic between hosts
- C. to pass traffic between different networks
- D. forward traffic within the same broadcast domain

Answer: C

NEW QUESTION 169

- (Topic 2)

Which two values or settings must be entered when configuring a new WLAN in the Cisco Wireless LAN Controller GUI? (Choose two)

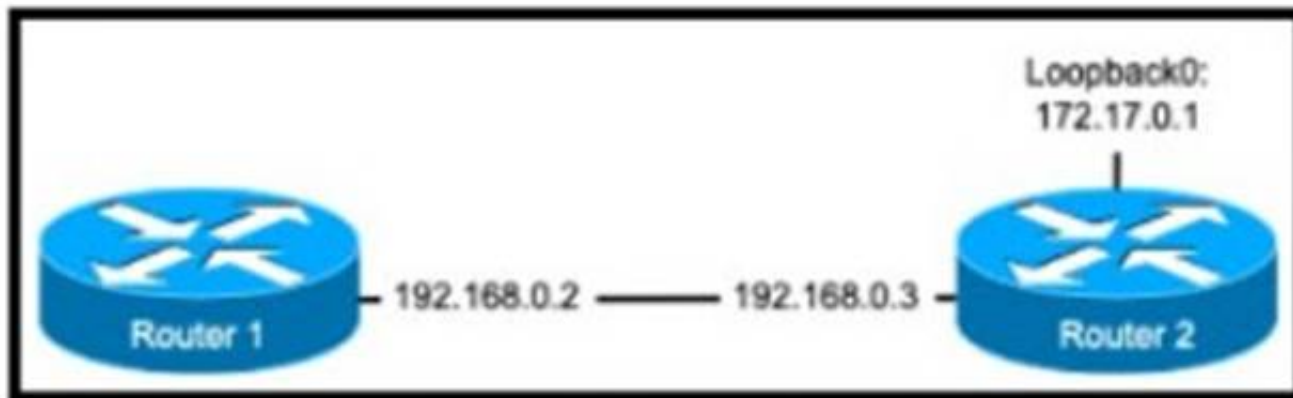
- A. management interface settings
- B. QoS settings
- C. Ip address of one or more access points
- D. SSID
- E. Profile name

Answer: DE

NEW QUESTION 173

- (Topic 2)

Refer to the exhibit.



The ntp server 192.168.0.3 command has been configured on router 1 to make it an NTP client of router 2. Which command must be configured on router 2 so that it operates in server-only mode and relies only on its internal clock?

- A. Router2(config)#ntp passive
- B. Router2(config)#ntp server 172.17.0.1
- C. Router2(config)#ntp master 4
- D. Router2(config)#ntp server 192.168.0.2

Answer: B

Explanation:

- To use internal clock of this router, use any configured IP address in any interface of this router.

NEW QUESTION 174

- (Topic 2)

Refer to the exhibit.

```

Switch(config)#hostname R1
R1(config)#interface FastEthernet0/1
R1(config-if)#no switchport
R1(config-if)#ip address 10.100.20.42 255.255.255.0
R1(config-if)#line vty 0 4
R1(config-line)#login
  
```

An engineer booted a new switch and applied this configuration via the console port. Which additional configuration must be applied to allow administrators to authenticate directly to enable privilege mode via Telnet using a local username and password?

- ☐ R1(config)#username admin privilege 15 secret p@ss1234
R1(config-if)#line vty 0 4
R1(config-line)#login local
- ☐ R1(config)#username admin secret p@ss1234
R1(config-if)#line vty 0 4
R1(config-line)#login local
R1(config)#enable secret p@ss1234
- ☐ R1(config)#username admin
R1(config-if)#line vty 0 4
R1(config-line)#password p@ss1234
R1(config-line)#transport input telnet
- ☐ R1(config)#username admin
R1(config-if)#line vty 0 4
R1(config-line)#password p@ss1234

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

Answer: A

NEW QUESTION 176

- (Topic 2)

Refer to the exhibit.

```
R1# show ip route

D      192.168.10.0/24  [90/2679326]  via 192.168.1.1
R      192.168.10.0/27  [120/3]      via 192.168.1.2
O      192.168.10.0/23  [110/2]      via 192.168.1.3
i L1   192.168.10.0/13  [115/30]     via 192.168.1.4
```

How does router R1 handle traffic to 192.168.10.16?

- A. It selects the IS-IS route because it has the shortest prefix inclusive of the destination address.
- B. It selects the EIGRP route because it has the lowest administrative distance.
- C. It selects the OSPF route because it has the lowest cost.
- D. It selects the RIP route because it has the longest prefix inclusive of the destination address.

Answer: D

NEW QUESTION 178

- (Topic 2)

R1 has learned route 192.168.12.0/24 via IS-IS, OSPF, RIP, and Internal EIGRP Under normal operating conditions, which routing protocol is installed in the routing table?

- A. IS-IS
- B. RIP
- C. Internal EIGRP
- D. OSPF

Answer: C

Explanation:

With the same route (prefix), the router will choose the routing protocol with lowest Administrative Distance (AD) to install into the routing table. The AD of Internal EIGRP (90) is lowest so it would be chosen. The table below lists the ADs of popular routing protocols.

Route Source	Administrative Distance
Directly Connected	0
Static	1
EIGRP	90
EIGRP Summary route	5
OSPF	110
RIP	120

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Note: The AD of IS-IS is 115. The “EIGRP” in the table above is “Internal EIGRP”. The AD of “External EIGRP” is 170. An EIGRP external route is a route that was redistributed into EIGRP.

NEW QUESTION 179

- (Topic 2)

What are two benefits of FHRPs? (Choose two.)

- A. They prevent (oops in the Layer 2 network.
- B. They allow encrypted traffic.
- C. They are able to bundle multiple ports to increase bandwidth
- D. They enable automatic failover of the default gateway.
- E. They allow multiple devices to serve as a single virtual gateway for clients in the network

Answer: DE

NEW QUESTION 182

- (Topic 2)

Which configuration management mechanism uses TCP port 22 by default when communicating with managed nodes?

- A. Ansible
- B. Python
- C. Puppet
- D. Chef

Answer: A

NEW QUESTION 186

- (Topic 2)

A user configured OSPF and advertised the Gigabit Ethernet interface in OSPF. By default, which type of OSPF network does this interface belong to?

- A. point-to-multipoint
- B. point-to-point
- C. broadcast
- D. nonbroadcast

Answer: C

Explanation:

<https://www.oreilly.com/library/view/cisco-ios-cookbook/0596527225/ch08s15.html>

The Broadcast network type is the default for an OSPF enabled ethernet interface (while Point-toPoint is the default OSPF network type for Serial interface with HDLC and PPP encapsulation).

NEW QUESTION 188

- (Topic 2)

What is the effect when loopback interfaces and the configured router ID are absent during the OSPF Process configuration?

- A. No router ID is set, and the OSPF protocol does not run.
- B. The highest up/up physical interface IP address is selected as the router ID.
- C. The lowest IP address is incremented by 1 and selected as the router ID.
- D. The router ID 0.0.0.0 is selected and placed in the OSPF process.

Answer: B

NEW QUESTION 192

- (Topic 2)

Refer to the exhibit.

```

Designated Router (ID) 10.11.11.11, Interface address 10.10.10.1
Backup Designated router (ID) 10.3.3.3, Interface address 10.10.10.3
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
oob-resync timeout 40
Hello due in 00:00:08
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 1/1/1, flood queue length 0
Next 0x0(0)/0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 6
Last flood scan time is 0 msec, maximum is 1 msec
Neighbor Count is 3, Adjacent neighbor count is 3
Adjacent with neighbor 10.1.1.4
Adjacent with neighbor 10.2.2.2
Adjacent with neighbor 10.3.3.3 (Backup Designated Router)
Suppress hello for 0 neighbor(s)

```

The show ip ospf interface command has been executed on R1 How is OSPF configured?

- A. The interface is not participating in OSPF
- B. A point-to-point network type is configured
- C. The default Hello and Dead timers are in use
- D. There are six OSPF neighbors on this interface

Answer: C

Explanation:

<https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/13689-17.html>

NEW QUESTION 193

- (Topic 2)

What are two descriptions of three-tier network topologies? (Choose two)

- A. The core and distribution layers perform the same functions
- B. The access layer manages routing between devices in different domains
- C. The network core is designed to maintain continuous connectivity when devices fail.
- D. The core layer maintains wired connections for each host
- E. The distribution layer runs Layer 2 and Layer 3 technologies

Answer: CE

NEW QUESTION 194

- (Topic 2)

Refer to the exhibit.

```

R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
    is directly connected, Serial0/1/0
    172.16.0.0/16 is variably subnetted, 3 subnets, 3 masks
S   172.16.0.0/24 [1/0] via 207.165.200.250, Serial0/0/0
O   172.16.0.128/25 [110/38443] via 207.165.200.254, 00:00:23, Serial0/0/1
D   172.16.0.192/29 [90/3184439] via 207.165.200.254, 00:00:25, Serial0/0/1
    209.165.200.0/24 is variably subnetted, 4 subnets, 2 masks
C   209.165.200.248/30 is directly connected, Serial0/0/0
L   209.165.200.249/32 is directly connected, Serial0/0/0
C   209.165.200.252/30 is directly connected, Serial0/0/1
L   209.165.200.253/32 is directly connected, Serial0/0/1

```

With which metric was the route to host 172.16.0.202 learned?

- A. 110
- B. 38443
- C. 3184439

Answer: C

Explanation:

Both the line “O 172.16.0.128/25” and “S 172.16.0.0/24” cover the host 172.16.0.202 but with the “longest (prefix) match” rule the router will choose the first route.

NEW QUESTION 198

- (Topic 2)

What are two reasons that cause late collisions to increment on an Ethernet interface? (Choose two)

- A. when the sending device waits 15 seconds before sending the frame again
- B. when the cable length limits are exceeded
- C. when one side of the connection is configured for half-duplex
- D. when Carrier Sense Multiple Access/Collision Detection is used
- E. when a collision occurs after the 32nd byte of a frame has been transmitted

Answer: BC

Explanation:

The usual possible causes are full-duplex/half-duplex mismatch, exceeded Ethernet cable length limits, or defective hardware such as incorrect cabling, non-compliant number of hubs in the network, or a bad NIC.

NEW QUESTION 200

- (Topic 2)

Which condition must be met before an NMS handles an SNMP trap from an agent?

- A. The NMS software must be loaded with the MIB associated with the trap.
- B. The NMS must be configured on the same router as the SNMP agent
- C. The NMS must receive a trap and an inform message from the SNMP agent within a configured interval
- D. The NMS must receive the same trap from two different SNMP agents to verify that it is reliable.

Answer: A

NEW QUESTION 202

- (Topic 2)

An implementer is preparing hardware for virtualization to create virtual machines on a host. What is needed to provide communication between hardware and virtual machines?

- A. hypervisor
- B. router
- C. straight cable
- D. switch

Answer: A

NEW QUESTION 204

- (Topic 2)

Where does a switch maintain DHCP snooping information?

- A. in the MAC address table
- B. in the CAM table
- C. in the binding database
- D. in the frame forwarding database

Answer: C

NEW QUESTION 207

- (Topic 2)

Which type of API allows SDN controllers to dynamically make changes to the network?

- A. northbound API
- B. REST API
- C. SOAP API
- D. southbound API

Answer: D

Explanation:

Cisco overview doc for SDN here: https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/VMDC/SDN/SDN.html

NEW QUESTION 208

- (Topic 2)

Which command must be entered when a device is configured as an NTP server?

- A. ntp authenticate
- B. ntp server

- C. ntp peer
- D. ntp master

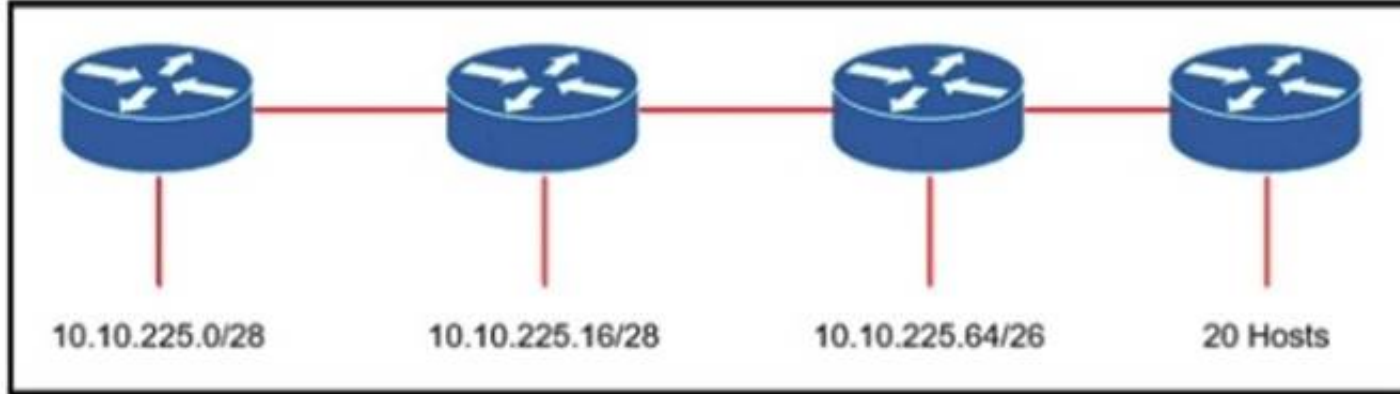
Answer: D

Explanation:

To configure a Cisco device as an Authoritative NTP Server, use the ntp master [stratum] command. To configure a Cisco device as a NTP client, use the command ntp server <IP address>. For example: Router(config)#ntp server 192.168.1.1. This command will instruct the router to query 192.168.1.1 for the time.

NEW QUESTION 210

- (Topic 2)



Refer to the exhibit. An engineer must add a subnet for a new office that will add 20 users to the network. Which IPv4 network and subnet mask combination does the engineer assign to minimize wasting addresses?

- A. 10.10.225.48 255.255.255.240
- B. 10.10.225.32 255.255.255.240
- C. 10.10.225.48 255.255.255.224
- D. 10.10.225.32 255.255.255.224

Answer: D

NEW QUESTION 212

- (Topic 2)

A network engineer must create a diagram of a multivendor network. Which command must be configured on the Cisco devices so that the topology of the network can be mapped?

- A. Device(Config)#lldp run
- B. Device(Config)#cdp run
- C. Device(Config-if)#cdp enable
- D. Device(Config)#flow-sampler-map topology

Answer: A

NEW QUESTION 216

- (Topic 2)

Refer to the exhibit.



Which configuration issue is preventing the OSPF neighbor relationship from being established between the two routers?

- A. R2 is using the passive-interface default command
- B. R1 has an incorrect network command for interface Gi1/0
- C. R2 should have its network command in area 1
- D. R1 interface Gi1/0 has a larger MTU size

Answer: D

NEW QUESTION 218

- (Topic 2)

What are two characteristics of an SSID? (Choose Two)

- A. It can be hidden or broadcast in a WLAN
- B. It uniquely identifies an access point in a WLAN
- C. It uniquely identifies a client in a WLAN
- D. It is at most 32 characters long.
- E. IT provides secured access to a WLAN

Answer: BE

NEW QUESTION 223

- (Topic 2)

When a client and server are not on the same physical network, which device is used to forward requests and replies between client and server for DHCP?

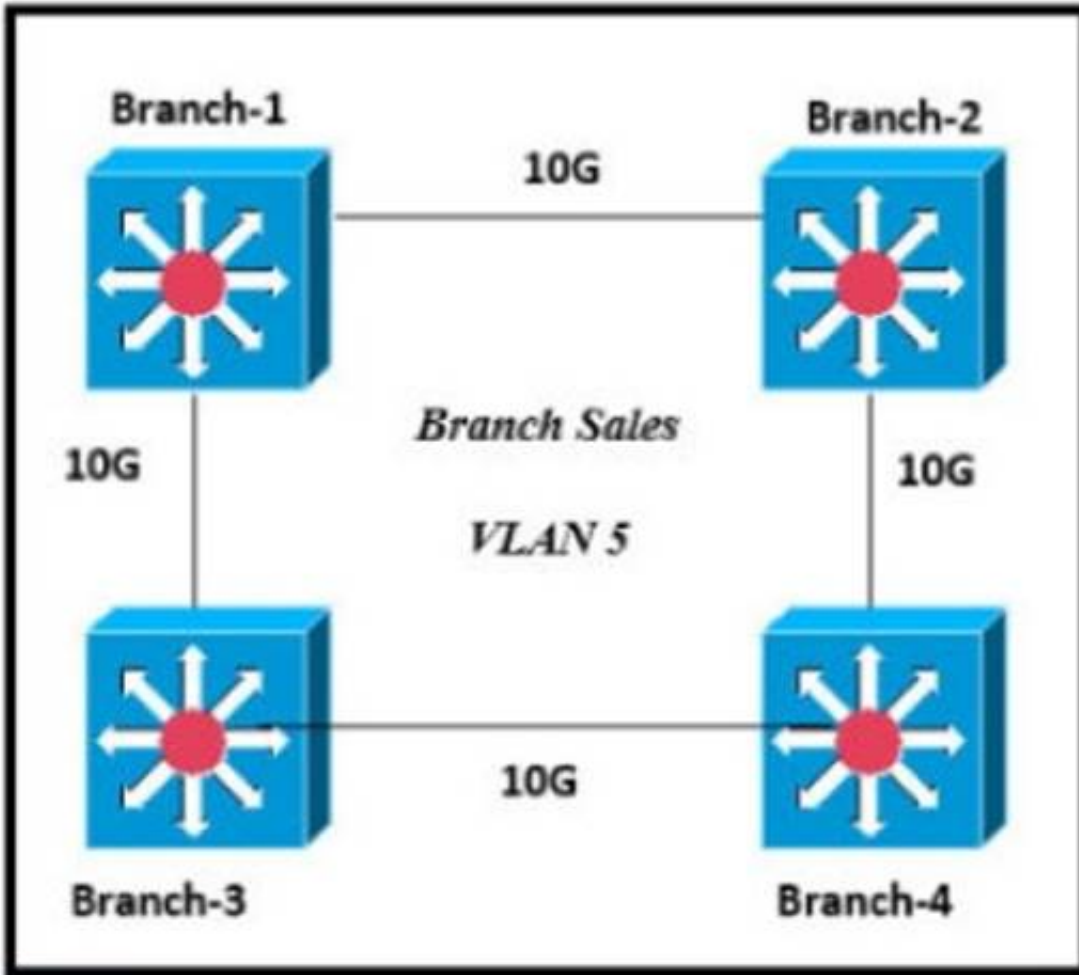
- A. DHCP relay agent
- B. DHCP server
- C. DHCPDISCOVER
- D. DHCPOFFER

Answer: A

NEW QUESTION 226

- (Topic 2)

Refer to the exhibit.



Only four switches are participating in the VLAN spanning-tree process.

Branch-1 priority 614440

Branch-2: priority 39082416

Branch-3: priority 0 Branch-4: root primary

Which switch becomes the permanent root bridge for VLAN 5?

