

Cisco

Exam Questions 200-301

Cisco Certified Network Associate



NEW QUESTION 1

- (Topic 3)

OSPF must be configured between routers R1 and R2. Which OSPF configuration must be applied to router R1 to avoid a DR/BDR election?

- A. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 interface e1/1 ip address 192.168.1.1 255.255.255.252 ip ospf network broadcast
- B. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 interface e1/1 ip address 192.168.1.1 255.255.255.252 ip ospf network point-to-point
- C. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 interface e1/1 ip address 192.168.1.1 255.255.255.252 ip ospf cost 0
- D. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 hello interval 15 interface e1/1 ip address 192.168.1.1 255.255.255.252

Answer: B

NEW QUESTION 2

- (Topic 3)

Refer to the exhibit.

```
R1# show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate
       default
       U - per-user static route, o - ODR
Gateway of last resort is not set
C 192.168.3.5 is directly connected, Loopback0
  10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
O   10.0.1.3/32 [110/100] via 192.168.0.40, 00:39:08, Serial0
C   10.0.1.0/24 is directly connected, Serial0
O   10.0.1.190/32 [110/5] via 192.168.0.35, 00:39:08, Serial0
O   10.0.1.0/24 [110/10] via 192.168.0.4, 00:39:08, Gigabit Ethernet 0/0
D   10.0.1.0/28 [90/10] via 192.168.0.7, 00:39:08, Gigabit Ethernet 0/0
```

Traffic sourced from the loopback0 Interface is trying to connect via ssh to the host at 10.0.1.15. What Is the next hop to the destination address?

- A. 192.168.0.7
- B. 192.168.0.4
- C. 192.168.0.40
- D. 192.168.3.5

Answer: B

NEW QUESTION 3

- (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 4

- (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 5

- (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 6

- (Topic 3)

Which value is the unique identifier that an access point uses to establish and maintain wireless connectivity to wireless network devices?

- A. VLANID
- B. SSID

- C. RFID
- D. WLANID

Answer: B

NEW QUESTION 7

- (Topic 3)
Refer to the exhibit.

A# show ip ospf neighbor							
Neighbor	ID	Pri	State	Dead Time	Address	Interface	
172.1.1.1		1	EXCHANGE/	- 00:00:36	172.16.32.1	Serial0.1	

An engineer assumes a configuration task from a peer Router A must establish an OSPF neighbor relationship with neighbor 172.1.1.1 The output displays the status of the adjacency after 2 hours. What is the next step in the configuration process for the routers to establish an adjacency?

- A. Configure router A to use the same MTU size as router B.
- B. Set the router B OSPF ID to a nonhost address.
- C. Configure a point-to-point link between router A and router B.
- D. Set the router B OSPF ID to the same value as its IP address

Answer: B

NEW QUESTION 8

- (Topic 3)
Which protocol is used for secure remote CLI access?

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

Answer: D

NEW QUESTION 9

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

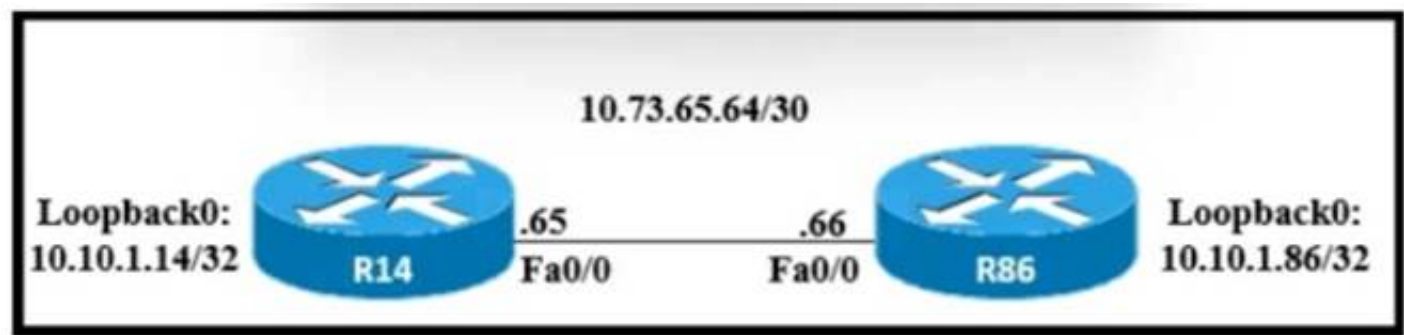
Answer: A

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 10

- (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 10

DRAG DROP - (Topic 3)

Drag and drop the characteristics of networking from the left onto the networking types on the right.

focused on network

focused on devices

user input is a configuration

user input is a policy

uses allow list security model

uses block list security model

Controller-Based Networking

Traditional Networking

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

focused on network

focused on devices

user input is a configuration

user input is a policy

uses allow list security model

uses block list security model

Controller-Based Networking

focused on network

uses allow list security model

user input is a policy

Traditional Networking

focused on devices

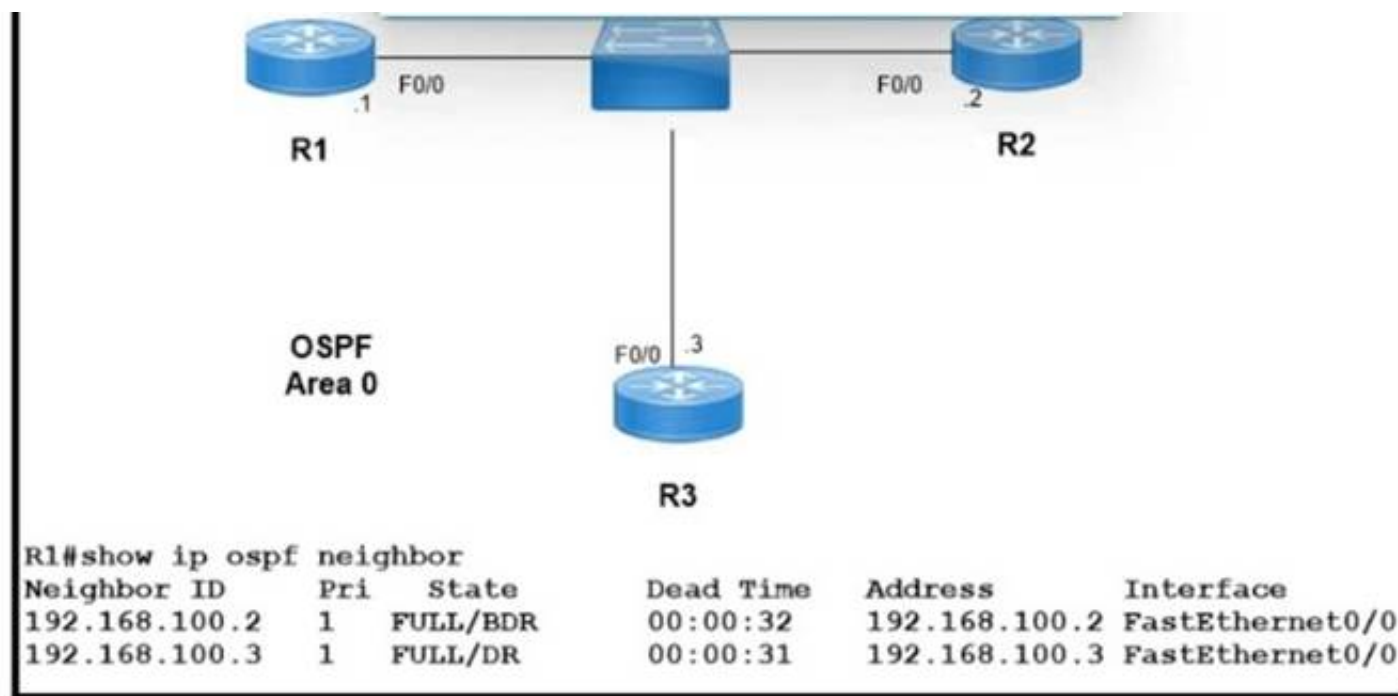
uses block list security model

user input is a configuration

NEW QUESTION 11

- (Topic 3)

Refer to the exhibit.



Which two configurations must the engineer apply on this network so that R1 becomes the DR? (Choose two.)

A)

```

R1(config)#router ospf 1
R1(config-router)#router-id 192.168.100.1
  
```

B)

```

R1(config)#interface fastethernet 0/0
R1(config-if)#ip ospf priority 200
  
```

C)

```

R3(config)#interface fastethernet 0/0
R3(config-if)#ip ospf priority 0
  
```

D)

```

R1(config)#interface fastethernet 0/0
R1(config-if)#ip ospf priority 0
  
```

E)

```

R3(config)#interface fastethernet 0/0
R3(config-if)#ip ospf priority 200
  
```

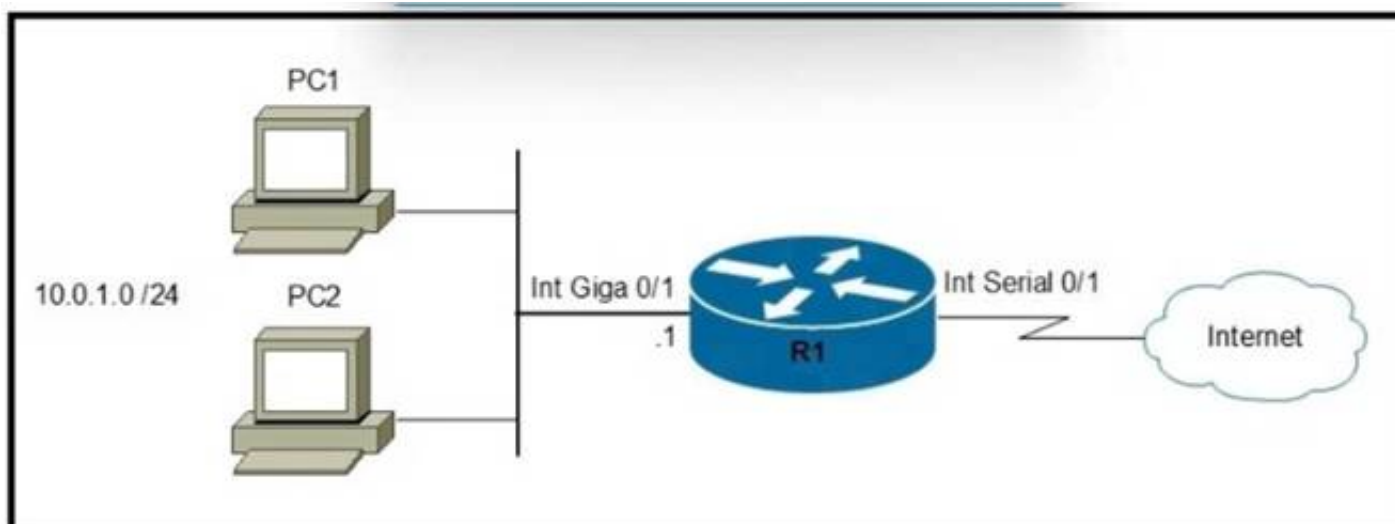
- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Answer: BC

NEW QUESTION 16

- (Topic 3)

Refer to the exhibit.



Which two commands must be configured on router R1 to enable the router to accept secure remote-access connections? (Choose two)

- A. transport input telnet
- B. crypto key generate rsa
- C. ip ssh pubkey-chain
- D. login console
- E. username cisco password 0 Cisco

Answer: BE

NEW QUESTION 18

- (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 20

- (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 25

- (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 30

- (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 31

FILL IN THE BLANK - (Topic 3)

Refer to the exhibit.

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

Drag and drop the prefix lengths from the left onto the corresponding prefixes on the right Not all prefixes are used

- A. Mastered
- B. Not Mastered

Answer: A

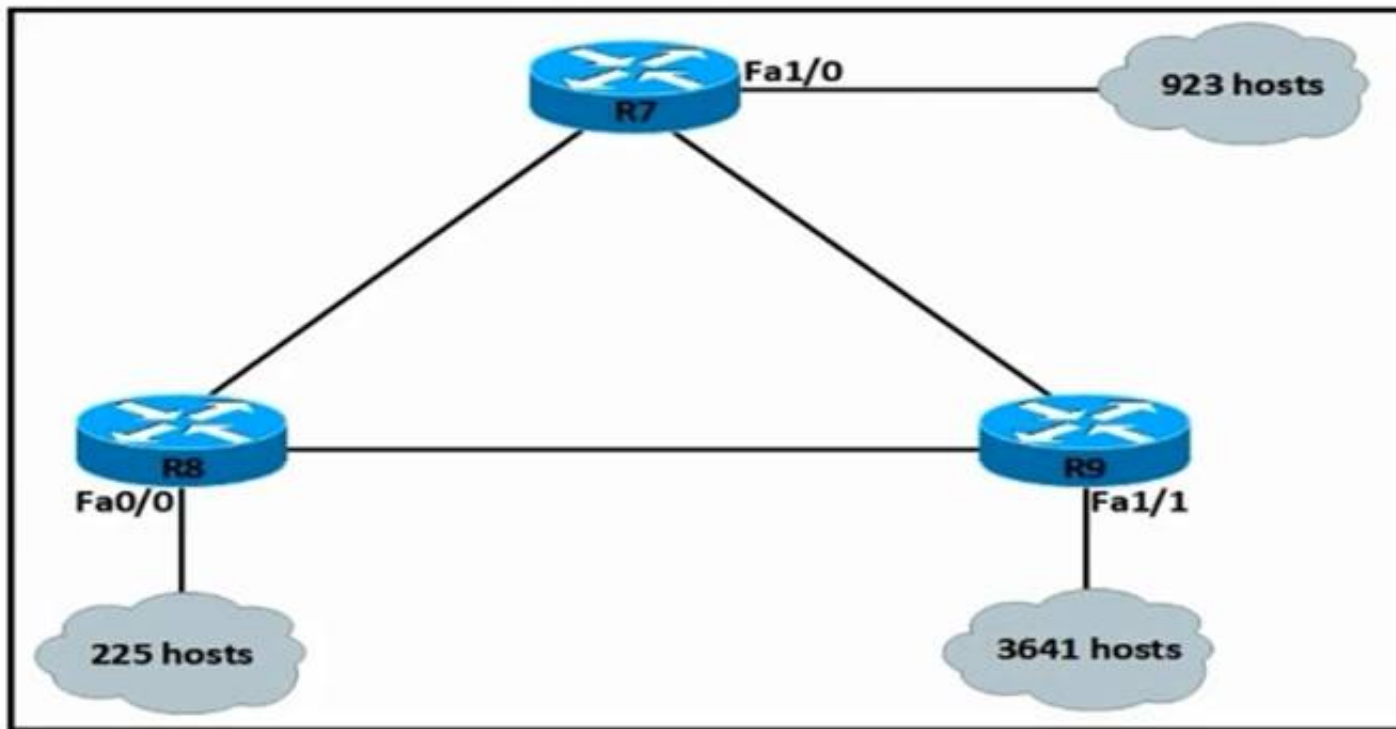
Explanation:

Diagram Description automatically generated with low confidence

NEW QUESTION 36

- (Topic 3)

Refer to the exhibit.



An IP subnet must be configured on each router that provides enough addresses for the number of assigned hosts and anticipates no more than 10% growth for now hosts. Which configuration script must be used?

A)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.252.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.255.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.240.0
no shutdown
```

B)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.248.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.254.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.248.0
no shutdown
```

C)


```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.240.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.224.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.192.0
no shutdown
```

D)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.192.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.224.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.128.0
no shutdown
```

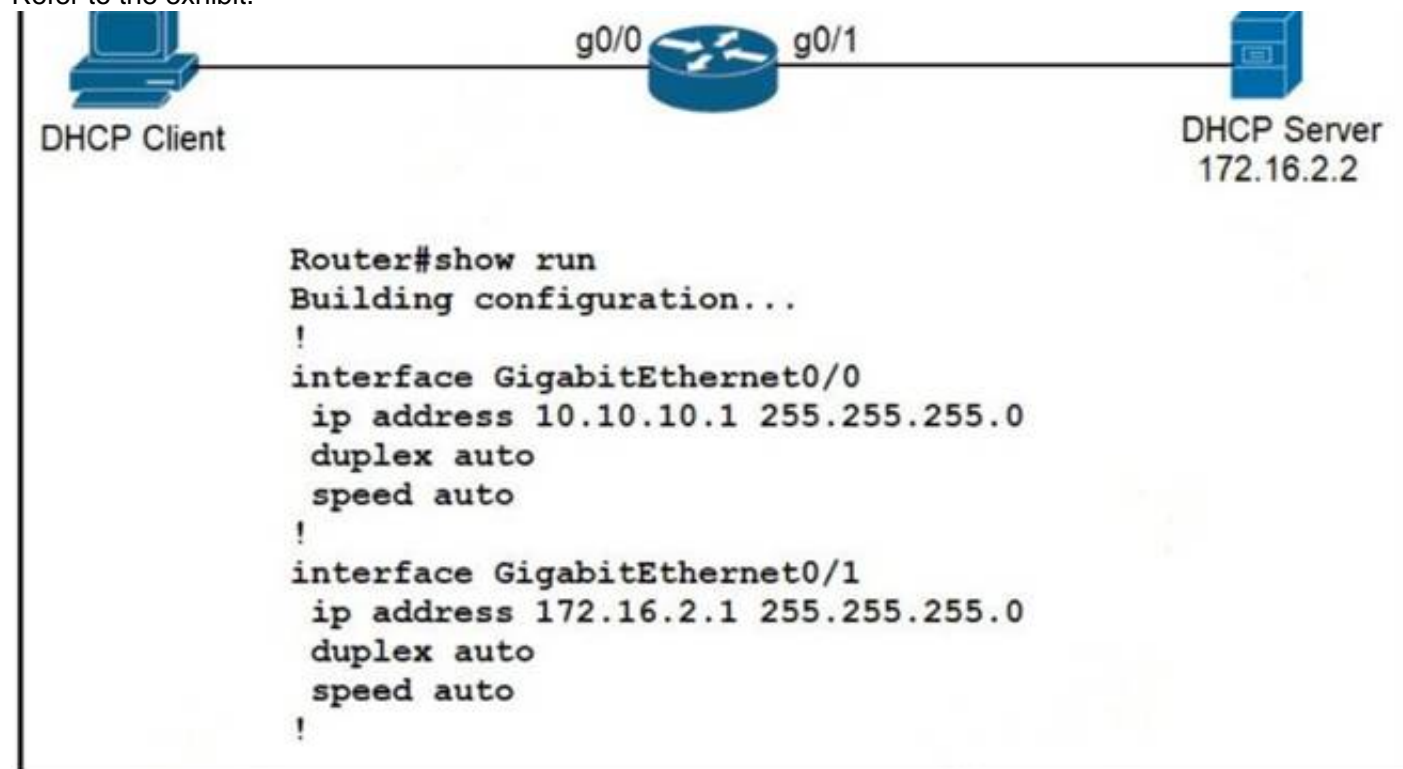
- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

NEW QUESTION 37

- (Topic 3)

Refer to the exhibit.



An engineer is configuring a new router on the network and applied this configuration. Which additional configuration allows the PC to obtain its IP address from a DHCP server?

- A. Configure the ip dhcp relay information command under interface Gi0/1.

- B. Configure the ip dhcp smart-relay command globally on the router
- C. Configure the ip helper-address 172.16.2.2 command under interface Gi0/0
- D. Configure the ip address dhcp command under interface Gi0/0

Answer: C

NEW QUESTION 41

- (Topic 3)

A network engineer must implement an IPv6 configuration on the vlan 2000 interface to create a routable locally-unique unicast address that is blocked from being advertised to the internet. Which configuration must the engineer apply?

- A. interface vlan 2000ipv6 address ffc0:0000:aaaa::1234:2343/64
- B. interface vlan 2000ipv6 address fc00:0000:aaaa:a15d:1234:2343:8aca/64
- C. interface vlan 2000ipv6 address fe80:0000:aaaa::1234:2343/64
- D. interface vlan 2000ipv6 address fd00::1234:2343/64

Answer: B

NEW QUESTION 45

- (Topic 3)

What is an expected outcome when network management automation is deployed?

- A. A distributed management plane must be used.
- B. Software upgrades are performed from a central controller
- C. Complexity increases when new device configurations are added
- D. Custom applications are needed to configure network devices

Answer: B

NEW QUESTION 47

- (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 49

- (Topic 3)

A network engineer is configuring a switch so that it is remotely reachable via SSH. The engineer has already configured the host name on the router. Which additional command must the engineer configure before entering the command to generate the RSA key?

- A. password password
- B. crypto key generate rsa modulus 1024
- C. ip domain-name domain
- D. ip ssh authentication-retries 2

Answer: C

Explanation:

<https://www.cisco.com/c/en/us/solutions/small-business/resource-center/networking/how-to-setup-network-switch.html>

NEW QUESTION 53

- (Topic 3)

Refer to the exhibit.

