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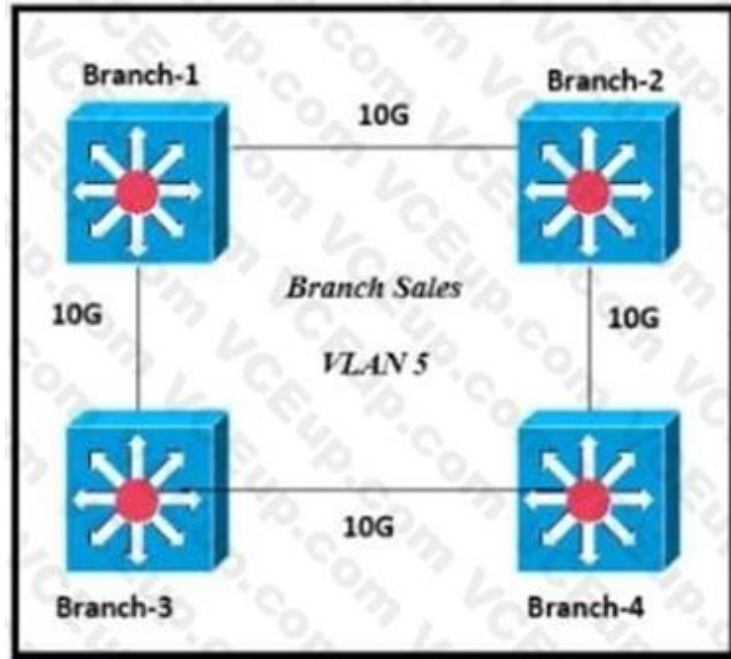
Exam Code: 200-301
Exam Name: Cisco Certified Network Associate (CCNA)



Exam A

QUESTION 1

Refer to the exhibit.



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

Branch-1 priority 614440

Branch-2: priority 39082416

Branch-3: priority 0

Branch-4: root primary

Which switch becomes the permanent root bridge for VLAN 5?

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

Correct Answer: C

Section:

Explanation:

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

QUESTION 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

Correct Answer: A, D

Section:

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.

QUESTION 3

Which plane is centralized by an SDN controller?

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

Correct Answer: B

Section:

QUESTION 4

Refer to the exhibit.



```
access-list 101 permit ospf any any
access-list 101 permit tcp any any eq 179
access-list 101 permit tcp any eq 179 any
access-list 101 permit gre any any
access-list 101 permit esp any any

access-list 101 deny ospf any any
access-list 101 permit tcp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255 eq telnet
access-list 101 permit udp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255 eq 500
access-list 101 permit udp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255 eq 4500
access-list 101 deny ip any any log

interface Ethernet0/0
 ip address 10.1.1.25 255.255.255.0
 ip access-group 101 in
```

A network administrator has been tasked with securing VTY access to a router. Which access-list entry accomplishes this task?

- A. access-list 101 permit tcp 10.1.10 0.0.0.255 172.16.10 0.0.0.255 eq ssh
- B. access-list 101 permit tcp 10.11.0 0.0.0.255 172.16.10 0.0.0.255 eq scp
- C. access-list 101 permit tcp 10.11.0 0.0.0.255 172.16.10 0.0.0.255 eq telnet
- D. access-list 101 permit tcp 10.1.10 0.0.0.255 172.16.10 0.0.0.255 eq https

Correct Answer: A

Section:

QUESTION 5

A Cisco IP phone receives untagged data traffic from an attached PC. Which action is taken by the phone?

- A. It allows the traffic to pass through unchanged
- B. It drops the traffic
- C. It tags the traffic with the default VLAN
- D. It tags the traffic with the native VLAN

Correct Answer: A

Section:

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960x/software/15-0_2_EX/vlan/configuration_guide/b_vlan_152ex_2960-x_cg/b_vlan_152ex_2960-x_cg_chapter_0110.pdf Untagged traffic from the device attached to the Cisco

IP Phone passes through the phone unchanged, regardless of the trust state of the access port on the phone.

QUESTION 6

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

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

Correct Answer: D

Section:

Explanation:

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

QUESTION 7

Which set of action satisfy the requirement for multifactor authentication?

- A. The user swipes a key fob, then clicks through an email link
- B. The user enters a user name and password, and then clicks a notification in an authentication app on a mobile device
- C. The user enters a PIN into an RSA token, and then enters the displayed RSA key on a login screen
- D. The user enters a user name and password and then re-enters the credentials on a second screen

Correct Answer: B

Section:

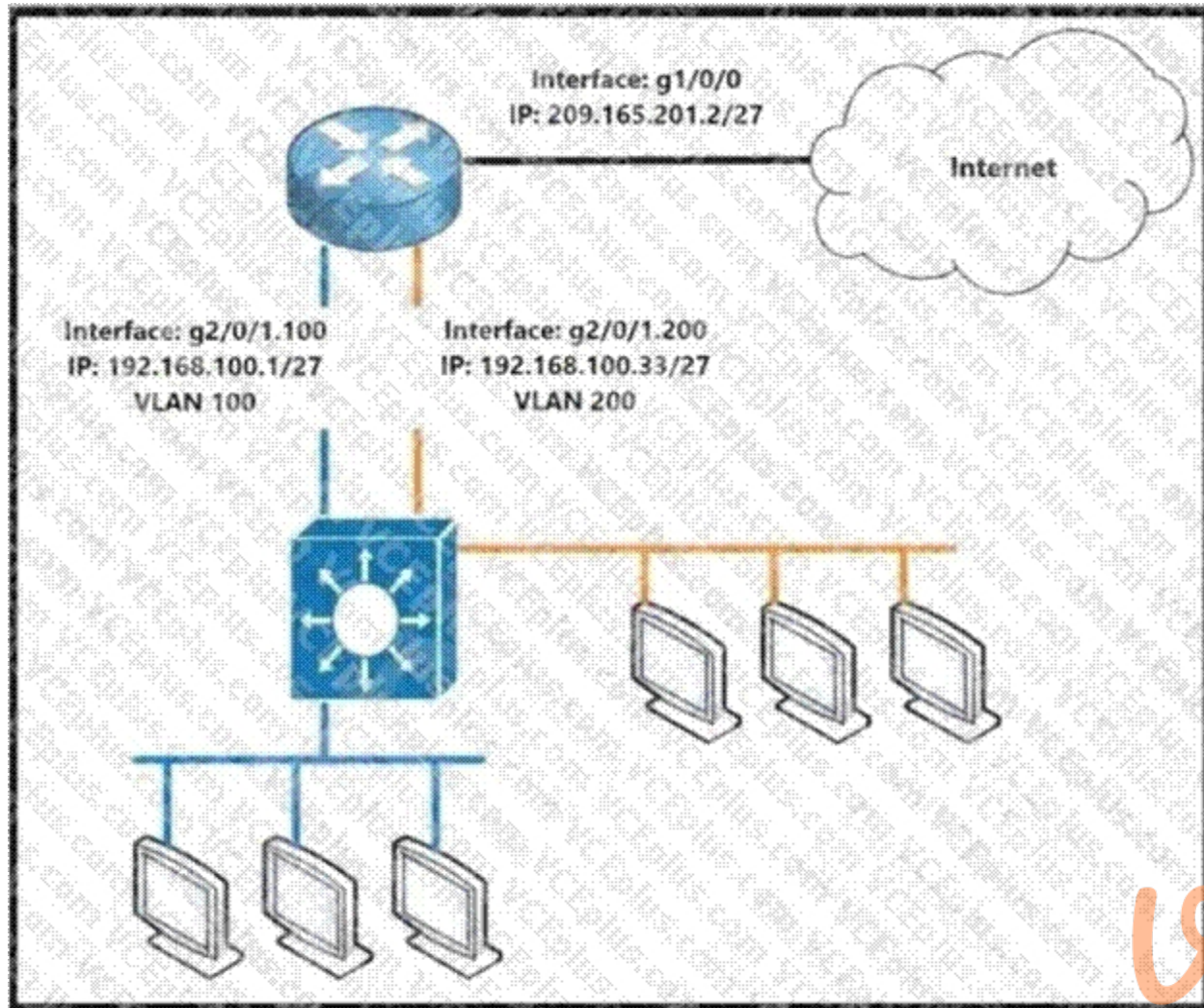
Explanation:

This is an example of how two-factor authentication (2FA) works:

1. The user logs in to the website or service with their username and password.
2. The password is validated by an authentication server and, if correct, the user becomes eligible for the second factor.
3. The authentication server sends a unique code to the user's second-factor method (such as a smartphone app).
4. The user confirms their identity by providing the additional authentication for their second-factor method.

QUESTION 8

Refer to Exhibit.



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

- A. Router1(config)#access-list 99 permit 192.168.100.32 0.0.0.31
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config)#ip nat outside
- B. Router1(config)#access-list 99 permit 192.168.100.0 0.0.0.255
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config)#ip nat outside
- C. Router1(config)#access-list 99 permit 209.165.201.2 255.255.255.255
Router1(config)#ip nat inside source list 99 interface gi1/0/0
overload Router1(config)#interface gi2/0/1.200
Router1(config)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config)#ip nat outside
- D. Router1(config)#access- list 99 permit 209.165.201.2 0.0.0.0
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config)#ip nat inside
Router1(config)#interface gi1/0/0

Router1(config)#ip nat outside

Correct Answer: A

Section:

QUESTION 9

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

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

Correct Answer: A, B

Section:

QUESTION 10

How do traditional campus device management and Cisco DNA Center device management differ in regards to deployment?

- A. Cisco DNA Center device management can deploy a network more quickly than traditional campus device management
- B. Traditional campus device management allows a network to scale more quickly than with Cisco DNA Center device management
- C. Cisco DNA Center device management can be implemented at a lower cost than most traditional campus device management options
- D. Traditional campus device management schemes can typically deploy patches and updates more quickly than Cisco DNA Center device management

Correct Answer: A

Section:

QUESTION 11

A corporate office uses four floors in a building

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

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

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

Correct Answer: D

Section:

QUESTION 12

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

- A. Exchange

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

Correct Answer: C

Section:

QUESTION 13

Which action is taken by a switch port enabled for PoE power classification override?

- A. When a powered device begins drawing power from a PoE switch port a syslog message is generated
- B. As power usage on a PoE switch port is checked data flow to the connected device is temporarily paused
- C. If a switch determines that a device is using less than the minimum configured power it assumes the device has failed and disconnects
- D. Should a monitored port exceeds the maximum administrative value for power, the port is shutdown and err-disabled

Correct Answer: D

Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SX/configuration/guide/book/power_over_ethernet.pdf PoE monitoring and policing compares the power consumption on ports with the administrative maximum value (either a configured maximum value or the port's default value). If the power consumption on a monitored port exceeds the administrative maximum value, the following actions occur:

- A syslog message is issued.
- The monitored port is shut down and error-disabled.
- The allocated power is freed.



QUESTION 14

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

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

Correct Answer: C

Section:

Explanation:

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

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

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

QUESTION 15

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

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

Correct Answer: B, C

Section:

Explanation:

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

QUESTION 16

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

Correct Answer: C

Section:

QUESTION 17

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

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

Correct Answer: B

Section:

QUESTION 18

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

Correct Answer: D



Section:

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.

QUESTION 19

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

Correct Answer: A

Section:

QUESTION 20

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

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

Correct Answer: C

Section:

QUESTION 21

Refer to the exhibit.

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

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



```

R1(config)#username admin privilege 15 secret p@ss1234
R1(config-if)#line vty 0 4
R1(config-line)#login local

R1(config)#username admin secret p@ss1234
R1(config-if)#line vty 0 4
R1(config-line)#login local
R1(config)#enable secret p@ss1234

R1(config)#username admin
R1(config-if)#line vty 0 4
R1(config-line)#password p@ss1234
R1(config-line)#transport input telnet

R1(config)#username admin
R1(config-if)#line vty 0 4
R1(config-line)#password p@ss1234

```

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

Correct Answer: A

Section:

QUESTION 22

Refer to the exhibit.



```

SiteA#show interface TenGigabitEthernet0/1/0
TenGigabitEthernet0/1/0 is up, line protocol is up
  Hardware is BUILT-IN-EPA-8x10G, address is 780c.f02a.db91 (bia 780a.f02b.db91)
  Description: Connection to SiteB
  Internet address is 10.10.10.1/30
  MTU 8146 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 166/255, txload 1/255, rxload 1/255
  Full Duplex, 10000Mbps, link type is force-up, media type is SFP-LR
  5 minute input rate 264797000 bits/sec, 26672 packets/sec
  5 minute output rate 122464000 bits/sec, 15724 packets/sec

SiteB#show interface TenGigabitEthernet0/1/0
TenGigabitEthernet0/1/0 is up, line protocol is up
  Hardware is BUILT-IN-EPA-8x10G, address is 780c.f02c.db26 (bia 780c.f02c.db26)
  Description: Connection to SiteA
  Internet address is 10.10.10.2/30
  MTU 8146 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Full Duplex, 10000Mbps, link type is force-up, media type is SFP-LR
  5 minute input rate 122464000 bits/sec, 15724 packets/sec
  5 minute output rate 264797000 bits/sec, 26672 packets/sec

```

Shortly after SiteA was connected to SiteB over a new single-mode fiber path users at SiteA report intermittent connectivity issues with applications hosted at SiteB What is the cause of the intermittent connectivity issue?

- A. Interface errors are incrementing
- B. An incorrect SFP media type was used at SiteA
- C. High usage is causing high latency

D. The sites were connected with the wrong cable type

Correct Answer: A

Section:

QUESTION 23

Where does a switch maintain DHCP snooping information?

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

Correct Answer: C

Section:

QUESTION 24

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

Correct Answer: A

Section:

QUESTION 25

Refer to the exhibit.

```

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

Channel group 35 neighbors

Partner's information:

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

```

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

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

Correct Answer: D

Section:

Explanation:

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

QUESTION 26

Which result occurs when PortFast is enabled on an interface that is connected to another switch?

- A. Spanning tree may fail to detect a switching loop in the network that causes broadcast storms
- B. VTP is allowed to propagate VLAN configuration information from switch to switch automatically.
- C. Root port choice and spanning tree recalculation are accelerated when a switch link goes down
- D. After spanning tree converges PortFast shuts down any port that receives BPDUs.

Correct Answer: A

Section:

Explanation:

Enabling the PortFast feature causes a switch or a trunk port to enter the STP forwarding-state immediately or upon a linkup event, thus bypassing the listening and learning states. Note: To enable portfast on a trunk port you need the trunk keyword "spanning-tree portfast trunk"

QUESTION 27

Refer to exhibit.

```

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

```

Which statement explains the configuration error message that is received?

- A. It is a broadcast IP address
- B. The router does not support /28 mask.

- C. It belongs to a private IP address range.
- D. IT is a network IP address.

Correct Answer: A

Section:

QUESTION 28

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

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

Correct Answer: C

Section:

Explanation:

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

QUESTION 29

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

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



Correct Answer: B

Section:

QUESTION 30

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

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

Correct Answer: D, E

Section:

Explanation:

Whenever the physical transmission has problems, the receiving device might receive a frame whose bits have changed values. These frames do not pass the error detection logic as implemented in the FCS field in the Ethernet trailer. The receiving device discards the frame and counts it as some kind of input error.

Cisco switches list this error as a CRC error. Cyclic redundancy check (CRC) is a term related to how the FCS math detects an error.

The "input errors" includes runts, giants, no buffer, CRC, frame, overrun, and ignored counts.

The output below show the interface counters with the "show interface s0/0/0" command:

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

QUESTION 31

Which command enables a router to become a DHCP client?

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

Correct Answer: A

Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipaddr_dhcp/configuration/12-4/dhcp-12-4-book/config-dhcp-client.htmlIf we want to get an IP address from the DHCP server on a Cisco device, we can use the command "ipaddress dhcp".

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

QUESTION 32

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

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

Correct Answer: B, E

Section:

Explanation:

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

Reference:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/5_x/rest_api_config/b_Cisco_N1KV_VMware_REST_API_Config_5x/b_Cisco_N1KV_VMware_REST_API_Config_5x_ch



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

QUESTION 33

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

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

Correct Answer: D

Section:

QUESTION 34

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

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

Correct Answer: D, E

Section:

Explanation:

Reference:

<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xe-3s/ipv6-xe-36sbook/ip6-multicast.html> When an interface is configured with IPv6 address, it automatically joins the all nodes (FF02::1) and solicited-node (FF02::1:FFxx:xxxx) multicast groups. The all-node group is used to communicate with all interfaces on the local link, and the solicited-nodes multicast group is required for link-layer address resolution. Routers also join a third multicast group, the all-routers group (FF02::2).

QUESTION 35

Which MAC address is recognized as a VRRP virtual address?

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

Correct Answer: A

Section:

Explanation:

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

QUESTION 36

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



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

Correct Answer: D

Section:

Explanation:

Spine-leaf architecture is typically deployed as two layers: spines (such as an aggregation layer), and leaves (such as an access layer). Spine-leaf topologies provide high-bandwidth, low-latency, nonblocking server-to-server connectivity.

Leaf (aggregation) switches are what provide devices access to the fabric (the network of spine and leaf switches) and are typically deployed at the top of the rack. Generally, devices connect to the leaf switches.

Devices can include servers, Layer 4-7 services (firewalls and load balancers), and WAN or Internet routers. Leaf switches do not connect to other leaf switches. In spine-and-leaf architecture, every leaf should connect to every spine in a full mesh.

Spine (aggregation) switches are used to connect to all leaf switches and are typically deployed at the end or middle of the row. Spine switches do not connect to other spine switches.

QUESTION 37

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

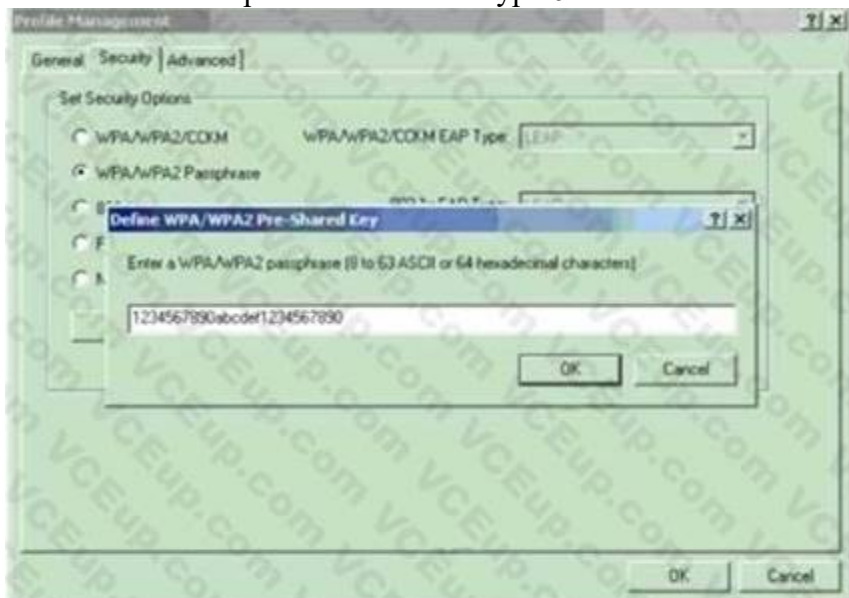
- A. TKIP with RC4
- B. RC4
- C. AES-128
- D. AES-256

Correct Answer: D

Section:

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>

QUESTION 38

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

- A. It drops lower-priority packets before it drops higher-priority packets

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

Correct Answer: A, D

Section:

Explanation:

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

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

WRED generally drops packets selectively based on IP precedence. Packets with a higher IP precedence are less likely to be dropped than packets with a lower precedence. Thus, the higher the priority of a packet, the higher the probability that the packet will be delivered

QUESTION 39

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

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

Correct Answer: A

Section:

QUESTION 40

Refer to the exhibit.

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

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

- A. adminadmin123

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

Correct Answer: C

Section:

Explanation:

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

QUESTION 41

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

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

Correct Answer: D

Section:

QUESTION 42

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

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



Correct Answer: B

Section:

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.

QUESTION 43

Which QoS Profile is selected in the GUI when configuring a voice over WLAN deployment?

- A. Bronze
- B. Platinum
- C. Silver
- D. Gold

Correct Answer: B

Section:

Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lanwlan/81831-qos-wlc-lap.html> Cisco Unified Wireless Network solution WLANs support four levels of QoS: Platinum/Voice, Gold/Video, Silver/Best Effort (default), and Bronze/Background.

QUESTION 44

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

Correct Answer: C

Section:

Explanation:

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

QUESTION 45

What are two southbound APIs? (Choose two)

- A. OpenFlow
- B. NETCONF
- C. Thrift
- D. CORBA
- E. DSC

Correct Answer: A, B

Section:

Explanation:

OpenFlow is a well-known southbound API. OpenFlow defines the way the SDN Controller should interact with the forwarding plane to make adjustments to the network, so it can better adapt to changing business requirements.

The Network Configuration Protocol (NetConf) uses Extensible Markup Language (XML) to install, manipulate and delete configuration to network devices.

QUESTION 46

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

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

Correct Answer: D

Section:

Explanation:

This is a training program which simulates an attack, not a real attack (as it says "The webpage that opens reports that it was safe") so we believed it should be called a "user awareness" program.

Therefore the best answer here should be "user awareness". This is the definition of "User awareness" from CCNA 200- 301 Official Cert Guide Book:

"User awareness: All users should be made aware of the need for data confidentiality to protect corporate information, as well as their own credentials and personal information. They should also be made aware of potential threats, schemes to mislead, and proper procedures to report security incidents. " Note: Physical access control means infrastructure locations, such as network closets and data centers, should remain securely locked.



QUESTION 47

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

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

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

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

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

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

Correct Answer: A

Section:

QUESTION 48

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

Correct Answer: B

Section:

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.

QUESTION 49

Refer to the exhibit.

```
R2#show ip nat translations
Pro Inside global      Inside local  Outside local  Outside global
tcp 172.23.104.3:43268  10.4.4.4:43268 172.23.103.10:23 172.23.103.10:23
tcp 172.23.104.4:45507  10.4.4.5:45507 172.23.103.10:80 172.23.103.10:80
```

An engineer configured NAT translations and has verified that the configuration is correct.

Which IP address is the source IP?

- A. 10.4.4.4

- B. 10.4.4.5
- C. 172.23.103.10
- D. 172.23.104.4

Correct Answer: D

Section:

Explanation:

NAT is used to send a packet to the outside network, using a public IP address to make it routable.

The NAT logic is "inside-to-outside" FIRST and "outside-to-inside" THEN. This way, configuring NAT means "choosing a public IP address" for any outbound packet" IN THE FIRST PLACE, where "public IP address" translates to "inside global address". Among the given answers, the only inside global address is 172.123.104.4.

QUESTION 50

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

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

Correct Answer: A

Section:

Explanation:

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

QUESTION 51

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

Correct Answer: C

Section:

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

QUESTION 52

An engineer is asked to protect unused ports that are configured in the default VLAN on a switch.

Which two steps will fulfill the request? (Choose two)

- A. Configure the ports in an EtherChannel.
- B. Administratively shut down the ports

- C. Configure the port type as access and place in VLAN 99
- D. Configure the ports as trunk ports
- E. Enable the Cisco Discovery Protocol

Correct Answer: B, C

Section:

QUESTION 53

Which output displays a JSON data representation?

```
A {
  "response" {
    "taskId" {},
    "url" "string"
  },
  "version" "string"
}

B {
  "response" {
    "taskId" {},
    "url" "string"
  },
  "version" "string"
}

C {
  "response" {
    "taskId" {},
    "url" "string"
  },
  "version" "string"
}

D {
  "response" {
    "taskId" {},
    "url" "string"
  },
  "version" "string"
}
```

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

Correct Answer: C

Section:



Explanation:

JSON data is written as name/value pairs.

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

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

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

For example:

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

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

QUESTION 54

Which command is used to specify the delay time in seconds for LLDP to initialize on any interface?