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

Answer: C

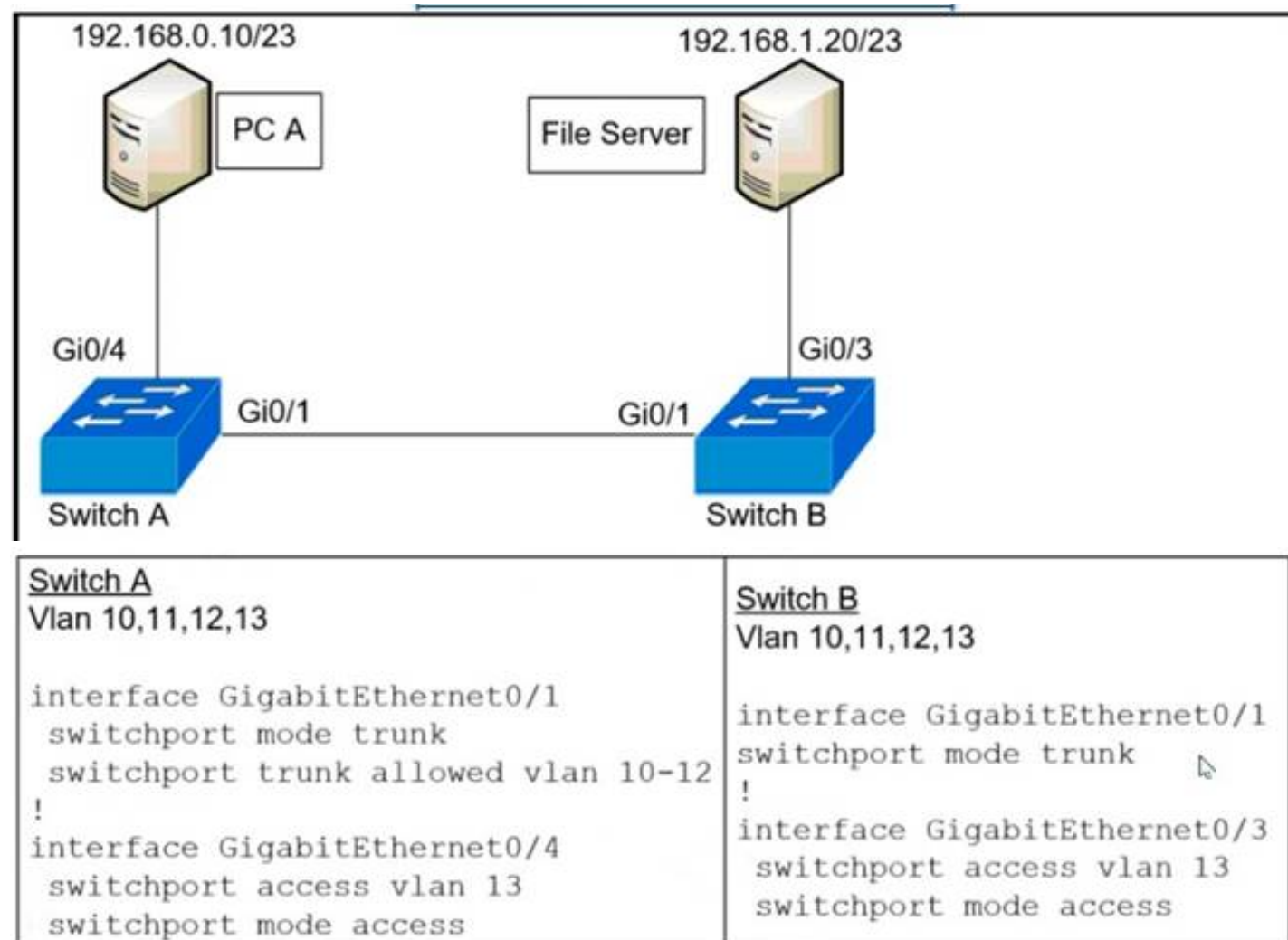
Explanation:

Dynamic ARP inspection is an ingress security feature; it does not perform any egress checking.

NEW QUESTION 227

- (Topic 2)

Refer to the exhibit.



A network administrator assumes a task to complete the connectivity between PC A and the File Server. Switch A and Switch B have been partially configured with VLAN 10, 11, 12, and 13. What is the next step in the configuration?

- A. Add PC A to VLAN 10 and the File Server to VLAN 11 for VLAN segmentation

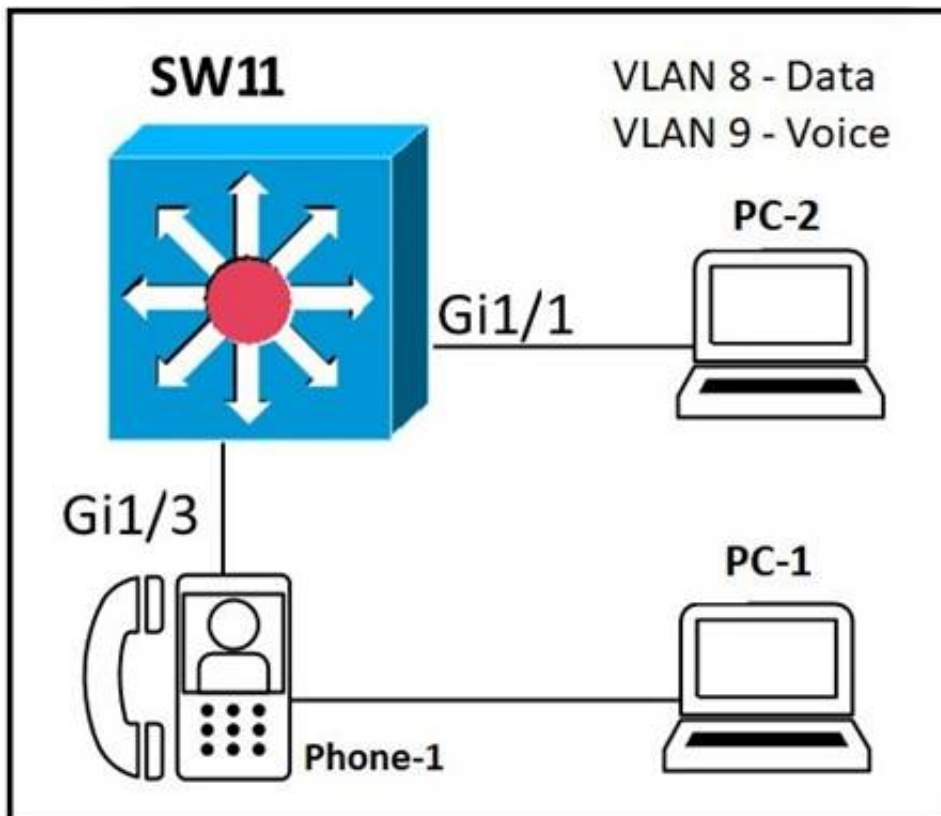
- B. Add VLAN 13 to the trunk links on Switch A and Switch B for VLAN propagation
- C. Add a router on a stick between Switch A and Switch B allowing for Inter-VLAN routing.
- D. Add PC A to the same subnet as the File Server allowing for intra-VLAN communication.

Answer: B

NEW QUESTION 232

- (Topic 2)

Refer to the exhibit.



An administrator must configure interfaces Gi1/1 and Gi1/3 on switch SW11. PC-1 and PC-2 must be placed in the Data VLAN, and Phone-1 must be placed in the Voice VLAN. Which configuration meets these requirements?

- ☐ interface gigabitethernet1/1
switchport mode access
switchport access vlan 8
!
interface gigabitethernet1/3
switchport mode access
switchport voice vlan 8
switchport access vlan 9
- ☐ interface gigabitethernet1/1
switchport mode access
switchport access vlan 9
!
interface gigabitethernet1/3
switchport mode trunk
switchport trunk vlan 8
switchport trunk vlan 9
- ☐ interface gigabitethernet1/1
switchport mode access
switchport access vlan 8
!
interface gigabitethernet1/3
switchport mode access
switchport access vlan 8
switchport voice vlan 9
- ☐ interface gigabitethernet1/1
switchport mode access
switchport access vlan 8
!
interface gigabitethernet1/3
switchport mode trunk
switchport trunk vlan 8
switchport voice vlan 9

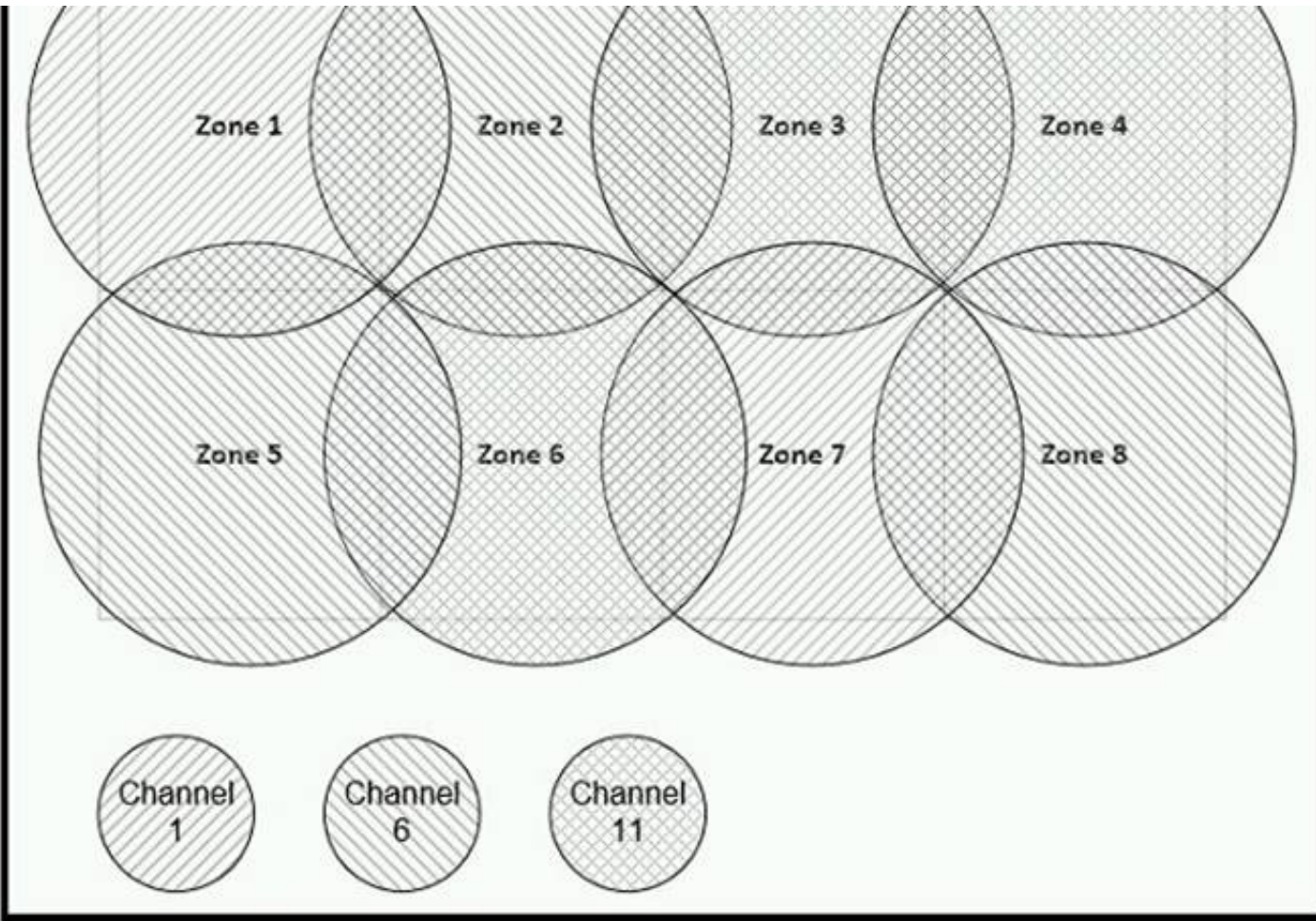
- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

NEW QUESTION 236

- (Topic 2)

Refer to the exhibit.



Between which zones do wireless users expect to experience intermittent connectivity?

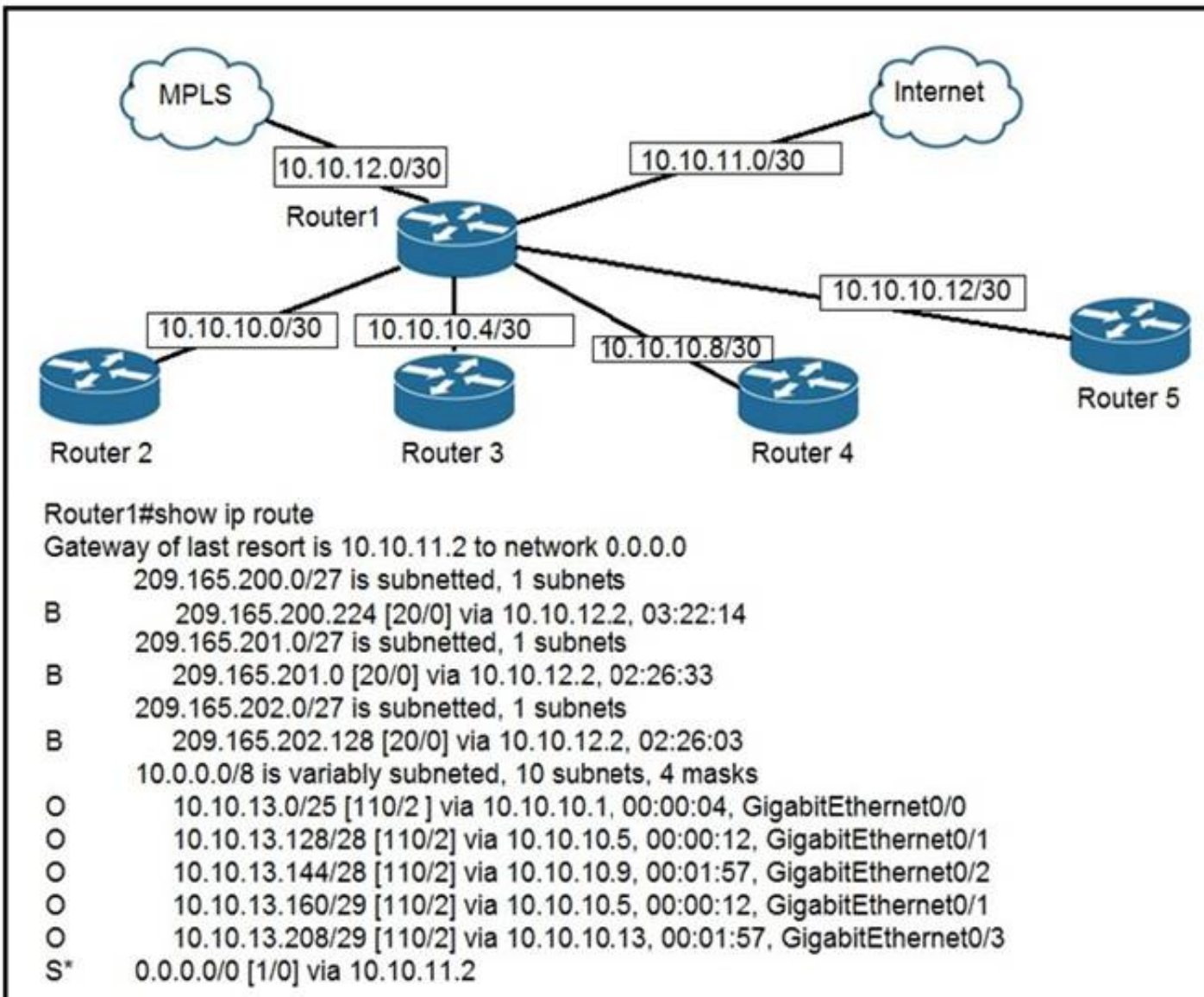
- A. between zones 1 and 2
- B. between zones 2 and 5
- C. between zones 3 and 4
- D. between zones 3 and 6

Answer: D

NEW QUESTION 238

- (Topic 2)

Refer to the exhibit.



To which device does Router1 send packets that are destined to host 10.10.13.165?

- A. Router2
- B. Router3
- C. Router4
- D. Router5

Answer: B

NEW QUESTION 241

- (Topic 2)

What Is the path for traffic sent from one user workstation to another workstation on a separate switch In a three-tier architecture model?

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

Answer: D

NEW QUESTION 243

DRAG DROP - (Topic 2)

Drag and drop the lightweight access point operation modes from the left onto the descriptions on the right

bridge mode	allows the access point to communicate with the WLC over a WAN link
local mode	allows for packet captures of wireless traffic
monitor mode	rogue detector mode
Flexconnect mode	preferred for connecting access points in a mesh environment
	receive only mode which acts as a dedicated sensor for RFID and IDS
sniffer mode	transmits normally on one channel and monitors other channels for noise and interference

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

bridge mode	local mode
local mode	sniffer mode
monitor mode	rogue detector mode
Flexconnect mode	bridge mode
	Flexconnect mode
sniffer mode	monitor mode

NEW QUESTION 245

- (Topic 2)

Refer to the exhibit.

```

Gateway of last resort is 10.12.0.1 to network 0.0.0.0

O*E2  0.0.0.0/0 [110/1] via 10.12.0.1, 00:00:01, GigabitEthernet0/0
      10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C      10.0.0.0/24 is directly connected, GigabitEthernet0/0
L      10.0.0.2/32 is directly connected, GigabitEthernet0/0
C      10.13.0.0/24 is directly connected, GigabitEthernet0/1
L      10.13.0.2/32 is directly connected, GigabitEthernet0/1
  
```

If configuring a static default route on the router with the ip route 0.0.0.0 0.0.0.0 10.13.0.1 120 command how does the router respond?

- A. It ignores the new static route until the existing OSPF default route is removed
- B. It immediately replaces the existing OSPF route in the routing table with the newly configured static route
- C. It starts load-balancing traffic between the two default routes
- D. It starts sending traffic without a specific matching entry in the routing table to GigabitEthernet0/1

Answer: A

Explanation:

Our new static default route has the Administrative Distance (AD) of 120, which is bigger than the AD of OSPF External route (O*E2) so it will not be pushed into the routing table until the current OSPF External route is removed. For your information, if you don't type the AD of 120 (using the command "ip route 0.0.0.0 0.0.0.0 10.13.0.1") then the new static default route would replace the OSPF default route as the default AD of static route is 1. You will see such line in the routing table: S* 0.0.0.0/0 [1/0] via 10.13.0.1

NEW QUESTION 249

- (Topic 2)

Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
    is directly connected, Serial0/1/0
    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
S   172.16.3.0/24 [1/0] via 209.165.200.250, Serial0/0/0
O   172.16.3.0/28 [110/1] via 209.165.200.254, 00:00:28, Serial0/0/1
    209.165.200.0/24 is variably subnetted, 6 subnets, 2 masks
C   209.165.200.244/30 is directly connected, Serial0/1/0
L   209.165.200.245/32 is directly connected, Serial0/1/0
C   209.165.200.248/30 is directly connected, Serial0/0/0
L   209.165.200.249/32 is directly connected, Serial0/0/0
C   209.165.200.252/30 is directly connected, Serial0/0/1
L   209.165.200.253/32 is directly connected, Serial0/0/1
```

A packet is being sent across router R1 to host 172.16.0.14. What is the destination route for the packet?

- A. 209.165.200.254 via Serial0/0/1
- B. 209.165.200.254 via Serial0/0/0
- C. 209.165.200.246 via Serial0/1/0
- D. 209.165.200.250 via Serial0/0/0

Answer: A

NEW QUESTION 250

- (Topic 2)

Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
    is directly connected, Serial0/1/0
    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
S   172.16.3.0/24 [1/0] via 207.165.200.250, Serial0/0/0
O   172.16.3.0/28 [110/84437] via 207.165.200.254, 00:00:28, Serial0/0/1
    207.165.200.0/24 is variably subnetted, 6 subnets, 2 masks
C   207.165.200.244/30 is directly connected, Serial0/1/0
L   207.165.200.245/32 is directly connected, Serial0/1/0
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
```

A packet is being sent across router R1 to host 172.163.3.14. To which destination does the router send the packet?