```
R1# show ip route
Codes:
C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP, D -
EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 - OSPF NSSA
external type 1, N2 - OSPF NSSA external type 2, E1 - OSPF external type
1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default,
U - per-user static route, o - ODR
Gateway of last resort is not set
C 10.0.0.0/8 is directly connected, Loopback0
10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
O 10.0.1.3/32 [110/100] via 10.0.1.100, 00:39:08, Serial0
C 10.0.1.0/24 is directly connected, Serial0
O 10.0.1.5/32 [110/5] via 10.0.1.50, 00:39:08, Serial0
O 10.0.10.0/24 [110/10] via 10.0.1.4, 00:39:08, Gigabit Ethernet 0/0
D 10.0.10.0/24 [90/10] via 10.0.1.5, 00:39:08, Gigabit Ethernet 0/1
```

Web traffic is coming in from the WAN interface. Which route takes precedence when the router is processing traffic destined for the LAN network at 10.0.10.0/24?

- A. via next-hop 10.0.1.5
- B. via next-hop 10 0 1.4
- C. via next-hop 10.0 1.50
- D. via next-hop 10.0 1 100

Answer: A

NEW QUESTION 55

- (Topic 3)

What is a function of a Next-Generation IPS?

- A. makes forwarding decisions based on learned MAC addresses
- B. serves as a controller within a controller-based network
- C. integrates with a RADIUS server to enforce Layer 2 device authentication rules
- D. correlates user activity with network events

Answer: D

NEW QUESTION 59

- (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?

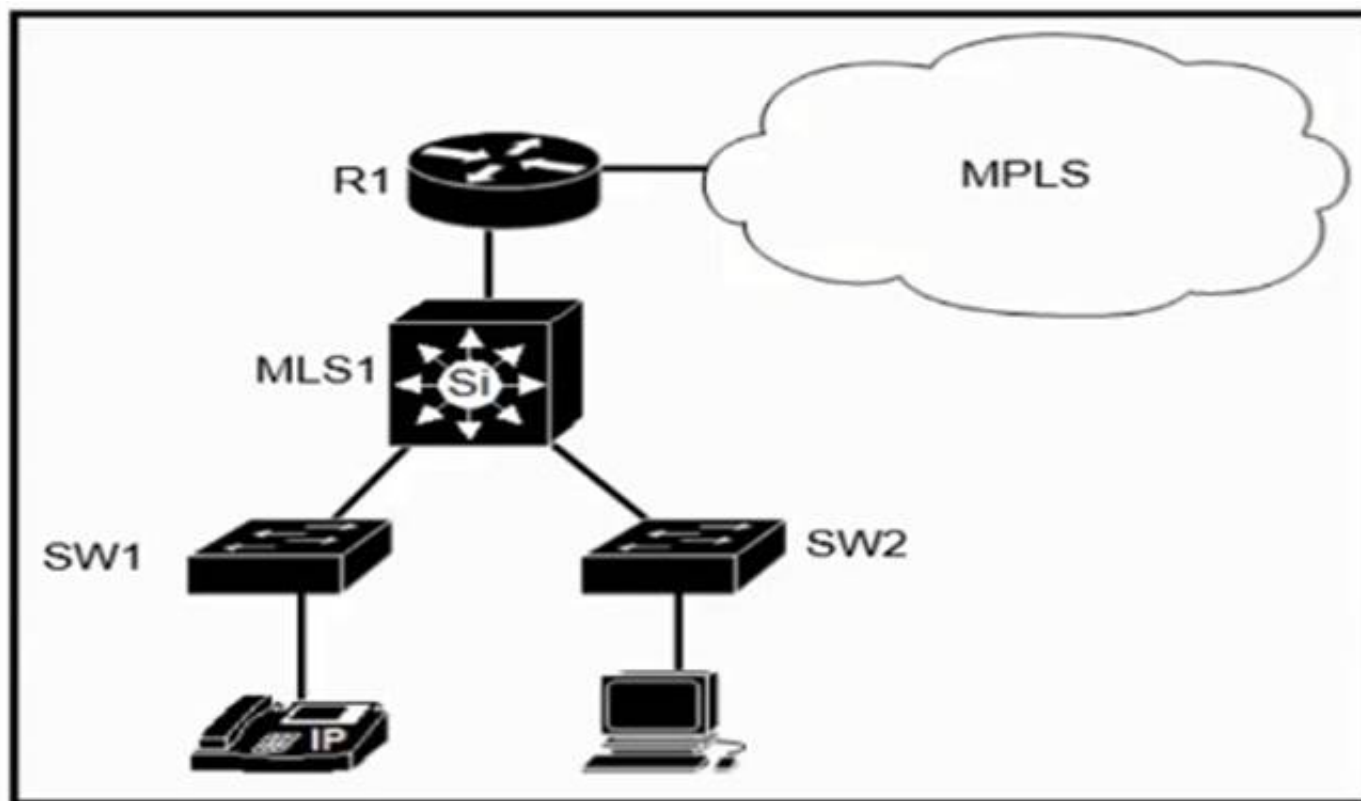
- A. global unicast address
- B. anycast address
- C. multicast address
- D. link-local address

Answer: B

NEW QUESTION 60

- (Topic 3)

Refer to the exhibit.



Which plan must be implemented to ensure optimal QoS marking practices on this network?

- A. As traffic traverses MLS1 remark the traffic, but trust all markings at the access layer.
- B. Trust the IP phone markings on SW1 and mark traffic entering SW2 at SW2.
- C. Remark traffic as it traverses R1 and trust all markings at the access layer.
- D. As traffic enters from the access layer on SW1 and SW2. trust all traffic markings.

Answer: C

NEW QUESTION 62

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

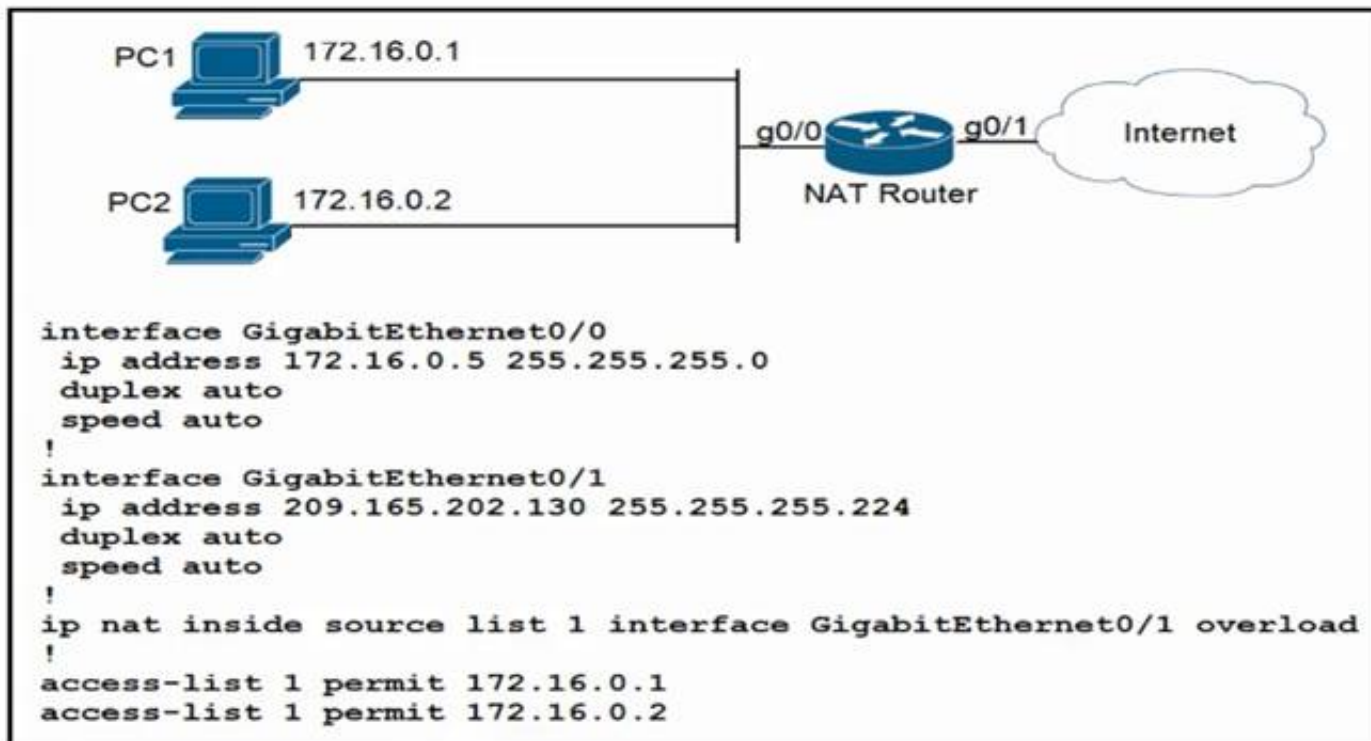
Explanation:

Table Description automatically generated

NEW QUESTION 66

- (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 68

- (Topic 3)

Refer to the exhibit.

```

ip domain-name CNAC.com
!
interface GigabitEthernet0/0/0
 ip address 192.168.1.10 255.255.255.0
 duplex auto
 speed auto
!
line vty 0 15
 login local

R1#show crypto key mypubkey rsa

R1#show ssh
%No SSHv2 server connections running.
%No SSHv1 server connections running.

```

Which two commands must be added to update the configuration of router R1 so that it accepts only encrypted connections? (Choose two)

- A. username CNAC secret R!41!4319115@
- B. ip ssh version 2
- C. line vty 0 4
- D. crypto key generate rsa 1024
- E. transport input ssh

Answer: DE

NEW QUESTION 72

- (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 FastEthernet0/1 on router R4?

- A. interface FastEthernet0/0 ip helper-address 10.0.1.1 access-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 FastEthernet0/0 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 73

- (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 78

- (Topic 2)

Which networking function occurs on the data plane?

- A. forwarding remote client/server traffic
- B. facilitates spanning-tree elections
- C. processing inbound SSH management traffic
- D. sending and receiving OSPF Hello packets

Answer: A

NEW QUESTION 83

- (Topic 2)

While examining excessive traffic on the network, it is noted that all incoming packets on an interface appear to be allowed even though an IPv4 ACL is applied to the interface.

Which two misconfigurations cause this behavior? (Choose two)

- A. The packets fail to match any permit statement
- B. A matching permit statement is too high in the access test

- C. A matching permit statement is too broadly defined
- D. The ACL is empty
- E. A matching deny statement is too high in the access list

Answer: BC

NEW QUESTION 87

- (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 89

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:

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

sends transmissions in sequence

transmits packets as a stream

uses a lower transmission rate to ensure reliability

UDP

transmissions include an 8-byte header

transmits packets individually

uses a higher transmission rate to support latency-sensitive applications

NEW QUESTION 94

- (Topic 2)
Which two protocols must be disabled to increase security for management connections to a Wireless LAN Controller? (Choose two)

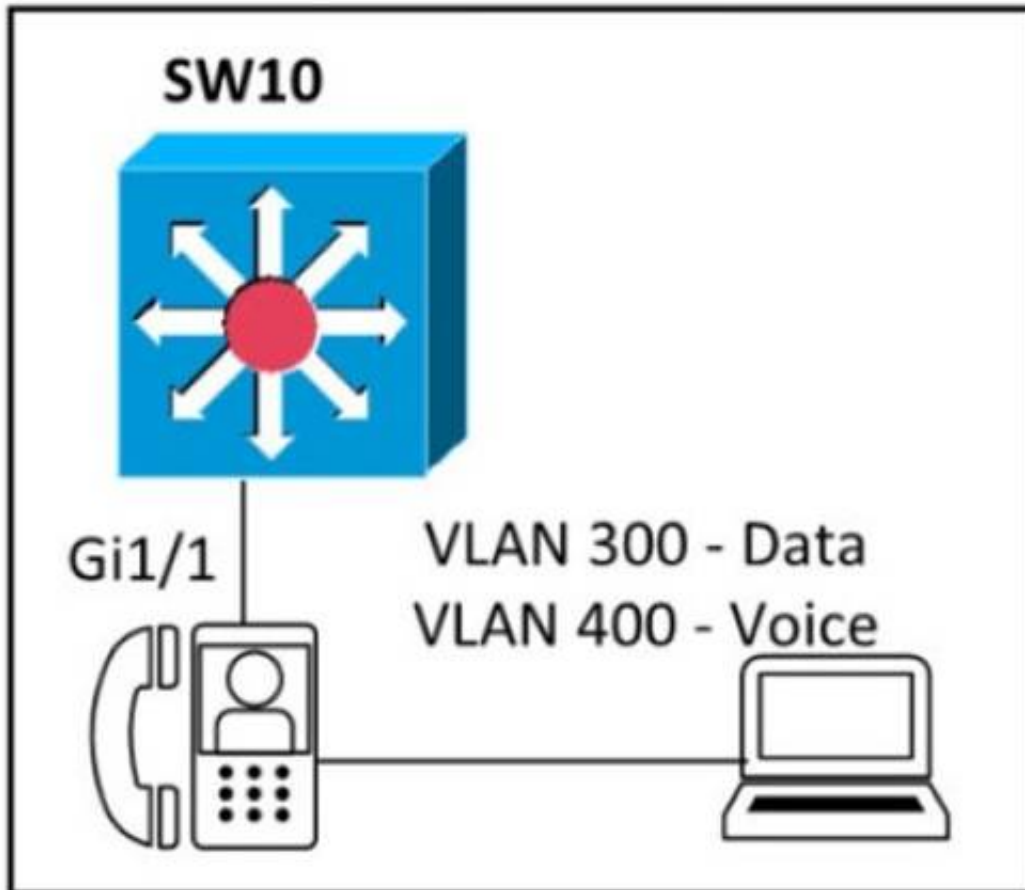
- A. Telnet
- B. SSH
- C. HTTP
- D. HTTPS
- E. TFTP

Answer: AC

NEW QUESTION 95

- (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 99

- (Topic 2)

What is a characteristic of spine-and-leaf architecture?

- A. Each device is separated by the same number of hops
- B. It provides variable latency
- C. It provides greater predictability on STP blocked ports.
- D. Each link between leaf switches allows for higher bandwidth.

Answer: A

NEW QUESTION 101

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 105

- (Topic 2)

Which two actions influence the EIGRP route selection process? (Choose two)

- A. The router calculates the reported distance by multiplying the delay on the exiting Interface by 256.
- B. The router calculates the best backup path to the destination route and assigns it as the feasible successor.
- C. The router calculates the feasible distance of all paths to the destination route

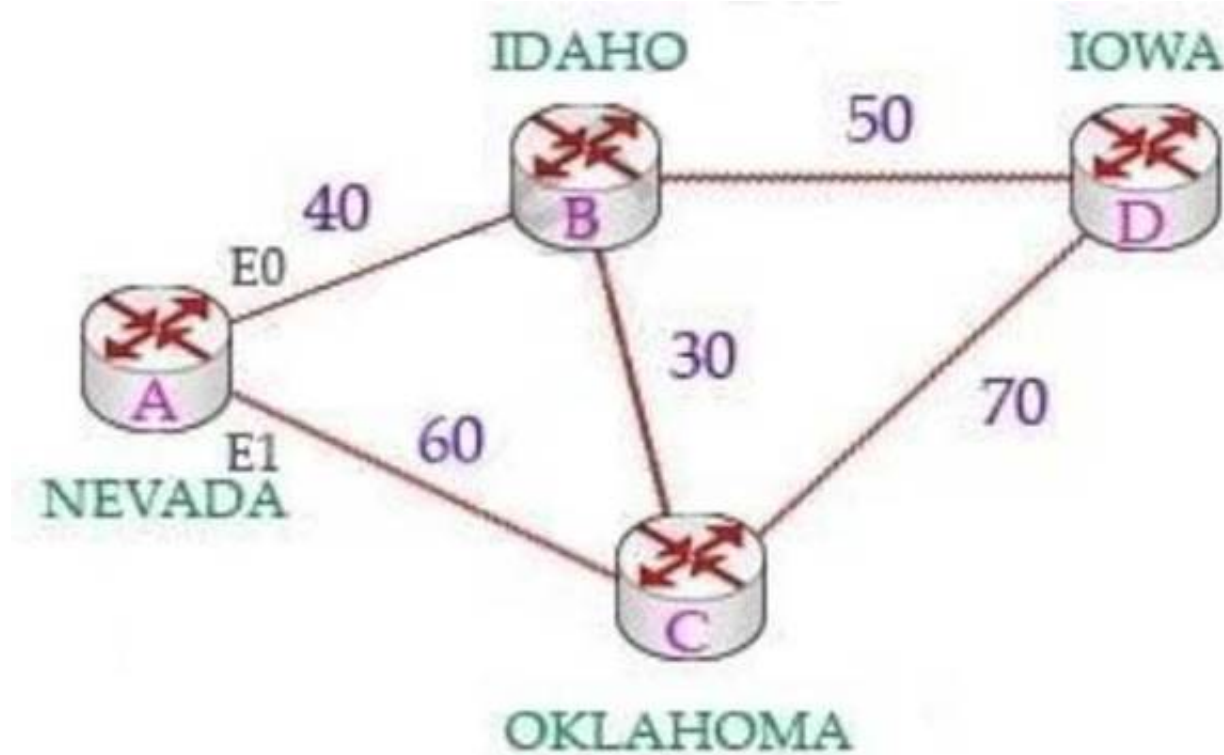
- D. The advertised distance is calculated by a downstream neighbor to inform the local router of the bandwidth on the link
- E. The router must use the advertised distance as the metric for any given route

Answer: BC

Explanation:

The reported distance (or advertised distance) is the cost from the neighbor to the destination. It is calculated from the router advertising the route to the network. For example in the topology below, suppose router A & B are exchanging their routing tables for the first time. Router B says "Hey, the best metric (cost) from me to IOWA is 50 and the metric from you to IOWA is 90" and advertises it to router A.

Router A considers the first metric (50) as the Advertised distance. The second metric (90), which is from NEVADA to IOWA (through IDAHO), is called the Feasible distance.



The reported distance is calculated in the same way of calculating the metric. By default (K1 = 1, K2 = 0, K3 = 1, K4 = 0, K5 = 0), the metric is calculated as follows:

$$metric = \left[\frac{10,000,000}{\text{slowest bandwidth[in kbps]}} + \frac{\text{sum of delay[in } \mu\text{sec]}}{10} \right] * 256$$

NEW QUESTION 107

- (Topic 2)

Refer to the exhibit.

```

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

Router R1 is running three different routing protocols. Which route characteristic is used by the router to forward the packet that it receives for destination IP 172.16.32.1?

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

Answer: A

Explanation:

<https://learningnetwork.cisco.com/s/question/0D53i00000KszSICAJ/administrative-distance-vs-longest-match-rule>

NEW QUESTION 112

- (Topic 2)

An engineer requires a scratch interface to actively attempt to establish a trunk link with a neighbor switch. What command must be configured?

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

Answer: C

NEW QUESTION 115

- (Topic 2)

Which communication interaction takes place when a southbound API is used?

- A. between the SDN controller and PCs on the network
- B. between the SON controller and switches and routers on the network
- C. between the SON controller and services and applications on the network
- D. between network applications and switches and routers on the network

Answer: B

NEW QUESTION 116

- (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 121

- (Topic 2)

Which command must be entered to configure a DHCP relay?

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

Answer: A

NEW QUESTION 126

- (Topic 2)

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

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

Answer: AB

NEW QUESTION 130

- (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 134

- (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 137

- (Topic 2)

Which two tasks must be performed to configure NTP to a trusted server in client mode on a single network device? (Choose two)

- A. Enable NTP authentication.
- B. Verify the time zone.
- C. Disable NTP broadcasts
- D. Specify the IP address of the NTP server
- E. Set the NTP server private key

Answer: AD

Explanation:

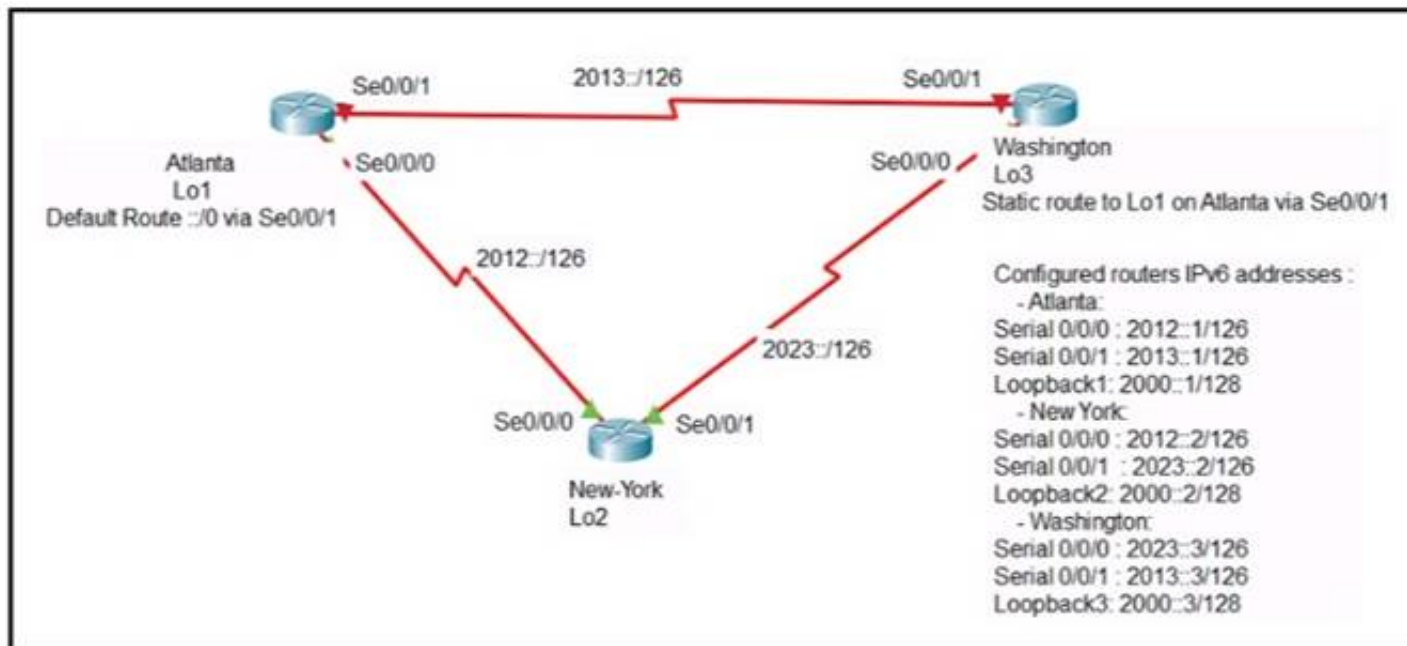
<https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4000/8-2glx/configuration/guide/ntp.html>

To configure authentication, perform this task in privileged mode: Step 1: Configure an authentication key pair for NTP and specify whether the key will be trusted or untrusted. Step 2: Set the IP address of the NTP server and the public key. Step 3: Enable NTP client mode. Step 4: Enable NTP authentication. Step 5: Verify the NTP configuration.

NEW QUESTION 142

- (Topic 2)

Refer to Exhibit.



An engineer is configuring the NEW York router to reach the Lo1 interface of the Atlanta router using interface Se0/0/0 as the primary path. Which two commands must be configured on the New York router so that it can reach the Lo1 interface of the Atlanta router via Washington when the link between New York and Atlanta goes down? (Choose two)

- A. ipv6 router 2000::1/28 2012::1
- B. ipv6 router 2000::1/28 2012::1 5
- C. ipv6 router 2000::1/28 2012::2
- D. ipv6 router 2000::1/28 2023::2 5
- E. ipv6 router 2000::1/28 2023::3 5

Answer: AE

Explanation:

Floating static routes are static routes that have an administrative distance greater than the administrative distance (AD) of another static route or dynamic routes. By default a static route has an AD of 1 then floating static route must have the AD greater than 1. Floating static route has a manually configured administrative distance greater than that of the primary route and therefore would not be in the routing table until the primary route fails.

NEW QUESTION 146

- (Topic 2)

Which function does an SNMP agent perform?

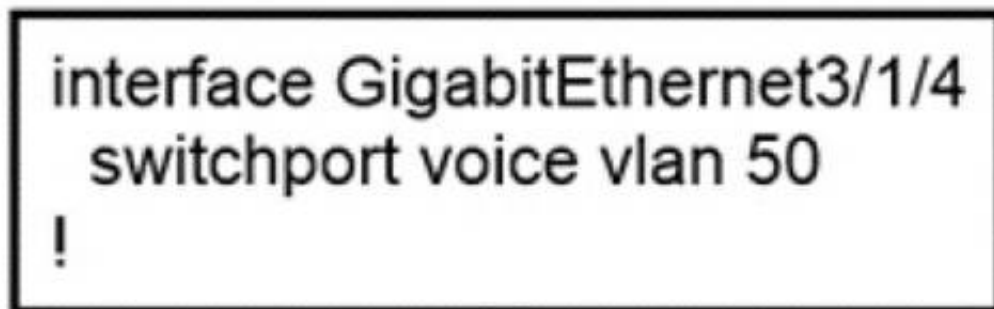
- A. it sends information about MIB variables in response to requests from the NMS
- B. it requests information from remote network nodes about catastrophic system events.
- C. it manages routing between Layer 3 devices in a network
- D. it coordinates user authentication between a network device and a TACACS+ or RADIUS server

Answer: A

NEW QUESTION 150

- (Topic 2)

Refer to the exhibit.