- A. lldp timer
- B. lldp holdtime
- C. lldp reinit
- D. lldp tlv-select

Correct Answer: C

Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960/software/release/12-2_37Ey/configuration/guide/scg/swlldp.pdf
+ lldp holdtime seconds: Specify the amount of time a receiving device should hold the information from your device before discarding it
+ lldp reinit delay: Specify the delay time in seconds for LLDP to initialize on an interface
+ lldp timer rate: Set the sending frequency of LLDP updates in seconds

QUESTION 55

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

Correct Answer: B

Section:

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

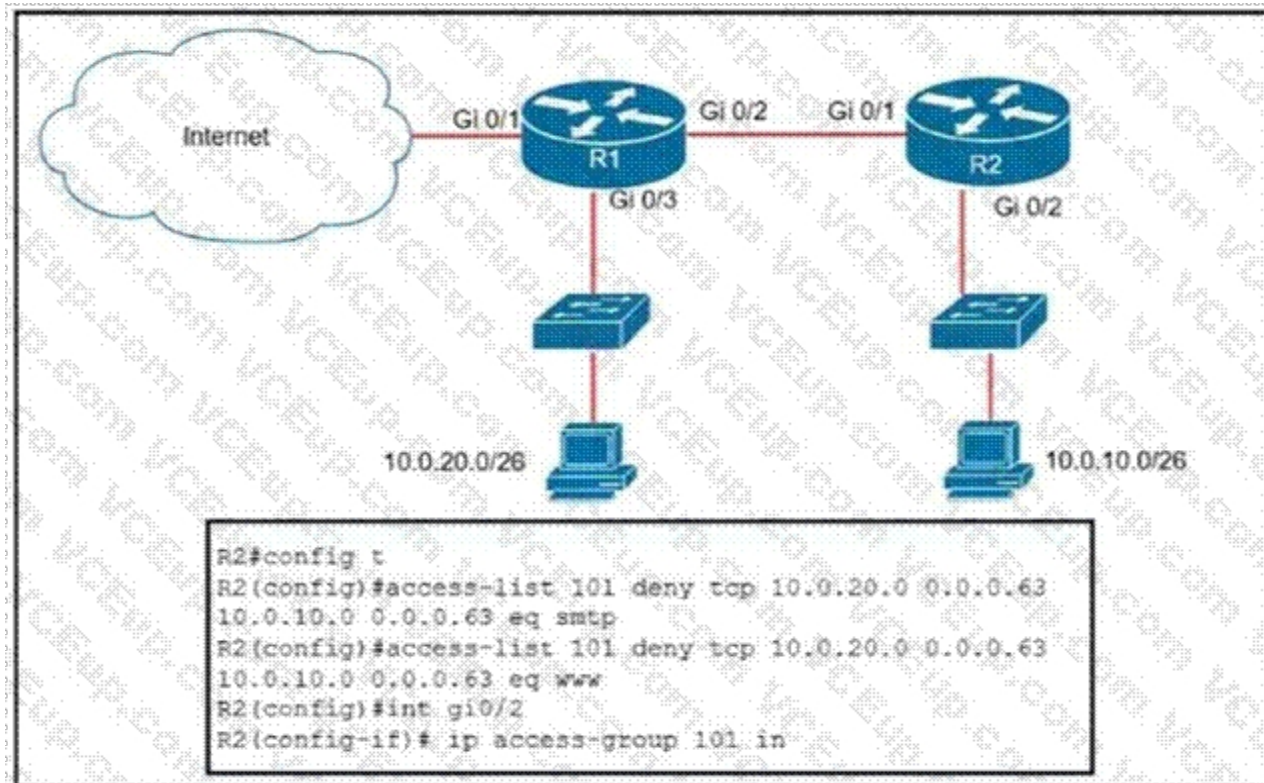
+ A Management Information Base (MIB)

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

QUESTION 56

Refer to the exhibit.



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

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

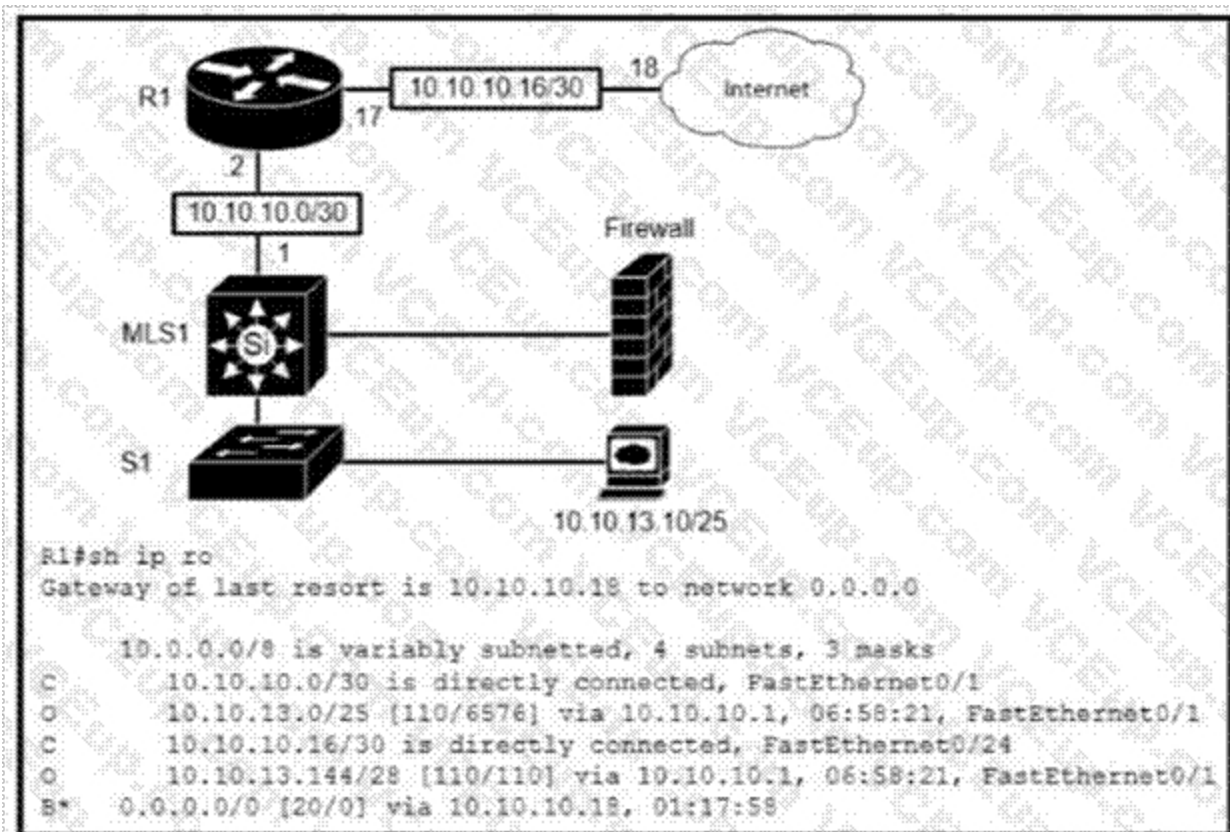


Correct Answer: B, C

Section:

QUESTION 57

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



Correct Answer: D

Section:

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.

QUESTION 58

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

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

Correct Answer: A

Section:

Explanation:

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

QUESTION 59



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

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

Correct Answer: D

Section:

Explanation:

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

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

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

QUESTION 60

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

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

Correct Answer: B, D

Section:

Explanation:

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

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

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

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

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

QUESTION 61

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

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

Correct Answer: B

Section:

Explanation:

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

QUESTION 62

Refer to the exhibit.



```

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

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

```

Which command provides this output?

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

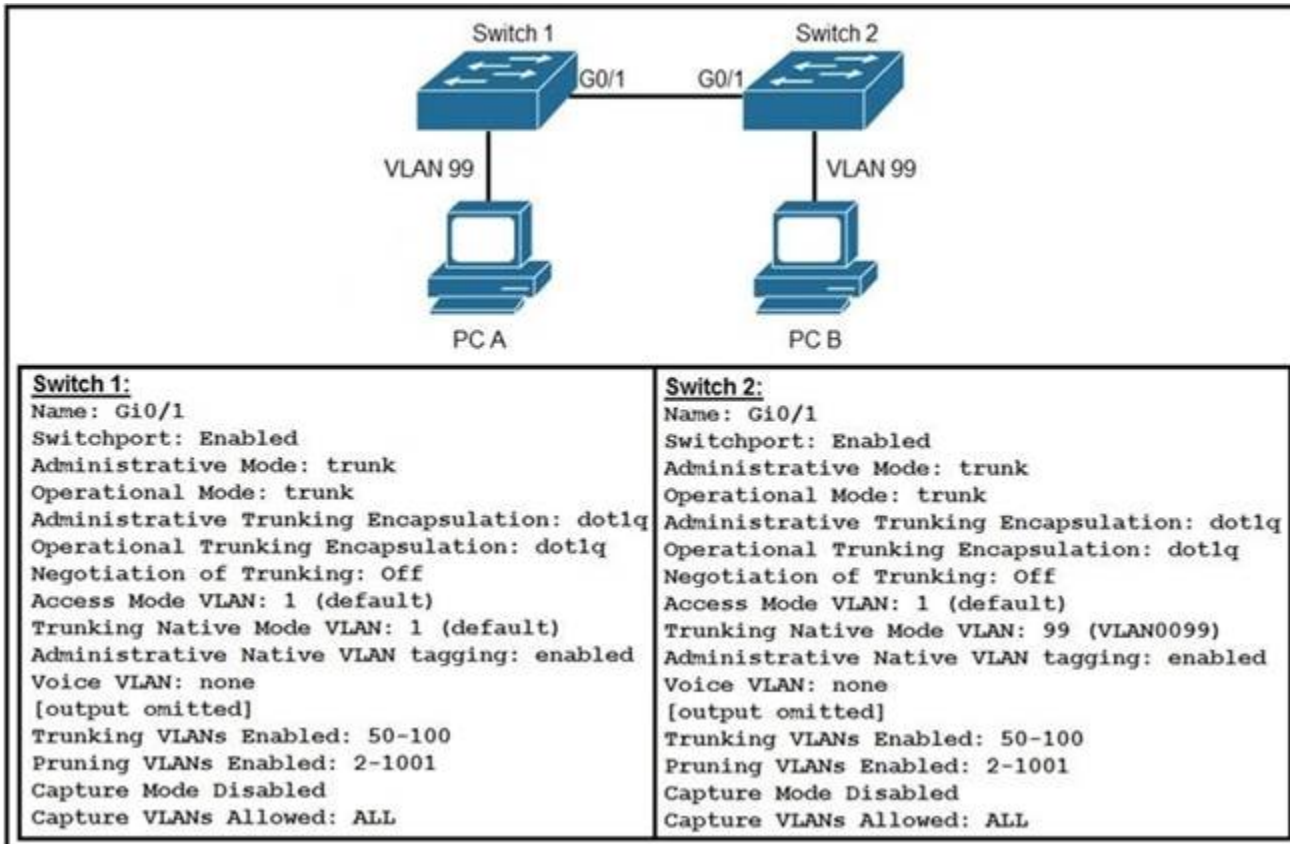
Correct Answer: D

Section:



QUESTION 63

Refer to the Exhibit.



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

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

Correct Answer: A

Section:

Explanation:

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

QUESTION 64

Which 802.11 frame type is association response?

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

Correct Answer: A

Section:

Explanation:

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



QUESTION 65

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

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

Correct Answer: D

Section:

QUESTION 66

Which statement identifies the functionality of virtual machines?

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

Correct Answer: B

Section:

QUESTION 67

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

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

Correct Answer: C

Section:

Explanation:

NAT use four types of addresses:

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

QUESTION 68

Which option about JSON is true?

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



Correct Answer: B

Section:

Explanation:

JSON data is written as name/value pairs.

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

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

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

For example:

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

QUESTION 69

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

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

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

Correct Answer: C

Section:

QUESTION 70

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

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

Correct Answer: B, E

Section:

QUESTION 71

Refer to the exhibit.

```
import ncclient
with ncclient.manager.connect(host='192.168.1.1', port=830, username='root',
                             password='teset123!', allow_agent=False) as m:
    print(m.get_config('running').data_xml)
```

After running the code in the exhibit, which step reduces the amount of data that the NETCONF server returns to the NETCONF client, to only the interface's configuration?

- A. Use the Ixml library to parse the data returned by the NETCONF server for the interface's configuration.
- B. Create an XML filter as a string and pass it to get_config() method as an argument.
- C. Create a JSON filter as a string and pass it to the get_config() method as an argument.
- D. Use the JSON library to parse the data returned by the NETCONF server for the interface's configuration.

Correct Answer: D

Section:

QUESTION 72

Which resource is able to be shared among virtual machines deployed on the same physical server?

- A. disk
- B. applications
- C. VM configuration file
- D. operating system

Correct Answer: C

Section:

QUESTION 73

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

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

Correct Answer: C

Section:

QUESTION 74

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

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

Correct Answer: C

Section:

QUESTION 75

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

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

Correct Answer: B, D

Section:

QUESTION 76

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

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

Correct Answer: C

Section:

QUESTION 77

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

- A. default-router



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

Correct Answer: A

Section:

QUESTION 78

What is an appropriate use for private IPv4 addressing?

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

Correct Answer: D

Section:

QUESTION 79

How is the native VLAN secured in a network?

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

Correct Answer: A

Section:

QUESTION 80

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

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

Correct Answer: B

Section:

Explanation:

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

The Southbound Interface

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

QUESTION 81

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



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

Correct Answer: B

Section:

Explanation:

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

QUESTION 82

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

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

Correct Answer: A

Section:

Explanation:

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

QUESTION 83

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

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

Correct Answer: B

Section:

QUESTION 84

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

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

Correct Answer: D

Section:

QUESTION 85

Which network action occurs within the data plane?

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

Correct Answer: A

Section:

QUESTION 86

What is a DHCP client?

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

Correct Answer: A

Section:

QUESTION 87

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

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

Correct Answer: A

Section:

QUESTION 88

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

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

Correct Answer: A

Section:

QUESTION 89

What is the benefit of using FHRP?

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

Correct Answer: C

Section:

QUESTION 90

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

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

Correct Answer: D

Section:

QUESTION 91

What occurs when overlapping Wi-Fi channels are implemented?

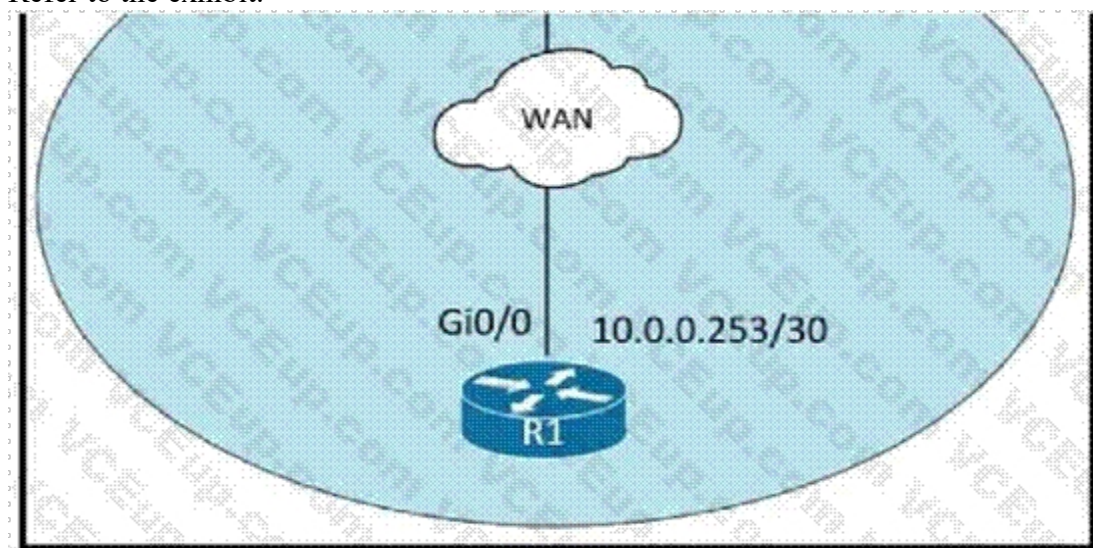
- A. The wireless network becomes vulnerable to unauthorized access.
- B. Wireless devices are unable to distinguish between different SSIDs
- C. Users experience poor wireless network performance.
- D. Network communications are open to eavesdropping.

Correct Answer: C

Section:

QUESTION 92

Refer to the exhibit.



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



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

Correct Answer: D

Section:

QUESTION 93

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

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

Correct Answer: A

Section:

QUESTION 94

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

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



Correct Answer: B, E

Section:

QUESTION 95

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

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

Correct Answer: A

Section:

QUESTION 96

What describes the operation of virtual machines?

- A. Virtual machines are responsible for managing and allocating host hardware resources

- B. In a virtual machine environment, physical servers must run one operating system at a time.
- C. Virtual machines are the physical hardware that support a virtual environment.
- D. Virtual machines are operating system instances that are decoupled from server hardware

Correct Answer: B

Section:

QUESTION 97

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

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

Correct Answer: C

Section:

QUESTION 98

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

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

Correct Answer: C

Section:

QUESTION 99

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

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

Correct Answer: D, E

Section:

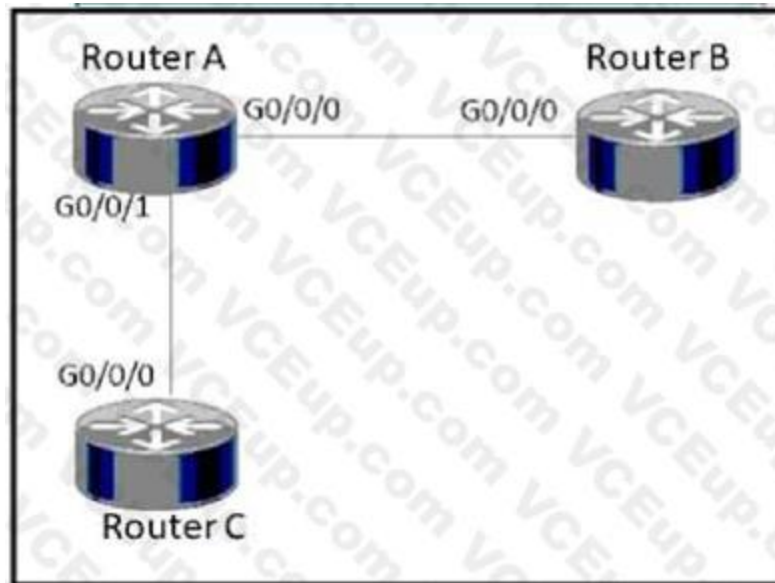
Explanation:

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

QUESTION 100

Refer to the exhibit.





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

```

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

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

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

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

```

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

Correct Answer: D
Section:

QUESTION 101

Which global command encrypt all passwords in the running configuration?

- A. password-encrypt
- B. enable password-encryption



- C. enable secret
- D. service password-encryption

Correct Answer: B

Section:

QUESTION 102

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

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

Correct Answer: B

Section:

QUESTION 103

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

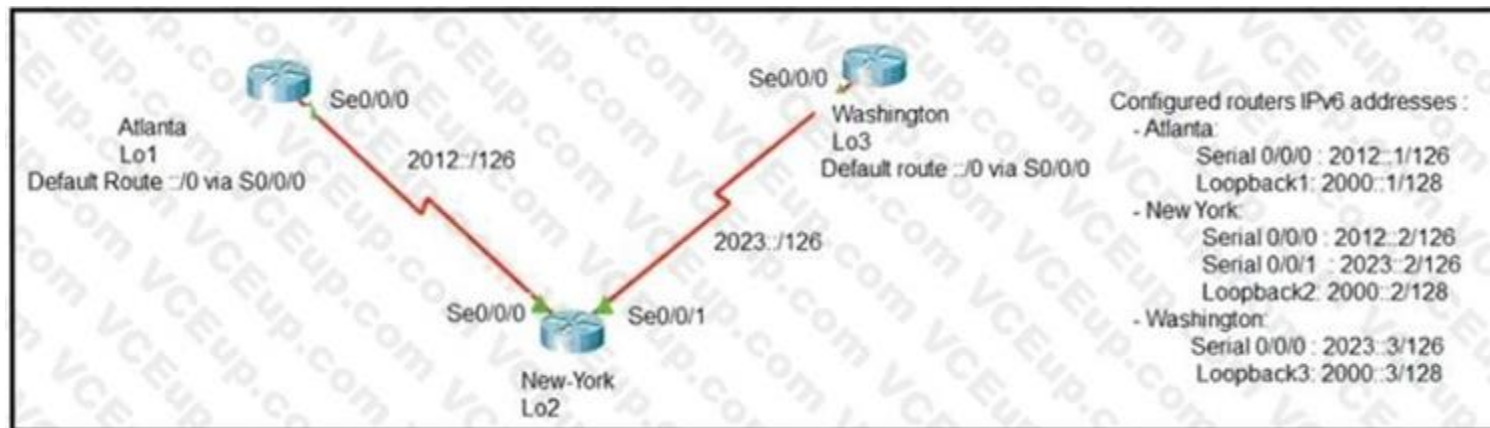
- A. OpenFlow
- B. OpenStack
- C. OpFlex
- D. REST

Correct Answer: D

Section:

QUESTION 104

Refer to Exhibit.



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

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

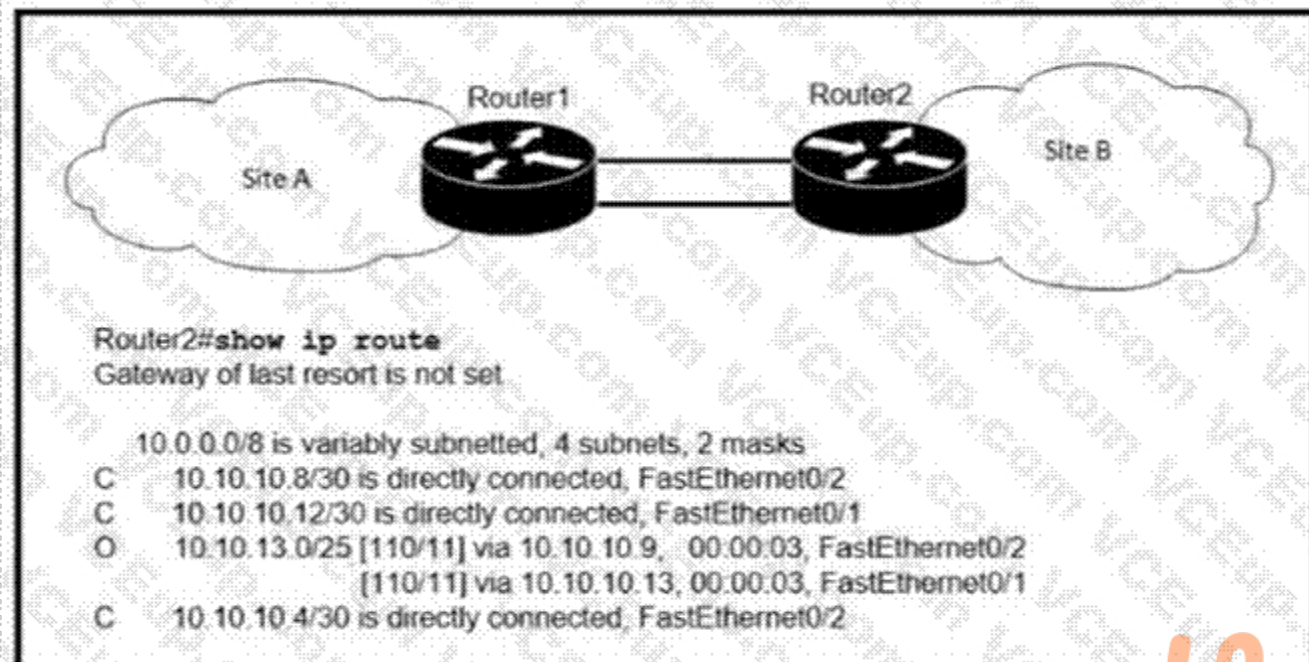
E. ipv6 route 2000::1/128 s0/0/1

Correct Answer: A, B

Section:

QUESTION 105

Refer to the exhibit.