- A. 207.165.200.246 via Serial0/1/0
- B. 207.165.200.254 via Serial0/0/1
- C. 207.165.200.254 via Serial0/0/0
- D. 207.165.200.250 via Serial0/0/0

Answer: B

NEW QUESTION 251

- (Topic 2)

How does a Cisco Unified Wireless network respond to Wi-Fi channel overlap?

- A. It alternates automatically between 2.4 GHz and 5 GHz on adjacent access points
- B. It allows the administrator to assign channels on a per-device or per-interface basis.
- C. It segregates devices from different manufacturers onto different channels.
- D. It analyzes client load and background noise and dynamically assigns a channel.

Answer: A

NEW QUESTION 252

- (Topic 2)

Which two must be met before SSH can operate normally on a Cisco IOS switch? (Choose two)

- A. The switch must be running a k9 (crypto) IOS image
- B. The Ip domain-name command must be configured on the switch
- C. IP routing must be enabled on the switch
- D. A console password must be configured on the switch
- E. Telnet must be disabled on the switch

Answer: AB

Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/security-vpn/secure-shell-ssh/4145-ssh.html>

NEW QUESTION 253

- (Topic 2)

Which type of organization should use a collapsed-core architecture?

- A. large and requires a flexible, scalable network design
- B. large and must minimize downtime when hardware fails
- C. small and needs to reduce networking costs currently
- D. small but is expected to grow dramatically in the near future

Answer: C

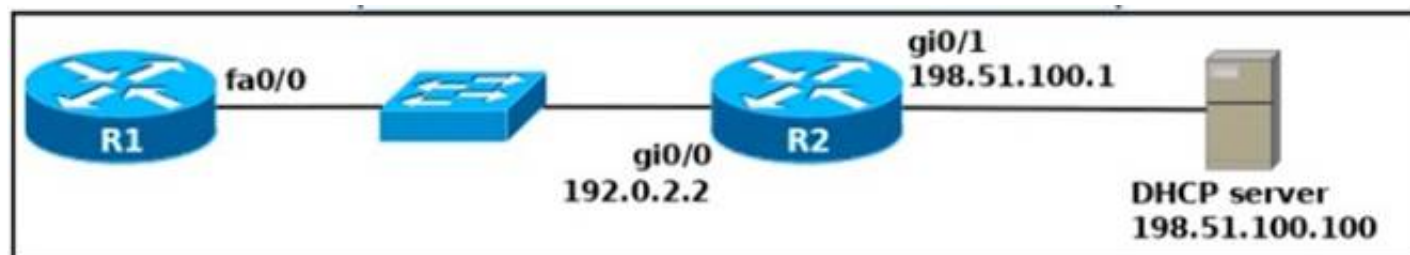
Explanation:

A collapsed-core architecture is a limited investment for a small company, and may be efficient and productive for a limited time.

NEW QUESTION 255

- (Topic 2)

Refer to the exhibit.



An engineer deploys a topology in which R1 obtains its IP configuration from DHCP. If the switch and DHCP server configurations are complete and correct. Which two sets of commands must be configured on R1 and R2 to complete the task? (Choose two)

- A. R1(config)# interface fa0/0 R1(config-if)# ip helper-address 198.51.100.100
- B. R2(config)# interface gi0/0 R2(config-if)# ip helper-address 198.51.100.100
- C. R1(config)# interface fa0/0 R1(config-if)# ip address dhcp R1(config-if)# no shutdown
- D. R2(config)# interface gi0/0 R2(config-if)# ip address dhcp
- E. R1(config)# interface fa0/0 R1(config-if)# ip helper-address 192.0.2.2

Answer: BC

NEW QUESTION 259

- (Topic 1)

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

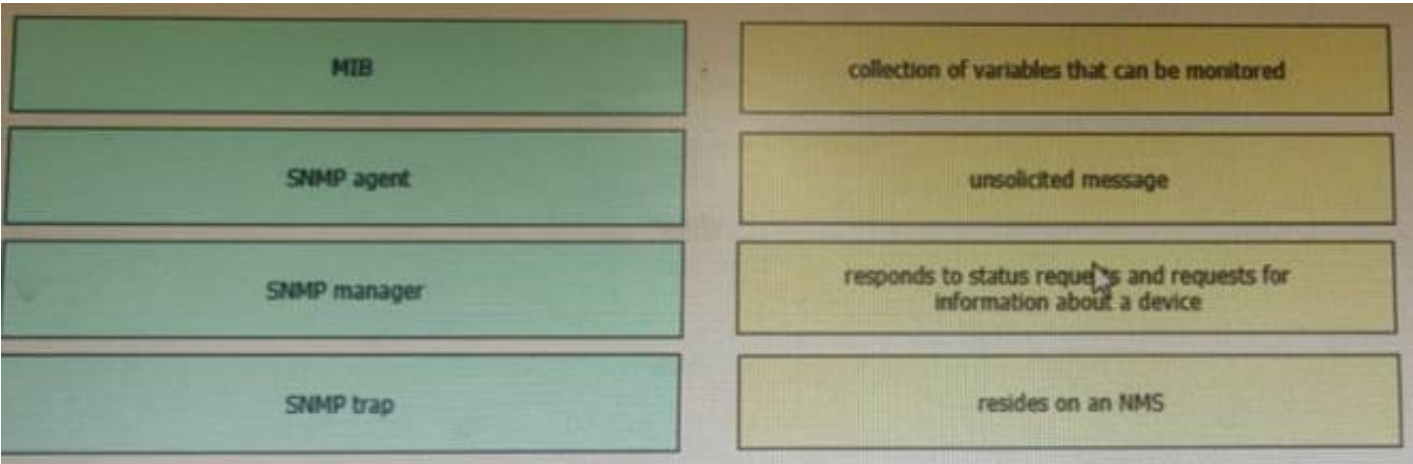
- A. Dynamic ARP Inspection
- B. using a non-default native VLAN
- C. 802.1x
- D. DHCP snooping

Answer: C

NEW QUESTION 262

DRAG DROP - (Topic 1)

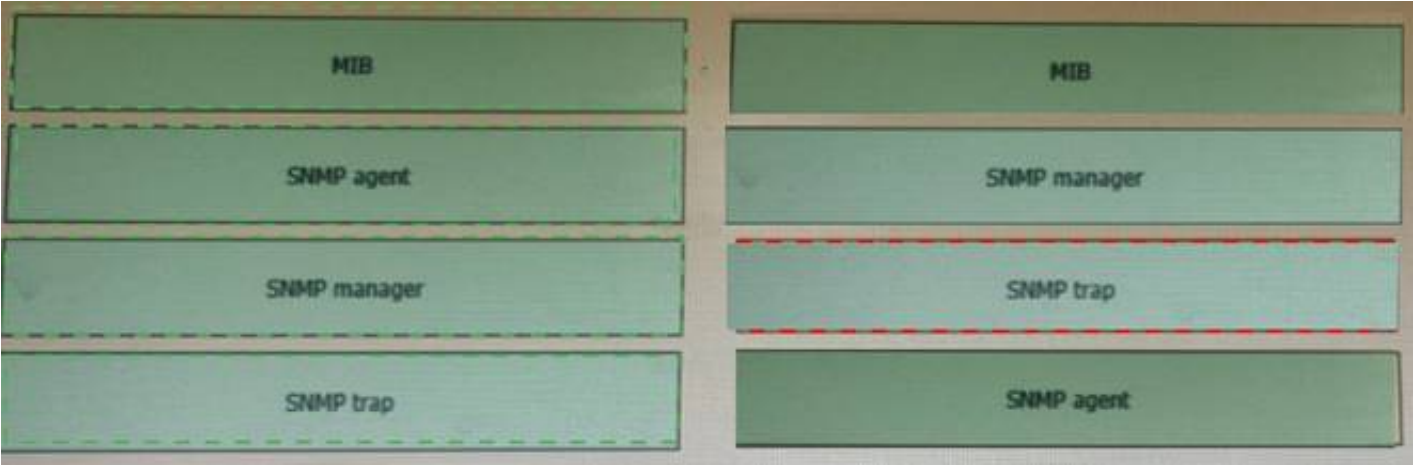
Drag and drop the SNMP components from the left onto the descriptions on the right.



- A. Mastered
- B. Not Mastered

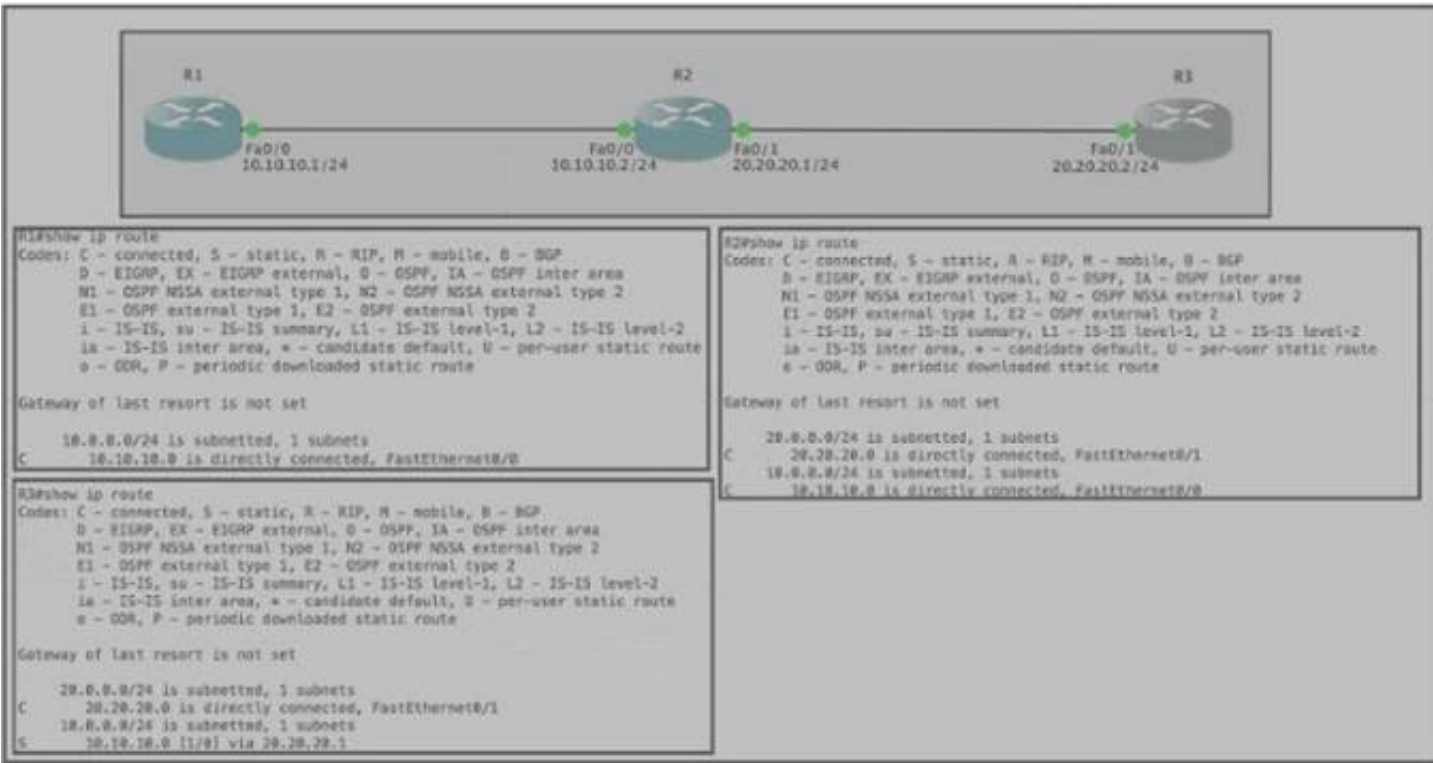
Answer: A

Explanation:



NEW QUESTION 263

- (Topic 1)



Refer to the exhibit Router R1 Fa0/0 is unable to ping router R3 Fa0'1. Which action must be taken in router R1 to help resolve the configuration issue?

- A. set the default network as 20.20.20.0/24
- B. set the default gateway as 20.20.20.2
- C. configure a static route with Fa0/1 as the egress interface to reach the 20.20.20.0/24 network
- D. configure a static route with 10.10.10.2 as the next hop to reach the 20.20.20.0/24 network

Answer: D

NEW QUESTION 266

- (Topic 1)

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 Intrfce	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

Answer: D

NEW QUESTION 270

- (Topic 1)

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

Answer: C

NEW QUESTION 273

- (Topic 1)

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

Answer: A

NEW QUESTION 277

- (Topic 1)

After installing a new Cisco ISE server, which task must the engineer perform on the Cisco WLC to connect wireless clients on a specific VLAN based on their credentials?

- A. Enable the allow AAA Override
- B. Enable the Even: Driven RRM.
- C. Disable the LAG Mode or Next Reboot.
- D. Enable the Authorized MIC APs against auth-list or AAA.

Answer: A

NEW QUESTION 278

- (Topic 1)

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

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

Answer: A

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.

NEW QUESTION 280

- (Topic 1)

Which 802.11 frame type is association response?

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

Answer: A

Explanation:

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

NEW QUESTION 283

DRAG DROP - (Topic 1)

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

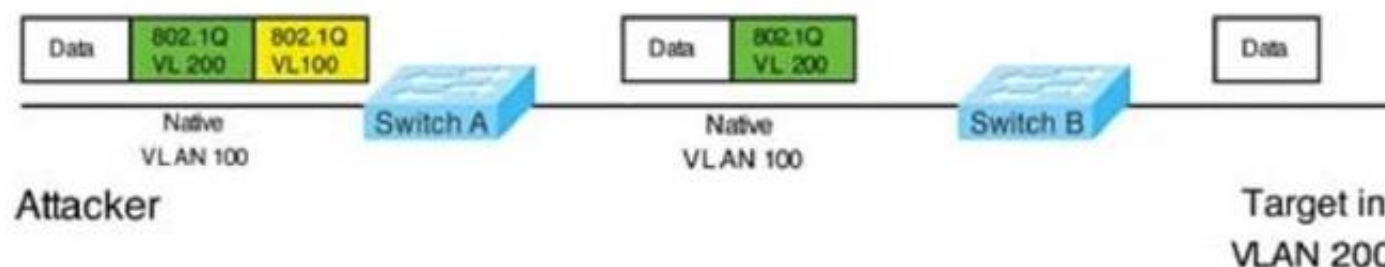
Configure BPDU guard.	802.1q double tagging
Configure dynamic ARP inspection.	ARP spoofing
Configure root guard.	unwanted superior BPDUs
Configure VACL.	unwanted BPDUs on PortFast-enabled interfaces

- A. Mastered
- B. Not Mastered

Answer: A

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.

NEW QUESTION 287

- (Topic 1)

What is a DNS lookup operation?

- A. DNS server pings the destination to verify that it is available
- B. serves requests over destination port 53
- C. DNS server forwards the client to an alternate IP address when the primary IP is down
- D. responds to a request for IP address to domain name resolution to the DNS server

Answer: D

NEW QUESTION 288

- (Topic 1)

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 CP
- C. memory, and storage

- D. Each hypervisor can support a single virtual machine and a single software switch
- E. The hypervisor communicates on Layer 3 without the need for additional resources

Answer: B

NEW QUESTION 289

- (Topic 1)

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

Answer: C

NEW QUESTION 292

- (Topic 1)

Refer to the exhibit.

```
Atlanta#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Atlanta(config)#aaa new-model
Atlanta(config)#aaa authentication login default local
Atlanta(config)#line vty 0 4
Atlanta(config-line)#login authentication default
Atlanta(config-line)#exit
Atlanta(config)#username ciscoadmin password adminadmin123
Atlanta(config)#username ciscoadmin privilege 15
Atlanta(config)#enable password cisco123
Atlanta(config)#enable secret testing1234
Atlanta(config)#end
```

Which password must an engineer use to enter the enable mode?

- A. adminadmin123
- B. default
- C. testing 1234
- D. cisco123

Answer: C

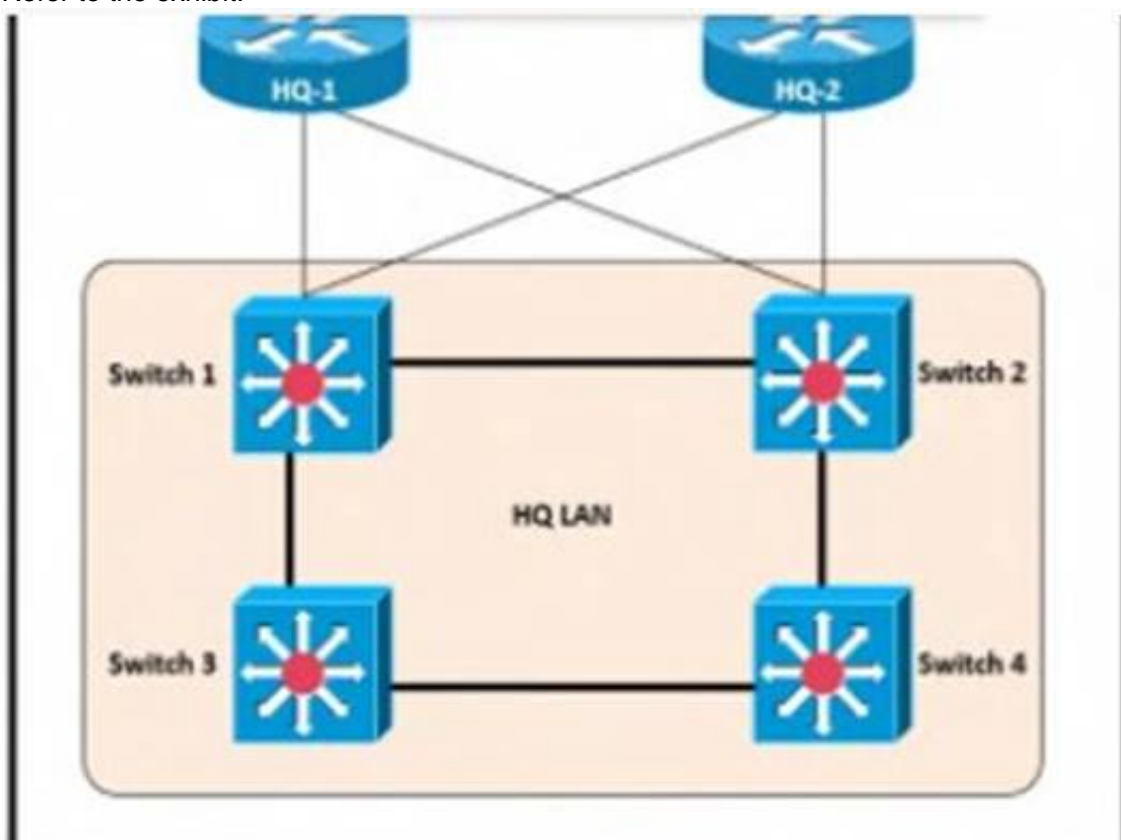
Explanation:

If neither the enable password command nor the enable secret command is configured, and if there is a line password configured for the console, the console line password serves as the enable password for all VTY sessions -> The “enable secret” will be used first if available, then “enable password” and line password.