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 151

- (Topic 2)

What are two reasons for an engineer to configure a floating state route? (Choose two)

- A. to automatically route traffic on a secondary path when the primary path goes down
- B. to route traffic differently based on the source IP of the packet
- C. to enable fallback static routing when the dynamic routing protocol fails
- D. to support load balancing via static routing
- E. to control the return path of traffic that is sent from the router

Answer: AC

NEW QUESTION 153

- (Topic 2)

How does WPA3 improve security?

- A. It uses SAE for authentication.
- B. It uses a 4-way handshake for authentication.
- C. It uses RC4 for encryption.
- D. It uses TKIP for encryption.

Answer: A

NEW QUESTION 154

- (Topic 2)

Refer to me 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 159

- (Topic 2)

When a WLAN with WPA2 PSK is configured in the Wireless LAN Controller GUI which format is supported?

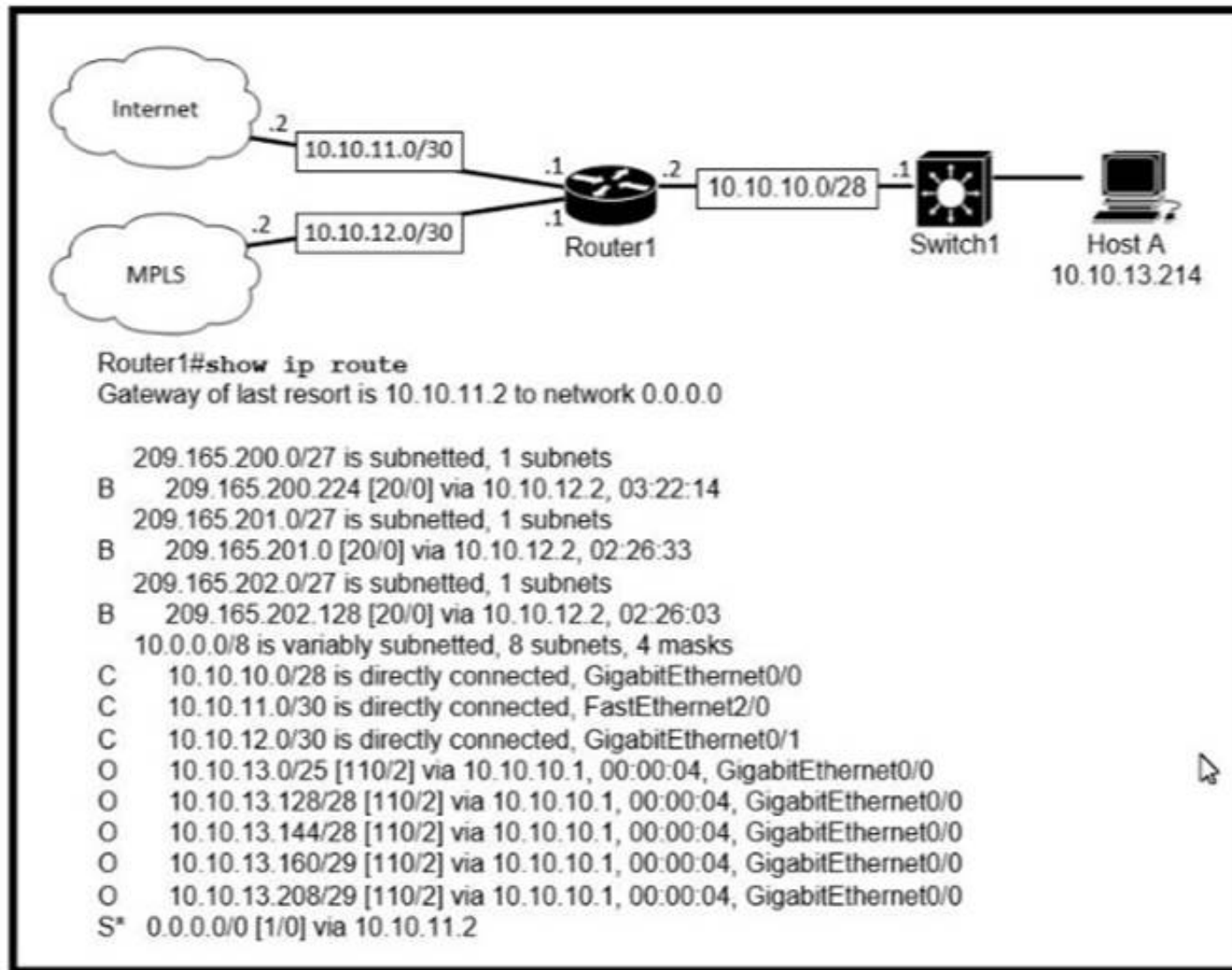
- A. Unicode
- B. base64
- C. decimal
- D. ASCII

Answer: D

NEW QUESTION 160

- (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 164

- (Topic 2)

Which protocol requires authentication to transfer a backup configuration file from a router to a remote server?

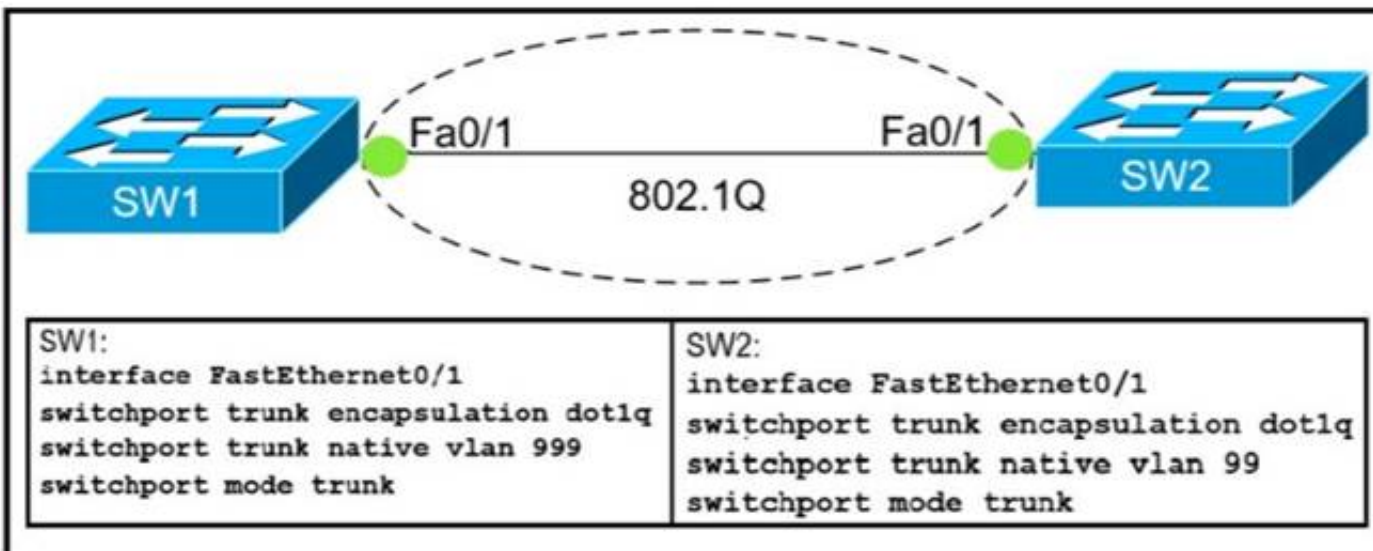
- A. DTP
- B. FTP
- C. SMTP
- D. TFTP

Answer: B

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 169

- (Topic 2)

Refer to the exhibit.

```
SW1(config-line)#line vty 0 15
SW1(config-line)#no login local
SW1(config-line)#password cisco

SW2(config)#username admin1 password abcd1234
SW2(config)#username admin2 password abcd1234
SW2(config-line)#line vty 0 15
SW2(config-line)#login local

SW3(config)#username admin1 secret abcd1234
SW3(config)#username admin2 secret abcd1234
SW3(config-line)#line vty 0 15
SW3(config-line)#login local

SW4(config)#username admin1 secret abcd1234
SW4(config)#username admin2 secret abcd1234
SW4(config-line)#line console 0
SW4(config-line)#login local
```

An administrator configures four switches for local authentication using passwords that are stored in a cryptographic hash. The four switches must also support SSH access for administrators to manage the network infrastructure. Which switch is configured correctly to meet these requirements?

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

Answer: C

NEW QUESTION 174

- (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 175

- (Topic 2)

Refer to the exhibit.

```
Switch1#show etherchannel summary
Flags:  D - down          P - in port-channel
        I - stand-alone  s - suspended
        H - Hot-standby (LACP only)
        R - Layer3       S - Layer2
        U - in use       f - failed to allocate aggregator
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port

Number of channel-groups in use: 1
Number of aggregators:           1
Group  Port-channel  Protocol    Ports
-----+-----+-----+-----
 1      Pol (SD)          LACP        Fa0/2 (I) Fa0/1 (I)

Switch1#show run
Building configuration...
interface Port-channel1
!
interface FastEthernet0/1
 channel-group 1 mode passive
!
interface FastEthernet0/2
 channel-group 1 mode passive

Switch2#show run
Building configuration...
interface Port-channel1
!
interface FastEthernet0/1
 channel-group 1 mode passive
!
interface FastEthernet0/2
 channel-group 1 mode passive
```

Which change to the configuration on Switch?
allows the two switches to establish an EtherChannel?

- A. Change the protocol to EtherChannel mode on.
- B. Change the LACP mode to active
- C. Change the LACP mode to desirable
- D. Change the protocol to PAqP and use auto mode

Answer: B

NEW QUESTION 177

- (Topic 2)

Which statement about Link Aggregation when implemented on a Cisco Wireless LAN Controller is true?

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

Answer: D

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-2/config-guide/b_cg82/b_cg82_chapter_010101011.html

NEW QUESTION 181

- (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 185

- (Topic 2)

An engineer must establish a trunk link between two switches. The neighboring switch is set to trunk or desirable mode. What action should be taken?

- A. configure switchport nonegotiate
- B. configure switchport mode dynamic desirable
- C. configure switchport mode dynamic auto
- D. configure switchport trunk dynamic desirable

Answer: C

NEW QUESTION 187

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. . . . . : 18-76-3F-7C-57-DF
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
Description . . . . . : Dell Wireless 1703 802.11b/g/n (2.4GHz)
Physical Address. . . . . : B8-76-3F-7C-57-DF
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::e09f:9839:6e86:f755%12(Preferred)
. . . . . : 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 required to verify that the network parameters are valid for the users wireless LAN connectivity on a /24 subnet. Drag and drop the values from the left onto the network parameters on the right. Not all values are used.

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
1A-76-3F-7C-57-DF	network address
192.168.1.0	

- A. Mastered
- B. Not Mastered

Answer: A

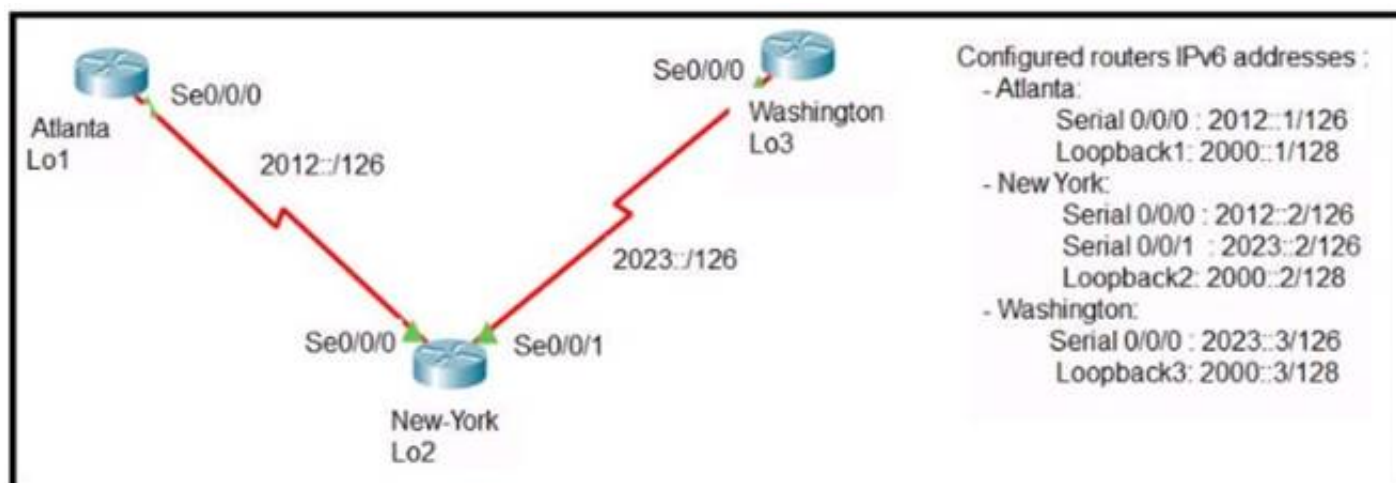
Explanation:

192.168.1.1	192.168.1.255
192.168.1.20	192.168.1.1
192.168.1.254	192.168.1.20
192.168.1.255	192.168.1.254
B8-76-3F-7C-57-DF	B8-76-3F-7C-57-DF
1A-76-3F-7C-57-DF	192.168.1.0
192.168.1.0	

NEW QUESTION 192

- (Topic 2)

Refer to the exhibit.



The New York router is configured with static routes pointing to the Atlanta and Washington sites. Which two tasks must be performed so that the Serial0/0/0 interfaces on the Atlanta and Washington routers can reach one another?

(Choose two.)

- A. Configure the ipv6 route 2012::/126 2023::1 command on the Washington router.
- B. Configure the ipv6 route 2023::/126 2012::1 command on the Atlanta router.
- C. Configure the Ipv6 route 2012::/126 s0/0/0 command on the Atlanta router.
- D. Configure the ipv6 route 2023::/126 2012::2 command on the Atlanta router.
- E. Configure the ipv6 route 2012::/126 2023::2 command on the Washington router.

Answer: DE

Explanation:

The short syntax of static IPv6 route is: `ipv6 route <destination-IPv6-address> {next-hop-IPv6-address | exit-interface}`

NEW QUESTION 195

- (Topic 2)

What is the benefit of configuring PortFast on an interface?

- A. After the cable is connected, the interface uses the fastest speed setting available for that cable type
- B. After the cable is connected, the interface is available faster to send and receive user data
- C. The frames entering the interface are marked with higher priority and then processed faster by a switch.
- D. Real-time voice and video frames entering the interface are processed faster

Answer: B

NEW QUESTION 198

- (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 203

- (Topic 2)

Refer to the exhibit.

R1# show ip route

```
D      192.168.16.0/26 [90/2679326] via 192.168.1.1
R      192.168.16.0/24 [120/3]   via 192.168.1.2
O      192.168.16.0/21 [110/2]   via 192.168.1.3
i L1   192.168.16.0/27 [115/30]   via 192.168.1.4
```

Which route does R1 select for traffic that is destined to 192.168.16.2?

- A. 192.168.16.0/21
- B. 192.168.16.0/24
- C. 192.168.16.0/26
- D. 192.168.16.0/27

Answer: D

Explanation:

The destination IP addresses match all four entries in the routing table but the 192.168.16.0/27 has the longest prefix so it will be chosen. This is called the "longest prefix match" rule.

NEW QUESTION 206

- (Topic 2)

An office has 8 floors with approximately 30-40 users per floor What command must be configured on the router Switched Virtual Interface to use address space efficiently?

- A. ip address 192.168.0.0 255.255.0.0
- B. ip address 192.168.0.0 255.255.254.0
- C. ip address 192.168.0.0 255.255.255.128
- D. ip address 192.168.0.0 255.255.255.224

Answer: B

NEW QUESTION 209

- (Topic 2)

Refer to the exhibit.

R2#show ip route

```
C      192.168.1.0/26 is directly connected, FastEthernet0/1
```

Which two prefixes are included in this routing table entry? (Choose two.)

- A. 192.168.1.17
- B. 192.168.1.61

- C. 192.168.1.64
- D. 192.168.1.127
- E. 192.168.1.254

Answer: BC

NEW QUESTION 210

- (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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CCNA 200-301

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 214

DRAG DROP - (Topic 2)

Refer to the exhibit.

```
[root@HostTest ~]# ip route
default via 192.168.1.193 dev eth1 proto static
192.168.1.0/26 dev eth1 proto kernel scope link src 192.168.1.200 metric 1

[root@HostTest ~]# ip addr show eth1
eth1: mtu 1500 qdisc pfifo_fast qlen 1000
    link/ether 00:0C:22:83:79:A3 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.200/26 brd 192.168.1.255 scope global eth1
    inet6 fe80::20c:29ff:fe89:79b3/64 scope link
    valid_lft forever preferred_lft forever
```

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

default gateway	00:0C:22
host IP address	00:0C:22:83:79:A3
NIC MAC address	192.168.1.193
NIC vendor OUI	192.168.1.200
subnet mask	255.255.255.192

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

NIC vendor OUI → 00:0C:22NIC MAC address → 00:0C:22:83:79:A3default gateway → 192.168.1.193host IP address → 192.168.1.200subnet mask → 255.255.255.192

The “ip route” and “ip addr show eth1” are Linux commands.+ “ip route”: display the routing table+ “ip addr show eth1”: get depth information (only on eth1

interface) about your network interfaces like IP Address, MAC Address information

NEW QUESTION 216

- (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 220

- (Topic 2)

What is a characteristic of private IPv4 addressing?

- A. traverse the Internet when an outbound ACL is applied
- B. issued by IANA in conjunction with an autonomous system number
- C. composed of up to 65.536 available addresses
- D. used without tracking or registration

Answer: D

NEW QUESTION 224

- (Topic 2)

What are two characteristics of a public cloud Implementation? (Choose two.)

- A. It is owned and maintained by one party, but it is shared among multiple organizations.
- B. It enables an organization to fully customize how it deploys network resources.
- C. It provides services that are accessed over the Internet.
- D. It is a data center on the public Internet that maintains cloud services for only one company.
- E. It supports network resources from a centralized third-party provider and privately- owned virtual resources

Answer: CE

Explanation:

Private cloud is cloud infrastructure operated solely for a single organization, whether managed internally or by a third party, and hosted either internally or externally. Most public-cloud providers offer direct-connection services that allow customers to securely link their legacy data centers to their cloud-resident applications.

NEW QUESTION 226

- (Topic 2)

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

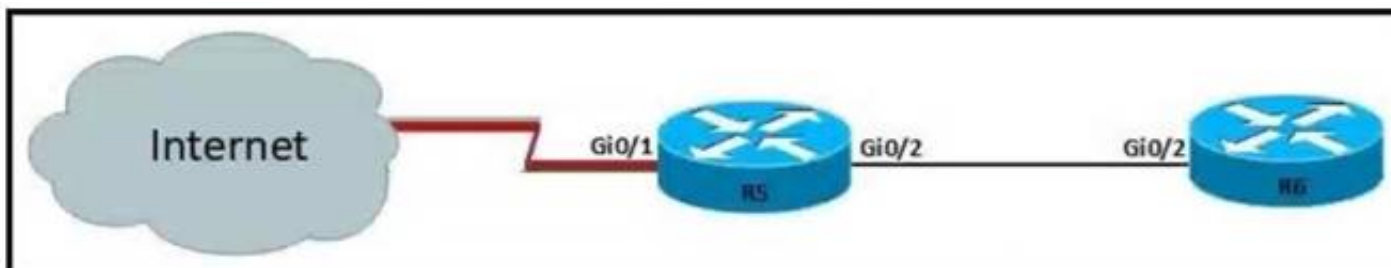
- A. Ansible
- B. Python
- C. Puppet
- D. Chef

Answer: A

NEW QUESTION 229

- (Topic 2)

Refer to the exhibit.



For security reasons, automatic neighbor discovery must be disabled on the R5 Gi0/1 interface. These tasks must be completed:

- Disable all neighbor discovery methods on R5 interface Gi0/1.
- Permit neighbor discovery on R5 interface Gi0/2.
- Verify there are no dynamically learned neighbors on R5 interface Gi0/1.
- Display the IP address of R6's interface Gi0/2. Which configuration must be used?

- ☐ R5(config)#int Gi0/1
R5(config-if)#no cdp run
R5(config-if)#exit
R5(config)#lldp run
R5(config)#cdp enable
R5#sh cdp neighbor
R5#sh lldp neighbor
- ☐ R5(config)#int Gi0/1
R5(config-if)#no cdp enable
R5(config-if)#exit
R5(config)#no lldp run
R5(config)#cdp run
R5#sh cdp neighbor
R5#sh lldp neighbor
- ☐ R5(config)#int Gi0/1
R5(config-if)#no cdp enable
R5(config-if)#exit
R5(config)#no lldp run
R5(config)#cdp run
R5#sh cdp neighbor detail
R5#sh lldp neighbor
- ☐ R5(config)#int Gi0/1
R5(config-if)#no cdp enable
R5(config-if)#exit
R5(config)#lldp run
R5(config)#no cdp run
R5#sh cdp neighbor detail
R5#sh lldp neighbor

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

Answer: C

NEW QUESTION 231

- (Topic 2)

R1 has learned route 10.10.10.0/24 via numerous routing protocols. Which route is installed?

- A. route with the lowest cost
- B. route with the next hop that has the highest IP
- C. route with the shortest prefix length
- D. route with the lowest administrative distance

Answer: D

NEW QUESTION 233

- (Topic 2)

Refer to the exhibit.



An engineer configured the New York router with static routes that point to the Atlanta and Washington sites. When command must be configured on the Atlanta and Washington routers so that both sites are able to reach the loopback2 interface on the New York router?

- A. ipv6 route ::0 Serial 0/0/1
- B. ipv6 route 0/0 Serial 0/0/0
- C. ipv6 route ::0 Serial 0/0/0
- D. ip route 0.0.0.0.0.0.0.0 Serial 0/0/0
- E. ipv6 route ::0 2000::2

Answer: C

NEW QUESTION 237

- (Topic 2)

Refer to the exhibit.

```
R1#config t
R1(config)# interface gil/1
R1(config-if)# ip address 192.168.0.1 255.255.255.0

R1(config)# router bgp 65000
R1(config-router)# neighbor 192.168.0.2 remote-as 65001
R1(config-router)# network 10.1.1.0 mask 255.255.255.0

R1(config)# router ospf 1
R1(config)# router-id 1.1.1.1
R1(config)# network 192.168.0.1 0.0.0.0 area 0
R1(config)# network 10.1.1.0 0.0.0.255 area 0

R1(config)# router eigrp 1
R1(config)# eigrp router-id 1.1.1.1
R1(config)# network 10.1.1.0 0.0.0.255
R1(config)# network 192.168.0.1 0.0.0.0

R2#config t
R2(config)# interface gil/1
R2(config-if)# ip address 192.168.0.2 255.255.255.0

R2#config t
R2(config)# router bgp 65001
R2(config-router)# neighbor 192.168.0.1 remote-as 65000

R2(config)# router ospf 1
R2(config)# router-id 2.2.2.2
R2(config)# network 192.168.1.2 0.0.0.0 area 0

R2(config)# router eigrp 1
R2(config)# eigrp router-id 1.1.1.1
R2(config)# network 192.168.0.1 0.0.0.0

R2(config)# ip route 10.1.1.0 255.255.255.0 192.168.0.1
```

Router R2 is configured with multiple routes to reach network 10.1.1.0/24 from router R1. What protocol is chosen by router R2 to reach the destination network 10.1.1.0/24?