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

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

Correct Answer: C

Section:

Explanation:

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

QUESTION 106

How does HSRP provide first hop redundancy?

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

Correct Answer: D

Section:

Explanation:

QUESTION 107

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

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

Correct Answer: B, C

Section:

QUESTION 108

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

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

Correct Answer: C

Section:

QUESTION 109

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

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

Correct Answer: C

Section:

QUESTION 110

What must be considered when using 802.11a?

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

Correct Answer: B

Section:



QUESTION 111

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

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

Correct Answer: C

Section:

QUESTION 112

What does physical access control regulate?

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

Correct Answer: D

Section:

QUESTION 113

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

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

Correct Answer: A

Section:

QUESTION 114

How are VLAN hopping attacks mitigated?

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

Correct Answer: B

Section:

QUESTION 115

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

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

Correct Answer: C

Section:

QUESTION 116

What is a function of the Cisco DNA Center Overall Health Dashboard?

- A. It provides a summary of the top 10 global issues.
- B. It provides detailed activity logging for the 10 devices and users on the network.
- C. It summarizes the operational status of each wireless device on the network.
- D. It summarizes daily and weekly CPU usage for servers and workstations in the network.

Correct Answer: A

Section:

QUESTION 117

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

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



Correct Answer: A

Section:

QUESTION 118

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

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

Correct Answer: D

Section:

QUESTION 119

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

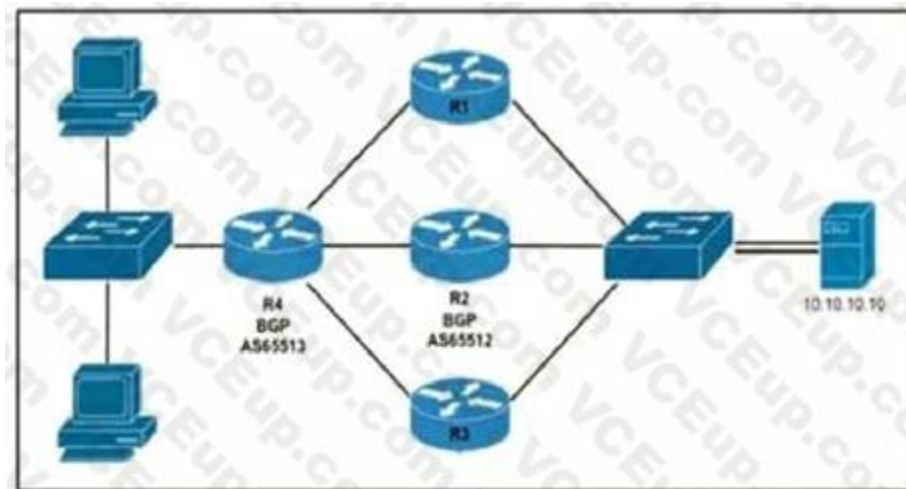
- A. configure port in the native VLAN
- B. configure ports in a black hole VLAN
- C. configure in a nondefault native VLAN
- D. configure ports as access ports

Correct Answer: B

Section:

QUESTION 120

Refer to the exhibit.



Router R4 is dynamically learning the path to the server. If R4 is connected to R1 via OSPF Area 20, to R2 via R2 BGP, and to R3 via EIGRP 777, which path is installed in the routing table of R4?

- A. the path through R1, because the OSPF administrative distance is 110
- B. the path through R2, because the IBGP administrative distance is 200
- C. the path through R2 because the EBGP administrative distance is 20
- D. the path through R3, because the EIGRP administrative distance is lower than OSPF and BGP

Correct Answer: C

Section:

QUESTION 121

Why was the RFC 1918 address space defined?

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

Correct Answer: A

Section:

QUESTION 122

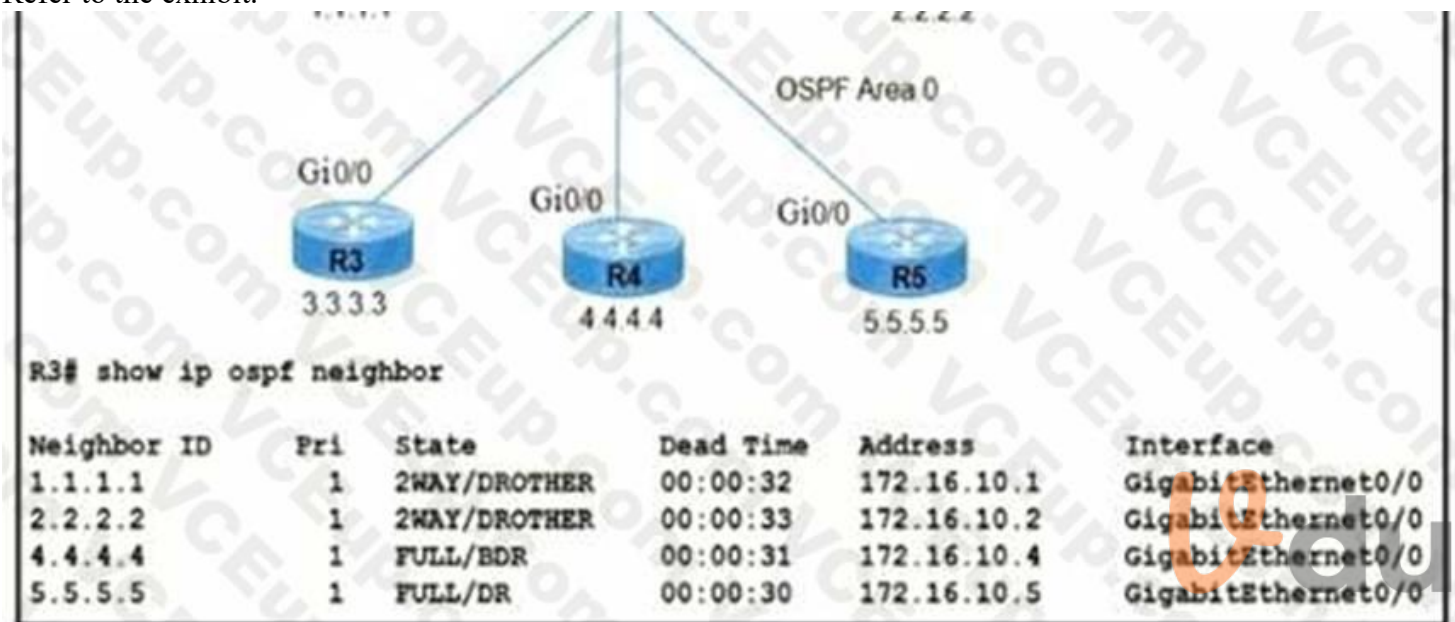
Which HTTP status code is returned after a successful REST API request?

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

Correct Answer: A
Section:

QUESTION 123

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
```

Correct Answer: D

Section:

QUESTION 124

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

Correct Answer: B

Section:

QUESTION 125

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

(Choose two.)

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



Correct Answer: C, D

Section:

QUESTION 126

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

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

Correct Answer: A, B

Section:

QUESTION 127

Which virtual MAC address is used by VRRP group 1?

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

Correct Answer: C

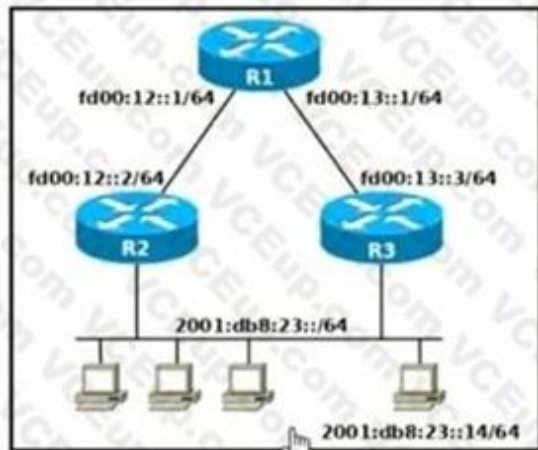
Section:

Explanation:

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

QUESTION 128

Refer to the exhibit.



Which two commands, when configured on router R1, fulfill these requirements? (Choose two.)
 Packets towards the entire network 2001:db8:2::/64 must be forwarded through router R2.
 Packets toward host 2001:db8:23::14 preferably must be forwarded through R3.

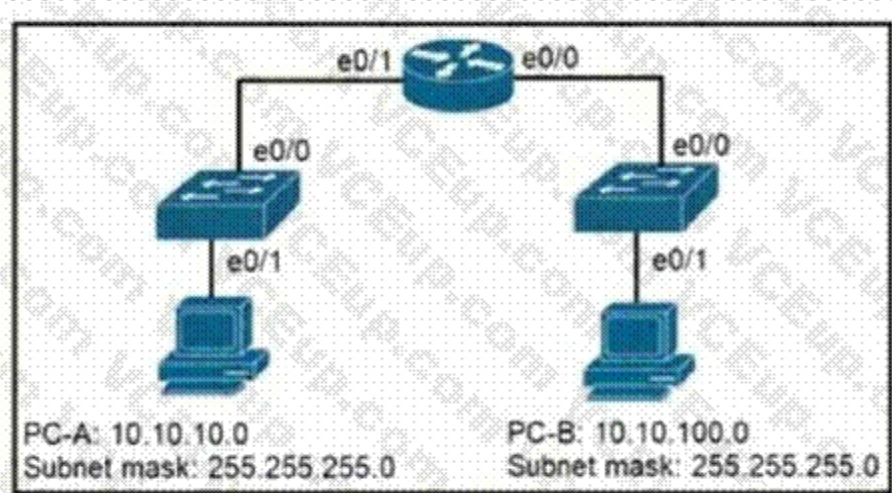
- A. Ipv6 route 2001:db8:23::/128 fd00:12::2
- B. Ipv6 route 2001:db8:23::14/128 fd00:13::3
- C. Ipv6 route 2001:db8:23::14/64 fd00:12::2
- D. Ipv6 route 2001:db8:23::/64 fd00:12::2
- E. Ipv6 route 2001:db8:23::14/64 fd00:12::2 200

Correct Answer: D, E

Section:

QUESTION 129

Refer to the exhibit.



When PC-A sends traffic to PC-B, which network component is in charge of receiving the packet from PC-A verifying the IP addresses, and forwarding the packet to PC-B?

- A. Layer 2 switch
- B. Router
- C. Load balancer
- D. firewall

Correct Answer: B

Section:

QUESTION 130

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

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

Correct Answer: C

Section:

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

QUESTION 131

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

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

Correct Answer: C

Section:



QUESTION 132

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

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

Correct Answer: A

Section:

QUESTION 133

How does QoS optimize voice traffic?

- A. reducing bandwidth usage
- B. by reducing packet loss
- C. by differentiating voice and video traffic
- D. by increasing jitter

Correct Answer: C

Section:

QUESTION 134

What is a characteristic of private IPv4 addressing?

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

Correct Answer: D

Section:

QUESTION 135

Refer to the exhibit.





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

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

Correct Answer: D

Section:

QUESTION 136

Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
   is directly connected, Serial0/1/0
   172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
S   172.16.3.0/24 [1/0] via 207.165.200.250, Serial0/0/0
O   172.16.3.0/28 [110/84437] via 207.165.200.254, 00:00:28, Serial0/0/1
   207.165.200.0/24 is variably subnetted, 6 subnets, 2 masks
C   207.165.200.244/30 is directly connected, Serial0/1/0
L   207.165.200.245/32 is directly connected, Serial0/1/0
C   207.165.200.248/30 is directly connected, Serial0/0/0
L   207.165.200.249/32 is directly connected, Serial0/0/0
C   207.165.200.252/30 is directly connected, Serial0/0/1
L   207.165.200.253/32 is directly connected, Serial0/0/1
```

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

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

Correct Answer: B

Section:

QUESTION 137

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

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

Correct Answer: D

Section:

QUESTION 138

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

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

Correct Answer: B

Section:

QUESTION 139

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

Correct Answer: A, C

Section:

QUESTION 140

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

Correct Answer: A

Section:

QUESTION 141

How does WPA3 improve security?

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

Correct Answer: A

Section:

QUESTION 142

A device detects two stations transmitting frames at the same time. This condition occurs after the first 64 bytes of the frame is received interface counter increments?

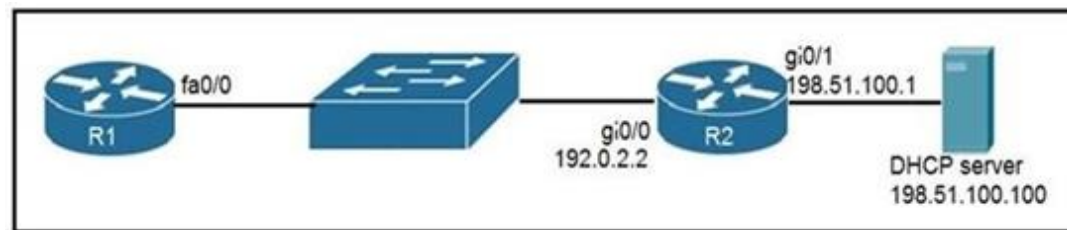
- A. collision
- B. CRC
- C. runt
- D. late collision

Correct Answer: D

Section:

QUESTION 143

Refer to the exhibit.



dumps

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

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

Correct Answer: B, C

Section:

QUESTION 144

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

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

Correct Answer: C

Section:

QUESTION 145

A user configured OSPF in a single area between two routers A serial interface connecting R1 and R2 is running encapsulation PPP By default which OSPF network type is seen on this interface when the user types show ip ospf interface on R1 or R2?

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

Correct Answer: C

Section:

Explanation:

The default OSPF network type for HDLC and PPP on Serial link is point-to-point (while the default OSPF network type for Ethernet link is Broadcast).

QUESTION 146

How do AAA operations compare regarding user identification, user services and access control?

- A. Authorization provides access control and authentication tracks user services
- B. Authentication identifies users and accounting tracks user services
- C. Accounting tracks user services, and authentication provides access control
- D. Authorization identifies users and authentication provides access control

Correct Answer: B

Section:

QUESTION 147

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

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

Correct Answer: C

Section:

QUESTION 148

Refer to the exhibit.

```

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

```

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

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

Correct Answer: A

Section:

QUESTION 149

With REST API, which standard HTTP header tells a server which media type is expected by the client?

- A. Accept-Encoding: gzip, deflate
- B. Accept-Patch: text/example; charset=utf-8
- C. Content-Type: application/json; charset=utf-8
- D. Accept: application/json

Correct Answer: D

Section:

Explanation:

Accept header is a way for a client to specify the media type of the response content it is expecting and Content-type is a way to specify the media type of request being sent from the client to the server. <http://www.java-allandsundry.com/2012/08/accept-header-vs-content-typeheader.html#:~:text=Accept%20and%20Content%2Dtype%20are,the%20client%20to%20the%20serv%20er>

QUESTION 150

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

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

Correct Answer: C

Section:

QUESTION 151

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

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

Correct Answer: A

Section:

QUESTION 152

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

Correct Answer: A

Section:

Explanation:

You can protect communication with the GUI by enabling HTTPS. HTTPS protects HTTP browser sessions by using the Secure Sockets Layer (SSL) protocol. When you enable HTTPS, the controller generates its own local web administration SSL certificate and automatically applies it to the GUI.

You also have the option of downloading an externally generated certificate.

Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configurationguide/b_cg80/b_cg80_chapter_011.html

QUESTION 153

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

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

Correct Answer: B, E

Section:

QUESTION 154

Which network plane is centralized and manages routing decisions?

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

Correct Answer: C

Section:

QUESTION 155

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

Correct Answer: A

Section:

QUESTION 156

Refer to the exhibit.

```
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       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

Gateway of last resort is 209.165.202.131 to network 0.0.0.0

S*   0.0.0.0/0 [1/0] via 209.165.202.131
     209.165.200.0/27 is subnetted, 1 subnets
S     209.165.200.224 [254/0] via 209.165.202.129
     209.165.201.0/27 is subnetted, 1 subnets
S     209.165.201.0 [1/0] via 209.165.202.130
```

Which command configures a floating static route to provide a backup to the primary link?

- A. ip route 0.0.0.0 0.0.0.0 209.165.202.131
- B. ip route 209.165.201.0 255.255.255.224 209.165.202.130
- C. ip route 0.0.0.0 0.0.0.0 209.165.200.224
- D. ip route 209.165.200.224 255.255.255.224 209.165.202.129 254

Correct Answer: D

Section:

QUESTION 157

Which two QoS tools provides congestion management? (Choose two)



- A. CAR
- B. CBWFQ
- C. PQ
- D. PBR
- E. FRTS

Correct Answer: B, C

Section:

Explanation:

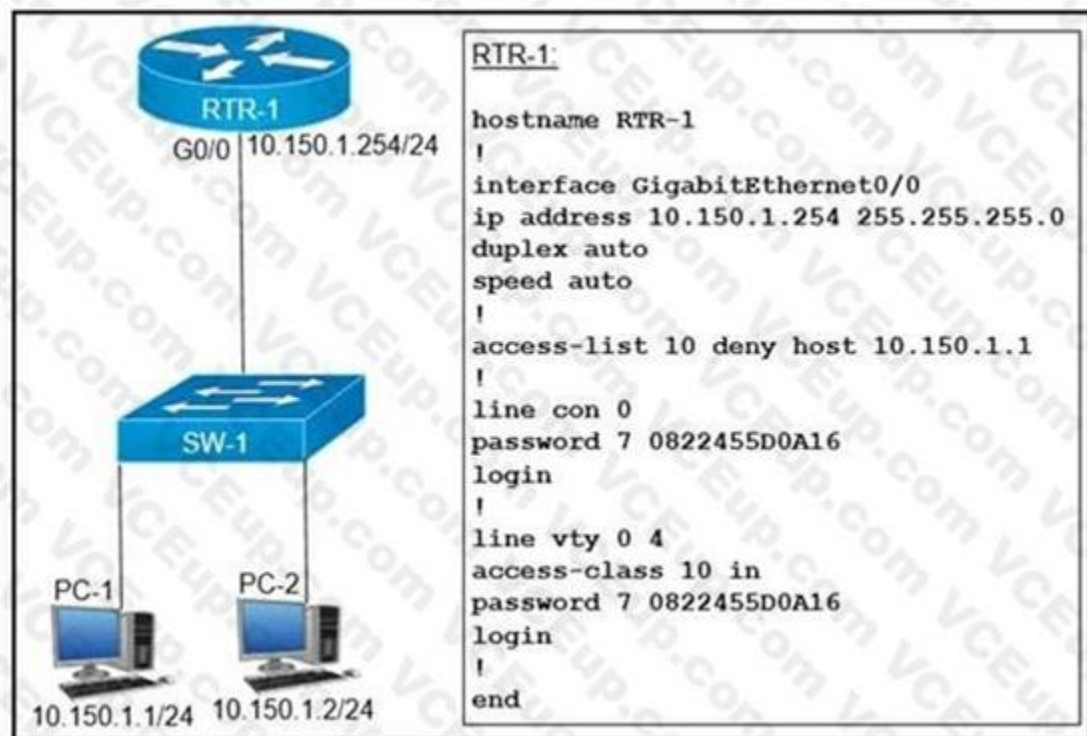
Type of queuing methods are available:

- First-In-First-Out (FIFO)
- Priority Queuing (PQ)
- Custom Queuing (CQ)
- Weighted Fair Queuing (WFQ)
- Class-Based Weighted Fair Queuing (CBWFQ)
- Low-Latency Queuing (LLQ)

<https://www.orbit-computer-solutions.com/qos-congestion-management-tools/>

QUESTION 158

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.

Correct Answer: A

Section:

QUESTION 159

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

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

Correct Answer: A, E

Section:

QUESTION 160

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

Correct Answer: D

Section:

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.

QUESTION 161

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

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

Correct Answer: D

Section:

QUESTION 162

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

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



Correct Answer: A

Section:

QUESTION 163

Which 802.11 frame type is indicated by a probe response after a client sends a probe request?

- A. action
- B. management
- C. control
- D. data

Correct Answer: B

Section:

QUESTION 164

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

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

Correct Answer: A, B

Section:

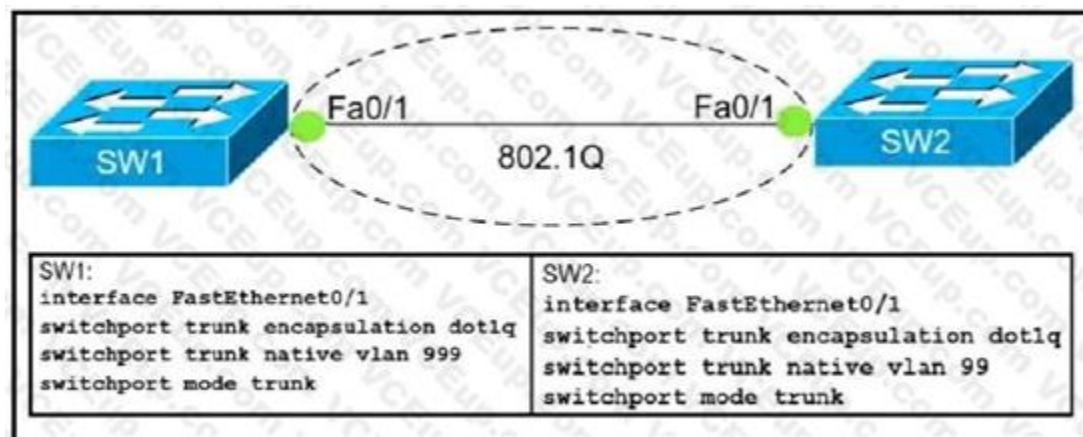
Explanation:

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



QUESTION 165

Refer to Exhibit.



Which action do the switches take on the trunk link?

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

Correct Answer: B

Section:

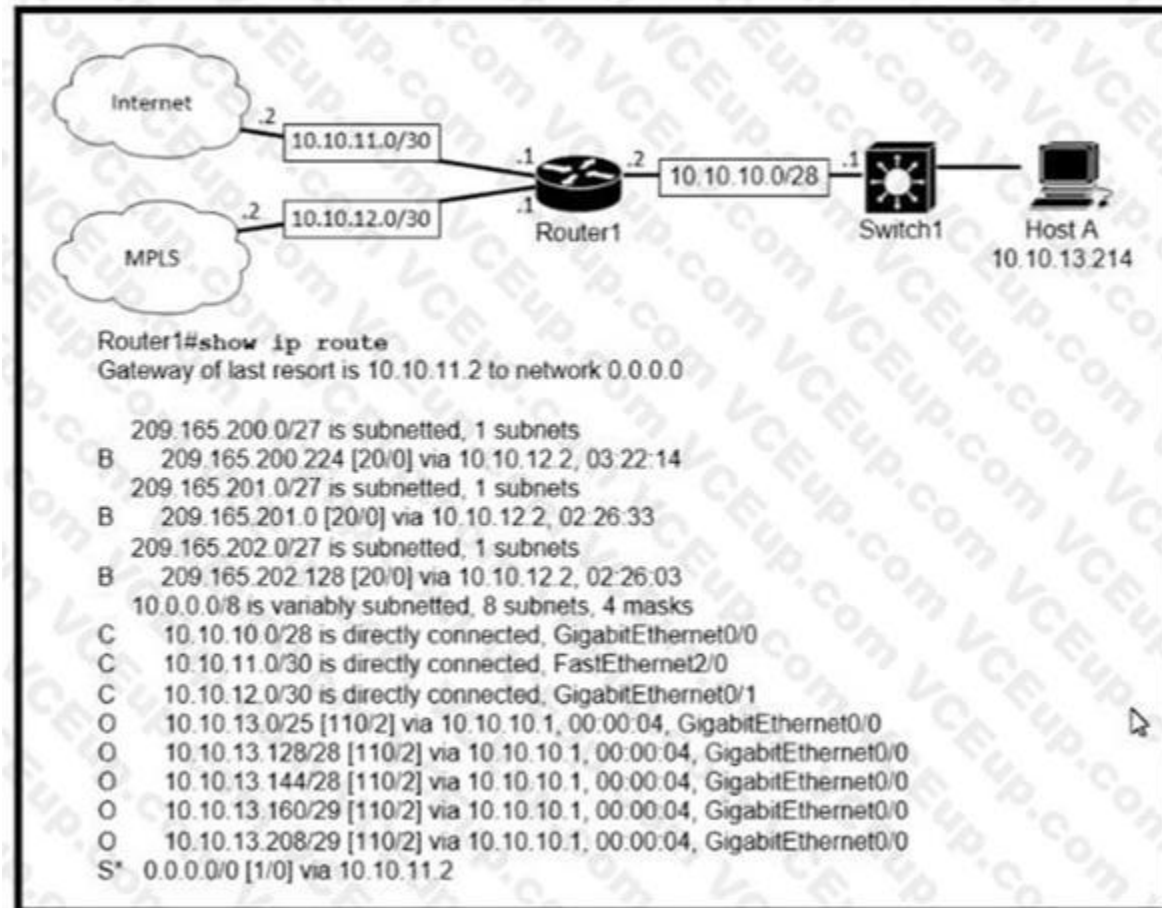
Explanation:

The trunk still forms with mismatched native VLANs and the traffic can actually flow between mismatched switches. But it is absolutely necessary that the native VLANs on both ends of a trunk link match; otherwise a native VLAN mismatch occurs, causing the two VLANs to effectively merge.