NEW QUESTION 297

- (Topic 1)

Refer to the exhibit.



After the election process what is the root bridge in the HQ LAN?

Switch 1: 0C:E0:38:58:15:77
Switch 2: 0C:0E:15:22:1A:61
Switch 3: 0C:0E:15:1D:3C:9A
Switch 4: 0C:E0:19:A1:4D:16

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

Answer: C

Explanation:

The root bridge is determined by the lowest bridge ID, which consists of the priority value and the MAC address. Because the priority values of all of the switches are not available, the MAC address is used to determine the root bridge. Because S3 has the lowest MAC address, S3 becomes the root bridge.

NEW QUESTION 301

DRAG DROP - (Topic 1)

Drag drop the descriptions from the left onto the correct configuration-management technologies on the right.

fundamental configuration elements are stored in a manifest

uses TCP port 10002 for configuration push jobs

uses Ruby for fundamental configuration elements

uses SSH for remote device communication

uses TCP 8140 for communication

uses YAML for fundamental configuration elements

Ansible

Chef

Puppet

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

The focus of Ansible is to be streamlined and fast, and to require no node agent installation. Thus, Ansible performs all functions over SSH. Ansible is built on Python, in contrast to the Ruby foundation of Puppet and Chef. TCP port 10002 is the command port. It may be configured in the Chef Push Jobs configuration file . This port allows Chef Push Jobs clients to communicate with the Chef Push Jobs server. Puppet is an open-source configuration management solution, which is built with Ruby and offers custom Domain Specific Language (DSL) and Embedded Ruby (ERB) templates to create custom Puppet language files, offering a declarative-paradigm programming approach. A Puppet piece of code is called a manifest, and is a file with .pp extension.

NEW QUESTION 302

- (Topic 1)

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.

Answer: A

NEW QUESTION 306

- (Topic 1)

What occurs when overlapping Wi-Fi channels are implemented?

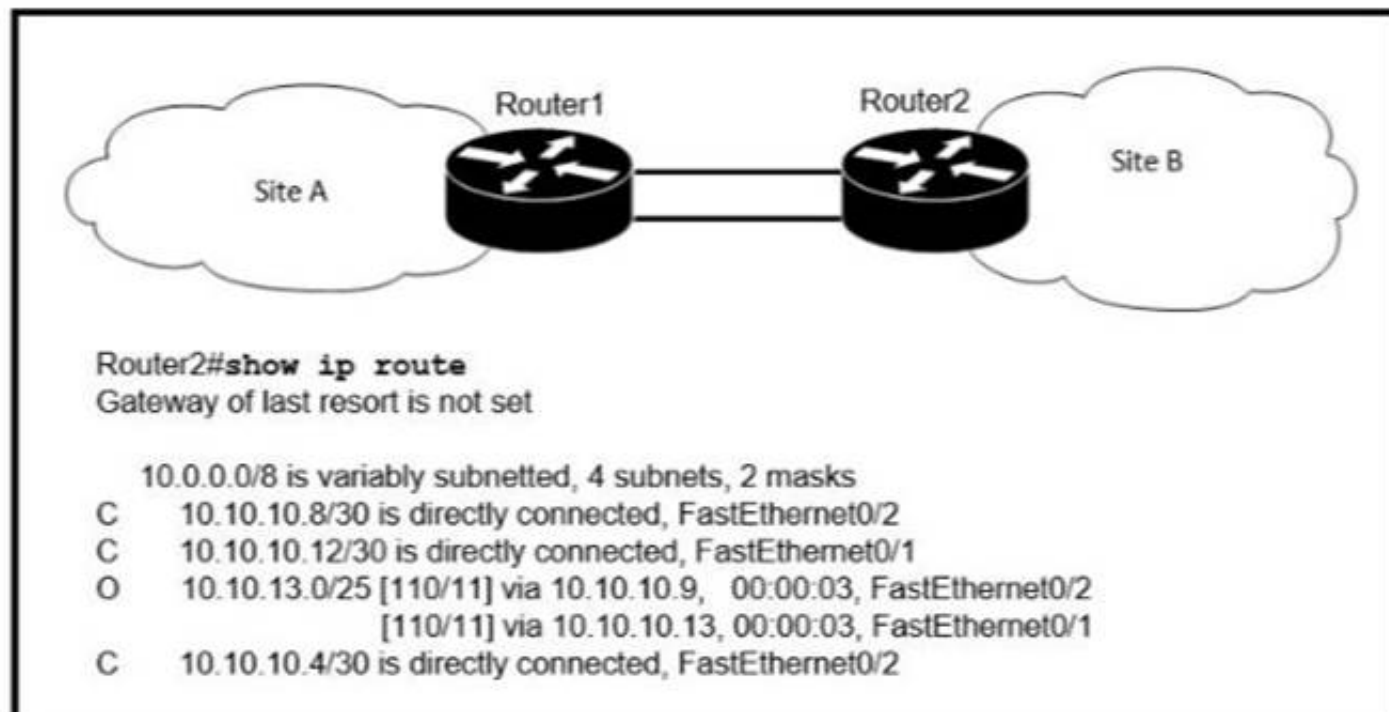
- A. The wireless network becomes vulnerable to unauthorized access.
- B. Wireless devices are unable to distinguish between different SSIDs
- C. Users experience poor wireless network performance.
- D. Network communications are open to eavesdropping.

Answer: C

NEW QUESTION 307

- (Topic 1)

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

Answer: C

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-ccna.com/administrative-distance-metric/>

NEW QUESTION 309

- (Topic 1)

Which virtual MAC address is used by VRRP group 1?

- A. 0050.0c05.ad81
- B. 0007.c061.bc01
- C. 0000.5E00.0101
- D. 0500.3976.6401

Answer: C

Explanation:

The virtual router MAC address associated with a virtual router is an IEEE 802 MAC Address in the following format:
 00-00-5E-00-01-{VRID} (in hex in internet standard bit-order)

NEW QUESTION 311

- (Topic 1)

in Which way does a spine and-leaf architecture allow for scalability in a network when additional access ports are required?

- A. A spine switch and a leaf switch can be added with redundant connections between them
- B. A spine switch can be added with at least 40 GB uplinks
- C. A leaf switch can be added with a single connection to a core spine switch.
- D. A leaf switch can be added with connections to every spine switch

Answer: D

Explanation:

Spine-leaf architecture is typically deployed as two layers: spines (such as an aggregation layer), and leaves (such as an access layer). Spine-leaf topologies provide high-bandwidth, low-latency, nonblocking server-to-server connectivity. Leaf (aggregation) switches are what provide devices access to the fabric (the network of spine and leaf switches) and are typically deployed at the top of the rack. Generally, devices connect to the leaf switches. Devices can include servers, Layer 4-7 services (firewalls and load balancers), and WAN or Internet routers. Leaf switches do not connect to other leaf switches. In spine-and-leaf architecture, every leaf should connect to every spine in a full mesh. Spine (aggregation) switches are used to connect to all leaf switches and are typically deployed at the end or middle of the row. Spine switches do not connect to other spine switches.

NEW QUESTION 315

- (Topic 1)

Which CRUD operation corresponds to the HTTP GET method?

- A. read
- B. update
- C. create
- D. delete

Answer: A

Explanation:

GET: This method retrieves the information identified by the request URI. In the context of the RESTful web services, this method is used to retrieve resources. This is the method used for read operations (the R in CRUD).
<https://hub.packtpub.com/crud-operations-rest/>

NEW QUESTION 316

- (Topic 1)

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

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

Answer: D

NEW QUESTION 320

- (Topic 1)

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

Answer: A

NEW QUESTION 324

- (Topic 1)

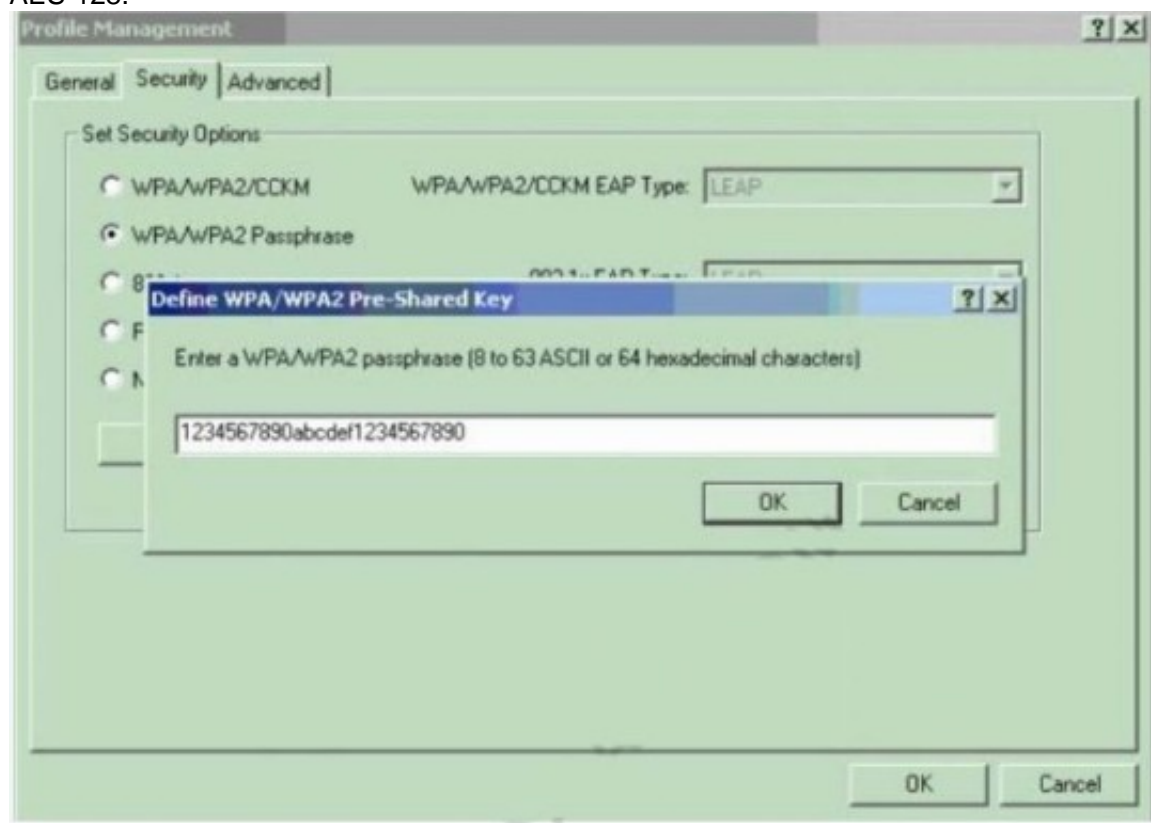
Which type of wireless encryption is used for WPA2 in preshared key mode?

- A. TKIP with RC4
- B. RC4
- C. AES-128
- D. AES-256

Answer: D

Explanation:

We can see in this picture we have to type 64 hexadecimal characters (256 bit) for the WPA2 passphrase so we can deduce the encryption is AES-256, not AES-128.



<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/67134-wpa2-config.html>

NEW QUESTION 326

- (Topic 1)
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 m a brownfield deployment.
- D. It is designed primarily to provide network assurance.

Answer: A

NEW QUESTION 327

- (Topic 1)
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

Answer: D

NEW QUESTION 330

- (Topic 1)
Which type of attack can be mitigated by dynamic ARP inspection?

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

Answer: D

NEW QUESTION 332

- (Topic 1)
What is the default behavior of a Layer 2 switch when a frame with an unknown destination MAC address is received?

- A. The Layer 2 switch drops the received frame
- B. The Layer 2 switch floods packets to all ports except the receiving port in the given VLAN.
- C. The Layer 2 switch sends a copy of a packet to CPU for destination MAC address learning.
- D. The Layer 2 switch forwards the packet and adds the destination MAC address to its MAC address table

Answer: B

Explanation:

If the destination MAC address is not in the CAM table (unknown destination MAC address), the switch sends the frame out all other ports that are in the same VLAN as the received frame. This is called flooding. It does not flood the frame out the same port on which the frame was received.

NEW QUESTION 336

DRAG DROP - (Topic 1)
Drag and drop the characteristics of network architectures from the left onto the type of architecture on the right.

single device handles the core and the distribution layer

enhances network availability

more cost-effective than other options

most appropriate for small network designs

separate devices handle the core and the distribution layer

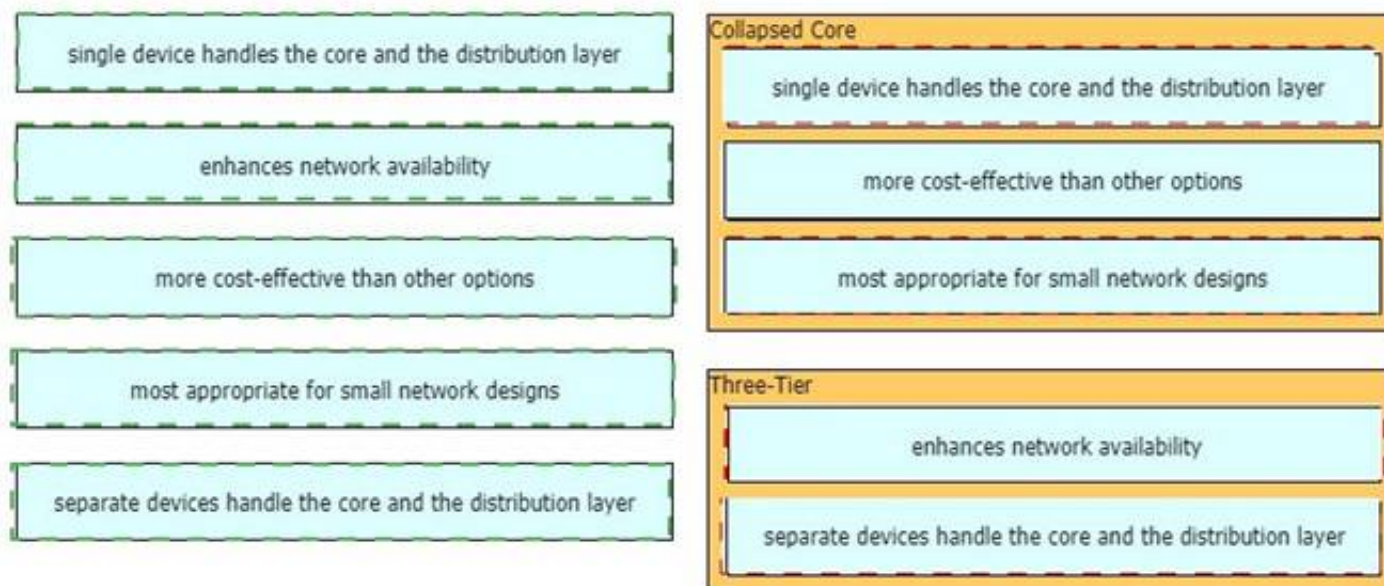
Collapsed Core

Three-Tier

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 339

- (Topic 1)

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

Answer: CE

Explanation:

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 priority extend cos 7
```

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

Answer: A

NEW QUESTION 343

- (Topic 1)

Which command prevents passwords from being stored in the configuration as plain text on a router or switch?

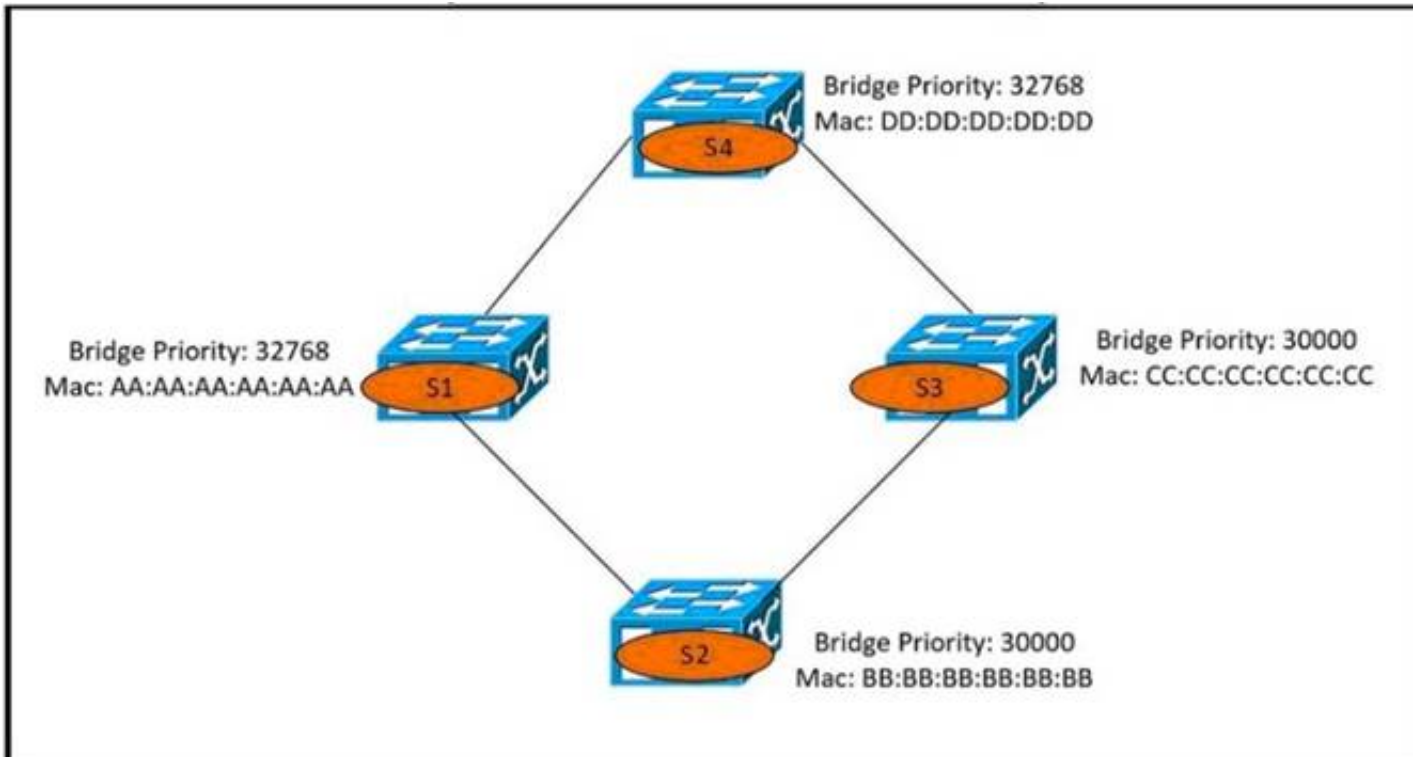
- A. enable secret
- B. service password-encryption
- C. username Cisco password encrypt
- D. enable password

Answer: B

NEW QUESTION 347

- (Topic 1)

Refer to the exhibit.



Which switch becomes the root bridge?

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

Answer: B

NEW QUESTION 351

- (Topic 1)

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.

Answer: B

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.

NEW QUESTION 352

- (Topic 1)

How does a switch process a frame received on Fa0/1 with the destination MAC address of 0e38.7363.657b when the table is missing the address?

- A. It drops the frame immediately.
- B. It forwards the frame back out of interface Fa0/1.
- C. It floods the frame to all interfaces except Fa0/1.
- D. It holds the frame until the MAC address timer expires and then drops the frame.

Answer: C

NEW QUESTION 354

- (Topic 1)

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

Answer: BD

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.

NEW QUESTION 355

- (Topic 1)

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

Answer: B

NEW QUESTION 357

- (Topic 1)

Which function is performed by the collapsed core layer in a two-tier architecture?

- A. enforcing routing policies
- B. marking interesting traffic for data polices
- C. attaching users to the edge of the network
- D. applying security policies

Answer: A

NEW QUESTION 358

- (Topic 1)

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

Answer: D

NEW QUESTION 360

- (Topic 1)

Which action does the router take as it forwards a packet through the network?

- A. The router replaces the original source and destination MAC addresses with the sending router MAC address as the source and neighbor MAC address as the destination
- B. The router encapsulates the original packet and then includes a tag that identifies the source router MAC address and transmits it transparently to the destination
- C. The router encapsulates the source and destination IP addresses with the sending router IP address as the source and the neighbor IP address as the destination
- D. The router replaces the source and destination labels with the sending router interface label as a source and the next hop router label as a destination

Answer: A

NEW QUESTION 361

- (Topic 1)

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

Answer: D

NEW QUESTION 362

- (Topic 1)

When a floating static route is configured, which action ensures that the backup route is used when the primary route fails?

- A. The floating static route must have a higher administrative distance than the primary route so it is used as a backup
- B. The administrative distance must be higher on the primary route so that the backup route becomes secondary.
- C. The floating static route must have a lower administrative distance than the primary route so it is used as a backup
- D. The default-information originate command must be configured for the route to be installed into the routing table

Answer: A

NEW QUESTION 363

- (Topic 1)

Refer to the exhibit.