- A. eBGP
- B. static
- C. OSPF
- D. EIGRP

Answer: B

NEW QUESTION 240

- (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 241

- (Topic 2)

What does an SDN controller use as a communication protocol to relay forwarding changes to a southbound API?

- A. OpenFlow
- B. Java
- C. REST
- D. XML

Answer: A

NEW QUESTION 246

- (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 250

- (Topic 2)

What are two benefits of using the PortFast feature? (Choose two)

- A. Enabled interfaces are automatically placed in listening state
- B. Enabled interfaces come up and move to the forwarding state immediately
- C. Enabled interfaces never generate topology change notifications.
- D. Enabled interfaces that move to the learning state generate switch topology change notifications
- E. Enabled interfaces wait 50 seconds before they move to the forwarding state

Answer: AB

NEW QUESTION 251

- (Topic 2)

A network administrator must to configure SSH for remote access to router R1 The requirement is to use a public and private key pair to encrypt management traffic to and from the connecting client.

Which configuration, when applied, meets the requirements?

```
R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key generate ec keysizes 2048
```

```
R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key generate rsa modulus 1024
```

```
R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key generate ec keysizes 1024
```

```
R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key encrypt rsa name myKey
```

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

Answer: C

NEW QUESTION 256

- (Topic 2)

Which mode must be set for APs to communicate to a Wireless LAN Controller using the Control and Provisioning of Wireless Access Points (CAPWAP) protocol?

- A. bridge
- B. route
- C. autonomous
- D. lightweight

Answer: D

NEW QUESTION 261

- (Topic 2)

What is the expected outcome when an EUI-64 address is generated?

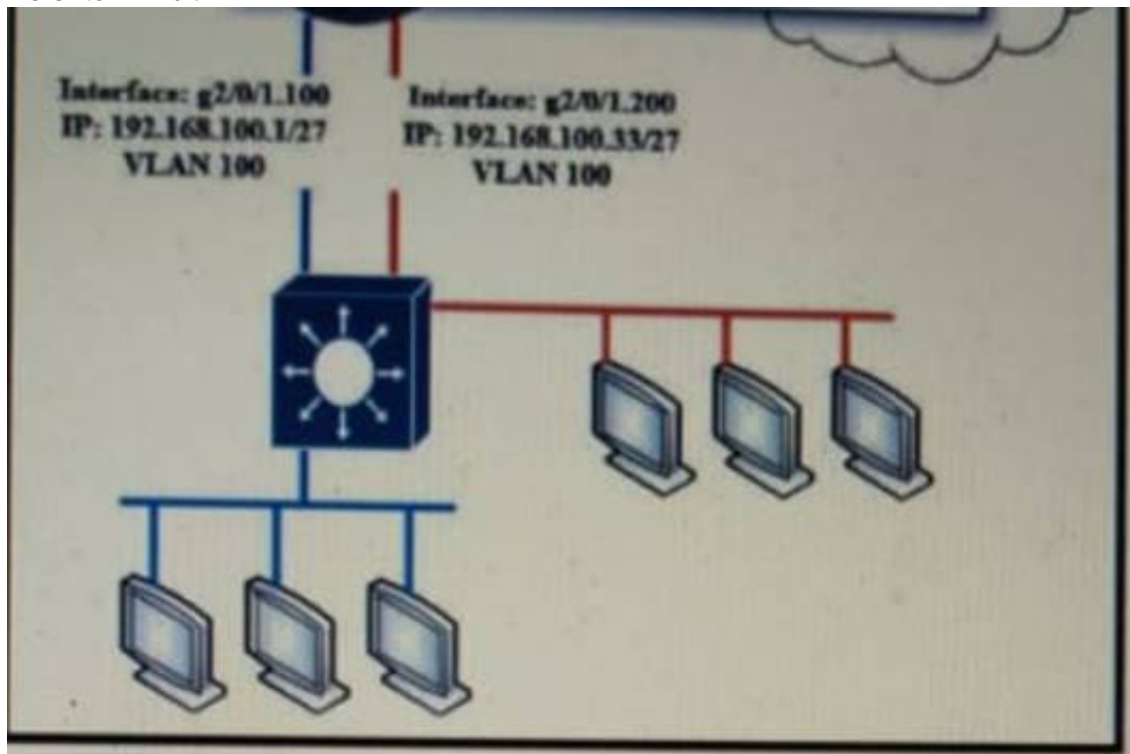
- A. The seventh bit of the original MAC address of the interface is inverted
- B. The interface ID is configured as a random 64-bit value
- C. The characters FE80 are inserted at the beginning of the MAC address of the interface
- D. The MAC address of the interface is used as the interface ID without modification

Answer: A

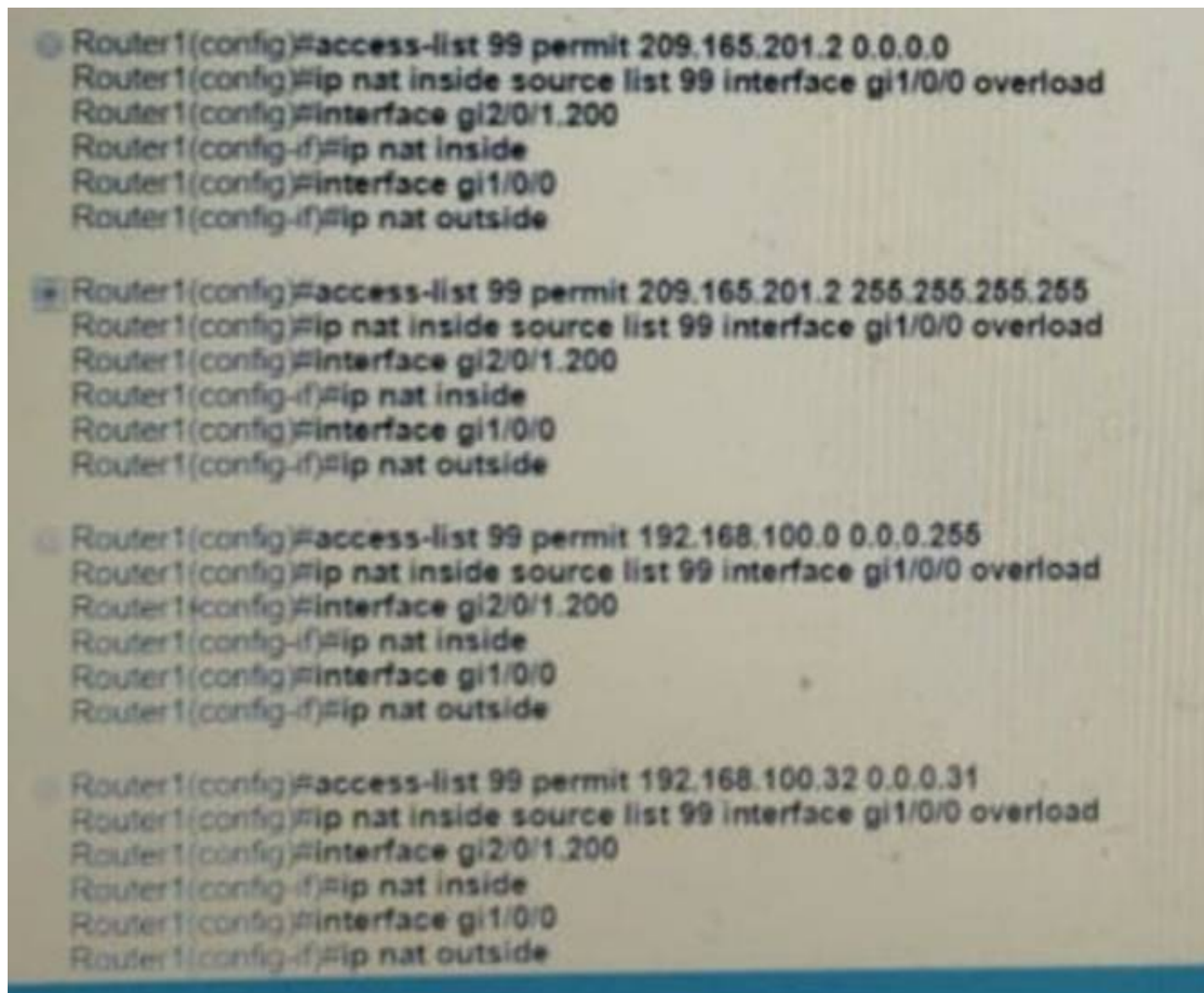
NEW QUESTION 266

- (Topic 2)

Refer to Exhibit.



Which configuration must be applied to the router that configures PAT to translate all addresses in VLAN 200 while allowing devices on VLAN 100 to use their own IP addresses?



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

Answer: D

NEW QUESTION 267

- (Topic 2)

The SW1 interface g0/1 is in the down/down state. Which two configurations are valid reasons for the interface conditions?(choose two)

- A. There is a duplex mismatch
- B. There is a speed mismatch
- C. There is a protocol mismatch
- D. The interface is shut down
- E. The interface is error-disabled

Answer: BE

NEW QUESTION 272

- (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 274

- (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 278

- (Topic 2)

An engineer must configure traffic for a VLAN that is untagged by the switch as it crosses a trunk link. Which command should be used?

- A. switchport trunk allowed vlan 10
- B. switchport trunk native vlan 10
- C. switchport mode trunk
- D. switchport trunk encapsulation dot1q

Answer: B

NEW QUESTION 282

- (Topic 2)

which IPv6 address block forwards packets to a multicast address rather than a unicast address?

- A. 2000::/3
- B. FC00::/7
- C. FE80::/10
- D. FF00::/12

Answer: D

NEW QUESTION 285

- (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 286

DRAG DROP - (Topic 2)

Drag and drop the AAA terms from the left onto the description on the right.

accounting	tracks activity
authentication	updates session attributes
authorization	verifies access rights
CoA	verifies identity

- A. Mastered
- B. Not Mastered

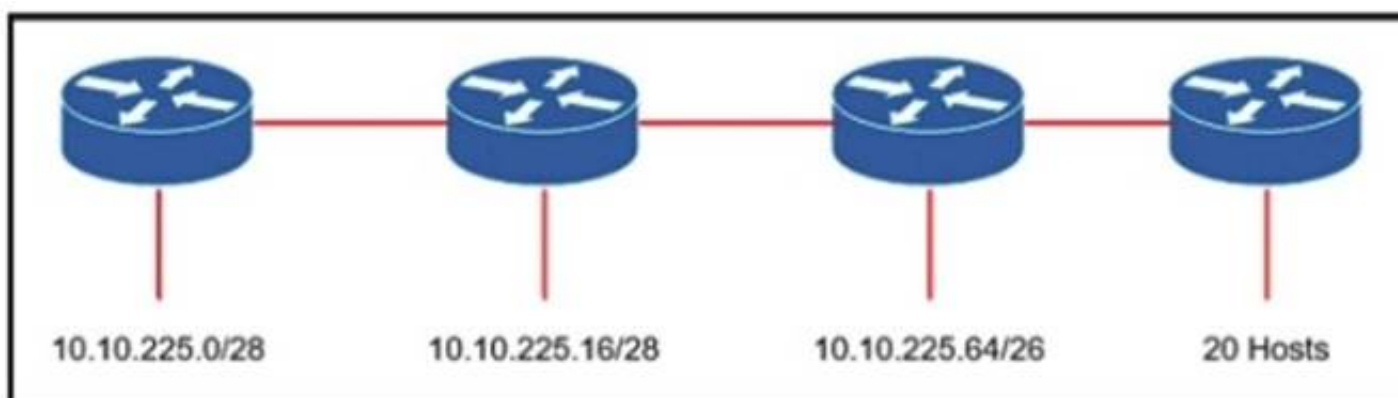
Answer: A

Explanation:

1-1, 2-4, 3-3, 4-2

NEW QUESTION 288

- (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 290

- (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 293

- (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 296

- (Topic 2)

How does the dynamically-learned MAC address feature function?

- A. The CAM table is empty until ingress traffic arrives at each port
- B. Switches dynamically learn MAC addresses of each connecting CAM table.
- C. The ports are restricted and learn up to a maximum of 10 dynamically-learned addresses
- D. It requires a minimum number of secure MAC addresses to be filled dynamically

Answer: A

NEW QUESTION 299

- (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 302

- (Topic 2)

An administrator must secure the WLC from receiving spoofed association requests. Which steps must be taken to configure the WLC to restrict the requests and force the user to wait 10 ms to retry an association request?

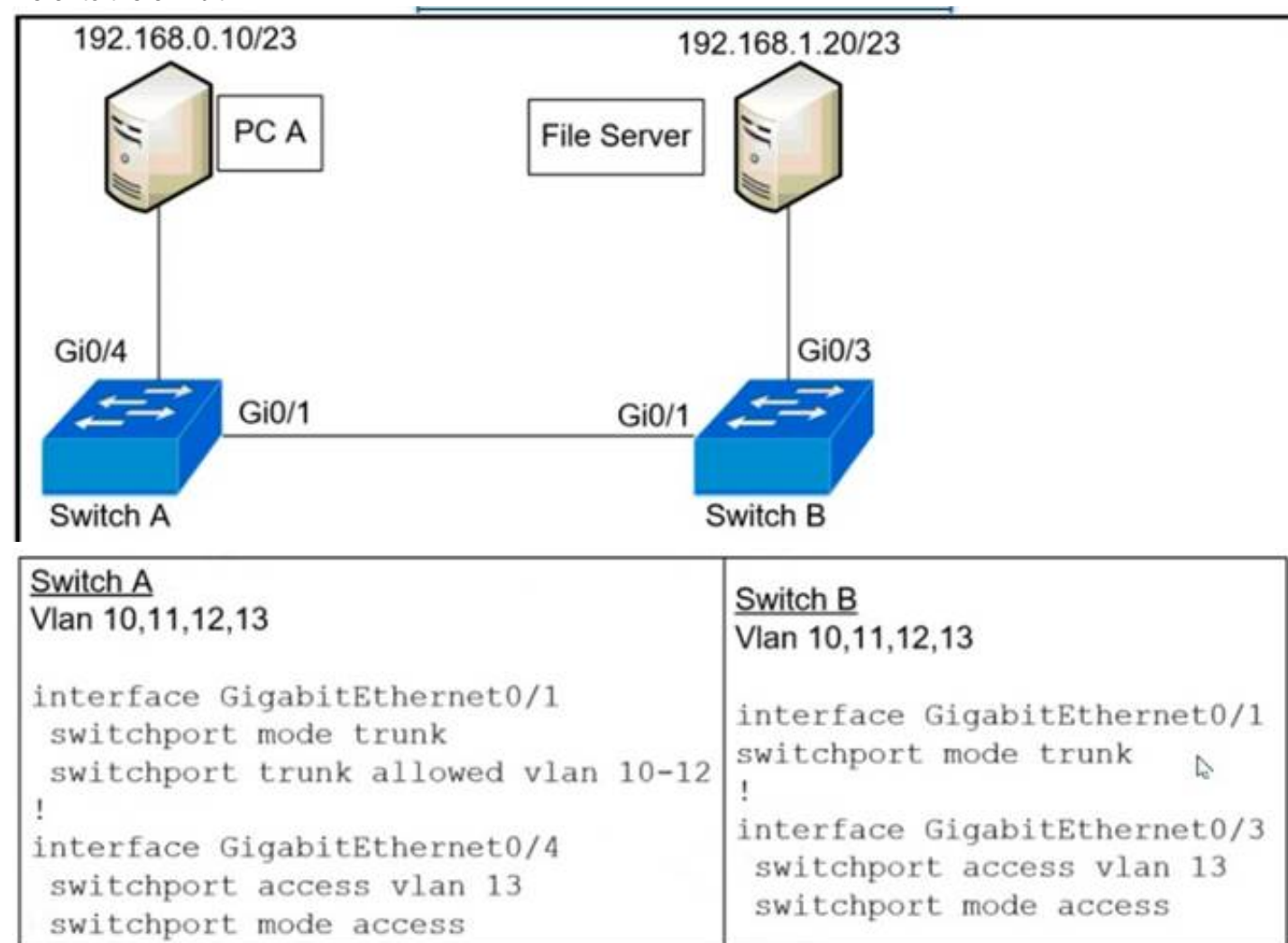
- A. Enable Security Association Teardown Protection and set the SA Query timeout to 10
- B. Enable MAC filtering and set the SA Query timeout to 10
- C. Enable 802.1x Layer 2 security and set the Comeback timer to 10
- D. Enable the Protected Management Frame service and set the Comeback timer to 10

Answer: C

NEW QUESTION 304

- (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 305

- (Topic 2)

How does CAPWAP communicate between an access point in local mode and a WLC?

- A. The access point must directly connect to the WLC using a copper cable
- B. The access point must not be connected to the wired network, as it would create a loop
- C. The access point must be connected to the same switch as the WLC
- D. The access point has the ability to link to any switch in the network, assuming connectivity to the WLC

Answer: D

NEW QUESTION 310

- (Topic 2)
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 were used to create port channel 10? (Choose two)

- ☐ int range g0/0-1
channel-group 10 mode active
- ☐ int range g0/0-1
channel-group 10 mode desirable
- ☐ int range g0/0-1
channel-group 10 mode passive
- ☐ int range g0/0-1
channel-group 10 mode auto
- ☐ int range g0/0-1
channel-group 10 mode on

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

Answer: AC

NEW QUESTION 311

- (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 313

- (Topic 2)
Where is the interface between the control plane and data plane within the software- defined architecture?

- A. control layer and the infrastructure layer
- B. application layer and the infrastructure layer
- C. application layer and the management layer
- D. control layer and the application layer

Answer: A

NEW QUESTION 318

- (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 319

- (Topic 2)

What is the function of a server?

- A. It transmits packets between hosts in the same broadcast domain.
- B. It provides shared applications to end users.
- C. It routes traffic between Layer 3 devices.
- D. It Creates security zones between trusted and untrusted networks

Answer: B

NEW QUESTION 323

- (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 328

- (Topic 2)

Which JSON data type is an unordered set of attribute- value pairs?

- A. array
- B. string
- C. object
- D. Boolean

Answer: C

NEW QUESTION 329

- (Topic 2)

What is a difference between RADIUS and TACACS+?

- A. RADIUS is most appropriate for dial authentication, but TACACS+ can be used for multiple types of authentication
- B. TACACS+ encrypts only password information and RADIUS encrypts the entire payload
- C. TACACS+ separates authentication and authorization, and RADIUS merges them
- D. RADIUS logs all commands that are entered by the administrator, but TACACS+ logs only start, stop, and interim commands

Answer: C

NEW QUESTION 333

- (Topic 2)

Refer to the exhibit.

R1#show ip interface brief						
Interface	IP-Address	OK?	Method	Status	Protocol	
FastEthernet0/0	unassigned	YES	NVRAM	administratively down	down	
GigabitEthernet1/0	192.168.0.1	YES	NVRAM	up	up	
GigabitEthernet2/0	10.10.1.10	YES	manual	up	up	
GigabitEthernet3/0	10.10.10.20	YES	manual	up	up	
GigabitEthernet4/0	unassigned	YES	NVRAM	administratively down	down	
Loopback0	172.16.15.10	YES	manual			

What does router R1 use as its OSPF router-ID?

- A. 10.10.1.10
- B. 10.10.10.20
- C. 172.16.15.10
- D. 192.168.0.1

Answer: C

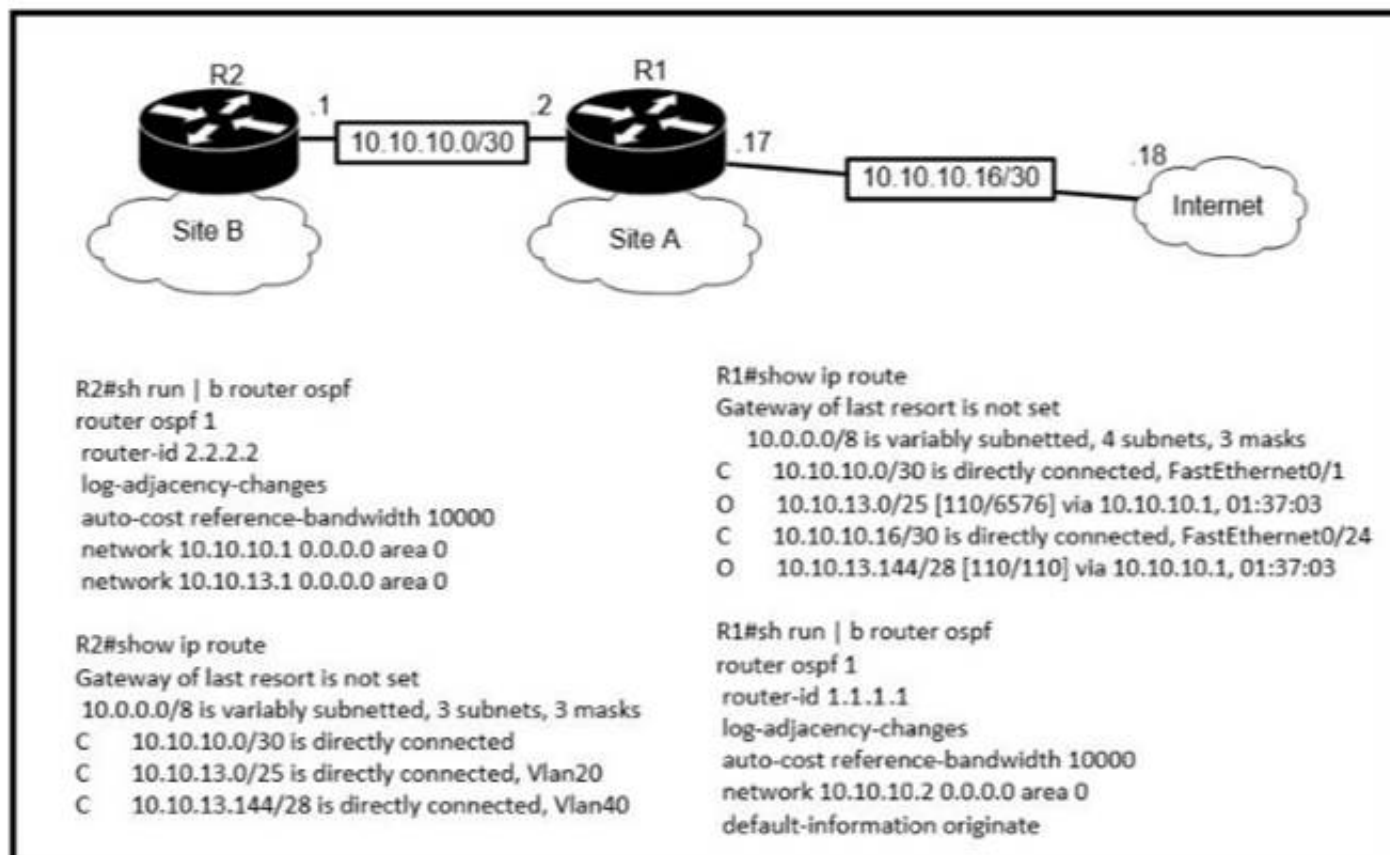
Explanation:

OSPF uses the following criteria to select the router ID:1. Manual configuration of the router ID (via the "router-id x.x.x.x" command under OSPF router configuration mode).2. Highest IP address on a loopback interface.3. Highest IP address on a non-loopback and active (no shutdown) interface.