For example with the above configuration, SW1 would send untagged frames for VLAN 999. SW2 receives them but would think they are for VLAN 99 so we can say these two VLANs are merged.

QUESTION 166

Refer to the exhibit.



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

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

Correct Answer: D

Section:

Explanation:

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

QUESTION 167

Refer to the exhibit.

```

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

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

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

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

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

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

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

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

R2(config)# ip route 10.1.1.0 255.255.255.0 192.168.0.1

```



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

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

Correct Answer: B

Section:

QUESTION 168

Refer to the exhibit.

```

R#2show ip route
C      192.168.1.0/26 is directly connected, FastEthernet0/1

```

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

- A. 192.168.1.17
- B. 192.168.1.61
- C. 192.168.1.64

- D. 192.168.1.127
- E. 192.168.1.254

Correct Answer: A, B

Section:

QUESTION 169

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

Correct Answer: D

Section:

QUESTION 170

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

Correct Answer: B, E

Section:

QUESTION 171

Refer to the exhibit.

```
10.0.0.0/24 is subsetting, 1 subnets
C 10.0.0.0 is directly connected, FastEthernet0/1
C 172.160.0/16 is directly connected, FastEthernet0/0
D 192.168.0.0/24 [90/30720] via 172.16.0.2, 00:00:03, FastEthernet0/0
```

Which route type does the routing protocol Code D represent in the output?

- A. internal BGP route
- B. /24 route of a locally configured IP
- C. statically assigned route
- D. route learned through EIGRP

Correct Answer: D

Section:

QUESTION 172

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

Correct Answer: A
Section:

QUESTION 173

Refer to the exhibit.

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

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

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

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



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

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

Correct Answer: B
Section:

QUESTION 174

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

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

Correct Answer: D

Section:

QUESTION 175

Refer to the exhibit.

```
R1#show ip route
#output suppressed

Gateway of last resort is 192.168.14.4 to network 0.0.0.0

C    172.16.1.128/25 is directly connected, GigabitEthernet1/1/0
C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
C    172.16.16.1 is directly connected, Loopback1
    192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O    192.168.10.0/24 [110/2] via 192.168.14.4, 00:02:01, FastEthernet1/0
O    192.168.10.32/27 [110/11] via 192.168.13.3, 00:00:52, FastEthernet0/1
O    192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, FastEthernet1/1
D    192.168.10.1/32 [90/52778] via 192.168.12.2, 00:03:44, FastEthernet0/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, FastEthernet1/0
```

If R1 receives a packet destined to 172.161.1, to which IP address does it send the packet?

- A. 192.168.12.2
- B. 192.168.13.3
- C. 192.168.14.4
- D. 192.168.15.5

Correct Answer: C

Section:

QUESTION 176

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

- A. The router calculates the reported distance by multiplying the delay on the exiting Interface by 256.
- B. The router calculates the best backup path to the destination route and assigns it as the feasible successor.
- C. The router calculates the feasible distance of all paths to the destination route
- D. The advertised distance is calculated by a downstream neighbor to inform the local router of the bandwidth on the link
- E. The router must use the advertised distance as the metric for any given route

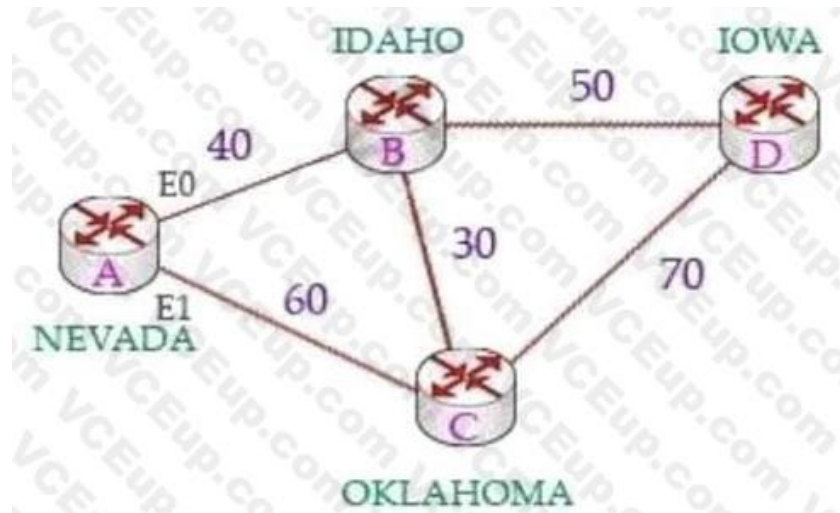
Correct Answer: B, C

Section:

Explanation:

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





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

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

QUESTION 177

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

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

Correct Answer: D

Section:

QUESTION 178

Which configuration is needed to generate an RSA key for SSH on a router?

- A. Configure the version of SSH
- B. Configure VTY access.
- C. Create a user with a password.
- D. Assign a DNS domain name

Correct Answer: D

Section:

QUESTION 179

What makes Cisco DNA Center different from traditional network management applications and their management of networks?

- A. It only supports auto-discovery of network elements in a greenfield deployment.
- B. Its modular design allows someone to implement different versions to meet the specific needs of an organization
- C. IT abstracts policy from the actual device configuration
- D. It does not support high availability of management functions when operating in cluster mode

Correct Answer: C



Section:

QUESTION 180

Which two primary drivers support the need for network automation? (Choose two.)

- A. Eliminating training needs
- B. Increasing reliance on self-diagnostic and self-healing
- C. Policy-derived provisioning of resources
- D. Providing a ship entry point for resource provisioning
- E. Reducing hardware footprint

Correct Answer: C, D

Section:

QUESTION 181

Using direct sequence spread spectrum, which three 2.4-GHz channels are used to limit collisions?

- A. 1,6,11
- B. 1,5,10
- C. 1,2,3
- D. 5,6,7

Correct Answer: A

Section:

QUESTION 182

Which port type supports the spanning-tree portfast command without additional configuration?

- A. access ports
- B. Layer 3 main Interfaces
- C. Layer 3 subinterfaces
- D. trunk ports

Correct Answer: A

Section:

QUESTION 183

Refer to the exhibit.

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

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



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

Correct Answer: D

Section:

QUESTION 184

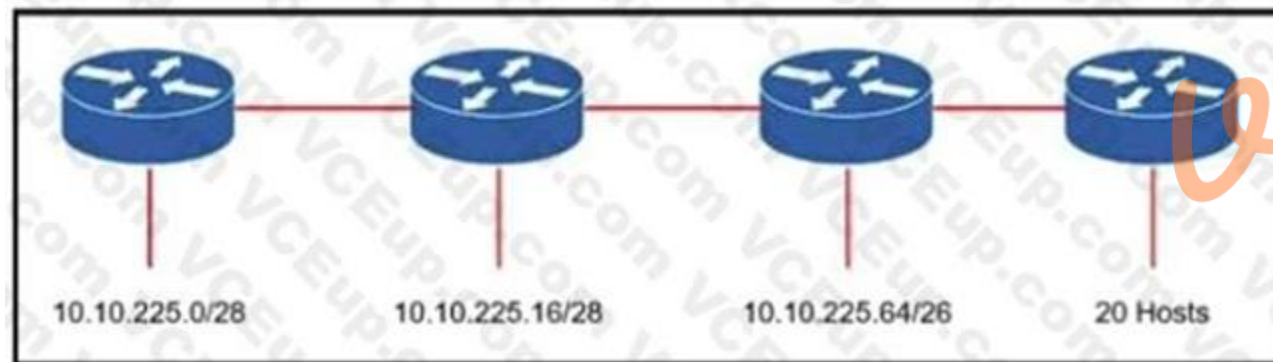
Where does wireless authentication happen?

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

Correct Answer: D

Section:

QUESTION 185



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

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

Correct Answer: D

Section:

QUESTION 186

Which WPA3 enhancement protects against hackers viewing traffic on the Wi-Fi network?

- A. TKiP encryption
- B. AES encryption
- C. scrambled encryption key

D. SAE encryption

Correct Answer: D

Section:

QUESTION 187

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

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

Correct Answer: A, C

Section:

QUESTION 188

The service password-encryption command is entered on a router. What is the effect of this configuration?

- A. restricts unauthorized users from viewing clear-text passwords in the running configuration
- B. encrypts the password exchange when a VPN tunnel is established
- C. prevents network administrators from configuring clear-text passwords
- D. protects the VLAN database from unauthorized PC connections on the switch



Correct Answer: A

Section:

QUESTION 189

Refer to me exhibit.

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

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

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

Correct Answer: B

Section:

QUESTION 190



Refer to the exhibit. After the configuration is applied, the two routers fail to establish an OSPF neighbor relationship. what is the reason for the problem?

- A. The OSPF router IDs are mismatched.
- B. Router2 is using the default hello timer.
- C. The network statement on Router1 is misconfigured.
- D. The OSPF process IDs are mismatched.

Correct Answer: B

Section:

QUESTION 191

Which design element is a best practice when deploying an 802.11b wireless infrastructure?

- A. disabling TPC so that access points can negotiate signal levels with their attached wireless devices.
- B. setting the maximum data rate to 54 Mbps on the Cisco Wireless LAN Controller
- C. allocating nonoverlapping channels to access points that are in close physical proximity to one another
- D. configuring access points to provide clients with a maximum of 5 Mbps

Correct Answer: C

Section:

QUESTION 192

Refer to the exhibit.

```
Gateway of last resort is 10.12.0.1 to network 0.0.0.0

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

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

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

Correct Answer: A

Section:

Explanation:

Our new static default route has the Administrative Distance (AD) of 120, which is bigger than the AD of OSPF External route (O*E2) so it will not be pushed into the routing table until the current OSPF External route is removed.

For your information, if you don't type the AD of 120 (using the command "ip route 0.0.0.0 0.0.0.0 10.13.0.1") then the new static default route would replace the OSPF default route as the default AD of static route is 1. You will see such line in the routing table:

```
S* 0.0.0.0/0 [1/0] via 10.13.0.1
```

QUESTION 193

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

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

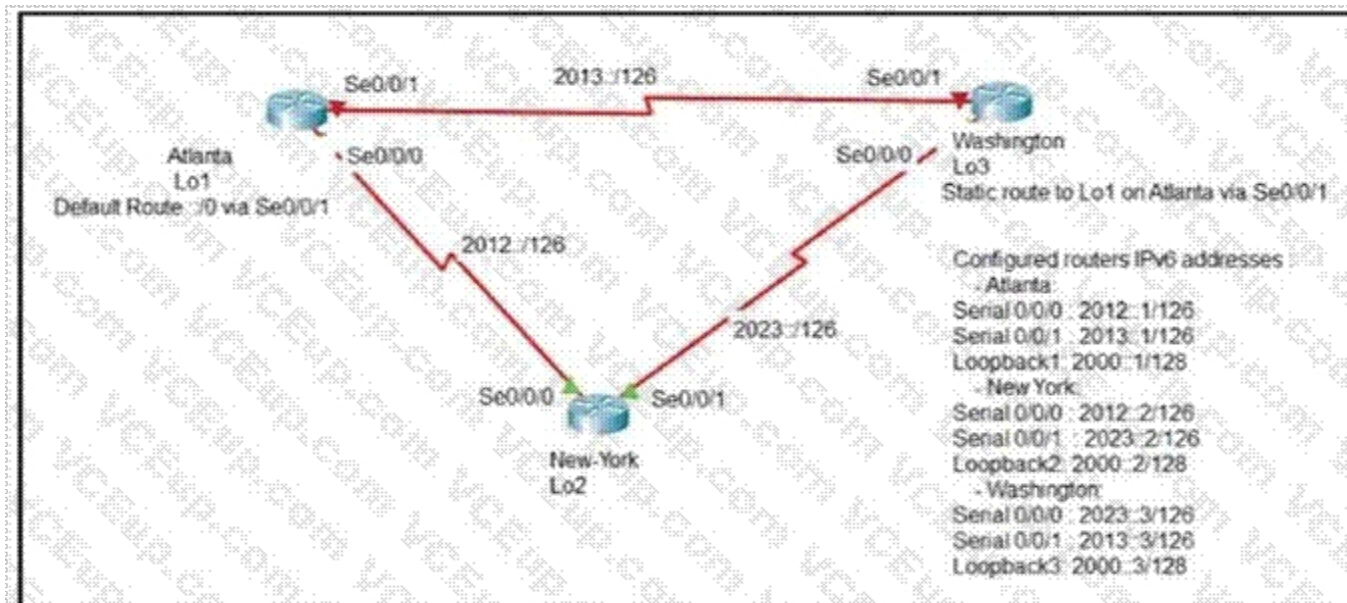
Correct Answer: A

Section:

QUESTION 194

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`

Correct Answer: A, E

Section:

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.

QUESTION 195

Which statement correctly compares traditional networks and controller-based networks?

- A. Only traditional networks offer a centralized control plane
- B. Only traditional networks natively support centralized management
- C. Traditional and controller-based networks abstract policies from device configurations
- D. Only controller-based networks decouple the control plane and the data plane

Correct Answer: D

Section:

Explanation:

Most traditional devices use a distributed architecture, in which each control plane is resided in a networking device. Therefore they need to communicate with each other via messages to work correctly. In contrast to distributed architecture, centralized (or controller-based) architectures centralizes the control of networking devices into one device, called SDN controller

QUESTION 196

How does the dynamically-learned MAC address feature function?

- A. The CAM table is empty until ingress traffic arrives at each port



- B. Switches dynamically learn MAC addresses of each connecting CAM table.
- C. The ports are restricted and learn up to a maximum of 10 dynamically-learned addresses
- D. It requires a minimum number of secure MAC addresses to be filled dynamically

Correct Answer: A

Section:

QUESTION 197

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
1 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

Correct Answer: D

Section:

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.



QUESTION 198

Which technology can prevent client devices from arbitrarily connecting to the network without state remediation?

- A. 802.1x
- B. IP Source Guard
- C. MAC Authentication Bypass
- D. 802.11n

Correct Answer: A

Section:

QUESTION 199

An engineer observes high usage on the 2.4GHz channels and lower usage on the 5GHz channels. What must be configured to allow clients to preferentially use 5GHz access points?

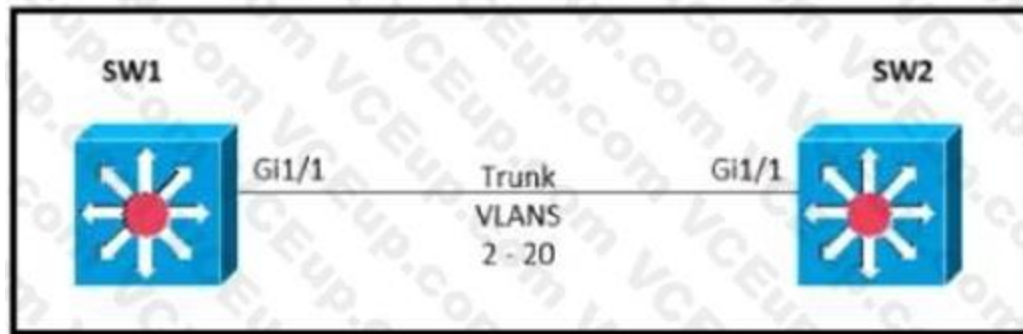
- A. Re- Anchor Roamed Clients
- B. 11ac MU-MIMO
- C. OEAP Split Tunnel
- D. Client Band Select

Correct Answer: D

Section:

QUESTION 200

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

Correct Answer: C

Section:

QUESTION 201

Which IPv6 address type provides communication between subnets and is unable to route on the Internet?

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

Correct Answer: B

Section:

QUESTION 202

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

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

Correct Answer: C, E

Section:

QUESTION 203

Refer to the exhibit.

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

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

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

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

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

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

Correct Answer: C

Section:

QUESTION 204

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

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

Correct Answer: A

Section:

QUESTION 205

What is a function of TFTP in network operations?

- A. transfers a backup configuration file from a server to a switch using a username and password
- B. transfers files between file systems on a router
- C. transfers a configuration files from a server to a router on a congested link
- D. transfers IOS images from a server to a router for firmware upgrades

Correct Answer: D

Section:

QUESTION 206

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

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

Correct Answer: A

Section:

QUESTION 207

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

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

Correct Answer: B

Section:

QUESTION 208

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

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

Correct Answer: D

Section:

QUESTION 209

When deploying syslog, which severity level logs informational message?

- A. 0
- B. 2



- C. 4
- D. 6

Correct Answer: D

Section:

Explanation:

<https://en.wikipedia.org/wiki/Syslog>

QUESTION 210

Refer to the exhibit.

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

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

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

Correct Answer: C

Section:

Explanation:

OSPF uses the following criteria to select the router ID:

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

QUESTION 211

Which protocol does an access point use to draw power from a connected switch?

- A. Internet Group Management Protocol
- B. Adaptive Wireless Path Protocol
- C. Cisco Discovery Protocol
- D. Neighbor Discovery Protocol

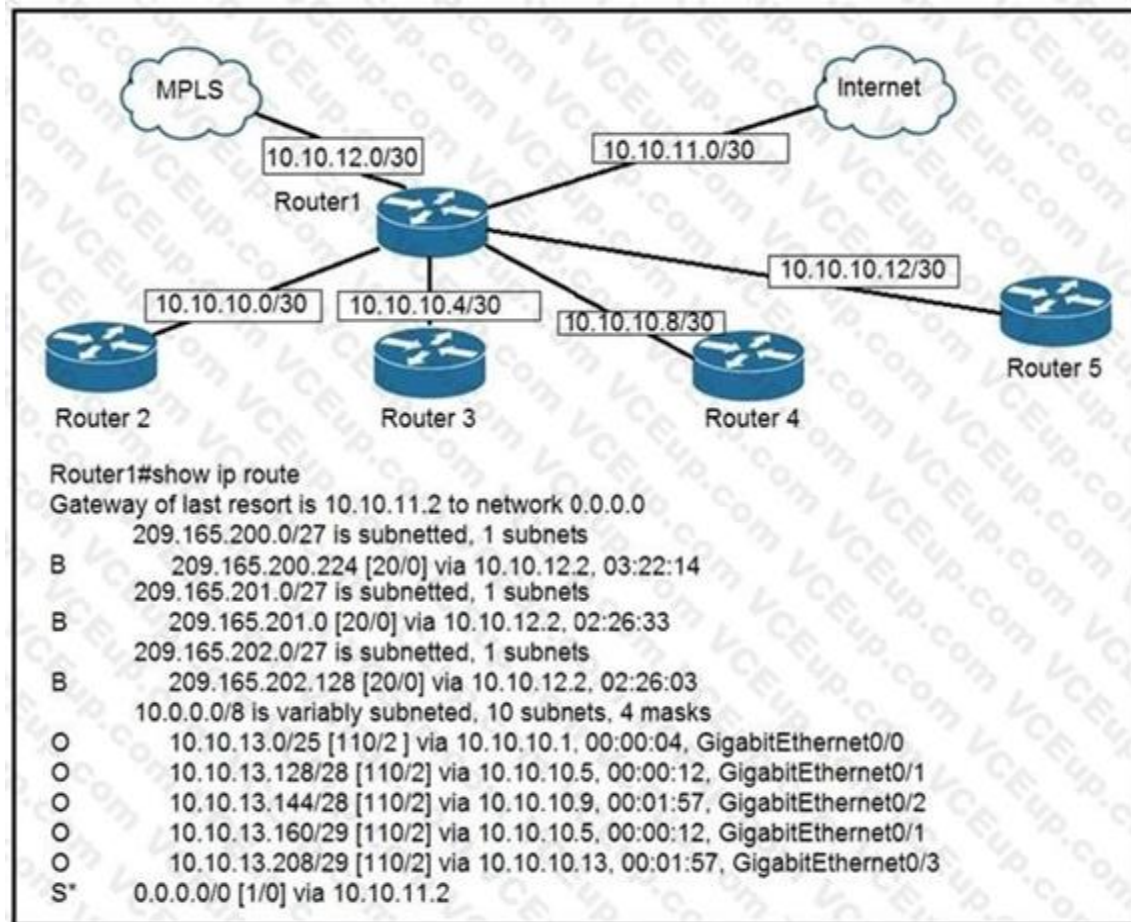
Correct Answer: C

Section:

QUESTION 212

Refer to the exhibit.





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

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

Correct Answer: B

Section:

QUESTION 213

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

Correct Answer: A

Section:

QUESTION 214

Router A learns the same route from two different neighbors, one of the neighbor routers is an OSPF neighbor and the other is an EIGRP neighbor. What is the administrative distance of the route that will be installed in the routing table?

- A. 20
- B. 90
- C. 110
- D. 115

Correct Answer: B

Section:

Explanation:

The Administrative distance (AD) of EIGRP is 90 while the AD of OSPF is 110 so EIGRP route will be chosen to install into the routing table.

QUESTION 215

When the active router in an HSRP group fails, what router assumes the role and forwards packets?

- A. backup
- B. standby
- C. listening
- D. forwarding

Correct Answer: B

Section:

QUESTION 216

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

Correct Answer: A, C

Section:

QUESTION 217

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

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

Correct Answer: C

Section:

QUESTION 218

Which function is performed by DHCP snooping?

- A. propagates VLAN information between switches
- B. listens to multicast traffic for packet forwarding
- C. provides DDoS mitigation
- D. rate-limits certain traffic

Correct Answer: D

Section:

QUESTION 219

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

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

Correct Answer: A

Section:

QUESTION 220

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

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

Correct Answer: A

Section:

Explanation:

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

QUESTION 221

Why does a switch flood a frame to all ports?

- A. The frame has zero destination MAC addresses.
- B. The source MAC address of the frame is unknown
- C. The source and destination MAC addresses of the frame are the same
- D. The destination MAC address of the frame is unknown.

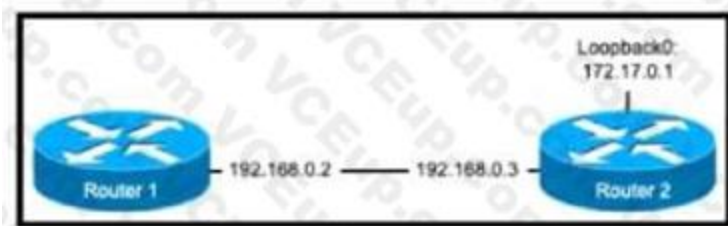
Correct Answer: D

Section:

QUESTION 222

Refer to the exhibit.





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

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

Correct Answer: D

Section:

QUESTION 223

A network administrator enabled port security on a switch interface connected to a printer. What is the next configuration action in order to allow the port to learn the MAC address of the printer and insert it into the table automatically?

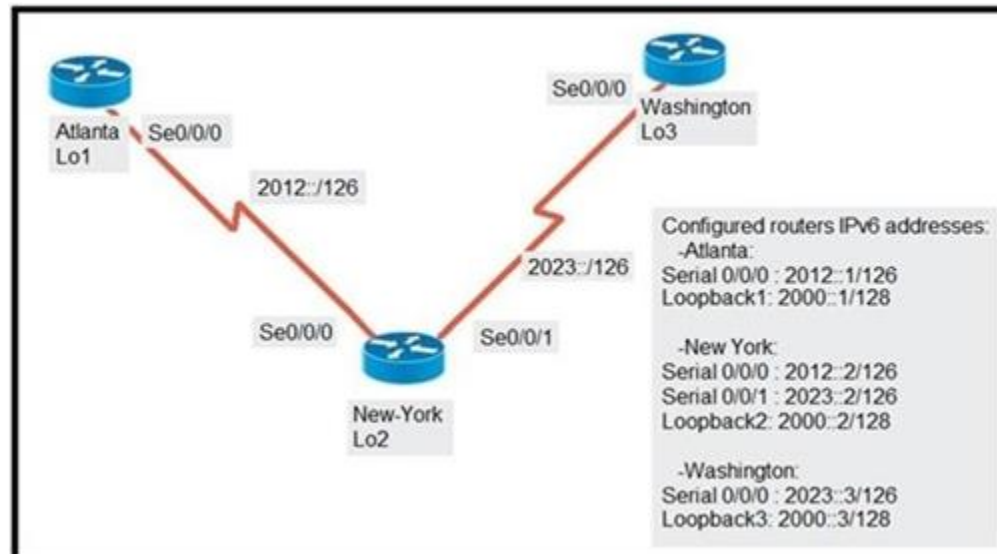
- A. enable dynamic MAC address learning
- B. implement static MAC addressing.
- C. enable sticky MAC addressing
- D. implement auto MAC address learning

Correct Answer: C

Section:

QUESTION 224

Refer to the exhibit.



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



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

Correct Answer: D, E

Section:

Explanation:

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

QUESTION 225

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

Correct Answer: A

Section:

QUESTION 226

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

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

Correct Answer: A, B

Section:

QUESTION 227

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

Correct Answer: B, E

Section:



QUESTION 228

What is the purpose of an SSID?

- A. It provides network security
- B. It differentiates traffic entering access points
- C. It identifies an individual access point on a WLAN
- D. It identifies a WLAN

Correct Answer: D

Section:

Explanation:

"In IEEE 802.11 wireless local area networking standards (including Wi-Fi), a service set is a group of wireless network devices which share a service set identifier (SSID) ... A service set forms a logical network of nodes operating with shared link-layer networking parameters; they form one logical network segment."

QUESTION 229

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

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

Correct Answer: C

Section:

QUESTION 230

What are two characteristics of a controller-based network? (Choose two)

- A. The administrator can make configuration updates from the CLI
- B. It uses northbound and southbound APIs to communicate between architectural layers
- C. It moves the control plane to a central point.
- D. It decentralizes the control plane, which allows each device to make its own forwarding decisions
- E. It uses Telnet to report system issues.

Correct Answer: B, C

Section:

QUESTION 231

What is the benefit of configuring PortFast on an interface?

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

Correct Answer: B

Section:



QUESTION 232

An engineer configures interface Gi1/0 on the company PE router to connect to an ISP Neighbor discovery is disabled

