

# Cisco

## Exam Questions 200-301

Cisco Certified Network Associate



**NEW QUESTION 1**

- (Topic 3)

Which wireless security protocol relies on Perfect Forward Secrecy?

- A. WPA3
- B. WPA
- C. WEP
- D. WPA2

**Answer: A**

**NEW QUESTION 2**

- (Topic 3)

R1 as an NTP server must have:

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

How should R1 be configured?

A)

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

B)

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

C)

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

D)

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

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

**Answer: B**

**NEW QUESTION 3**

- (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?

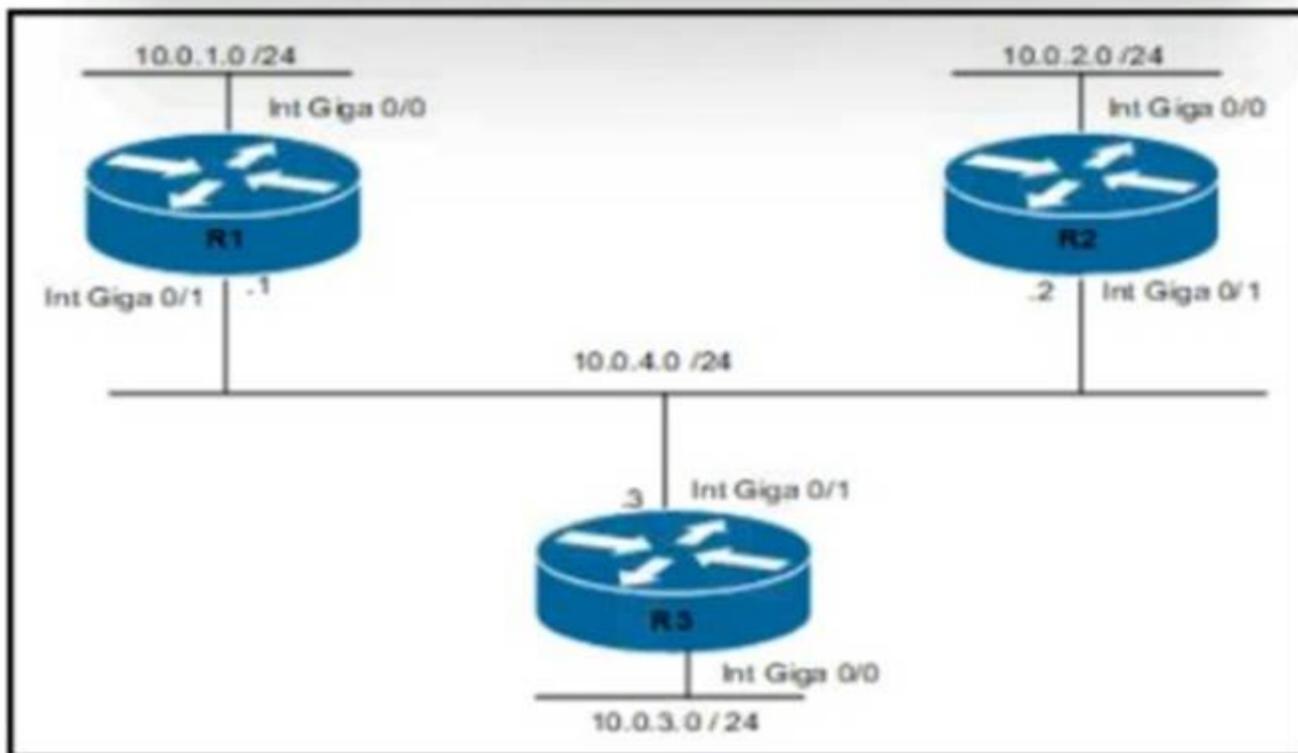
- A. Configure router A to use the same MTU size as router B.
- B. Set the router B OSPF ID to a nonhost address.
- C. Configure a point-to-point link between router A and router B.
- D. Set the router B OSPF ID to the same value as its IP address

**Answer: B**

**NEW QUESTION 4**

- (Topic 3)

Refer to the exhibit.



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

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

**Answer: B**

**NEW QUESTION 5**

- (Topic 3)

Which protocol is used for secure remote CLI access?

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

**Answer: D**

**NEW QUESTION 6**

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**

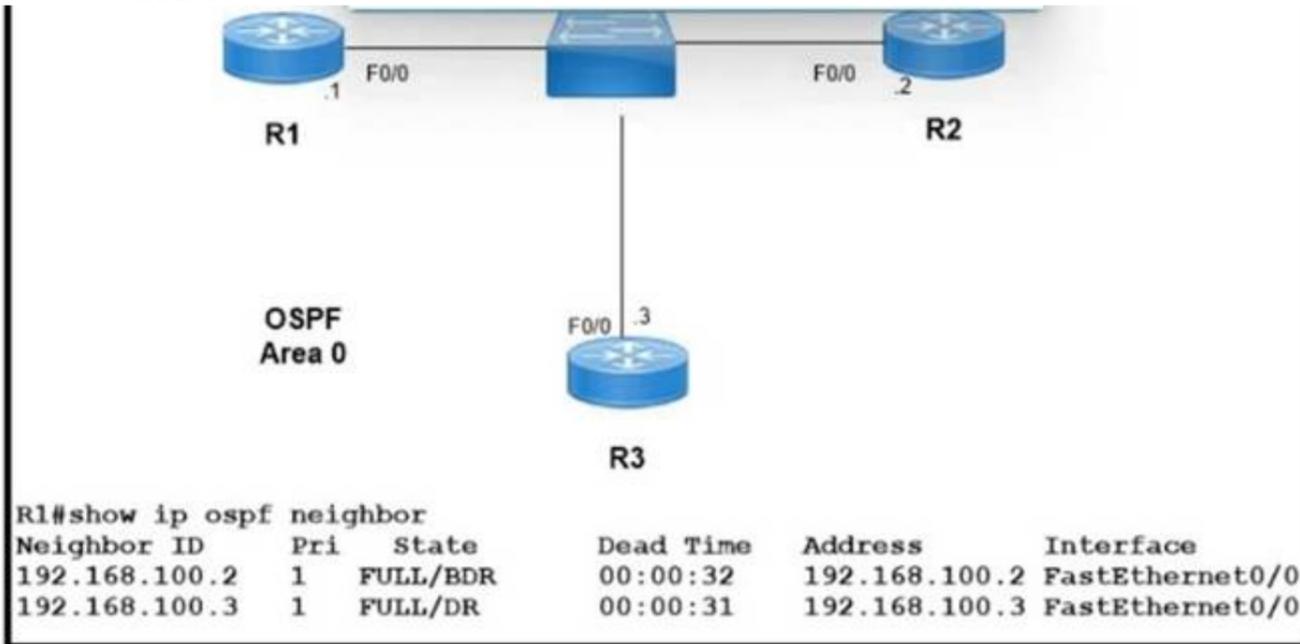
**Explanation:**

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 7**

- (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 8**

- (Topic 3)

Refer to the exhibit.

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

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 9**

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

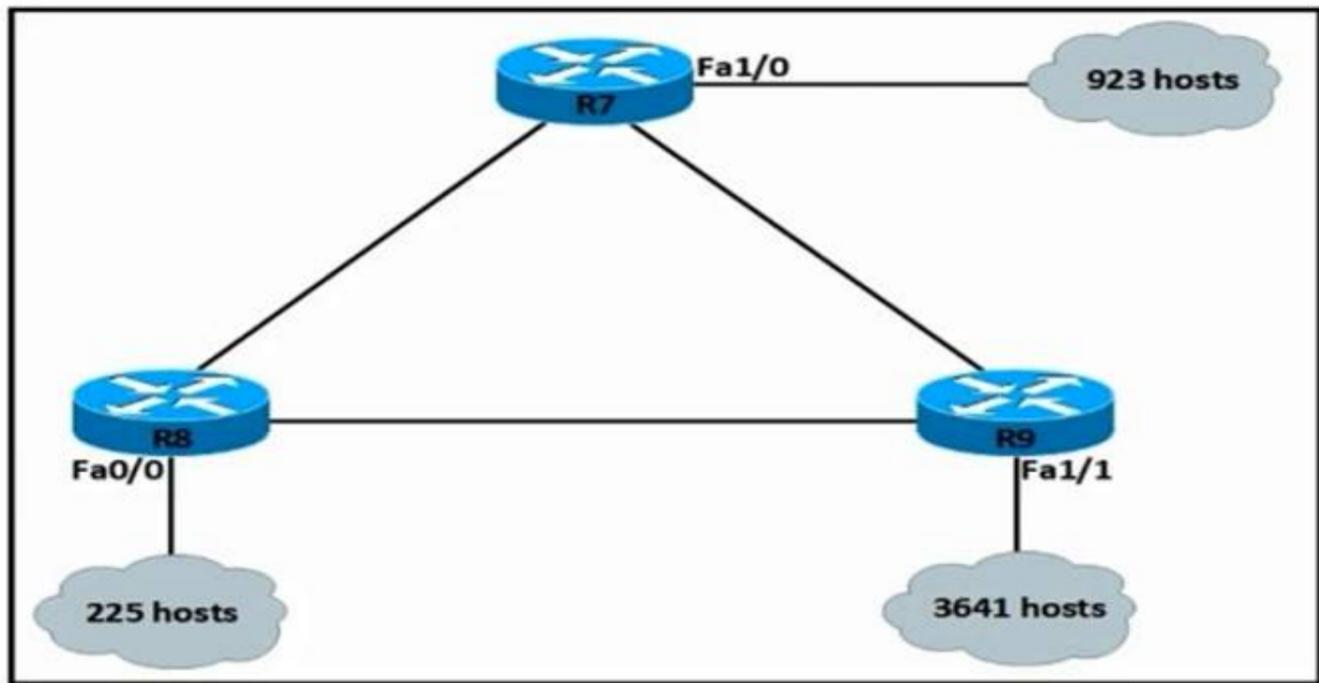
**Explanation:**

Diagram Description automatically generated with low confidence

**NEW QUESTION 10**

- (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 10

- (Topic 3)  
Refer to the exhibit.

```

R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.254 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.254, Serial0/0/1
   is directly connected, Serial0/0/1
C   172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
C   172.16.1.0/24 is directly connected, FastEthernet0/0
L   172.16.1.1/32 is directly connected, FastEthernet0/0
R   172.16.2.0/24 [120/2] via 207.165.200.250, 00:00:25, Serial0/0/0
O   192.168.1.0/24 [110/4437] via 207.165.200.254, 00:00:17, Serial0/0/1
D   192.168.2.0/24 [90/84437] via 207.165.200.254, 00:00:15, Serial0/0/1
   207.165.200.0/24 is variably subnetted, 5 subnets, 2 masks
S   207.165.200.244/30 [1/1] via 207.165.200.254, Serial0/0/1
C   207.165.200.248/30 is directly connected, Serial0/0/0
L   207.165.200.249/32 is directly connected, Serial0/0/0
C   207.165.200.252/30 is directly connected, Serial0/0/1
L   207.165.200.253/32 is directly connected, Serial0/0/1
    
```

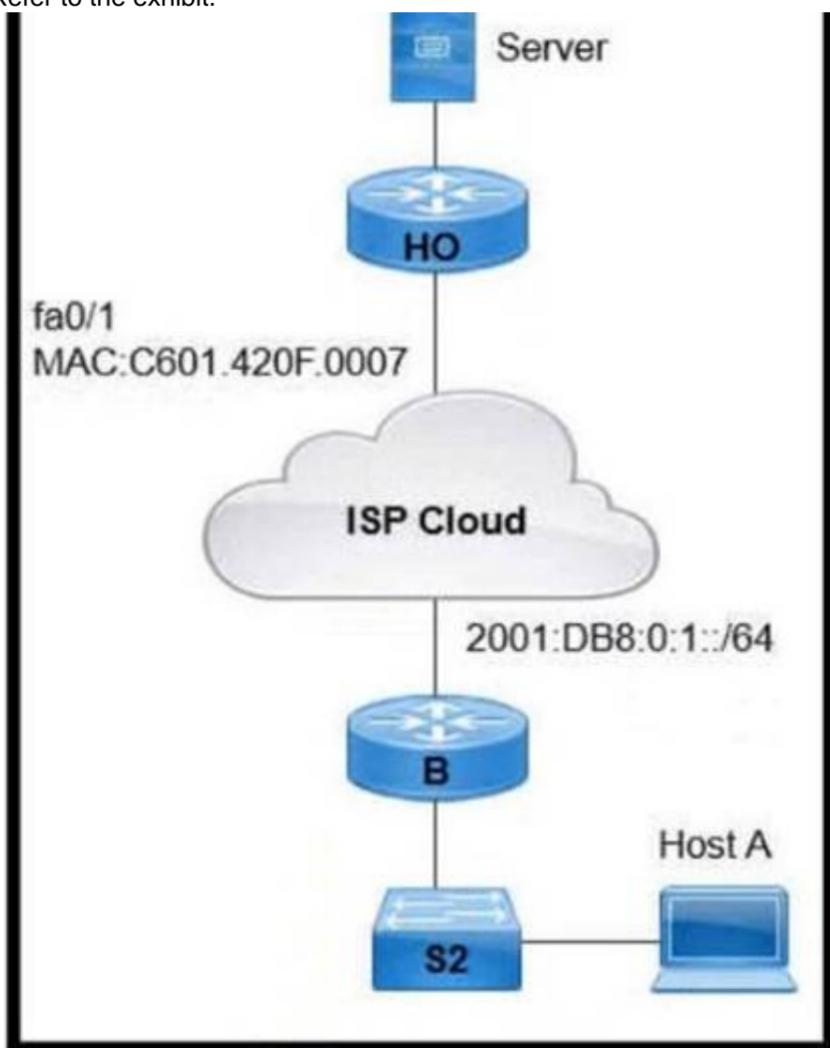
Which network prefix was learned via EIGRP?

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

Answer: B

**NEW QUESTION 12**

- (Topic 3)  
 Refer to the exhibit.



An engineer is configuring the HO router. Which IPv6 address configuration must be applied to the router fa0/1 interface for the router to assign a unique 64-bit IPv6 address to itself?

- A. ipv6 address 2001:DB8:0:1:C601:42FF:FE0F:7/64
- B. ipv6 address 2001:DB8:0:1:C601:42FE:800F:7/64
- C. ipv6 address 2001 :DB8:0:1:FFFF:C601:420F:7/64
- D. iov6 address 2001 :DB8:0:1:FE80:C601:420F:7/64

Answer: A

**NEW QUESTION 13**

- (Topic 3)  
 Which QoS traffic handling technique retains excess packets in a queue and reschedules these packets for later transmission when the configured maximum bandwidth has been surpassed?

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

Answer: C

**NEW QUESTION 15**

- (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 16**

- (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 20**

- (Topic 2)

Refer to the exhibit.

```
SW1#show run int gig 0/1
interface GigabitEthernet0/1
  switchport access vlan 11
  switchport trunk allowed vlan 1-10
  switchport trunk encapsulation dot1q
  switchport trunk native vlan 5
  switchport mode trunk
  speed 1000
  duplex full
```

Which action is expected from SW1 when the untagged frame is received on the GigabitEthernet0/1 interface?

- A. The frame is processed in VLAN 5.
- B. The frame is processed in VLAN 11
- C. The frame is processed in VLAN 1
- D. The frame is dropped

**Answer: A**

**NEW QUESTION 22**

- (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 25**

- (Topic 2)

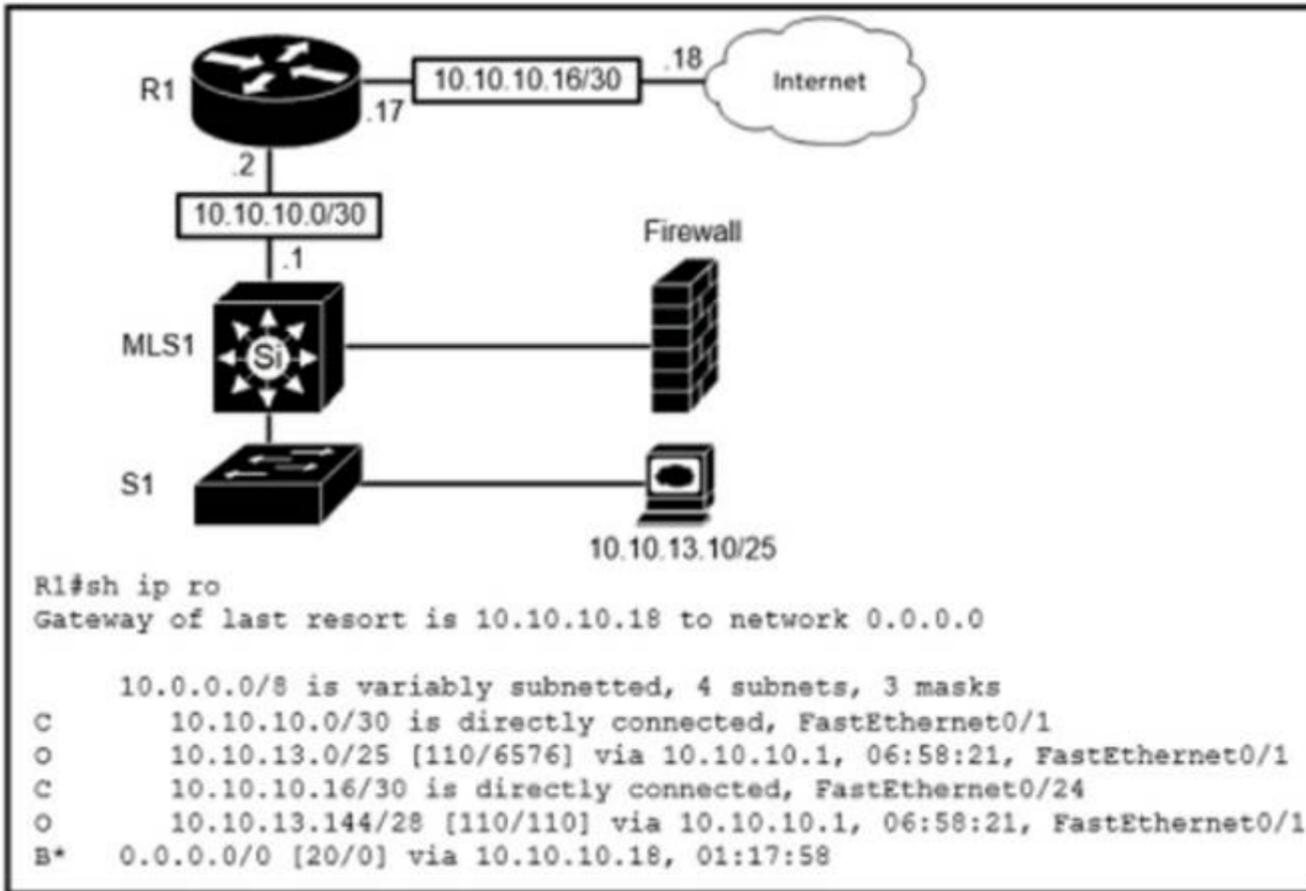
What are two differences between optical-fiber cabling and copper cabling? (Choose two)

- 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 30**

- (Topic 2)  
 Refer to the exhibit.



Which route type is configured to reach the internet?

- A. host route
- B. default route
- C. floating static route
- D. network route

**Answer: B**

**NEW QUESTION 32**

- (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 36**

- (Topic 2)  
 A packet is destined for 10.10.1.22. Which static route does the router choose to forward the packet?

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

**Answer: C**

**NEW QUESTION 39**

- (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 42**

- (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:**

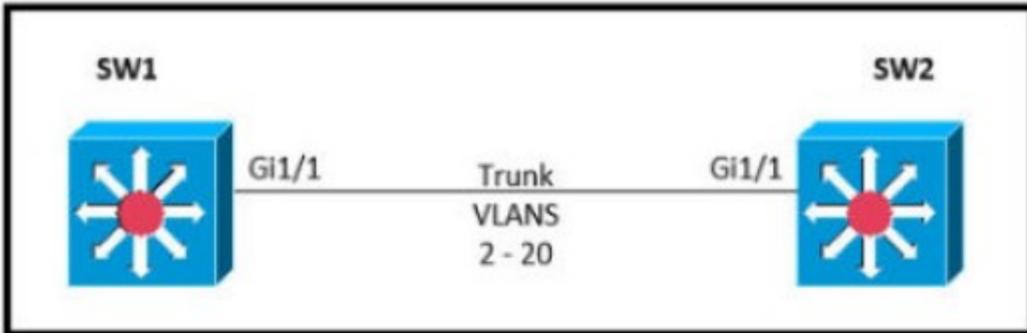
<https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4000/8-2glx/configuration/guide/ntp.html>

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 43**

- (Topic 2)

Refer to the exhibit.