```
switch(config)#interface gigabitEthernet 1/11

switch(config-if)#switchport mode access

switch(config-if)#spanning-tree portfast

switch(config-if)#spanning-tree bpduguard enable
```

What is the result if Gig1/11 receives an STP BPDU?

- A. The port transitions to STP blocking
- B. The port transitions to the root port
- C. The port immediately transitions to STP forwarding.
- D. The port goes into error-disable state

Answer: D

NEW QUESTION 366

- (Topic 1)

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

Answer: A

NEW QUESTION 371

- (Topic 1)

Which device controls the forwarding of authentication requests for users when connecting to the network using a lightweight access point?

- A. TACACS server
- B. wireless access point
- C. RADIUS server
- D. wireless LAN controller

Answer: B

NEW QUESTION 373

- (Topic 1)

Which MAC address is recognized as a VRRP virtual address?

- A. 0000.5E00.010a
- B. 0005.3711.0975
- C. 0000.0C07.AC99
- D. 0007.C070/AB01

Answer: A

Explanation:

With VRRP, the virtual router's MAC address is 0000.5E00.01xx, in which xx is the VRRP group.

NEW QUESTION 377

- (Topic 1)

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

Answer: DE

NEW QUESTION 382

- (Topic 1)

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

Answer: A

NEW QUESTION 386

- (Topic 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

Answer: BC

NEW QUESTION 389

- (Topic 1)

How do TCP and UDP differ in the way that they establish a connection between two endpoints?

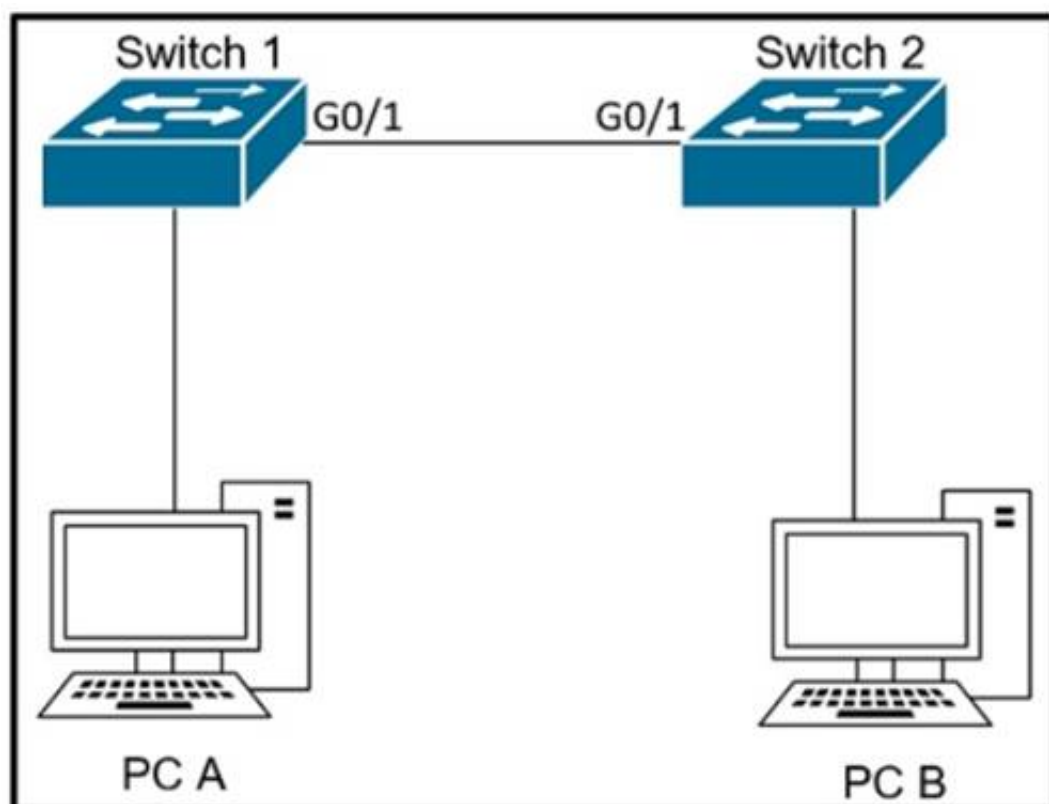
- A. TCP uses synchronization packets, and UDP uses acknowledgment packets.
- B. UDP uses SYN, SYN ACK and FIN bits in the frame header while TCP uses SYN, SYN ACK and ACK bits
- C. UDP provides reliable message transfer and TCP is a connectionless protocol
- D. TCP uses the three-way handshake and UDP does not guarantee message delivery

Answer: D

NEW QUESTION 393

- (Topic 1)

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

Answer: D

NEW QUESTION 395

- (Topic 1)
What is a DHCP client?

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

Answer: B

NEW QUESTION 396

- (Topic 1)
Which global command encrypt all passwords in the running configuration?

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

Answer: B

NEW QUESTION 399

DRAG DROP - (Topic 1)
Drag and drop the network protocols from the left onto the correct transport services on the right.

SMTP

SNMP

TFTP

VoIP

SSH

FTP

Connection Oriented

Connectionless

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

SMTP

SNMP

TFTP

VoIP

SSH

FTP

Connection Oriented

Connectionless

NEW QUESTION 403

- (Topic 1)
Which command enables a router to become a DHCP client?

- A. ip address dhcp
- B. ip helper-address
- C. ip dhcp pool
- D. ip dhcp client

Answer: A

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipaddr_dhcp/configuration/12-4/dhcp-12-4-book/config-dhcp-client.html

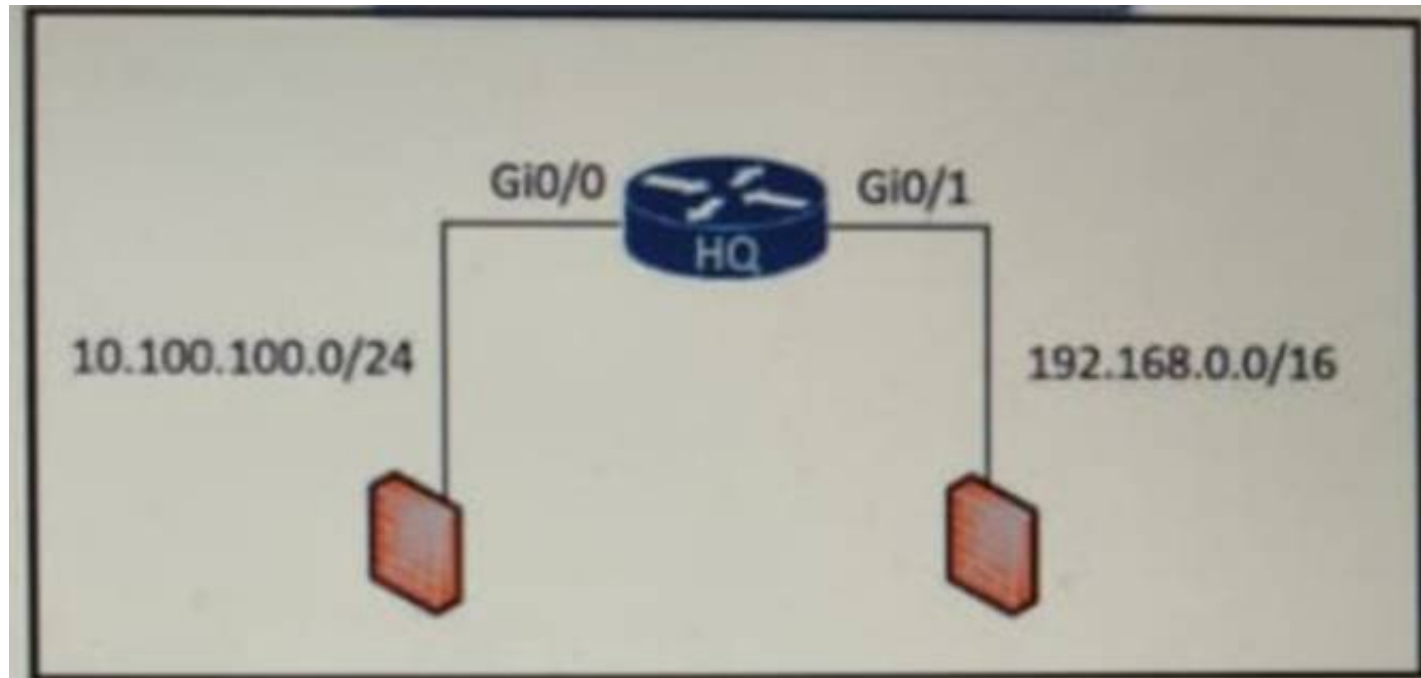
If we want to get an IP address from the DHCP server on a Cisco device, we can use the command “ip address dhcp”.

Note: The command “ip helper-address” enables a router to become a DHCP Relay Agent.

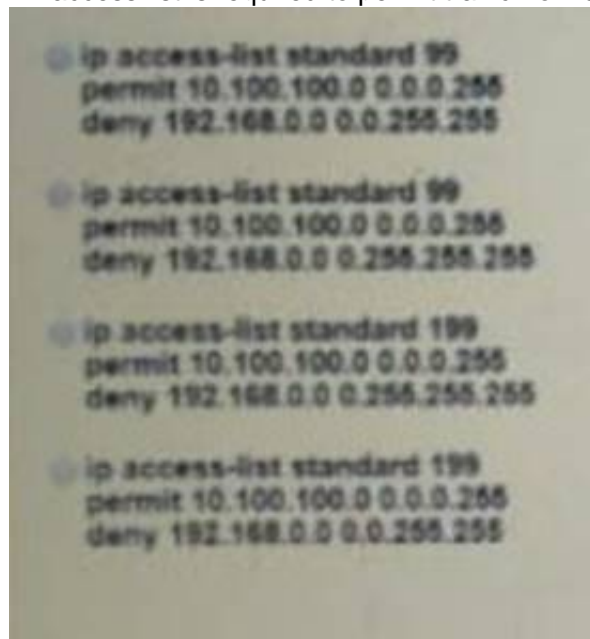
NEW QUESTION 406

- (Topic 1)

Refer to the exhibit.



An access list is required to permit traffic from any host on interface G0/0 and deny traffic from interface G/0/1. Which access list must be applied?



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

Answer: A

NEW QUESTION 407

- (Topic 1)

An email user has been lured into clicking a link in an email sent by their company's security organization. The webpage that opens reports that it was safe but the link could have contained malicious code. Which type of security program is in place?

- A. Physical access control
- B. Social engineering attack
- C. brute force attack
- D. user awareness

Answer: D

Explanation:

This is a training program which simulates an attack, not a real attack (as it says “The webpage that opens reports that it was safe”) so we believed it should be called a “user awareness” program. Therefore the best answer here should be “user awareness”. This is the definition of “User awareness” from CCNA 200- 301 Official Cert Guide Book: “User awareness: All users should be made aware of the need for data confidentiality to protect corporate information, as well as their own credentials and personal information. They should also be made aware of potential threats, schemes to mislead, and proper procedures to report security incidents. ” Note: Physical access control means infrastructure locations, such as network closets and data centers, should remain securely locked.

NEW QUESTION 409

- (Topic 1)

How do servers connect to the network in a virtual environment?

- A. wireless to an access point that is physically connected to the network
- B. a cable connected to a physical switch on the network
- C. a virtual switch that links to an access point that is physically connected to the network
- D. a software switch on a hypervisor that is physically connected to the network

Answer: D

NEW QUESTION 410

- (Topic 1)

Which output displays a JSON data representation?

- A.

```
{
  "response": {
    "taskId": {},
    "url": "string"
  },
  "version": "string"
}
```
- B.

```
{
  "response"- {
    "taskId"- {},
    "url"- "string"
  },
  "version"- "string"
}
```
- C.

```
{
  "response": {
    "taskId": {},
    "url": "string"
  },
  "version": "string"
}
```
- D.

```
{
  "response". {
    "taskId". {};
    "url". "string"
  };
  "version". "string"
}
```

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

Answer: C

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"]} JSON can have empty object like "taskId": {}

NEW QUESTION 413

DRAG DROP - (Topic 1)

Drag and drop the IPv6 address type characteristics from the left to the right.

attached to a single subnet	Link-Local Address
addresses with prefix FC00::/7	
configured only once per interface	
addressing for exclusive use internally without Internet routing	Unique Local Address

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

attached to a single subnet	Link-Local Address
addresses with prefix FC00::/7	addresses with prefix FC00::/7
configured only once per interface	addressing for exclusive use internally without Internet routing
addressing for exclusive use internally without Internet routing	Unique Local Address
	configured only once per interface
	attached to a single subnet

NEW QUESTION 416

- (Topic 1)
What criteria is used first during me root port selection process?

- A. local port ID
- B. lowest path cost to the root bridge
- C. lowest neighbor's bridge ID
- D. lowest neighbor's port ID

Answer: B

NEW QUESTION 418

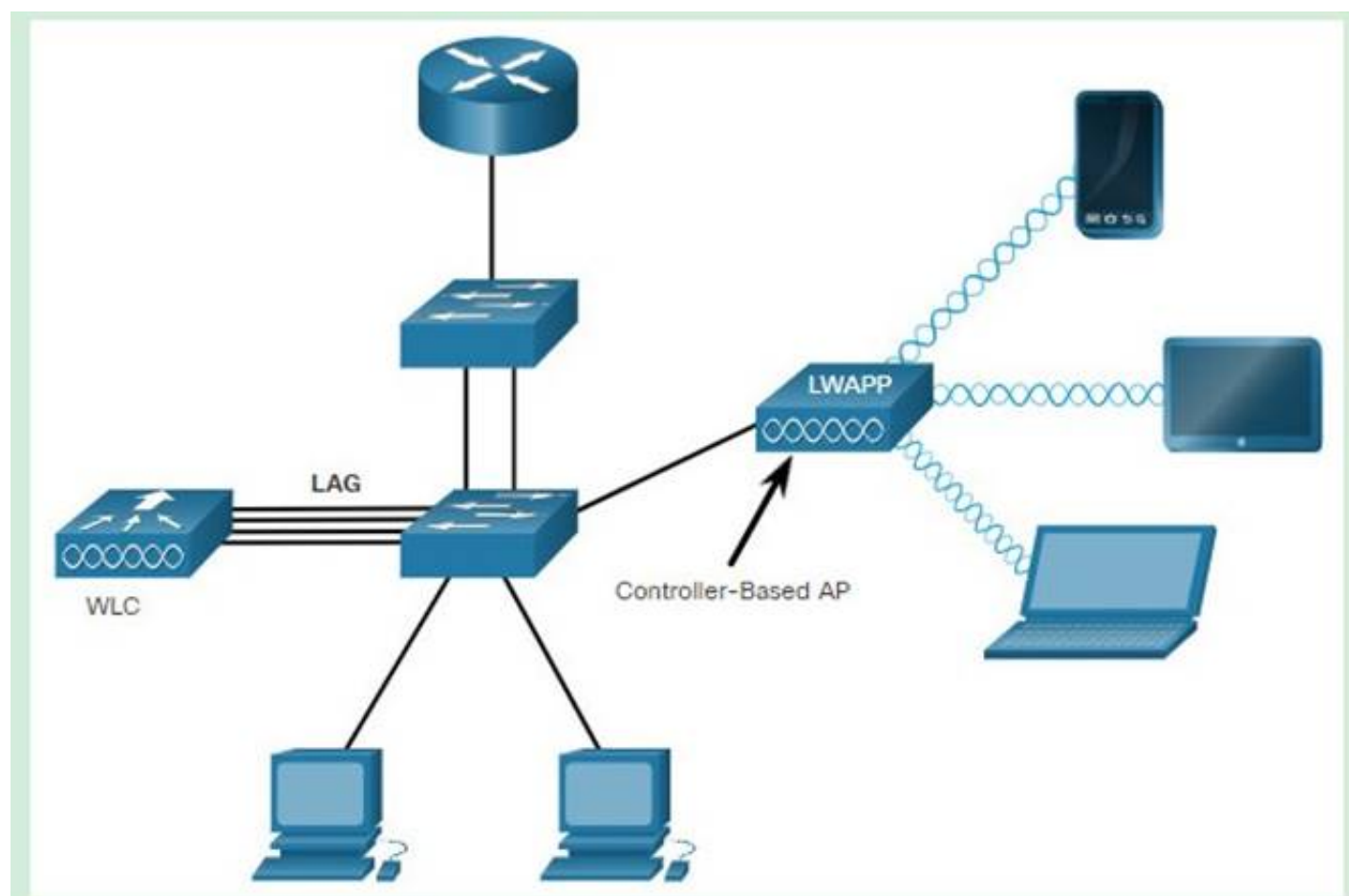
- (Topic 1)
What is a function of Wireless LAN Controller?

- A. register with a single access point that controls traffic between wired and wireless endpoints.
- B. use SSIDs to distinguish between wireless clients.
- C. send LWAPP packets to access points.
- D. monitor activity on wireless and wired LANs

Answer: C

Explanation:

Lightweight APs (LAPs) is devices require no initial configuration. LAPs use the Lightweight Access Point Protocol (LWAPP) to communicate with a WLAN controller (WLC), as shown in the below figure. Controller-based APs are useful in situations where many APs are required in the network. As more APs are added, each AP is automatically configured and managed by the WLC.



NEW QUESTION 422

- (Topic 1)

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

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

Answer: DE

Explanation:

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

NEW QUESTION 424

DRAG DROP - (Topic 1)

Drag and drop the SNMP manager and agent identifier commands from the left onto the functions on the right

show snmp chassis	displays information about the SNMP recipient
show snmp community	displays the IP address of the remote SNMP device
show snmp engineID	displays the SNMP security model in use
show snmp group	displays the SNMP access string
show snmp host	displays the SNMP server serial number

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 427

- (Topic 1)

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

Answer: D

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.

NEW QUESTION 431

- (Topic 1)

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

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

Answer: A

NEW QUESTION 433

- (Topic 1)

Which HTTP status code is returned after a successful REST API request?

- A. 200
- B. 301
- C. 404
- D. 500

Answer: A

NEW QUESTION 435

- (Topic 1)

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

Answer: D

NEW QUESTION 436

DRAG DROP - (Topic 1)

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

DHCP server	list of hosts on the network that are unknown to the administrative domain
snooping binding database	network component that propagates IP addresses to hosts on the network
spurious DHCP server	internal device under the control of the network administrator
trusted	unknown DHCP server within an administrative domain
untrusted	default state of all interfaces

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

DHCP server	snooping binding database
snooping binding database	spurious DHCP server
spurious DHCP server	trusted
trusted	DHCP server
untrusted	untrusted

NEW QUESTION 440

- (Topic 1)
Which WLC port connects to a switch to pass normal access-point traffic?

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

Answer: C

NEW QUESTION 445

DRAG DROP - (Topic 1)
Drag and drop the 802.11 wireless standards from the left onto the matching statements on the right

802.11a	Operates in the 2.4 GHz and 5 GHz bands.
802.11ac	Operates in the 2.4 GHz band only and supports a maximum data rate of 54 Mbps.
802.11b	Operates in the 5 GHz band only and supports a maximum data rate that can exceed 100 Mbps.
802.11g	Supports a maximum data rate of 11 Mbps.
802.11n	Operates in the 5 GHz band only and supports a maximum data rate of 54 Mbps.

- A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 450

- (Topic 1)

Refer to the exhibit.