```
interface Gi1/0
description HQ_DC3978-87297
duplex full
speed 100
negotiation auto
lldp transmit
lldp receive
```

Which action is necessary to complete the configuration if the ISP uses third-party network devices?

- A. Enable LLDP globally
- B. Disable autonegotiation
- C. Disable Cisco Discovery Protocol on the interface
- D. Enable LLDP-MED on the ISP device

Correct Answer: A

Section:

QUESTION 233

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

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

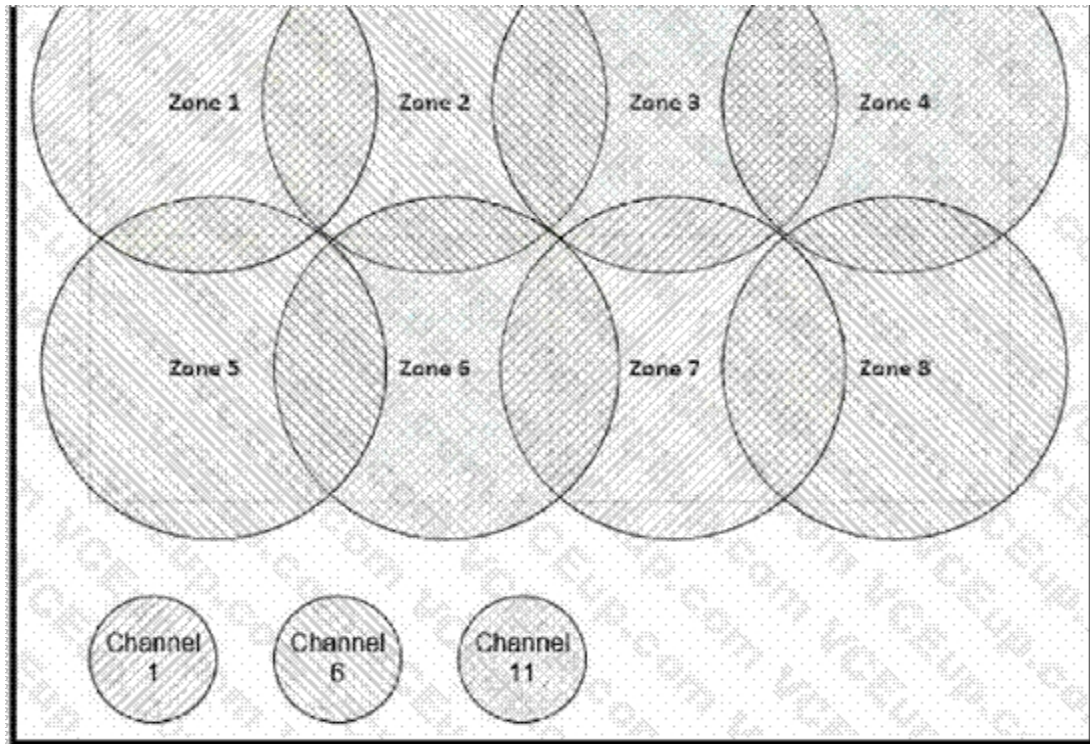
Correct Answer: A

Section:

QUESTION 234

Refer to the exhibit.





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

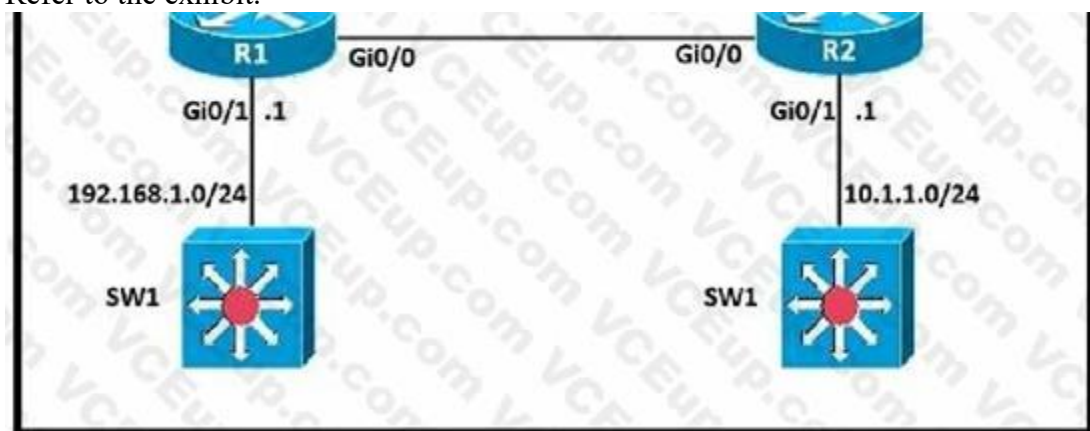
- A. between zones 1 and 2
- B. between zones 2 and 5
- C. between zones 3 and 4
- D. between zones 3 and 6

Correct Answer: C

Section:

QUESTION 235

Refer to the exhibit.



A network engineer is in the process of establishing IP connectivity between two sites. Routers R1 and R2 are partially configured with IP addressing. Both routers have the ability to access devices on their respective LANs. Which command set configures the IP connectivity between devices located on both LANs in each site?



```

R1
ip route 192.168.1.0 255.255.255.0 GigabitEthernet0/0
R2
ip route 10.1.1.1 255.255.255.0 GigabitEthernet0/0

R1
ip route 0.0.0.0 0.0.0.0 209.165.200.225
R2
ip route 0.0.0.0 0.0.0.0 209.165.200.226

R1
ip route 192.168.1.1 255.255.255.0 GigabitEthernet0/1
R2
ip route 10.1.1.1 255.255.255.0 GigabitEthernet0/1

R1
ip route 0.0.0.0 0.0.0.0 209.165.200.226
R2
ip route 0.0.0.0 0.0.0.0 209.165.200.225

```

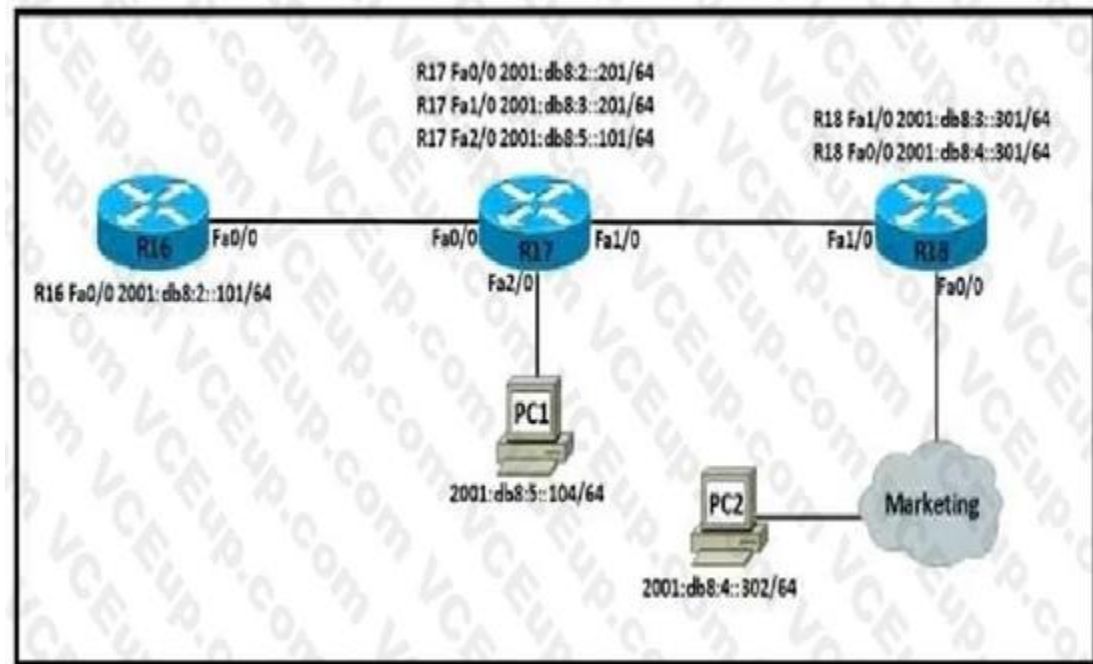
- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D

Section:

QUESTION 236

Refer to the exhibit.



Which IPv6 configuration is required for R17 to successfully ping the WAN interface on R18?

- A.

```
R17#  
!  
no ip domain lookup  
ip cef  
!  
interface FastEthernet0/0  
no ip address  
duplex auto  
speed auto  
ipv6 address 2001:DB8:3::201/64  
!  
interface FastEthernet1/0  
no ip address  
duplex auto  
speed auto  
ipv6 address 2001:DB8:2::201/64  
!  
no cdp log mismatch duplex  
ipv6 route 2001:DB8:4::/64 2001:DB8:5::101
```

B.

```
R17#  
!  
no ip domain lookup  
ip cef  
ipv6 unicast-routing  
!  
interface FastEthernet0/0  
no ip address  
duplex auto  
speed auto  
ipv6 address 2001:DB8:2::201/64  
!  
interface FastEthernet1/0  
no ip address  
duplex auto  
speed auto  
ipv6 address 2001:DB8:3::201/64  
!  
no cdp log mismatch duplex  
ipv6 route 2001:DB8:4::/64 2001:DB8:3::301
```

C.




```
R17#
!
no ip domain lookup
ip cef
ipv6 cef
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64 2001:DB8:4::302
```

D.

```
R17#
!
no ip domain lookup
ip cef
ipv6 unicast-routing
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64 2001:DB8:2::201
```

Correct Answer: B

Section:

Explanation:

ipv6 unicast-routing statement included (IPv6 is enabled on the router).
Compared to the exhibit, Fa0/0 and Fa0/1 have correct configurations.
The route to subnet 2001:db8:4::/64 points to R18's Fa1/0 (correct next-hop).

QUESTION 237

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

A. large and requires a flexible, scalable network design



- B. large and must minimize downtime when hardware fails
- C. small and needs to reduce networking costs currently
- D. small but is expected to grow dramatically in the near future

Correct Answer: C

Section:

Explanation:

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

QUESTION 238

What is a capability of FTP in network management operations?

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

Correct Answer: C

Section:

Explanation:

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

QUESTION 239

Refer to the exhibit.



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

These tasks must be completed:

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

Which configuration must be used?

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

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

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

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



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

Correct Answer: A

Section:

QUESTION 240

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

Correct Answer: A

Section:

QUESTION 241

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

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

Correct Answer: D

Section:

Explanation:

Cisco overview doc for SDN here:

https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/VMDC/SDN/SDN.html

Topic 3, Exam Pool Feb 2022

QUESTION 242

Refer to the exhibit.

```

Router1#show ip route
Gateway of last resort is 10.10.11.2 to network 0.0.0.0
209.165.200.0/27 is subnetted, 1 subnets
B    209.165.200.224 [20/0] via 10.10.12.2, 03:22:14
209.165.201.0/27 is subnetted, 1 subnets
B    209.165.201.0 [20/0] via 10.10.12.2, 02:26:33
209.165.202.0/27 is subnetted, 1 subnets
B    209.165.202.128 [20/0] via 10.10.12.2, 02:26:03
10.0.0.0/8 is variably subnetted, 10 subnets, 4 masks
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 10.10.10.5, 00:00:12, GigabitEthernet0/1
O    10.10.13.144/28 [110/2] via 10.10.10.9, 00:01:57, GigabitEthernet0/2
O    10.10.13.160/29 [110/2] via 10.10.10.5, 00:00:12, GigabitEthernet0/1
O    10.10.13.208/29 [110/2] via 10.10.10.13, 00:01:57, GigabitEthernet0/3
S*  0.0.0.0/0 [1/0] via 10.10.11.2
  
```



Which next-hop IP address does Routed use for packets destined to host 10.10.13.158?

- A. 10.10.10.5
- B. 10.10.11.2
- C. 10.10.12.2
- D. 10.10.10.9

Correct Answer: A

Section:

QUESTION 243

A Cisco engineer must configure a single switch interface to meet these requirements • accept untagged frames and place them in VLAN 20 • accept tagged frames in VLAN 30 when CDP detects a Cisco IP phone Which command set must the engineer apply?

- A.

```
switchport mode dynamic desirable
switchport access vlan 20
switchport trunk allowed vlan 30
switchport voice vlan 30
```

B.

```
switchport mode dynamic auto
switchport trunk native vlan 20
switchport trunk allowed vlan 30
switchport voice vlan 30
```

C.

```
switchport mode access
switchport access vlan 20
switchport voice vlan 30
```

D.

```
switchport mode trunk
switchport access vlan 20
switchport voice vlan 30
```

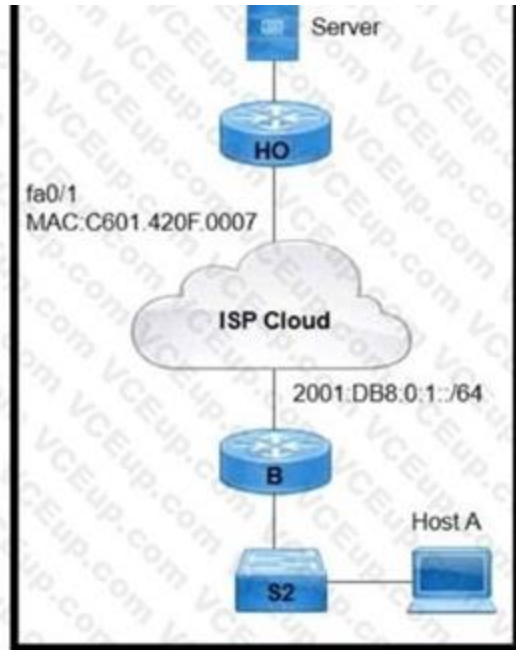
Correct Answer: D

Section:

QUESTION 244

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

Correct Answer: A

Section:



QUESTION 245

Which WLC management connection type is vulnerable to man-in-the-middle attacks?

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

Correct Answer: C

Section:

QUESTION 246

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

Correct Answer: A

Section:

QUESTION 247

What is a function of a Next-Generation IPS?

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

Correct Answer: D

Section:

QUESTION 248

Which characteristic differentiates the concept of authentication from authorization and accounting?

- A. user-activity logging
- B. service limitations
- C. consumption-based billing
- D. identity verification

Correct Answer: D

Section:

QUESTION 249

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

- A. VLANID
- B. SSID
- C. RFID
- D. WLANID

Correct Answer: B

Section:

QUESTION 250

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

- A.

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

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

B.

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

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

C.

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

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

D.


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

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

- E. Option A
- F. Option B
- G. Option C
- H. Option D

Correct Answer: B

Section:

QUESTION 251

Which QoS per-hop behavior changes the value of the ToS field in the IPv4 packet header?

- A. shaping
- B. classification
- C. policing
- D. marking

Correct Answer: D

Section:

QUESTION 252

Refer to the exhibit.



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



- A. ip route 10.1.1.10 255.255.255.255 172.16.2.2 100
- B. ip route 10.1.1.0 255.255.255.0 gi0/1 125
- C. ip route 10.1.1.0 255.255.255.0 172.16.2.2 100
- D. ip route 10.1.1.10 255.255.255.255 gi0/0 125

Correct Answer: D

Section:

QUESTION 253

Refer to the exhibit.



Users need to connect to the wireless network with IEEE 802. 11r-compatible devices. The connection must be maintained as users travel between floors or to other areas in the building What must be the configuration of the connection?

- A. Select the WPA Policy option with the CCKM option.
- B. Disable AES encryption.
- C. Enable Fast Transition and select the FT 802.1x option.
- D. Enable Fast Transition and select the FT PSK option.

Correct Answer: C

Section:

QUESTION 254

Refer to the exhibit.

```
Hardware is ISR4331-3x1GE, address is 5486.bc25.1f70 (bia 5486.bc25.1f70)
Description: << WAN Link >>
Internet address is 192.0.2.2/30
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media type is RJ45
output flow-control is off, input flow-control is off
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:00, output 00:00:11, output hang never
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
 5 minute input rate 7000 bits/sec, 4 packets/sec
 5 minute output rate 4000 bits/sec, 4 packets/sec
 22579370 packets input, 8825545968 bytes, 0 no buffer
  Received 67 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
 3612699 input errors, 3612699 CRC, 0 frame, 0 overrun, 0 ignored
 0 watchdog, 10747057 multicast, 0 pause input
 12072167 packets output, 1697953637 bytes, 0 underruns
 0 output errors, 0 collisions, 1 interface resets
 6 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 5 lost carrier, 0 no carrier, 0 pause output
 0 output buffer failures, 0 output buffers swapped out
```

What is a reason for poor performance on the network interface?

- A. The interface is receiving excessive broadcast traffic.
- B. The cable connection between the two devices is faulty.
- C. The interface is operating at a different speed than the connected device.
- D. The bandwidth setting of the interface is misconfigured

Correct Answer: B

Section:

QUESTION 255

Refer to the exhibit.

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

A network engineer must update the configuration on Switch2 so that it sends LLDP packets every minute and the information sent via LLDP is refreshed every 3 minutes. Which configuration must the engineer apply?



- A.

```
Switch2(config)#lldp timer 60
Switch2(config)#lldp holdtime 180
```
- B.

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