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

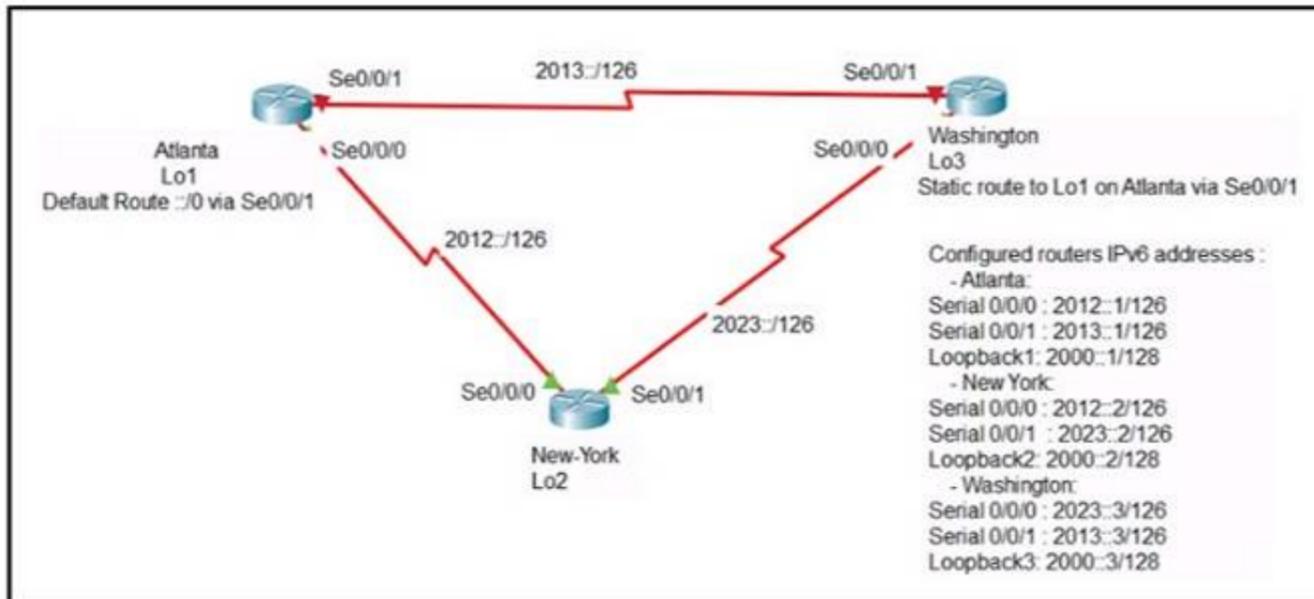
- A. switchport mode trunk
- B. switchport mode dot1-tunnel
- C. switchport mode dynamic auto
- D. switchport mode dynamic desirable

**Answer:** C

**NEW QUESTION 44**

- (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::1/128 2012::1
- B. ipv6 router 2000::1/128 2012::1 5
- C. ipv6 router 2000::1/128 2012::2
- D. ipv6 router 2000::1/128 2023::2 5
- E. ipv6 router 2000::1/128 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 45**

- (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
```

Keystream Times!  
<https://keystream>

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 47**

- (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 50**

- (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      Po1 (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 54**

- (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 58**

- (Topic 2)

What are two benefits of network automation? (Choose two)

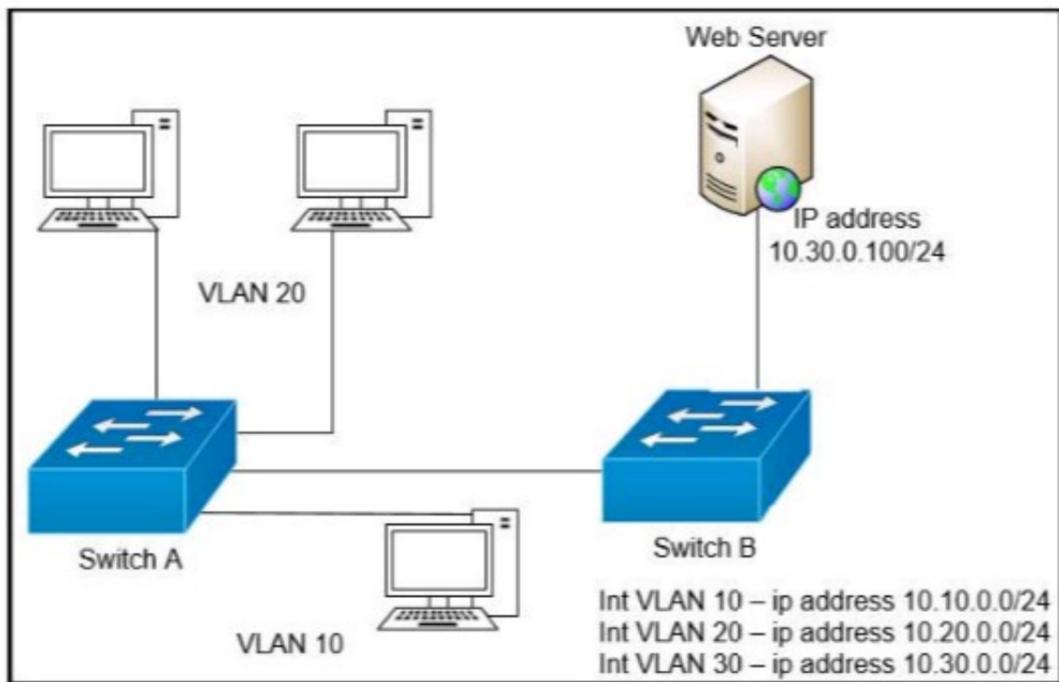
- A. reduced operational costs
- B. reduced hardware footprint
- C. faster changes with more reliable results
- D. fewer network failures
- E. increased network security

**Answer: AC**

**NEW QUESTION 62**

- (Topic 2)

Refer to the exhibit.



A network engineer must block access for all computers on VLAN 20 to the web server via HTTP. All other computers must be able to access the web server. Which configuration when applied to switch A accomplishes this task?

```
config t
ip access-list extended wwwblock
deny tcp any host 10.30.0.100 eq 80
int vlan 10
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
deny tcp any host 10.30.0.100 eq 80
permit ip any any
int vlan 20
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
permit ip any any
deny tcp any host 10.30.0.100 eq 80
int vlan 30
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
permit ip any any
deny tcp any host 10.30.0.100 eq 80
int vlan 20
ip access-group wwwblock in
```

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

Answer: B

#### NEW QUESTION 65

- (Topic 2)

Which protocol prompts the Wireless LAN Controller to generate its own local web administration SSL certificate for GUI access?

- A. HTTPS
- B. RADIUS
- C. TACACS+
- D. HTTP

Answer: A

#### Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configuration-guide/b\\_cg80/b\\_cg80\\_chapter\\_011.html](https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configuration-guide/b_cg80/b_cg80_chapter_011.html)

#### NEW QUESTION 69

- (Topic 2)

Which type of traffic is sent with pure iPsec?

- A. broadcast packets from a switch that is attempting to locate a MAC address at one of several remote sites
- B. multicast traffic from a server at one site to hosts at another location
- C. spanning-tree updates between switches that are at two different sites
- D. unicast messages from a host at a remote site to a server at headquarters

Answer: D

#### Explanation:

"The original poster makes a correct observation that EIGRP does not work in a pure IPSEC environment. IPSEC was designed to process unicast traffic.

#### NEW QUESTION 70

- (Topic 2)

A network engineer must configure the router R1 GigabitEthernet1/1 interface to connect to the router R2 GigabitEthernet1/1 interface. For the configuration to be applied the engineer must compress the address 2001:0db8:0000:0000:0500:000a:400F:583B. Which command must be issued on the interface?

- A. ipv6 address 2001:0db8::5: a: 4F 583B
- B. ipv6 address 2001:db8::500:a:400F:583B
- C. ipv6 address 2001 db8:0::500:a:4F:583B
- D. ipv6 address 2001::db8:0000::500:a:400F:583B

Answer: B

#### NEW QUESTION 73

- (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 77**

- (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 81**

- (Topic 2)

Which goal is achieved by the implementation of private IPv4 addressing on a network?

- A. provides an added level of protection against Internet exposure
- B. provides a reduction in size of the forwarding table on network routers
- C. allows communication across the Internet to other private networks
- D. allows servers and workstations to communicate across public network boundaries

**Answer: A**

#### **NEW QUESTION 82**

- (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 84**

- (Topic 2)

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

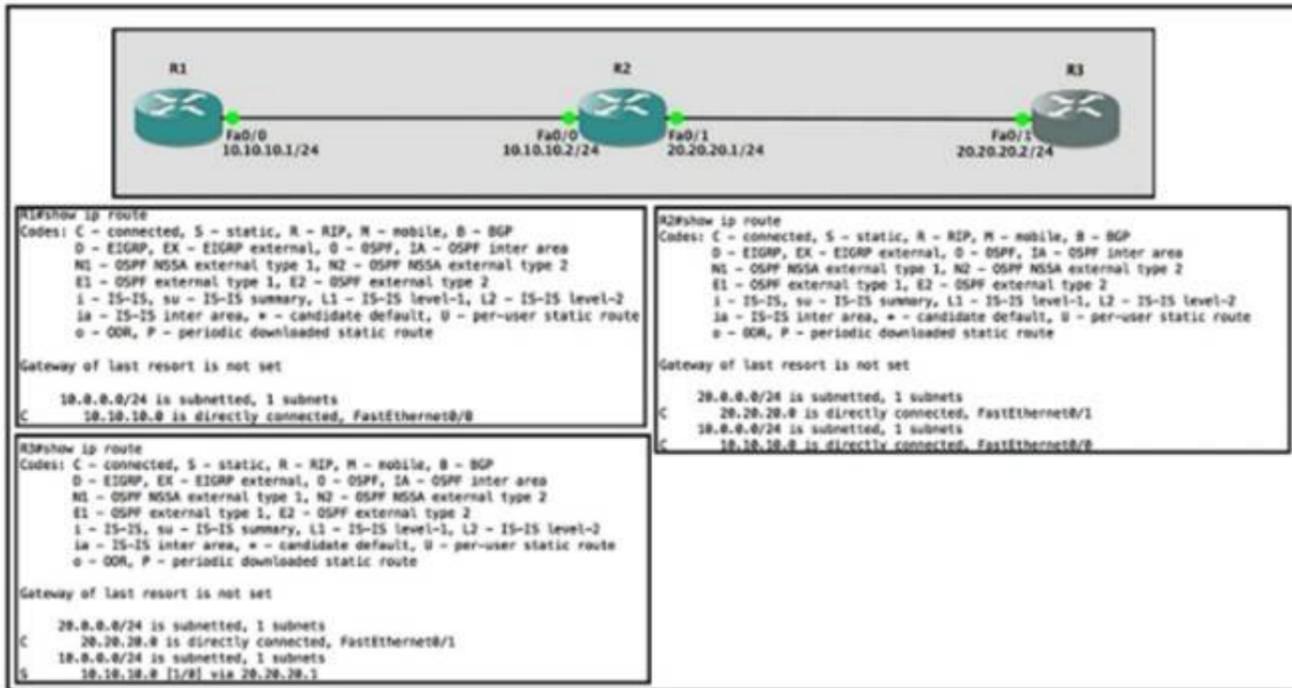
- A. It can be hidden or broadcast in a WLAN
- B. It uniquely identifies an access point in a WLAN
- C. It uniquely identifies a client in a WLAN
- D. It is at most 32 characters long.
- E. IT provides secured access to a WLAN

**Answer: BE**

#### **NEW QUESTION 86**

- (Topic 2)

Refer to the exhibit.



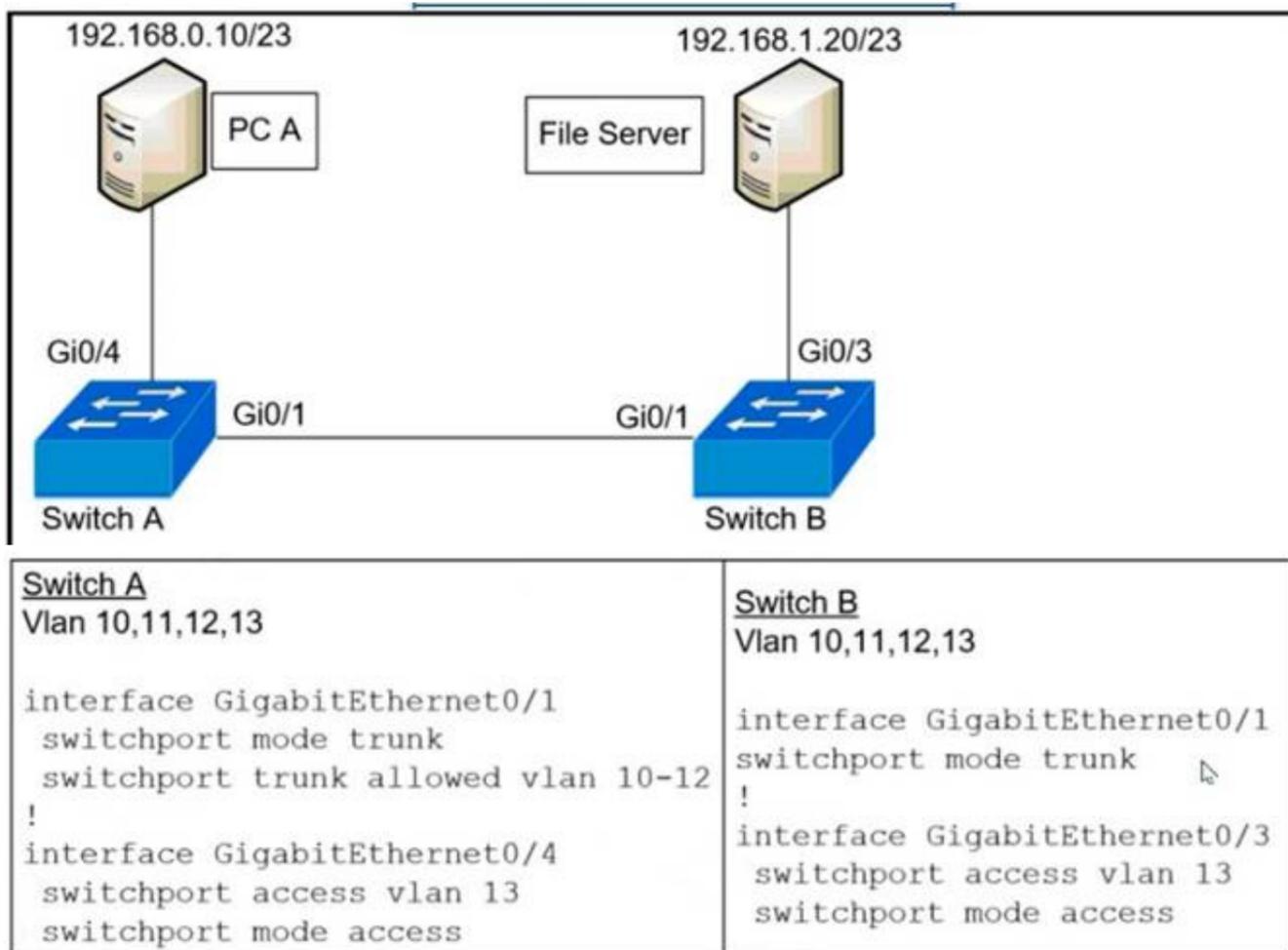
Router R1 Fa0/0 is unable ping router R3 Fa0/1.  
 Which action must be taken in router R1 to help resolve the configuration issue?

- 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 90**

- (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 92**

- (Topic 2)  
 Refer to the exhibit.

```

R1# sh ip ospf int gig0/0
Gig0/0 is up, line protocol is up
Internet Address 10.201.24.8/28, Area 1, Attached via Network Statement
Process ID 100, Router ID 192.168.1.1, Network Type BROADCAST, Cost: 1
Topology-MTID    Cost    Disabled    Shutdown    Topology Name
   0             1      no         no         Base
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 192.168.1.1, Interface address 10.201.24.8
No backup designated router on this network
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:07