NEW QUESTION 334

- (Topic 2)

Refer to the exhibit.



An engineer is bringing up a new circuit to the MPLS provider on the Gi0/1 interface of Router1. The new circuit uses eBGP and teams the route to VLAN25 from the BGP path. What is the expected behavior for the traffic flow for route 10.10.13.0/25?

- A. Traffic to 10.10.13.0.25 is load balanced out of multiple interfaces
- B. Route 10.10.13.0/25 is updated in the routing table as being learned from interface Gi0/1.
- C. Traffic to 10.10.13.0/25 is asymmetrical
- D. Route 10.10.13.0/25 learned via the Gi0/0 interface remains in the routing table

Answer: D

NEW QUESTION 335

- (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 338

- (Topic 2)

Which QoS tool is used to optimize voice traffic on a network that is primarily intended for data traffic?

- A. FIFO
- B. WFQ
- C. PQ
- D. WRED

Answer: C

NEW QUESTION 340

- (Topic 2)

An organization secures its network with multi-factor authentication using an authenticator app on employee smartphone. How is the application secured in the case of a user's smartphone being lost or stolen?

- A. The application requires an administrator password to reactivate after a configured Interval.
- B. The application requires the user to enter a PIN before it provides the second factor.
- C. The application challenges a user by requiring an administrator password to reactivate when the smartphone is rebooted.
- D. The application verifies that the user is in a specific location before it provides the second factor.

Answer: B

NEW QUESTION 345

- (Topic 2)

What are two recommendations for protecting network ports from being exploited when located in an office space outside of an IT closer? (Choose two.)

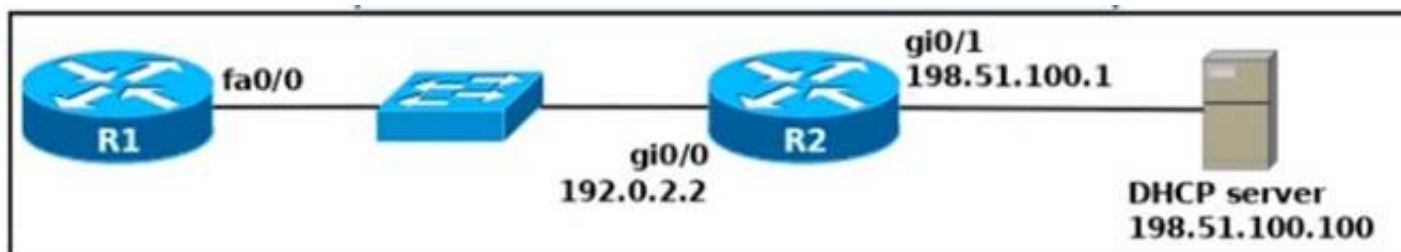
- A. enable the PortFast feature on ports
- B. implement port-based authentication
- C. configure static ARP entries
- D. configure ports to a fixed speed
- E. shut down unused ports

Answer: BE

NEW QUESTION 346

- (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)

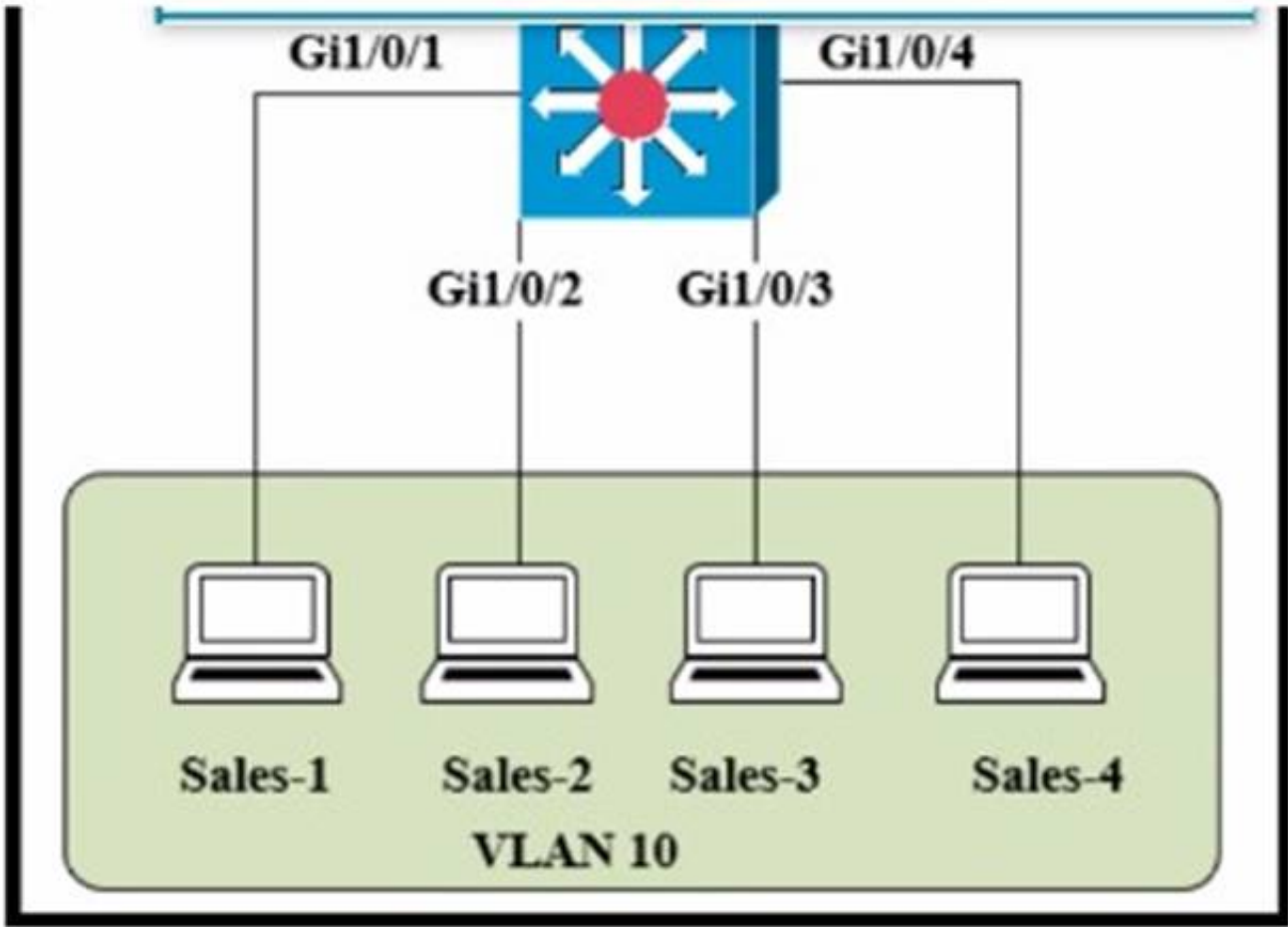
- A. R1(config)# interface fa0/0 R1(config-if)# ip helper-address 198.51.100.100
- B. R2(config)# interface gi0/0 R2(config-if)# ip helper-address 198.51.100.100
- C. R1(config)# interface fa0/0 R1(config-if)# ip address dhcp R1(config-if)# no shutdown
- D. R2(config)# interface gi0/0 R2(config-if)#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

Answer: BC

NEW QUESTION 348

- (Topic 2)

Refer to the exhibit.



The entire contents of the MAC address table are shown. Sales-4 sends a data frame to Sales-1.

Sales-SW#show mac-address-table
Mac Address Table

VLAN	MAC Address	Type	Ports
10	000c.8590.bb7d	DYNAMIC	Gi1/0/1
10	3910.4161.9bb7	DYNAMIC	Gi1/0/2
10	00d0.d3b6.957c	DYNAMIC	Gi1/0/3

Sales-SW#

What does the switch do as it receives the frame from Sales-4?

- A. Perform a lookup in the MAC address table and discard the frame due to a missing entry.
- B. Insert the source MAC address and port into the forwarding table and forward the frame to Sales-1.
- C. Map the Layer 2 MAC address to the Layer 3 IP address and forward the frame.
- D. Flood the frame out of all ports except on the port where Sales-1 is connected.

Answer: B

Explanation:

<https://www.ciscopress.com/articles/article.asp?p=3089352&seqNum=6>

NEW QUESTION 353

- (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 354

DRAG DROP - (Topic 1)

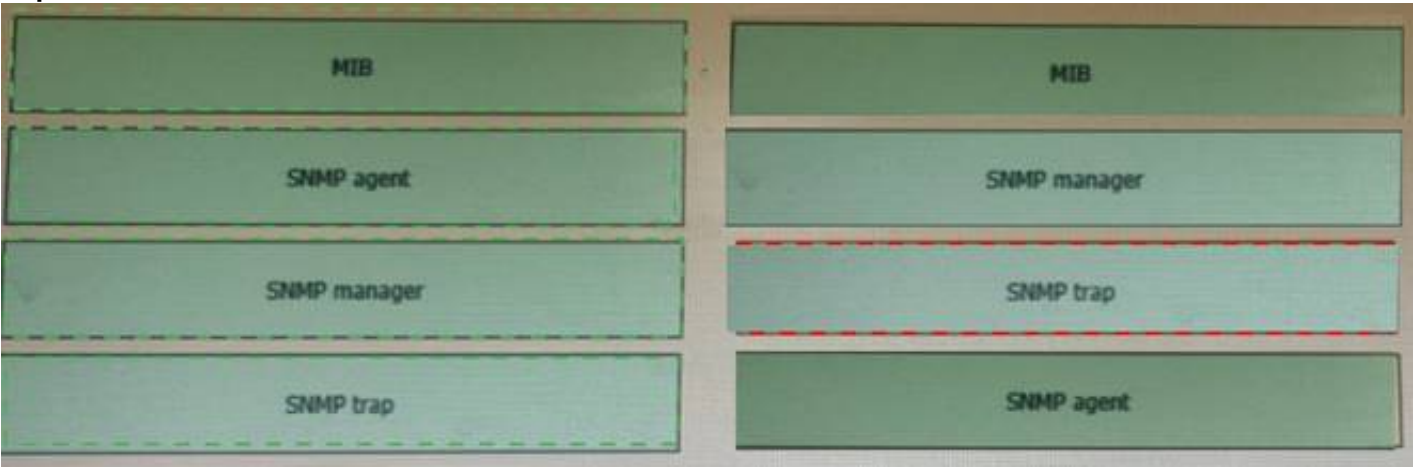
Drag and drop the SNMP components from the left onto the descriptions on the right.

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 358

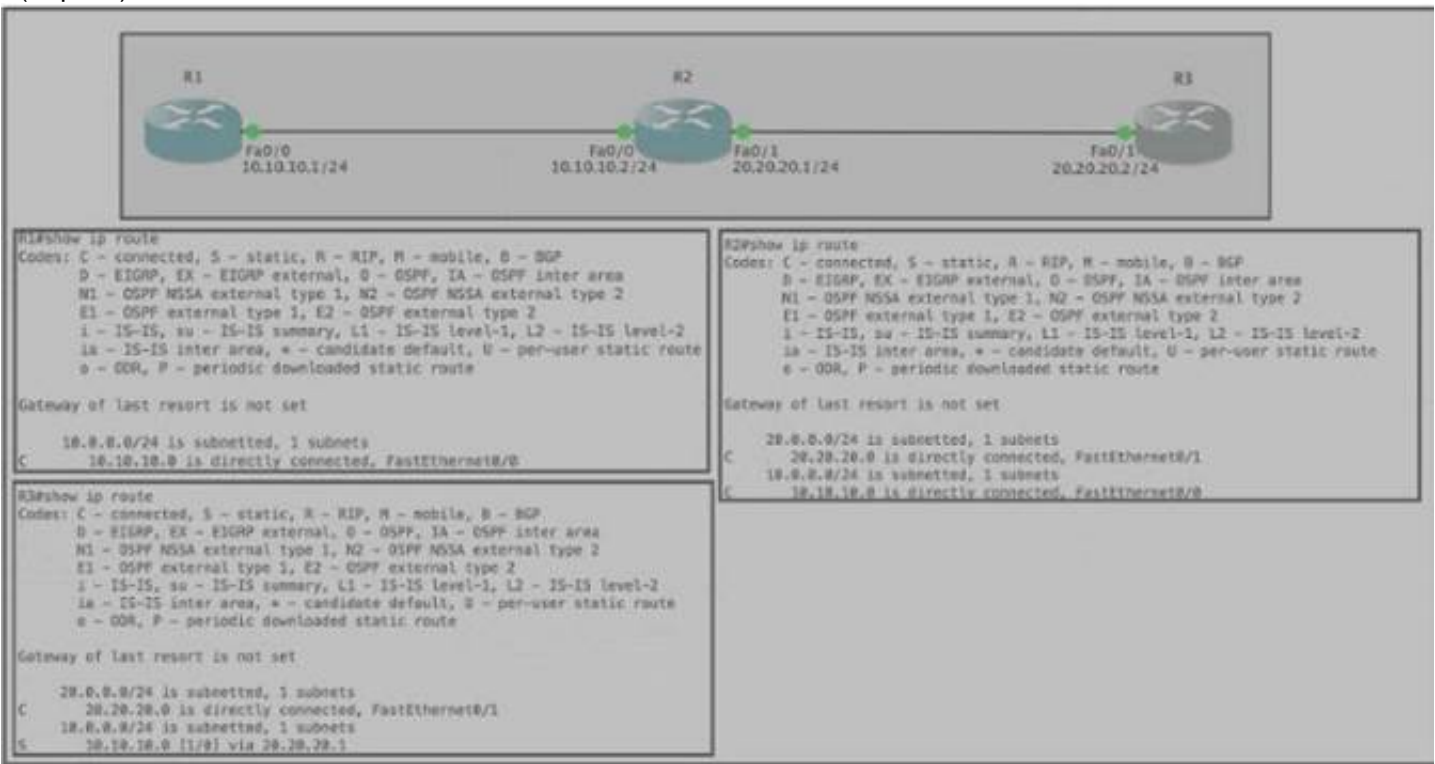
- (Topic 1)
Why was the RFC 1918 address space defined?

- A. conserve public IPv4 addressing
- B. preserve public IPv6 address space
- C. reduce instances of overlapping IP addresses
- D. support the NAT protocol

Answer: A

NEW QUESTION 361

- (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 363

- (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 367

- (Topic 1)

Which type of information resides on a DHCP server?

- A. a list of the available IP addresses in a pool
- B. a list of public IP addresses and their corresponding names
- C. usernames and passwords for the end users in a domain
- D. a list of statically assigned MAC addresses

Answer: A

NEW QUESTION 372

- (Topic 1)

What is a role of wireless controllers in an enterprise network?

- A. centralize the management of access points in an enterprise network
- B. support standalone or controller-based architectures
- C. serve as the first line of defense in an enterprise network
- D. provide secure user logins to devices on the network.

Answer: A

NEW QUESTION 374

- (Topic 1)

Two switches are connected and using Cisco Dynamic Trunking Protocol SW1 is set to Dynamic Desirable
 What is the result of this configuration?

- A. The link is in a down state.
- B. The link is in an error disables state
- C. The link is becomes an access port.
- D. The link becomes a trunk port.

Answer: D

NEW QUESTION 379

- (Topic 1)

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

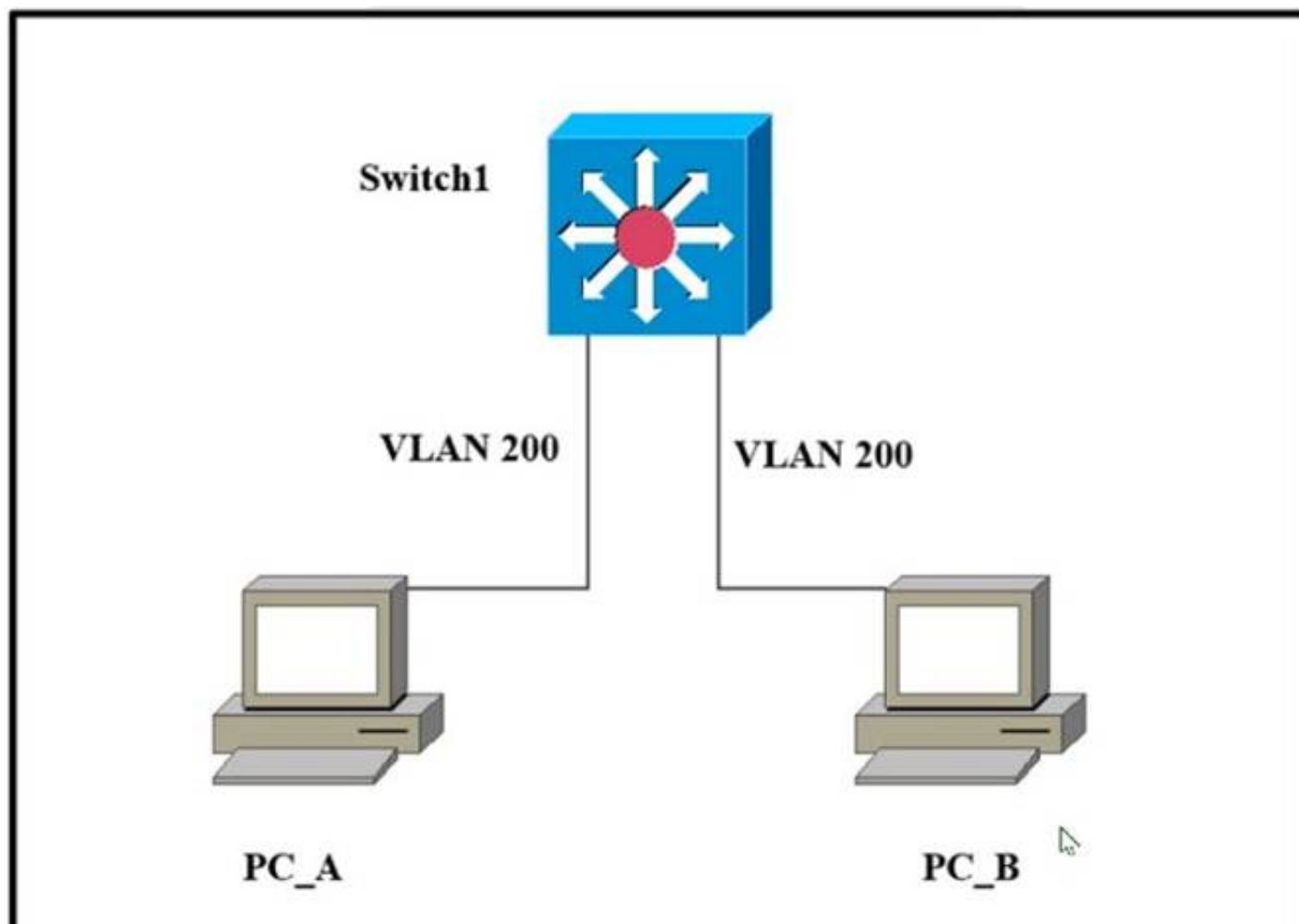
- A. broadband cable access
- B. frame-relay packet switching
- C. dedicated point-to-point leased line
- D. Integrated Services Digital Network switching.

Answer: A

NEW QUESTION 382

- (Topic 1)

Refer to the exhibit.



Which outcome is expected when PC_A sends data to PC_B?

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

Answer: C

NEW QUESTION 384

- (Topic 1)

What are two similarities between UTP Cat 5e and Cat 6a cabling? (Choose two.)

- A. Both operate at a frequency of 500 MHz.
- B. Both support runs of up to 55 meters.
- C. Both support runs of up to 100 meters.
- D. Both support speeds of at least 1 Gigabit.
- E. Both support speeds up to 10 Gigabit.

Answer: CD

NEW QUESTION 387

- (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 389

- (Topic 1)

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

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

Answer: AD

NEW QUESTION 393

- (Topic 1)

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

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

Answer: CD

Explanation:

Cisco DNA Center Device Management

* 3. Monitor the cloud for software update

* 5. Uses CLI templates to apply a consistent configuration to multiple devices at an individual location

* 6. Uses NetFlow to analyse potential security threats throughout the network and take appropriate action on that traffic

Traditional device management

* 2. Manages device configuration on a per-device basis

* 4. Security is managed near the perimeter of the network with firewalls, VPNs, and IPS

? Implements changes via an SSH terminal

NEW QUESTION 395

- (Topic 1)

Which implementation provides the strongest encryption combination for the wireless environment?