```
Switch2(config)#lldp timer 1
Switch2(config)#lldp holdtime 3
```
- D.

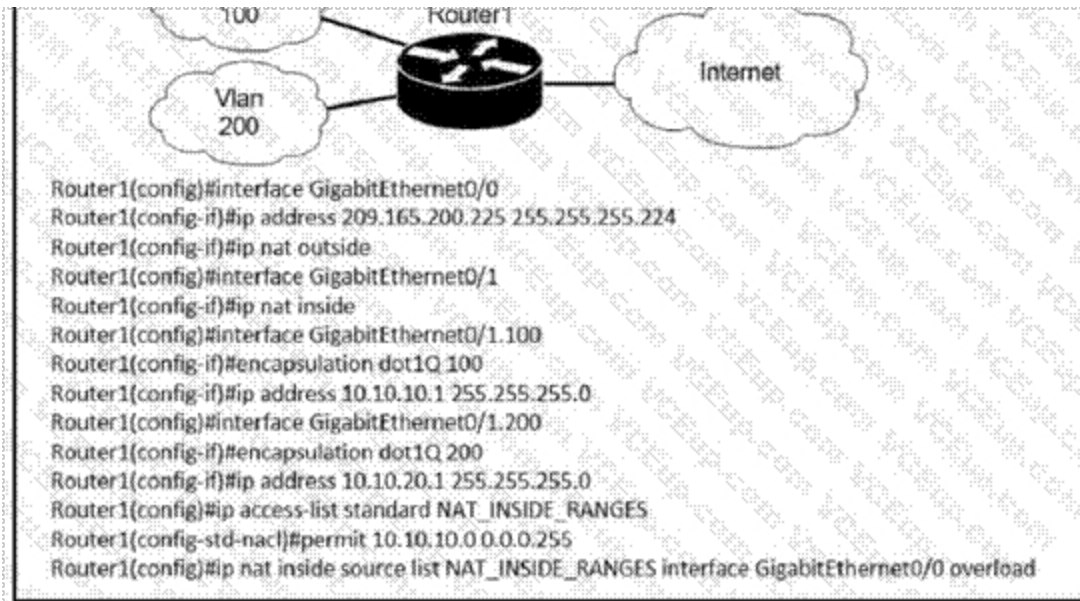
```
Switch2(config)#lldp timer 1
Switch2(config)#lldp tlv-select 3
```

Correct Answer: A

Section:

QUESTION 256

Refer to the exhibit.



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

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

Correct Answer: D

Section:

QUESTION 257

Refer to the exhibit.

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

Packets received by the router from BGP enter via a serial interface at 209 165 201 1 Each route is present within the routing table Which interface is used to forward traffic with a destination IP of 10.1.1.19?

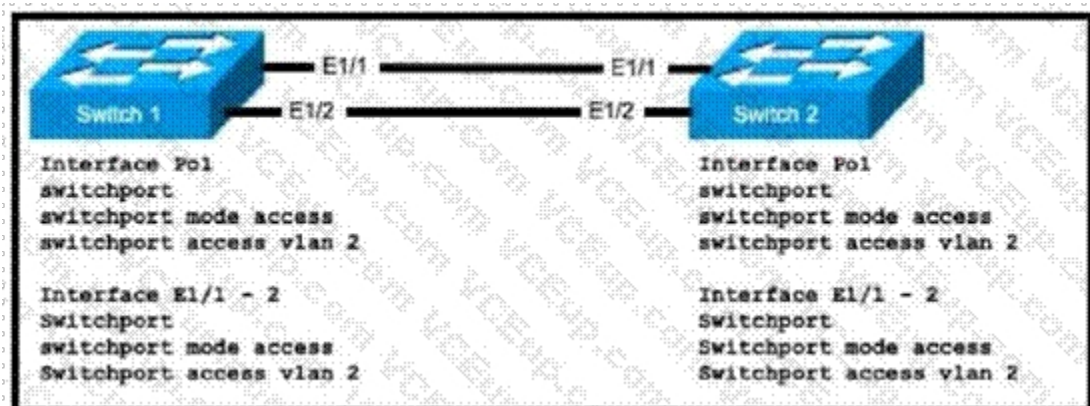
- A. F0/4
- B. F0/0
- C. F0/1
- D. F0/3

Correct Answer: B

Section:

QUESTION 258

Refer to the exhibit.



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

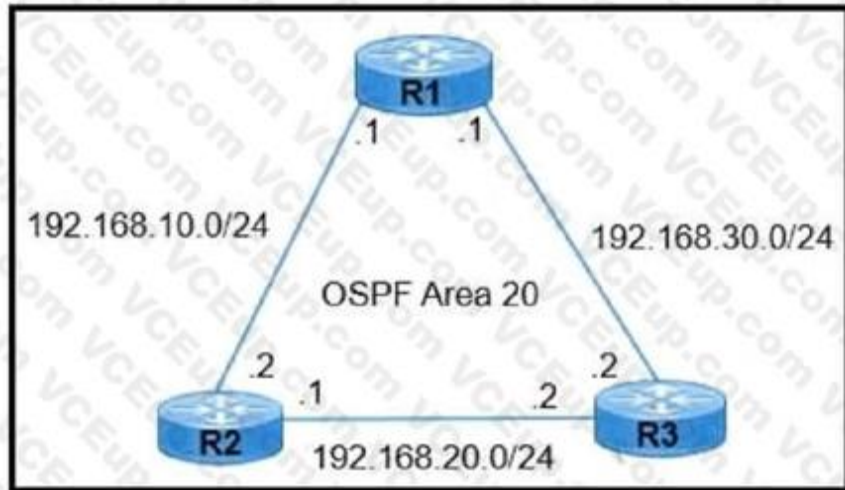
- A. Switch 1 (config-if)#channel-group 1 mode on
Switch2(config-if)#channel-group 1 mode passive
- B. Switch1(config-if)#channel-group 1 mode passive
Switch2(config-if)#channel-group 1 mode active
- C. Switch1 {config-if)#channel-group 1 mode active
Switch2(config-if)#channel-group 1 mode passive
-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

Correct Answer: C

Section:

QUESTION 259

Refer to the exhibit.



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

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

Correct Answer: C

Section:

QUESTION 260

What is the difference between IPv6 unicast and anycast addressing?

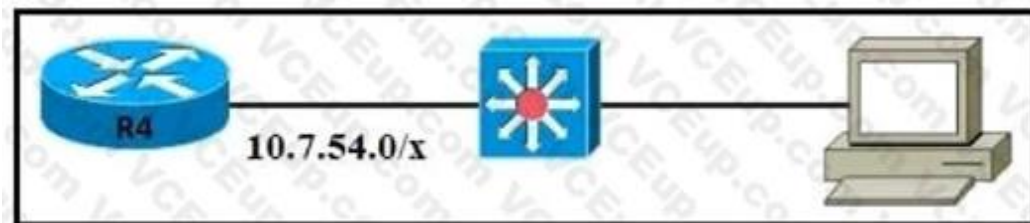
- A. IPv6 anycast nodes must be explicitly configured to recognize the anycast address, but IPv6 unicast nodes require no special configuration
- B. IPv6 unicast nodes must be explicitly configured to recognize the unicast address, but IPv6 anycast nodes require no special configuration
- C. An individual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

Correct Answer: C

Section:

QUESTION 261

Refer to the exhibit.



The router has been configured with a supernet to accommodate the requirement for 380 users on a subnet The requirement already considers 30% future growth. Which configuration verifies the IP subnet on router R4?

- A.

Subnet: 10.7.54.0
Subnet mask: 255.255.254.0
Broadcast address: 10.7.54.255
Usable IP address range: 10.7.54.1 - 10.7.55.254

B.

Subnet: 10.7.54.0
Subnet mask: 255.255.254.0
Broadcast address: 10.7.55.255
Usable IP address range: 10.7.54.1 - 10.7.55.254

C.

Subnet: 10.7.54.0
Subnet mask: 255.255.128.0
Broadcast address: 10.7.55.255
Usable IP address range: 10.7.54.1 - 10.7.55.254

D.

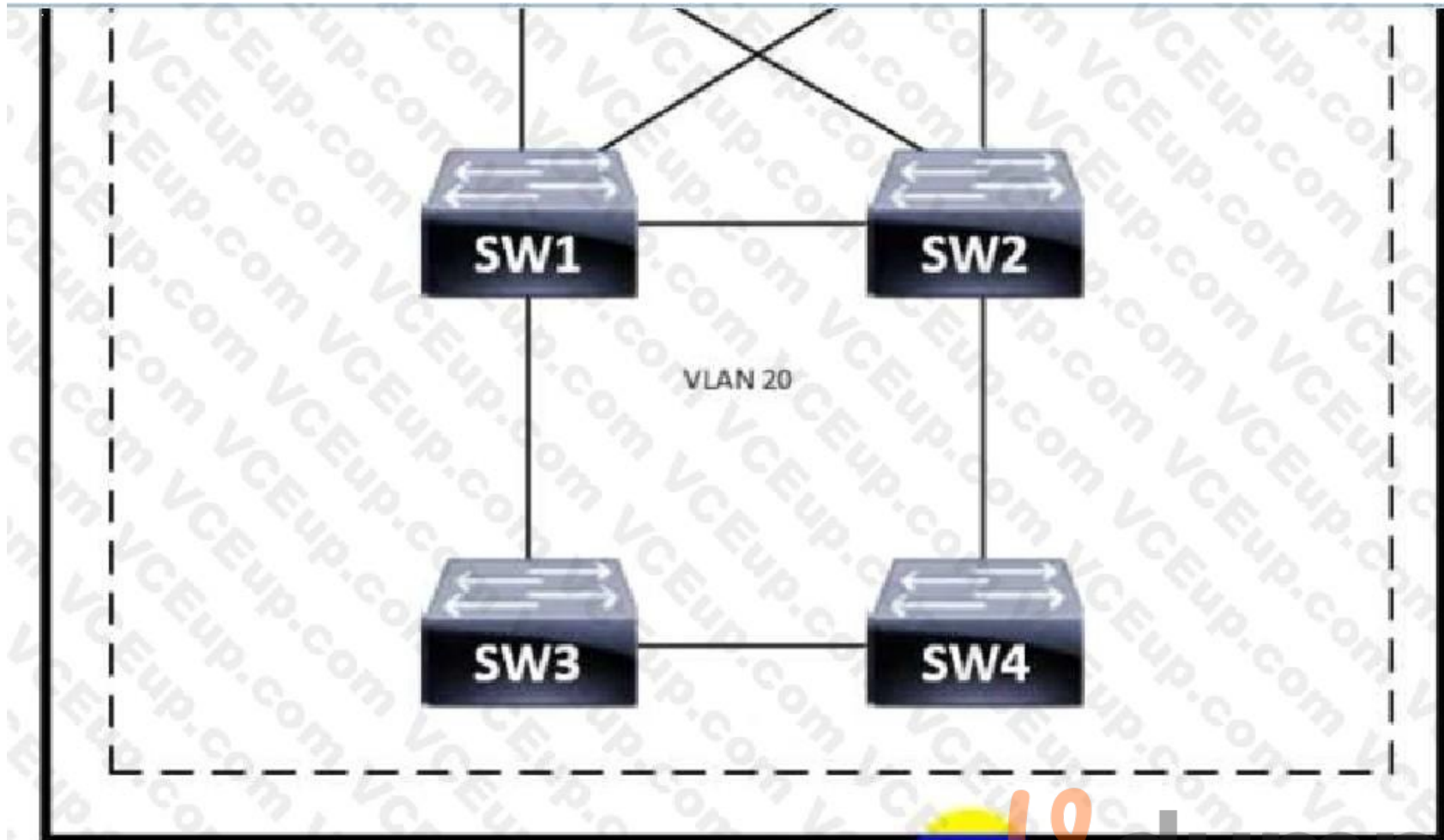
Subnet: 10.7.54.0
Subnet mask: 255.255.255.0
Broadcast address: 10.7.54.255
Usable IP address range: 10.7.54.1 - 10.7.55.254

Correct Answer: B

Section:

QUESTION 262

Refer to the exhibit.



Which switch becomes the root of a spanning tree for VLAN 20 if all links are of equal speed?

SW1 = 24596 0018.184e.3c00
SW2 = 28692 004a.14e5.4077
SW3 = 32788 0022.55cf.dd00
SW4 = 64000 0041.454d.407f

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

Correct Answer: C

Section:

QUESTION 263

Which protocol uses the SSL?

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

Correct Answer: C

Section:

QUESTION 264

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

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

Correct Answer: B, D

Section:

QUESTION 265

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

- The user EXEC password for console access is p4ssw0rd1
 - The user EXEC password for Telnet access is s3cr3t2
 - The password for privileged EXEC mode is pnv4t3p4ss
- Which command sequence must the engineer configured

A.

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

B.



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

C.

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

D.

```
enable secret privilege 15 priv4t3p4ss
!  
line con 0
```

Correct Answer: B

Section:

QUESTION 266

How does Rapid PVST+ create a fast loop-free network topology?

A. It requires multiple links between core switches



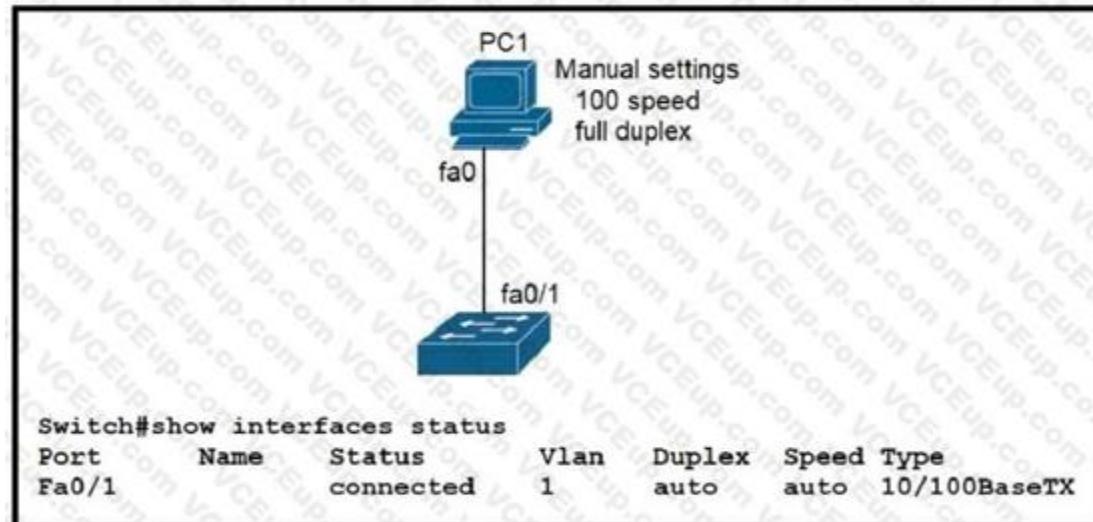
- B. It generates one spanning-tree instance for each VLAN
- C. It maps multiple VLANs into the same spanning-tree instance
- D. It uses multiple active paths between end stations.

Correct Answer: B

Section:

QUESTION 267

Refer to the exhibit.



The link between PC1 and the switch is up, but it is performing poorly. Which interface condition is causing the performance problem?

- A. There is a duplex mismatch on the interface
- B. There is an issue with the fiber on the switch interface.
- C. There is a speed mismatch on the interface.
- D. There is an interface type mismatch

Correct Answer: A

Section:

QUESTION 268

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

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

Correct Answer: B

Section:

QUESTION 269

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

- A. A distributed management plane must be used.

- B. Software upgrades are performed from a central controller
- C. Complexity increases when new device configurations are added
- D. Custom applications are needed to configure network devices

Correct Answer: B

Section:

QUESTION 270

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

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

Correct Answer:

Section:

Explanation:

event correlation and aggregation

fault detection

fault diagnosis and isolation

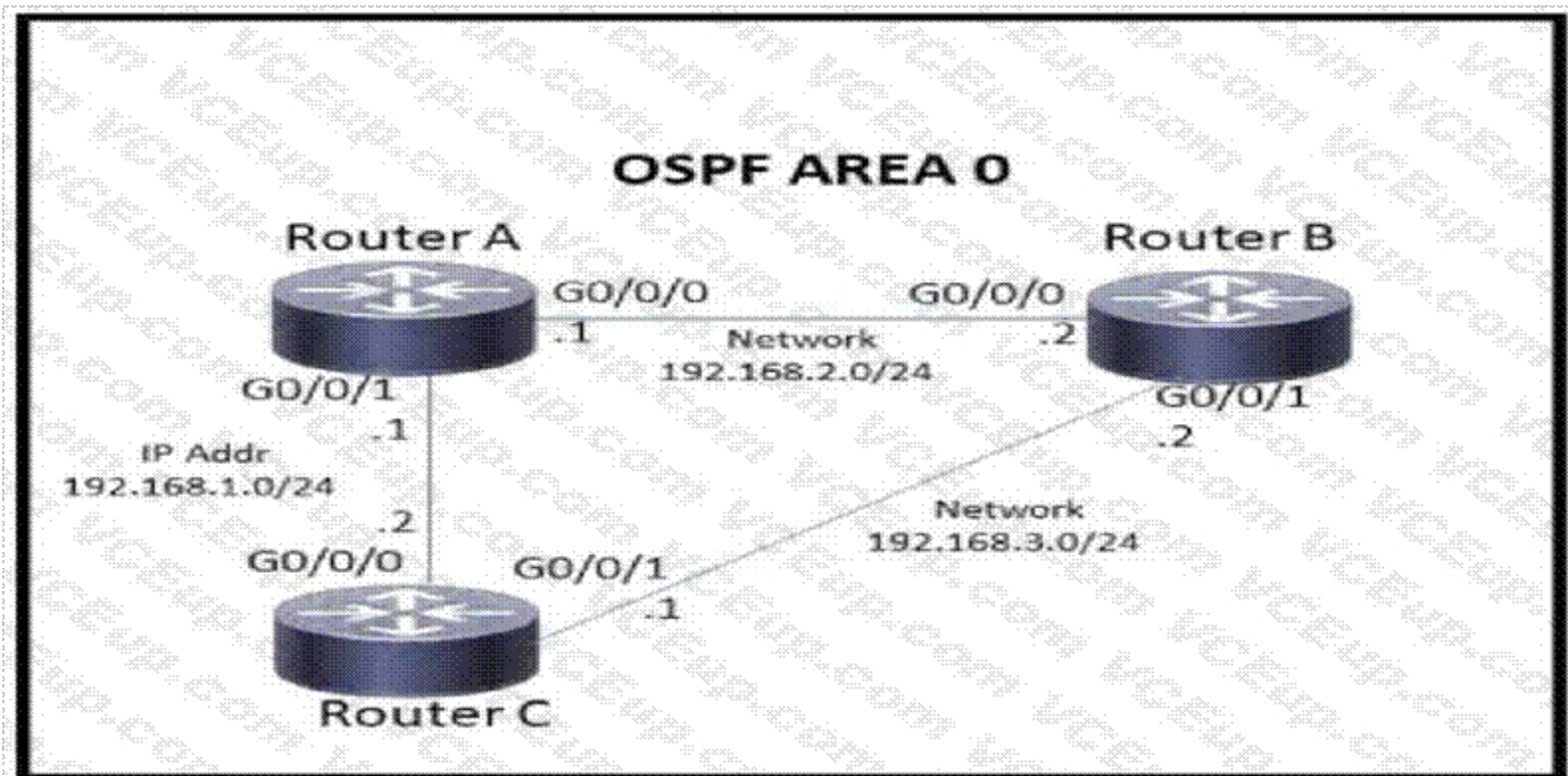
problem resolution

restoration of service



QUESTION 271

Refer to the exhibit.



Which action must be taken to ensure that router A is elected as the DR for OSPF area 0?

- A. Configure the OSPF priority on router A with the lowest value between the three routers.
- B. Configure router B and router C as OSPF neighbors of router A.
- C. Configure the router A interfaces with the highest OSPF priority value within the area.
- D. Configure router A with a fixed OSPF router ID



Correct Answer: C

Section:

QUESTION 272

Refer to the exhibit.

```

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

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

- A. via next-hop 10.0.1.5
- B. via next-hop 10.0.1.4
- C. via next-hop 10.0.1.50

D. via next-hop 10.0 1 100

Correct Answer: A

Section:

QUESTION 273

Which two components comprise part of a PKI? (Choose two.)

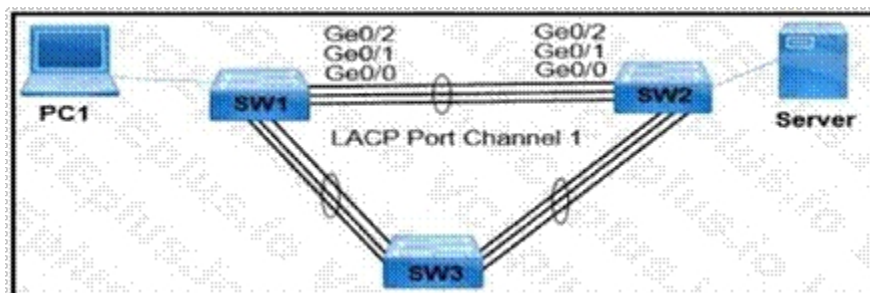
- A. preshared key that authenticates connections
- B. RSA token
- C. CA that grants certificates
- D. clear-text password that authenticates connections
- E. one or more CRLs

Correct Answer: B, C

Section:

QUESTION 274

Refer to the exhibit.



vdumps

PC1 regularly sends 1800 Mbps of traffic to the server. A network engineer needs to configure the EtherChannel to disable Port Channel 1 between SW1 and SW2 when the Ge0/0 and Ge0/1 ports on SW2 go down. Which configuration must the engineer apply to the switch?

- A.

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# lacp port-priority 32000
```
- B.

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# lacp max-bundle 2
```
- C.

```
SW2# configure terminal
SW2(config)# lacp system-priority 32000
```
- D.

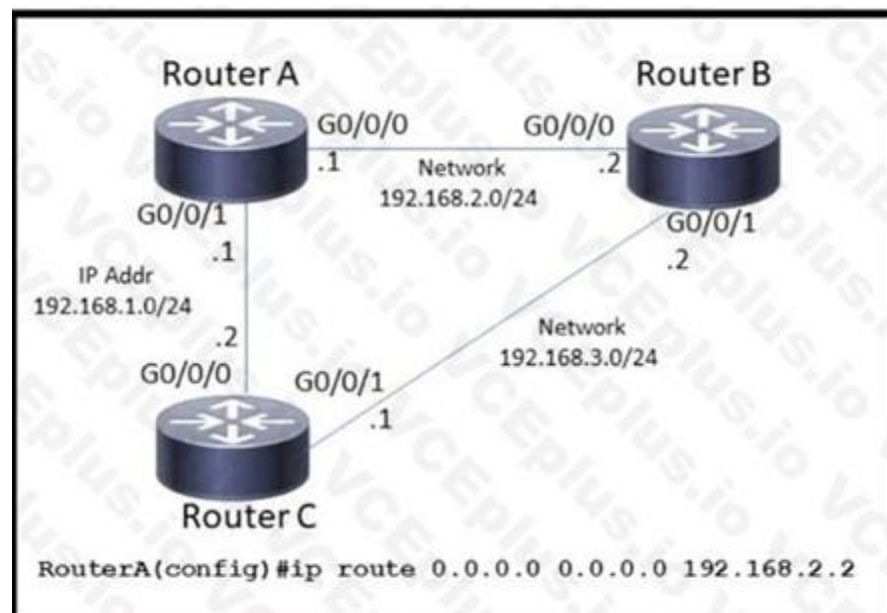
```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# port-channel min-links 2
```

Correct Answer: D

Section:

QUESTION 275

Refer to the exhibit.



Which command must be enable a floating default route on router A?

- A. ip route 0.0.0.0 0.0.0.0 192.168.1.2
- B. ip default-gateway 192.168.2.1
- C. ip route 0.0.0.0 0.0.0.0 192.168.1.2 10
- D. ip route 0.0.0.0 0.0.0.0 192.168.2.1 10

Correct Answer: C

Section:



QUESTION 276

Refer to the exhibit.

Current Neighbor Relationship					
Neighbor ID	Pri	State	Dead Time	Address	Interface
192.168.1.1	1	FULL/DR	00:00:33	192.168.1.1	GigabitEthernet0/0

Desired Neighbor Relationship					
Neighbor ID	Pri	State	Dead Time	Address	Interface
192.168.1.1	0	FULL/ -	00:00:31	192.168.1.1	GigabitEthernet0/0

How must OSPF be configured on the GigabitEthernet0/0 interface of the neighbor device to achieve.

- A.

```
Router(config)#interface GigabitEthernet 0/0
Router(config-if)#ip ospf priority 1
```
- B.

```
Router(config)#interface GigabitEthernet 0/0
Router(config-if)#ip ospf 1 area 2
```
- C.

```
Router(config)#interface GigabitEthernet 0/0
Router(config-if)#ip ospf cost 5
```
- D.

```
Router(config)#interface GigabitEthernet 0/0
Router(config-if)#ip ospf network point-to-point
```

Correct Answer: A

Section:

QUESTION 277

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

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

Correct Answer: D

Section:

QUESTION 278

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

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

Correct Answer: A, D

Section:

QUESTION 279

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

A.

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

B.

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

C.




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

D.

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

Correct Answer: B

Section:

QUESTION 280

Refer to the exhibit.

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

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

A.

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

B.

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

C.

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

D.

Vdumps

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

Correct Answer: C

Section:

QUESTION 281

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

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

Correct Answer: A

Section:

QUESTION 282

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

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



Correct Answer: C

Section:

QUESTION 283

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

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

Correct Answer: B

Section:

QUESTION 284

What is the primary purpose of private address space?

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

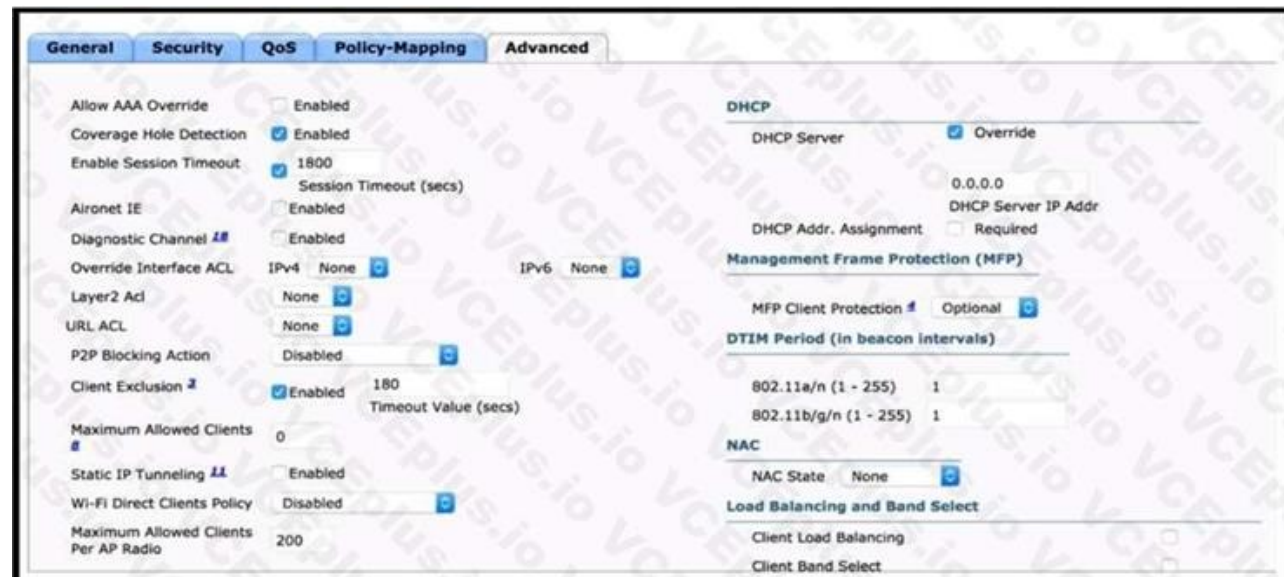
D. reduce network complexity

Correct Answer: A

Section:

QUESTION 285

Refer to the exhibit.