R2#sh ip ospf int gig0/0
gig0/0 is up, line protocol is up
Internet Address 10.201.24.1/28, Area 1
Process ID 100, Router ID 172.16.1.1, Network Type BROADCAST, Cost: 1
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 172.16.1.1, Interface address 10.201.24.1
No backup designated router on this network
Timer intervals configured, Hello 20, Dead 80, Wait 80, Retransmit 5
  
```

What action establishes the OSPF neighbor relationship without forming an adjacency?

- A. modify hello interval
- B. modify process ID
- C. modify priority
- D. modify network type

Answer: A

**NEW QUESTION 94**

- (Topic 2)

What benefit does controller-based networking provide versus traditional networking?

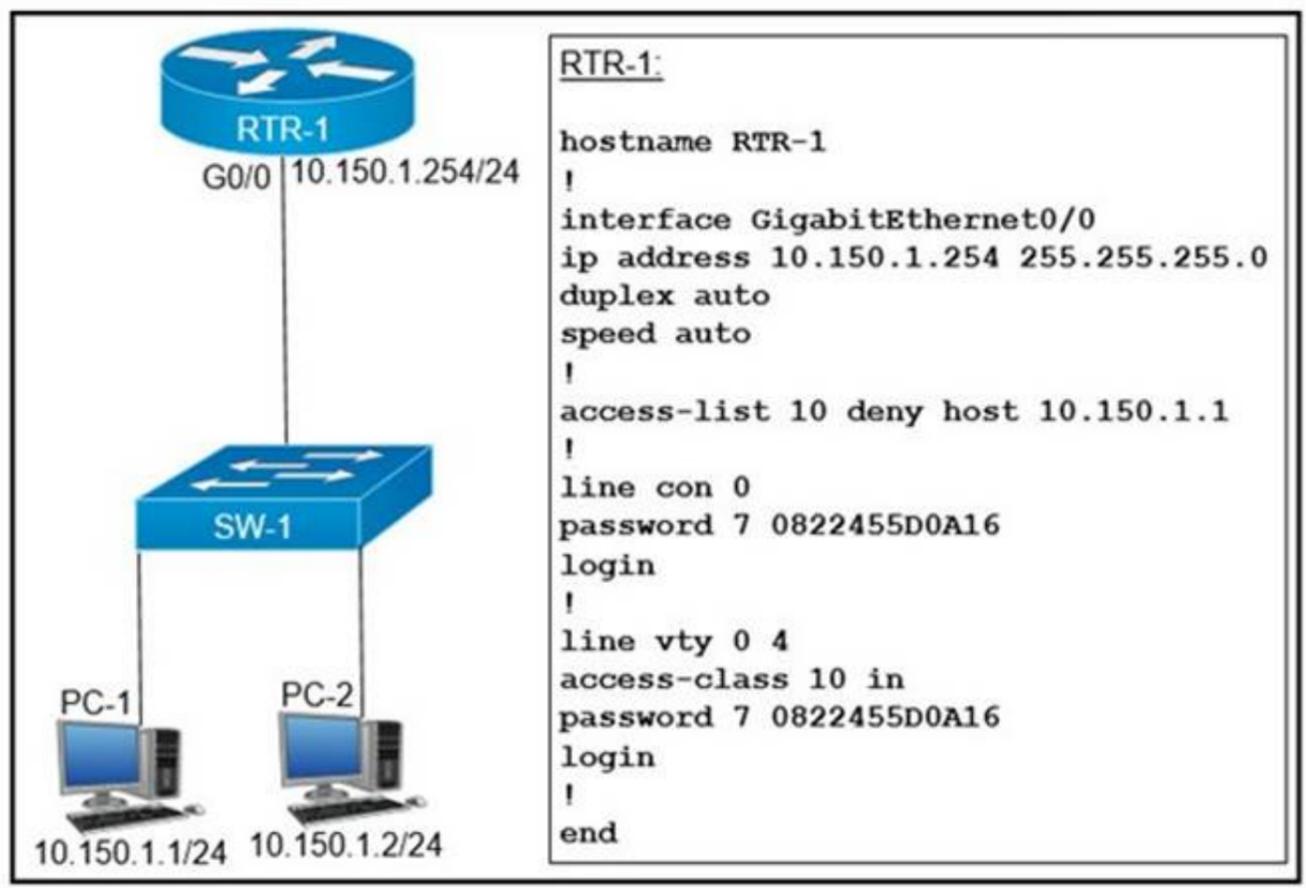
- A. moves from a two-tier to a three-tier network architecture to provide maximum redundancy
- B. provides an added layer of security to protect from DDoS attacks
- C. allows configuration and monitoring of the network from one centralized port
- D. combines control and data plane functionality on a single device to minimize latency

Answer: C

**NEW QUESTION 97**

- (Topic 2)

Refer to the exhibit.



An access list is created to deny Telnet access from host PC-1 to RTR-1 and allow access from all other hosts A Telnet attempt from PC-2 gives this message: "% Connection refused by remote host" Without allowing Telnet access from PC-1, which action must be taken to permit the traffic?

- A. Add the access-list 10 permit any command to the configuration

- B. Remove the access-class 10 in command from line vty 0.4.
- C. Add the ip access-group 10 out command to interface g0/0.
- D. Remove the password command from line vty 0 4.

**Answer:** A

#### NEW QUESTION 102

- (Topic 2)

Which technology must be implemented to configure network device monitoring with the highest security?

- A. IP SLA
- B. syslog
- C. NetFlow
- D. SNMPv3

**Answer:** C

#### NEW QUESTION 105

- (Topic 2)

Where does wireless authentication happen?

- A. SSID
- B. radio
- C. band
- D. Layer 2

**Answer:** D

#### NEW QUESTION 106

- (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 110

- (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 111

- (Topic 2)

Which action must be taken to assign a global unicast IPv6 address on an interface that is derived from the MAC address of that interface?

- A. configure a stateful DHCPv6 server on the network
- B. enable SLAAC on an interface
- C. disable the EUI-64 bit process
- D. explicitly assign a link-local address

**Answer:** A

#### NEW QUESTION 112

- (Topic 2)

What is a function of a Layer 3 switch?

- A. move frames between endpoints limited to IP addresses
- B. transmit broadcast traffic when operating in Layer 3 mode exclusively
- C. forward Ethernet frames between VLANs using only MAC addresses
- D. flood broadcast traffic within a VLAN

**Answer:** A

#### NEW QUESTION 113

- (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.)

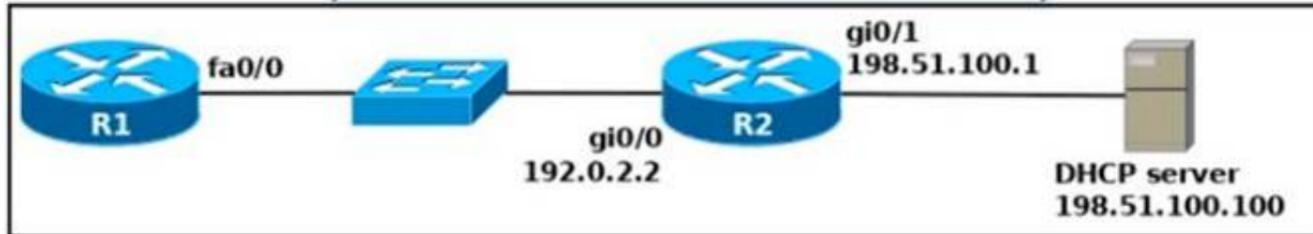
- A. enable the PortFast feature on ports
- B. implement port-based authentication
- C. configure static ARP entries
- D. configure ports to a fixed speed
- E. shut down unused ports

Answer: BE

**NEW QUESTION 118**

- (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 fa0/0R1(config-if)# ip helper-address 198.51.100.100
- B. R2(config)# interface gi0/0R2(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 fa0/0R1(config-if)# ip helper-address 192.0.2.2

Answer: BC

**NEW QUESTION 123**

- (Topic 2)

An engineer needs to configure LLDP to send the port description time length value (TLV). What command sequence must be implemented?

- A. switch(config-line)#lldp port-description
- B. switch(config)#lldp port-description
- C. switch(config-if)#lldp port-description
- D. switch#lldp port-description

Answer: B

**NEW QUESTION 127**

- (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 132**

- (Topic 1)

Which 802.11 frame type is association response?

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

Answer: A

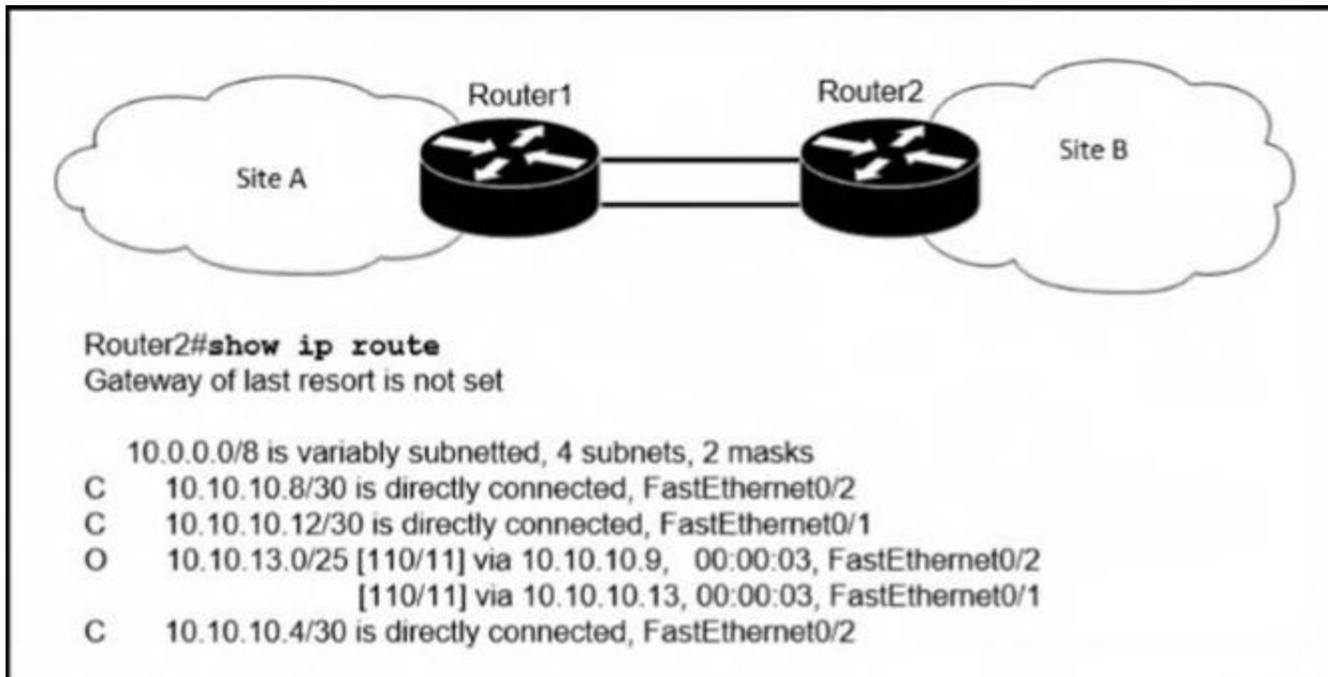
**Explanation:**

Reference: [https://en.wikipedia.org/wiki/802.11\\_Frame\\_Types](https://en.wikipedia.org/wiki/802.11_Frame_Types)

**NEW QUESTION 133**

- (Topic 1)

Refer to the exhibit.



If OSPF is running on this network, how does Router2 handle traffic from Site B to 10.10.13.128/25 at Site A?

- A. It load-balances traffic out of Fa0/1 and Fa0/2.
- B. It is unreachable and discards the traffic.
- C. It sends packets out of interface Fa0/2.
- D. It sends packets out of interface Fa0/1.

**Answer: B**

**NEW QUESTION 137**

- (Topic 1)

Which command automatically generates an IPv6 address from a specified IPv6 prefix and MAC address of an interface?

- A. ipv6 address dhcp
- B. ipv6 address 2001:DB8:5:112::/64 eui-64
- C. ipv6 address autoconfig
- D. ipv6 address 2001:DB8:5:112::2/64 link-local

**Answer: C**

**Explanation:**

The "ipv6 address autoconfig" command causes the device to perform IPv6 stateless address autoconfiguration to discover prefixes on the link and then to add the EUI-64 based addresses to the interface. Addresses are configured depending on the prefixes received in Router Advertisement (RA) messages. The device will listen for RA messages which are transmitted periodically from the router (DHCP Server). This RA message allows a host to create a global IPv6 address from: + Its interface identifier (EUI-64 address) + Link Prefix (obtained via RA) Note: Global address is the combination of Link Prefix and EUI-64 address

**NEW QUESTION 142**

- (Topic 1)

What are network endpoints?

- A. act as routers to connect a user to the service provider network
- B. a threat to the network if they are compromised
- C. support inter-VLAN connectivity
- D. enforce policies for campus-wide traffic going to the internet

**Answer: B**

**NEW QUESTION 146**

- (Topic 1)

Which statement identifies the functionality of virtual machines?

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

**Answer: B**

**NEW QUESTION 147**

- (Topic 1)

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

- A. TCP is a connectionless protocol that does not provide reliable delivery of data, UDP is a connection-oriented protocol that uses sequencing to provide reliable delivery.
- B. TCP does not guarantee delivery or error checking to ensure that there is no corruption of data UDP provides message acknowledgement and retransmits data if lost.
- C. TCP provides flow control to avoid overwhelming a receiver by sending too many packets at once, UDP sends packets to the receiver in a continuous stream

without checking for sequencing

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

**Answer: C**

**NEW QUESTION 149**

- (Topic 1)

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

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

**Answer: A**

**NEW QUESTION 150**

- (Topic 1)

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

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

**Answer: C**

**NEW QUESTION 155**

- (Topic 1)

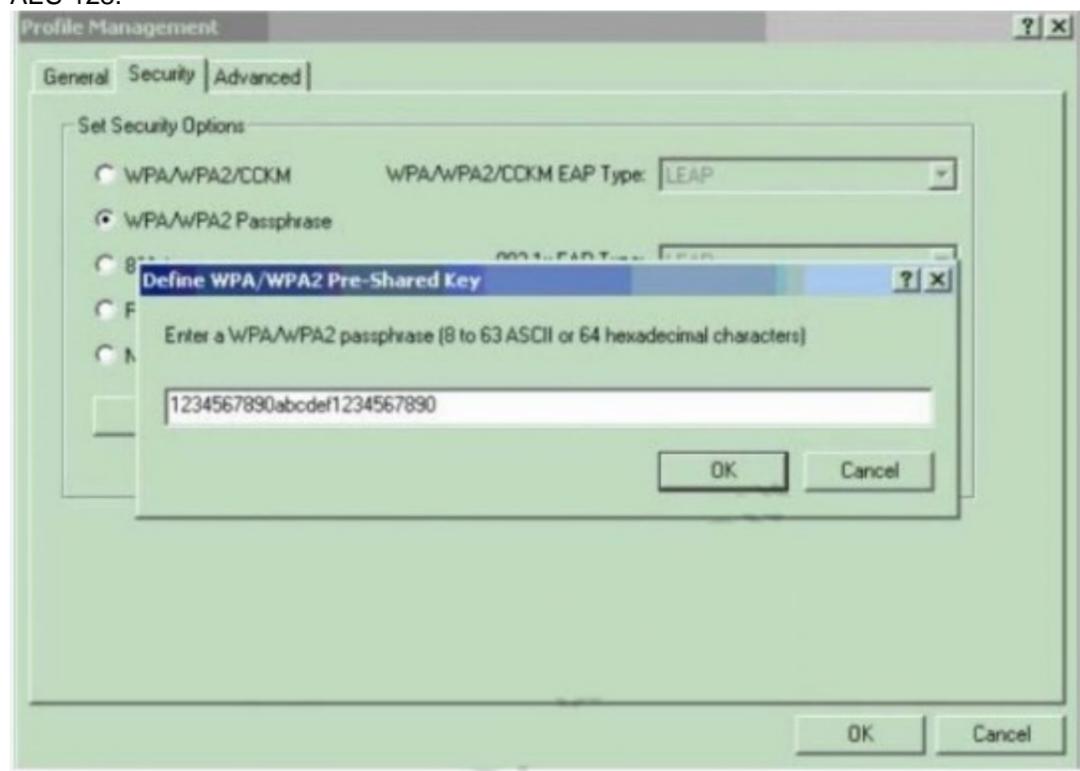
Which type of wireless encryption is used for WPA2 in preshared key mode?

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

**Answer: D**

**Explanation:**

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



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

**NEW QUESTION 157**

- (Topic 1)

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

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

**Answer: D**

**NEW QUESTION 162**

- (Topic 1)

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

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

**Answer: B**

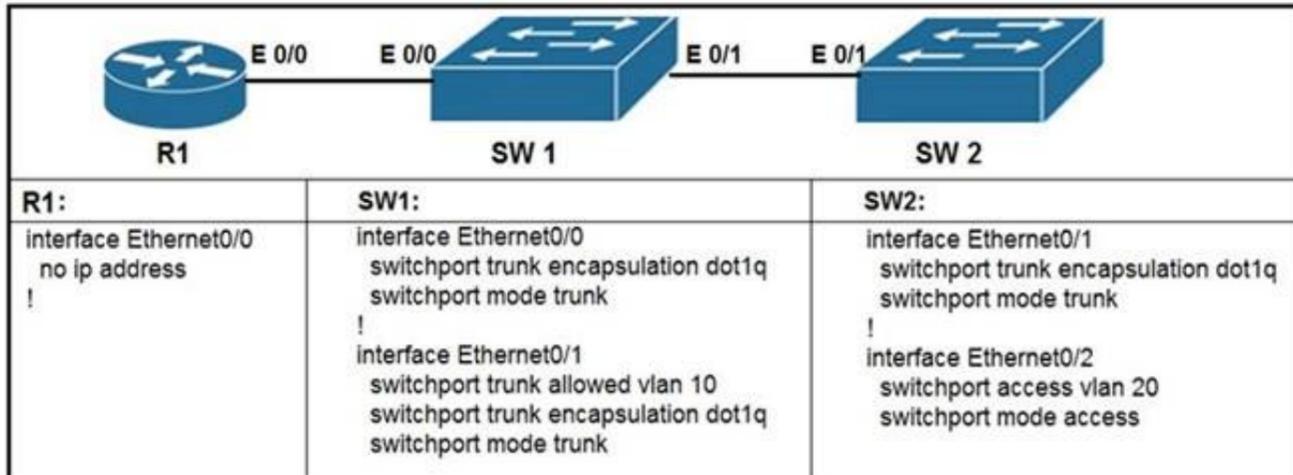
**Explanation:**

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

**NEW QUESTION 164**

- (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 165**

- (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 168**

- (Topic 1)

Refer to the exhibit.

```
SW1#show spanning-tree vlan 30

VLAN0030
Spanning tree enabled protocol rstp
Root ID    Priority          32798
           Address         0025.63e9.c800
           Cost             19
           Port             1 (FastEthernet 2/1)
           Hello Time       2 sec
           Max Age          30 sec
           Forward Delay    20 sec

[Output suppressed]
```

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

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

**Answer:** CE

**Explanation:**

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

A)

```
interface fastethernet0/1
switchport priority extend cos 7
```

B)

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

C)

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

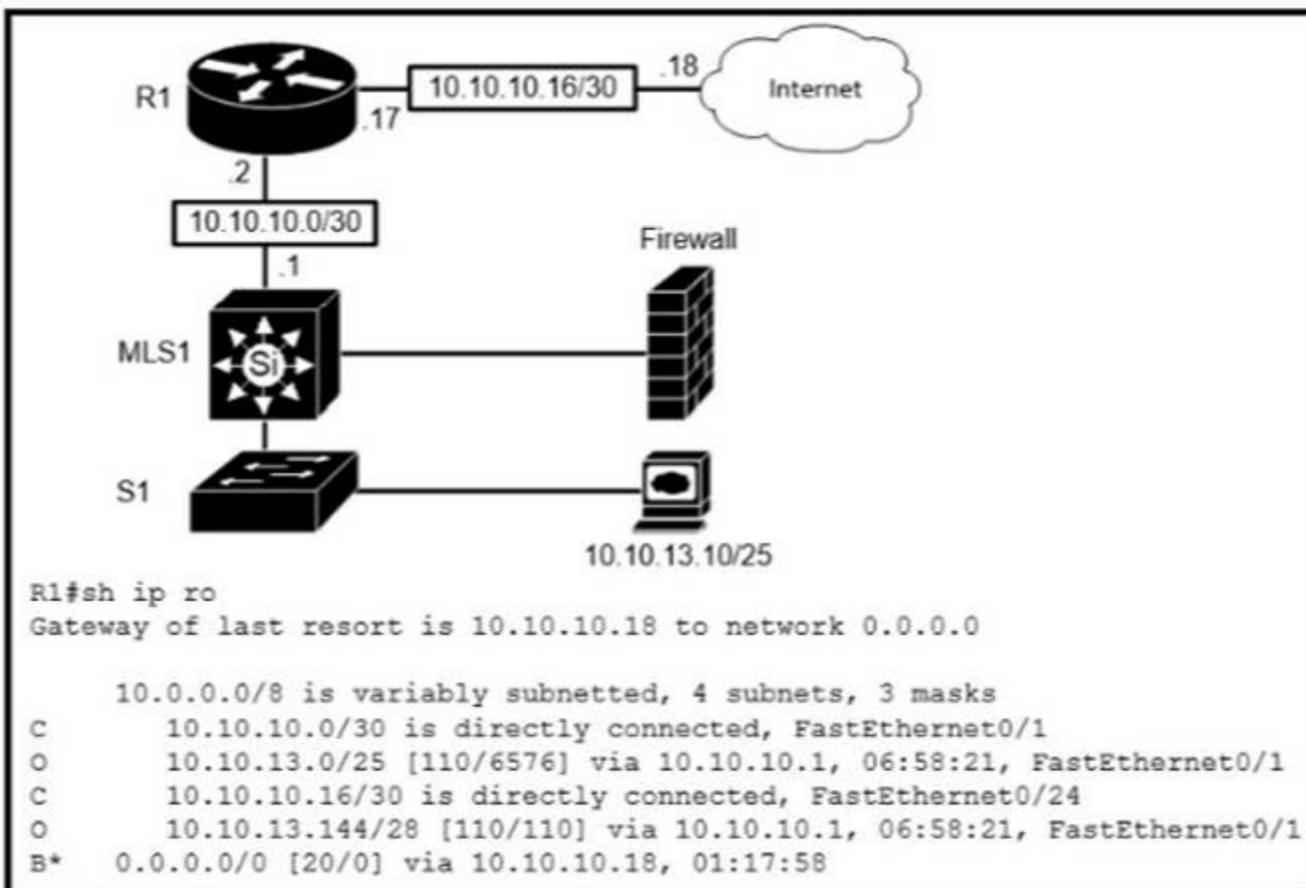
D)

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

- A. Option A
  - B. Option B
  - C. Option C
  - D. Option D
- Answer:** A

**NEW QUESTION 169**

- (Topic 1)  
Refer to the exhibit.



Which type of route does R1 use to reach host 10.10.13.10/32?

- A. floating static route
- B. host route
- C. default route
- D. network route

**Answer:** D

**Explanation:**

From the output, we see R1 will use the entry "O 10.10.13.0/25 [110/4576] via 10.10.10.1, ..." to reach host 10.10.13.10. This is a network route. Note: "B\* 0.0.0.0/0..." is a default route.

**NEW QUESTION 174**

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:**

**NEW QUESTION 179**

- (Topic 1)

A network engineer must back up 20 network router configurations globally within a customer environment. Which protocol allows the engineer to perform this function using the Cisco IOS MIB?

- A. CDP
- B. SNMP
- C. SMTP
- D. ARP

**Answer:** B

**Explanation:**

SNMP is an application-layer protocol that provides a message format for communication between SNMP managers and agents. SNMP provides a standardized framework and a common language used for the monitoring and management of devices in a network. The SNMP framework has three parts: + An SNMP manager + An SNMP agent + A Management Information Base (MIB) The Management Information Base (MIB) is a virtual information storage area for network management information, which consists of collections of managed objects. With SNMP, the network administrator can send commands to multiple routers to do the backup

**NEW QUESTION 181**

- (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 184**

- (Topic 1)

What does a switch use to build its MAC address table?

- A. VTP
- B. DTP
- C. egress traffic
- D. ingress traffic

**Answer:** D

**NEW QUESTION 186**

DRAG DROP - (Topic 1)

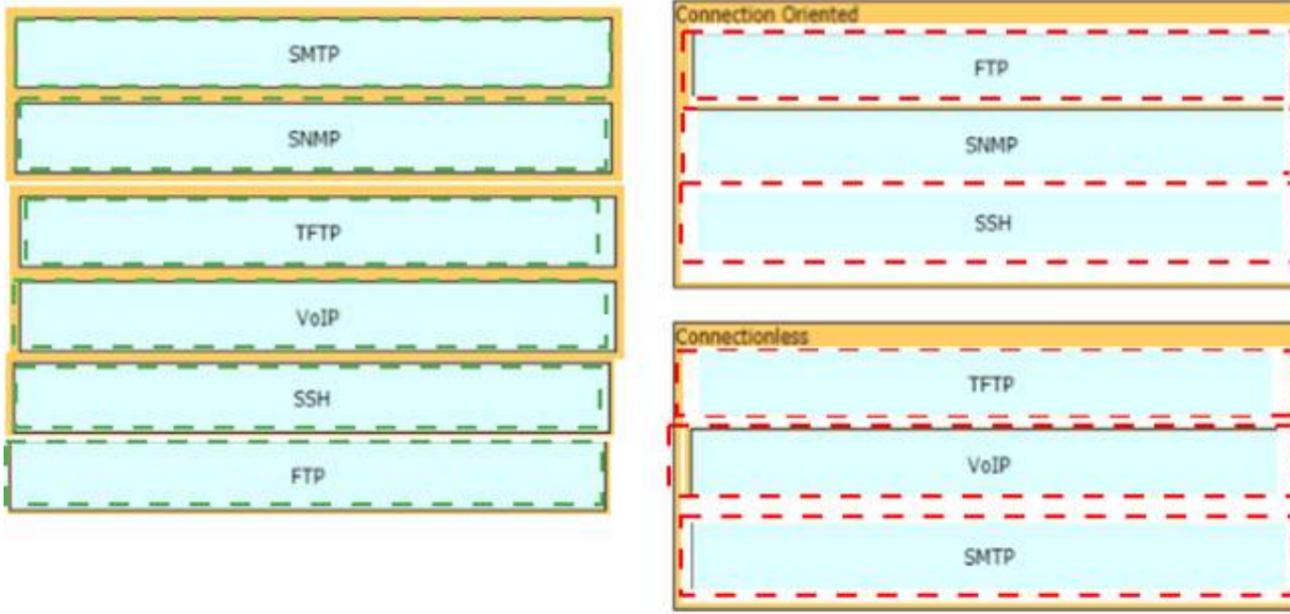
Drag and drop the network protocols from the left onto the correct transport services on the right.

SMTP	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Connection Oriented</div> <div style="border: 1px solid black; padding: 5px;">Connectionless</div>
SNMP	
TFTP	
VoIP	
SSH	
FTP	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 191**

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:**

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

**NEW QUESTION 192**

- (Topic 1)

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

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

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

**Answer:** CE

**NEW QUESTION 194**

- (Topic 1)

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

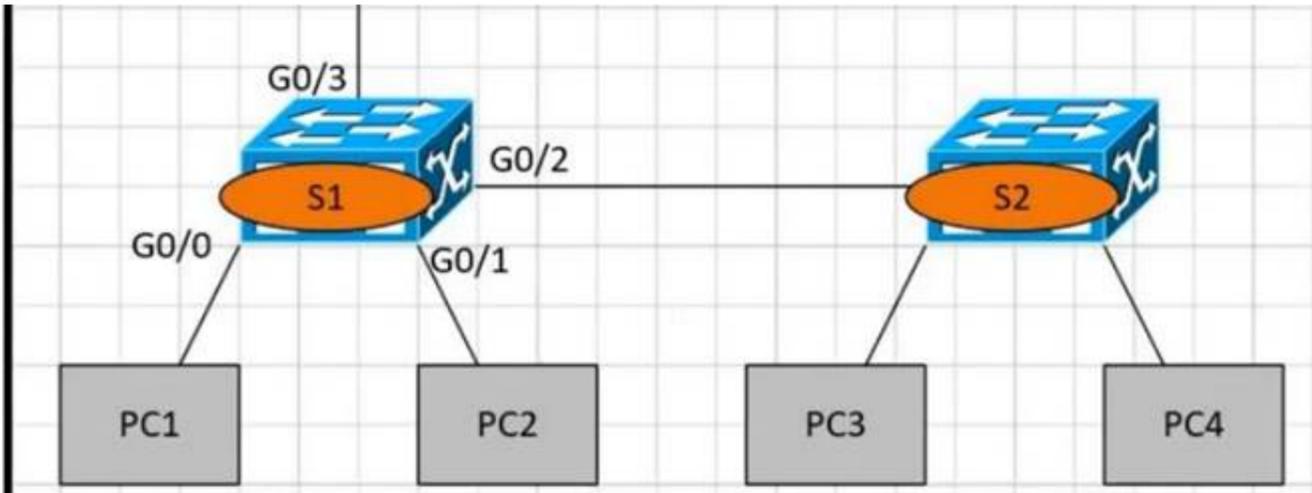
- A. A TCP connection has been torn down
- B. An ICMP connection has been built
- C. An interface line has changed status
- D. A certificate has expired.

**Answer:** C

**NEW QUESTION 196**

- (Topic 1)

Refer to the exhibit.



PC1 is trying to ping PC3 for the first time and sends out an ARP to S1 Which action is taken by S1?

- A. It forwards it out G0/3 only
- B. It is flooded out every port except G0/0.
- C. It drops the frame.
- D. It forwards it out interface G0/2 only.

**Answer:** B

**NEW QUESTION 201**

- (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 202**

- (Topic 1)

In software-defined architecture, which plane handles switching for traffic through a Cisco router?

- A. Control
- B. Management
- C. Data
- D. application

**Answer:** C

**Explanation:**

Data plane—Handles all the data traffic. The basic functionality of a Cisco NX-OS device is to forward packets from one interface to another. The packets that are not meant for the switch itself are called the transit packets. These packets are handled by the data plane

**NEW QUESTION 207**

- (Topic 1)

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

- A. it uses the bandwidth and delay values of the path to calculate the route metric
- B. it uses a default metric of 10 for all routes that are learned by the router

- C. it uses a reference Bandwidth and the actual bandwidth of the connected link to calculate the route metric
- D. it counts the number of hops between the receiving and destination routers and uses that value as the metric

**Answer:** A

**NEW QUESTION 208**

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

**NEW QUESTION 210**

DRAG DROP - (Topic 1)

Drag and drop the 802.11 wireless standards from the left onto the matching statements on the right

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

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

802.11a	802.11n
802.11ac	802.11g
802.11b	802.11ac
802.11g	802.11b
802.11n	802.11a

**NEW QUESTION 212**

- (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:**

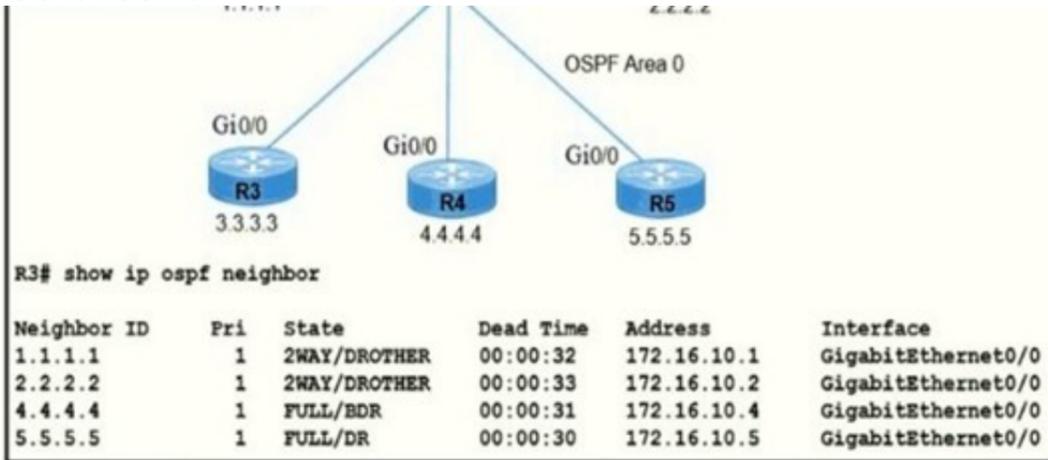
<https://www.cisco.com/c/en/us/support/docs/wireless/aironet-1200-series/70278-lap-faq.html>

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 213**

- (Topic 1)

Refer to the exhibit.



R5 is the current DR on the network, and R4 is the BDR. Their interfaces are flapping, so a network engineer wants the OSPF network to elect a different DR and BDR. Which set of configurations must the engineer implement?

A)