- A. WPA2 + AES
- B. WPA + AES
- C. WEP
- D. WPA + TKIP

Answer: A

NEW QUESTION 400

DRAG DROP - (Topic 1)

Drag and drop the IPv4 network subnets from the left onto the correct usable host ranges on the right

172.28.228.144/18	172.28.228.1 - 172.28.229.254
172.28.228.144/21	172.28.224.1 - 172.28.231.254
172.28.228.144/23	172.28.228.129 - 172.28.228.254
172.28.228.144/25	172.28.228.145 - 172.28.228.150
172.28.228.144/29	172.28.192.1 - 172.28.255.254

- A. Mastered
- B. Not Mastered

Answer: A

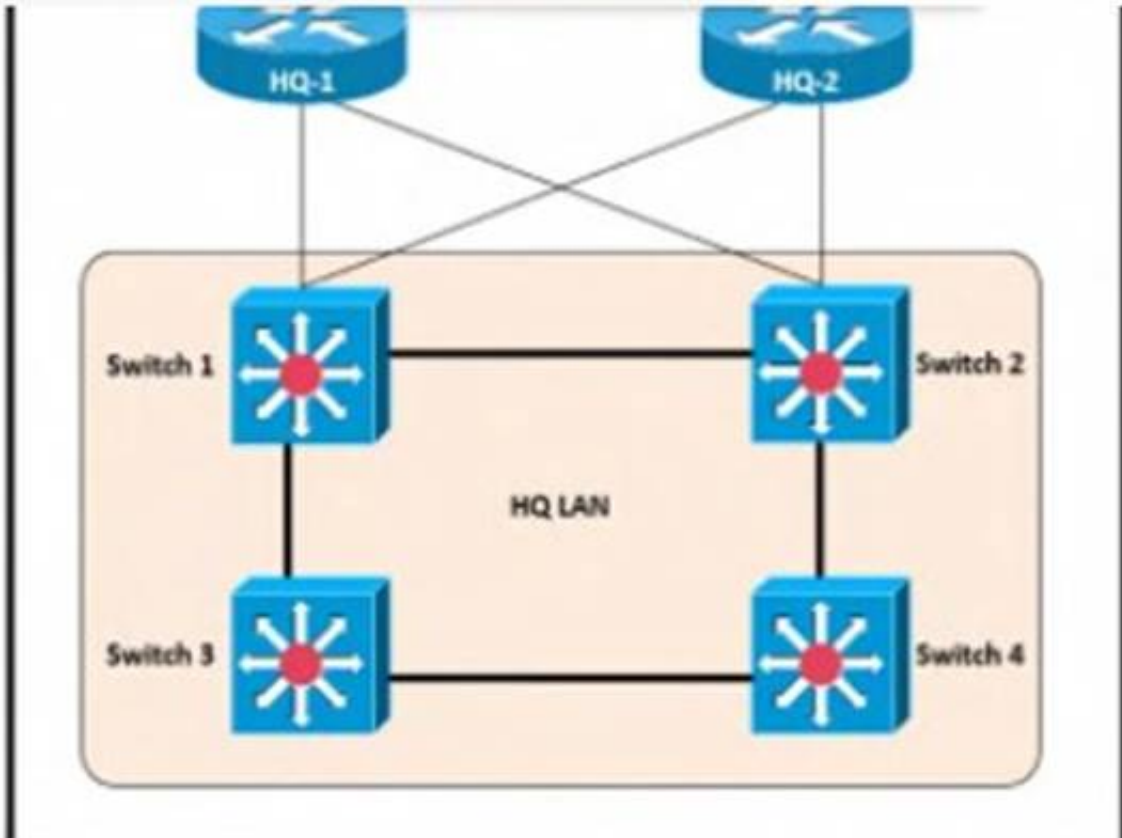
Explanation:

172.28.228.144/18	172.28.228.144/23
172.28.228.144/21	172.28.228.144/21
172.28.228.144/23	172.28.228.144/25
172.28.228.144/25	172.28.228.144/29
172.28.228.144/29	172.28.228.144/18

NEW QUESTION 404

- (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 407

- (Topic 1)

When configuring a WLAN with WPA2 PSK in the Cisco Wireless LAN Controller GUI, which two formats are available to select? (Choose two)

- A. ASCII
- B. base64
- C. binary
- D. decimal
- E. hexadecimal

Answer: AE

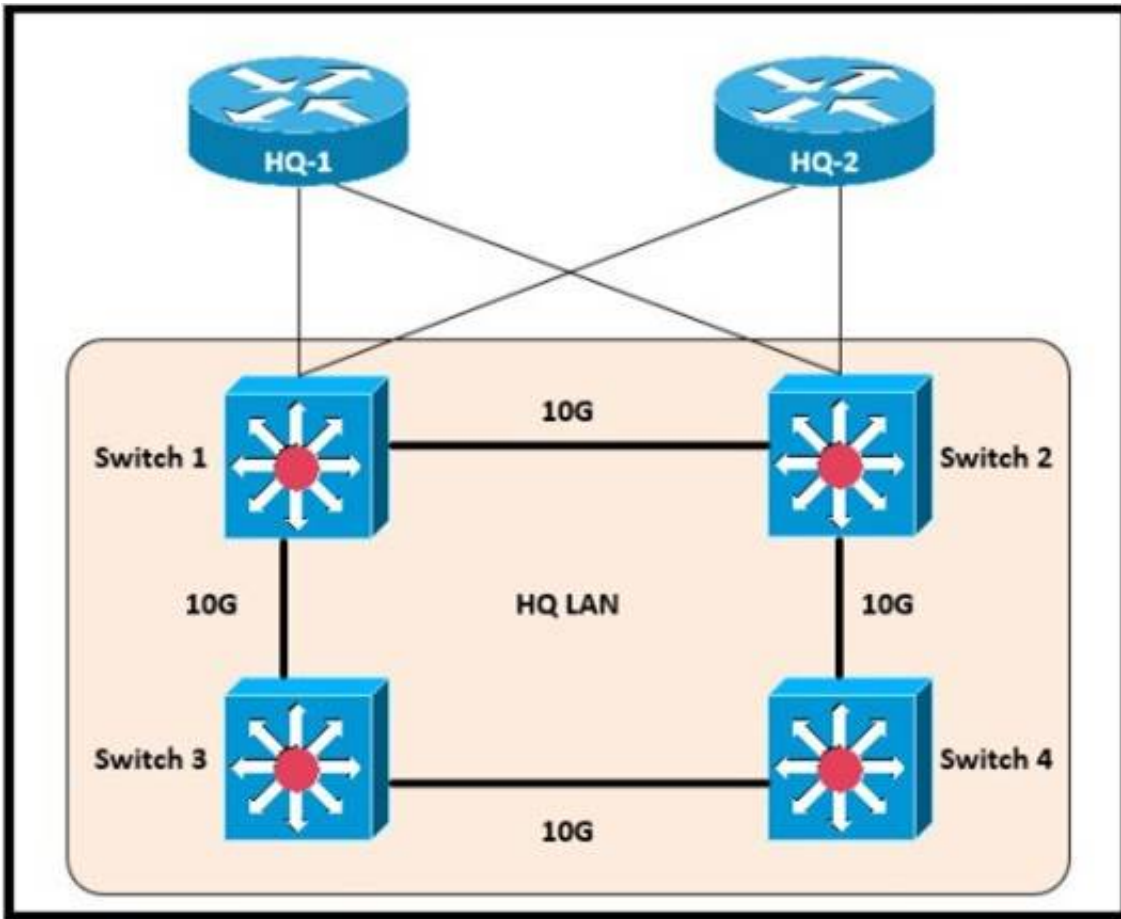
Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_01010001.html

NEW QUESTION 412

- (Topic 1)

Refer to the exhibit.



Which switch becomes the root of the spanning tree for VLAN 110?

Switch 1
 VLAN 110 - 32778 0018.184e.3c00
 Switch 2
 VLAN 110 - 24586 001a.e3ff.a680
 Switch 3
 VLAN 110 - 28682 0022.55cf.cc00
 Switch 4
 VLAN 110 - 64000 0e38.7363.657f

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

Answer: B

NEW QUESTION 413

- (Topic 1)

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

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

Answer: D

NEW QUESTION 418

- (Topic 1)

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

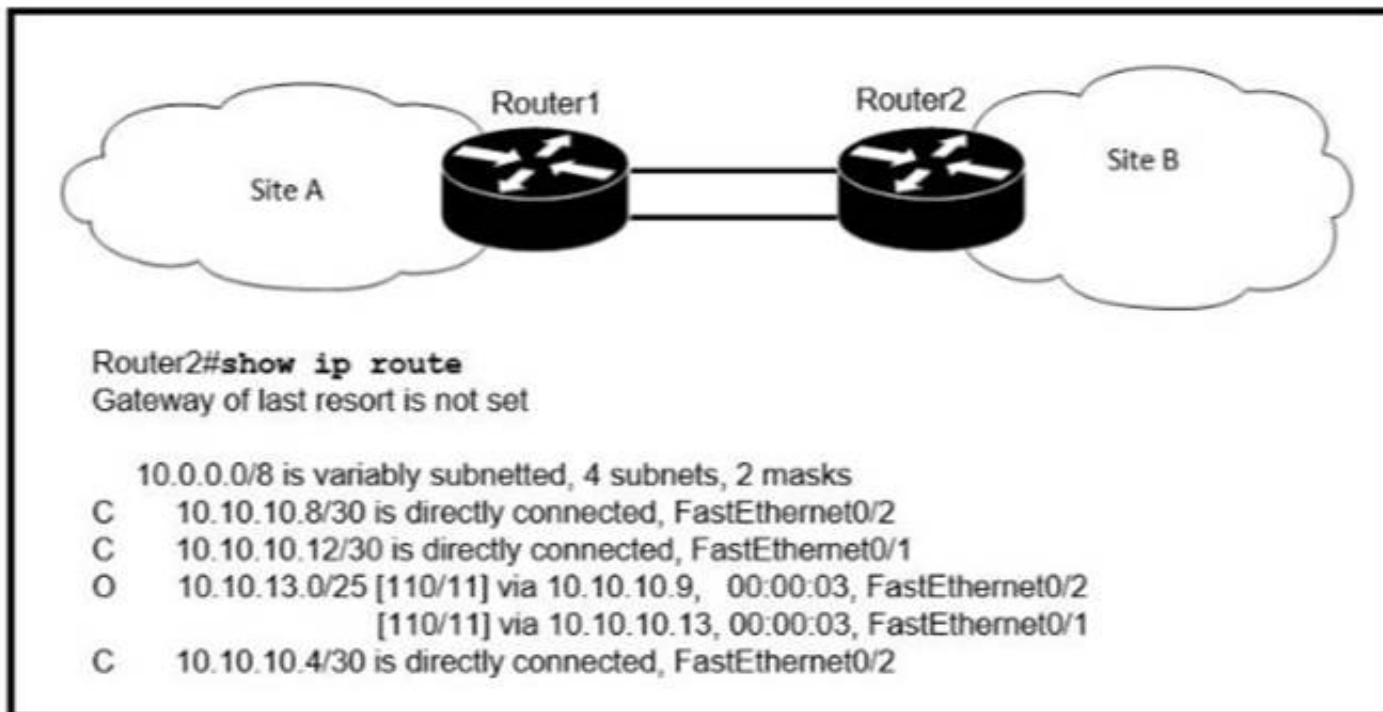
- A. ISATAP
- B. GRE over IPsec
- C. IPsec over ISATAP
- D. GRE

Answer: B

NEW QUESTION 420

- (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 425

- (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 429

- (Topic 1)

How does HSRP provide first hop redundancy?

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

Answer: D

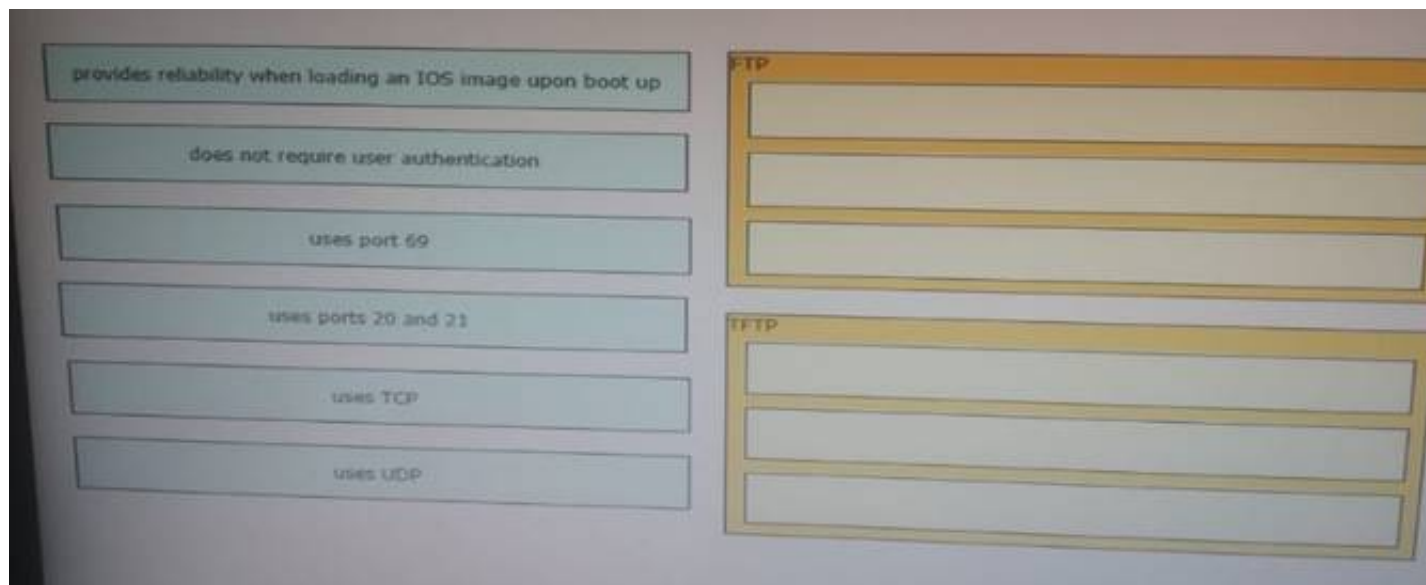
Explanation:

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

NEW QUESTION 433

DRAG DROP - (Topic 1)

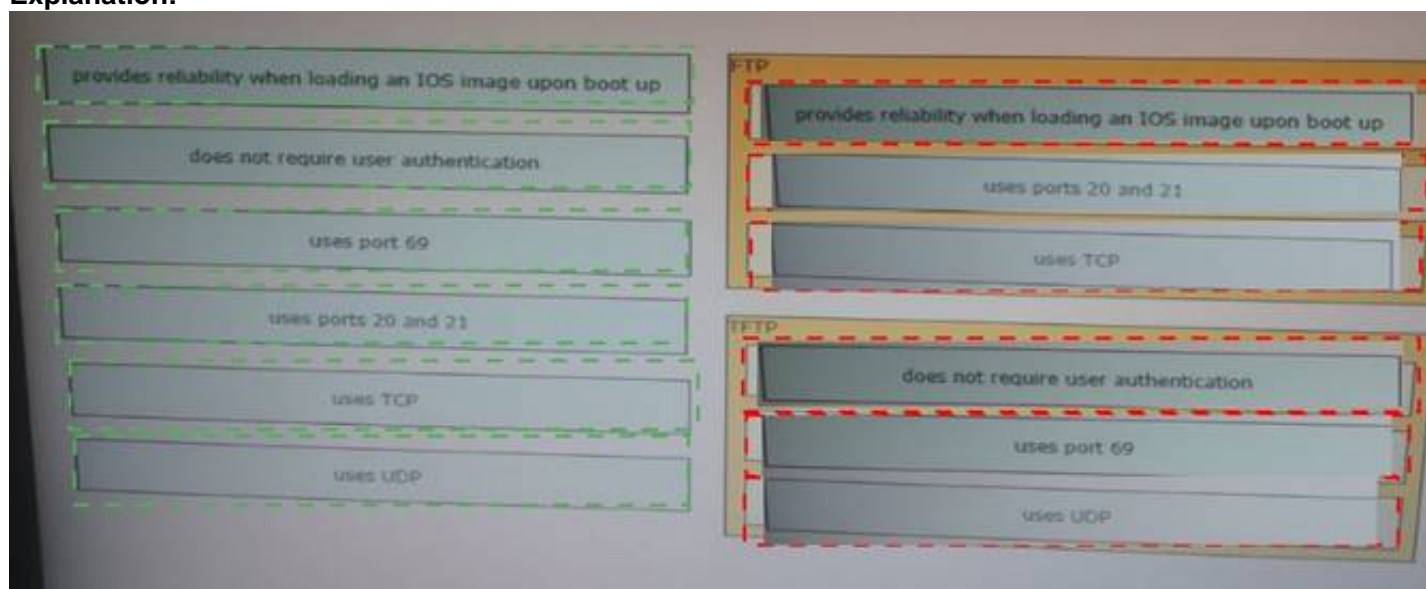
Drag and drop the descriptions of file-transfer protocols from the left onto the correct protocols on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 435

- (Topic 1)

How are the switches in a spine-and-leaf topology interconnected?

- A. Each leaf switch is connected to one of the spine switches.
- B. Each leaf switch is connected to two spine switches, making a loop.
- C. Each leaf switch is connected to each spine switch.
- D. Each leaf switch is connected to a central leaf switch, then uplinked to a core spine switch.

Answer: B

NEW QUESTION 439

- (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 443

- (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 in a brownfield deployment.
- D. It is designed primarily to provide network assurance.

Answer: A

NEW QUESTION 447

- (Topic 1)

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

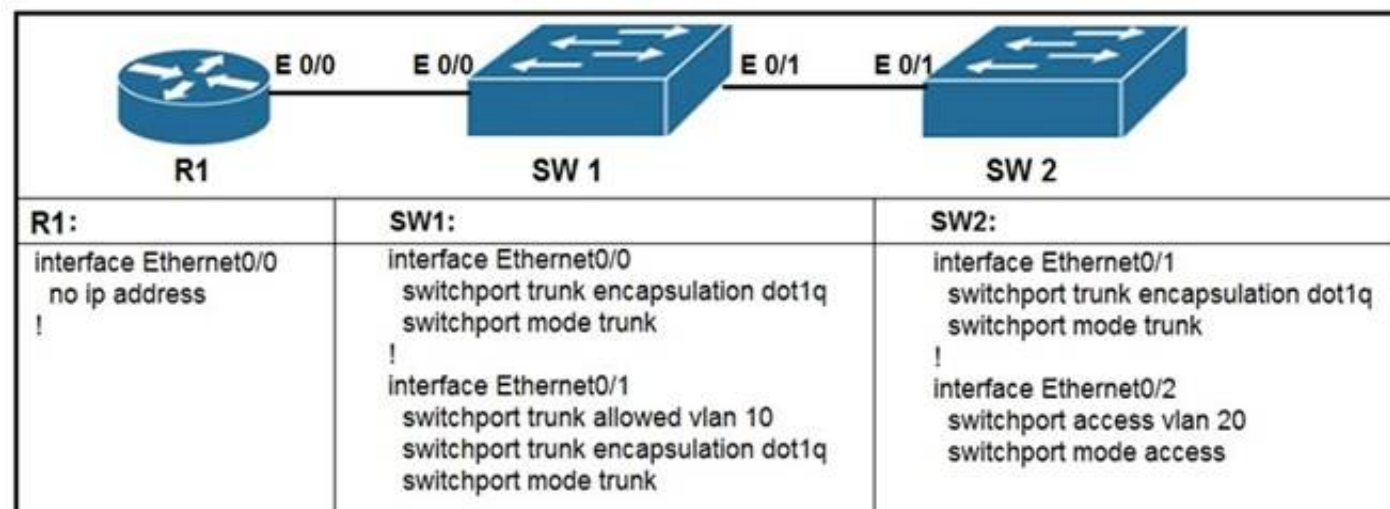
- A. communicates between the controller and the physical network hardware
- B. reports device errors to a controller
- C. generates statistics for network hardware and traffic
- D. facilitates communication between the controller and the applications

Answer: D

NEW QUESTION 451

- (Topic 1)

Refer to the exhibit.



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

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

Answer: B

NEW QUESTION 455

- (Topic 1)

What criteria is used first during the root port selection process?

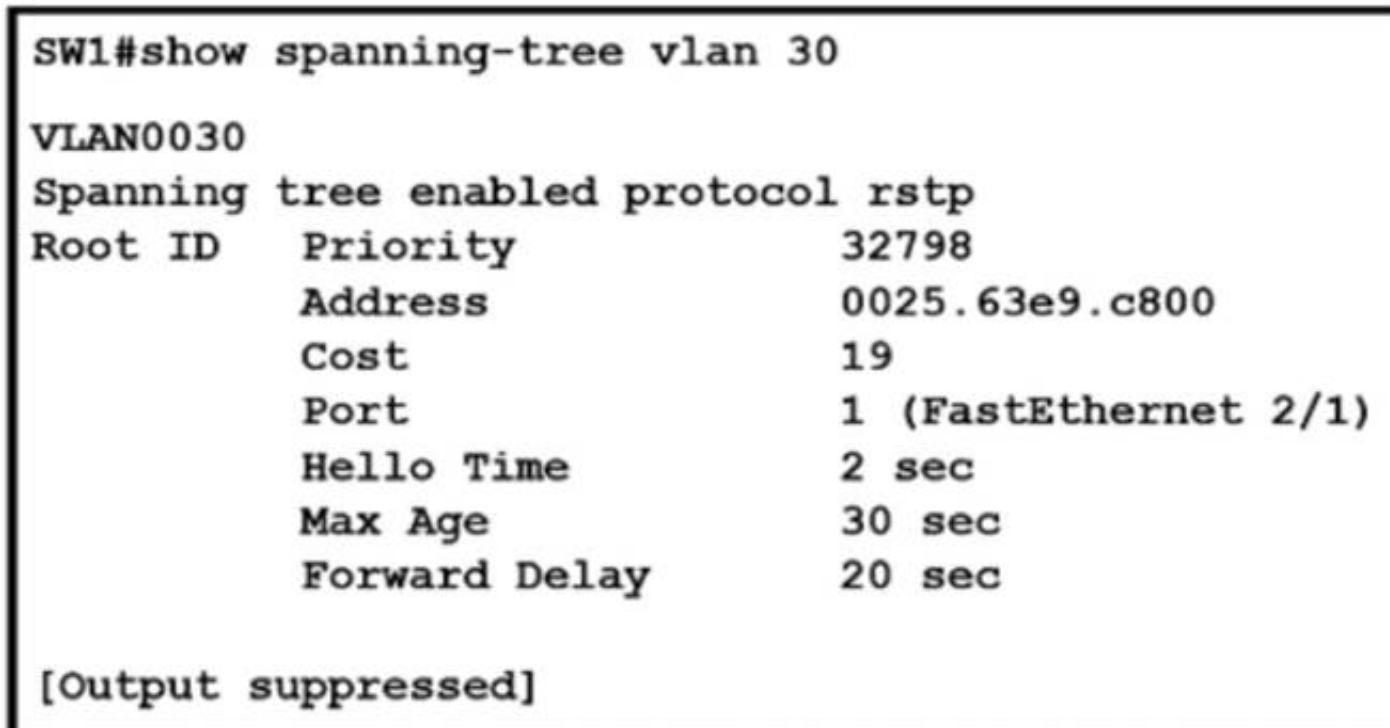
- A. local port ID
- B. lowest path cost to the root bridge
- C. lowest neighbor's bridge ID
- D. lowest neighbor's port ID

Answer: B

NEW QUESTION 458

- (Topic 1)

Refer to the exhibit.



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 459

- (Topic 1)

Refer to the exhibit.

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

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

A. DHCP client

B. access point

C. router

D. PC

Answer: C

NEW QUESTION 461

- (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 462

- (Topic 1)

What is recommended for the wireless infrastructure design of an organization?

A. group access points together to increase throughput on a given channel

B. configure the first three access points are configured to use Channels 1, 6, and 11

C. include a least two access points on nonoverlapping channels to support load balancing

D. assign physically adjacent access points to the same Wi-Fi channel

Answer: B

NEW QUESTION 463

- (Topic 1)

Which two encoding methods are supported by REST APIs? (Choose two)

A. YAML

- B. JSON
- C. EBCDIC
- D. SGML
- E. XML

Answer: BE

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/2-x/rest_cfg/2_1_x/b_Cisco_APIC_REST_API_Configuration_Guide/b_Cisco_APIC_REST_API_Configuration_Guide_chapter_01.html

Reference:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/5_x/rest_api_config/b_Cisco_N1KV_VMware_REST_API_Config_5x/b_Cisco_N1KV_VMware_REST_API_Config_5x_chapter_010.pdf

The Application Policy Infrastructure Controller (APIC) REST API is a programmatic interface that uses REST architecture. The API accepts and returns HTTP (not enabled by default) or HTTPS messages that contain JavaScript Object Notation (JSON) or Extensible Markup Language (XML) documents.

NEW QUESTION 468

DRAG DROP - (Topic 1)

Drag and drop the QoS congestion management terms from the left onto the description on the right.

CBWQ	places packets into one of four priority-based queues
CQ	provides guaranteed bandwidth to a specified class of traffic
FIFO	provides minimum guaranteed bandwidth to one or more flows
PQ	services a specified number of bytes in one queue before continuing to the next queue
WFQ	uses store-and-forward queueing

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

CBWQ	WFQ
CQ	CBWQ
FIFO	FIFO
PQ	PQ
WFQ	CQ

NEW QUESTION 470

- (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 475

- (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 476

- (Topic 1)
Which WAN topology provides a combination of simplicity quality, and availability?

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

Answer: C

NEW QUESTION 478

DRAG DROP - (Topic 1)
Drag and drop the AAA functions from the left onto the correct AAA services on the right

records user activities

restricts the services that are available to a user

identifies the user

controls the actions that a user can perform

provides analytical information for the network administrator

verifies the password associated with a user

Authentication

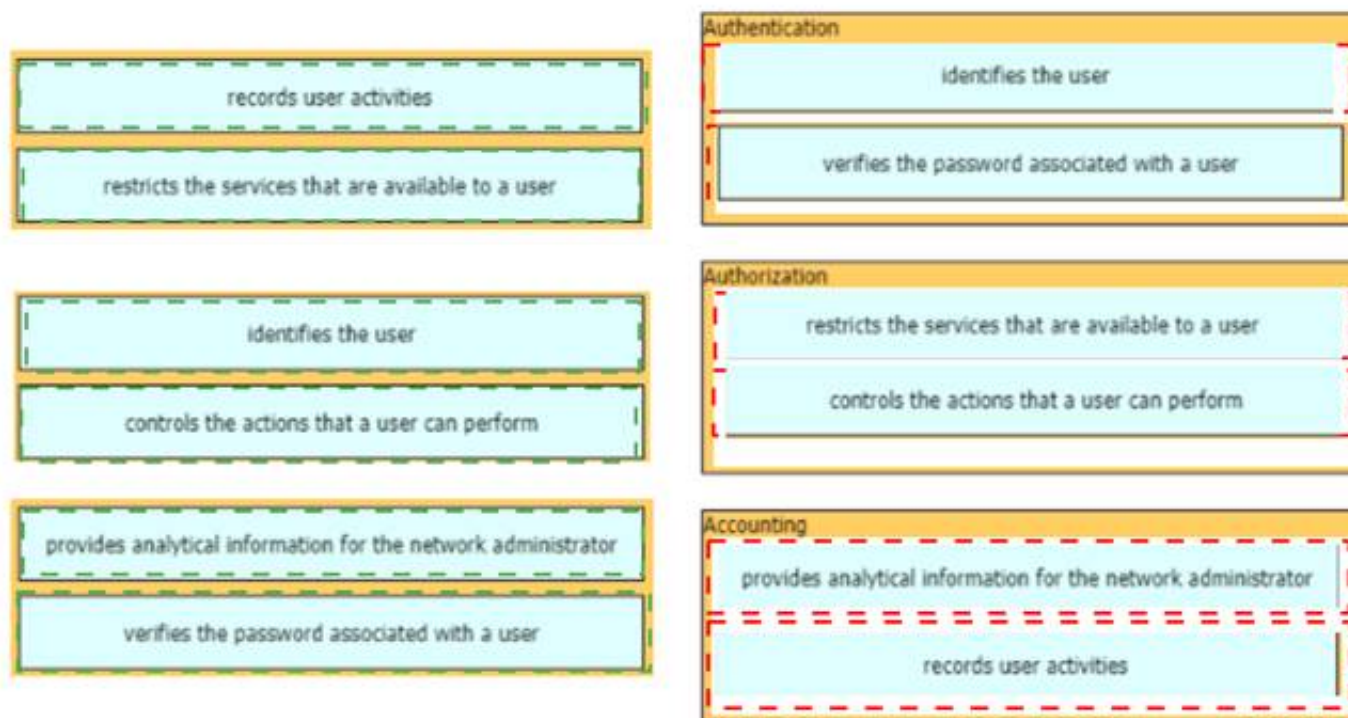
Authorization

Accounting

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 483

- (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 488

- (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 491

- (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 493

- (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 496

- (Topic 1)

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

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

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

Answer: A

NEW QUESTION 497

- (Topic 1)

What is the function of a controller in controller-based networking?

- A. It serves as the centralized management point of an SDN architecture.
- B. It centralizes the data plane for the network.
- C. It is the card on a core router that maintains all routing decisions for a campus.
- D. It is a pair of core routers that maintain all routing decisions for a campus

Answer: A

NEW QUESTION 502

- (Topic 1)

Refer to exhibit.

```
Router(config)#interface GigabitEthernet 1/0/1
Router(config-if)#ip address 192.168.16.143 255.255.255.240
Bad mask /28 for address 192.168.16.143
```

Which statement explains the configuration error message that is received?

- A. It is a broadcast IP address
- B. The router does not support /28 mask.
- C. It belongs to a private IP address range.
- D. IT is a network IP address.

Answer: A

NEW QUESTION 507

- (Topic 1)

Refer to the exhibit.

```
iBGP route 10.0.0.0/30
RIP route 10.0.0.0/30
OSPF route 10.0.0.0/16
OSPF route 10.0.0.0/30
EIGRP route 10.0.0.1/32
```

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

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

Answer: CD

NEW QUESTION 510

- (Topic 1)

A port security violation has occurred on a switch port due to the maximum MAC address count being exceeded. Which command must be configured to increment the security- violation count and forward an SNMP trap?

- A. switchport port-security violation access
- B. switchport port-security violation protect
- C. switchport port-security violation restrict
- D. switchport port-security violation shutdown

Answer: C

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/25ew/configuration/guide/conf/port_sec.html

NEW QUESTION 514

- (Topic 1)

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

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

Answer: A

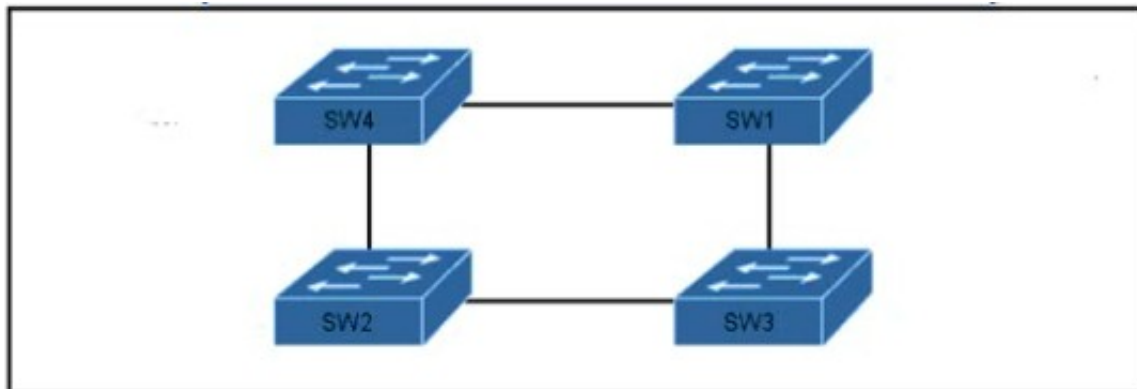
Explanation:

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

NEW QUESTION 515

- (Topic 1)

Refer to the exhibit.



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

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

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

Answer: C

NEW QUESTION 520

- (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 522

- (Topic 1)

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

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

Answer: BE

NEW QUESTION 527

- (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 530

- (Topic 1)

Which two events occur automatically when a device is added to Cisco DNA Center?
(Choose two.)

- A. The device is assigned to the Global site.
- B. The device is placed into the Unmanaged state.
- C. The device is placed into the Provisioned state.
- D. The device is placed into the Managed state.
- E. The device is assigned to the Local site.

Answer: AB

NEW QUESTION 532

- (Topic 1)

Which level of severity must be set to get informational syslogs?

- A. alert
- B. critical
- C. notice
- D. debug

Answer: C

NEW QUESTION 537

- (Topic 1)

Which network allows devices to communicate without the need to access the Internet?

- A. 1729.0.0/16
- B. 172.28.0.0/16
- C. 192.0.0.0/8
- D. 209.165.201.0/24

Answer: B

Explanation:

The private ranges of each class of IPv4 are listed below:

Class A private IP address ranges from 10.0.0.0 to 10.255.255.255 Class B private IP address ranges from 172.16.0.0 to 172.31.255.255 Class C private IP address ranges from 192.168.0.0 to 192.168.255.255 Only the network 172.28.0.0/16 belongs to the private IP address (of class B).

NEW QUESTION 538

- (Topic 1)

What is the maximum bandwidth of a T1 point-to-point connection?

- A. 1.544 Mbps
- B. 2.048 Mbps
- C. 34.368 Mbps
- D. 43.7 Mbps

Answer: A

Explanation:

[https://www.bsimplify.com/what-is-point-to-point-t1/#:~:text=A%20Point%20to%20Point%20T1,data%20speeds%20\(1.54Mbps\).](https://www.bsimplify.com/what-is-point-to-point-t1/#:~:text=A%20Point%20to%20Point%20T1,data%20speeds%20(1.54Mbps).)

Point to Point T1

A Point to Point T1 service is a private data connection securely connecting two or more locations with T1 data speeds (1.54Mbps).

NEW QUESTION 540

- (Topic 1)

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

- A. It allows directly connected neighbors to share configuration information.
- B. It allows a router to use bridge priorities to create multiple loop-free paths to a single destination.
- C. It reduces routing failures by allowing Layer 3 load balancing between OSPF neighbors that have the same link metric.
- D. It reduces routing failures by allowing more than one router to represent itself, as the default gateway of a network.

Answer: D

NEW QUESTION 545

- (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

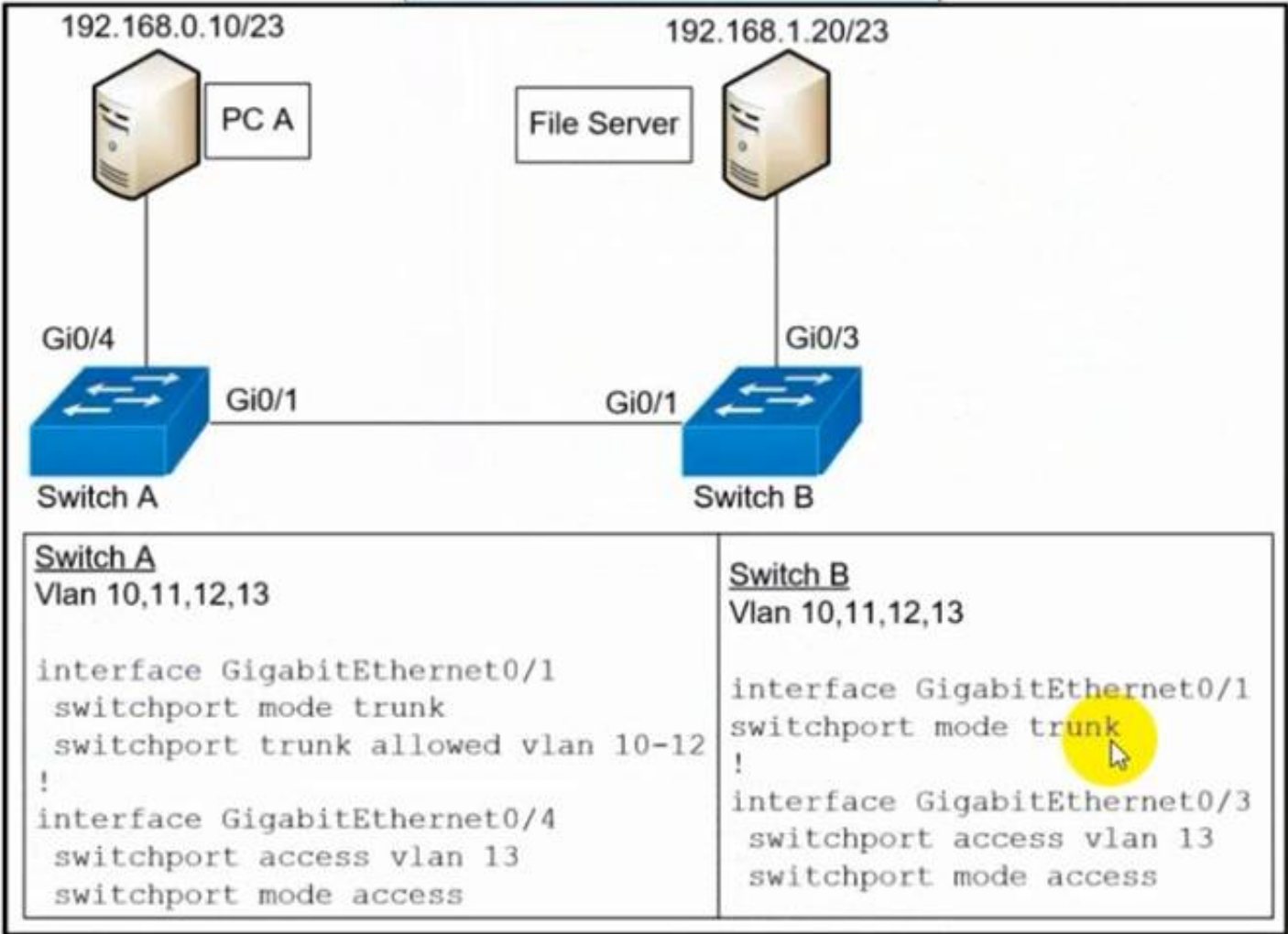
Answer: A

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 548

- (Topic 1)
 Refer to the exhibit.



A network engineer must configured communication between PC A and the File Server. To prevent interruption for any other communications, which command must be configured?

- A. Switch trunk allowed vlan 12
- B. Switchport trunk allowed vlan none
- C. Switchport trunk allowed vlan add 13
- D. Switchport trunk allowed vlan remove 10-11

Answer: C

NEW QUESTION 550

DRAG DROP - (Topic 1)
 An engineer is configuring an encrypted password for the enable command on a router where the local user database has already been configured Drag and drop the configuration commands from the left into the correct sequence on the right Not all commands are used

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 551

- (Topic 1)

Which two components are needed to create an Ansible script that configures a VLAN on a switch? (Choose two.)

- A. cookbook
- B. task
- C. playbook
- D. model
- E. recipe

Answer: CD

NEW QUESTION 553

- (Topic 1)

A network administrator is asked to configure VLANS 2, 3 and 4 for a new implementation. Some ports must be assigned to the new VLANS with unused remaining. Which action should be taken for the unused ports?

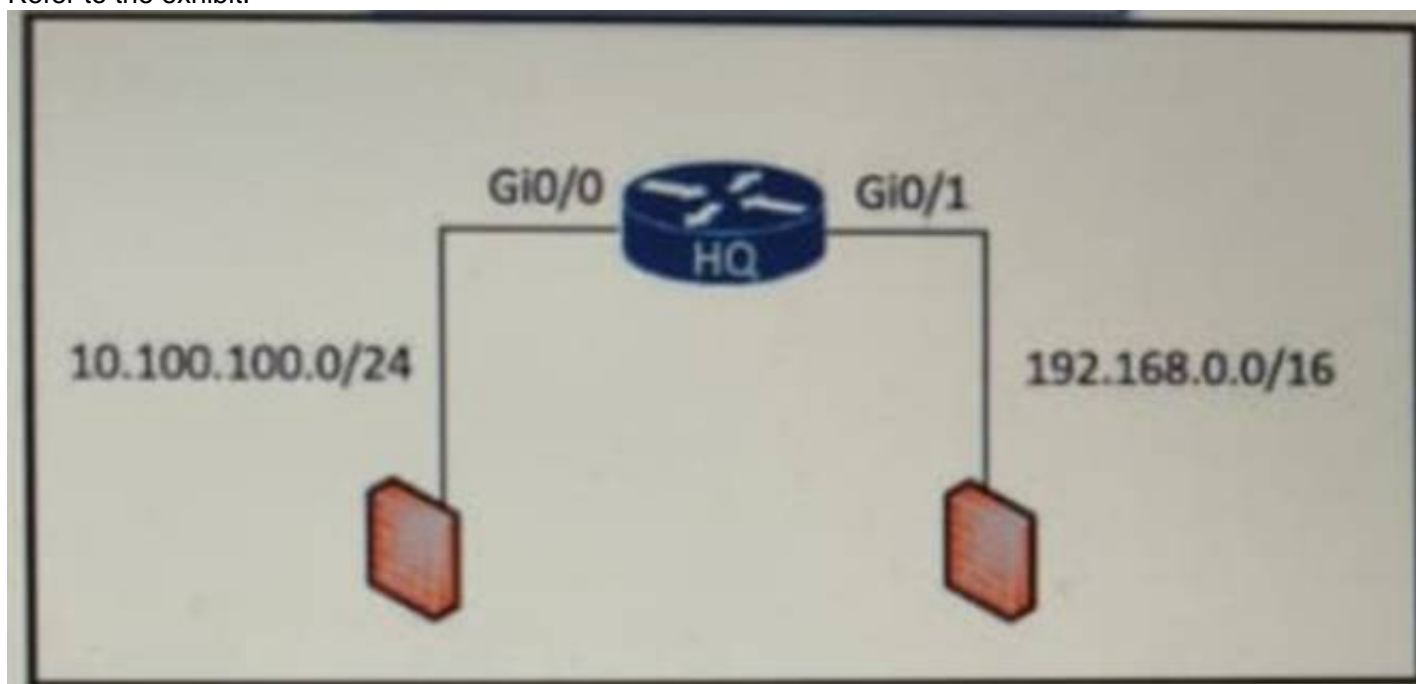
- A. configure port in the native VLAN
- B. configure ports in a black hole VLAN
- C. configure in a nondefault native VLAN
- D. configure ports as access ports

Answer: B

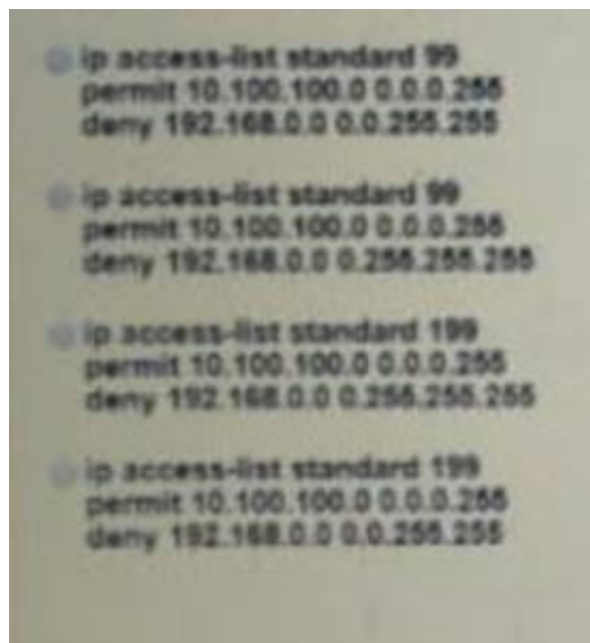
NEW QUESTION 555

- (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 G0/1. Which access list must be applied?



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

Answer: A

NEW QUESTION 557

- (Topic 1)

Which attribute does a router use to select the best path when two or more different routes to the same destination exist from two different routing protocols.

- A. dual algorithm
- B. metric
- C. administrative distance
- D. hop count

Answer: C

Explanation:

Administrative distance is the feature used by routers to select the best path when there are two or more different routes to the same destination from different routing protocols. Administrative distance defines the reliability of a routing protocol.

NEW QUESTION 561

- (Topic 1)

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

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

Answer: B

NEW QUESTION 566

- (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 567

DRAG DROP - (Topic 1)

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

attached to a single subnet

addresses with prefix FC00::/7

configured only once per interface

addressing for exclusive use internally without Internet routing

Link-Local Address

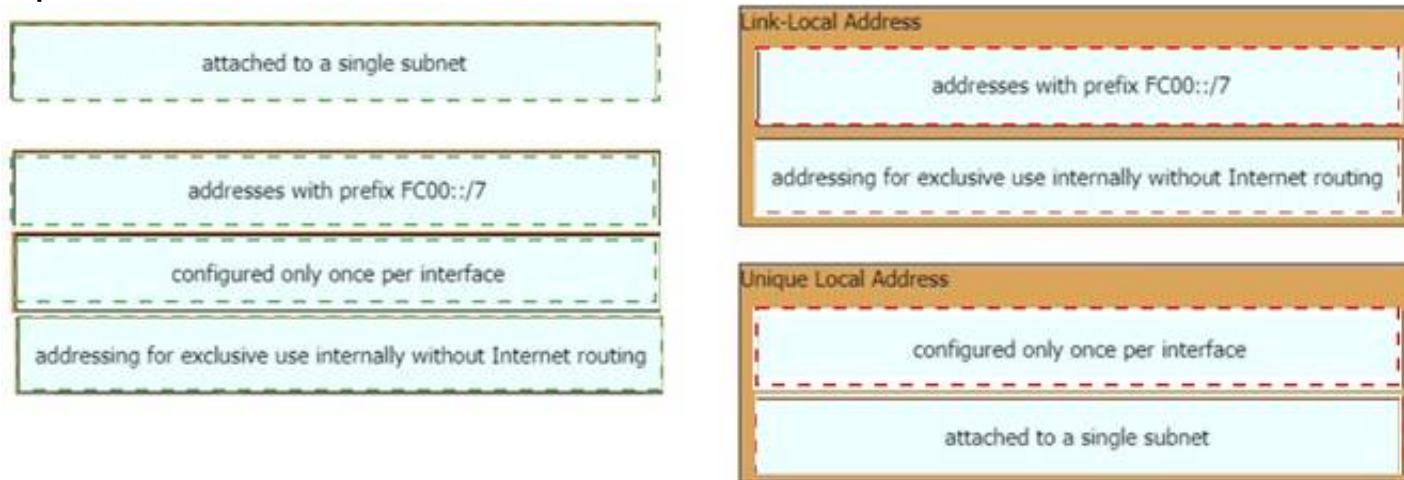
Unique Local Address

A. Mastered

B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 572

- (Topic 1)

What criteria is used first during the 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 573

- (Topic 1)

What is the purpose of traffic shaping?

- A. to mitigate delays over slow links
- B. to provide fair queuing for buffered flows
- C. to limit the bandwidth that a flow can use to
- D. be a marking mechanism that identifies different flows

Answer: B

Explanation:

Traffic shaping retains excess packets in a queue and then schedules the excess for later transmission over increments of time.

NEW QUESTION 576

- (Topic 1)

Which feature on the Cisco Wireless LAN Controller when enabled restricts management access from specific networks?

- A. CPU ACL
- B. TACACS
- C. Flex ACL
- D. RADIUS

Answer: A

Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wlan-security/71978-acl-wlc.html>

NEW QUESTION 577

- (Topic 1)

When configuring IPv6 on an interface, which two IPv6 multicast groups are joined? (Choose two)

- A. 2000::/3
- B. 2002::5
- C. FC00::/7
- D. FF02::1
- E. FF02::2

Answer: DE

Explanation:

Reference:

<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xr-3s/ipv6-xr-36s-book/ipv6-multicast.html>

When an interface is configured with IPv6 address, it automatically joins the all nodes (FF02::1) and solicited-node (FF02::1:FFxx:xxxx) multicast groups. The all-node group is used to communicate with all interfaces on the local link, and the solicited-nodes multicast group is required for link-layer address resolution. Routers also join a third multicast group, the all-routers group (FF02::2).

NEW QUESTION 582

- (Topic 1)

Which protocol does an IPv4 host use to obtain a dynamically assigned IP address?

- A. ARP
- B. DHCP
- C. CDP
- D. DNS

Answer: B

Explanation:

<https://www.geeksforgeeks.org/how-dhcp-server-dynamically-assigns-ip-address-to-a-host/#:~:text=DHCP%20is%20an%20abbreviation%20for,subnet%20mask%20and%20gateway%20address.>

NEW QUESTION 583

- (Topic 1)

Which function does the range of private IPv4 addresses perform?

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

Answer: A

NEW QUESTION 586

- (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 591

- (Topic 1)

What is a recommended approach to avoid co-channel congestion while installing access points that use the 2.4 GHz frequency?

- A. different nonoverlapping channels
- B. different overlapping channels
- C. one overlapping channel
- D. one nonoverlapping channel

Answer: A

NEW QUESTION 595

- (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 598

- (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 599

- (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 602

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 606

- (Topic 1)

Where is the interface between the control plane and data plane within the software-defined architecture?

- A. control layer and the infrastructure layer
- B. application layer and the infrastructure layer
- C. control layer and the application layer
- D. application layer and the management layer

Answer: A

NEW QUESTION 610

- (Topic 1)

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

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

Answer: C

Explanation:

“Encapsulating Security Payload...Unlike Authentication Header (AH), ESP in transport mode does not provide integrity and authentication for the entire IP packet. However, in Tunnel Mode, where the entire original IP packet is encapsulated with a new packet header added, ESP protection is afforded to the whole inner IP packet (including the inner header) while the outer header (including any outer IPv4 options or IPv6 extension headers) remains unprotected.

NEW QUESTION 615

- (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 619

- (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 623

- (Topic 1)

Which mode allows access points to be managed by Cisco Wireless LAN Controllers?

- A. autonomous
- B. lightweight
- C. bridge
- D. mobility express

Answer: B

Explanation:

<https://www.cisco.com/c/en/us/support/docs/wireless/aironet-1200-series/70278-lap-faq.html>

A Lightweight Access Point (LAP) is an AP that is designed to be connected to a wireless LAN (WLAN) controller (WLC). APs are “lightweight,” which means that they cannot act independently of a wireless LAN controller (WLC). The WLC manages the AP configurations and firmware. The APs are “zero touch” deployed, and individual configuration of APs is not necessary.

NEW QUESTION 624

- (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 627

- (Topic 1)

What is the difference in data transmission delivery and reliability between TCP and UDP?

- A. TCP transmits data at a higher rate and ensures packet deliver
- B. UDP retransmits lost data to ensure applications receive the data on the remote end.
- C. UDP sets up a connection between both devices before transmitting dat
- D. TCP uses the three-way handshake to transmit data with a reliable connection.
- E. UDP is used for multicast and broadcast communicatio
- F. TCP is used for unicast communication and transmits data at a higher rate with error checking.
- G. TCP requires the connection to be established before transmitting dat
- H. UDP transmits data at a higher rate without ensuring packet delivery.

Answer: D

NEW QUESTION 628

- (Topic 1)

Aside from discarding, which two states does the switch port transition through while using RSTP (802.1w)? (Choose two)

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

Answer: CD

NEW QUESTION 629

- (Topic 1)

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

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

Answer: BE

NEW QUESTION 630

- (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 634

- (Topic 1)

Which two actions are performed by the Weighted Random Early Detection mechanism? (Choose two)

- A. It drops lower-priority packets before it drops higher-priority packets
- B. It can identify different flows with a high level of granularity
- C. It guarantees the delivery of high-priority packets
- D. It can mitigate congestion by preventing the queue from filling up
- E. it supports protocol discovery

Answer: AD

Explanation:

Weighted Random Early Detection (WRED) is just a congestion avoidance mechanism. WRED drops packets selectively based on IP precedence. Edge routers assign IP precedences to packets as they enter the network. When a packet arrives, the following events occur:

* 1. The average queue size is calculated. 2. If the average is less than the minimum queue threshold, the arriving packet is queued. 3. If the average is between the minimum queue threshold for that type of traffic and the maximum threshold for the interface, the packet is either dropped or queued, depending on the packet drop probability for that type of traffic. 4. If the average queue size is greater than the maximum threshold, the packet is dropped. WRED reduces the chances of tail drop (when the queue is full, the packet is dropped) by selectively dropping packets when the output interface begins to show signs of congestion (thus it can mitigate congestion by preventing the queue from filling up). By dropping some packets early rather than waiting until the queue is full, WRED avoids dropping large numbers of packets at once and minimizes the chances of global synchronization. Thus, WRED allows the transmission line to be usefully at all times. WRED generally drops packets selectively based on IP precedence. Packets with a higher IP precedence are less likely to be dropped than packets with a lower precedence. Thus, the higher the priority of a packet, the higher the probability that the packet will be delivered

NEW QUESTION 637

- (Topic 1)

What is a characteristic of a SOHO network?

- A. connects each switch to every other switch in the network
- B. enables multiple users to share a single broadband connection
- C. provides high throughput access for 1000 or more users
- D. includes at least three tiers of devices to provide load balancing and redundancy

Answer: B

NEW QUESTION 638

- (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 640

- (Topic 1)

A manager asks a network engineer to advise which cloud service models are used so employees do not have to waste their time installing, managing, and updating software which is only used occasionally Which cloud service model does the engineer recommend?

- A. infrastructure-as-a-service
- B. platform-as-a-service
- C. business process as service to support different types of service
- D. software-as-a-service

Answer: D

NEW QUESTION 645

- (Topic 1)

Which option about JSON is true?

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

Answer: B

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"] }

NEW QUESTION 646

- (Topic 1)

What is a function of a remote access VPN?

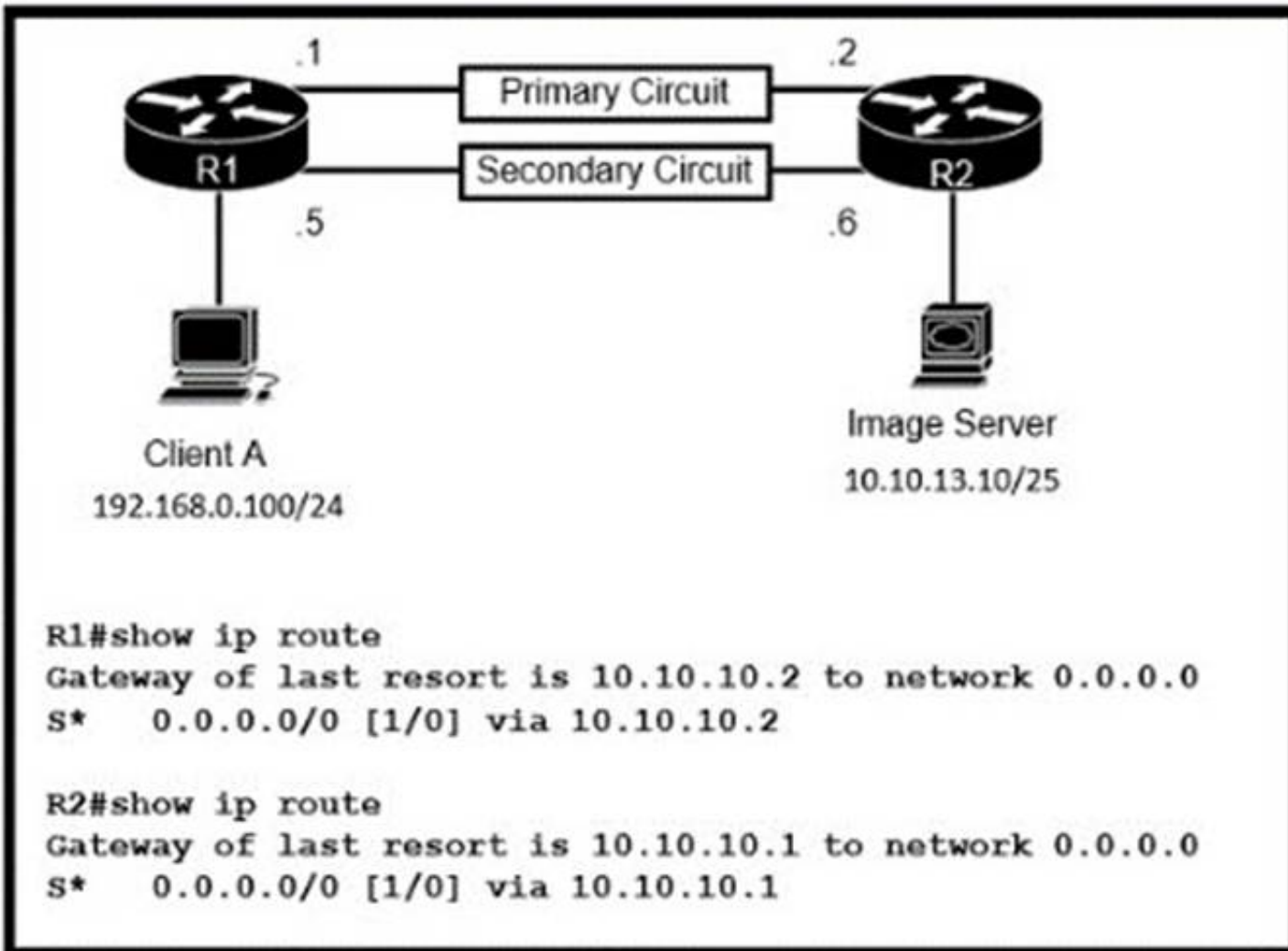
- A. used cryptographic tunneling to protect the privacy of data for multiple users simultaneously
- B. used exclusively when a user is connected to a company's internal network
- C. establishes a secure tunnel between two branch sites

D. allows the users to access company internal network resources through a secure tunnel

Answer: D

NEW QUESTION 651

- (Topic 1)



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

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

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

Answer: B

NEW QUESTION 656

- (Topic 1)

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

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

Answer: C

Explanation:

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

NEW QUESTION 658

- (Topic 1)

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

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

Answer: D

Explanation:

FHRP is layer 3 protocol whose purpose is to protect the default gateway by offering redundancy of the gateway in a subnet. This is achieved by allowing two or more routers to provide a backup for the first-hop IP router address. If a failure of an active router occurs, the backup router will take over the address. The routers negotiate their roles (Active/Standby) with each other by multicast hello messages to share the VIP (virtual IP address) between the FHRP routers. The terms Active/Standby vary between the different types of FHRP. The active router will act as the default gateway and the standby router acts as a backup the active router.

NEW QUESTION 663

- (Topic 1)

Which two WAN architecture options help a business scalability and reliability for the network? (Choose two)

- A. asynchronous routing
- B. single-homed branches
- C. dual-homed branches
- D. static routing
- E. dynamic routing

Answer: AC

NEW QUESTION 665

- (Topic 1)

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

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

Answer: A

NEW QUESTION 668

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

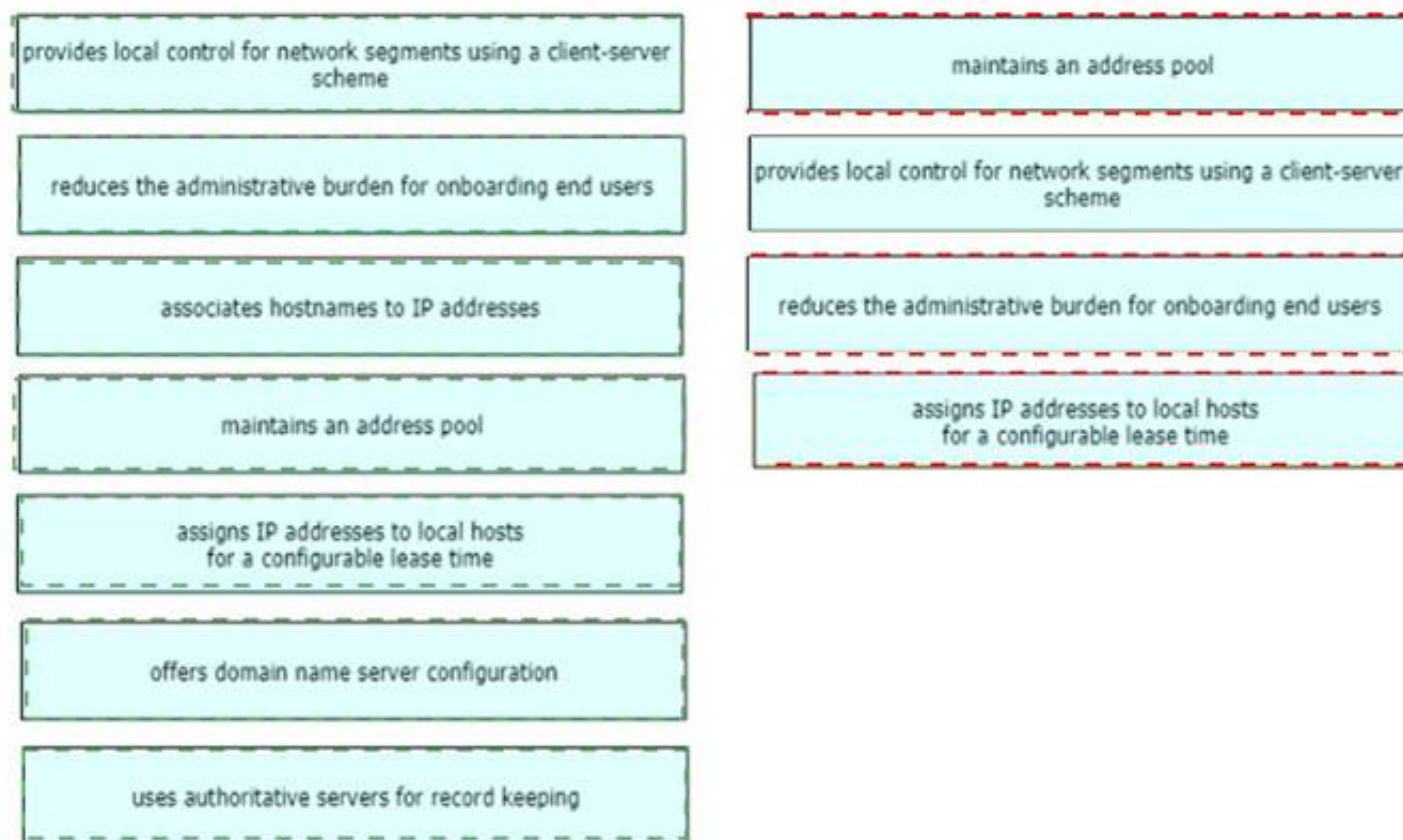
provides local control for network segments using a client-server scheme	1
reduces the administrative burden for onboarding end users	2
associates hostnames to IP addresses	3
maintains an address pool	4
assigns IP addresses to local hosts for a configurable lease time	
offers domain name server configuration	
uses authoritative servers for record keeping	

A. Mastered

B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 672

- (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 673

- (Topic 1)

Which spanning-tree enhancement avoids the learning and listening states and immediately places ports in the forwarding state?

- A. BPDUfilter
- B. PortFast
- C. Backbonefast
- D. BPDUguard

Answer: B

Explanation:

PortFast

Spanning Tree Portfast causes layer 2 switch interfaces to enter forwarding state immediately, bypassing the listening and learning states. It should be used on ports connected directly to end hosts like servers or workstations. Note: If portfast isn't enabled, DHCP timeouts can occur while STP converges, causing more problems.

<https://skminhaj.wordpress.com/2015/03/04/spanning-tree-stp-rstp-mst-enhancements/>

NEW QUESTION 677

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 679

- (Topic 1)

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

- A. runs
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 runs, 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 runs, 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 683

- (Topic 1)

When implementing a router as a DHCP server, which two features must be configured'? (Choose two)

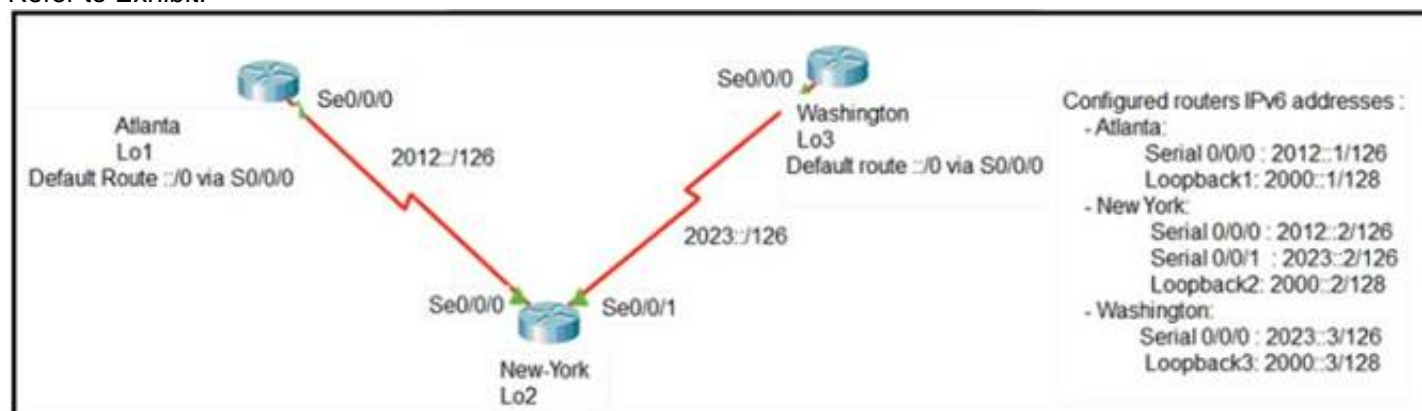
- A. relay agent information
- B. database agent
- C. address pool
- D. smart-relay
- E. manual bindings

Answer: CE

NEW QUESTION 686

- (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)

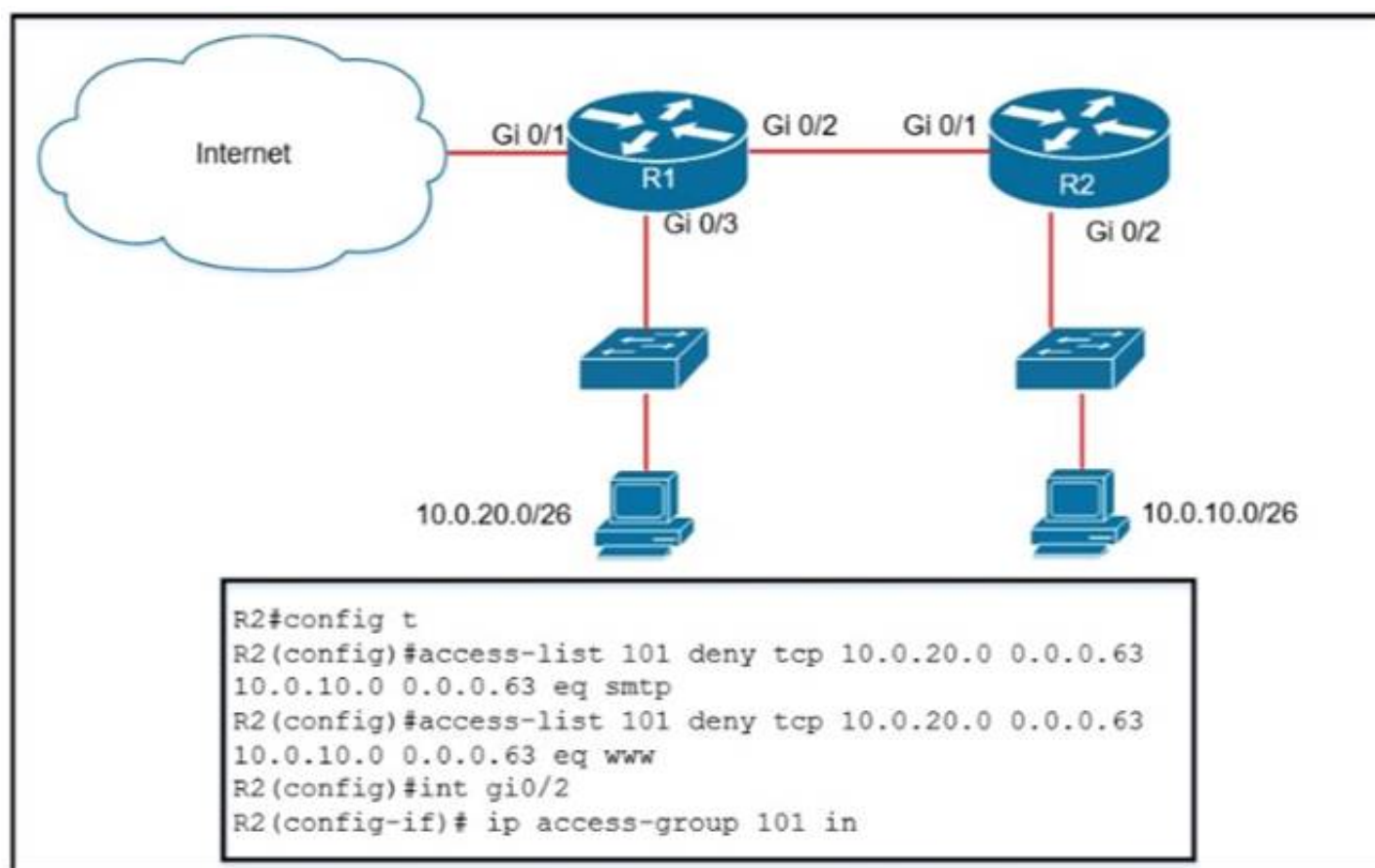
- A. ipv6 route 2000::1/128 2012::1
- B. ipv6 route 2000::3/128 2023::3
- C. ipv6 route 2000::3/128 s0/0/0
- D. ipv6 route 2000::1/128 2012::2
- E. ipv6 route 2000::1/128 s0/0/1

Answer: AB

NEW QUESTION 690

- (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 begining 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 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 695

- (Topic 1)

What are two fundamentals of virtualization? (choose two)

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

Answer: BC

NEW QUESTION 697

- (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 702

- (Topic 1)

Which two functions are performed by the core layer in a three-tier architecture? (Choose two)

- A. Provide uninterrupted forwarding service.
- B. Police traffic that is sent to the edge of the network.
- C. Provide direct connectivity for end user devices.
- D. Ensure timely data transfer between layers.
- E. Inspect packets for malicious activity.

Answer: AD

Explanation:

Cisco is very clear about the purpose of this layer. Its only role is to forward traffic, the fastest it can. Here you don't apply any policy, as you must try to reduce the load of the core so it can focus on routing. https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Campus/campover.html#wp708_831

NEW QUESTION 705

- (Topic 1)

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

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

Answer: A

NEW QUESTION 706

- (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 707

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