The P2P blocking action option is disabled on the WLC.

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



Correct Answer: A

Section:

QUESTION 286

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

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

Correct Answer: D

Section:

QUESTION 287

What is a purpose of traffic shaping?

- A. It enables dynamic flow identification.
- B. It enables policy-based routing.

- C. It provides best-effort service.
- D. It limits bandwidth usage.

Correct Answer: A

Section:

QUESTION 288

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

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

Correct Answer: B

Section:

QUESTION 289

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

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

Correct Answer: D

Section:

QUESTION 290

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

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

Correct Answer: B

Section:

QUESTION 291



Refer to the exhibit.



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



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

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

Correct Answer: D

Section:

QUESTION 292

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

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

Correct Answer: B

Section:

QUESTION 293

What is a specification for SSIDS?

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

Correct Answer: B

Section:

QUESTION 294

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

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

Correct Answer: C

Section:

QUESTION 295

DRAG DROP

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



Select and Place:

DNS
SMTP
SNMP

HTTP
RTP
Telnet

TCP

UDP

Correct Answer:

TCP
SMTP
HTTP
Telnet

UDP
DNS
SNMP
RTP

Section:

Explanation:

QUESTION 296

DRAG DROP

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

Select and Place:

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

Correct Answer:

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

Section:

Explanation:

QUESTION 297

DRAG DROP

Drag and drop the descriptions of AAA services from the left onto the corresponding services on the right.

Select and Place:

- allows the user to change to enable mode
- limits the user's access permissions
- logs session statistics
- records user commands
- secures access to routers
- validates user credentials

Accounting

-
-

Authentication

-
-

Authorization

-
-

Correct Answer:

-
-
-
-
-
-

Accounting

- records user commands
- logs session statistics

Authentication

- validates user credentials
- allows the user to change to enable mode

Authorization

- limits the user's access permissions
- secures access to routers

Section:
Explanation:

QUESTION 298

DRAG DROP

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

Select and Place:

identifies an interface on an IPv6 device

includes link-local and loopback addresses

provides one-to-many communications

used exclusively by a non-host device

assigned to more than one interface

derived from the FF00::/8 address range

Anycast

Multicast

Unicast



Correct Answer:

Anycast

- provides one-to-many communications
- used exclusively by a non-host device

Multicast

- assigned to more than one interface
- derived from the FF00::/8 address range

Unicast

- identifies an interface on an IPv6 device
- includes link-local and loopback addresses

Section:
Explanation:



Anycast

- provides one-to-many communications
- used exclusively by a non-host device

Multicast

- assigned to more than one interface
- derived from the FF00::/8 address range

Unicast

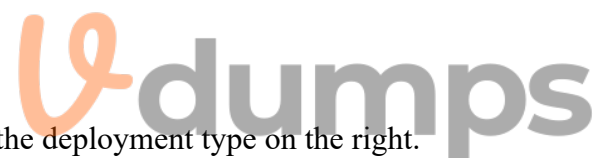
- identifies an interface on an IPv6 device
- includes link-local and loopback addresses

QUESTION 299

DRAG DROP

Drag and drop each characteristic of device-management technologies from the left onto the deployment type on the right.

Select and Place:



- relies on per-device management
- uses individual software management
- orchestrates background device configuration

Cisco DNA Center

- supports open APIs
- provides greater flexibility for custom and non-standard configurations
- supports centralized software management

Traditional



Correct Answer:

-
-
-

Cisco DNA Center

- supports open APIs
- provides greater flexibility for custom and non-standard configurations
- supports centralized software management

-
-
-

Traditional

- relies on per-device management
- uses individual software management
- orchestrates background device configuration

Section:

Explanation:

QUESTION 300

DRAG DROP

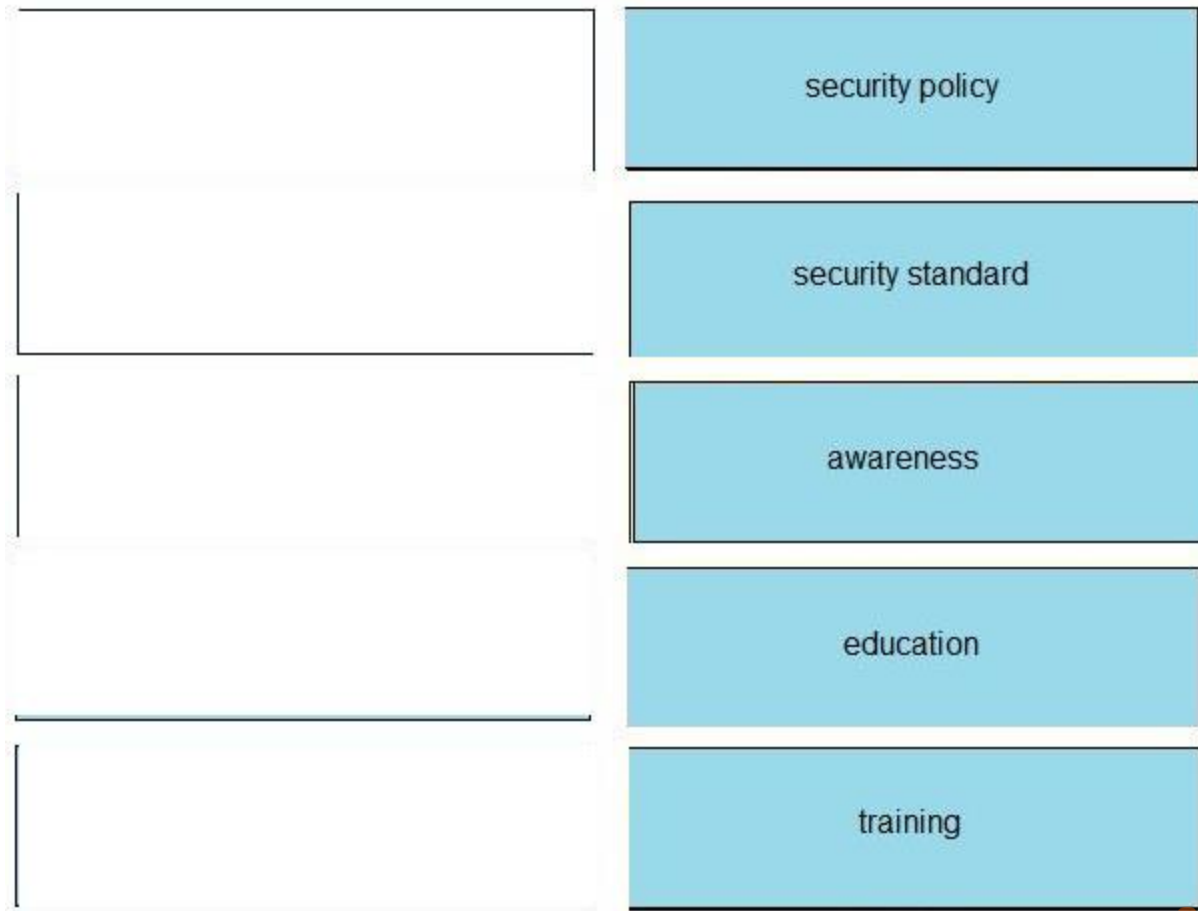
Drag and drop the elements of a security program from the left onto the corresponding descriptions on the right

Select and Place:

awareness	document that outlines an organization's security goals and practices and the roles and responsibilities of the organization's personnel
education	tactical document that sets out specific tasks and methods to maintain security
security policy	user-awareness learning level that focuses on learning about topics and practices beyond what is typically required by the user's job
security standard	user-awareness learning level that focuses on security practices that all employees must understand and enforce
training	user-awareness learning level that focuses on teaching employees how to perform tasks specifically required by their jobs

Vdumps

Correct Answer:



Section:
Explanation:

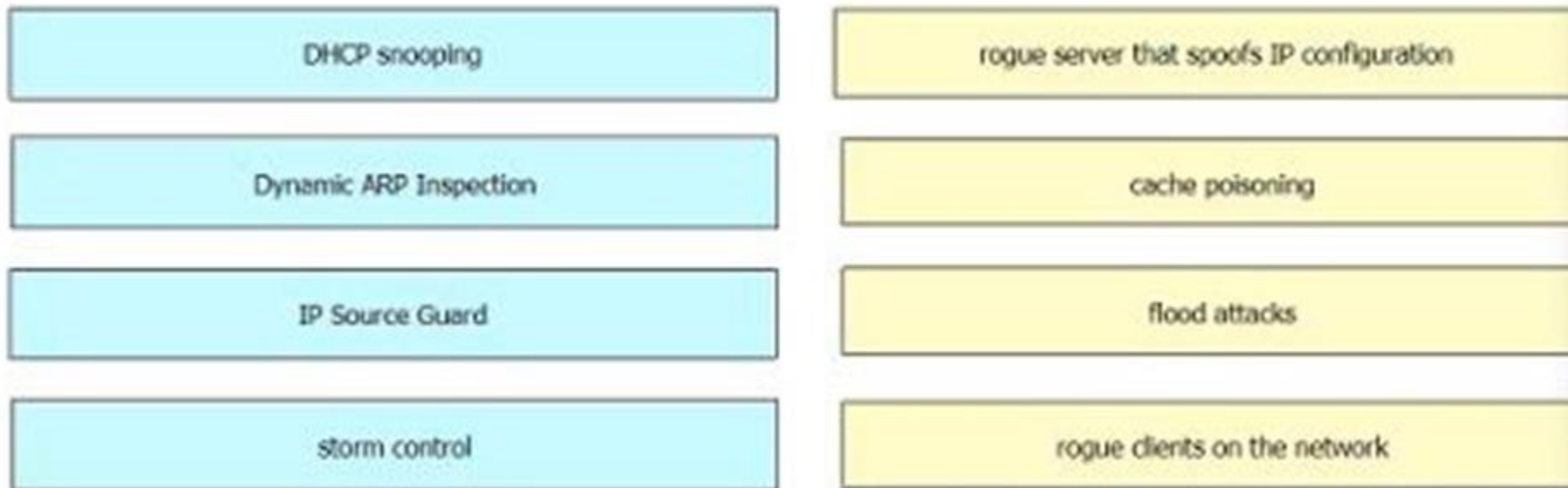


QUESTION 301

DRAG DROP

Drag and drop the Cisco IOS attack mitigation features from the left onto the types of network attack they mitigate on the right.

Select and Place:



Correct Answer:

Four empty rectangular boxes for drag-and-drop.

- IP Source Guard
- Dynamic ARP Inspection
- storm control
- DHCP snooping

Section:

Explanation:

- IP Source Guard
- Dynamic ARP Inspection
- storm control
- DHCP snooping



QUESTION 302

DRAG DROP

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

Select and Place:

Answer Area

used to reliably share files between devices

appropriate for streaming operations with minimal latency

provides best-effort service

supports reliable data transmission

TCP

UDP

Correct Answer:

Answer Area

TCP

supports reliable data transmission

used to reliably share files between devices

UDP

appropriate for streaming operations with minimal latency

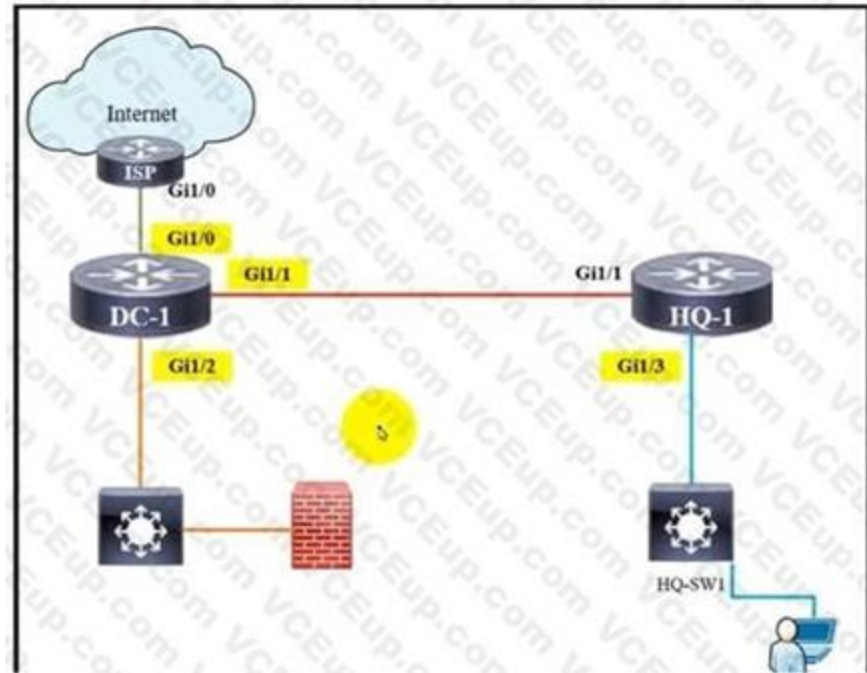
provides best-effort service



Section:

Explanation:

QUESTION 303
DRAG DROP
Refer to Exhibit.



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

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

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

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

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

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

Select and Place:



ip address 192.168.4.9 255.255.255.248

ip address 192.168.3.14 255.255.255.240

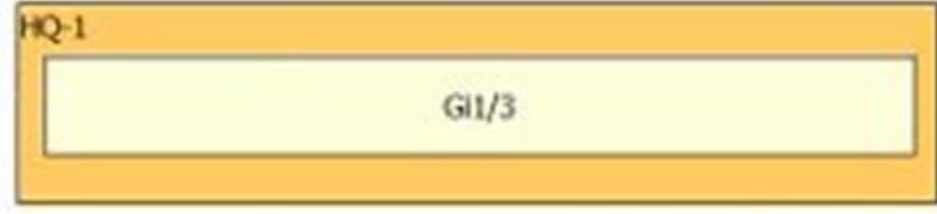
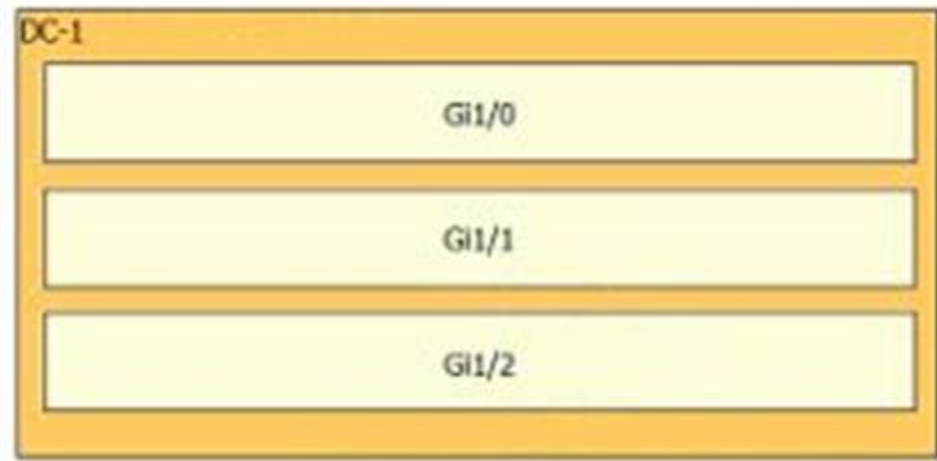
ip address 209.165.202.129 255.255.255.252

ip address 192.168.4.13 255.255.255.240

ip address 209.165.202.130 255.255.255.252

ip address 209.165.202.131 255.255.255.252

ip address 192.168.3.14 255.255.255.248



Vdumps

Correct Answer:

ip address 209.165.202.129 255.255.255.252

ip address 192.168.4.13 255.255.255.240

ip address 209.165.202.131 255.255.255.252

DC-1

ip address 209.165.202.130 255.255.255.252

ip address 192.168.4.9 255.255.255.248

ip address 192.168.3.14 255.255.255.240

HQ-1

ip address 192.168.3.14 255.255.255.248

Vdumps

Section:

Explanation:

QUESTION 304

DRAG DROP

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

Not all options are used.

Select and Place:

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

Unique Local Addresses

-
-
-

Link-Local Addresses

-
-

Correct Answer:

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

Unique Local Addresses

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

Link-Local Addresses

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

Section:
Explanation:

QUESTION 305
DRAG DROP

Select and Place:

2001:db8:600d:cafe::123	Global Unicast
fcba:926a:e8e:7a25:b1:c6d2:1a76:8fdc	Link-Local Unicast
fe80::a00:27ff:feeb:89aa	Multicast
ff05::1:3	Unique Local

Correct Answer:

	Global Unicast	2001:db8:600d:cafe::123
	Link-Local Unicast	fe80::a00:27ff:feeb:89aa
	Multicast	ff05::1:3
	Unique Local	fcba:926a:e8e:7a25:b1:c6d2:1a76:8fdc

Section:

Explanation:

QUESTION 306

DRAG DROP

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

Select and Place:

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

Correct Answer:

	classification
	cloud-based weighted fair queueing
	shaping
	congestion
	policing

Section:

Explanation:

QUESTION 307

DRAG DROP

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



Select and Place:

encrypts only the password when it sends an access request

encrypts the entire body of the access-request packet

separates all three AAA operations

combines authentication and authorization

uses TCP

uses UDP

RADIUS

TACACS+

Correct Answer:

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

Section:
Explanation:

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

QUESTION 308
DRAG DROP

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

Select and Place:

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

Correct Answer:

	POST
	DELETE
	PATCH
	PUT
	GET

Section:
Explanation:



	POST
	DELETE
	PATCH
	PUT
	GET

QUESTION 309

DRAG DROP

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

Select and Place:

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

Correct Answer:

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

Section:

Explanation:

QUESTION 310

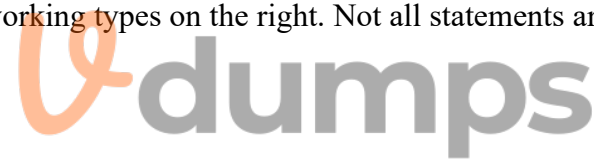
DRAG DROP

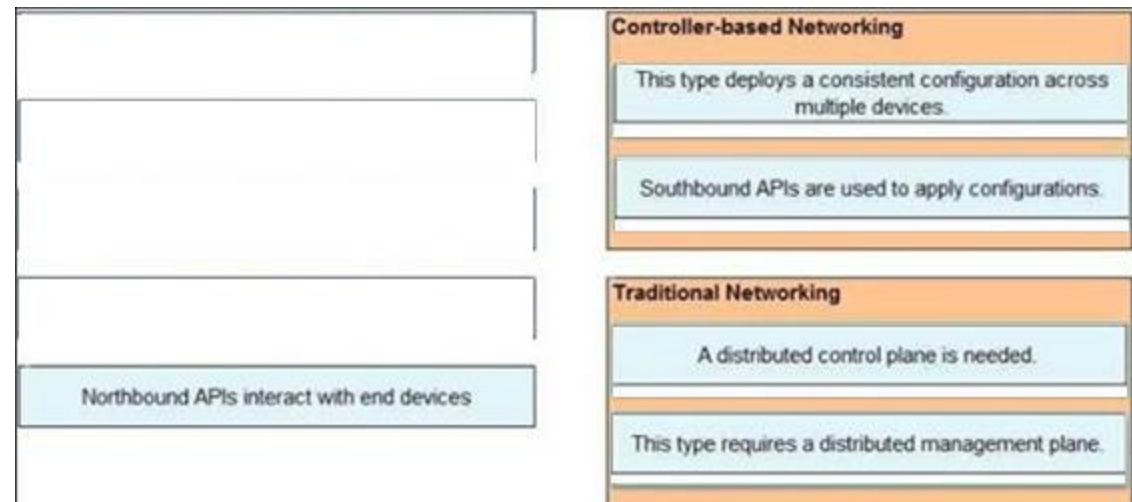
Drag and drop the statements about networking from the left onto the corresponding networking types on the right. Not all statements are used.

Select and Place:

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

Correct Answer:





Section:

Explanation:

Controller-based Networking :

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

Traditional Networking :

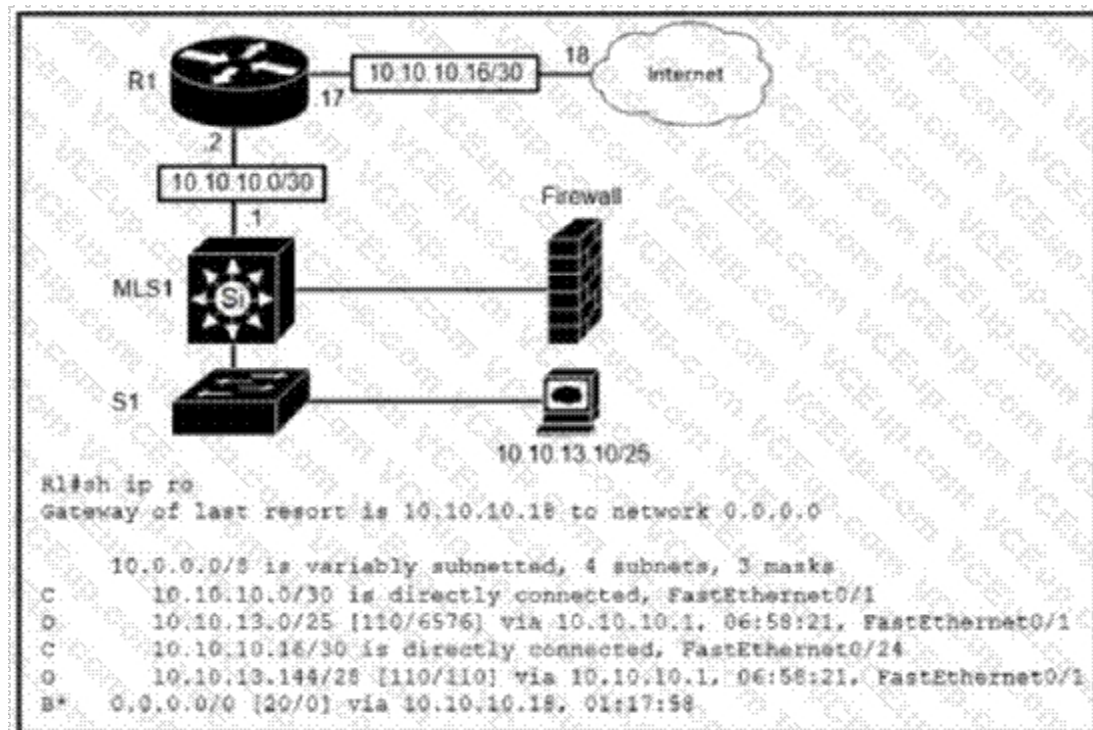
- A distributed control plane is needed.
- This type requires a distributed management plane.

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

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

QUESTION 311

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

Correct Answer: B

Section:

QUESTION 312

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

Correct Answer: B

Section:

QUESTION 313

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

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

Correct Answer: C

Section:

Explanation:

<https://www.oreilly.com/library/view/cisco-ios-cookbook/0596527225/ch08s15.html>The Broadcast network type is the default for an OSPF enabled ethernet interface (while PointtoPoint is the default OSPF network type for Serial interface with HDLC and PPP encapsulation).