```

R4(config)#interface gi0/0
R4(config-if)#ip ospf priority 20
    
```

```

R5(config)#interface gi0/0
R5(config-if)#ip ospf priority 10
    
```

B)

```

R2(config)#interface gi0/0
R2(config-if)#ip ospf priority 259
    
```

```

R3(config)#interface gi0/0
R3(config-if)#ip ospf priority 256
    
```

C)

```

R5(config)#interface gi0/0
R5(config-if)#ip ospf priority 120
    
```

```

R4(config)#interface gi0/0
R4(config-if)#ip ospf priority 110
    
```

D)

```

R3(config)#interface gi0/0
R3(config-if)#ip ospf priority 255
    
```

```

R2(config)#interface gi0/0
R2(config-if)#ip ospf priority 240
    
```

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

**Answer: D**

**NEW QUESTION 216**

- (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 218**

- (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 221**

- (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 226**

- (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 229**

- (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

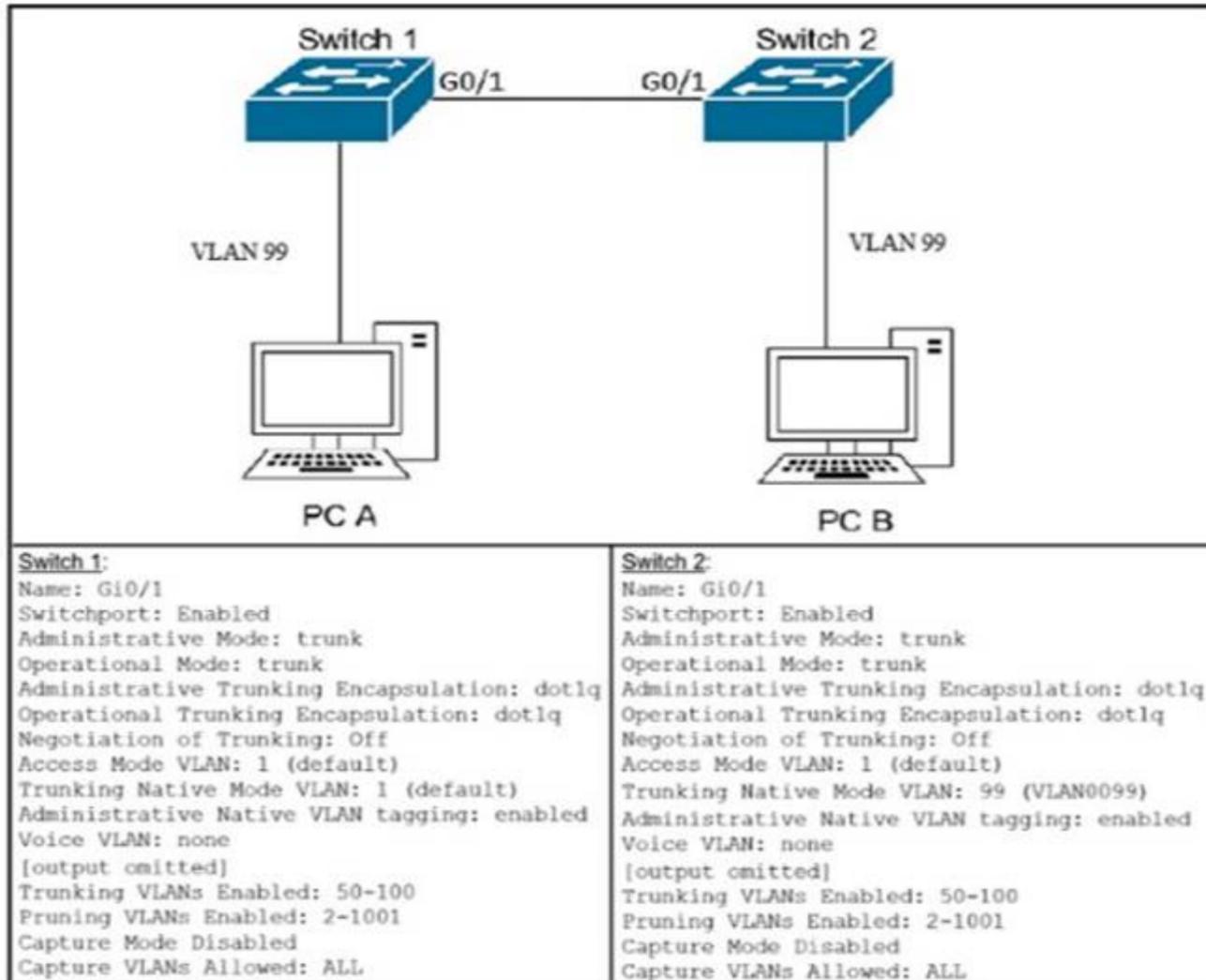
**Explanation:**

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 232**

- (Topic 1)

Refer to the Exhibit.



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

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

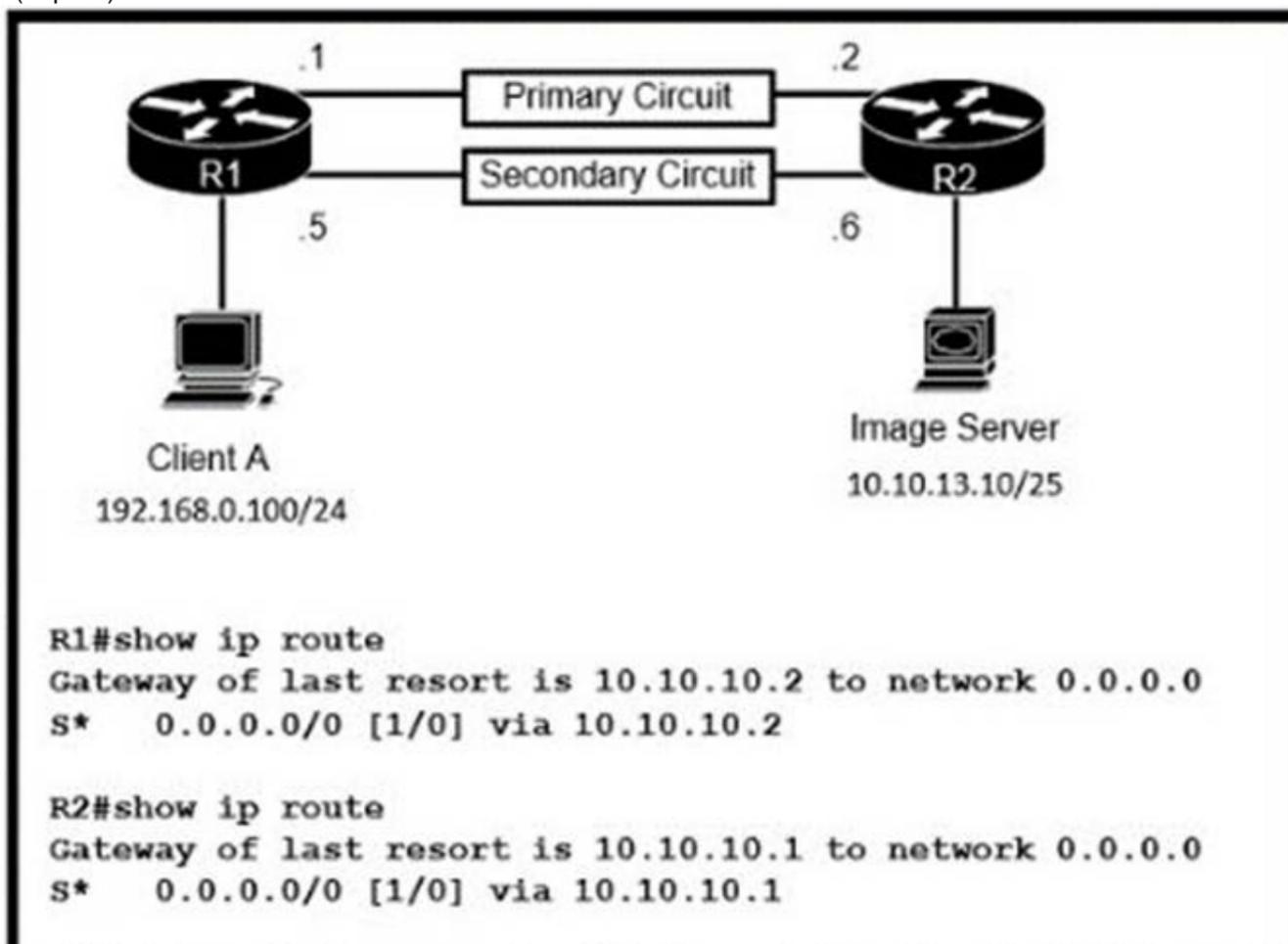
**Answer:** A

**Explanation:**

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

**NEW QUESTION 233**

- (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 237**

- (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 241**

- (Topic 1)

What facilitates a Telnet connection between devices by entering the device name?

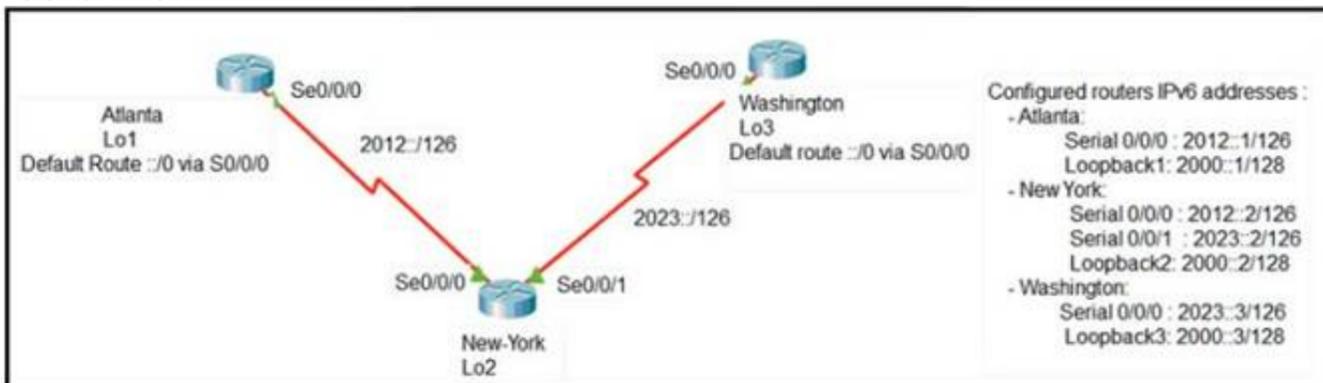
- A. SNMP
- B. DNS lookup
- C. syslog
- D. NTP

**Answer: B**

**NEW QUESTION 246**

- (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 248**

- (Topic 1)

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 251**

- (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 252**

- (Topic 1)

How are VLAN hopping attacks mitigated?

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

**Answer:** B

**NEW QUESTION 257**

- (Topic 1)

Which state does the switch port move to when PortFast is enabled?

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

**Answer:** B

**NEW QUESTION 259**

- (Topic 1)

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

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

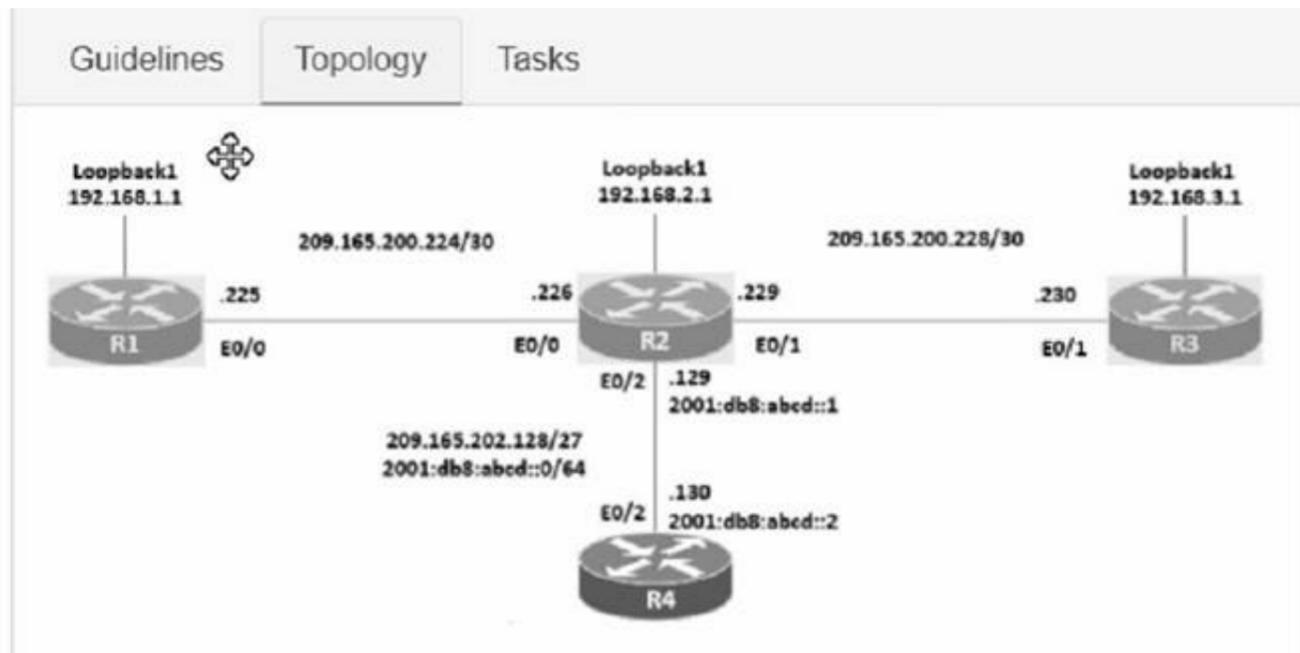
**Answer:** D

**NEW QUESTION 264**

SIMULATION - (Topic 5)

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

- \* 1. Configure static routing using host routes to establish connectivity from router R3 to the router R1 Loopback address using the source IP of 209.165.200.230.
- \* 2. Configure an IPv4 default route on router R2 destined for router R4.
- \* 3. Configure an IPv6 default router on router R2 destined for router R4.



Guidelines | **Topology** | Tasks

## Guidelines

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

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

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Answer as below configuration:

```
* 1.- on R3
config terminal
ip route 192.168.1.1 255.255.255.255 209.165.200.229
end
copy running start

* 2.- on R2
config terminal
ip route 0.0.0.0 0.0.0.0 209.165.202.130
end
copy running start

* 3.- on R2
config terminal
ipv6 route ::/0 2001:db8:abcd::2 end
copy running start
```

**NEW QUESTION 269**

SIMULATION - (Topic 5)

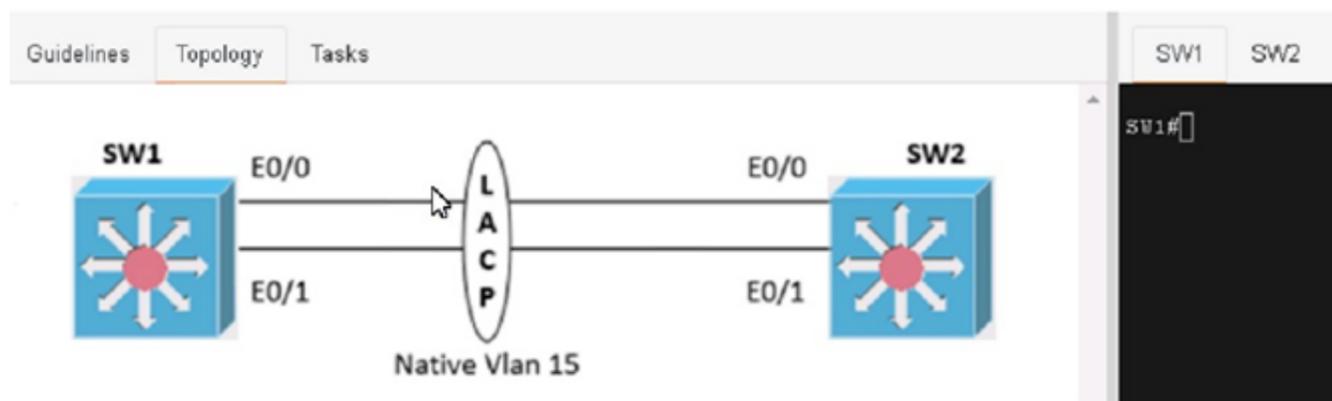
Physical connectivity is implemented between the two Layer 2 switches, and the network connectivity between them must be configured

- \* 1. Configure an LACP EtherChannel and number it as 1; configure it between switches SW1 and SVV2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides. The LACP mode must match on both ends
- \* 2 Configure the EtherChannel as a trunk link.
- \* 3. Configure the trunk link with 802.1 q tags.
- \* 4. Configure the native VLAN of the EtherChannel as VLAN 15.

## Guidelines

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

- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
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- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Answer as below configuration:

On SW1:

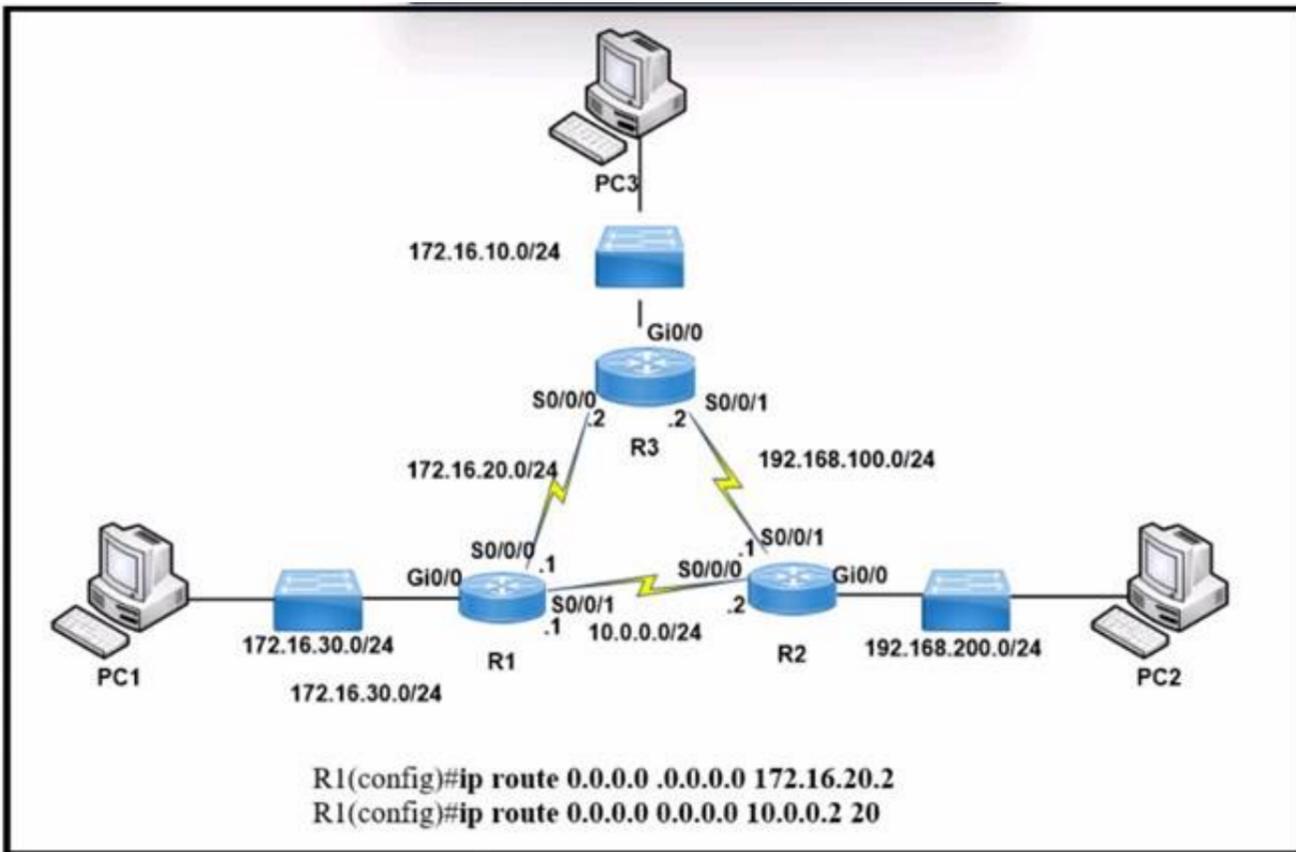
```
conf terminal vlan 15
exit
interface range eth0/0 - 1 channel-group 1 mode active exit
interface port-channel 1
switchport trunk encapsulation dot1q switchport mode trunk
switchport trunk native vlan 15 end
copy run start
```

on SW2:

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

**NEW QUESTION 271**

- (Topic 4)



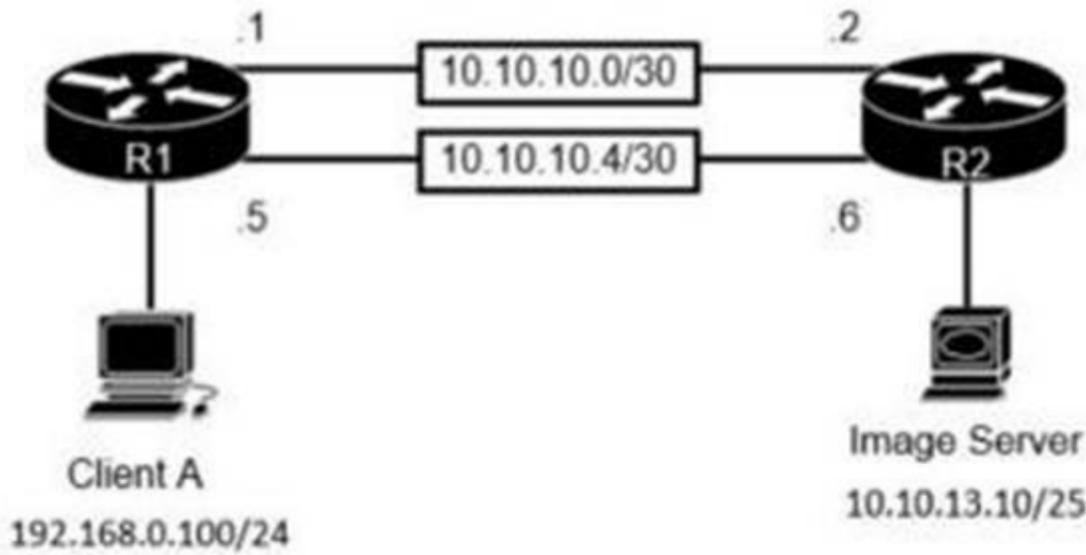
Refer to the exhibit. After applying this configuration to router R1, a network engineer is verifying the implementation. If all links are operating normally, and the engineer sends a series of packets from PC1 to PC3. how are the packets routed?

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

**Answer: A**

**NEW QUESTION 275**

- (Topic 4)  
 Refer to the exhibit.



```

R1#show ip route
Gateway of last resort is 10.10.10.2 to network 0.0.0.0
s* 0.0.0.0/0 [1/0] via 10.10.10.2
    
```

```

R2#show ip route
Gateway of last resort is 10.10.10.1 to network 0.0.0.0
s* 0.0.0.0/0 [1/0] via 10.10.10.1
    
```

The image server and client A are running an application that transfers an extremely high volume of data between the two. An engineer is configuring a dedicated circuit between R1 and R2. Which set of commands must the engineer apply to the routers so that only traffic between the image server and client A is forced to use the new circuit?

- A. R1(config)#ip route 10.10.13.10 255.255.255.255 10.10.10.6R2(config)#ip route 192.168.0.100 255.255.255.255 10.10.10.5
- B. R1(config)#ip route 10.10.13.10 255.255.255.128 10.10.10.6R2(config)#ip route 192.168.0.100 255.255.255.0 10.10.10.5
- C. R1(config)#ip route 10.10.13.10 255.255.255.252 10.10.10.6R2(config)#tp route 192.168.0.100 255.255.255.252 10.10.10.5
- D. R1(config)#ip route 10.10.13.10 255.255.255.255 10.10.10.2R2(config)#ip route 192.168.0.100 255.255.255.255 10.10.10.1

**Answer: D**

**NEW QUESTION 277**

- (Topic 4)

What is a reason to implement IPv4 private addressing?

- A. Reduce the risk of a network security breach
- B. Comply with PCI regulations
- C. Comply with local law
- D. Reduce the size of the forwarding table on network routers

**Answer: D**

**NEW QUESTION 280**

DRAG DROP - (Topic 4)

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

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

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

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

**NEW QUESTION 284**

- (Topic 4)

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

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

**Answer: D**

**NEW QUESTION 287**

- (Topic 4)

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

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

**Answer: A**

**NEW QUESTION 288**

- (Topic 4)

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

program is being deployed?

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

**Answer: D**

**NEW QUESTION 290**

- (Topic 4)

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

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

**Answer: B**

**NEW QUESTION 291**

- (Topic 4)

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

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

**Answer: B**

**NEW QUESTION 296**

- (Topic 4)

What are two reasons a switch experiences frame flooding? (Choose two.)

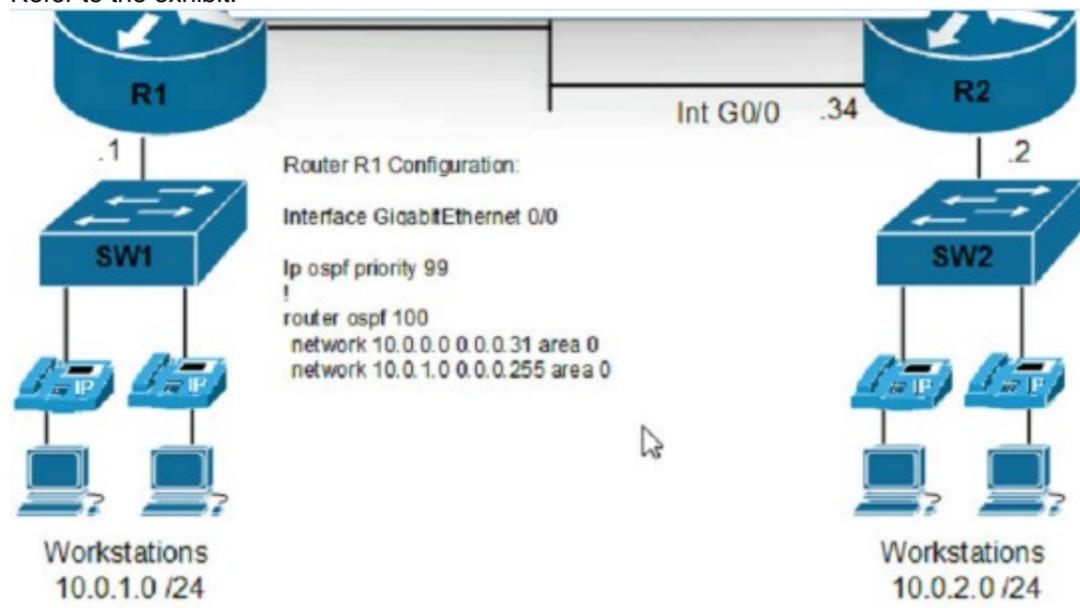
- A. A defective patch cable is connected to the switch port
- B. Topology changes are occurring within spanning-tree
- C. An aged MAC (able entry is causing excessive updates
- D. Port-security is configured globally
- E. The forwarding table has overflowed

**Answer: AB**

**NEW QUESTION 300**

- (Topic 4)

Refer to the exhibit.



An engineer must configure router R2 so it is elected as the DR on the WAN subnet. Which command sequence must be configured?

A)

```
interface gigabitethernet0/0
ip address 10.0.0.34 255.255.255.224
ip ospf priority 100
```

B)

```
interface gigabitethernet0/0
ip address 10.0.1.1 255.255.255.224
ip ospf priority 98
```

C)

```
interface gigabitethernet0/0
ip address 10.0.0.34 255.255.255.248
ip ospf priority 0
```

D)

```
interface gigabitethernet0/0
ip address 10.0.1.1 255.255.255.0
ip ospf priority 255
```

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

Answer: A

**NEW QUESTION 305**

DRAG DROP - (Topic 4)

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

transmitted based on data contained in the packet without the need for a data channel	TCP
provides best-effort service	
requires the client and the server to establish a connection before sending the packet	UDP
supports reliable data transmission	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

transmitted based on data contained in the packet without the need for a data channel	requires the client and the server to establish a connection before sending the packet
provides best-effort service	supports reliable data transmission
requires the client and the server to establish a connection before sending the packet	transmitted based on data contained in the packet without the need for a data channel
supports reliable data transmission	provides best-effort service

**NEW QUESTION 307**

DRAG DROP - (Topic 4)

Drag and drop the DNS commands from the left onto their effects on the right.

Drag and drop the DNS commands from the left onto their effects on the right.

ip domain-lookup	adds an entry to the host table
ip domain-name	completes the FQDN of the DNS server
ip host switch_1 192.168.0.1	displays address-mapping information
ip name-server	enables host-to-IP-address translation
show hosts	specifies the IP address of the DNS server

- A. Mastered
- B. Not Mastered

**Answer: A**

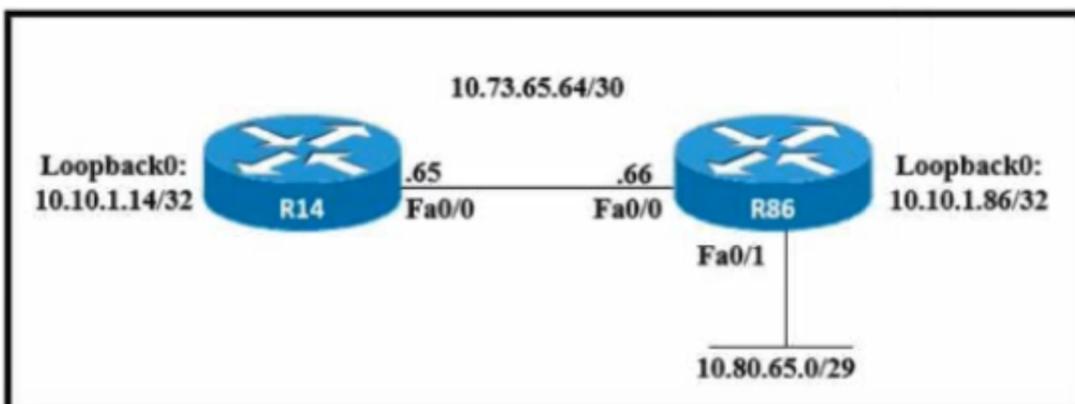
**Explanation:**

Drag and drop the DNS commands from the left onto their effects on the right.

ip domain-lookup	ip domain-name
ip domain-name	ip domain-lookup
ip host switch_1 192.168.0.1	show hosts
ip name-server	ip host switch_1 192.168.0.1
show hosts	ip name-server

**NEW QUESTION 308**

- (Topic 4)  
 Refer to the exhibit.



An engineer must configure a floating static route on an external EIGRP network. The destination subnet is the /29 on the LAN Interface of R86. Which command must be executed on R14?

- A. ip route 10.80.65.0.255.255.248.0.10.73.65.66.1
- B. ip route 10.80.65.0.255.255.255..240 fa0/1 89
- C. ip route 10.80.65.0.255.255.248.0.10.73.65.66.171
- D. ip route 10.80.65.0.0.0.224.10.80.65.0. 255

**Answer: C**

**NEW QUESTION 309**

- (Topic 4)  
 What is a benefit for external users who consume public cloud resources?

- A. implemented over a dedicated WAN
- B. located in the same data center as the users
- C. all hosted on physical servers
- D. accessed over the Internet

Answer: D

**NEW QUESTION 314**

- (Topic 4)

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

- A. OS
- B. hypervisor
- C. CPU
- D. physical enclosure

Answer: B

**NEW QUESTION 318**

- (Topic 4)

Which security method is used to prevent man-in-the-middle attack?

- A. authorization
- B. authentication
- C. anti-replay
- D. accounting

Answer: B

**NEW QUESTION 320**

- (Topic 4)

What is the primary purpose of a console port on a Cisco WLC?

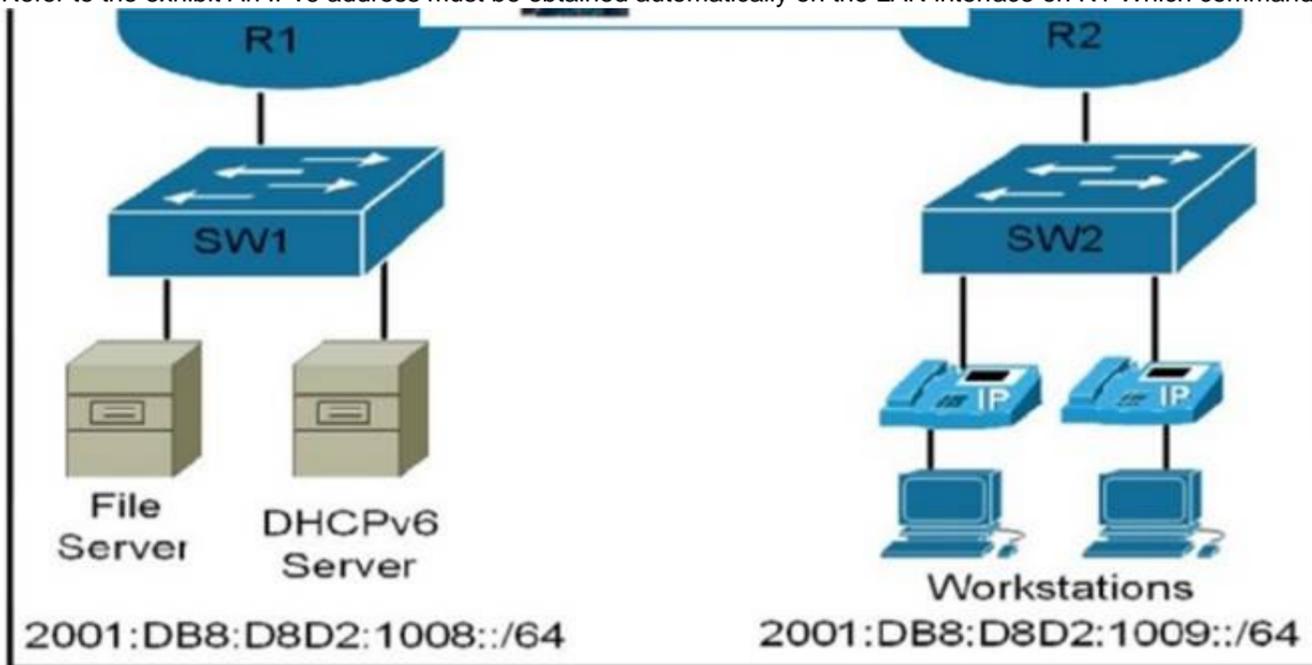
- A. In-band management via an asynchronous transport
- B. out-of-band management via an IP transport
- C. in-band management via an IP transport
- D. out-of-band management via an asynchronous transport

Answer: D

**NEW QUESTION 323**

- (Topic 4)

Refer to the exhibit An IPv6 address must be obtained automatically on the LAN interface on R1 Which command must be implemented to accomplish the task?

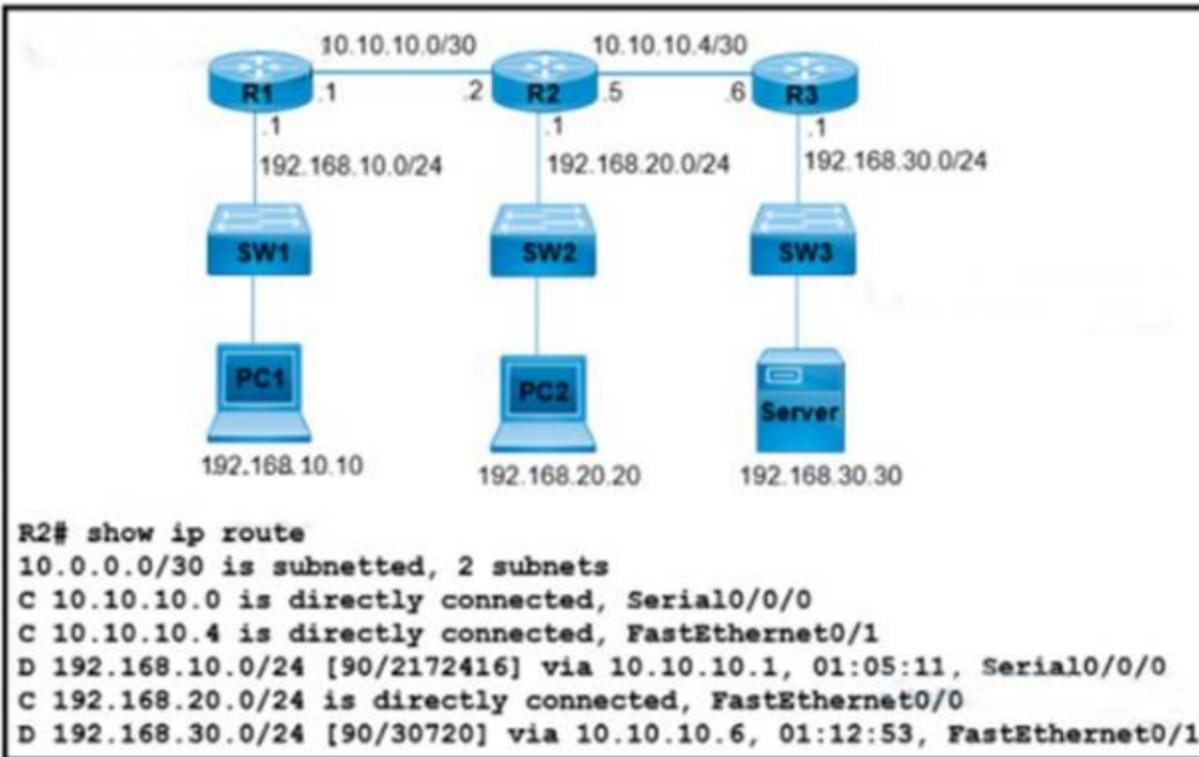


- A. Ipv6 address 2001:dbB:d8d2:1008:4343:61:0010::/64
- B. Ipv6 address autoconfig
- C. Ipv6 address fe80::/10
- D. Ipv6 address dhcp

Answer: B

**NEW QUESTION 328**

- (Topic 4)



Refer to the exhibit. What is the next-hop P address for R2 so that PC2 reaches the application server via EIGRP?

- A. 192.168.30.1
- B. 10.10.105
- C. 10.10.10.6
- D. 192.168.201

**Answer: D**

**NEW QUESTION 333**

- (Topic 4)

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

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

**Answer: B**

**NEW QUESTION 336**

- (Topic 4)

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

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

**Answer: B**

**NEW QUESTION 337**

- (Topic 4)

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

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

**Answer: A**

**NEW QUESTION 342**

- (Topic 4)

What is a benefit of using private IPv4 addressing?

- A. Multiple companies can use the same addresses without conflicts.
- B. Direct connectivity is provided to internal hosts from outside an enterprise network.
- C. Communication to the internet is reachable without the use of NAT.
- D. All external hosts are provided with secure communication to the Internet.

**Answer: A**

**NEW QUESTION 344**

**DRAG DROP - (Topic 4)**

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

is used exclusively by a non-host device	Multicast
sends packets to a group address rather than a single address	
has a unicast source sent to a group	Anycast
is routed to the nearest interface that has the address	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

is used exclusively by a non-host device	Multicast
sends packets to a group address rather than a single address	
has a unicast source sent to a group	Anycast
is routed to the nearest interface that has the address	

**NEW QUESTION 345**

- (Topic 4)

What is a function of an endpoint?

- A. It is used directly by an individual user to access network services
- B. It passes unicast communication between hosts in a network
- C. It transmits broadcast traffic between devices in the same VLAN
- D. It provides security between trusted and untrusted sections of the network.

**Answer: A**

**NEW QUESTION 346**

**DRAG DROP - (Topic 4)**

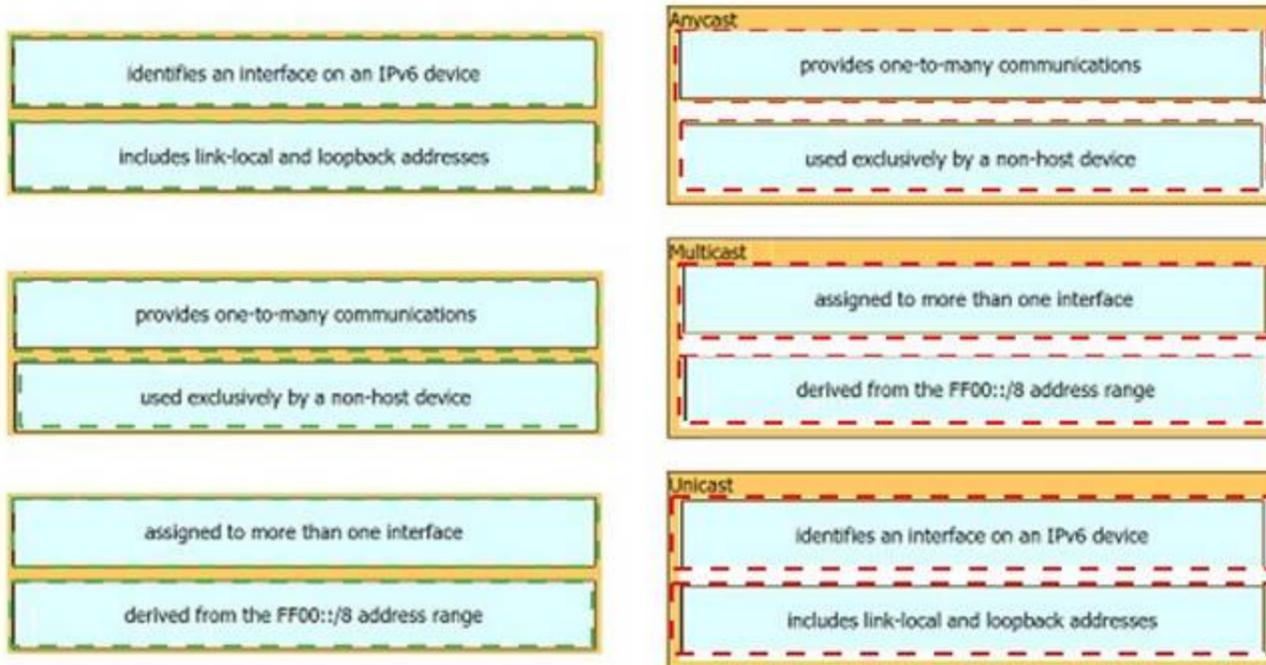
Drag and drop the IPv6 address details from the left onto the corresponding types on the right.

identifies an interface on an IPv6 device	Anycast
includes link-local and loopback addresses	
provides one-to-many communications	Multicast
used exclusively by a non-host device	
assigned to more than one interface	Unicast
derived from the FF00::/8 address range	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 349**

- (Topic 4)

Refer to the exhibit.

```

Gateway of last resort is 172.16.2.2 to network 0.0.0.0

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

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

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

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

Answer: B

**NEW QUESTION 354**

DRAG DROP - (Topic 4)

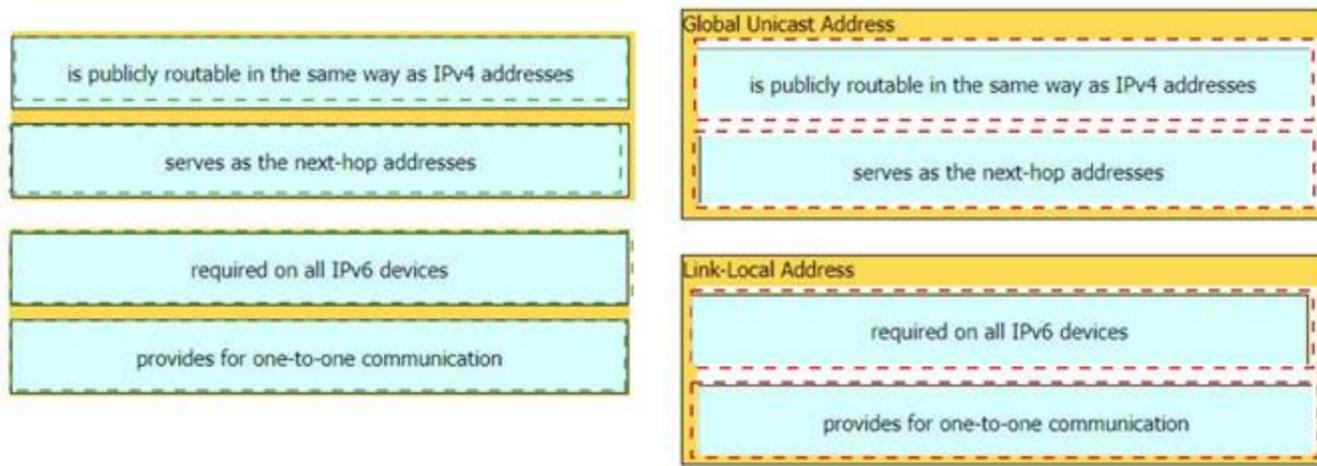
Drag and drop the characteristic from the left onto the IPv6 address type on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 359**

- (Topic 4)

Which function generally performed by a traditional network device is replaced by a software-defined controller?

- A. encryption and decryption for VPN link processing
- B. building route tables and updating the forwarding table
- C. changing the source or destination address during NAT operations
- D. encapsulation and decapsulation of packets in a data-link frame

**Answer: B**

**NEW QUESTION 360**

- (Topic 4)

What is a feature of WPA?

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

**Answer: A**

**NEW QUESTION 365**

- (Topic 4)

Refer to the exhibit.

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

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

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

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

**Answer: D**

**NEW QUESTION 367**

- (Topic 4)

Which enhancement is implemented in WPA3?

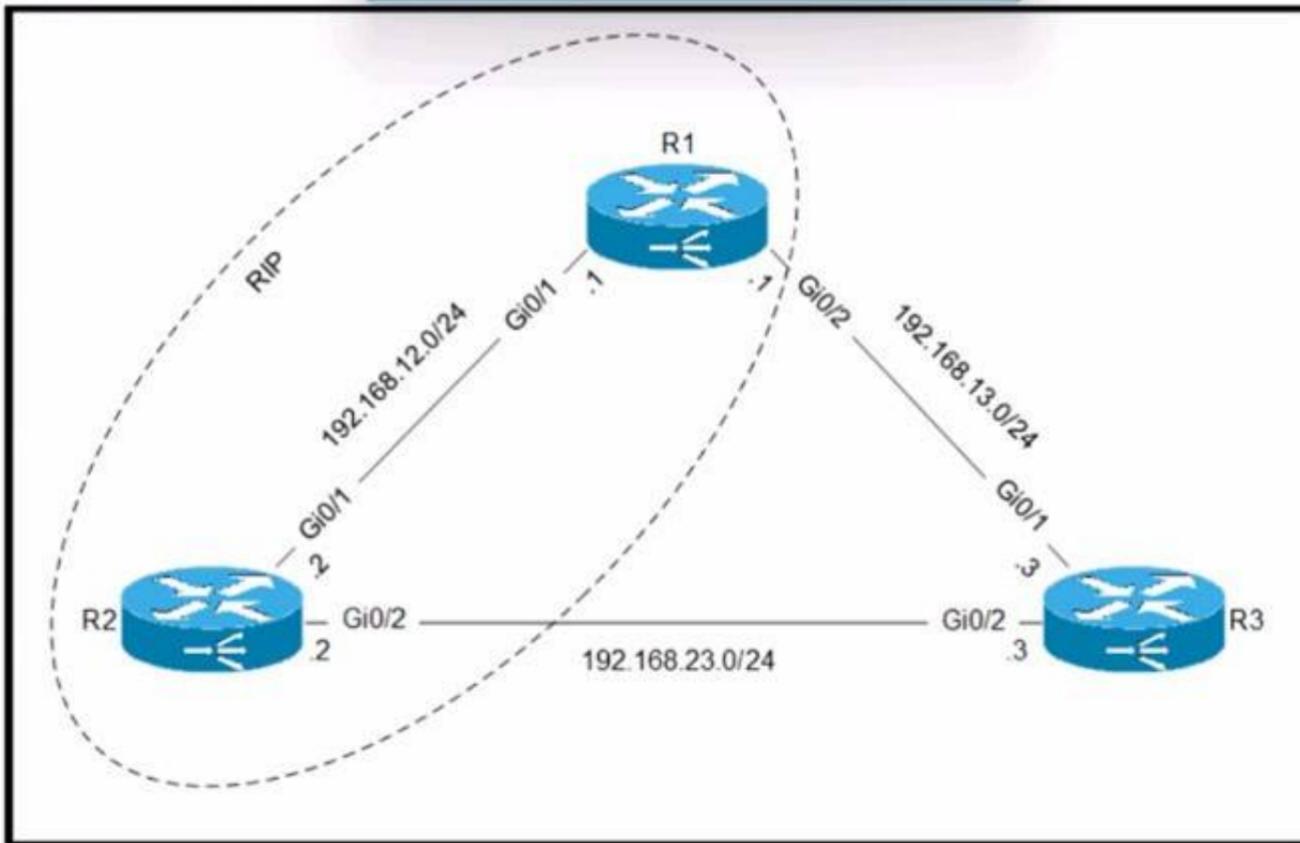
- A. applies 802.1x authentication

- B. usesTKIP
- C. employs PKI to identify access points
- D. protects against brute force attacks

Answer: D

**NEW QUESTION 372**

- (Topic 4)  
 Refer to the exhibit.



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

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

Answer: B

**NEW QUESTION 374**

- (Topic 4)  
 Refer to the exhibit.

```

Known via "connected", distance 0, metric 0 (connected, via interface)
Routing Descriptor Blocks:
* directly connected, via Ethernet0/1
  Route metric is 0, traffic share count is 1

CPE# ping 203.0.113.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 203.0.113.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms

CPE# show ip route
Gateway of last resort is 198.51.100.1 to network 0.0.0.0
B* 0.0.0.0/0 [20/0] via 198.51.100.1, 00:02:07
   198.51.100.0/24 is variably subnetted, 2 subnets, 2 masks
C   198.51.100.0/30 is directly connected, Ethernet0/0
L   198.51.100.2/32 is directly connected, Ethernet0/0
   203.0.113.0/24 is variably subnetted, 2 subnets, 2 masks
C   203.0.113.0/30 is directly connected, Ethernet0/1
L   203.0.113.2/32 is directly connected, Ethernet0/1
    
```

After configuring a new static route on the CPE, the engineer entered this series of commands to verify that the new configuration is operating normally. When is the static default route installed into the routing table?

- A. when 203.0.113.1 is no longer reachable as a next hop
- B. when the default route learned over external BGP becomes invalid
- C. when a route to 203.0.113.1 is learned via BGP
- D. when the default route over external BGP changes its next hop

Answer: A

**NEW QUESTION 377**

**DRAG DROP - (Topic 4)**

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

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

- A. Mastered
- B. Not Mastered

**Answer: A**

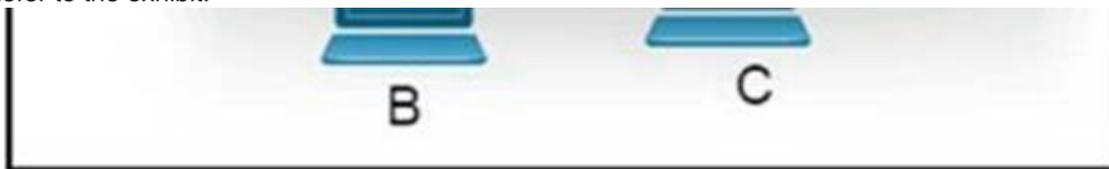
**Explanation:**

- \* 1. BPDUs received are forwarded to the system module.
- \* 2. Frames received from the attached segment are processed.
- \* 3. Switched frames received from other ports are advanced.
- \* 4. The port in the forwarding state responds to network management messages.

[https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/layer2/503\\_n1\\_1/Cisco\\_n5k\\_layer2\\_config\\_gd\\_rel\\_503\\_N1\\_1\\_chapter9.html](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/layer2/503_n1_1/Cisco_n5k_layer2_config_gd_rel_503_N1_1_chapter9.html)

**NEW QUESTION 378**

- (Topic 4)  
Refer to the exhibit.



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

Sw1#show mac-address table  
Mac Address Table

Vlan	Mac Address	Type	Ports
2	000c.859c.bb7b	DYNAMIC	e0/1
3	000c.859c.bb7b	DYNAMIC	e0/1
2	0010.11dc.3e91	DYNAMIC	e0/2
3	0010.11dc.3e91	DYNAMIC	e0/2
2	0043.49d4.c383	DYNAMIC	e0/3

Sw1#

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

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

**Answer: C**

**NEW QUESTION 381**

- (Topic 4)  
Refer to the exhibit.

```

Last clearing of "show interface" counters never
Input queue: 1/75/1/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: random early detection(RED)
Output queue :0/40 (size/max)
5 minute input rate 1000 bits/sec, 2 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 7558065 packets input, 783768942 bytes, 1 no buffer
 Received 8280963 broadcasts, 0 runts, 0 giants, 1 throttles
 15 input errors, 14278 CRC, 0 frame, 0 overrun, 3 ignored
 0 input packets with dribble condition detected
798092 packets output, 50280266 bytes, 0 underruns
 0 output errors, 15000 collisions, 0 interface resets
 0 babbles, 0 late collision, 179 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
    
```

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

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

**Answer: C**

**NEW QUESTION 384**

DRAG DROP - (Topic 4)

Drag and drop the management connection types from the left onto the definitions on the right.

console	supports clear-text connections to the controller CLI
HTTPS	supports encrypted access to CLI and a secure channel for data transfer
SSH	supports physical connections over a serial cable
Telnet	supports secure web access for management of the device

- A. Mastered
- B. Not Mastered

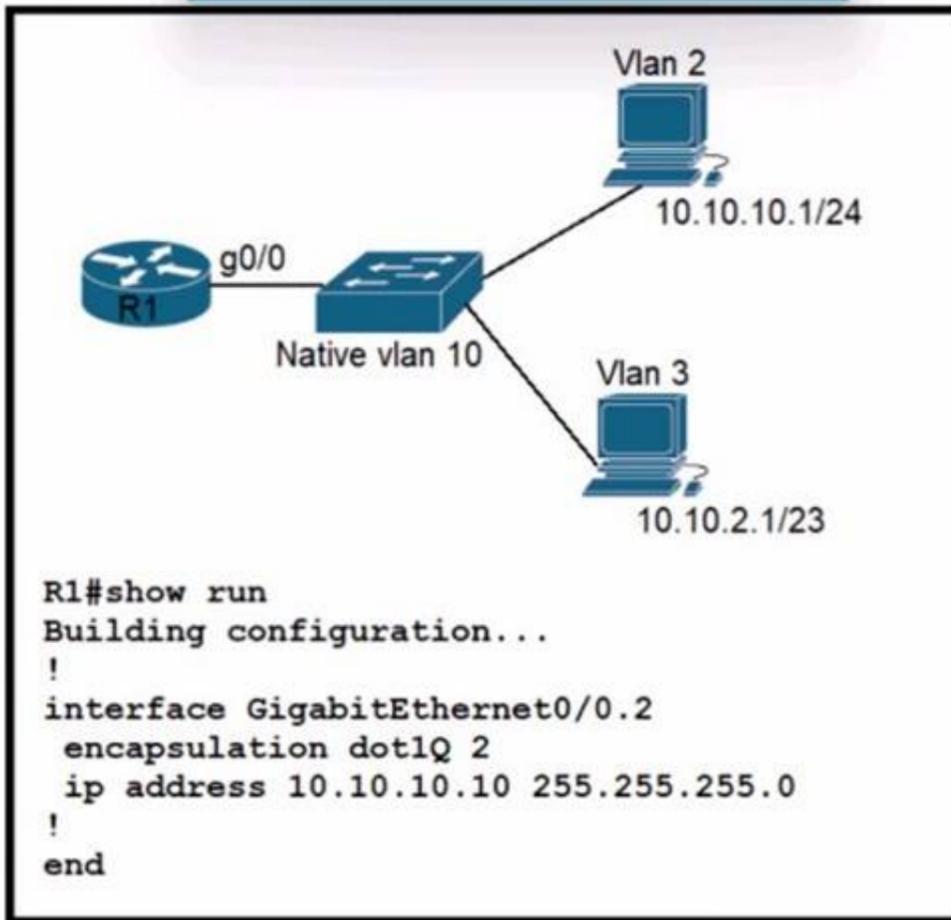
**Answer: A**

**Explanation:**

console	Telnet
HTTPS	SSH
SSH	console
Telnet	HTTPS

**NEW QUESTION 389**

- (Topic 4)



A)

```

interface GigabitEthernet0/0
 ip address 10.10.2.10 255.255.252.0
    
```

B)

```

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

C)

```

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

D)

```

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

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

**Answer: C**

**NEW QUESTION 391**

- (Topic 4)

What is an advantage of using auto mode versus static mode for power allocation when an access point is connected to a PoE switch port?

- A. All four pairs of the cable are used
- B. It detects the device is a powered device
- C. The default level is used for the access point
- D. Power policing is enabled at the same time

**Answer: D**

**NEW QUESTION 393**

- (Topic 4)

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, Gigabit Ethernet 0/0
D    10.0.1.4/32 [110/10] via 10.0.1.4, 00:39:08, Gigabit Ethernet 0/0
    
```

What does route 10.0.1.3/32 represent in the routing table?

- A. the 10.0.0.0 network
- B. a single destination address
- C. the source 10.0.1.100
- D. all hosts in the 10.0.1.0 subnet

**Answer: A**

**NEW QUESTION 395**

- (Topic 4)

Which two IPv6 addresses are used to provide connectivity between two routers on a shared link? (Choose two)

- A. ::ffif 1014 1011/96
- B. 2001 7011046:1111:1/64
- C. :jff06bb43cd4dd111bbff02 4545234d
- D. 2002 5121204b 1111:1/64
- E. FF02::0WIFF00:0I)00/104

**Answer: B**

**NEW QUESTION 398**

DRAG DROP - (Topic 4)

Drag and drop the REST API call method for HTTP from the left onto the action they perform on the right.

DELETE	creates a resource on the server
GET	reads data from the server
POST	removes a resource from the server
PUT	updates an entry in the database
PATCH	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

DELETE	POST
GET	GET
POST	DELETE
PUT	PUT
PATCH	

**NEW QUESTION 400**

- (Topic 4)

Which action implements physical access control as part of the security program of an organization?

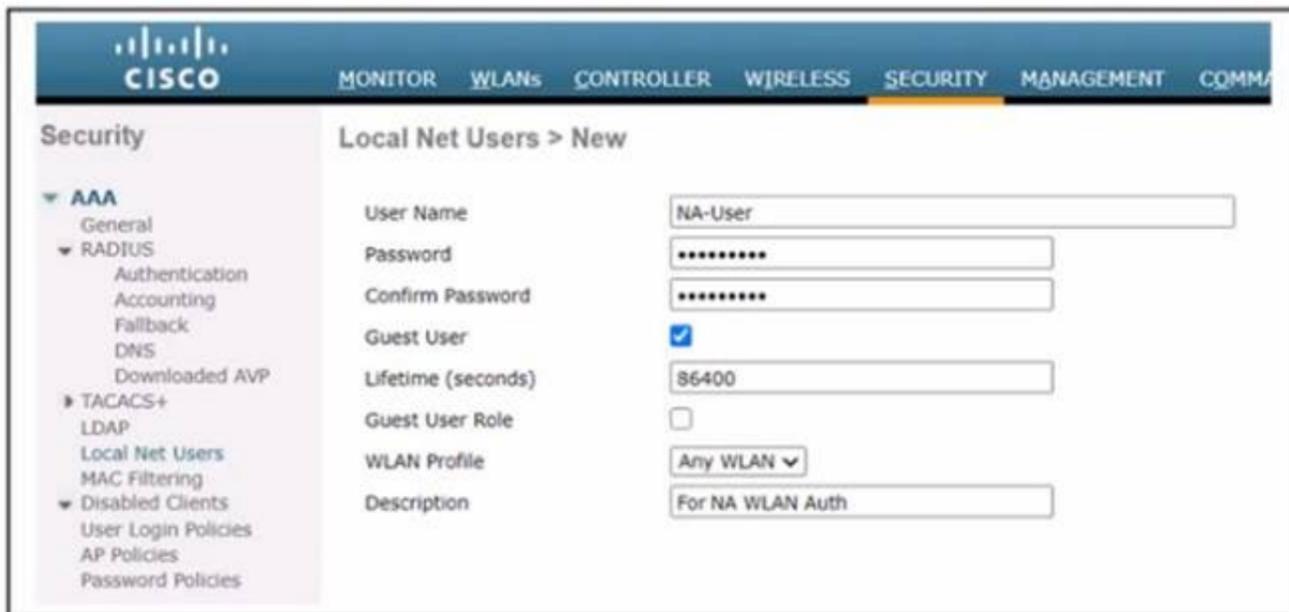
- A. backing up syslogs at a remote location
- B. configuring a password for the console port
- C. configuring enable passwords on network devices
- D. setting up IP cameras to monitor key infrastructure

**Answer: B**

**NEW QUESTION 403**

- (Topic 4)

Refer to the exhibit.



Wireless LAN access must be set up to force all clients from the NA WLAN to authenticate against the local database. The WLAN is configured for local EAP authentication. The time that users access the network must not be limited. Which action completes this configuration?

- A. Uncheck the Guest User check box
- B. Check the Guest User Role check box
- C. Set the Lifetime (seconds) value to 0
- D. Clear the Lifetime (seconds) value

**Answer: C**

**NEW QUESTION 405**

- (Topic 4)

A DHCP pool has been created with the name NOCC. The pool is using 192.168.20.0/24 and must use the next to last usable IP address as the default gateway for the DHCP clients. What is the next step in the process?

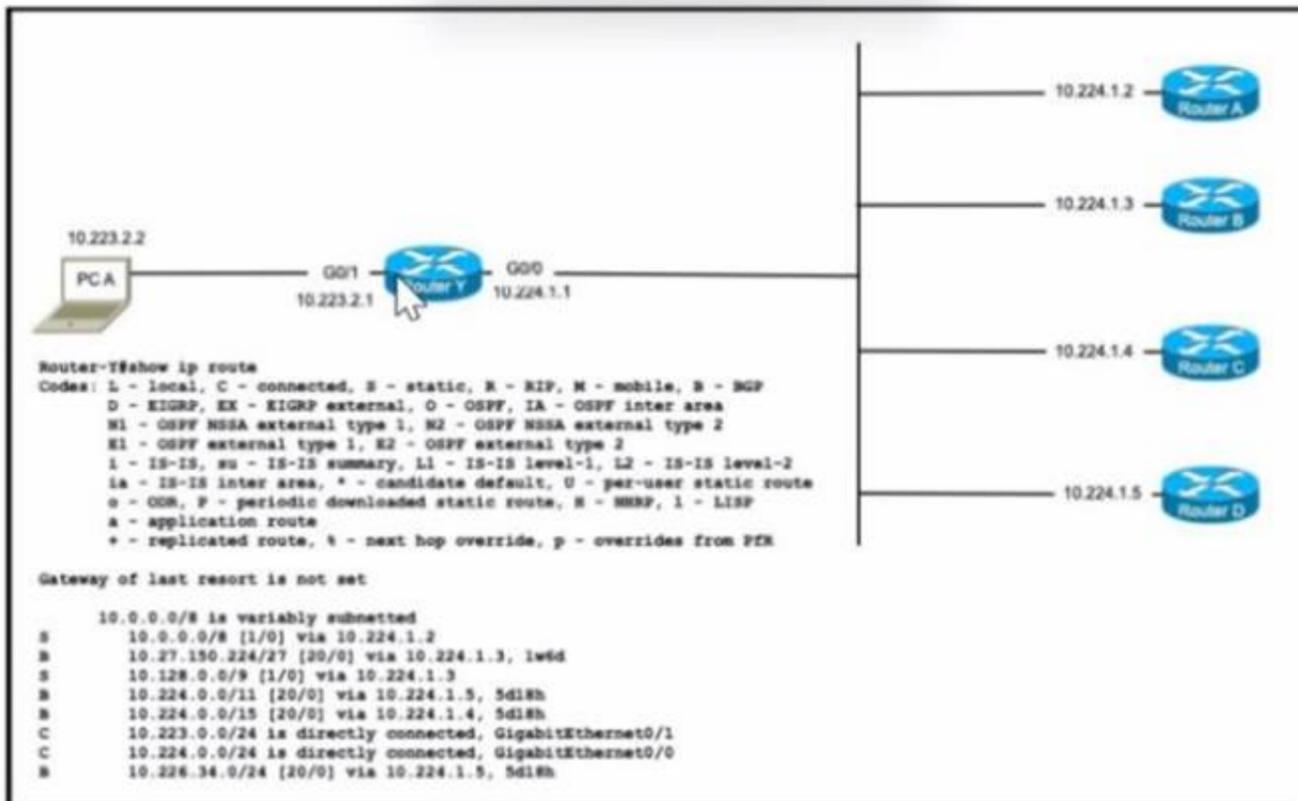
- A. default-router 192.168.20.253
- B. network 192.168.20.254 255.255.255.0 secondary
- C. ip default-gateway 0.0.0.0 0.0.0.0 192.168.20.253
- D. next-server 192.168.20.254

**Answer: A**

**NEW QUESTION 410**

- (Topic 4)

Refer to the exhibit.



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

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

**Answer: C**

**NEW QUESTION 414**

- (Topic 4)

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

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

**Answer: CE**

**NEW QUESTION 416**

- (Topic 4)

Refer to the exhibit.

When router R1 receives a packet with destination IP address 10.56.0 62. through which interface does it route the packet?

- A. Null0
- B. Vlan58
- C. Vlan60
- D. Vlan59

**Answer: B**

**NEW QUESTION 421**

- (Topic 4)

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

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

**Answer: CD**

**NEW QUESTION 422**

DRAG DROP - (Topic 4)

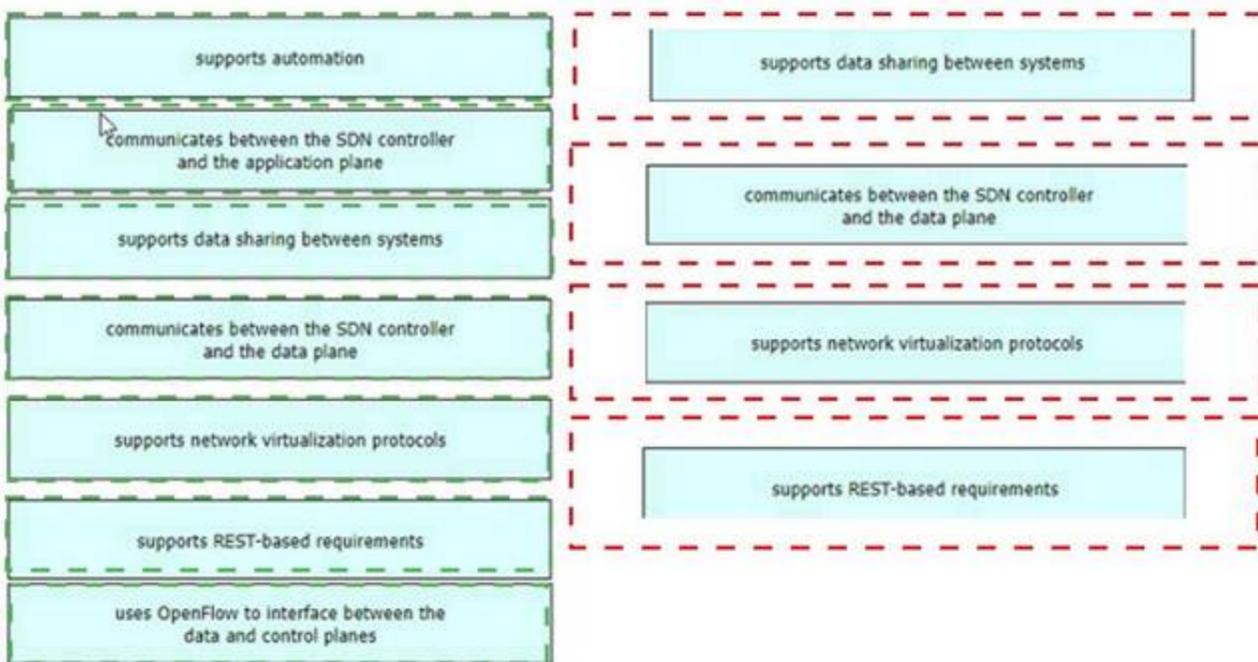
Drag and drop the characteristics of northbound APIs from the left onto any position on the right. Not all characteristics are used.

- supports automation
- communicates between the SDN controller and the application plane
- supports data sharing between systems
- communicates between the SDN controller and the data plane
- supports network virtualization protocols
- supports REST-based requirements
- uses OpenFlow to interface between the data and control planes

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 426**

- (Topic 4)

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

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

Answer: D

Explanation:

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

**NEW QUESTION 430**

- (Topic 4)

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    172.16.0.0/16 is directly connected, Loopback0
     172.16.0/16 is variably subnetted, 4 subnets, 2 masks
O    172.16.1.3/32 [110/100] via 192.168.7.40, 00:39:08, Serial0
C    172.16.1.0/24 is directly connected, Serial0
O    172.16.1.384/29 [110/5] via 192.168.7.35, 00:39:08, Serial0
O    172.16.3.0/24 [110/10] via 192.168.7.4, 00:39:08, Gigabit Ethernet 0/0
D    172.16.1.0/28 [90/10] via 192.168.7.7, 00:39:08, Gigabit Ethernet 0/0

```

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

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

Answer: D

**NEW QUESTION 433**

- (Topic 4)

Refer to the exhibit.

```

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

```

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

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

Answer: B

**NEW QUESTION 437**

DRAG DROP - (Topic 4)

Drag and drop the descriptions of IP protocol transmissions from the left onto the IP traffic types on the right.

sends transmissions in sequence	TCP
transmissions include an 8-byte header	
transmits packets as a stream	
transmits packets individually	UDP
uses a higher transmission rate to support latency-sensitive applications	
uses a lower transmission rate to ensure reliability	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

sends transmissions in sequence	TCP
uses a lower transmission rate to ensure reliability	
transmits packets as a stream	
transmits packets individually	UDP
transmissions include an 8-byte header	
uses a higher transmission rate to support latency-sensitive applications	

**NEW QUESTION 438**

DRAG DROP - (Topic 4)

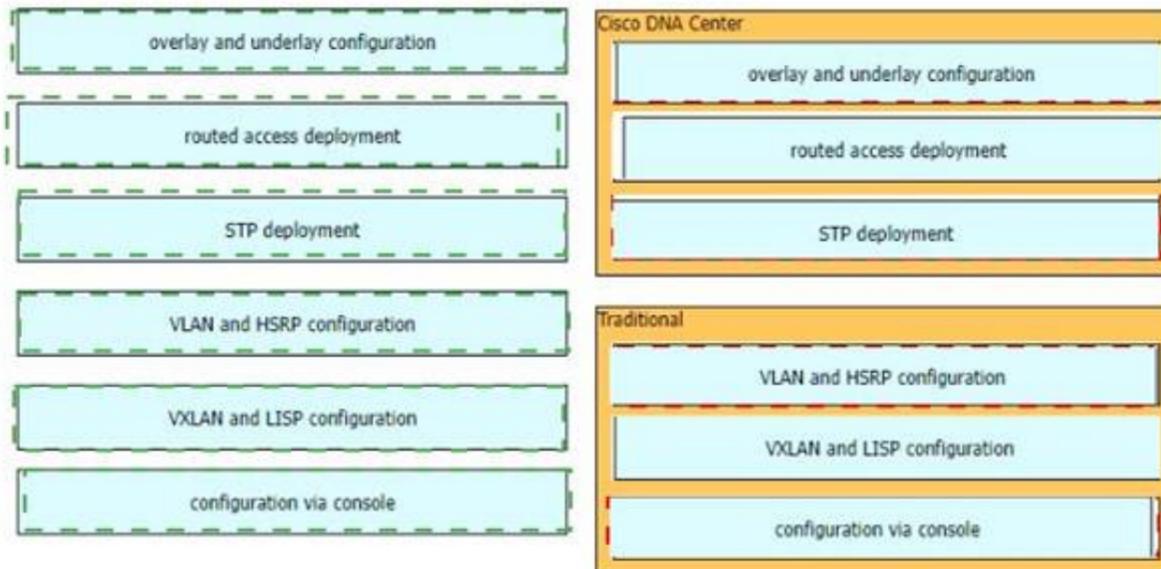
Drag and drop the use cases for device-management technologies from the left onto the corresponding.

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

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 440**

- (Topic 4)

What are two features of the DHCP relay agent? (Choose two.)

- A. assigns DNS locally and then forwards request to DHCP server
- B. permits one IP helper command under an individual Layer 3 interface
- C. allows only MAC-to-IP reservations to determine the local subnet of a client
- D. minimizes the necessary number of DHCP servers
- E. configured under the Layer 3 interface of a router on the client subnet

**Answer:** BE

**NEW QUESTION 443**

- (Topic 4)

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

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

**Answer:** A

**NEW QUESTION 446**

- (Topic 4)

Refer to the exhibit.

Entry #	
1	192.168.10.0 255.255.254.0
2	192.168.10.0 255.255.255.192
3	192.168.10.0 255.255.0.0
4	192.168.10.0 255.255.224.0

Which entry is the longest prefix match for host IP address 192.168.10.5?

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

**Answer:** B

**NEW QUESTION 448**

DRAG DROP - (Topic 4)

An engineer must configure a core router with a floating static default route to the backup router at 10.200.0.2.

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

**NEW QUESTION 451**

- (Topic 4)

Refer to the exhibit.

Gateway of last resort is not set

```

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

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

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

**Answer: B**

**NEW QUESTION 454**

**DRAG DROP - (Topic 4)**

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

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

- A. Mastered
- B. Not Mastered

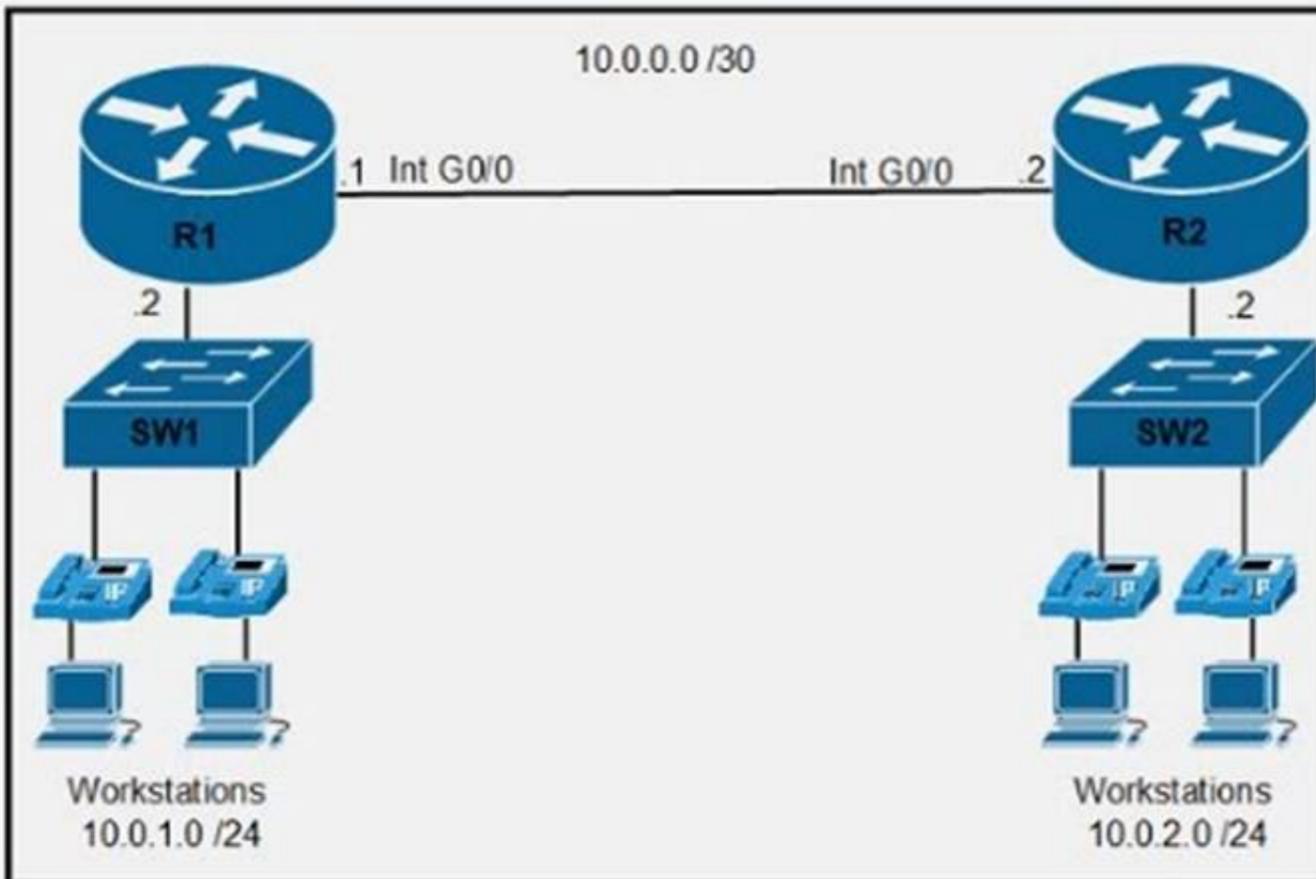
**Answer: A**

**Explanation:**

DELETE	POST
GET	DELETE
POST	PATCH
PATCH	PUT
PUT	GET

**NEW QUESTION 459**

- (Topic 4)



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

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

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

**Answer: B**

**NEW QUESTION 463**

- (Topic 4)

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

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

**Answer: BE**

**NEW QUESTION 466**

- (Topic 4)

```
Cat9300-1# show interface gi1/0/1 switchport
Name: Gi1/0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 321 (VLAN0321)
Administrative Native VLAN tagging: enabled
Trunking VLANs Enabled: 100,200,300
Pruning VLANs Enabled: 2-1001
```

Refer to the exhibit.

A network administrator configures an interface control re switch so that it connects to interface Gi1/0/1 on switch Cat9300-1. Which configuration must be applied to the new interface?

A)

```
switchport mode trunk
switchport trunk native vian 321
switchport trunk allowed vian 100,200,300
```

B)

```
switchport trunk encapsulation dot1q
switchport trunk native vian 321
switchport trunk allowed vian 100-300
```

C)

switchport mode dynamic desirable  
 switchport trunk native vlan 321  
 switchport trunk allowed vlan 100,200,300

D)

switchport nonegotiate  
 switchport access vlan 321  
 switchport trunk allowed vlan except 2-1001

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

**Answer:** A

**NEW QUESTION 470**

DRAG DROP - (Topic 4)

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

used to reliably share files between devices	TCP
appropriate for streaming operations with minimal latency	
provides best-effort service	UDP
supports reliable data transmission	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

used to reliably share files between devices	TCP
appropriate for streaming operations with minimal latency	
provides best-effort service	UDP
supports reliable data transmission	

**NEW QUESTION 471**

- (Topic 4)

What is a purpose of traffic shaping?

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

**Answer:** A

**NEW QUESTION 472**

- (Topic 4)

What is the purpose of configuring different levels of syslog for different devices on the network?

- A. to rate-limit messages for different severity levels from each device
- B. to set the severity of syslog messages from each device
- C. to identify the source from which each syslog message originated
- D. to control the number of syslog messages from different devices that are stored locally

**Answer:** B

**NEW QUESTION 475**

- (Topic 4)

Refer to the exhibit.

```

R1# show ip route | begin Gateway
Gateway of last resort is 0.0.0.0 to network 0.0.0.0
S* 0.0.0.0/0 is directly connected, Serial0/0/1
    172.16.0.0/16 is variably subnetted, 4 subnets, 2 masks
C    172.16.2.0/24 is directly connected, GigabitEthernet0/0
L    172.16.2.2/32 is directly connected, GigabitEthernet0/0
C    172.16.4.0/21 is directly connected, Serial0/0/1
L    172.16.8.2/26 is directly connected, Serial0/0/1
    
```

What is the subnet mask for route 172.16.4.0?

- A. 255.255.248.0
- B. 255.255.254.0
- C. 255.255.255.192
- D. 255.255.240.0

**Answer: A**

**NEW QUESTION 479**

- (Topic 4)

What is a benefit of a point-to-point leased line?

- A. flexibility of design
- B. simplicity of configurator
- C. low cost
- D. full-mesh capability

**Answer: B**

**NEW QUESTION 481**

- (Topic 4)

The address block 192.168.32.0/24 must be subnetted into smaller networks. The engineer must meet these requirements:

- Create 8 new subnets
- Each subnet must accommodate 30 hosts
- Interface VLAN 10 must use the last usable IP in the first new subnet
- A Layer 3 interface is used

Which configuration must be applied to the interface?

A)

```

no switchport mode access
ip address 192.168.32.62 255.255.255.240
    
```

B)

```

switchport
ip address 192.168.32.65 255.255.255.240
    
```

C)

```

no switchport mode trunk
ip address 192.168.32.97 255.255.255.224
    
```

D)

```

no switchport
ip address 192.168.32.30 255.255.255.224
    
```

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

**Answer: D**

**NEW QUESTION 482**

DRAG DROP - (Topic 4)

Drag and drop the IPv6 address description from the left onto the IPv6 address types on the right. Not all options are used.

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

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

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

**NEW QUESTION 487**

- (Topic 4)  
 Refer to the exhibit.

The screenshot shows a configuration page with tabs for General, Security, QoS, Policy-Mapping, and Advanced. Under the Security tab, the 'Layer 2' sub-tab is active. The 'Layer 2 Security' dropdown menu is set to 'WPA+WPA2'. Below this, 'MAC Filtering' is unchecked. The 'Fast Transition' section has 'Fast Transition' unchecked. The 'Protected Management Frame' section has 'PMF' set to 'Required'. The 'WPA+WPA2 Parameters' section includes 'WPA Policy' (unchecked), 'WPA2 Policy' (unchecked), 'WPA2 Encryption' (unchecked) with sub-options for 'AES' and 'TKIP', and 'OSN Policy' (unchecked). The 'Authentication Key Management' section includes '802.1X', 'CCKM', 'PSK', 'FT 802.1X', and 'FT PSK', all of which are unchecked. The 'PSK Format' dropdown is set to 'ASCII'. At the bottom, 'WPA gtk-randomize State' is set to 'Disable'.

A)

Select WPA Policy  
Select WPA2 Policy  
Enable FT PSK

B)

Select WPA2 Policy  
Disable PMF  
Enable PSK

C)

Select WPA Policy  
Enable CCKM  
Enable PSK

D)

Disable PMF  
Enable PSK  
Enable 802.1x

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

**Answer: C**

#### NEW QUESTION 490

- (Topic 4)

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

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

**Answer: D**

#### NEW QUESTION 492

- (Topic 4)

How does MAC learning function on a switch?

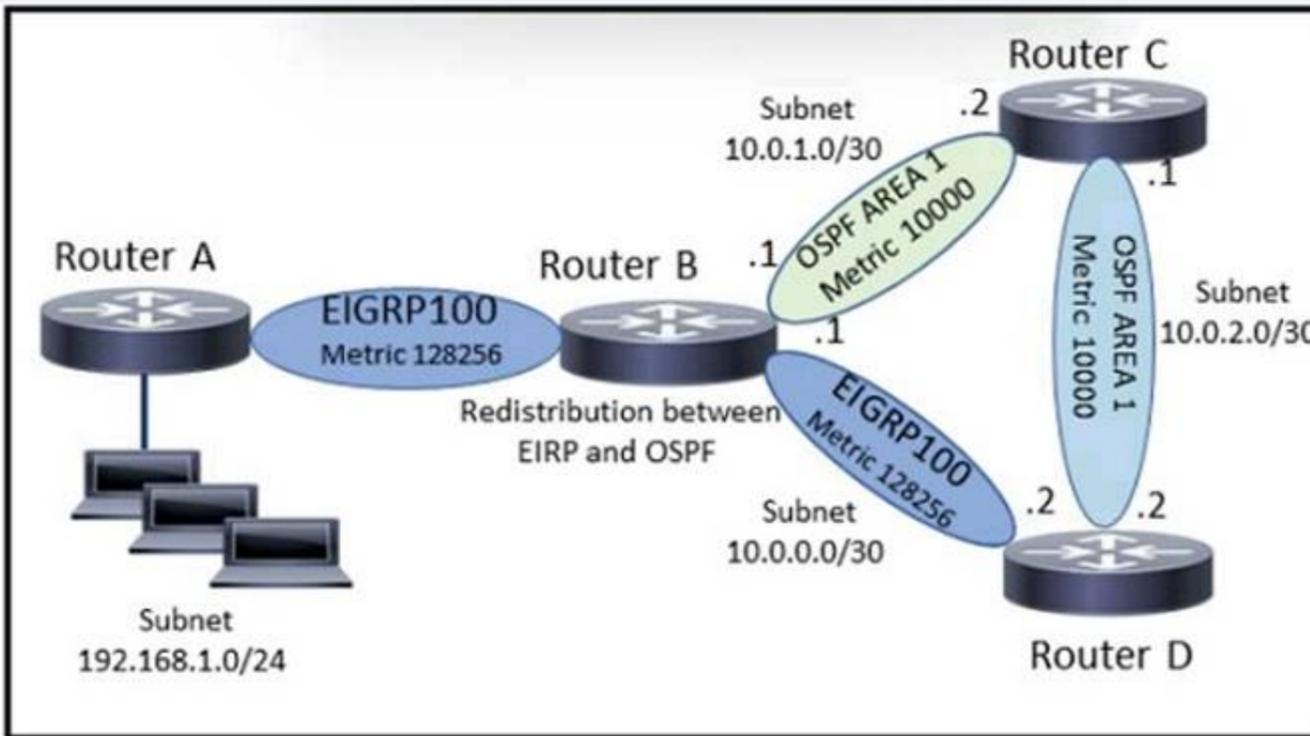
- A. broadcasts frames to all ports without queuing
- B. adds unknown source MAC addresses to the address table
- C. sends a retransmission request when a new frame is received
- D. sends frames with unknown destinations to a multicast group

**Answer: B**

#### NEW QUESTION 497

- (Topic 4)

Refer to the exhibit.



A network engineer executes the show ip route command on router D. What is the next hop to network 192.168 1 0/24 and why?

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

**Answer: B**

**NEW QUESTION 499**

- (Topic 4)

Which syslog severity level is considered the most severe and results in the system being considered unusable?

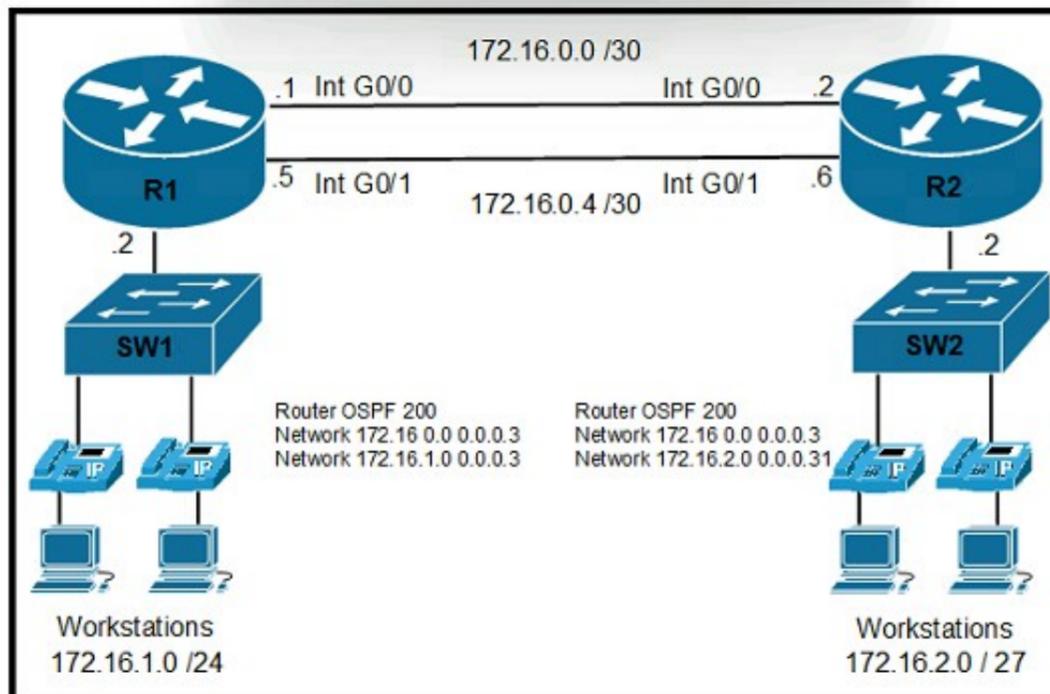
- A. Alert
- B. Error
- C. Emergency
- D. Critical

**Answer: C**

**NEW QUESTION 502**

- (Topic 4)

Refer to the exhibit.



The primary route across Gi0/0 is configured on both routers. A secondary route must be configured to establish connectivity between the workstation networks. Which command set must be configured to complete this task?

A)

**R1**  
**ip route 172.16.2.0 255.255.255.240 172.16.0.2 113**

**R2**  
**ip route 172.16.1.0 255.255.255.0 172.16.0.1 114**

B)

R1  
**ip route 172.16.2.0 255.255.255.240 172.16.0.5 89**

R2  
**ip route 172.16.1.0 255.255.255.0 172.16.0.6 89**

C)

R1  
**ip route 172.16.2.0 255.255.255.248 172.16.0.5 110**

R2  
**ip route 172.16.1.0 255.255.255.0 172.16.0.6 110**

D)

R1  
**ip route 172.16.2.0 255.255.255.224 172.16.0.6 111**

R2  
**ip route 172.16.1.0 255.255.255.0 172.16.0.5 112**

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

**Answer: D**

**NEW QUESTION 504**

- (Topic 4)  
 Refer to the exhibit.

```

R1#sho ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 10.56.0.1 to network 0.0.0.0

S*   0.0.0.0/0 [1/0] via 10.56.0.1
     10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C     10.56.0.0/17 is directly connected, Vlan56
L     10.56.0.19/32 is directly connected, Vlan56
C     10.56.128.0/18 is directly connected, Vlan57
L     10.56.128.19/32 is directly connected, Vlan57
    
```

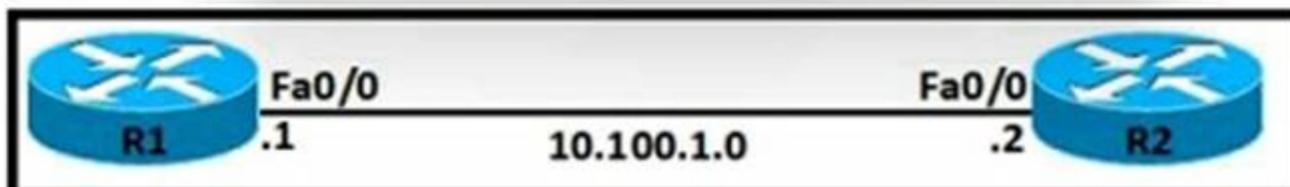
When router R1 is sending traffic to IP address 10.56.192.1, which interface or next hop address does it use to route the packet?

- A. 0.0.0.0/0
- B. 10.56.0.1
- C. 10.56.128.19
- D. Vlan57

**Answer: B**

**NEW QUESTION 507**

- (Topic 4)  
 Refer to the exhibit.



An OSPF neighbor relationship must be configured using these guidelines:

- R1 is only permitted to establish a neighbor with R2
- R1 will never participate in DR elections
- R1 will use a router-id of 101.1.1. Which configuration must be used?

A)

```
interface Loopback0
  ip address 10.1.1.1 255.255.255.255

interface FastEthernet0/0
  ip address 10.100.1.1 255.255.255.252
  ip ospf priority 100
  ip access-group 102 in

router ospf 10
  log-adjacency-changes
  network 10.1.1.1 0.0.0.0 area 0
  network 10.100.1.0 0.0.0.3 area 0
  ospf router-id 10.1.1.1

access-list 102 permit 88 host 10.100.1.2 host 224.0.0.5
access-list 102 deny 88 any any
access-list 102 permit ip any any
```

B)

```
interface Loopback0
  ip address 10.1.1.1 255.255.255.255

interface FastEthernet0/0
  ip address 10.100.1.1 255.255.255.252
  ip ospf priority 0
  ip access-group 102 in

router ospf 10
  log-adjacency-changes
  network 10.1.1.1 0.0.0.0 area 0
  network 10.100.1.0 0.0.0.3 area 0
  router-id 10.1.1.1

access-list 102 permit 88 host 10.100.1.2 host 224.0.0.5
access-list 102 deny 88 any any
access-list 102 permit ip any any
```

C)

```
interface FastEthernet0/0
  ip address 10.100.1.1 255.255.255.252
  ip ospf priority 100
  ip access-group 102 in

router ospf 10
  log-adjacency-changes
  network 10.1.1.1 0.0.0.0 area 0
  network 10.100.1.0 0.0.0.3 area 0
  ospf router-id 10.1.1.1

access-list 102 permit 89 host 10.100.1.2 host 224.0.0.5
access-list 102 deny 89 any any
access-list 102 permit ip any any
```

D)

```
interface FastEthernet0/0
 ip address 10.100.1.1 255.255.255.252
 ip ospf priority 0
 ip access-group 102 in

router ospf 10
 log-adjacency-changes
 network 10.1.1.1 0.0.0.0 area 0
 network 10.100.1.0 0.0.0.3 area 0
 router-id 10.1.1.1

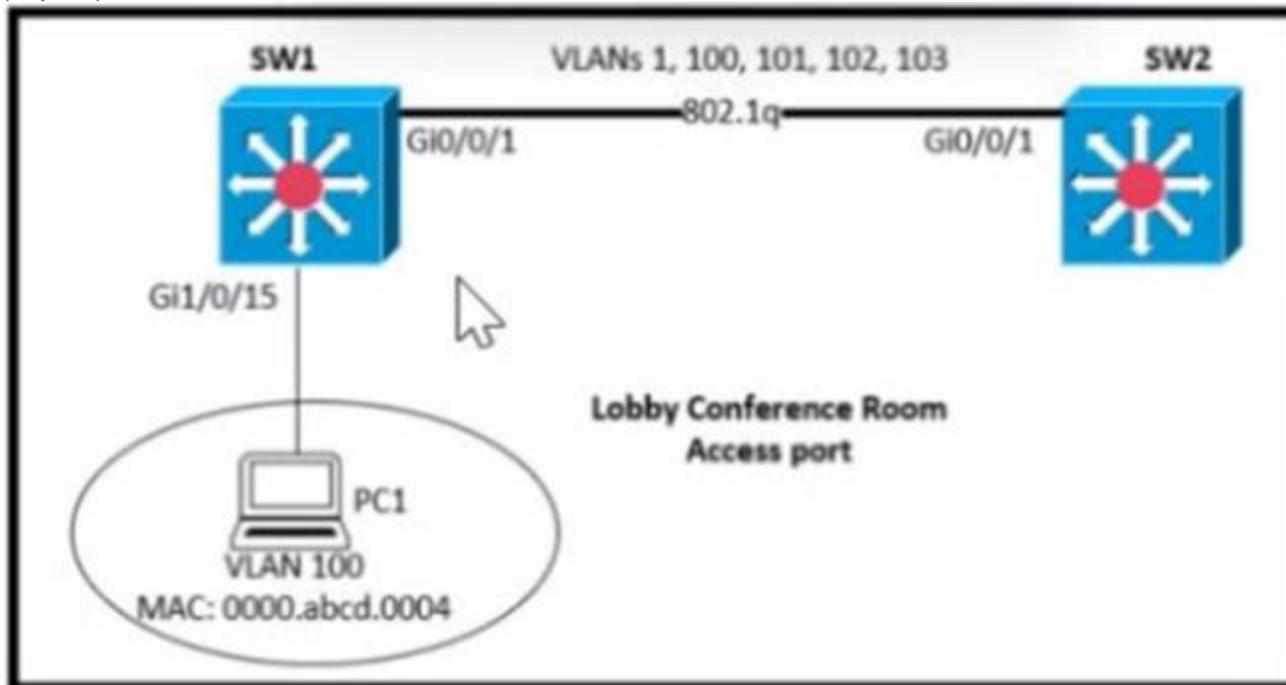
access-list 102 permit 89 host 10.100.1.2 host 224.0.0.5
access-list 102 deny 89 any any
access-list 102 permit ip any any
```

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

Answer: C

**NEW QUESTION 511**

- (Topic 4)



SW1 supports connectivity for a lobby conference room and must be secured. The engineer must limit the connectivity from PC1 to the SW1 and SW2 network. The MAC addresses allowed must be limited to two. Which configuration secures the conference room connectivity?

- A)
 

```
interface gi1/0/15
 switchport port-security mac-address 0000.abcd.0004 vlan 100
```
- B)
 

```
interface gi1/0/15
 switchport port-security
 switchport port-security maximum 2
```
- C)
 

```
interface gi1/0/15
 switchport port-security mac-address 0000.abcd.0004 vlan 100
 interface switchport secure-mac limit 2
```
- D)
 

```
interface gi1/0/15
 switchport port-security
 switchport port-security mac-address 0000.abcd.0004 vlan 100
```

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

Answer: B

**NEW QUESTION 512**

- (Topic 4)  
 Refer to the exhibit.

```

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

How many arrays are present in the JSON data?

- A. one
- B. three
- C. six
- D. nine

**Answer: C**

**NEW QUESTION 517**

- (Topic 4)  
 Refer to the exhibit.



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

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

**Answer: AB**

**NEW QUESTION 520**

- (Topic 4)  
 What are two disadvantages of a full-mesh topology? (Choose two.)

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

**Answer: BD**

**NEW QUESTION 522**

- (Topic 4)  
 Which two HTTP methods are suitable for actions performed by REST-based APIs? (Choose two.)

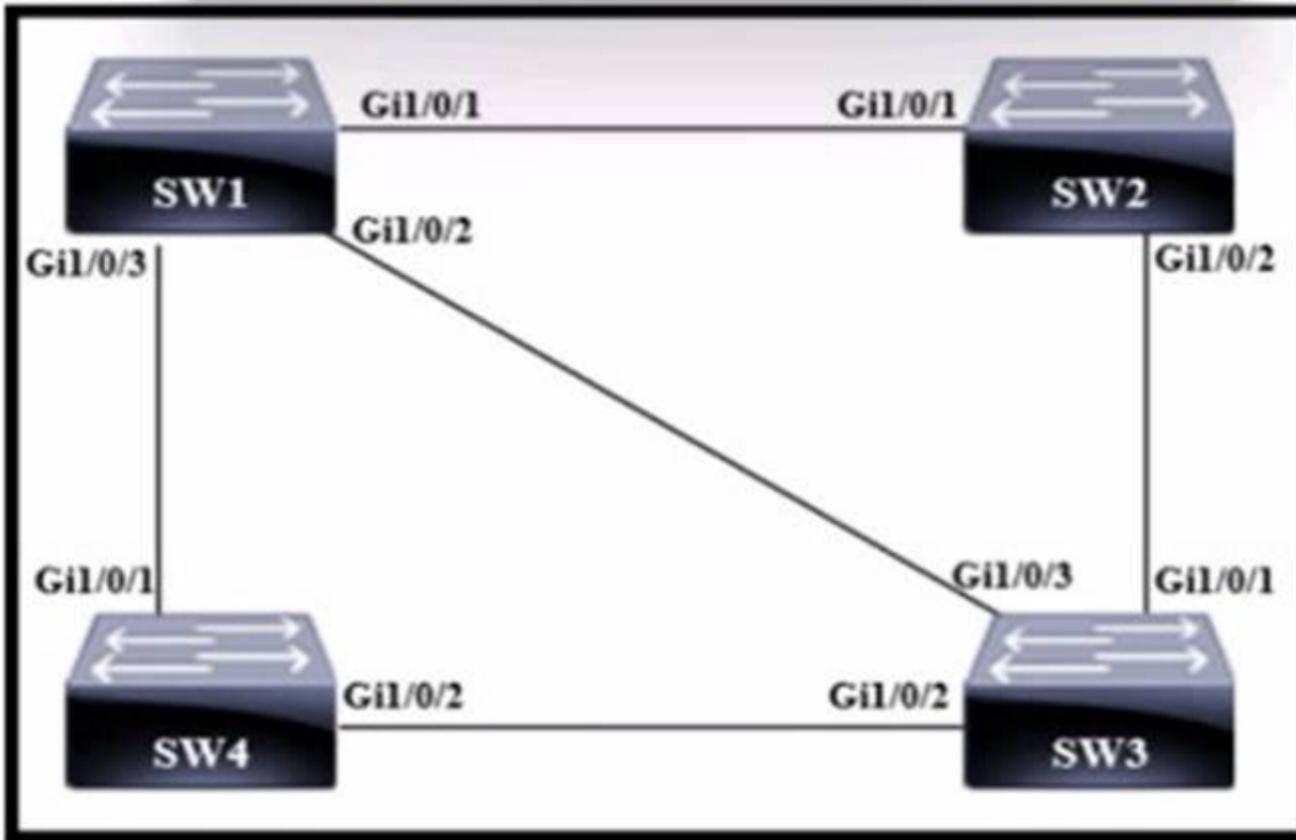
- A. REMOVE
- B. REDIRECT

- C. OPOST
- D. GET
- E. UPOP

**Answer:** CD

**NEW QUESTION 526**

- (Topic 4)



- A)
  - SW 1
  - Bridge Priority - 32768
  - mac-address 0d:ca:8e:7f:a0:24
- B)
  - SW 2
  - Bridge Priority - 53248
  - mac-address 02:3e:ee:61:5b:21
- C)
  - SW 4
  - Bridge Priority - 32768
  - mac-address 07:c1:b7:27:dd:73
- D)
  - SW 3
  - Bridge Priority - 53248
  - mac-address 02:aa:03:d3:05:87

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

**Answer:** D

**NEW QUESTION 529**

- (Topic 4)

What is a characteristic of RSA?

- A. It uses preshared keys for encryption
- B. It requires both sides to have identical keys
- C. It is a private-key encryption algorithm
- D. It is a public-key cryptosystem

**Answer:** D

**NEW QUESTION 533**

- (Topic 4)

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

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

**Answer: C**

**NEW QUESTION 538**

- (Topic 4)

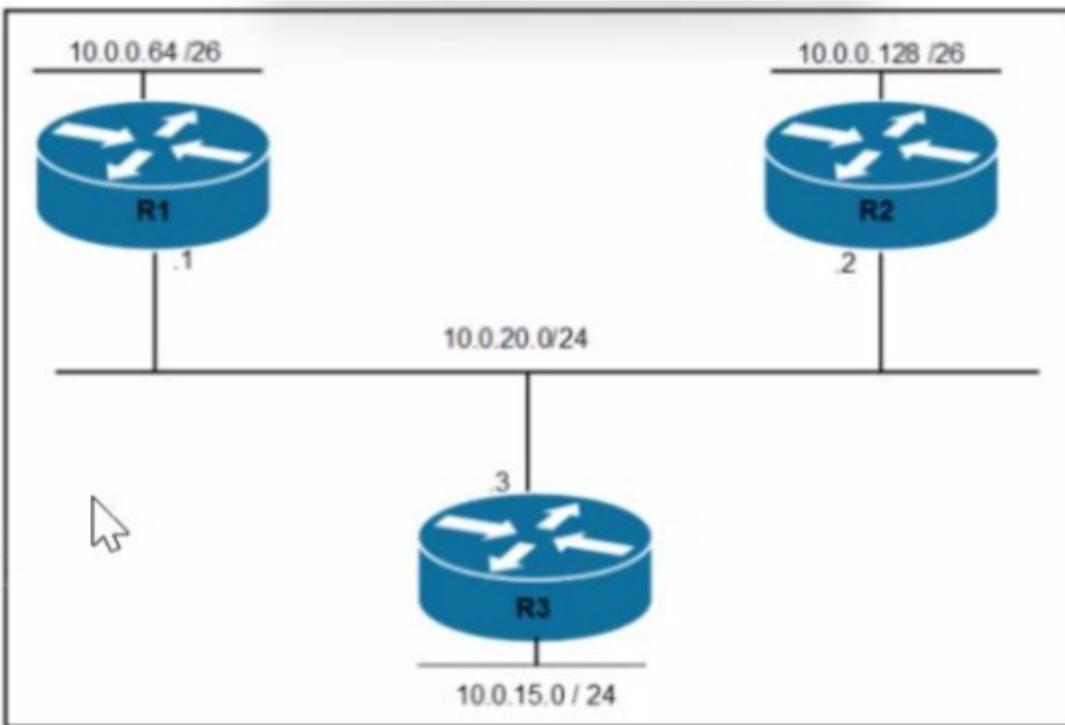
- A. LAG
- B. EtherChannel
- C. trunk
- D. access

**Answer: C**

**NEW QUESTION 541**

- (Topic 4)

Refer to the exhibit.



Router R1 is added to the network and configured with the 10.0.0.64/26 and 10.0.20.0/24 subnets. However, traffic destined for the LAN on R3 is not accessible. Which command, when executed on R1, defines a static route to reach the R3 LAN?

A)

```
ip route 10.0.15.0 255.255.255.192 10.0.20.1
```

B)

```
ip route 10.0.15.0 255.255.255.0 10.0.20.1
```

C)

```
ip route 10.0.0.64 255.255.255.192 10.0.20.3
```

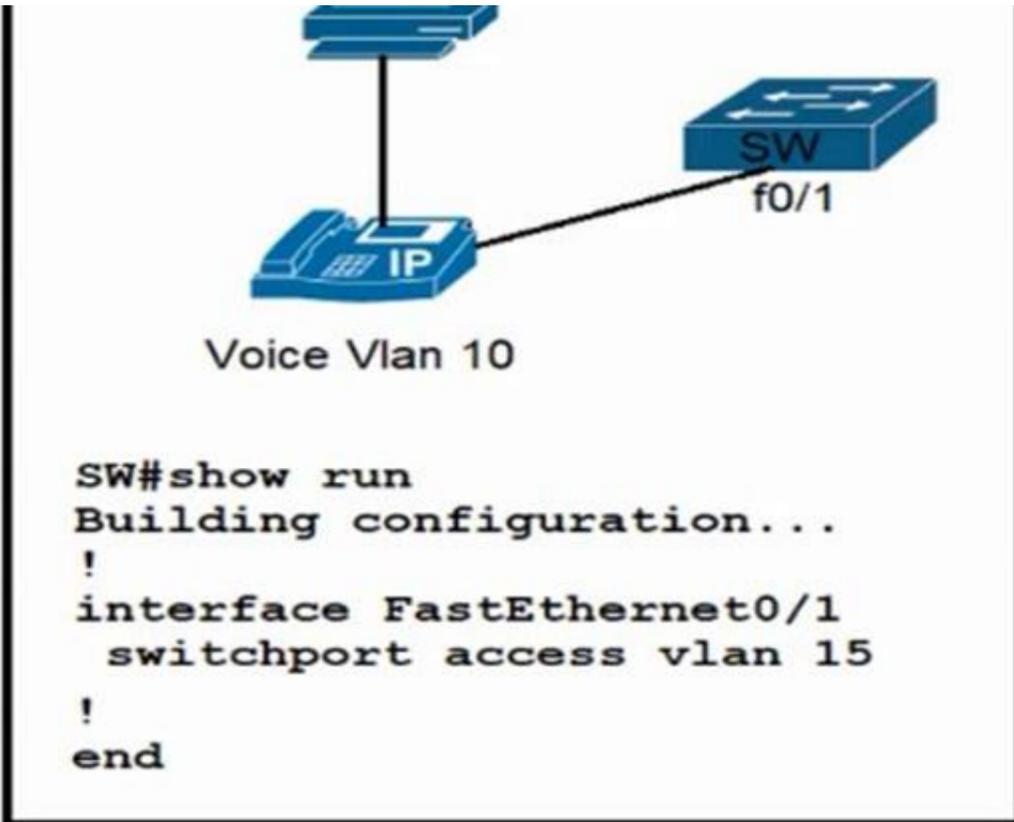
- A. Option A
- B. Option B
- C. Option C

**Answer: C**

**NEW QUESTION 546**

- (Topic 3)

Refer to the exhibit.



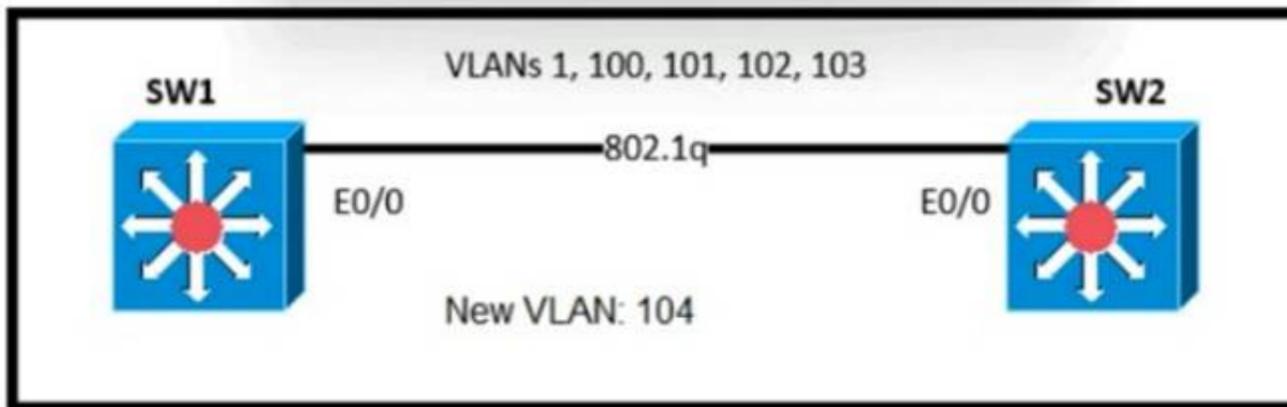
All VLANs are present in the VLAN database. Which command sequence must be applied to complete the configuration?

- A. Interface FastEthernet0/1 switchport trunk native vlan 10 switchport trunk allowed vlan 10,15
- B. Interface FastEthernet0/1 switchport mode trunk switchport trunk allowed vlan 10,15
- C. interface FastEthernet0/1 switchport mode access switchport voice vlan 10
- D. Interface FastEthernet0/1 switchport trunk allowed vlan add 10 vlan 10 private-vlan isolated

Answer: C

**NEW QUESTION 550**

- (Topic 3)  
 Refer to the exhibit.



An engineer is asked to insert the new VLAN into the existing trunk without modifying anything previously configured. Which command accomplishes this task?

- A. switchport trunk allowed vlan 100-104
- B. switchport trunk allowed vlan add 104
- C. switchport trunk allowed vlan all
- D. switchport trunk allowed vlan 104

Answer: D

**NEW QUESTION 555**

- (Topic 3)  
 Which action is taken by the data plane within a network device?

- A. forwards traffic to the next hop
- B. constructs a routing table based on a routing protocol
- C. provides CLI access to the network device
- D. looks up an egress interface in the forwarding information base

Answer: A

**NEW QUESTION 556**

FILL IN THE BLANK - (Topic 3)  
 Drag and drop the REST API call methods for HTTP from the left onto the actions they perform on the right. Not all methods are used.

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

Chart, bar chart Description automatically generated

**NEW QUESTION 558**

- (Topic 3)

Which field within the access-request packet is encrypted by RADIUS?

- A. authorized services
- B. authenticator
- C. username
- D. password

**Answer:** D

**NEW QUESTION 560**

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