```
R1#show ip route
Codes: 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
Gateway of last resort is 192.168.30.10 to network 0.0.0.0
192.168.30.0/29 is subnetted, 2 subnets
C      192.168.30.0 is directly connected, FastEthernet0/0
C      192.168.30.8 is directly connected, Serial0/0.1
192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
O IA   192.168.10.32/28 [110/193] via 192.168.30.10, 00:18:49, Serial0/0.1
O IA   192.168.10.0/27 [110/192] via 192.168.30.10, 00:18:49, Serial0/0.1
192.168.20.0/30 is subnetted, 1 subnets
O IA   192.168.20.0 [110/128] via 192.168.30.10, 00:18:49, Serial0/0.1
192.168.50.0/32 is subnetted, 1 subnets
C      192.168.50.1 is directly connected, Loopback0
O*IA 0.0.0.0/0 [110/84] via 192.168.30.10, 00:10:36, Serial0/0.1
```

What is the metric of the route to the 192.168.10.33/28 subnet?

- A. 84
- B. 110
- C. 128
- D. 192
- E. 193

Answer: E

NEW QUESTION 451

DRAG DROP - (Topic 1)

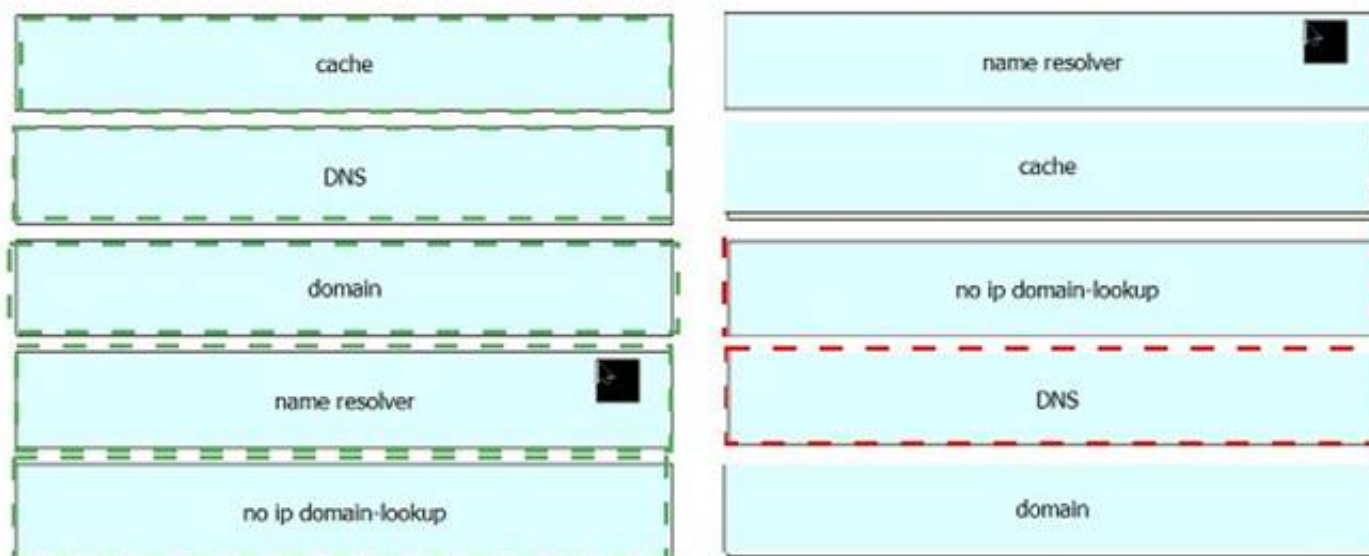
Drag and drop the DNS lookup components from the left onto the functions on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 454

- (Topic 1)

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.

Answer: A

NEW QUESTION 459

- (Topic 1)

In software defined architectures, which plane is distributed and responsible for traffic forwarding?

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

Answer: D

NEW QUESTION 462

- (Topic 1)

An engineer must configure a /30 subnet between two routers. Which usable IP address and subnet mask combination meets this criteria?

```
interface e0/0
description to HQ-A371:19452
ip address 209.165.201.2 255.255.255.252
```

```
interface e0/0
description to HQ-A371:19452
ip address 10.2.1.3 255.255.255.252
```

```
interface e0/0
description to HQ-A371:19452
ip address 172.16.1.4 255.255.255.248
```

```
interface e0/0
description to HQ-A371:19452
ip address 192.168.1.1 255.255.255.248
```

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

Answer: A

NEW QUESTION 464

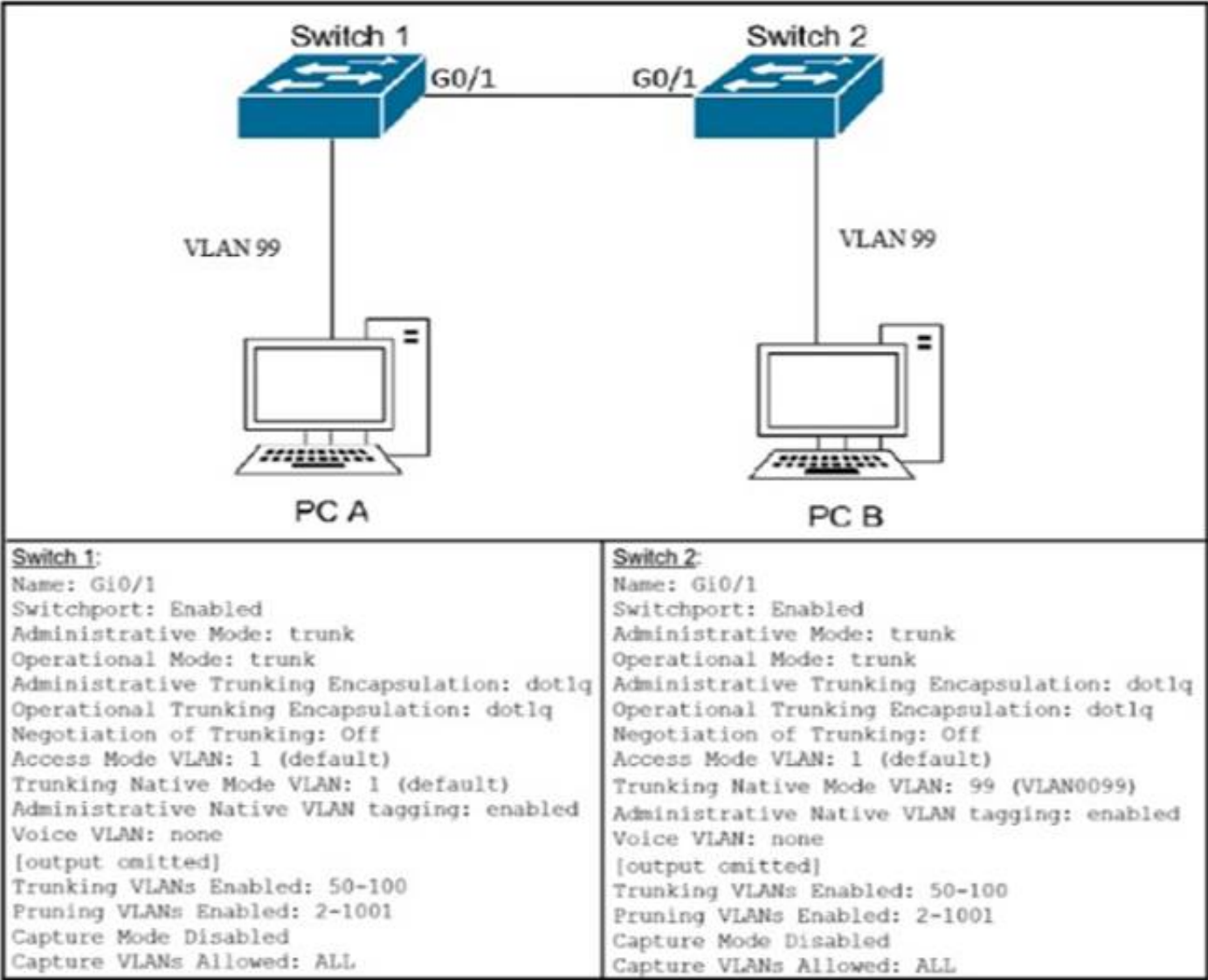
- (Topic 1)
What are two functions of an SDN controller? (Choose two)

- A. Layer 2 forwarding
- B. coordinating VTNs
- C. tracking hosts
- D. managing the topology
- E. protecting against DDoS attacks

Answer: BD

NEW QUESTION 465

- (Topic 1)
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

Answer: A

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.

NEW QUESTION 469

DRAG DROP - (Topic 1)
Drag and drop the functions of DHCP from the left onto any of the positions on the right Not all functions are used

- provides local control for network segments using a client-server scheme
- reduces the administrative burden for onboarding end users
- associates hostnames to IP addresses
- maintains an address pool
- assigns IP addresses to local hosts for a configurable lease time
- offers domain name server configuration
- uses authoritative servers for record keeping

- 1
- 2
- 3
- 4

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

- provides local control for network segments using a client-server scheme
- reduces the administrative burden for onboarding end users
- associates hostnames to IP addresses
- maintains an address pool
- assigns IP addresses to local hosts for a configurable lease time
- offers domain name server configuration
- uses authoritative servers for record keeping

- maintains an address pool
- provides local control for network segments using a client-server scheme
- reduces the administrative burden for onboarding end users
- assigns IP addresses to local hosts for a configurable lease time

NEW QUESTION 474

- (Topic 1)
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

Answer: C

NEW QUESTION 479

DRAG DROP - (Topic 1)

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

configure 802.1x authentication	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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

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

NEW QUESTION 484

- (Topic 1)

A frame that enters a switch fails the Frame Check Sequence. Which two interface counters are incremented? (Choose two)

- A. runts
- B. giants
- C. frame
- D. CRC
- E. input errors

Answer: DE

Explanation:

Whenever the physical transmission has problems, the receiving device might receive a frame whose bits have changed values. These frames do not pass the error detection logic as implemented in the FCS field in the Ethernet trailer. The receiving device discards the frame and counts it as some kind of input error. Cisco switches list this error as a CRC error. Cyclic redundancy check (CRC) is a term related to how the FCS math detects an error. The “input errors” includes runts, giants, no buffer, CRC, frame, overrun, and ignored counts. The output below show the interface counters with the “show interface s0/0/0” command:

```
Router#show interface s0/0/0
Serial0/0/0 is up, line protocol is up
Hardware is M4T
Description: Link to R2
Internet address is 10.1.1.1/30
MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
--output omitted--
5 minute output rate 0 bits/sec, 0 packets/sec
 268 packets input, 24889 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
251 packets output, 23498 bytes, 0 underruns
 0 output errors, 0 collisions, 0 interface resets
 0 output buffer failures, 0 output buffers swapped out
 0 carrier transitions      DCD=up DSR=up DTR=up RTS=up CTS=up
```

NEW QUESTION 489

- (Topic 1)

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)

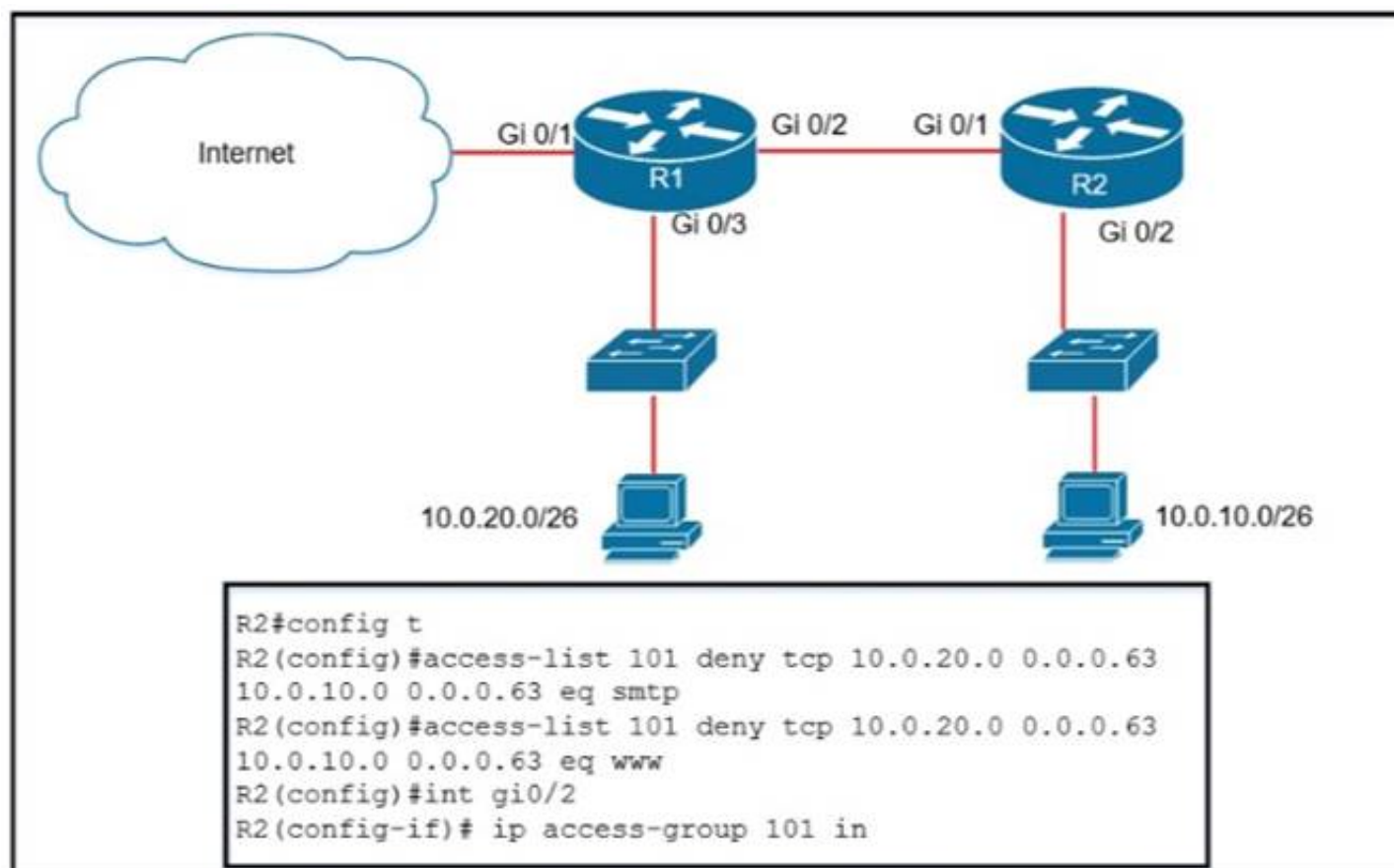
- A. ipv6 route 2000::1/128 2012::1
- B. ipv6 route 2000::3/128 2023::3
- C. ipv6 route 2000::3/128 s0/0/0
- D. ipv6 route 2000::1/128 2012::2
- E. ipv6 route 2000::1/128 s0/0/1

Answer: AB

NEW QUESTION 490

- (Topic 1)

Refer to the exhibit.



An extended ACL has been configured and applied to router R2. The configuration failed to work as intended. Which two changes stop outbound traffic on TCP ports 25 and 80 to 10.0.20.0/26 from the 10.0.10.0/26 subnet while still allowing all other traffic? (Choose two.)

- A. Add a "permit ip any any" statement to the beginning of ACL 101 for allowed traffic.
- B. Add a "permit ip any any" statement at the end of ACL 101 for allowed traffic.
- C. The source and destination IPs must be swapped in ACL 101.
- D. The ACL must be configured on the Gi0/2 interface inbound on R1.
- E. The ACL must be moved to the Gi0/1 interface outbound on R2.

Answer: BC

NEW QUESTION 493

- (Topic 1)

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

Answer: B

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.

NEW QUESTION 496

- (Topic 1)

If a notice-level message is sent to a syslog server, which event has occurred?

- A. A network device has restarted.
- B. An ARP inspection has failed.
- C. A routing instance has flapped.
- D. A debug operation is running.

Answer: C

Explanation:

Usually no action is required when a route flaps so it generates the notification syslog level message (level 5).

NEW QUESTION 498

- (Topic 1)

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

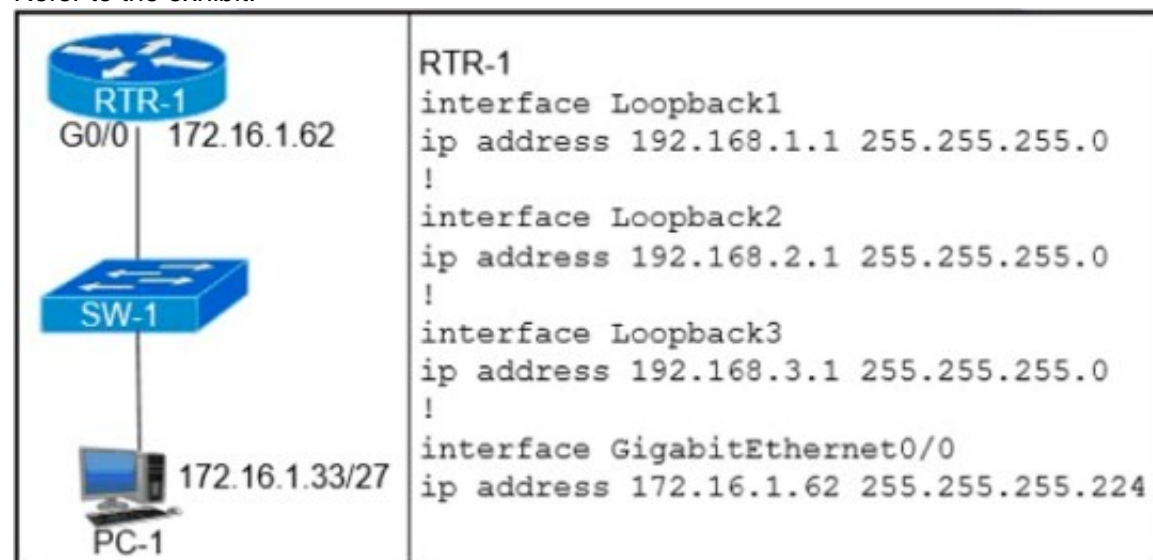
- A. SMTP
- B. SNMP
- C. TCP
- D. FTP

Answer: B

NEW QUESTION 499

- (Topic 1)

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

Answer: B

NEW QUESTION 503

DRAG DROP - (Topic 1)

Drag and drop the statement about networking from the left into the Corresponding networking types on the right. Not all statements are used.

This type deploys a consistent configuration across multiple devices.

A distributed control plane is needed.

This type requires a distributed management plane.

Southbound APIs are used to apply configurations.

Northbound APIs interact with end devices.

Controller-Based Networking

Traditional Networking

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

This type deploys a consistent configuration across multiple devices.

A distributed control plane is needed.

This type requires a distributed management plane.

Southbound APIs are used to apply configurations.

Northbound APIs interact with end devices.

Controller-Based Networking

A distributed control plane is needed.

Southbound APIs are used to apply configurations.

Traditional Networking

This type deploys a consistent configuration across multiple devices.

This type requires a distributed management plane.

NEW QUESTION 506

- (Topic 1)

Where does the configuration reside when a helper address is configured to support DHCP?

- A. on the router closest to the server
- B. on the router closest to the client
- C. on every router along the path
- D. on the switch trunk interface

Answer: B

NEW QUESTION 511

- (Topic 1)

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

Answer: B

NEW QUESTION 512

- (Topic 1)

An engineer must configure Interswitch VLAN communication between a Cisco switch and a third-party switch. Which action should be taken?

- A. configure IEEE 802.1p
- B. configure IEEE 802.1q

- C. configure ISL
- D. configure DSCP

Answer: B

NEW QUESTION 517

- (Topic 1)

An organization has decided to start using cloud-provided services. Which cloud service allows the organization to install its own operating system on a virtual machine?

- A. platform-as-a-service
- B. software-as-a-service
- C. network-as-a-service
- D. infrastructure-as-a-service

Answer: B

Explanation:

Below are the 3 cloud supporting services cloud providers provide to customer:

+ SaaS (Software as a Service): SaaS uses the web to deliver applications that are managed by a thirdparty vendor and whose interface is accessed on the clients' side. Most SaaS applications can be run directly from a web browser without any downloads or installations required, although some require plugins.

+ PaaS (Platform as a Service): are used for applications, and other development, while providing cloud components to software. What developers gain with PaaS is a framework they can build upon to develop or customize applications. PaaS makes the development, testing, and deployment of applications quick, simple, and cost-effective. With this technology, enterprise operations, or a thirdparty provider, can manage Oses, virtualization, servers, storage, networking, and the PaaS software itself. Developers, however, manage the applications.

+ IaaS (Infrastructure as a Service): self-service models for accessing, monitoring, and managing remote datacenter infrastructures, such as compute (virtualized or bare metal), storage, networking, and networking services (e.g. firewalls). Instead of having to purchase hardware outright, users can purchase IaaS based on consumption, similar to electricity or other utility billing.

In general, IaaS provides hardware so that an organization can install their own operating system.

NEW QUESTION 520

- (Topic 1)

When a switch receives a frame for a known destination MAC address, how is the frame handed?

- A. sent to the port identified for the known MAC address
- B. broadcast to all ports
- C. forwarded to the first available port
- D. flooded to all ports except the one from which it originated

Answer: A

NEW QUESTION 525

- (Topic 1)

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

Answer: D

NEW QUESTION 527

DRAG DROP - (Topic 1)

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

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

- A. Mastered
- B. Not Mastered

Answer: A

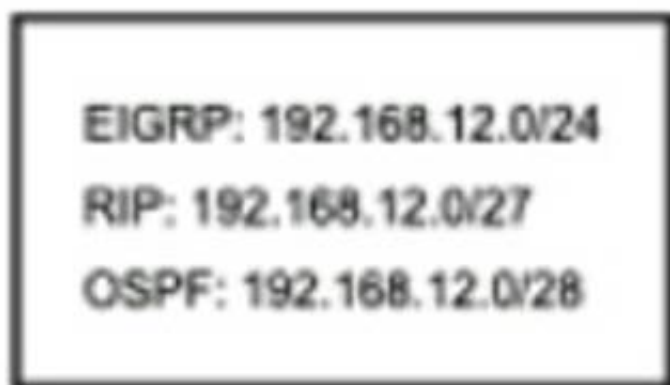
Explanation:



NEW QUESTION 530

- (Topic 1)

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

Answer: A

NEW QUESTION 531

- (Topic 1)

A network administrator must enable DHCP services between two sites. What must be configured for the router to pass DHCPDISCOVER messages on to the server?

- A. a DHCP Relay Agent
- B. DHCP Binding
- C. a DHCP Pool
- D. DHCP Snooping

Answer: A

NEW QUESTION 533

- (Topic 1)

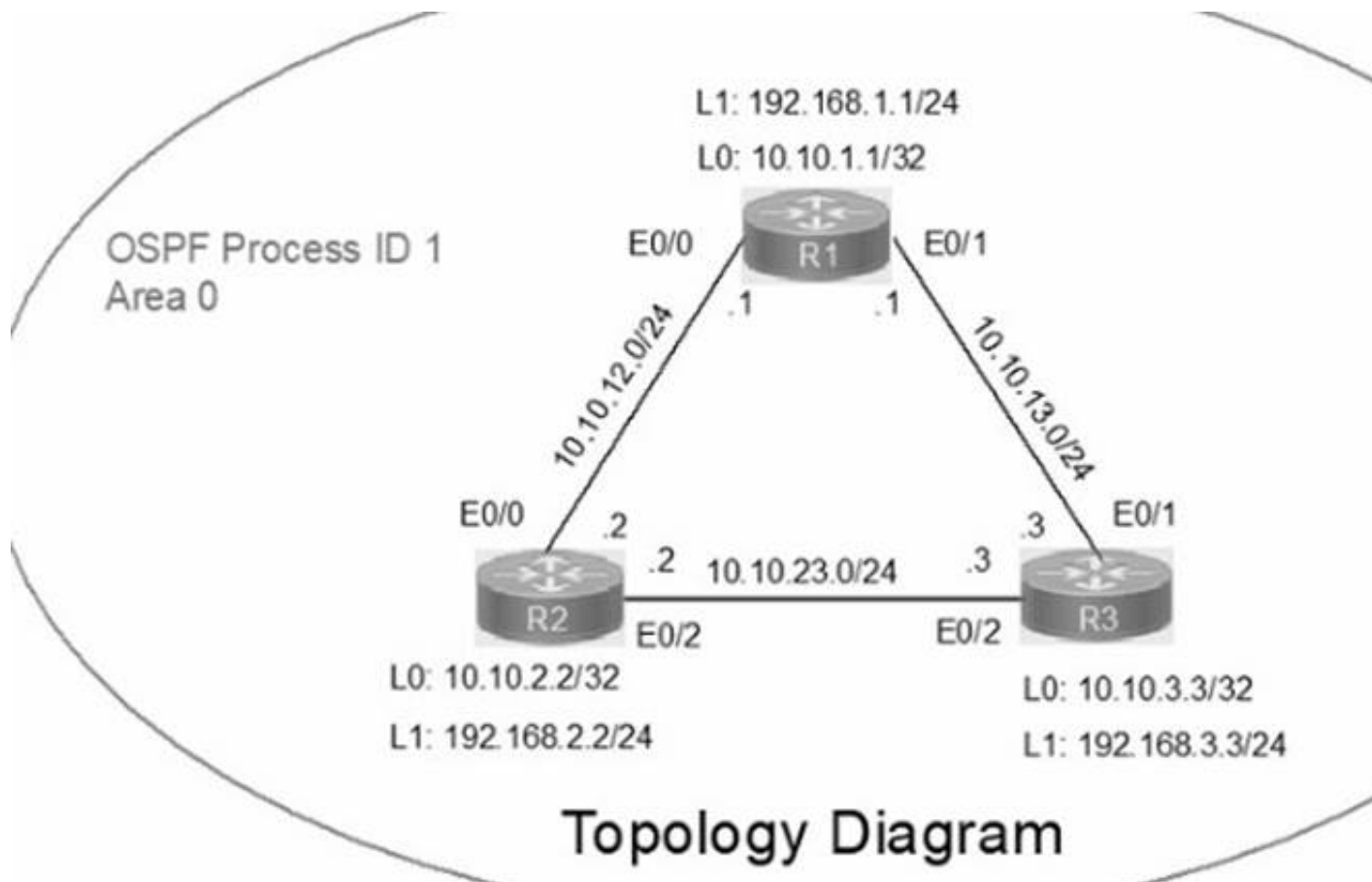
What is the role of a firewall in an enterprise network?

- 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

Answer: C

NEW QUESTION 536

SIMULATION - (Topic 5)



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.

- * 1. Configure R1 and R2 Router IDs using the interface IP addresses from the link that is shared between them.
- * 2. 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.
- * 3. Using a host wildcard mask, configure all three routers to advertise their respective Loopback1 networks.
- * 4. Configure the link between R1 and R3 to disable their ability to add other OSPF routers.

- A. Mastered
- B. Not Mastered

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
!
```

NEW QUESTION 539
SIMULATION - (Topic 5)

Guidelines

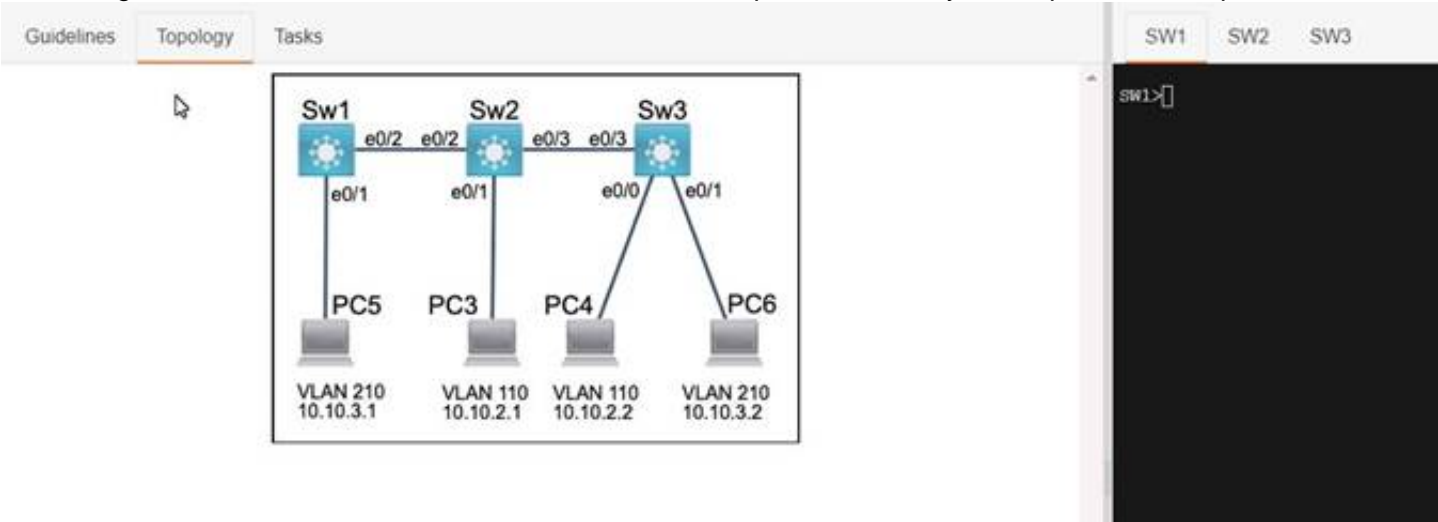
This is a lab item in which tasks will be performed on virtual devices.

- 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.

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 accross 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

- * 1. Configure the VLANs on the designated switches and assign them as access ports to the interfaces connected to the PCs.
- * 2. Configure the e0/2 interfaces on Sw1 and Sw2 as 802.1q trunks with only the required VLANs permitted.
- * 3. Configure the e0/3 interfaces on Sw2 and Sw3 as 802.1q trunks with only the required VLANs permitted.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer as below configuration:
 Sw1 enable config t Vlan 210
 Name FINANCE
 Inter e0/1
 Switchport access vlan 210 do wr
 Sw2 Enable config t Vlan 110
 Name MARKITING
 Int e0/1
 Switchport acees vlan 110 do wr
 Sw3 Enable config t
 Vlan 110
 Name MARKITING
 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

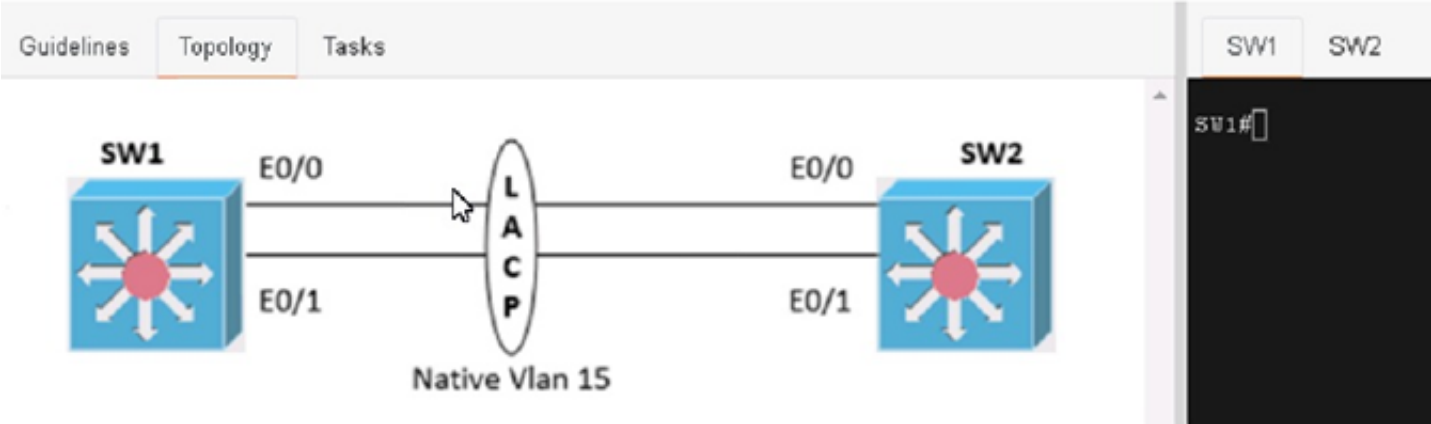
NEW QUESTION 543

SIMULATION - (Topic 5)
 Physical connectivity is implemented between the two Layer 2 switches, and the network connectivity between them must be configured
 * 1. 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.
 * 3. Configure the trunk link with 802.1 q tags.
 * 4. 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.



- A. Mastered
- B. Not Mastered

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

NEW QUESTION 546

SIMULATION - (Topic 5)

All physical cabling is in place. A company plans to deploy 32 new sites. The sites will utilize both IPv4 and IPv6 networks.

* 1 . Subnet 172.25.0.0/16 to meet the subnet requirements and maximize the number of hosts

Using the second subnet

- Assign the first usable IP address to e0/0 on Sw101

- Assign the last usable IP address to e0/0 on Sw102

* 2. Subnet to meet the subnet requirements and maximize the number of hosts

c Using the second subnet

- Assign an IPv6 GUA using a unique 64-Bit interface identifier on e0/0 on Sw101

- Assign an IPv6 GUA using a unique 64-Bit interface identifier on e0/0 on swi02

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.

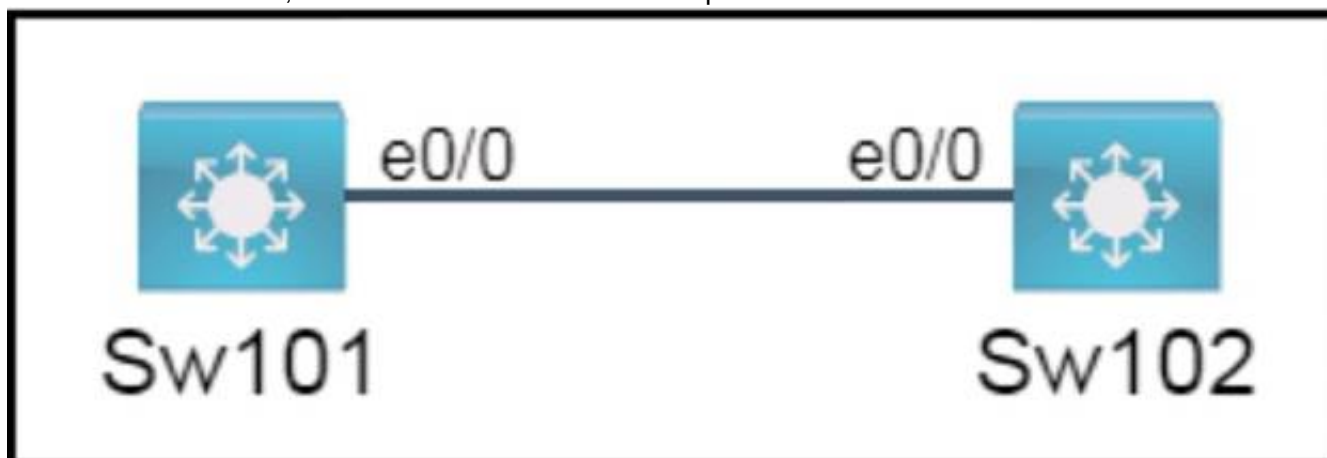
- All necessary preconfigurations have been applied.

- 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.



A. Mastered

B. Not Mastered

Answer: A

Explanation:

? To subnet 172.25.0.0/16 to meet the subnet requirements and maximize the number of hosts, you need to determine how many bits you need to borrow from the host portion of the address to create enough subnets for 32 sites. Since 32 is 2^5 , you need to borrow 5 bits, which means your new subnet mask will be /21 or 255.255.248.0. To find the second subnet, you need to add the value of the fifth bit

(32) to the third octet of the network address (0), which gives you 172.25.32.0/21 as the second subnet. The first usable IP address in this subnet is 172.25.32.1, and the last usable IP address is 172.25.39.254.

? To assign the first usable IP address to e0/0 on Sw101, you need to enter the

following commands on the device console:

Sw101#configure terminal Sw101(config)#interface e0/0 Sw101(config-if)#ip address 172.25.32.1 255.255.248.0 Sw101(config-if)#no shutdown Sw101(config-if)#end

? To assign the last usable IP address to e0/0 on Sw102, you need to enter the

following commands on the device console:

Sw102#configure terminal Sw102(config)#interface e0/0 Sw102(config-if)#ip address 172.25.39.254 255.255.248.0 Sw102(config-if)#no shutdown Sw102(config-if)#end

? To subnet an IPv6 GUA to meet the subnet requirements and maximize the

number of hosts, you need to determine how many bits you need to borrow from the interface identifier portion of the address to create enough subnets for 32 sites. Since 32 is 2^5 , you need to borrow 5 bits, which means your new prefix length will be /69 or ffff:ffff:ffff:fff8::/69 (assuming that your IPv6 GUA has a /64 prefix by default). To find the second subnet, you need to add the value of the fifth bit (32) to the fourth hextet of the network address (0000), which gives you xxxx:xxxx:xxxx:0020::/69 as the second subnet (where xxxx:xxxx:xxxx is your IPv6 GUA prefix). The first and last IPv6 addresses in this subnet are

xxxx:xxxx:xxxx:0020::1 and xxxx:xxxx:xxxx:0027:ffff:ffff:ffff:fffe respectively.

? To assign an IPv6 GUA using a unique 64-bit interface identifier on e0/0 on

Sw101, you need to enter the following commands on the device console (assuming that your IPv6 GUA prefix is 2001:db8::/64):

Sw101#configure terminal Sw101(config)#interface e0/0 Sw101(config-if)#ipv6 address 2001:db8::20::1/69 Sw101(config-if)#no shutdown Sw101(config-if)#end

? To assign an IPv6 GUA using a unique 64-bit interface identifier on e0/0 on Sw102, you need to enter the following commands on the device console (assuming that your IPv6 GUA prefix is 2001:db8::/64):
Sw102#configure terminal Sw102(config)#interface e0/0 Sw102(config-if)#ipv6 address 2001:db8::27::ffe/69 Sw102(config-if)#no shutdown Sw102(config-if)#end

NEW QUESTION 547
DRAG DROP - (Topic 4)
Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is not set
  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

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

172.16.3.128	172.16.4.0
172.16.3.64	172.16.2.128
172.16.2.128	172.16.3.64
172.16.3.192	172.16.3.128
172.16.4.0	172.16.3.192

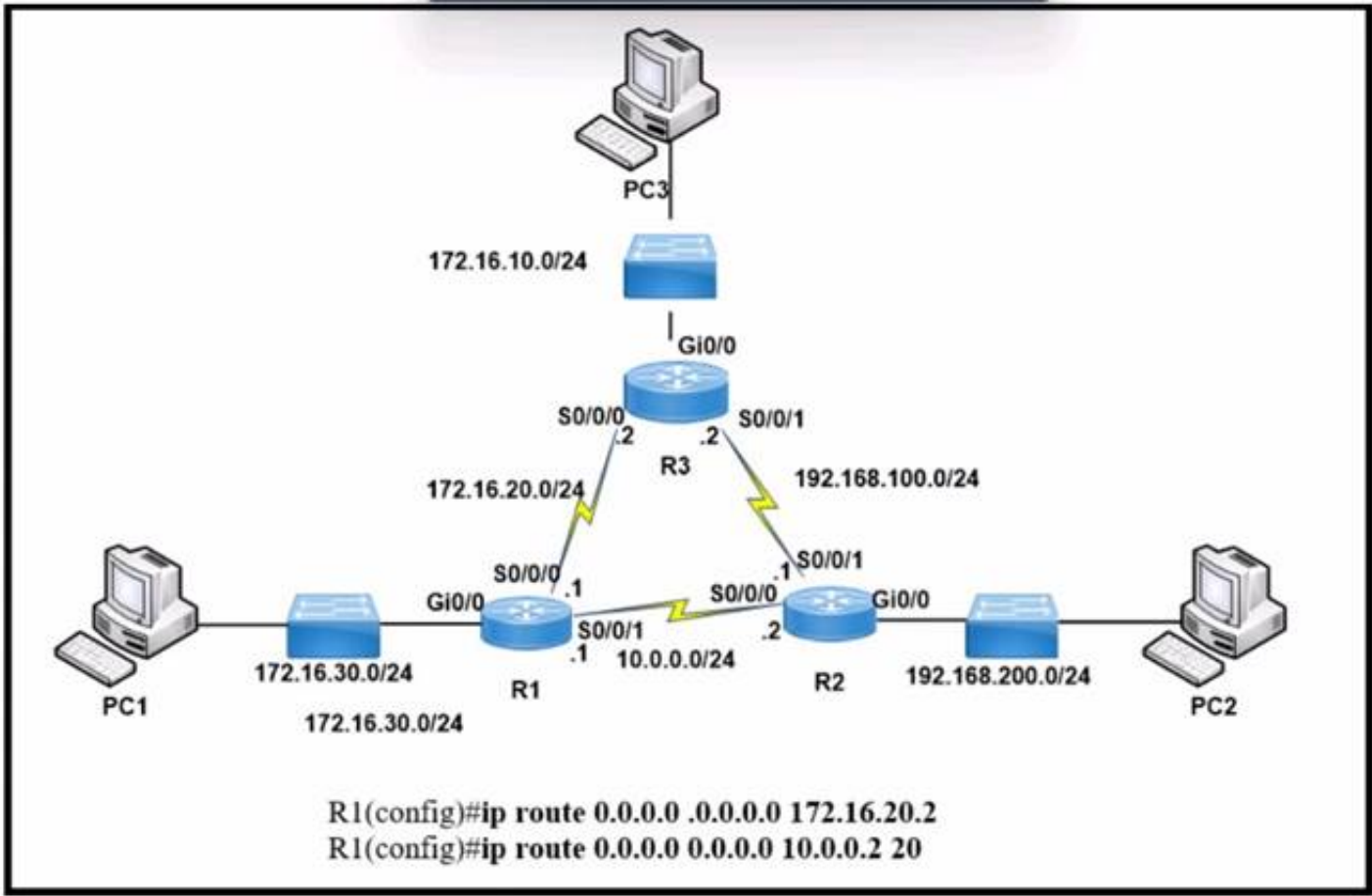
NEW QUESTION 551
- (Topic 4)

A packet from a company s branch office is destined to host 172.31.0.1 at headquarters. The sending router has three possible matches in its routing table for the packet prefixes: 172. 31.0 .0/16,172.31.0.0/24. and 172.31 0 0/25.
How does the router handle the packet?

- A. It sends the traffic via prefix 172.31.0.0/16
- B. It sends the traffic via the default gateway 0.0.0.0/0.
- C. It sends the traffic via prefix 172.31.0.0/24
- D. It sends the traffic via prefix 172.31.0.0/25

Answer: D

NEW QUESTION 555
- (Topic 4)



Refer to the exhibit. After applying this configuration to router R1, a network engineer is verifying the implementation. If all links are operating normally, and the engineer sends a series of packets from PC1 to PC3. how are the packets routed?

- A. They are routed to 172.16.20.2.
- B. They are routed to 192.168.100.2.
- C. They are distributed sent round robin to interfaces SO/0/0 and SO/0/1.
- D. They are routed to 10.0.0.2.

Answer: A

NEW QUESTION 559

DRAG DROP - (Topic 4)

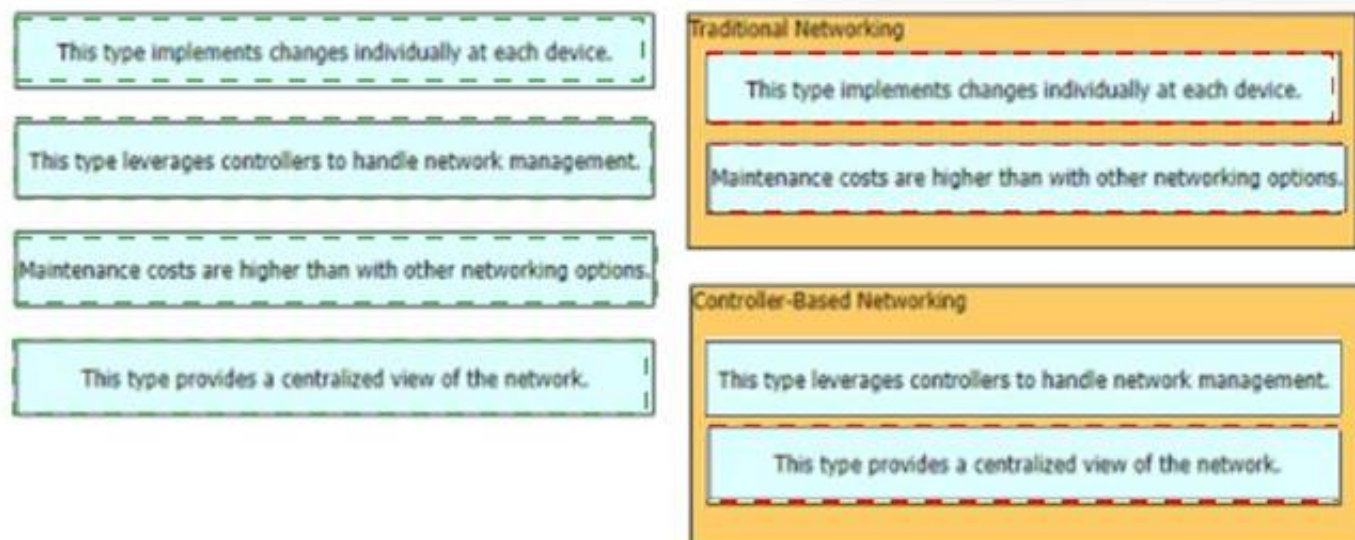
Drag and drop the statements about networking from me left onto the corresponding networking types on the right

This type implements changes individually at each device.	Traditional Networking <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div>
This type leverages controllers to handle network management.	
Maintenance costs are higher than with other networking options.	Controller-Based Networking <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div>
This type provides a centralized view of the network.	

- A. Mastered
- B. Not Mastered

Answer: A

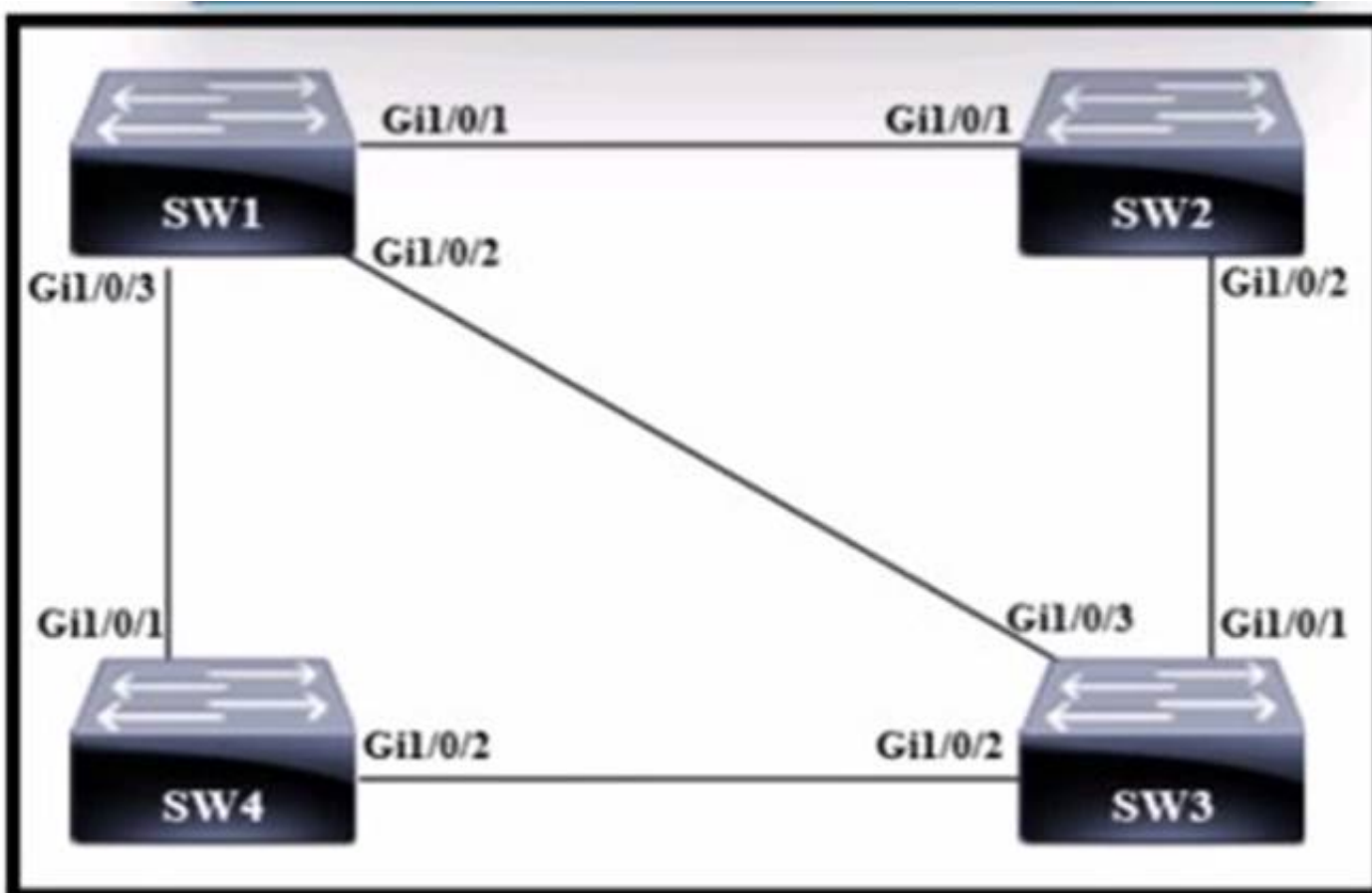
Explanation:



NEW QUESTION 560

- (Topic 4)

Refer to the exhibit.



Which switch becomes the root bridge?

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

A. Option A

B. Option B

- C. Option C
- D. Option D

Answer: B

NEW QUESTION 563

- (Topic 4)

What is a link-local all-nodes IPv6 multicast address?

- A. ff02:0:0:0:0:0:1
- B. 2004:31c:73d9:683e:255::
- C. ffe:034:0dd:45d6:789e::
- D. fe80:4433:034:0dd::2

Answer: D

NEW QUESTION 566

- (Topic 4)

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

Answer: B

NEW QUESTION 567

- (Topic 4)

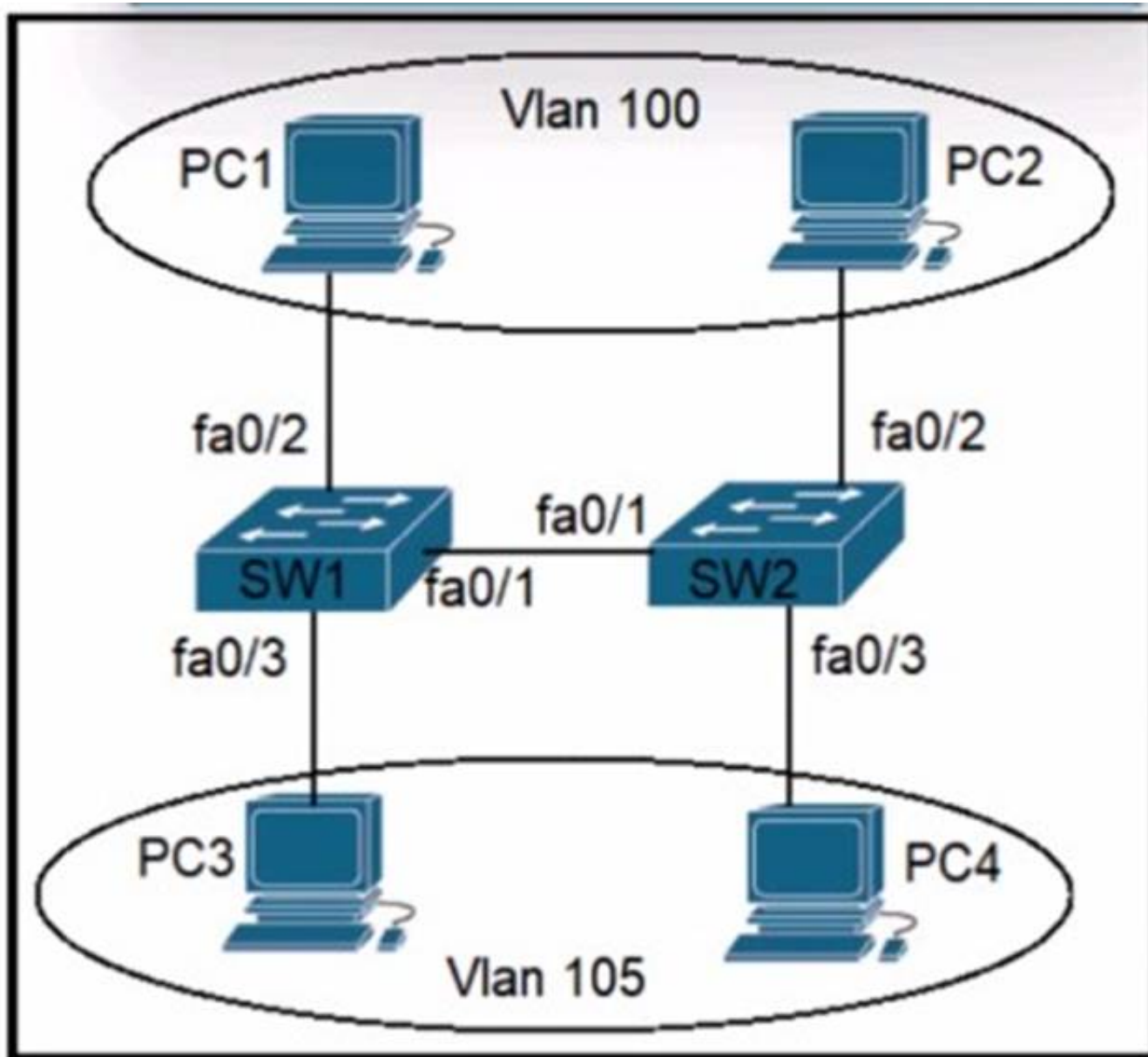
Which two features introduced in SNMPv2 provides the ability to retrieve large amounts of data in one request

- A. Get
- B. GetNext
- C. Set
- D. GetBulk
- E. Inform

Answer: AD

NEW QUESTION 570

- (Topic 4)



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
```

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

Answer: B

NEW QUESTION 572

- (Topic 4)

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

Answer: D

NEW QUESTION 577

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