QUESTION 314

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

Correct Answer: C

Section:

QUESTION 315

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

- A. They prevent (oops in the Layer 2 network.
- B. They allow encrypted traffic.
- C. They are able to bundle multiple ports to increase bandwidth

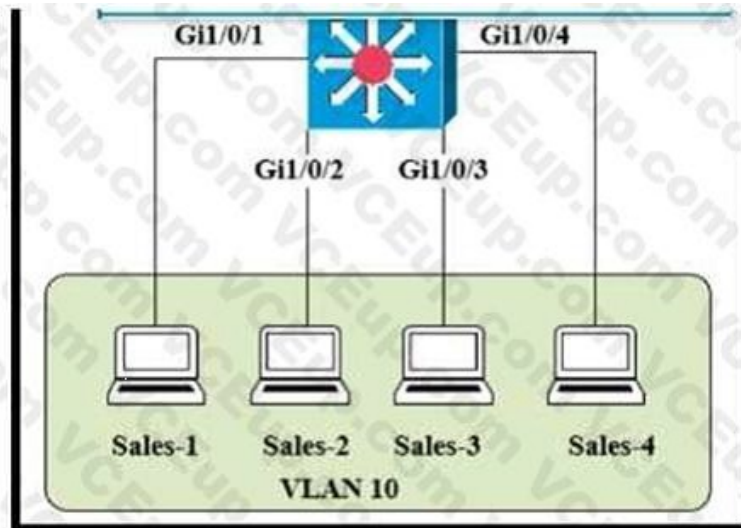
- D. They enable automatic failover of the default gateway.
- E. They allow multiple devices to serve as a single virtual gateway for clients in the network

Correct Answer: D, E

Section:

QUESTION 316

Refer to the exhibit.



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

```
Sales-SW#show mac-address-table
Mac Address Table
-----
VLAN    MAC Address      Type    Ports
----    -
10      000c.8590.bb7d   DYNAMIC Gi1/0/1
10      3910.4161.9bb7   DYNAMIC Gi1/0/2
10      00d0.d3b6.957c   DYNAMIC Gi1/0/3
Sales-SW#
```



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

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

Correct Answer: B

Section:

Explanation:

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

QUESTION 317

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

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

Correct Answer: D

Section:

QUESTION 318

DRAG DROP

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

Select and Place:

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

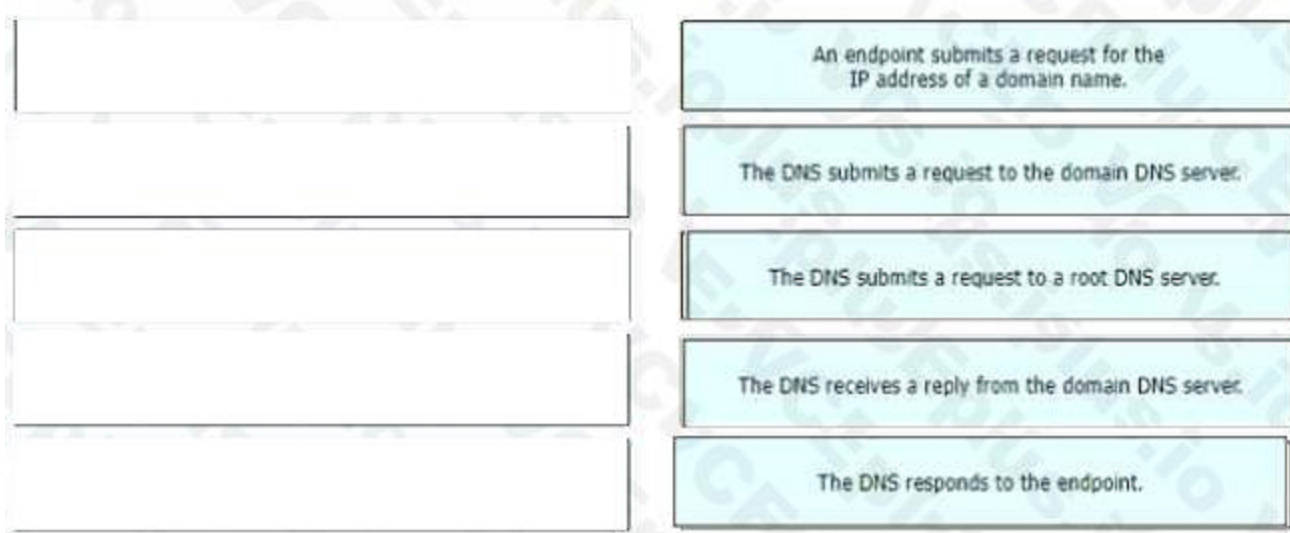
Vdumps

Correct Answer:

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

Section:

Explanation:



QUESTION 319

DRAG DROP

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

Select and Place:

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

Correct Answer:

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

Section:

Explanation:

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

QUESTION 320

DRAG DROP

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

Select and Place:

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

Correct Answer:

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

Section:

Explanation:

QUESTION 321

DRAG DROP

Refer to the exhibit.



```

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

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

Select and Place:

172.16.3.128	255.255.254.0
172.16.3.64	255.255.255.128
172.16.2.128	255.255.255.224
172.16.3.192	255.255.255.240
172.16.4.0	255.255.255.248

Correct Answer:

	172.16.4.0
	172.16.3.128
	172.16.3.64
	172.16.2.128
	172.16.3.192

Section:

Explanation:

QUESTION 322

DRAG DROP

Drag and drop the Ansible terms from the left onto the right.

Select and Place:



control node	collection of actions to perform on target devices, expressed in YAML format
inventory	device with Ansible installed that manages target devices
managed node	network device, without Ansible installed, upon which commands can be executed
module	specific action to be performed on one or more target devices
playbook	unit of Python code to be executed
task	Ansible file that defines the target devices upon which commands and tasks can be executed

Correct Answer:



Section:

Explanation:

QUESTION 323

What is the primary different between AAA authentication and authorization?

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

Correct Answer: C

Section:

Explanation:

AAA stands for Authentication, Authorization and Accounting.

+ Authentication: Specify who you are (usually via login username & password) + Authorization: Specify what actions you can do, what resource you can access + Accounting: Monitor what you do, how long you do it (can be used for billing and auditing) An example of AAA is shown below:

+ Authentication: "I am a normal user. My username/password is user_tom/learnforever" + Authorization: "user_tom can access LearnCCNA server via HTTP and FTP" + Accounting: "user_tom accessed LearnCCNA server for 2 hours".

This user only uses "show" commands.

QUESTION 324

A network administrator must to configure SSH for remote access to router R1. The requirement is to use a public and private key pair to encrypt management traffic to and from the connecting client. Which configuration, when applied, meets the requirements?

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

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

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

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

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

Correct Answer: B
Section:



QUESTION 325

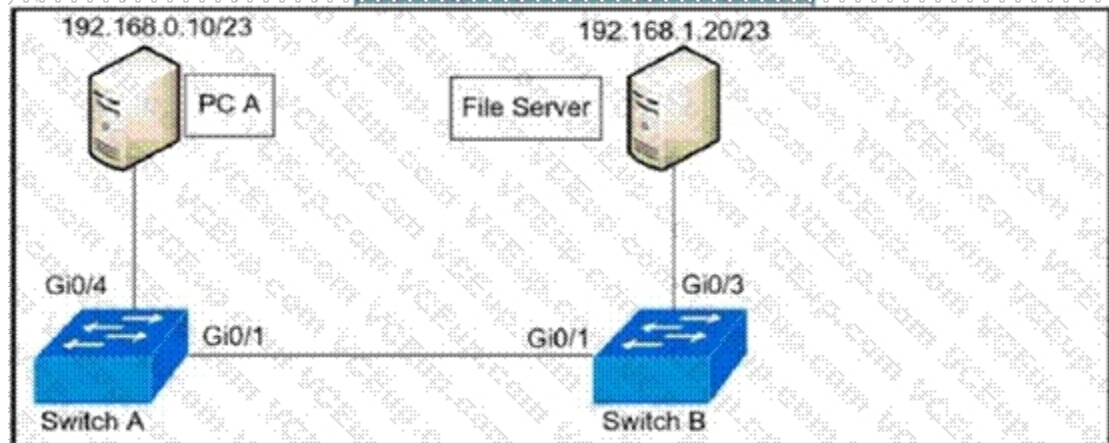
A network engineer must configure the router R1 GigabitEthernet1/1 interface to connect to the router R2 GigabitEthernet1/1 interface. For the configuration to be applied the engineer must compress the address 2001:0db8:0000:0000:0500:000a:400F:583B. Which command must be issued on the interface?

- 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

Correct Answer: B
Section:

QUESTION 326

Refer to the exhibit.



<pre>Switch A Vlan 10,11,12,13 interface GigabitEthernet0/1 switchport mode trunk switchport trunk allowed vlan 10-12 interface GigabitEthernet0/4 switchport access vlan 13 switchport mode access</pre>	<pre>Switch B Vlan 10,11,12,13 interface GigabitEthernet0/1 switchport mode trunk interface GigabitEthernet0/3 switchport access vlan 13 switchport mode access</pre>
---	---

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.



Correct Answer: B

Section:

QUESTION 327

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

Correct Answer: A

Section:

QUESTION 328

An engineer is configuring NAT to translate the source subnet of 10.10.0.0/24 to any of three addresses 192.168.30.1, 192.168.3.2, 192.168.3.3 Which configuration should be used?

```
enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
route-map permit 10.10.0.0 255.255.255.0
ip nat outside destination list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside
```

```
enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
access-list 1 permit 10.10.0.0 0.0.0.255
ip nat inside source list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside
```

```
enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
access-list 1 permit 10.10.0.0 0.0.0.255
ip nat outside destination list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside
```

```
enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
access-list 1 permit 10.10.0.0 0.0.0.254
ip nat inside source list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside
```

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

Correct Answer: C

Section:

QUESTION 329

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



Correct Answer: C

Section:

QUESTION 330

DRAG DROP

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

Select and Place:

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

Correct Answer:

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

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

Section:

Explanation:

QUESTION 331

DRAG DROP

Drag and drop the statement about AAA services from the left to the corresponding AAA services on the right.

Select and Place:

It grants access to network assets, such as FTP servers.	Accounting
It restricts the CLI commands that a user is able to perform.	
It performs user validation via TACACS+.	Authorization
It records the duration of each connection.	
It supports User Access Reporting.	
It verifies "who you are".	

Correct Answer:

	Accounting
	It supports User Access Reporting.
	It restricts the CLI commands that a user is able to perform.
	Authorization
It records the duration of each connection.	It performs user validation via TACACS+.
	It grants access to network assets, such as FTP servers.
It verifies "who you are".	

Section:

Explanation:

QUESTION 332

DRAG DROP

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

Select and Place:

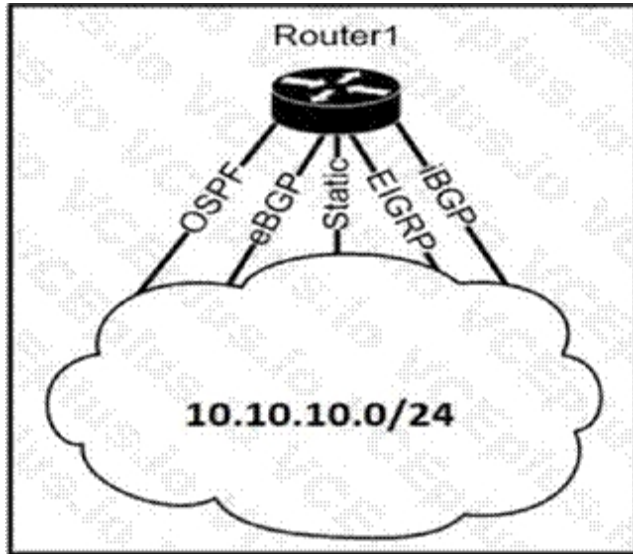


Correct Answer:



Vdumps

Section:
 Explanation:
QUESTION 333
 DRAG DROP
 Refer to the exhibit.



The Router1 routing table has multiple methods to reach 10.10.10.0/24 as shown. The default Administrative Distance is used. Drag and drop the network conditions from the left onto the routing methods that Router1 uses on the right.

Select and Place:

- All protocols are up.
- OSPF and eBGP are down.
- The static route and eBGP are down.
- The static route and EIGRP are down.
- The static route and OSPF are down.

eBGP	<input type="text"/>
eBGP	<input type="text"/>
EIGRP	<input type="text"/>
EIGRP	<input type="text"/>
Static	<input type="text"/>
Static	<input type="text"/>

Correct Answer:

	eBGP
	All protocols are up.
	OSPF and eBGP are down.
	EIGRP
	The static route and EIGRP are down.
	Static
	The static route and OSPF are down.
	The static route and eBGP are down.

Section:

Explanation:

QUESTION 334

DRAG DROP

Drag and drop the wireless architecture benefits from the left onto the architecture types on the right.

Select and Place:

Drag and drop the wireless architecture benefits from the left onto the architecture types on the right.



Appropriate for a small-business environment.	Split-MAC
Work is divided between the access point and the controller.	
The access points transmit beacon frames.	
Supports per device configuration and management.	Autonomous
Uses the CAPWAP tunneling protocol.	

Correct Answer:

Drag and drop the wireless architecture benefits from the left onto the architecture types on the right.

Split-MAC

- Work is divided between the access point and the controller.
- Supports per device configuration and management.
- Uses the CAPWAP tunneling protocol.

Autonomous

- The access points transmit beacon frames.
- Appropriate for a small-business environment.

Section:

Explanation:

QUESTION 335

DRAG DROP

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



Select and Place:

DELETE

GET

POST

PUT

PATCH

creates a resource on the server

reads data from the server

removes a resource from the server

updates an entry in the database

Correct Answer:



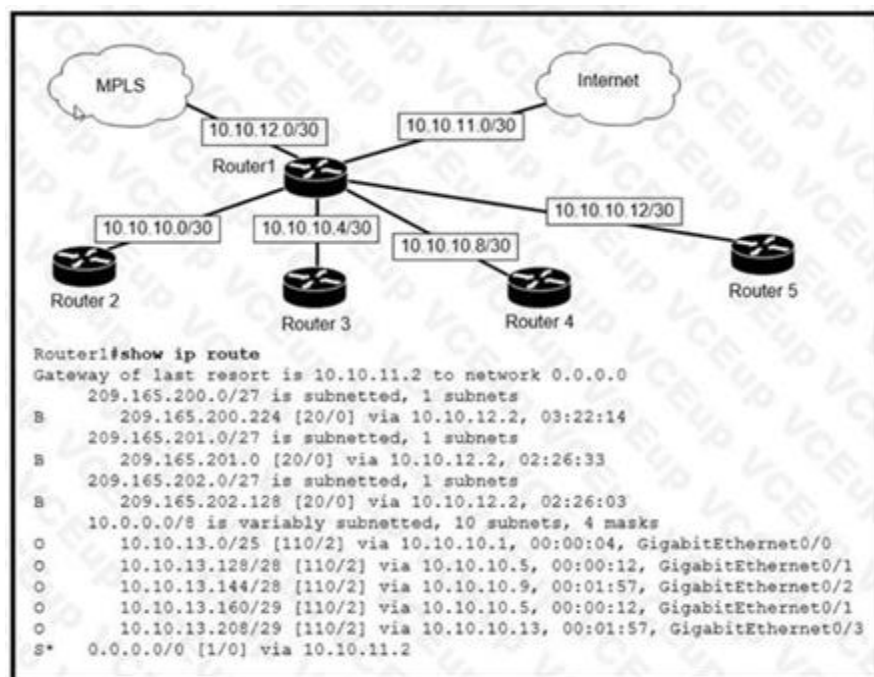
Section:

Explanation:

QUESTION 336

DRAG DROP

Refer to the exhibit.



Drag and drop the destination IPs from the left onto the paths to reach those destinations on the right.

Select and Place:



1.1.1.1	Router2
10.10.13.126	Router3
10.10.13.129	Router4
10.10.13.150	Router5
10.10.13.209	Internet cloud
209.165.200.30	MPLS cloud

Correct Answer:

	10.10.13.126
	10.10.13.129
	10.10.13.150
	10.10.13.209
	209.165.200.30
	1.1.1.1

Section:

Explanation:

QUESTION 337

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

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

Correct Answer: B

Section:

QUESTION 338

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

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

Correct Answer: B

Section:

QUESTION 339

Refer to the exhibit.

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

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

Which two commands were used to create port channel 10? (Choose two)

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

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

Correct Answer: A, C

Section:



QUESTION 340

Refer to the exhibit.

```
ip arp inspection vlan 2
interface fastethernet 0/1
  switchport mode access
  switchport access vlan 2
```

What is the effect of this configuration?

- A. The switch port interface trust state becomes untrusted
- B. The switch port remains administratively down until the interface is connected to another switch
- C. Dynamic ARP inspection is disabled because the ARP ACL is missing
- D. The switch port remains down until it is configured to trust or untrust incoming packets

Correct Answer: A

Section:

Explanation:

Dynamic ARP inspection (DAI) is a security feature that validates ARP packets in a network. It intercepts, logs, and discards ARP packets with invalid IP-to-MAC address bindings. This capability protects the network from certain man-in-the-middle attacks. After enabling DAI, all ports become untrusted ports.

QUESTION 341

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

Correct Answer: B

Section:

QUESTION 342

While examining excessive traffic on the network, it is noted that all incoming packets on an interface appear to be allowed even though an IPv4 ACL is applied to the interface. Which two misconfigurations cause this behavior? (Choose two)

- A. The packets fail to match any permit statement
- B. A matching permit statement is too high in the access test
- C. A matching permit statement is too broadly defined
- D. The ACL is empty
- E. A matching deny statement is too high in the access list

Correct Answer: B, C

Section:

QUESTION 343

DRAG DROP

Drag and drop the statements about access-point modes from the left onto the corresponding modes on the right.

Select and Place:



It supports real-time Wi-Fi client troubleshooting when network engineers are offsite.

It captures and forwards packets on a specific wireless channel.

It enables enhanced RFID-tag location tracking.

It provides air-quality data and interference detection across all enabled channels.

It supports analytics for wireless performance testing.

It supports software that analyzes wireless frames on a remote device.

Monitor

Sensor

Sniffer

Correct Answer:



<div style="border-left: 1px solid black; border-right: 1px solid black; height: 100%;"></div>	Monitor
	It provides air-quality data and interference detection across all enabled channels.
	It enables enhanced RFID-tag location tracking.
	Sensor
	It supports analytics for wireless performance testing.
	It supports real-time Wi-Fi client troubleshooting when network engineers are offsite.
Sniffer	
It captures and forwards packets on a specific wireless channel.	
It supports software that analyzes wireless frames on a remote device.	



Section:

Explanation:

QUESTION 344

DRAG DROP

Drag and drop the characteristics of northbound APIs from the left onto any position on the right.

Not all characteristics are used.

Select and Place:

- 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

Correct Answer:

- supports automation
-
-
- communicates between the SDN controller and the data plane
-
-
- uses OpenFlow to interface between the data and control planes

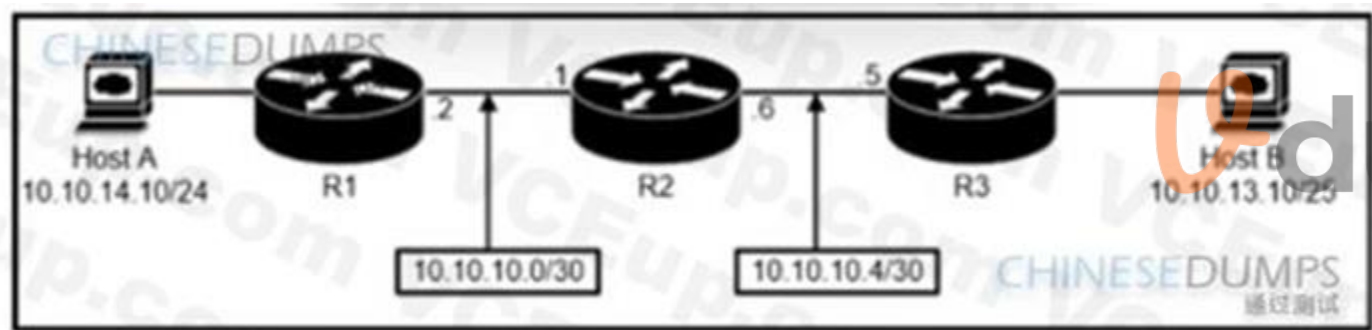
- supports data sharing between systems
- communicates between the SDN controller and the application plane
- supports network virtualization protocols
- supports REST-based requirements



Section:
Explanation:

supports automation	supports data sharing between systems
communicates between the SDN controller and the application plane	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	

QUESTION 345
DRAG DROP



Refer to the exhibit. An engineer must configure a static network route between two networks so that host A communicates with host B. Drag and drop the commands from the left onto the routers where they must be configured on the right. Not all commands are used.

Select and Place:

ip route 10.10.13.0 255.255.255.128 10.10.10.1 通过测试	R1
ip route 10.10.13.0 255.255.255.128 10.10.10.5	
ip route 10.10.13.10 255.255.255.255 10.10.10.1 通过测试	R2
ip route 10.10.14.0 255.255.255.0 10.10.10.2	
ip route 10.10.14.0 255.255.255.0 10.10.10.6 通过测试	R3
ip route 10.10.14.10 255.255.255.255 10.10.10.6	

Correct Answer:

ip route 10.10.13.0 255.255.255.128 10.10.10.1 通过测试	R1
	ip route 10.10.13.10 255.255.255.255 10.10.10.1
	ip route 10.10.13.0 255.255.255.128 10.10.10.5
	ip route 10.10.14.0 255.255.255.0 10.10.10.2
ip route 10.10.14.10 255.255.255.255 10.10.10.6	R3
	ip route 10.10.14.0 255.255.255.0 10.10.10.6 通过测试

Section:

Explanation:

QUESTION 346

DRAG DROP

Drag and drop the virtualization concepts from the left onto the matching statements on the right.

Select and Place:

guest operating system	An operating system instance that is decoupled from the server hardware.
host operating system	Each core can run more than one process simultaneously.
hypervisor	Runs on a physical server, manages, and allocates the physical resources.
multithreading	The software that manages the basic functions of the physical hardware.
virtual machine	The software that manages the basic functions of the vital machine.

Correct Answer:

virtual machine
multithreading
hypervisor
host operating system
guest operating system

Section:

Explanation:

QUESTION 347

DRAG DROP

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

Select and Place:

cannot be used as a source address	Multicast
sends packets to a group address rather than a single address	
confined to a single link	Link-Local Address
required on all IPv6 devices	

Correct Answer:

	Multicast
	Link-Local Address

Vdumps

Section:

Explanation:

QUESTION 348

DRAG DROP

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

Select and Place:

confined to a single link	Global Unicast Address
required on all IPv6 devices	
is publicly routable in the same way as IPv4 addresses	Link-Local Address
provides for one-to-one communication	

Correct Answer:

	Global Unicast Address
	is publicly routable in the same way as IPv4 addresses
	provides for one-to-one communication
	Link-Local Address
	confined to a single link
	required on all IPv6 devices

Section:

Explanation:

QUESTION 349

DRAG DROP

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

Select and Place:

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

Correct Answer:

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

Section:

Explanation:



QUESTION 350

DRAG DROP

Refer to the Exhibit.

```

R1# show ip route | begin gateway
Gateway of last resort is not set
 172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
 172.16.1.0/24 is directly connected, FastEthernet0/0
 172.16.1.1/32 is directly connected, FastEthernet0/0
 172.16.2.0/24 [120/2] via 207.165.200.250, 00:00:25, Serial0/0/0
 192.168.1.0/24 [110/84437] via 207.165.200.254, 00:00:17, Serial0/0/1
 192.168.2.0/24 [90/3184437] via 207.165.200.254, 00:00:15, Serial0/0/1
 207.165.200.0/24 is variably subnetted, 5 subnets, 2 masks
 207.165.200.244/30 [1/1] via 207.165.200.254, Serial0/0/1
 207.165.200.248/30 is directly connected, Serial0/0/0
 207.165.200.249/32 is directly connected, Serial0/0/0
 207.165.200.252/30 is directly connected, Serial0/0/1
 207.165.200.253/32 is directly connected, Serial0/0/1

```

Refer to the exhibit. Drag and drop the learned prefixes from the left onto the preferred route methods from which they were learned on the right.

Select and Place:

172.16.2.0/24

static

192.168.1.0/24

EIGRP

192.168.2.0/24

OSPF

207.165.200.244/30

RIP

207.165.200.248/30

Correct Answer:

192.168.1.0/24

172.16.2.0/24

192.168.2.0/24

207.165.200.244/30

207.165.200.248/30



Section:

Explanation: